



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

## Understanding Tax Reform in Minnesota

Laura Kalambokidis

Minnesota is in the midst of a wave of interest in reforming the state tax system. In response to taxpayer input gathered at numerous public meetings, the Minnesota Department of Revenue (DOR) has developed proposals designed to make the tax system fairer, simpler, and more favorable to prosperity. Governor Ventura has proposed that the state 1) shifts K–12 education funding away from local property taxes to some other tax, 2) reduces income-tax rates, and 3) lowers the rate and broadens the base of the sales tax. The Citizens' League has recommended that property-tax relief be more carefully targeted to low-income households. Finally, Minnesota has joined 38 other states in seeking to simplify general sales taxes and to adopt a model sales-tax system.

It seems that every major component of the state tax system is being considered for reform, including the sales tax, property tax, corporate franchise tax, and individual income tax. For each tax, numerous options are on the table. How are Minnesota taxpayers to understand and assess the array of possible outcomes of the reform process? This article will explain some of the options and provide some guidance for evaluating tax-reform proposals.

### Why Reform the System?

The objectives of the current reform effort are consistent with the basic principles of tax reform: fairness, simplicity, and promoting prosperity by restricting the influence of taxes on individuals' economic decisions. As with other major tax changes, reforming Minnesota's system is complicated by tensions among these principles. For example, provisions that enhance fairness, such as Minne-

sota's Working Family Credit for low-income families, also introduce complexity. In addition, the tax system is often used to pursue important social and economic goals such as home ownership and education. The resulting special deductions, credits, and rates can conflict with all three of the basic tax-reform principles. In any tax-reform effort, policymakers and citizens must consult their own values to balance these competing goals.

### Reduce Complexity

Tax reform has risen to prominence in Minnesota for several reasons. First is a widespread perception that some parts of the state tax system have grown unnecessarily complex. Taxpayers complain that some Minnesota taxes—especially the property tax—are exceedingly hard to understand and ought to be simplified.

Indeed, simplifying taxes can have numerous benefits. A more understandable tax system reduces taxpayers'

(See *Taxes* on page 2)

## Wage Changes in the Pork Industry: How Did Minnesota Workers Fare?

Terrance Hurley and Pascal Elisabeth

The nation's pork industry has experienced turbulent change over the past decade. Smaller operations that rely almost exclusively on family labor have largely been replaced by larger operations that hire skilled labor to take advantage of new technologies. The result is a market that provides new jobs for skilled workers in rural communities, while often leaving unskilled workers behind.

Understanding wages and wage growth in this emerging labor market is useful for producers, their employees, and rural communities. Producers can use wage information to determine whether they pay enough to attract and retain skilled employees, and whether their wages are too high to remain competitive. Current and prospective employees can determine whether their wages are fair, or whether it is better to seek employment elsewhere. And rural communities can determine whether hog-production facilities will help the local economy; for example, if wages in the pork industry are low and growth poor,

communities may be better off looking to other industries for economic growth.

### Wage Determinants

Why do some people working in the same jobs earn higher wages than do others? The answer depends on many factors, but four in particular seem to account for many of the observed wage differences.

First, the more people know, the more they earn. What people know is often referred to as a person's "human capital"—and good indicators of what he or she knows are the numbers of years spent 1) in formal education, 2) in the world of work, and 3) at the same job with a specific employer. And just as a

(See *Wages* on page 5)

(Taxes from page 1)

compliance costs and the government's administrative costs. Under a simpler system, it is easier for taxpayers to predict what their taxes will be, which simplifies their financial planning. A simple, transparent tax system can also improve the perceived fairness of the system, as taxpayers wonder less about whether they are being treated differently than someone else. Despite these arguments, and despite nearly universal support for tax simplification in theory, simplification can be difficult for lawmakers to achieve in practice.

### **Increase Taxpayers' Sense of Fairness**

Related to taxpayers' impatience with tax complexity is a concern that Minnesota's tax system includes many special benefits (the state's DOR has identified 292 of them) for particular taxpayers, and that those special benefits harm the system overall. Special deductions, rates, and credits are intended to enhance fairness or influence taxpayers' decisions, steering them toward choices that are consistent with social and economic goals. For example, Minnesota allows tax deductions for charitable contributions and provides tax credits for families with certain types of educational expenses. Influencing taxpayer behavior, however, causes distortions in the economy that can limit economic growth. Preferential treatment for particular activities or taxpayers also increases tax complexity and narrows the tax base, requiring higher tax rates overall.

It is good practice to periodically examine preferential tax provisions to determine whether the social and economic benefits they provide exceed the costs to the efficient operation of the tax system and the economy. Eliminating special tax benefits, however, is rarely easy, as each provision is, or once was, justified by some policy goal or particular political interest. The current recipients of those benefits will surely resist change.

### **Prevent Erosion of Tax Base**

Another reason for the growing interest in reforming state taxes—in particular, sales taxes—is the erosion of the sales-tax base. Over the last few decades, families have significantly increased the share of their total expendi-

tures that goes to services, while reducing the share they spend on physical goods. Minnesota's general sales tax, however, *exempts* most services, including financial, legal, and home-improvement services. For states like Minnesota, the trend toward a service economy has meant a steady wearing away of the sales-tax base. Consequently, Minnesota's general sales-tax rate is one of the highest in the country, and is tied to one of the narrowest bases. This has prompted lawmakers to consider a variety of base-broadening measures.

Sales-tax bases have also been threatened by the growth of interstate sales, including sales made over the Internet. Sellers argue that the wide and varying assortment of state and local sales-tax rates, bases, and regulations make it impossible to accurately calculate and collect taxes on Internet sales. The potential loss of these sales taxes has prompted a coalition of 39 state governments, including Minnesota, to form the "Streamlined Sales Tax Project." The goal of the project is to simplify and conform state tax systems in order to make collection of taxes on Internet and other interstate sales more feasible.

## **Criteria for Evaluating Tax-Reform Proposals**

Evaluating a far-reaching tax reform can be daunting. Proposals are complex, their effects are unclear, and the evaluation criteria conflict with one another. A few guidelines can help us assess the net impact.

### **Start With a Picture of the Current System**

In 2001 Minnesota's combined state and local taxes will amount to an estimated \$17.7 billion (figure 1). Of this total, the largest portions are the statewide individual income tax (33 percent), local residential and commercial property taxes (30 percent), and statewide (and some local) general sales taxes (25 percent). It is easy to see that significant changes in any of these three taxes could have important effects.

### **Is the Current System Fair?**

The notion of fairness is highly subjective, and there is no consensus among economists on how it should be defined or measured. A commonly used measure is the distribution of the tax burden

among taxpayers at different income levels. Some people view a tax as fair if all households pay roughly the same percentage of income in taxes—regardless of their income—because all households are thereby treated equally. Such a tax is said to be flat, or proportional. Others feel that taxes should be imposed according to households' ability to pay taxes. This argument suggests that a fair tax is one that requires high-income families to pay a larger share of their income in taxes than low-income families. Such a system is called progressive. A system is said to be regressive if the share of income paid in taxes falls as income rises.

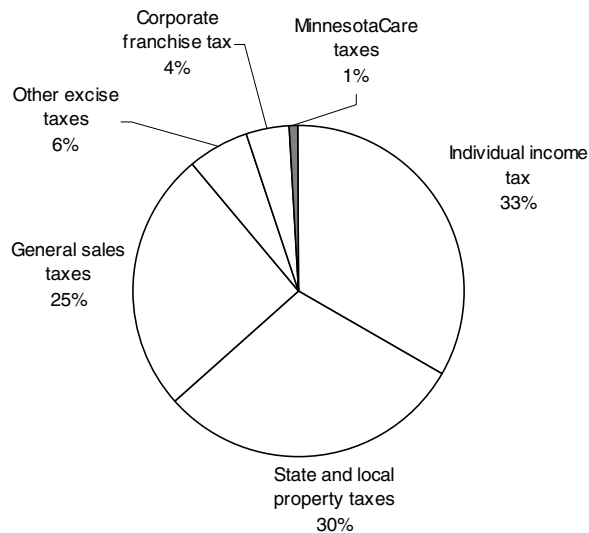
Of course, income is not the only characteristic that differentiates households. Tax changes can shift burdens between homeowners and renters, workers and retirees, single people and families with children, and metro and rural households. But it is the income dimension that captures most of the public attention.

Not all of the \$17.7 billion in 2001 taxes shown in figure 1 is paid by Minnesotans. An estimated 16 percent will come from individuals and businesses located outside Minnesota. And while some taxes are collected from businesses, all taxes are ultimately paid by individuals. Businesses may pass taxes to workers in the form of lower wages, to customers in the form of higher prices, or to investors in the form of lower rates of return. To estimate the distribution of the tax burden, therefore, we need to make assumptions about which households bear the final burden of taxes imposed on businesses, as well as about how much of the tax will be paid by non-Minnesotans.

### **Minnesota's Tax System Today Is Roughly Proportional**

In its *1999 Minnesota Tax Incidence Study*, the DOR showed that for low- and middle-income households, the percentage of income paid in Minnesota state and local taxes tends to rise as income rises. For higher-income households (those with incomes over about \$80,000), however, the share of income paid in state and local taxes falls as income rises. In other words, Minnesota's tax system is progressive over much of the income distribution and regressive at higher income levels. Taken overall, however, Minnesota's tax system is

**Figure 1. Percentage of total tax derived from various types of taxes in Minnesota in 2001**



nearly flat.

While the entire tax system may be flat, each component tax has a different distribution. For example, because low-income households tend to spend a larger share of their incomes than high-income households, retail sales taxes tend to be regressive. That is, the share of household income paid in sales taxes tends to rise as income falls. In contrast, Minnesota's state income tax includes provisions—such as graduated tax rates and the Working Family Tax Credit that reduce the tax burden on low-income households—that make income tax relatively progressive.

## Evaluating Tax Reforms as a Package

Major tax-reform proposals will likely include changes in more than one tax. The discussion of tax distributions highlights an important point about sweeping tax changes: different components of a tax proposal may have different effects. Even if a proposed reform were to leave the total tax burden the same, shifting revenue from one type of tax to another could affect the overall distribution of taxes among households of different income levels.

### Different Taxes May Cancel Each Other Out

An increase in a family's share of one tax might be mitigated by a change somewhere else, implying that the fairness of an entire tax package might be quite different than the fairness of a single component. In addition, cuts in

one tax would have to be made up by increases in another, if revenue is to remain the same. Therefore, if a reform proposal includes several components that are likely to emerge intact from the legislature, the package should be evaluated in its entirety.

### Questions Families Should Ask About Any Tax Reforms

First, a taxpayer may want to decide whether a proposal would be sound policy by asking whether it is consistent with the basic tax-reform principles discussed above. Would the proposed change make the tax system more or less fair, more or less complex, and would the change enhance or hinder economic growth?

Second, a taxpayer may want to predict how the change will affect his or her own family. To get at this question, a taxpayer should identify what household characteristics determine the family's tax burden. For example, in what part of the state does the family live? Are home-stead property taxes relatively high in the region? Does the family own a vacation home? What is the family's income level? Does the family benefit from the Working Family Credit, the K-12 Education Credit, or the Child and Dependent Care Tax Credit? Does the family own a business? Are the costs of complying with business taxes onerous? Does the family plan to make any large purchases in the near future? Does the family purchase tobacco products, use a lot of gas for business, or go on frequent vacations? The answers to these questions

can help determine how a particular tax change will affect an individual household.

## What Options Are on the Tax-Reform Table?

Policymakers are discussing changes to nearly every Minnesota tax. Below are some of the more prominent options for sales, property, and income taxes. Table 1 shows some of the options that are under consideration.

### Sales-Tax Reforms

The current sales-tax reform effort in Minnesota focuses on broadening the base, lowering the tax rate, and conforming to the recommendations of the Streamlined Sales Tax Project mentioned earlier.

To broaden the base, the sales tax could be extended to cover purchases of many types of consumer services that are currently excluded. These could include financial and legal services, but the governor's proposed plan would continue to exempt sales of real property, medical services, prescription drugs, private-school tuition, and motor fuel. At the same time, the current multiple sales tax rates (which vary by location and by type of product) could be replaced with a single, flat rate.

Broadening the tax base by including services would allow the rate to be lowered without a loss of revenue, bringing it more in line with the tax rates in nearby states. Taxing a broader range of purchases at a uniform rate could also reduce the influence of taxes on households' spending decisions and simplify the system. On the other hand, the change would require many more businesses—such as law firms—to collect the tax, thereby increasing tax-compliance costs. Taxpayers who purchase a lot of goods and services that are currently exempt may believe such base-broadening proposals unfairly single them out.

The state's participation in the Streamlined Sales Tax Project probably means that the legislature will be asked to adopt the model sales-tax legislation proposed by this group of states. The recently published model legislation includes uniform definitions of different goods and services—to which states can refer when choosing which items to in-

(See *Taxes* on page 4)

**Table 1. Proposed reform options for various Minnesota taxes**

Some Reform Options	Types of Taxes			
	Sales	Property	Corporate franchise	Individual income
Broaden tax base and lower tax rates	x	-	x	x
Flatten rate structure (reduce number of tax rates)	x	-	-	-
Simplify the tax	x	x	x	x
Shift tax from localities to state	-	x	-	-
Conform to other states' taxes	x	-	-	-
Provide more targeted tax relief	-	x	-	-
Increase tax to pay for property tax shift	x	x*	x	x

\* Includes a statewide tax on business property

(Taxes from page 3)

clude or exclude. The proposal also includes rules for administering exemptions for business purchases, rules governing when and how states can change their sales-tax rates, and other administrative simplifications. These changes, if adopted by a significant number of states, should reduce the costs to sellers of collecting sales taxes, and shift some of the collection costs to the states themselves. The changes should also increase the likelihood that taxes on Internet and other remote sales will be collected.

These changes, taken together, promise to make the state's sales tax more efficient and more administrable, and would bring Minnesota's sales-tax rates more in line with those of nearby states. Minnesotans would pay a sales tax on many purchases that were previously exempt, but would pay this tax at a lower rate on all purchases.

A carefully designed reform could accomplish a great deal without imposing additional burdens on individuals. The net effect on the compliance costs of businesses is unclear, because the changes will increase costs for some types of businesses and reduce them for others.

The distributional effects of sales-tax simplification and reform are also not clear. Because sales taxes are generally regressive, an increased reliance by the state on sales-tax revenue could disproportionately burden lower-income households. The effect of broadening the sales-tax base (while simultaneously reducing the rate to ensure that total revenue remains the same), however,

depends on which types of goods and services are included in the base—and on which families purchase them.

### Property-Tax Reform and Simplification

The governor would like to eliminate that portion of the K–12 general education levy that is currently mandated by the state. Under his proposal, the state would cover the mandated spending that local governments currently cover through property taxes. Local districts would continue to use the property tax, through local referenda, to supplement the state-mandated funding levels. The governor's proposal would cut the share of total education costs financed by local property taxes from 25 percent to around 12 percent. Because a good educational system is thought to produce benefits for the entire state, the governor argues that the state—and not individual communities—should bear the burden of financing K–12 education.

The estimated revenue shift is about \$900 million per year, which the state will have to fund from new or existing sources. This would probably not result in a \$900 million tax cut but, rather, in a shift of \$900 million from local property taxes to one of the other state taxes. Because the different taxes have different economic and distributional effects, it is impossible to evaluate the effect of this proposal until the specific source of state funding is identified, which has yet to be done.

The administration, responding to complaints that the property tax is far too complex and unpredictable, has also suggested repealing provisions that now

provide preferential treatment for certain types of property or taxpayers. As with income and sales taxes, imposing the property tax more uniformly can simplify the administration of the tax and improve its efficiency. Even with this, the state will probably need to support education programs to help taxpayers understand what will surely remain a complicated tax.

The Minnesota property tax includes numerous provisions, such as the education homestead credit, the senior citizens' property-tax deferral program, and the "circuit breaker" property-tax refund, that are meant to keep homestead property taxes low relative to household income. In a recent report, however, the Citizens' League argued that programs targeted to households with tax bills that are high relative to family incomes account for only 10 percent of total homeowner property-tax relief. The other 90 percent of relief goes to taxpayers regardless of their ability to pay. To make the tax fairer, the Citizens' League recommends placing greater emphasis on relief that is targeted to those taxpayers with the greatest need.

### Corporate and Individual Income Taxes

Proposed changes to the state corporate and individual income taxes generally follow the basic reform strategy of broadening the bases of the taxes to make them simpler and less distorting to the economy.

For the corporate franchise tax, the state is evaluating ways to improve the performance of some credits, such as the Credit for Increasing Research Activities.

As a simplification measure, the state is also considering repealing the corporate Alternative Minimum Tax and the corporate minimum fee. For individuals, the primary focus is on eliminating special tax benefits, lowering tax rates, and basing the tax on federal-adjusted gross income instead of federal taxable income. In an additional simplification effort, the state could merge all of the refundable state credits now targeted to the same low-income population into a single credit.

## Conclusion

The kinds of changes to state taxes I have described in this article probably would indeed make the tax system easier to administer, easier for taxpayers to comply with, and more efficient. It will be difficult, however, for the legislature to eliminate tax provisions for which there is strong political support without providing substitute spending programs. Legislators will confront some tough choices: should they reduce old taxes that have worked reasonably well in the past? or enact new tax legislation?—legislation that alters the way vital government services—such as education—are funded in Minnesota.

*Laura Kalambokidis is an assistant professor in the Department of Applied Economics at the University of Minnesota.*

---

(Wages from page 1)

farmer can invest in a new tractor (that is, in physical capital), an individual can invest in learning (that is, in the formation of human capital). Both types of investment are costly, but both are worthwhile if the investment leads to greater profits for the individual or business.

Second, men earn more than women. There are several explanations for this phenomenon—including gender discrimination, a woman's weaker attachment to work outside the home, and work absences due to child bearing and rearing. None of these explanations, however, provides a complete or persuasive answer about why women usually earn less than men.

Third, larger businesses (measured by numbers of employees or by level of production) pay more than smaller ones. Again, there are many explanations for this phenomenon; for example, larger businesses may pay more because they can afford to, or to encourage employees to work harder and with less supervision. While these explanations are plausible, they provide only partial answers about why larger businesses pay more.

Finally, location matters. Location can be described geographically using states and regions, or by parameters such as population density. As a general rule, someone who works in a large city earns more than someone with the same job in a rural community. The higher earnings of city dwellers are often attributed to the higher living costs and the decreased quality of life in cities compared to rural areas.

## Pork-Industry Wages Grew Strongly in the 1990s

Taking the four wage determinants listed above as a starting point, we (in conjunction with colleagues at Iowa State University) conducted three nationwide surveys of workers in the pork industry to learn more about wages and wage growth in the 1990s. In particular, we were interested in exploring how the pork industry and its demand for labor are changing, and how the pork industry in Minnesota compares with other pork-producing regions in the nation. We surveyed pork-industry workers in 1990, 1995, and 2000 using funds provided by the National Pork Producers Council (NPPC) and *National Hog Farmer* (NHF).

Three interesting results emerged from our NPPC-NHF surveys. First, the determinants of wages in the pork industry appear to be the same as in other industries. Second, average national pork-industry wages in 1990 were well below other industries, and the wages in Minnesota were even below the national average. And third, strong wage growth in the pork industry between 1990 and 2000 resulted in more equitable wages when compared to other industries (and these higher wages were enjoyed by *all* workers in the pork industry). This strong wage growth was triggered by two factors: the increased educational attainment of workers in the industry, and

continued growth in the size of pork-producing operations.

## Factors that Determine Wage Differences in the Pork Industry

Using the NPPC-NHF survey data, we found five (previously identified) factors that do, indeed, influence how much an individual worker in the pork industry is paid. These factors are 1) amount of education, 2) years of job-related experience and job tenure, 3) gender, 4) size of operation where he or she works, and 5) region of employment. In table 2 we show how each of these factors influences an individual's wages by displaying the percentage a particular factor increases or decreases a worker's wages in comparison to others in the industry. For example, having a four-year college degree (as opposed to only a high-school diploma) results in a wage premium of roughly 24 percent. Coincidentally, being female also results in a wage decrement of roughly 24 percent.

### Education

As expected, workers who know more earn higher wages. On average in 2000, when comparing workers who have the same amount of experience and tenure and work for similar-sized operations in the same region, those with a high-school diploma earned 11.4 percent more than high-school dropouts. Workers with a two-year college degree earned 11.4 percent more than high-school graduates, and workers with a four-year college degree earned 12.8 percent more than graduates with only two years of college—and 24.2 percent more than those who only graduated from high school. Moreover, between 1990 and 2000, there was a decrease in the value of a high-school diploma and four-year college degree, and an increase in the value of a two-year college degree.

### Job Experience and Tenure

In 2000, workers with one additional year of job-related experience earned 0.7 percent more than average, and workers with one additional year of tenure with their current employer earned 0.2 percent more. However, the advantage of having more job experience and tenure gradually decreased over the decade.

(See *Wages* on page 6)

**Table 2. Individual wage differences in 2000 compared to 1995**

Parameters	Average Wage Difference (Percent)
<b>Education</b>	
High-school diploma vs. high-school dropout	11.4
Two-year college degree vs. high-school graduate	11.4
Four-year college degree vs. two-year college degree	12.8
Four-year college degree vs. high-school graduate	24.2
<b>Years of Experience and Tenure</b>	
One more year of experience vs. average experience	0.7
One more year of tenure vs. average tenure	0.2
<b>Gender</b>	
Women vs. men	-23.8
<b>Operation Size</b>	
One more full-time employee vs. average number of full-time employees	0.4
<b>Annual Hog Production</b>	
1,000–10,000 vs. <1,000	-5.3
Over 10,000 vs. 1,000–10,000	21.6
Over 10,000 vs. <1,000	16.4
<b>Region of Employment</b>	
Northeast vs. Midwest	-0.5
Southeast vs. Midwest	6.4
West vs. Midwest	-12.2
<b>Notes</b>	
Midwest region:	IA, IL, IN, MN, MO, ND, NE, OH, SD, and WI.
Northeast region:	CT, MD, ME, MI, NJ, NY, and PA.
Southeast region:	AL, FL, GA, KY, LA, MS, NC, SC, TN, VA, and WV.
West region:	AK, AR, AZ, CA, CO, HI, ID, KS, MT, OK, OR, TX, UT, WA, and WY.

(Wages from page 5)

**Gender: Women Still Earn Less**

As in other industries, women working in the pork industry in 2000 earned 23.8 less than men—even after adjusting for education, job experience and tenure, size of operation, and location. For women, this represents an improvement over 1990 when they earned 30.9 less than men, but is a step backwards from 1995, when women earned only 17.5 percent less.

**Size of Operation**

Larger operations pay higher wages. On average in 2000, the addition of one full-time employee to a firm’s payroll increases the wages of all workers by 0.4 percent—a result that has not changed much from 1990 to 2000.

The relationship between operation size and average wages, however, was not linear. Workers in small operations (producing fewer than 1,000 hogs per year) earned 5.3 percent more than those working in medium-sized operations (producing between 1,000 and 10,000

hogs per year). Similarly, workers in small operations earned 16.4 percent less than those working in large operations (producing more than 10,000 hogs per year). It is interesting to note that between 1990 and 2000, the wages paid by large operations *decreased* relative to small operations, but *increased* relative to medium-sized operations.

**Regional Differences**

Regional differences are also apparent in our survey data. In comparison to the Midwest region, workers in the Northeast and West are paid less, whereas workers in the Southeast are paid more. From 1990 to 2000, wages in the Midwest increased in comparison to the Northeast and West, but decreased in comparison to the Southeast.

**Relative Pork-Industry Wages**

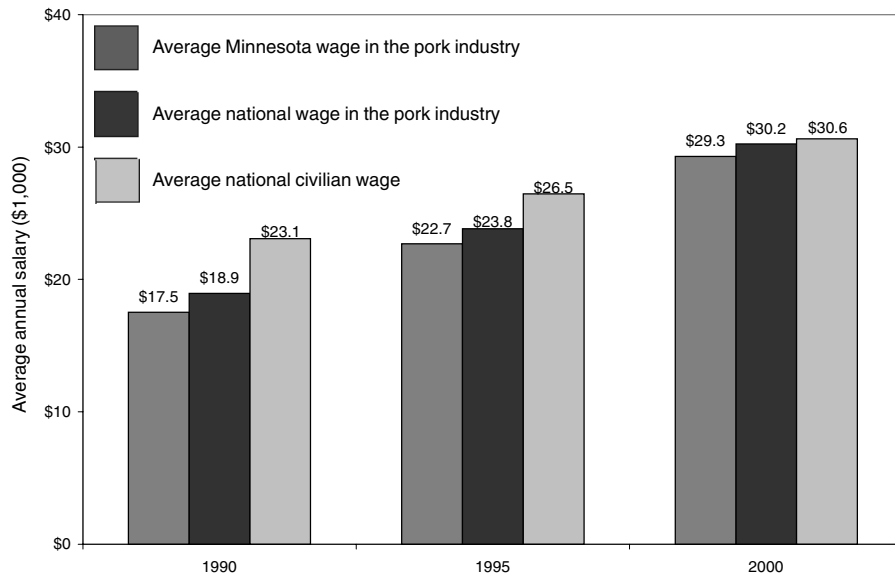
The NPPC-NHF surveys also allow us to look at how wages in Minnesota’s pork industry compare to the national pork-industry average, and how the na-

tional average wage in the pork industry compares with other U.S. industries. Figure 2 shows average pork-industry wages in Minnesota and nationally for 1990–2000, as well as the average wage of civilian workers for the economy as a whole (as reported by the U.S. Bureau of Labor Statistics).

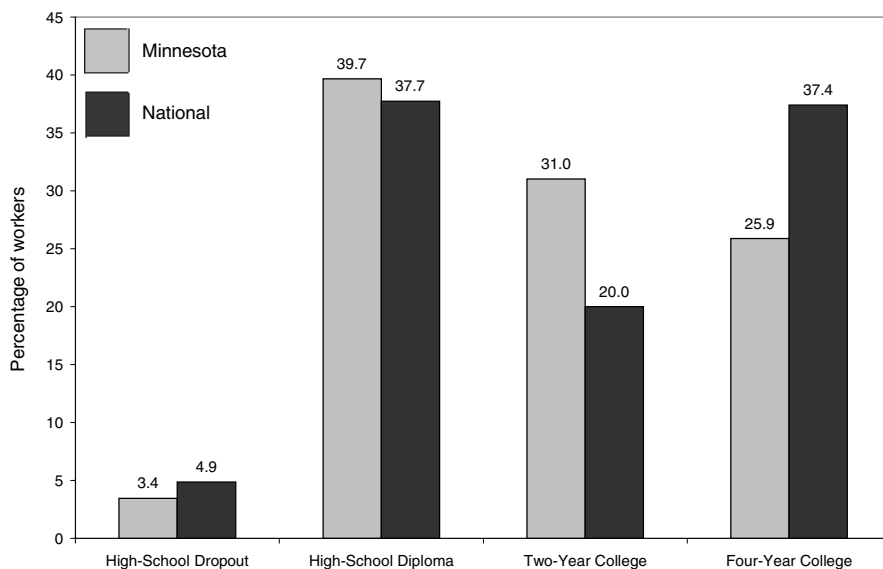
In 1990, the average national wage in the pork industry was only \$18,900, and pork-industry wages in Minnesota—at \$17,500—were even lower. The national wage was 18 percent lower than the average civilian wage of \$23,000. Moreover, in 1990 Minnesota’s pork-industry wages were 7 percent less than the national average, and 24 percent lower than the average civilian wage.

Between 1990 and 2000, the wage gap between the Minnesota and national pork industries closed—as did the gap between the national pork industry and the average civilian wage. The average wage in the pork industry has risen to within 1 percent of the average civilian wage. Similarly, the average wage in the Minnesota pork industry was only 3 per-

**Figure 2. Comparison of average annual wages from 1990–2000**



**Figure 3. Comparison of average educational attainment in 2000**



cent less than the national pork-industry average, and only 4 percent less than the average civilian wage.

**Why Do Minnesota Pork-Industry Wages Still Trail?**

Figure 2 shows that wages in the Minnesota pork industry have persistently lagged behind the industry as a whole—but also shows that, during the past 10 years, this gap has been closing. What is responsible for the persistence of lower-than-average wages in Minnesota, and why has this gap been closing?

Figure 3 shows that the educational attainment of employees in the Minnesota pork industry lags behind the national average. About 43 percent of Minnesota and, indeed, 43 percent of all

pork-industry workers have only a high-school education. Most workers in Minnesota who extended their education beyond high school obtained a two-year college degree, whereas most workers outside Minnesota obtained a four-year college degree. Similarly, the average worker in Minnesota’s pork industry has significantly less job experience and tenure (12 months and seven months, respectively) than the average pork-industry worker in the U.S. Finally, a larger percentage of workers in Minnesota’s pork industry are women—13.8 as compared to 11.1 percent nationally. In summary, wages in Minnesota’s pork industry are lower than the national average because the state’s workforce is less educated, less experienced and tenured,

and there are, proportionally, more women compared to the rest of the nation.

**Industry Expansion and Worker Education Boosted Wages**

Pork-industry wages in 1990 were low in comparison to other industries, but strong wage growth between 1990 and 2000 made pork-industry wages more comparable with other industries. What accounted for this growth? An in-depth analysis of the survey data reveals that the reasons for the observed—and vigorous—growth in the early and late 1990s was powered by different factors.

In 1990, low wages in the pork industry made it hard to attract and retain the skilled employees the industry needed to grow bigger and introduce new technologies. To bring pork-industry wages more in line with other industries, there was a general increase in wages for workers throughout the industry. From 1990 to 1995, the wages of *all* pork-industry workers increased roughly \$5,000—regardless of the workers’ education, job experience and tenure, size of operation where he or she worked, and employment location.

While strong growth continued from 1995 to 2000, not all employees benefited equally from a further overall boost in wages of roughly \$5,000. Instead, a worker’s wages increased only if he or she returned to school for more education or went to work for a larger operation.

**Future Trends**

Today, the pork industry offers competitive wages and attracts skilled workers to well-paid jobs throughout Minnesota. No one, however, should expect pork-industry wages to outpace the economy as a whole, because the industry has achieved near parity with the average national civilian wage. Nonetheless, *individuals* in the pork industry can still increase their wages in the coming years by becoming more educated, acquiring more on-the-job experience, and accumulating more years of tenure on the job.

*Terrance Hurley is an assistant professor and extension economist and Pascal Elisabeth is a research associate in the Department of Applied Economics at the University of Minnesota.*



## Previous Issues

### No. 701 Summer 2000

Are Foreign-Owned Businesses in Vietnam Really Sweatshops?

*Paul Glewwe*

Filling the Feed Troughs of Minnesota

*Douglas G. Tiffany and Jerry Fruin*

### No. 700 Spring 2000

American Agriculture in an Uncertain Global Economy

*Willard W. Cochrane*

The Economics of Windbreak Renovation

*Mamane Annou and Glenn Pederson*

### No. 699 Winter 2000

Minnesota Farm and Timber Land Prices Stay Up in 1999

*Steven J. Taff*

How Do Farmland Values Respond to Changes in Returns and Rents?

*Bill Lazarus*

### No. 698 Fall 1999

Emerging Genetic Engineering Technologies and Minnesota Agriculture

*Stanley C. Stevens*

The Big Shift from a Food Supply to a Food Demand Chain

*Jean D. Kinsey*

Copies available from:

Waite Library, Department of Applied Economics

University of Minnesota, 1994 Buford Avenue

St. Paul, MN 55108-6040

(612) 625-1705

Look for us at <http://apec.umn.edu>

University of Minnesota  
Department of Applied Economics  
1994 Buford Avenue  
St. Paul, MN 55108-6040

# Minnesota Agricultural Economist

**Steven J. Taff.....Managing Editor**

(612) 625-3103

[stjaff@umn.edu](mailto:stjaff@umn.edu)

Prepared by the University of Minnesota Extension Service and the Department of Applied Economics. The views expressed are those of the authors, not necessarily those of the sponsoring institutions. Address comments or suggestions to the Managing Editor, MAE, Department of Applied Economics, University of Minnesota, 1994 Buford Avenue, St. Paul, MN 55108-6040.

Please send all address changes to Louise Letnes, Waite Library, Department of Applied Economics, University of Minnesota, 1994 Buford Ave., St. Paul, MN 55108-6040.

Produced by Communication and Educational Technology Services, with assistance from Business and Science Writers Incorporated.

The University of Minnesota Extension Service is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.

This material is available in alternative formats. Please contact your Minnesota county extension office or contact the Extension Distribution Center at (612) 625-8173.

Copyright © 2001 by the Regents of the University of Minnesota. All rights reserved. This document may be reproduced freely for noncommercial purposes as long as this copyright statement is retained.

Printed on recycled paper with a minimum of 10 percent postconsumer waste.

ISSN: 0885-4874

Nonprofit Org.  
U.S. Postage  
**PAID**  
Minneapolis, MN  
Permit No. 155