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# U.S. and Canadian Farm Structure More Similarities Than Differences

*Long-term trends in the number, size, and organization of farms, changes in the distribution of farms by type of enterprise, and changes in the economic status of farm families point to many commonalities between Canadian and U.S. farming. Their like agricultural structures suggest that both countries' reactions to the removal of trade barriers and other changes in market conditions will be similar.*

THE farm sectors of the United States and Canada are now largely integrated with the world economy. The restructuring of world commodity and financial markets, compounded by international negotiations to restructure agricultural policies, is exerting fundamental pressures on the structure of the farm sector. U.S. and Canadian agriculture have become more dependent on other sectors for inputs and financing and on export markets for the sale of products, although certain sectors in Canada have always depended on exports. This interdependence stresses the need for an increased awareness of structural conditions in the agricultural sector that underlie many agricultural and trade policy decisions in both countries.

Farm structure refers to the ways in which farms of different sizes and types organize natural, financial, and human resources to produce food and fiber and the distribution of income and wealth that results from that activity (Carlin and Reimund). This definition guides our exploration of key structural features of the U.S. and Canadian agricultural industry, including changes in the number, size, and organization of farms, degree of commodity specialization, patterns of labor use on farms, and the financial status of farm families. We focus on national and regional trends with emphasis on change since the 1970's to better understand agricultural structure and its relationship to a changing trade environment.

## Long-term Trends in the Number of Farms

The Censuses of Agriculture in both the United States and Canada have enumerated fewer farms in each decade

since World War II. In 1950, there were 5.4 million farms in the United States and 623,000 farms in Canada (fig. 1). By the late 1980's, the number of U.S. farms had fallen to 2.1 million while Canadian farms had declined to 280,000. Most of this decline occurred in the 1950's and the 1960's. During those decades, the rate of decline in the number of farms was double the rate of more recent decades, over 2 percent per year compared with under 1 percent per year since the mid-1970's.

The predictions by many scholars of drastic declines in farm numbers during the farm financial crisis of the 1980's are not evident in the data. Bankruptcies and foreclosures were at historically high levels in both Canada and the United States, forcing some farmers off the land. The resulting number of farms did not change significantly, however, because many farmers who left agriculture were replaced by others. Some farms were amalgamated into larger units, but the pace of change in farm size was actually slower than in previous decades.

## Farms by Size Class

Aggregate statistics mask divergent trends among farms of different sizes and in different regions of both countries. For example, in both Canada and the United States, the overall decline in farm numbers during the last decade was a result of decreases in the number of smaller farms offsetting moderate increases in larger size farms. Decreasing numbers of smaller farms have larger implications for the survival of rural communities while increasing numbers of larger farms have greater significance for the production of agricultural products.

Changes in the distribution of U.S. and Canadian farms over the last decade, measured by gross farm revenue in nominal dollars, show increases in the number and pro-

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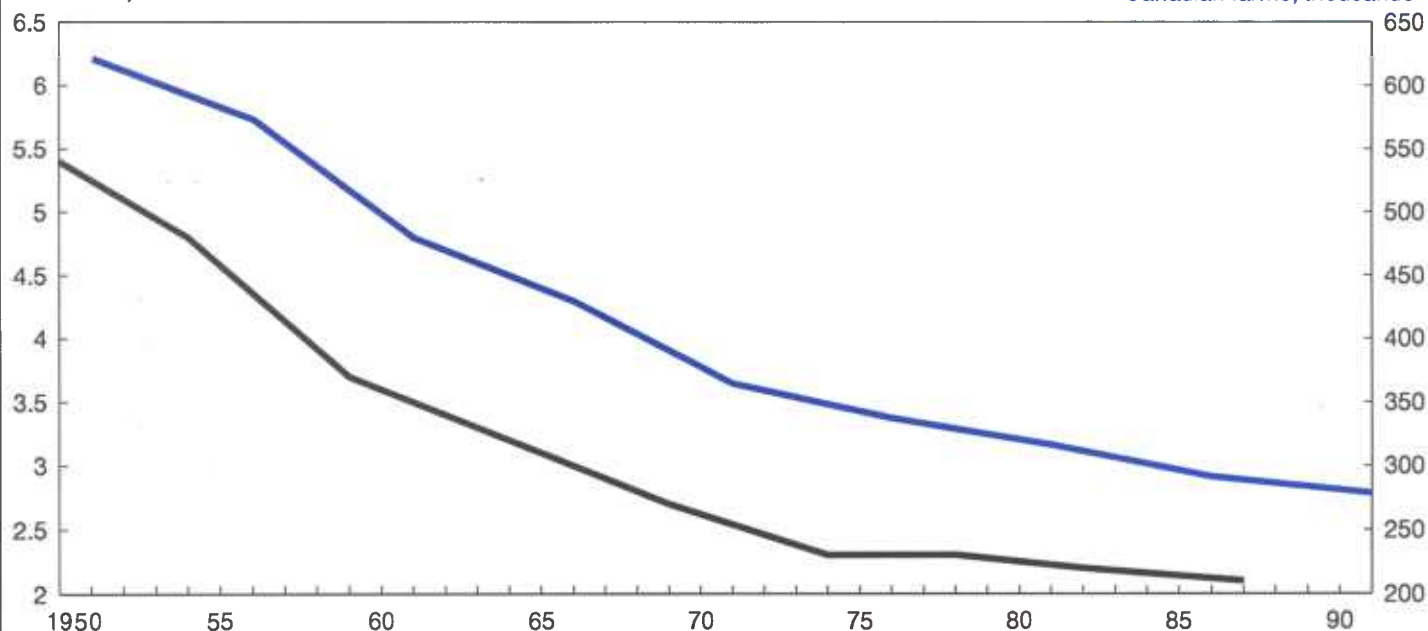
Figure 1

## Numbers of U.S. and Canadian farms

*The numbers of farms have continued to decline in both countries, but at slower rates since the mid-1970's*

U.S. farms, millions

Canadian farms, thousands



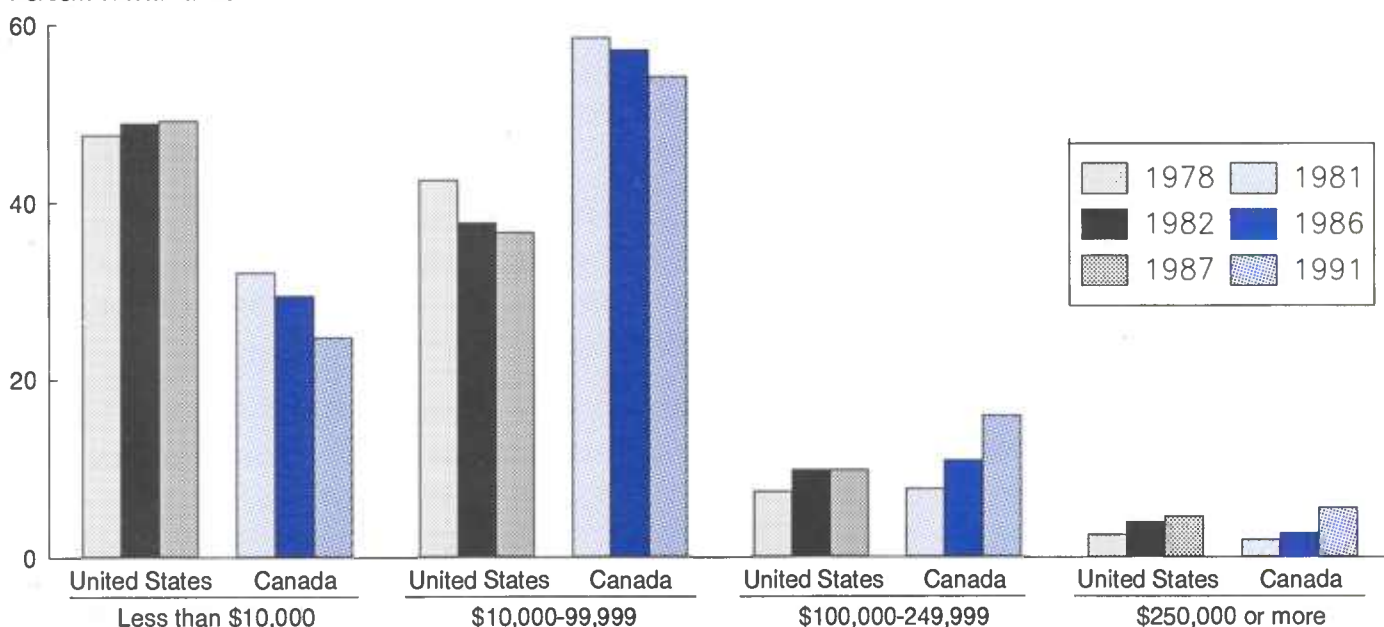
Sources: U.S. Bureau of the Census, Censuses of Agriculture and Statistics Canada, Censuses of Agriculture.

Figure 2

## Shares of U.S. and Canadian farms by value of sales

*The numbers of large farms increased and midsize farms decreased in both countries; a much larger share of U.S. than Canadian farms are small*

Percent of total farms



Note: Sales measured in nominal U.S. dollars.

Source: U.S. Bureau of the Census, unpublished data from the Censuses of Agriculture, and Statistics Canada, Censuses of Agriculture.

portion of large farms with gross revenues of \$100,000 or more (fig. 2). The number and proportion of small farms with less than \$10,000 in revenues decreased in Canada but remained relatively stable in the United States. Midsized farms with \$10,000-99,999 in revenues declined in both countries. (All sales data are in U.S. dollars.)

While there are many similarities in the changing patterns of U.S. and Canadian agricultural holdings by size class, there are differences as well. Size class data indicate that the United States has a much larger proportion of small farms and a smaller proportion of midsized farms compared with Canada. For example, almost 50 percent of U.S. farms had gross farm revenues of less than \$10,000 in 1987, compared with only 25 percent of Canadian farms in 1991.

Regional differences emerge as well. In general, the Eastern Canada-Northeastern United States and Western Canada-Northwestern United States regions both show increases in the number of larger farms and decreases in the smaller and midsized farms (see "Data and Definitions" for definitions of regions). However, the eastern regions have a larger share of small farms with revenues of less than \$10,000 than the western regions have. Although the eastern regions generally depend less on agriculture, the continued decline in the numbers of small farms may have more serious implications for the survival of rural communities in those regions.

Changes in the number and size of farms have led to speculation that many midsized farms will disappear to be replaced by a relatively small number of large farms controlled by nonfamily corporations. Despite ever increasing mechanization and technical sophistication of farming, most farms are still owned and operated by families; nonfamily corporations are not a large share of farms in either country. Less than 2 percent of the farm businesses in Canada in 1991 and in the United States in 1987 were organized as nonfamily corporations, according to the Canadian and U.S. Censuses of Agriculture. Nonfamily corporations have increased only slightly in Canada and barely changed in the United States over the last decade.

### Commodity Specialization

Producers of commodities will be affected differently by future market price trends and technological developments that are specific to a commodity. Beef, hog, and sheep operations make up a large share of farms and aggregate revenues in both countries (table 1). In the United States, this group ranks far above all other commodity sectors accounting for over 43 percent of the farms and 33 percent of total sales in 1987. In Canada, cash grain enterprises rank first in number of farms, followed closely by beef, hog, and sheep operations, but the latter group ranks first in share of sales. In 1991, beef, hog, and

sheep farms accounted for 33 percent of both Canadian farms and sales.

The agricultural economies of regions with similar geographies are similar. In both the northwestern United States and western Canada, for example, grain and beef, hog, and sheep operations make up the largest share of farms. However, western Canada has a larger share of grain farms and a smaller share of beef, hog, and sheep enterprises than the northwestern United States. In the eastern regions, grain, dairy, and beef, hog, and sheep operations account for about 60 percent of the Canadian farms and over 75 percent of the U.S. farms. In eastern Canada, dairy farms are a larger share and grain farms are a smaller share of all farms compared with farms in the northeastern United States.

Finally, as the number of farms has decreased, farms have become more specialized along commodity lines, with distinct trends for different commodity subsectors. Because of the high degree of farm and regional specialization, the farm sector has now become many different industries, each with its own organizational characteristics. Specialization on farms has increased largely because of technological advancements such as chemical herbicides and single-function machinery that changed the economics of farm production to favor a single-commodity type of agriculture. Regional specialization increased as a result of improved transportation, marketing, and storage technology that enhanced interregional trade, facilitating commodity concentration in areas of the greatest comparative advantage (Reimund and Gale).

Table 1

### Share of farms and total sales by major enterprise group, United States and Canada

*Beef, hog, and sheep operations make up large shares of farms and farm sales*

Major enterprise group	United States, 1987		Canada, 1991	
	Share of farms	Share of sales	Share of farms	Share of sales
Percentage of total				
Cash grain	22	18	34	27
Other field crops	5	5	5	4
Fruits, nuts, vegetables, and melons	5	8	4	4
Horticultural specialties	1	4	2	4
General crops	3	2	1	1
Beef, hogs, and sheep	43	33	32	33
Dairy	7	13	11	17
Poultry	2	10	2	7
Animal specialties	4	1	5	2
General livestock	1	1	3	2

Sources: U.S. Department of Commerce, 1987 Census of Agriculture, and Statistics Canada, 1991 Census of Agriculture.

Hog production in Canada offers a good example. Less than 30 years ago, only half of the Canadian hog herd was on hog-specialized farms; the other half was on farms, largely grain producers, diversifying their production. Today, over 85 percent of all Canadian hogs are on specialized hog farms. Several explanations for this increased specialization are possible: grain farmers substituted crop insurance for hog enterprises in diversifying their portfolios; the development of technology to raise larger herds of hogs in barns lowered costs per unit of output, making small supplementary hog enterprises unprofitable; or the demand for standardized carcasses increased the payoff to managerial attention in hog raising.

U.S. poultry production offers a similar example. Before the 1950's, the poultry industry comprised a large number of small, geographically dispersed, autonomous producers selling through open markets. For many producers, broiler and egg production were backyard activities. Technological advances during the 1940's and 1950's in poultry housing, processing, breeding, and disease control transformed the poultry industry. The need for standardized products also led to more mechanized production. Today, poultry production is organized as a closely controlled, vertically integrated production-marketing system with regional concentration in the Atlantic Coast States. Almost all poultry production in the United States is performed under some form of production contract arrangement where the farm operator provides land, labor, and day-to-day management while the large, vertically integrated contractor/processor provides the livestock, feed, medicine, and overall management (Barnard and

Grimard). U.S. poultry production now more closely resembles a manufacturing firm than what most observers would consider a farm firm (Reimund and Gale).

### Trends in Labor Employed in Agriculture

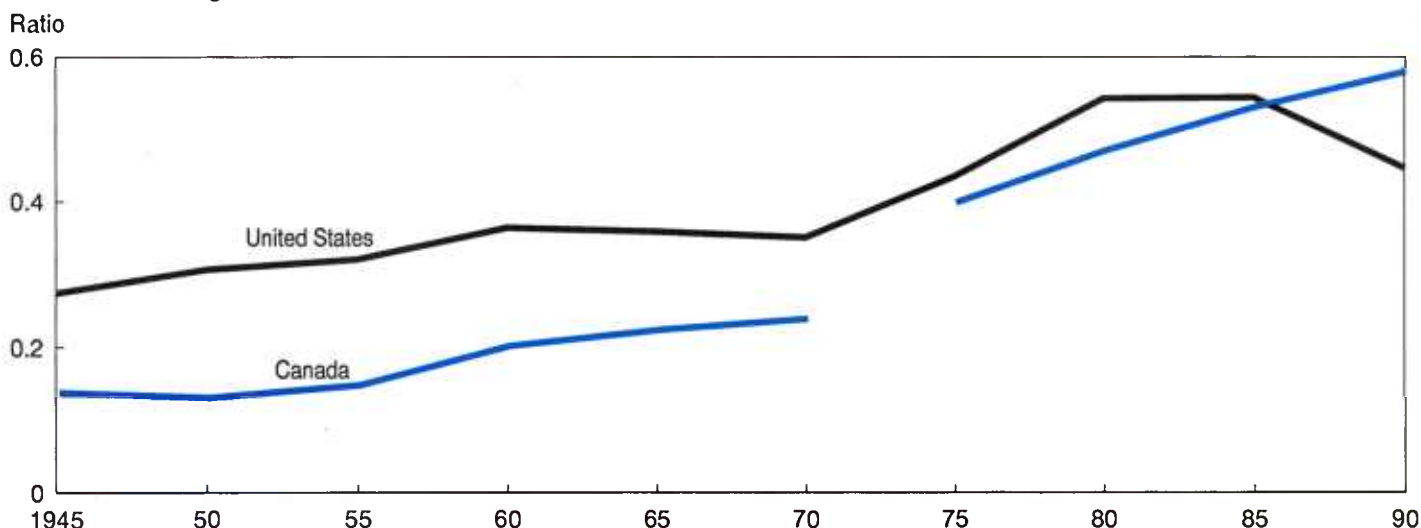
Employment in agriculture in both countries has declined steadily since World War II—a structural adjustment due largely to trends toward fewer agricultural holdings, larger farms, and increased mechanization. Annual average U.S. farm employment in 1990 was only slightly more than 25 percent of the 1945 level; in Canada, average farm employment in 1992 was about 36 percent of the 1946 level. Beginning in the 1970's, a major structural shift also began to take shape within the workforce itself as the ratio of paid workers to family (self-employed and unpaid) workers began to increase (fig. 3). While both family and hired components of the work force have declined over time, family labor declined faster, leading to a gradual substitution of hired for family labor on U.S. and Canadian farms. Prior to 1970, the ratio had remained relatively constant. However, despite this substitution effect, family workers still account for the largest proportion of labor used by farm operators in both countries.

Between 1985 and 1990, the ratio of paid to family workers in the United States began to decline slightly, although not to the pre-1970 levels. This may have represented a temporary adjustment to U.S. immigration reform legislation enacted in 1986 which made knowingly hiring undocumented foreign workers illegal.

Figure 3

### Ratio of hired to family workers on U.S. and Canadian farms

*The share of hired workers has increased compared with family workers since 1970, but family workers still account for the largest share of farm labor in both countries*



Notes: Family workers include self-employed and unpaid workers. The Canadian survey design changed between 1970 and 1975, making the later numbers not strictly comparable with the earlier ones.

Sources: USDA, National Agricultural Statistics Service, Farm Labor Survey, and Statistics Canada, Labour Force Survey.



As hired workers provide more of the labor used on farms, farm operators will increasingly assume more labor-management responsibilities if they are to compete for workers in the farm labor market. The better managers will improve their personnel management skills to minimize hiring, turnover, and training costs. Both operators and workers will require a better understanding of national, State/Provincial, and local employment, wage, safety, and health regulations. Also, as farm operators increase their use of contract labor to meet some production and harvesting needs, operators will need more knowledge of labor relations and labor contract negotiation procedures.

### **The Economic Well-Being of Farm Families**

We reviewed the Survey of Consumer Finances in Canada and the Current Population Survey in the United States to compare trends in economic well-being of farm families between the two countries. These surveys have obvious weaknesses for our purposes. The major weaknesses are that neither their survey samples nor their questionnaire contents are directly targeted at farm families. Farm families represent a small share of each survey's sample. The advantages are that each survey uses a single method to estimate both farm and nonfarm families' incomes and that both countries' surveys employ the same general methodology to estimate income. We feel that the advantages in consistency outweigh the disadvantages of surveys that are not specifically designed for farm families.

The average income of farm families is no longer low relative to nonfarm families' average income. Since the mid-1970's, average farm family income has varied relative to nonfarm family income in both Canada and the United States, but the difference is not large and has not trended either up or down. The convergence of average farm family income with that of nonfarm families has been achieved by farm families earning more income from off-farm sources. The share of family income from farming has not been above 50 percent in the last 15 years and is now closer to 30 percent in both countries.

These general conclusions beg for an analysis of distribution and structure. The large number of families associated with small farms have little or no farm income and receive almost all of their income from nonfarm sources. At the other end of the spectrum, a smaller number of families associated with large "commercial" farms depend on farm earnings for most of their earned family income and produce the bulk of agricultural production (Kalbacher and Bentley; Barnard and Grimard).

The preambles to major pieces of farm legislation invariably state that improving the income of farm families is a primary objective of the proposed program. U.S. and Canadian farm family income trends suggest two insights about the relationship between farm policy and farm income in both countries. First, although improved farm

family income is the reason behind most agricultural policy, the response of farm family income to farm policy is not large because so much farm family income comes from sources other than farming. Second, farm family income is on par with nonfarm family income because of the off-farm employment of one or more family members. The growing importance of off-farm income to most farm households suggests that public policies that strengthen the rural nonfarm economy and improve employment and earnings opportunities may be more important to maintaining many farm households' incomes than commodity programs and policies.

### **Summary and Conclusions**

This review of farm structural trends suggests more commonalities than differences in economic conditions and structural trends between Canada and the United States. Both countries experienced a "boom and bust" cycle during the 1970's and 1980's, resulting in lowered real farm incomes, increased debt, and economic stress for some farmers. The number of farms in both Canada and the United States has continued to decline over time, while average farm size increased. Despite farm enlargement, most farms are still owned and operated by families. In both countries, beef, hog, and sheep operations are a large share of farms and total sales, and both countries are witnessing increased commodity and regional agricultural concentration. Also, employment in agriculture continues its long-term decline in both countries while hired workers are increasingly replacing family and unpaid labor on farms. Finally, U.S. and Canadian farm family income statistics no longer portray the farm population as a relatively disadvantaged group. Farm family income has reached parity with that of nonfarm families in the United States and Canada, due largely to farm families' increased reliance on off-farm income.

Canada and the United States are engaged in an accelerating process of economic integration into one North American economy. Trade liberalization, in the form of the Canada-United States Trade Agreement (CUSTA), its subsequent extension to the North American Free Trade Agreement (NAFTA), and recent negotiations over the General Agreement on Tariffs and Trade (GATT), promises movement toward harmonization of agricultural structures among participating countries. However, we need to acknowledge the increasing diversity of U.S. and Canadian agriculture. Different subsectors of the agricultural industry are expected to be affected differently by price movements, technological change, and agricultural policy and program reforms in a freer trading environment. Trade liberalization will not operate within a vacuum, and a variety of complex forces, mechanisms, policies, and programs have the potential to affect changes in agricultural structure in the United States and Canada.

We expect some current trends in farm structure to continue as the United States and Canada move toward closer integration into a single North American market:

*The number of smaller farms will continue to decline.* We expect the number of smaller farms with sales of less than US\$100,000 to continue decreasing as they have done in the past. The decline of the small family farm continues to receive media attention in both countries. However, families on the smaller farms tend to have relatively high incomes with little dependence on farm income. In fact, they look like many other families, rural or urban, with one or two workers in the nonfarm labor force. Families associated with small noncommercial farms would most likely benefit more from healthy rural nonfarm economies than from farm policies and freer agricultural trade.

*Farms will continue to grow larger, but large corporations will not become the predominant organizational form.* The trend toward fewer and larger farms is continuing, but at a much slower pace than in the past. Also, nonfamily corporations do not comprise a large share of farms in either country, and we do not expect their numbers to increase at any greater pace in the near future. However, vertical integration is likely to increase and could have mixed effects on producers. Many farms, while maintaining family control over their operations, have become closely linked with downstream agribusinesses. Farmers who produce under contract reduce their risks associated with volatile and changing prices. Also, contract arrangements reduce barriers to farm entry for persons with low equity. These farmers become less independent, however, and experience other risks associated with contract renewal and negotiation (Gale and Harrington).

*Trends toward commodity specialization will continue.* Farms in both Canada and the United States have become highly specialized and tightly integrated into the economy, and these trends are likely to continue. Commodity specialization has increased largely because of technological advancements that changed the economics of farm production to favor a single-commodity type of agriculture. Regional specialization increased as a result of improved transportation, marketing, and storage technology that facilitated commodity concentration.

*Hired labor will continue to replace family labor on farms.* Employment on U.S. and Canadian farms will continue its long-term decline, although at slower rates than in earlier decades. Hired workers will continue to replace family labor on farms, as farms become larger and family members increasingly take nonfarm jobs to supplement family income.

*Nonfarm income will become increasingly important to farm families.* Farms in both the United States and Canada will increasingly depend on the nonfarm economy to provide off-farm employment and income for farm family members. Nonfarm income is an important source of cash-flow for beginning farmers and provides a cushion to offset year-to-year variations in farm income. Nonfarm income also supports large numbers of families on small farms who earn little or no net farm income.

Farm structure continues to be important to policymakers in both the United States and Canada, and concern with structural adjustment has provided, at least in part, an underlying rationale for much of current agricultural and trade policy. Policy interest in structure has traditionally focused on efforts to improve the economic welfare of farmers, preserve cultural values embodied in farming, assure a continued adequate supply of food and fiber, and

### Data and Definitions

**Data:** Information on farm characteristics reported in this article is taken from published and unpublished data from the U.S. and Canadian Censuses of Agriculture. Data on farm employment trends are from the U.S. Department of Agriculture's quarterly Farm Labor Survey and Statistics Canada's monthly Labour Force Survey. Finally, information on farm family income is taken from the U.S. Department of Commerce's Current Population Survey and Statistics Canada's Survey of Consumer Finance.

**Farm:** U.S. data sources define a farm as any unit that produced or expected to produce at least \$1,000 worth of agricultural products in the census year; Canadian data sources used here do not apply a sales criteria.

**Regions:** The regional aggregations used in this article are Eastern Canada, including the provinces of Newfoundland, Nova Scotia, Prince Edward Island, New Brunswick, Quebec, and Ontario; Western Canada, including the provinces of British Columbia, Alberta, Saskatchewan, and Manitoba; Northeastern United States, including Connecticut, Illinois, Indiana, Iowa, Kentucky, Maine, Massachusetts, Michigan, Minnesota, Missouri, New Hampshire, New Jersey, New York, Ohio, Pennsylvania, Rhode Island, Vermont, West Virginia, and Wisconsin; and Northwestern United States, including Idaho, Montana, Nebraska, Oregon, North Dakota, South Dakota, Washington, and Wyoming.

**Total Farm Sales:** Measured by value of product sales in U.S. data and gross farm revenue in Canadian data. These measures include the gross annual receipts from the sale of agricultural products plus government farm subsidies; the measures are essentially the same.

improve the economic contribution of agriculture to the national economy. As trade liberalization pushes Canada and the United States to greater economic integration into one North American economy, the policy focus becomes broader. Public policy must increasingly recognize greater linkages to upstream and downstream industries, the global as well as the domestic outlook, and interdependencies with other national priorities such as agri-environmental management and rural community development.

#### For Further Reading

C. H. Barnard and J. Grimard, "Financial Structure of Canadian and U.S. Farms, 1989 and 1991," in D. Harrington and others (eds.), *Farms, Farm Families, and Farming Communities: Structural Change in Canada and the United States*, special issue of the *Canadian Journal of Agricultural Economics*, 1995, forthcoming.

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Compiled by Karen Hamrick

## ***Families in Troubled Times: Adapting to Change in Rural America***

Rand D. Conger and Glen H. Elder, Jr., with Frederick O. Lorenz, Ronald L. Simons, and Les B. Whitbeck. Hawthorne, NY: Aldine de Gruyter, 1994. 303 pages. ISBN 0-202-30487-6 (cloth) \$46.95. ISBN 0-202-30488-4 (paper) \$23.95. To order, call 1-914-747-0110.

*Families in Troubled Times* is based on the Iowa Youth and Families Project (IYFP), which studied the experiences of over 400 Iowa families living on farms or in small rural communities that depend on agriculture, and who lost farms and other businesses because of the severe economic decline in the rural Midwest in the "farm crisis years" of the 1980's. The central purpose of the IYFP is to examine the relationships between economic hardship and specific developmental outcomes, including the psychological well-being of individual family members and the quality of family relationships. Each of the book's chapters empirically evaluates different dimensions of the theory of family economic stress. The five parts of the book cover families and hardship, rural families and communities, husbands and wives, adolescent development, and a review of the IYFP evidence.

IYFP was launched in 1989 at Iowa State University where the authors were part of a study group of researchers. IYFP staff interviewed four members in each of 451 rural families in eight north-central Iowa counties. All families included a father, mother, target child (a seventh-grader), and a sibling closest in age to the target child. This family configuration allowed for studying the influence of economic hardship on the behaviors, emotions, and sense-of-self of adults, children, and adolescents. It also lent itself to assessing the effect of disadvantage on several dimensions of nuclear family relationships, such as marital, parent-child, and sibling relationships. Because current economic circumstances may reflect several different, earlier financial trajectories, the sample families represented a wide range of economic well-being. The book examines the consequences of different economic scenarios, including the effect of economic decline of Iowa families during the 1980's on their emotional well-being and interpersonal relations.

Part 1 covers the theoretical perspective and methodological procedures used to understand the hardship experiences and stresses of these Iowa families. The introductory chapter covers a brief description of the IYFP, its history and purpose, participating families, the theoretical perspective, and some major elements of the methodological approach to the investigation. One of the strengths of the book is that it relates the experience of rural families of the 1980's farm crisis to early research on families during the 1930's Great Depression and to other contempo-

rary studies of economic stress. The chapter on methodological procedures by Lorenz and Melby reviews the general design and analytic strategies employed in the study. Readers may wish to skip this chapter but return to it as needed to understand the analyses presented later in the book.

Part 2 looks at the economic circumstances in rural communities and families that participated in the research and the historical trends that created today's conditions. Lasley's informative chapter on rural economic and social trends covers the history of boom-and-bust cycles in agriculture, and the uniqueness of the 1980's farm crisis compared with previous agricultural recessions. Lasley identifies several areas of concern about probable effects of the current farm crisis—the structure of the family, community life, social relationships, and individuals and families. Other chapters in the section cover the difficult choices and adjustments these Iowa families made in response to economic hardship and pressure; survival adaptations of farm families, the psychosocial experience of loss and recovery among the displaced families, variations in experience and adaptation within the farm and displaced farm groups, and some implications of life changes for parents and children including the quality of marital support, intergenerational ties, and emotional health; and the contribution of children and adolescents to both family income and productive household activities to counter adverse economic circumstances.

Part 3 shifts focus from unique histories of rural families and communities to more general lessons learned from their hardship experiences. The authors of one chapter use retrospective reports of early family experiences to assess the effects of this experience on the quality of adult relations with aging parents and interaction styles later in life. The chapter by Lorenz, Conger, and Montague addresses the psychological consequences of economic hardship, the effects of economic conditions on depressive symptoms of husbands and wives, and the mediating effects of family and extrafamilial social support. Their findings support the basic theoretical model that hardship conditions were only indirectly related to psychological distress through the daily economic pressures they exacerbate. The chapter by Conger, Ge, and Lorenz examines the effect of economic hardship, economic pressure, and parents' emotional distress on marital conflict and relationship quality.

Part 4 covers linkages between parents' stress-related emotional and marital problems and disruptions in parenting practices and adolescent adjustment. These chapters propose that marital response to economic stress should play an important role in developmental outcomes for rural children and adolescents in the study. They also suggest that accumulating emotional and relationship problems associated with economic stress will dis-

rupt effective parenting practices. Topics covered in the section include the association between economic pressure and harsh, explosive parenting, especially through its impact on hostility and conflict in marriage; disruptions in child-rearing practices and adjustment problems of children and adolescents living in families experiencing significant economic hardship; and the effect of economic disruptions in the lives of parents on the emotional health of children through the conflict and hostility they create in sibling relationships.

Although the rural character of the Iowa families in this study may significantly influence their response to socioeconomic change, the study has wider relevance in its more general message about the role of economic hardship in family life. The experiences of the IYFP families substantially replicate and extend results from studies of urban families and children conducted during the Great Depression of the 1930's and during the past decade. A main strength of the book is that it relates the experience of rural families of the farm crisis of the 1980's to early research on families during the Great Depression and to other contemporary studies of economic stress. Their experiences may even anticipate the fate of many American families in the economically troubled 1990's. Drawbacks to the study include its small sample size and its not being a nationally representative sample.

The book is well written and very interesting to read. I recommend it. The authors successfully argue that economic hardship is crucial in shaping family relationships and individual adaptation. Understanding the effect of societal changes in economic circumstances on the lives of families and individuals is necessary for future rural and urban families. This book would be most valuable to researchers and practitioners (psychiatrists, social workers, and counselors) in the mental health field. Some emotional and marital conflict problems and work and family issues are of a general nature and apply to a broad population. Rural development specialists, researchers, and practitioners should also find the issues and findings useful in planning strategies for rural communities.

*Reviewed by Carolyn C. Rogers, a Demographer in ERS-RED.*

### ***Comrades and Chicken Ranchers: The Story of a California Jewish Community***

Kenneth L. Kann. Ithaca, NY: Cornell University Press, 1993. 336 pages. ISBN 0-8014-2807-6 (cloth) \$36.95. ISBN 0-8014-8075-2 (paper) \$16.95. To order, call 1-607-277-2211.

During the last 20 years, oral history has become a full-fledged subdiscipline of history. Oral history associations exist throughout the United States and are supported by the work of both lay and professional historians. Forty or 50 years ago, oral historians, for the most part, confined themselves to recording the words of prominent people. By the 1960's, however, "elite" political history had fallen into disfavor. Social historians became more interested in writing about previously anonymous groups and communities. As a result, recording and publishing oral histories from ordinary people became increasingly acceptable. Beginning in the mid-1970's, oral history received an additional boost from the growing popularity of genealogical research among the general public.

On the positive side, oral history has certainly succeeded in rescuing many "voices" from oblivion and in preserving records of

local traditions. On the other hand, it has often been a way to avoid the task of historical narrative and analysis, resulting in the accumulation of much undigested and useless information.

Kenneth Kann's *Comrades and Chicken Farmers* combines the positive aspects of oral history while avoiding its pitfalls. Based on the information Kann presents in this book, I believe he would have had difficulty sustaining a standard book-length narrative history of Jewish chicken farmers in Petaluma, CA. But by using the oral history form, Kann succeeds in presenting an interesting, poignant, and at times amusing picture of a small, unique group of people.

This book does not present individual oral histories serially. Rather, it is broken into chronological chapters within which edited portions of oral histories (rarely more than a page in length) comment on events. Of course, the many individuals interviewed by Kann rarely remember and interpret the past in the same way. Thus, his book often has a dramatic quality that this reviewer has not seen before in an oral history. Kann also occasionally interposes short quotations from local newspaper accounts and records to cast additional light on the history. Kann's editing and structuring of the oral histories make him an active interpreter of this story of Petaluma's Jews.

Petaluma is about 35 miles north of San Francisco. Now it is a suburb of that city, but before World War II it was a small rural town. In the 19th century, some Jews from western Europe lived in the area, but in the early 20th century Jewish families began to arrive from eastern Europe. They brought with them their Yiddish culture and a Zionist-inspired desire to live on the land and practice agriculture, an occupation that had been denied them in eastern Europe. Chicken ranching was the quickest way to begin, and many of the immigrating families took it up after receiving low-interest loans from the Hess Foundation in San Francisco. Petaluma had one of the very few Jewish agricultural communities of any kind in the United States. ("Here the Kellys live in town and the Cohens live on the farm.") By the 1930's, as many as 300 Jewish chicken-ranching families lived in the Petaluma area. In the late 1950's and 1960's, many of the small chicken farmers went out of business as chicken breeding became an increasingly automated and industrialized big business.

The immigrants transplanted much of their eastern European cultural life to Petaluma, and for many years their community had the feel of a shtetl. Most of the early immigrants were secular-oriented refugees from political oppression and were predominantly Zionists and leftists. In the 1930's, some became Communists or Communist-sympathizers. In one notorious incident, a member of the community was tarred and feathered for union organizing. During the McCarthy scare of the early 1950's, the community was torn apart when conservatives prevented leftist discussion groups from meeting in the Jewish Community Center.

What makes the story of Petaluma's Jews especially interesting is the extent to which the life of this rural community revolved around world events and politics. In many ways, Petaluma was a vibrant and disputatious arena for intellectual debate and conflict, the complete opposite of the "idiocy of rural life" ridiculed by Karl Marx.

Kann interviewed three generations of Petaluma Jews and so another theme of the history is the assimilation of the two American-born generations to American society. What is somewhat surprising is that many third-generation individuals who

once had little or no connection with their Jewish Petaluma heritage are now beginning to recover it.

*Reviewed by Dennis Roth, an analyst in ERS-RED.*

## ***Farming the Home Place: A Japanese American Community in California, 1919-1982***

Valerie J. Matsumoto. Ithaca, NY: Cornell University Press, 1993. 272 pages. ISBN 0-8014-2074-1 (cloth) \$35.00. ISBN 0-8014-8115-5 (paper) \$14.95. To order call, 1-607-277-2211.

*Farming the Home Place* by Valerie J. Matsumoto has some similarities with *Comrades and Chicken Farmers*. Both are about ethnic communities in rural California that suffered varying degrees of prejudice or persecution. Both authors used oral history as their main research tool, and both are third-generation members of the ethnic groups about which they write, although neither comes from the specific community studied. There the commonalities end.

Matsumoto transforms the raw material from her interviews into a standard historical and sociological narrative and only occasionally quotes the interviewees themselves. The Japanese American community in Cortez, CA, was seemingly much more cohesive than the Petaluma shtetl, and there was much less internal wrangling, suggesting that an oral history account would probably have been less successful. Matsumoto's history, however, is generally interesting and well written. I encountered no surprising insights in *Farming the Home Place*, but the book is nevertheless a worthwhile contribution to the literature on small ethnic rural communities.

In the early 20th century, Japanese immigrants, like the Chinese before them, were legally prevented from owning land and becoming citizens. Californians rationalized these restrictions by claiming that they could not compete with the Japanese who put all of their family members into the fields to work. The effect of these laws may, however, have been more psychological than economic because by 1920 many issei (first-generation immigrants) had acquired land in the name of their nisei (second-generation) children who were citizens by birth. Most of them spread throughout central and southern California intermingling with the Caucasian population. But in three places, they congregated to form well-defined Japanese American agricultural communities.

The father of the Cortez Japanese community was Abiko Kyutaro, an idealistic publisher and businessman in San Francisco, who purchased land and resold it to colonists in three communities he established (Cortez, Livingston, and Cressey). The early Cortez colonists set about planting and replanting grapes, but in the years before the vines began to bear fruit, they hired themselves out as laborers in neighboring towns such as Turlock. Life was very hard, but the issei persevered because they developed "vital economic, religious, and educational institutions that fostered their economic independence and cultural cohesion." One of the most important was the nonprofit Cortez Growers Association (CGA) through which the individual farmers got favorable terms for both their sales and purchases. According to Matsumoto, the Cortez farmers "gained a bargaining strength beyond the means of most farmers who cultivated parcels of twenty to forty acres."

By the end of the 1930's, life was improving for Cortez's 30 issei families. They had two active churches (Christian and Buddhist)

and a Japanese school for their children. The CGA had helped them to prosper economically. During the same time, the political climate had improved for Japanese Americans in California. Then came the attack on Pearl Harbor.

All Japanese Americans living on the West Coast were removed from their homes and interned in camps farther inland. The people of Cortez were shipped to the dry plains of eastern Colorado and placed in the Amache Camp. Matsumoto's two chapters on the removal and internment are low key but effective accounts of the injustice of those actions and the resilience of the Japanese Americans in overcoming them. One of the more pronounced effects of camp life was the disruption of traditional lines of family authority when hundreds of young people were thrown together in the close quarters of barracks life. The Cortez people, however, fared better than many of their compatriots because before their removal they established a management corporation, administered by a Caucasian, which leased all of their lands during their absence. Thus, unlike many other internees, they felt reasonably confident they would reclaim their property after the war.

The final chapters of the book deal with the recovery of the Cortez community after the war and reflect on the meaning of this group's experience and its future. As farming becomes more mechanized, Matsumoto concludes that "the ethnic core of Cortez will grow smaller as farmholdings become consolidated and more non-Japanese Americans join the CGA."

*Reviewed by Dennis Roth, an analyst in ERS-RED.*

## ***My Own Country: A Doctor's Story of a Town and Its People in the Age of AIDS***

Abraham Verghese. New York: Simon & Schuster, 1994. 352 pages. ISBN 0-671-78514-1 (cloth) \$23.00. To order, call 1-212-698-7000.

Rural development experts spend a great deal of time and energy describing rural areas to each other and to nonrural development people. These descriptions tend to entail statistics: people per square mile, distance to the nearest urban center, or number per capita of x, y, and z. Much of this description takes place at a computer terminal. Without the aid of a research or travel grant, experts cannot take the time to attend a community meeting, have coffee with a stranger, or drive down a country road. Besides, with rare exceptions (Calvin Beale comes to mind), such forays do not lead to policy changes, journal articles, or tenure, so the incentives are not there. When experts do manage to break away, they tend to frequent universities or State capitals. Thus, the expert's view of the countryside tends to be second-hand, often reduced to three-color maps, aggregations by rural-urban codes, and pie charts.

Still, this is not to suggest that the experts' numbers are not useful. They do guide policy. For example, in the area of health, statistics tell us the number of physicians is dangerously low in some rural areas, rural people have less insurance coverage than urban people, rural hospitals are closing or down-sizing, and rural people, too, die of complications of acquired immune deficiency syndrome (AIDS). However, these data do not tell us what it is like to pull into the driveway of an AIDS sufferer, watch as families are pulled together, or the medical community tugged apart. That is why, to truly inform, the data need to be complemented with books like *My Own Country*.

In this very personal account, Dr. Verghese describes his involvement, no, enmeshment, with the disease culture of AIDS. Verghese begins his story on a highway, with the reader riding south from New York. When the gasping driver reaches his destination, AIDS has arrived in Johnson City, TN. It is the summer of 1985. Amid tobacco auctions, coal mines, neighborhood gas stations, and homo- and AIDS-phobia, a riveting, painfully true story unfolds.

This book is totally mesmerizing. It is a story that simultaneously evolves on several levels. It is as much a personal story as a public health case study. The reader will be touched by the degree of self-exposure, by the disclosure of how treating AIDS patients affected this young doctor personally, testing his marriage and bringing him guilt-laced satisfaction and pain as his practice grew and patients he befriended died. As the story of AIDS in this rural area unfolds, the reader learns about the complications of the disease, the battle caregivers face, and the fear of AIDS among not only lay people, but also the medical profession. And we see the countryside in which these events unfold. Verghese gives a colorful account of the culture and history of the area and its mountain people, said to be descendants of English outcasts and orphans who were brought to the United States as indentured servants to work on the tobacco plantations. A hard life, perhaps in some ways harder than living with AIDS, but not immune from it.

The setting, perhaps, does not fit the average rural U.S. town. No description of a single community would. The Johnson City Medical Center, with its easy access to ambitious, intelligent interns (many, like the author, foreign born), has its advantages over the nearly empty 20-bed hospital, common in some rural towns. The characters are a complicated mixture of coal miners, tobacco farmers, housewives, white-collar professionals, immigrant doctors, rural health care workers, activists, blood recipients, and open and closeted gay men and their partners.

Johnson City is also not typical in that, in the end, the community harbors a disproportionate number of AIDS victims. Some are simply drawn by the innate need to return home, others by Dr. Verghese's reputation or by fear of the effect on their family if they were treated in their home community.

This account illustrates the effect of the high patient-to-doctor ratio on rural areas and a rural physician, causing Dr. Verghese to leave after 4 years. The book also shows how the increasing dependence in rural areas on foreign-trained physicians creates an unlikely subculture in some rural communities.

*My Own Country* contains no graphs, tables, or maps and no footnote, index, or bibliography. Still, it informs even the experts.

*Reviewed by Anicca Jansen, a USDA economist currently on loan to the U.S. Agency for International Development. Prior to graduate school, Dr. Jansen worked as a nurse in rural Minnesota. In 1988, a long-time friend moved from Washington, DC, to his hometown in rural Minnesota, where he died of AIDS-related complications. His mother told friends he died from cancer.*

## ***The Handbook of Research Synthesis***

Harris Cooper and Larry Hodges, Editors. New York: Russell Sage, 1994. 574 pages. ISBN 0-87154-226-9 (cloth) \$49.95. To order, call 1-800-666-2211

One often needs to know something about the effect of a particular policy or variable or treatment. Do welfare payments decrease work effort, and if so, by how much? Do farm subsidies result in more intensive cultivation, and if so, what is the size of the effect? Do legislated minimum wages lower employment of teenagers, and, if so, is the effect large or small?

To find out, we are likely to turn to an empirical literature containing many studies. The studies do not always agree about the existence of an effect or its direction. Even studies agreeing about direction of effect may exhibit considerably different effect sizes. How is the conscientious reader to distill the "weight of the evidence" from these disparate results?

This problem of making systematic inferences from a sizable empirical literature has received little explicit attention from my discipline, economics. Yet the formal statistically based study of this problem has been going on for several decades in psychology/educational research and has more recently been extensively dealt with in the biostatistics/medical research literature about clinical trials. Moreover, the current "state of the art" is quite impressive. The term "meta-analysis" is widely used in those disciplines to describe the "statistical analysis of a collection of analysis results from individual studies for the purpose of integrating the findings." (*Handbook*, p. 537).

*The Handbook of Research Synthesis* contains 32 original articles that describe current practice in research synthesis in the meta-analysis tradition. This volume will be of great interest to readers like me (an interested observer rather than a meta-analysis practitioner) and to those actively engaged in carrying out meta-analyses. For the practitioner, it provides a reference volume describing state-of-the-art practice in matters running from the nitty-gritty of coding large samples of studies to statistical techniques for "combining significance levels." "Combining" involves making a judgment about the overall level of an effect's statistical significance implied by the entire collection of studies. For the interested observer who has faced these "weight of evidence" problems and wants to see how this unfamiliar literature deals with them, this book provides an excellent resource likely to yield numerous useful insights.

The book's 32 chapters were written by 43 contributors; 18 chapters have single authors. Author affiliations include university departments of biostatistics, education, epidemiology, exercise science, human resources, management, mathematics, occupational therapy, psychiatry, psychology, public policy, and statistics and several private firms. Twelve contributors are from psychology and nine are from mathematics/statistics/biostatistics departments. The volume is divided into 10 sections. Besides the introduction and summary, the book includes the following sections: "Formulating a Problem for Research Synthesis," "Searching the Literature," "Evaluating the Literature," "Statistically Describing and Combining Studies," "Statistically Analyzing Effect Sizes," "Special Statistical Issues and Problems," "Reporting the Results of Research Synthesis," and "Tying Research Synthesis to Substantive Issues."

A problem I have worried about, and written about, with respect to economics is publications bias: the idea that the selection of studies actually published is a biased sample of all studies ever undertaken. The psychology and clinical trial literatures sometimes refer to this as the "file drawer problem," a term in use since at least the late 1970's; negative results are "dumped in a file drawer" and never published. Many chapters discuss the publications bias problem, but three particular contributions are worth mentioning.

1. An excellent chapter on publication bias by Colin Begg discusses different types of bias (for example, is the bias associated with effect size or is it associated with significance levels?) and different statistical techniques for coping with it.

2. Both the Begg chapter and one on "Visual Presentation and Interpretation of Meta-Analyses" present a graphical technique known as a "funnel diagram." This is a highly effective way of displaying how variation in sample size across studies can affect measured results. Moreover, the shape of the funnel diagram provides a simple and effective way of diagnosing whether certain kinds of publications bias are present in published literature.

3. In the clinical trials literature, publications bias can result in misleading findings that treatment therapies are effective, when use of full samples (including unpublished clinical trials) show that the same treatments are not effective. So-called "research registers" of clinical trials make such studies possible by identifying trials whose results are not published. While I knew about the bias in clinical trial results before reading this volume, its chapter on "Research Registers" immensely increased my understanding of the nature, incidence, reasons behind, and status of research registers. To cite one of many interesting tidbits: although MEDLINE, a major medical database on published studies, includes 92 percent of published reports identified in a research register, a MEDLINE search by a trained information specialist failed to turn up 44 percent of known trials of intra-ventricular hemorrhage and 71 percent of known trials of neonatal hyperbilirubinemia, suggesting a problem with the process of MEDLINE search.

Quite apart from the material on publications bias, there is a wealth of interesting material on how to statistically evaluate the "weight of the evidence" in a sizable sample of studies with seemingly diverse statistical results. A simple example from the chapter on "Combining Significance Levels" may help whet the reader's appetite. Suppose five available studies show the effect of a particular treatment to be significant at the following levels (that is, to have  $p$  values of): 0.016, 0.067, 0.250, 0.405, 0.871. Using a 5 percent significance level, the first-listed study shows a significant effect, the second "just misses," and the other three are "far from" significant. But how can the "overall significance" of the effect measured by these five studies taken as a whole be evaluated? The chapter presents a variety of formal statistical tests for the combined significance of this set of studies. Formulas are provided for 16 different tests: when four of them are applied to this five study example, three of the four indicate that the null hypothesis of no effect cannot be rejected. This chapter, by Betsy Jane Becker, also does an excellent job of laying out what these tests mean and how results are sometimes misinterpreted.

An analogous problem involves effect sizes; what does a series of studies, each reporting somewhat different sizes of effects, have to say in combination about the likely "real" effect size? Separate chapters deal with this issue.

Equally interesting examples of the use of statistical techniques to help evaluate the "weight of the evidence" could have been drawn from at least four of the other statistical chapters. A particularly helpful unifying feature is the use of the same three data sets to carry out examples in the various statistical chapters. Data set II, for example, contains 19 studies (randomized experiments) on the effects of teacher expectancy on pupil IQ.

On a quite different plane from the statistically oriented chapters, the introductory and summary chapters present brief but useful historical information about the development of the meta-analysis research synthesis approach and useful overviews of the state of the art.

I conclude with two cautionary notes. In my view, the most significant contribution of this volume involves statistical issues. To benefit from this material, the reader must have a firm grounding in basic statistics and a willingness to slog through material that makes use of this knowledge.

The second cautionary note concerns the "transferability" of the techniques displayed here to disciplines such as economics. Some of the ideas and techniques that seem very appealing for psychology experiments or clinical trials do not seem immediately applicable to a field like economics. Research registers that allow enumerations of (unpublished) studies work for clinical trials because a clinical trial is a large, discrete, highly visible event. The analogous publications bias problem in economics involves multiple computer runs or unpublished statistical studies. But, because such computer runs or statistical studies are not large-scale, highly visible, discrete undertakings, registering all of them is simply not reasonable. A second example involves funnel diagrams. Their ability to diagnose publications bias derives from the existence of a large number of small-sample studies, combined with some larger sample studies. But many econometric studies in economics are done on very large survey samples, such as the Census of Population and Housing or Current Population Survey household surveys: there simply are not large quantities of small sample studies to use for the funnel diagram.

Even if the transferability of some of these techniques to fields like economics is limited, those with a grasp of basic statistics who are interested in the problems of drawing "weight of evidence" inferences from sizable empirical literatures will find this volume interesting, thought provoking, and useful.

*Reviewed by Robert S. Goldfarb, a professor in the Department of Economics at George Washington University.*

### ***Effective Communication: A Local Government Guide***

Kenneth M. Wheeler, editor. Washington, DC: International City/County Management Association, 1994. 260 pages. ISBN 0-87326-094-5 (paper) \$36.00 plus \$3.50 handling charge. To order call, 1-800-745-8780.

This book's purpose, stated in its Foreword, is "... to provide local government administrations and employees with clear and succinct guidelines to communicating successfully as they perform the work of local government." This is an extensively revised version of *Effective Communication: Getting the Message Across* that ICMA published in 1983. Half the book is devoted to communicating with four important audiences: voters, elected officials, government employees, and the media. The chapter on the media is especially useful, covering all aspects of media relations. Included are suggestions on how to build a working relationship with the media, how to handle news conferences, and legal issues in media relations.

The Guide stresses the importance of having a comprehensive communications plan. The second half of the book covers a variety of techniques and tools that can be used in a communications plan. Many management basics are touched on here, including interpersonal communication and making presentations. Also discussed are how to create effective local government publications and how to use cable television as part of a communications strategy. Many examples from various communities are used throughout the Guide, and an extensive annotated reference list is provided.

### ***Rural Economic Development, 1975-1993: An Annotated Bibliography***

F. Larry Leistritz and Rita R. Hamm. Westport, CT: Greenwood Press, 1994. 320 pages. ISBN 0-313-29159-4 (cloth) \$65.00. To order, call 1-800-225-5800.

This bibliography identifies major publications on the process of economic development and economic revitalization strategies that pertain to nonmetro areas. It covers works published in professional journals, books, university research reports, extension reports, conference proceedings, government reports, and

unpublished papers accessible to the general public. Thus, it provides a starting place for students of rural development who are interested in the forces affecting various economic sectors (agriculture, manufacturing, recreation/tourism) and types of firms (high tech, telecommunications), their potential for contributing to rural economic development, and economic development policies and strategies that could be employed by various levels of government. It includes North American and European literature published in English and emphasizes the period from 1988 to 1993. The book also has author, geographic, and subject indexes which help users quickly identify specific literature from 748 citations. The senior author has published two other annotated bibliographies on the interdependence of agriculture and rural communities and on rural community decline and revitalization that cover literature published during the period from 1975 to 1987. Thus, users may be best served by referring to all three bibliographies.

### ***Proceedings of the Regional Growth and Community Development Conference***

James R. Follain and John P. Ross, editors. Published in *Cityscape: A Journal of Policy Development and Research*, Vol. 1, No. 1, Aug. 1994, U.S. Department of Housing and Urban Development. \$4.00 for this back issue. To order, call 1-800-245-2691 (301-251-5154 in the DC area).

This volume includes papers presented at the Regional Growth and Community Development Conference held in 1993 and sponsored by the U.S. Department of Housing and Urban Development (HUD). Although the purpose of *Cityscape* is to examine urban policy issues, the topics covered are relevant to rural areas. The journal editor (Michael A. Stegman) states that "Economic relationships and interactions occurring within regions, it is clear, have not received sufficient attention. Not enough is known about how a community can stimulate its own growth" (p. iii). Toward greater understanding of these relationships, papers included in this issue cover the topics of poverty (Andrews), industrial development (Henderson), and the importance of industry mix (Garcia-Milà and McGuire). The policy controversy focusing on people or on place is examined, and a literature review of the place-based policies is presented (Ladd). The development triage decision—"...is the return to public investment higher in the slightly wounded places or in those



near death?" (p. 6)—is presented (Ihlanfeldt, Lynn). Other policy issues discussed are the role of various levels of government within the Federal system and the role of the Federal Government in economic development programs (Bartik).

### ***Applied Agricultural Research: Foundations and Methodology***

Chris O. Andrew and Peter E. Hildebrand. Boulder, CO: Westview Press, 1994. 223 pages. ISBN 0-8133-8781-7 (paper) \$35.00. To order, call 1-800-456-1995.

This volume is a revised version of *Planning and Conducting Applied Agricultural Research*, first published by the authors in 1977. The goal of the book is to "... improve the process of problem identification, of selecting alternatives and priorities to help explain and resolve the problem, and the specification of research objectives to effectively and efficiently guide the needed tasks of observation and analysis" (p. 1). Andrew and Hildebrand outline the research process: specifying the research problem, formulating the hypothesis, limiting the project to available resources, determining the research objectives, conducting the research, and finally, communicating the research results.

Although the intended audience is graduate students in agricultural sciences, *Applied Agricultural Research* is general enough to be useful to the novice social science or science researcher. The discussion is nontechnical and covers the fundamentals of implementing a research project. Particularly helpful are the five applied research proposal examples that are provided. Specific topics covered in the book are experimental and nonexperimental data, case studies, and survey data. The book includes references and an index.

### ***The Wilderness Movement and the National Forests***

Dennis M. Roth. College Station, TX: Intaglio Press, 1995, 2nd edition revised. 105 pages. ISBN 0-944091-05-9 (paper) \$14.95. To order, call 1-800-768-5565.

This book is a historical and sociological study of the development and realization of the concept of wilderness preservation on the National Forests administered by USDA's Forest Service.

It begins with early Forest Service efforts in the 1920's to set aside wilderness areas and follows the rise of the citizen wilderness organizations such as the Sierra Club and The Wilderness Society, which became the leading advocates of wilderness preservation from the 1950's to the present. The author presents several detailed case studies that analyze the ways in which contending interest groups—timber companies, miners, ranchers, wilderness organizations, and the Forest Service—attempted to define and implement the provisions of the Wilderness Act of 1964. All of the major precedent-setting political battles are discussed, including the Oregon Wilderness Act of 1984, which presaged the struggle to preserve old-growth forest habitat for the northern spotted owl in the early 1990's. The author is a member of the Rural Economy Division of USDA's Economic Research Service.

### ***Projections of Education Statistics to 2005***

U.S. Department of Education, National Center for Education Statistics. Washington, DC: Government Printing Office, Jan. 1995. Stock number 065-000-00699-5 (paper) \$14. To order, call the nearest GPO bookstore, usually listed in the Federal Government section of your telephone book.

This book shows National Center for Education Statistics projections of national changes in elementary, secondary, and postsecondary teacher numbers and expenditure amounts over the next 10 years. It also provides State projections for public elementary and secondary enrollment and public high school graduates. Readers interested in how the projections were made may call Debra Gerald at 1-202-219-1581.