CHOICES
The magazine of food, farm, and resource issues
A publication of AAEA Agricultural & Applied Economics Association
VOLUME 40 QUARTER 3

Town and Country: Linking Agriculture and the Nonfarm Rural Economies

Steven C. Deller and Mckenzie Boyce

JEL Classifications: R11, O18, Q10
Keywords: Community development, Off-farm income, Rural development
DOI: 10.22004/ag.econ.369388

"At the end of the day, a strong farm economy inarguably contributes to a strong rural economy and makes rural communities a more attractive place to live."
—Tom Vilsack, Former U.S. Secretary of Agriculture (2024)

For generations, agriculture has been seen as the backbone of rural America. The commonly held belief—that farm success directly translates into rural prosperity—has long guided American agricultural and rural development policy. Yet the structure of agriculture and, with it, the relationship between farming and the economic prosperity of rural communities continue to evolve.

The relationship between farming and rural communities is often viewed through the lens of the Goldschmidt Hypothesis (for example, Lobao, Schulman and Swanson, 1993; Lobao and Stofferahn, 2008). This hypothesis suggests that a healthy farm economy, composed of predominantly modest yet vibrant family farms, is both necessary and sufficient for a thriving rural economy. The Goldschmidt Hypothesis and the ensuing policy implications are being challenged (for example, Park and Deller, 2021; Quaicoe et al., 2024). The structure of farming and farm households continues to evolve as farming faces renewed pressures to consolidate to remain economically viable. At the same time, farm households increasingly rely on off-farm income to supplement their earnings from farming and to stabilize family income. For many smaller and medium-sized farms, this additional income has become essential for the survival of the farm household.

Here we examine how the role of agriculture in rural America has shifted and argue for a new perspective: In many communities, it is no longer accurate to say that strong agriculture ensures rural prosperity. In fact, the reverse may now be true—viable farms depend on healthy, diversified rural economies. Thus, rural economic development more broadly should be viewed as an important component of agricultural policy.

The Goldschmidt Hypothesis and Its Legacy

In the 1940s, Goldschmidt (1946) compared two agricultural communities in California's San Joaquin Valley: Dinuba, characterized by small, family-owned farms, and Arvin, dominated by large-scale, industrialized farms. He observed that Dinuba, with its small-scale farms, exhibited stronger social, economic, and civic well-being compared to Arvin, where large farms led to greater economic inequality, reduced community participation, and lowered quality of life. His findings formed the basis of the "Goldschmidt Hypothesis," which argues that less consolidation is better for rural prosperity. While this thinking has contributed to the tendency to equate a healthy farm economy, made up of modest yet vibrant farms, with rural prosperity, there is mixed evidence of whether the Goldschmidt Hypothesis is true.

The academic literature examining the Goldschmidt Hypothesis has led to three key observations. First, studies supporting the hypothesis that rural communities thrive when sustained by farming tend to focus on regions heavily dependent on farming, such as the Great Plains (for example, Gilles and Dalecki, 1988, MacCannell, 1988, Crowley and Roscigno, 2004, Bailey et al., 2021). In contrast, research examining rural America more broadly often finds little evidence of a direct link between farming and community well-being (for example, Green, 1985; Skees and Swanson, 1988; Barnes and Blevins, 1992; Harrison and Getz, 2015; Park and Deller, 2021). Outside of farm-dependent areas, rural economies are typically more diverse, with agriculture playing a smaller role within a broader, more complex regional economy. While farming remains an important part of these communities' identities, local

economies and household incomes rely on a wider range of industries.

Second, while the Goldschmidt Hypothesis focuses on growth in the number of very large farms, it does not account for increasing agricultural diversity across products and scale of operations. For example, the growth in the number of smaller farms is acting as a counterweight to the growth in the number of large farms. How this shift in the distribution of farm sizes (the hollowing out of the middle) impacts rural communities is not well understood and is a compounding factor in mixed academic literature.

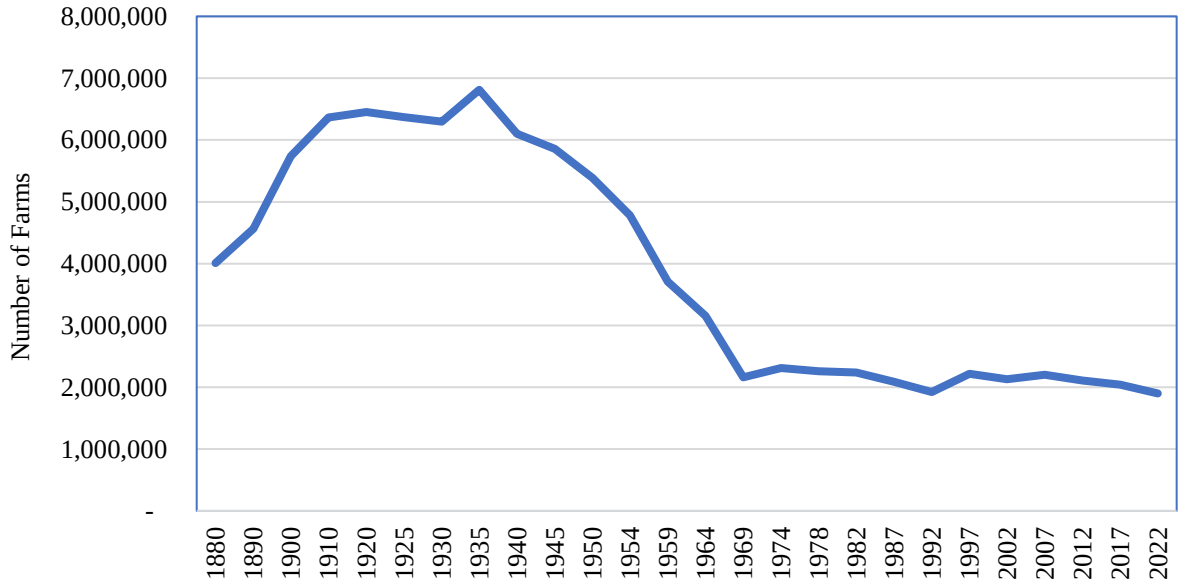
A third factor that has received relatively less attention is the role of off-farm income in the viability of farm enterprises. Off-farm employment has often been pursued for access to benefits, such as health insurance, with any additional income serving as a supplementary benefit to the farm household. The growing importance of off-farm income, beyond access to health insurance, is receiving more attention (for example, Hoppe, MacDonald, and Korb, 2010; Hoppe and Banker, 2010). In a study of farm debt, Briggeman (2011) found that farm income is often insufficient for many farmers to service their debt, and many lenders look for sources of off-farm income as part of their willingness to extend farm credit. In a study of Canadian farmers, Poon and Weersink (2011) found that pursuing off-farm income is a risk management strategy to off-set unstable farm income. Fernandez-Cornejo, Hendricks, and Mishra (2005) found that U.S. farms with higher levels of off-farm income were more likely to adopt new technologies. The rise in off-farm income suggests a reversal of the relationship outlined in the Goldschmidt Hypothesis: Rather than rural communities' economic health depending on a strong farm economy with modest and vibrant farms, the viability of farming may now depend on access to off-farm income, which, in turn, requires a thriving rural economy beyond agriculture.

Restructuring of American Agriculture

In the United States, Jeffersonian democracy has long idealized the “yeoman farmer” and “plain folk” as the backbone of both local communities and the nation—a belief that lies at the heart of the Goldschmidt Hypothesis. For the first 150 years of the country, family farms were the economic foundation, but after peaking at 6.8 million farms in 1935, the number of U.S. farms fell sharply until the early 1970s (Figure 1) and was matched by significant consolidation and growth in average farm size. Starting in the mid-1930s, average farm size, measured by acreage, began to grow largely driven by advances in production technologies (Figure 2).

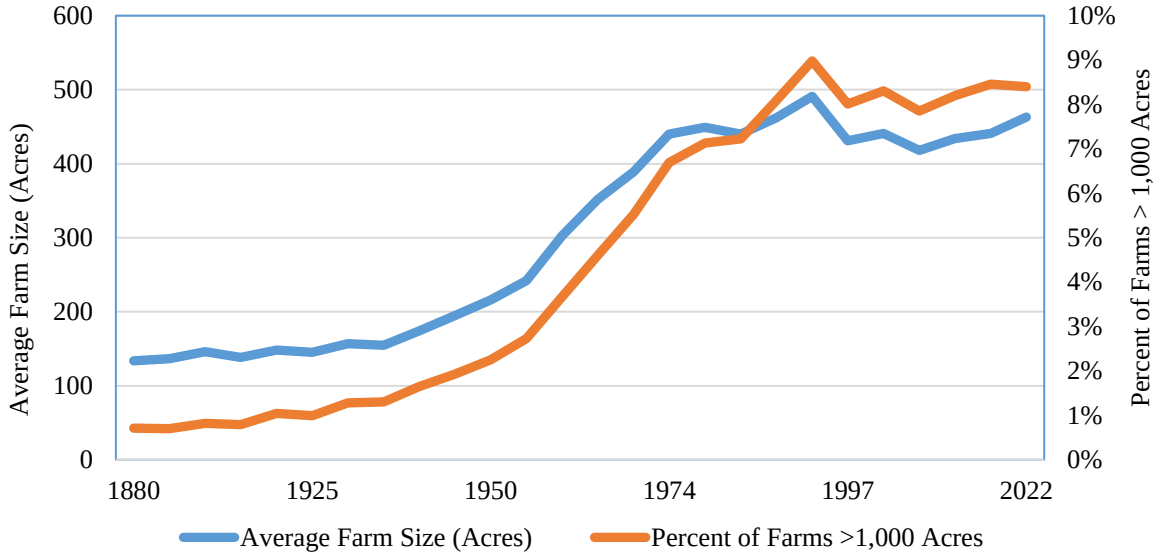
Between 1880 and 1935, the typical U.S. farm spanned approximately 145 acres, but it had peaked at 491 acres by 1992; by 2022, the average farm was 463 acres. Before 1935, only about 1% of farms exceeded 1,000 acres, but 8.4% had surpassed that threshold by 2022. The rapidly falling number of farms during the earlier period reflected growing productivity in agriculture and increased nonfarm employment opportunities (for example, Lin, Coffman, and Penn, 1980; Kislev and Peterson, 1982; Park and Deller, 2021).

Figure 1. Number of Farms in the United States



Source: USDA Census of Agriculture (various years).

Figure 2. Changes in Average Farm Size over Time



Source: USDA Census of Agriculture (various years).

While Gardner (2002) notes that farm consolidation appeared to have slowed in the 1980s, the number of farms throughout the U.S. continues to decline. Since 1982, the number of U.S. farms has continued to decline, but much more slowly, with a 15.2% decline from 1982 to 2022. Even with the unusual increase in the number of farms between the 1992 and 1997 Censuses of Agriculture, the typical rate of decline between the censuses was 1.8%. Increasingly, rapid growth in advanced technologies such as GPS-driven precision farming and robotic milking parlors, developments that generally necessitate larger-scale operations, has fueled a renewed round of farm consolidation and growth in sizes. The percentage of farms over 1,000 acres increased from around 7.2% in 1982 to 8.4% in 2022.

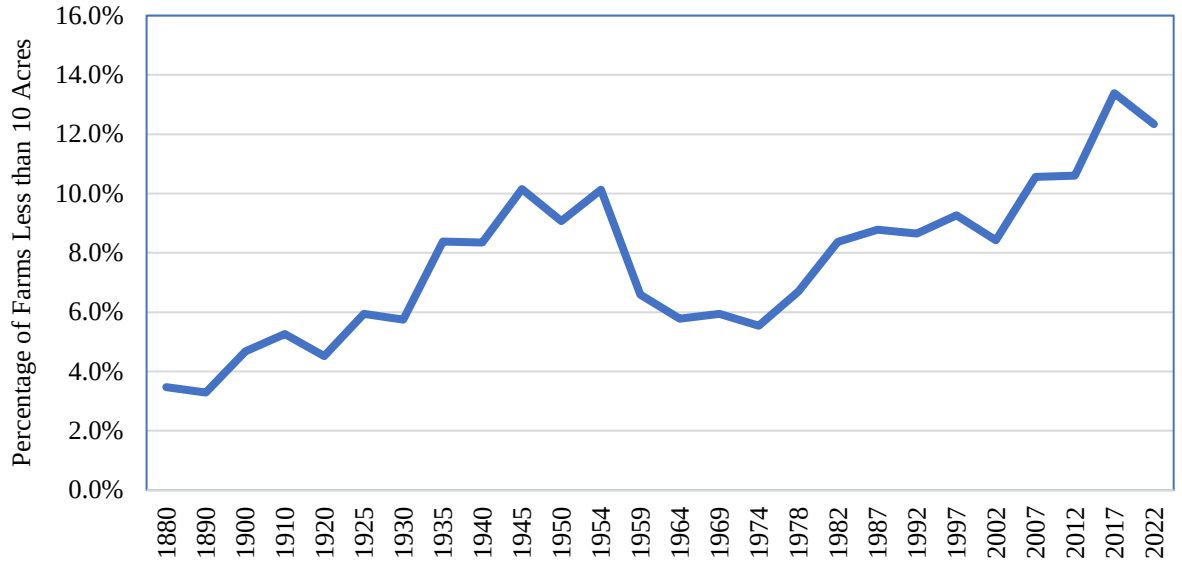
These simple averages (Figure 2) may mask persistent consolidation across agriculture (MacDonald, 2020). If one considers average farm size by cropland, in 1982 only 9,797 farms (0.4% of all farms) had 2,000 or more harvested acres, but by 2022 that number had increased to 67,597 farms (3.6%). Consider the case of dairy farming: In 1982, 0.4% of dairy farms had 500 or more milking cows, yet by 2022 that share had increased to 11.4%. More importantly, dairies with more than 2,500 cows accounted for 44.7% of total milk sales in 2022. Additionally, in the poultry industry in 1982, the share of birds in farms with 100,000 or more birds was 40.9%, but by 2022 that share had increased to 75.4% of all birds. A similar trend emerges for organic agricultural production, with 86% of organic sales coming from farms with more than $500,000 in total sales. Clearly, there remains strong growth in the number and scale of the largest farms.

At the same time, there is growth in the number of small farms. Using the percentage of farms operating less than 10 acres, other than a period in the 1950s and 1960s, there has been a historically consistent upward trend in these smallest of farms (Figure 3). In the post–World War II period, the lowest point was in 1974, where 5.5% of farms operated less than 10 acres; by 2022, the share had increased to 12.3%. This has created a “barbell” distribution in American agriculture: A few very large farms at one end, many very small farms at the other end, and a hollowing out of the middle (Figure 4). In 1982, 64.4% of farms operated 50–999, acres but by 2022 the share of farms that could be considered “middle scale” had declined to 49.4%. The relative share of midsize farms has declined, yet the biggest growth has been in the smallest farms, not the largest. This shift matters because the midsized family farm has historically served as both a cultural icon and economic pillar of rural life. As that sector declines, rural economies must increasingly look beyond agriculture to maintain vitality.

Rise of Off-Farm Income

One of the most profound shifts in rural livelihoods is the increasing reliance on off-farm income among farm households. From the 2022 Census of Agriculture, 58.1% of farmers (operators) reported that farming was not their primary occupation and 39.7% reported working 200 or more days a year off the farm. This is a noticeable increase from 1982, where 44.9% of operators reported that their primary occupation was something other than farming and 34.6% worked off-farm 200 or more days a year. When matched with the growth in the number of smaller farms over the 1982–2022 period, a reasonable follow-up hypothesis is that a

Figure 3. Percentage of Farms in the U.S. Less than 10 Acres

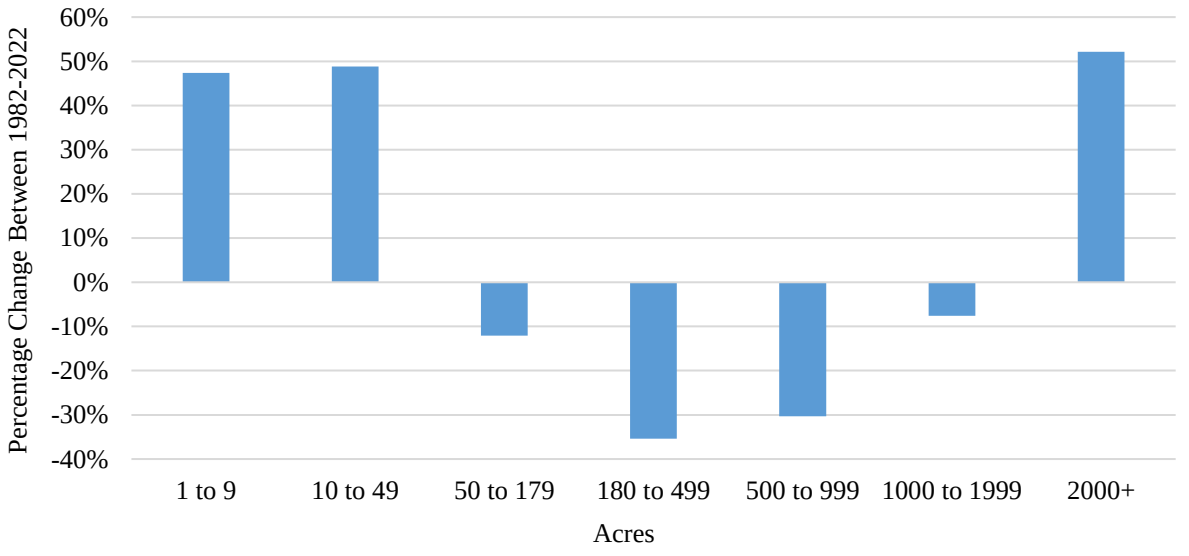


Source: USDA Census of Agriculture (various years).

sizable number of farms are something other than the farmer and farm family's primary source of personal income. Operator's off-farm employment is primarily in construction, manufacturing, or agriculture, forestry, fishing, hunting, or mining industries, with many operators serving in professional and management occupations, perhaps related to the knowledge and skills gained from operating their farm enterprise (Brown and Weber, 2013). Farm-operator spouses often work in the education and healthcare sectors (Brown and Weber, 2013).

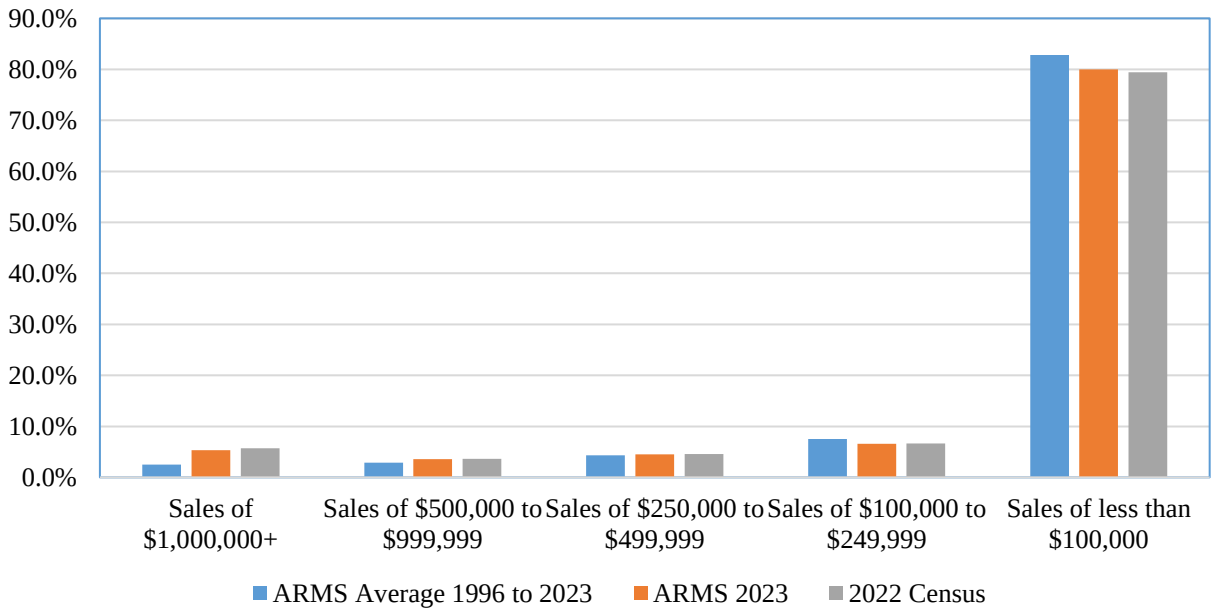
While the Census of Agriculture data are an excellent source of information about the farm and select operator characteristics, they do not provide insights into the dynamics of the farm family or household. Alternatively, the USDA Economic Research Service (ERS) Agricultural Resource Management Survey (ARMS) conducted annually by the National Agricultural Statistics Service (NASS) since 1996 provides a comprehensive overview of the economic and structural characteristics of U.S. farms and is a primary source of data on the financial condition and economic well-being of farm

Figure 4. Changes in the Distribution of Farm Size by Acres, 1982–2022



Source: USDA Census of Agriculture (1982, 2022).

Figure 5. Distribution of Farms by Sales



Source: USDA Census of Agriculture and Agricultural Resource Management Survey (ARMS).

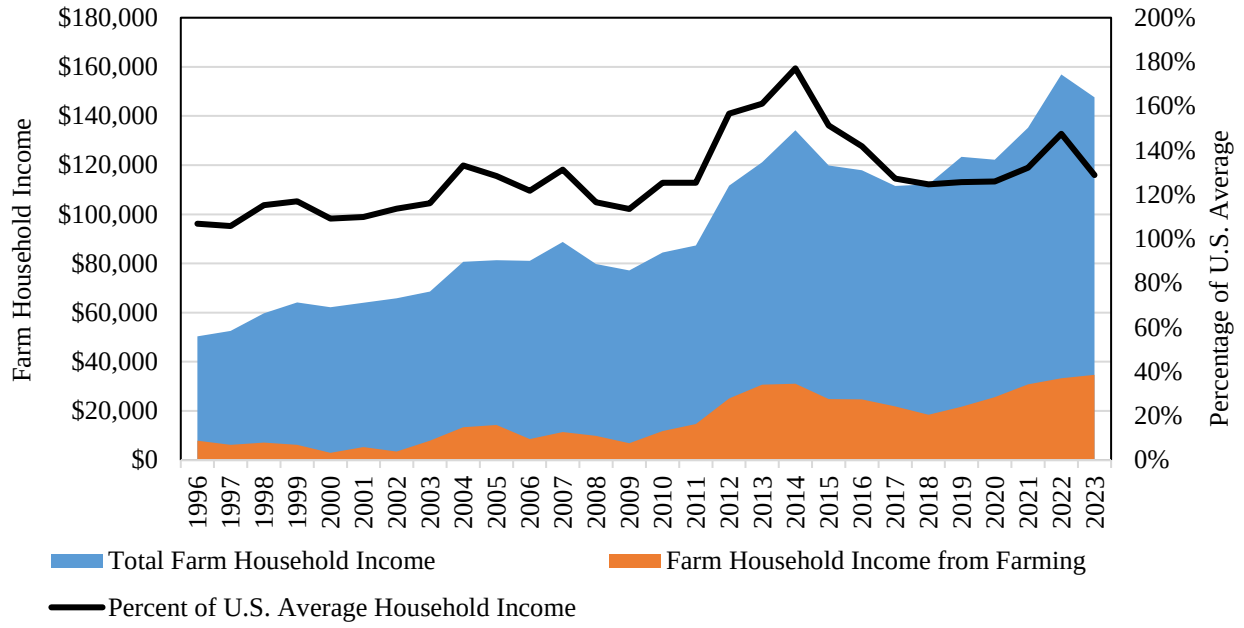
households in the United States. NASS surveys approximately 30,000 farms annually from the 48 contiguous states to ensure representation of all farm sizes and types, using the Census of Agriculture as the primary reference point. As such, the distribution of surveyed farms by size, in this case measured by sales volume, comprising the ARMS data closely mimics the census (Figure 5). It is important to note that four out of five farms have sales of less than $100,000, while only one in 20 have sales of more than $1,000,000. This distribution of farms by sales is consistent with the observation above that we are seeing growth in the smallest and largest farms and a "hollowing out" of the middle of the distribution.

Considering first the total income of farm households, regardless of farm sales, three patterns emerge (Figure 6). First, while there are short periods of farm household income decline (2013–2016), overall nominal income to the farm household has been trending upward. Second, compared to the national average household income, the typical farm household has relatively high income levels. Over the entire period the ARMS data are available (1996–2023), the typical farm household income was 128.2% of the national average household income, with a peak of 177.1% in 2014 to a low of 105.8% in 1997. For the largest farms, those with over a million dollars in sales, the average farm household income over the whole of the time-period was $424,554, which is 591.4% of the national average household income. Even for farms with sales below $100,000, the average farm household income over the 1996–2023 period was $80,008, which is 108.7% of the national average.

The third pattern, and perhaps the most relevant, is that the typical farm household, regardless of sales, received most of its income from off-farm sources. Over the whole period, 84.2% of farm household income came from off-farm sources. The lowest level of dependency on off-farm income was in 2013, when 74.7% of farm household income was from off-farm sources; the highest level of dependency was in 2000 at 95.4%. When we examine this level of dependency on off-farm income across different sales categories, two patterns emerge (Figure 7). First, nearly all farms, regardless of sales, generally have some off-farm income. It may be the case that even for farms with the largest sales off-farm employment ensures access to health insurance. In a study of farm households' access to health insurance, Ahearn, El-Osta, and Mishra (2013) find that most farm-operator households have access to health insurance and that most of those households allocate time to off-farm employment that often provides employer-sponsored health insurance.

Second, the level of dependency on off-farm employment for household income declines for farms with higher sales. For example, for the largest farms, those with sales over $1 million dollars, off-farm income accounts for an average of 14.0% of total farm household income, over the 1996–2023 period, but for the farms with sales of less than $100,000, farm household income averages 103.8% from off-farm employment. In essence, these farms tend to lose money, and the off-farm employment is subsidizing the farm enterprise. This latter point is particularly relevant because four in five farms (Figure 5) fall into this category. One could reasonably conclude that the

Figure 6. Farm Household Income

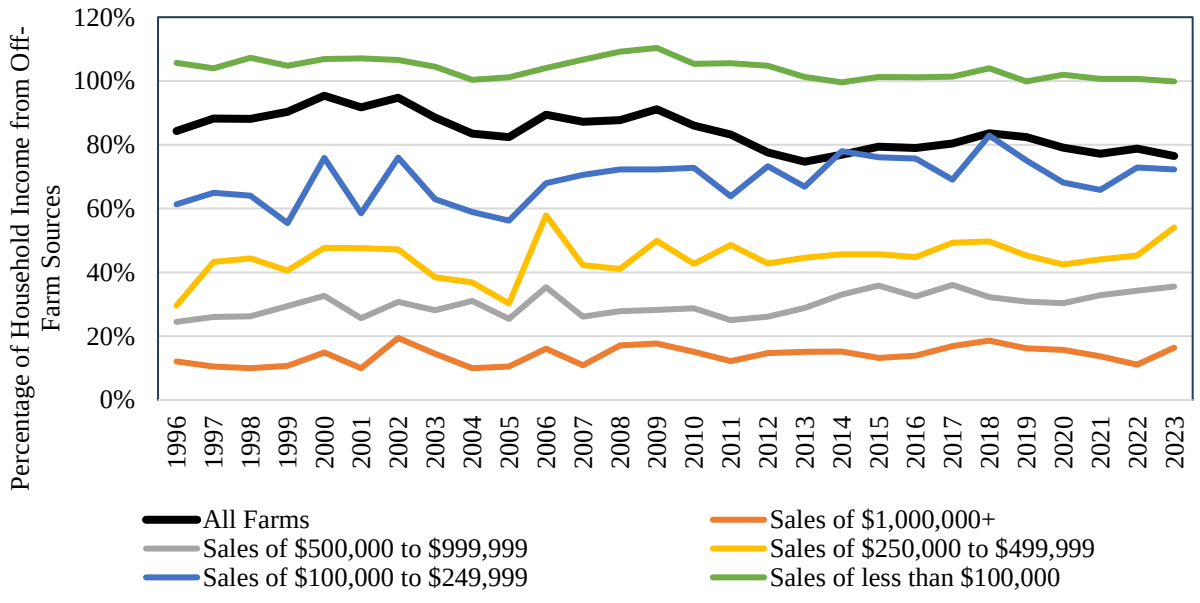


Source: USDA Census of Agriculture and Agricultural Resource Management Survey (ARMS) (various years).

viability of off-farm employment enables these more modest-sized farms to remain in operation.

One of the challenges of studying farm economics and the well-being of farm households is a matter of definition: At what point is a farm a viable economic enterprise or is the farm better thought of as a "hobby farm" or "lifestyle farm"? The USDA defines a "farm" as any place that has the potential to produce and sell at least $1,000 of agricultural products in a year. In contrast, the U.S. Internal Revenue Service classifies a farm as a business if it is actively cultivating, operating, or managing land for profit and must show a profit in 3 out of 5 years.

Figure 7. Percentage of Farm Household Income from Off-Farm Sources by Farm Size



Source: USDA Census of Agriculture and Agricultural Resource Management Survey (ARMS) (various years).

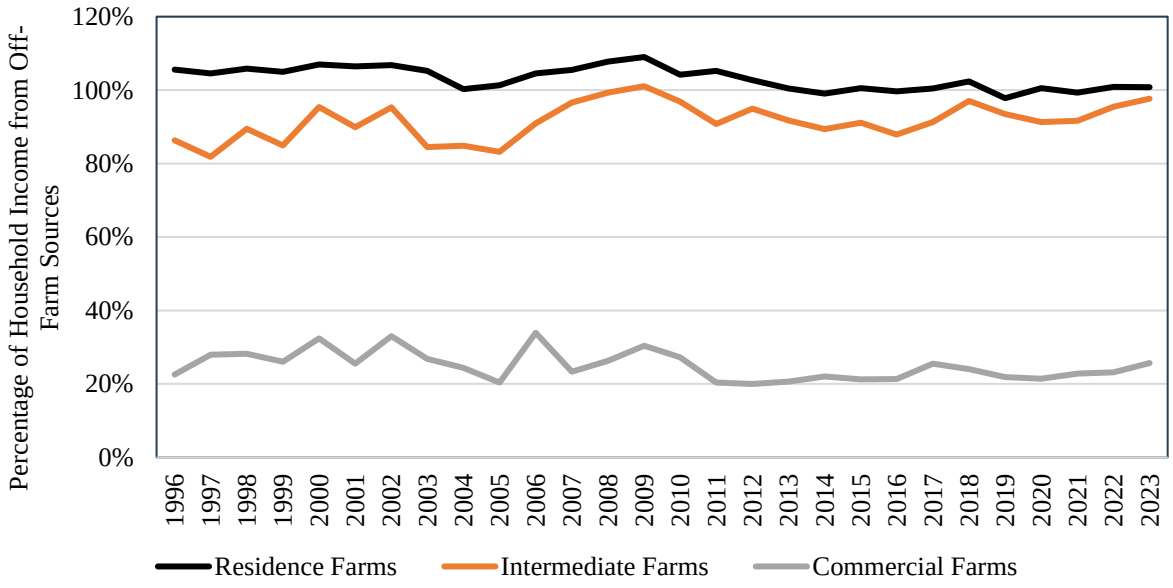
To better address this concern around commingling "hobby" or "lifestyle" farms with viable commercial enterprises, Whitt, Todd, and MacDonald (2020) used the detailed ARMS data to develop a more refined classification of farms: residence farms, intermediate farms, and commercial farms. Here a residence farm has sales of less than $350,000 gross cash income and the principal operator is retired or has a nonfarm primary occupation. Intermediate farms are those with sales of less than $350,000 gross cash income and the principal operator's primary occupation is farming. Finally, commercial farms have sales of $350,000 or more gross cash income as well as nonfamily farms. While this classification is helpful, whether the farm is a viable business and a "hobby" or "lifestyle" farm remains somewhat subjective. For example, a "residence farm" may provide a second income for the family, which is profit-motivated.

Using this alternative classification of farms within the ARMS data, 58.8% of farms over the 1996–2023 period (52.2% in 2023) could be thought of as residential farms, while over the same period 32.8% of farms (37.0% in 2023) are classified as intermediate farms. Only 8.4% of farms (10.8% in 2023) could be considered commercial farms. Since 2007, there has been a slight downward trend in the share of the farms in the ARMS survey that are residential, with an uptake in the number of intermediate farms and a modest increase in the share of commercial farms. It is not clear whether these recent trends reflect changes in farming or in the ARMS sample.

With this reclassification of farms, farm household dependency on off-farm employment for income is still prevalent (Figure 8). Over the whole 1996–2023 period, households with intermediate farms were dependent on off-farm employment for an average of 91.6% (97.6% in 2023) of total income whereas households associated with commercial farms received about 24.9% (25.7% in 2023) of total household income from off-farm employment. It is not unexpected that households associated with residence farms received an average of 103.2% (100.8% in 2023) of their income from off-farm employment. Again, all but the largest commercial farms are highly dependent on off-farm income for household income. The average household with a residence farm uses their off-farm income to subsidize their farm.

While off-farm income is an important consideration across all farms on average, the geographic variation of agriculture across the United States contributes to greater dependency on off-farm income for some regions. For example, in states like Nebraska, Illinois, and Iowa, large-scale operations dominate the agricultural sectors, where farms with gross sales of $100,000 or more make up 45.2%, 37.2%, and 43.9% of total farms in each state, respectively (2022 Census of Agriculture). These large-scale operations tend to be less dependent on off-farm income sources to sustain the farm and farm household. Alternatively, places like North Carolina, Missouri, and Texas tend to have smaller-scale, more diversified farms with farms grossing $100,000 or more in sales making up only 18.4%, 15.6%, and 0.08% of total farms in each state, respectively (2022 Census of Agriculture). Thus, in

Figure 8. Percentage of Farm Household Income from Off-Farm Sources by Farm Type



Source: Census of Agriculture and Agricultural Resource Management Survey (ARMS) (various years).

aggregate, producers in these states are likely to have a greater dependence on off-farm income.

Rethinking Farm Viability and Rural Policy

The data challenge long-held assumptions about the relationship between farming and rural community well-being. The size and structure of U.S. farms has changed: There is growth in the number of small farms, which could be associated with growing interest in "lifestyle" or "hobby" farms, and a handful of very large farms. Other than farms with sales of over $1 million, the majority of farm household income comes from off-farm sources. Regardless of farm sales, the average farm household has about $4 of every $5 in household income coming from off-farm employment. Even the highest sales farms depend on off-farm employment for some of their income. Thus, while farming contributes to the identity and culture of rural communities, sustaining rural economies and farm households lies beyond a healthy farm economy.

Here rather than the widely held belief that a healthy farm economy is the foundation of a thriving rural America; the opposite holds true. A viable farm requires a financially stable farm household that is dependent on a strong nonagricultural dependent community. The viability of the local economy is necessary for a viable farm economy.

To ensure the economic vitality of farms the economic health of the farm family, or household, must be stable. If the farm household is financially unstable, the farm enterprise becomes unviable. To support the economic vitality of farm households, policies must support diversified employment opportunities in rural areas. For example, communities may invest in broadband expansion to increase access to remote jobs, or a community may focus on creating a strong entrepreneurial ecosystem in their community to support small business growth. Ensuring access to stable, well-paid off-farm jobs is crucial to maintaining the viability of most farms.

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About the Authors: Steven Deller (scdeller@wisc.edu) is a Professor with the Department of Agricultural and Applied Economics, and an Economic Development Specialist at the University of Wisconsin-Madison. Mckenzie Boyce (mckenzie.boyce@wisc.edu) is a PhD Candidate with the Department of Agricultural and Applied Economics, at the University of Wisconsin-Madison.

Acknowledgments: Financial support for the research, authorship, and publication of this article comes from the United States Department of Commerce Economic Development Administration in support of Economic Development Authority University Center [Award No. ED21CHI3030029].

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