

Agricultural Outlook Forum 2001

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## IMPLICATIONS OF STRUCTURAL CHANGE FOR FARMS AND RURAL ECONOMICS

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### 1. Introduction

The structural change in rural America that has occurred over the past decades has created significant pressures for farms and rural economies. In part, this is because the rural communities were built to serve an agriculture that is no more. The evolving structure of agriculture has effected the economic base for rural communities, and the adjustments in these communities are conditioning the future of farms and agriculture. In short, there is much interdependence between the farms and rural communities and in their responses to the pressures of change. We will focus on what seem to be the major factors contributing to these pressures and speculate on how the adaptation processes will/can evolve. The factors identified are technology, globalization, place policy, and infrastructure.

The adaptations to the pressures of change are all conditioned by path dependence, the future depends on the way we have evolved and our current circumstances. The idea of starting from some point in the past, say the 1950s farm and rural setting, may be attractive but, in fact, is largely irrelevant to adaptation strategies by individuals, local governmental and nongovernmental groups and the national and other policy makers. A good example is the current farming system which is conditioned to produce for government subsidies rather than the market. Communities and farms have an endowment of culture and assets that have evolved over time and that will condition how they adapt to external pressures. Unfortunately, in the case of both farms and rural communities, the history seems not to have provided particularly good preparation for a promising future.

For both farms and rural communities, the agricultural policy of the past 70 years has provided essential support but has left baggage that represents a challenge for the future. It is now broadly recognized that these farm policies and the idea that they work in the favor of a vibrant rural economy are in serious question. Our policies to subsidize agriculture have resulted in transfers mostly capitalized into land prices. But much of the land is not owned by farmers or even the residents of rural communities. And, this is an increasing trend. At the same time there are powerful constituency groups that have organized to support the continuation of the existing farm policy framework and the associated subsidies. Rural economies have been disadvantaged by the view that their interests are somehow looked after by the USDA, which is in reality an agency controlled by farmers. Interests of farmers are not necessarily those of the rural communities--and in the current farm policy framework increasingly divergent.

Agricultural and rural policy are at an important crossroad. The common interests of the farmers and the rural communities in the context of the current farm policy framework are more and more not the same. In fact, the main connection may be the link between the subsidies for farms and the land price. Rural communities depend on property taxes for the public services. A radical change in agriculture policy eliminating subsidies would reduce land prices and the tax revenues of the rural communities--at least in

the short run. At the same time, the nearly \$70 billion in farm USDA subsidies that has been transferred over the past three years would have been used very differently if the primary objective would have been to increase the economic opportunity in rural communities and grow the rural economy. The long assumed coincidence between the economy of rural America and farm income is a reality in but a very few of the predominantly agricultural counties, perhaps less than ten percent.

## **2. Pressures for Change**

There are, of course, many factors involved in the pressures for change of farming and the rural economy. The four selected are important, but have been identified mainly to illustrate their differing impacts on farms and the rural economy. Understanding these impacts may provide insights on the ways that the economies and the farms will adapt. Again, the processes of adaptation of farms and of the rural communities have interactions, often at a more subtle level than is at first apparent. There are as well many impacts of the pressures of structural change, since the farms and rural communities are an integrated part of it. The four factors that we have selected emphasize the divergent interests and responses of farms and broader rural economy.

### *Technology*

Perhaps the major features of the trends in technology for agriculture and farming are productivity and scalability. Productivity of crop (and more recently animal) production has increased consistently over the past decades. Moreover, these technologies if we include management and administration, have not been scale neutral. The result has been rapid growth in farm size and a decreased necessity for a rural economic structure that is designed to serve many small farmers. Agriculture or farming as an economic base of the rural economy has declined. Agricultural policy has been friendly to this change in farm size. At the same time, the technology in other industries (providing access by rural residents to opportunities in urban economies) has resulted in an out migration of economically mobile populations. The result is rural communities declining and with the diminished demands for servicing agriculture, and that have lost many of their most talented residents.

The spiral of decline in rural communities and of the rural economy is in part due to this selective process of migration. The populations left behind are less well educated and have lower entrepreneurial inclination. Also, there is less local competition among the talented component of the population that remains. All of this limits the possibilities for growth and diversity of the economic base in rural relative to the urban areas. Populations may accept lower wages or other remuneration because they want to stay in rural areas. This is an attraction for firms looking to lower production costs. But at the same time, because of urban opportunity, the kind of human resources in rural areas that are available at relatively low remuneration cost are not highly skilled. The result is attractiveness to industries that may depend on agriculture but that demand relatively low skills.

One of the responses to this systemic set of changes has been to provide policy incentives to support the development of so-called value-added agriculture. The focus has been not on primary product differentiation, but on upstream processing and distribution. Unfortunately, the value-added agriculture industry of this type is generally capital or low wage labor intensive. While this fits the labor force that is evolving in the rural communities, it does not bring high-quality jobs. Moreover, the capital is often owned by those outside the community or rural economy. The result is that the payments for this factor (frequently the most important) in many cases, go directly out of the rural economy--just as the high rents that result from agricultural subsidies go to absentee landowners.

For this and other reasons value-added agriculture, a possible common interest of farmers and the other participants of the rural economy, has not turned out to be the panacea that was first envisioned. Many states and even the federal government cling to upstream value-added agriculture as a hope for improving the rural economy mainly because they seem not to have any better ideas. As will be argued, there is hope for this strategy, but not with a value creation system based on commodity agriculture.

### *Globalization*

Globalization is often identified as a problem for the development of rural economies and for farmers. This is at the very least questionable. Globalization means that consumers are increasingly more accessible and diverse. These consumers have different tastes and preferences. Possibilities for product differentiation are increased. In fact, this is more commonly observed for agricultural production and for the farm sector. Globalization also means that resources, capital and labor, flow more freely to the industry sectors and locations with higher rates of return. Finally, globalization increases the possibility for specialization and division of labor. All of these can work in favor of localities and industries that are prepared to respond and or are not provided disincentives to respond by out dated government policies.

Globalization has not benefited agriculture and farming as it might have because the United States agricultural policy in many ways insulates the farmers from the market. The incentive is for high levels of production of "commodities" -- not specialized "products." The latter is the way to respond to diverse consumer demands and to take advantage of the returns to product differentiation. This is a particularly interesting possibility for improving farm incomes in ways that do not tie the capitalization of the increased profit/gross margins to land prices. The scarce factor in this case is the systems necessary to produce and deliver the differentiated product, likely tied more to the personal assets and the specialized investments involved.

Globalization has a similar potential for the rural economy. Again the possibilities associated with the information technologies and the institutions that have supported the emergence of the global economy are at the heart of the situation. Expanded demand for differentiated products is more easily expressed and served. The potential for serving these markets at scales of production that are achievable in rural communities is greatly expanded.

The requirements for succeeding in the global arena are entrepreneurial abilities, the skills to understand and exploit the emerging market niches and associated risk taking. Again the U.S. farm policy history is at odds with success. Farmers, and to an extent the communities that serve them, have enjoyed programs that transfer and/or subsidize risk. The culture is thus in many ways not one that makes it likely that the rural areas and economy will be able to fully exploit the opportunities of globalization. Thus, globalization may have a negative effect on rural economies, but not due to the condition of freer and more open markets. Instead, it is related to the path by which the rural economies came to the circumstances that they find themselves in today.

### *Place Policy*

The income and price and the environmental policies directed to farms make up much of what is a de facto rural place policy in the United States. Rural areas are places with features that are recognized by those who live there (and by those who might wish to live in rural areas) as important elements in the decision calculus of location choice. The fact that rural place policy has been dominated by farm interests may have greatly disadvantaged rural areas. In addition to farm policies, the suite of other policies for rural areas has been heavily influenced by agricultural interests. Examples are abundant and include

transport/roads, river and barge traffic and zoning. The problem is that the future of these communities depends on their capability as places to attract new populations that can lead their future.

The kinds of residents that can lead rural economies and communities to a better future and/or reverse the secular decline in the economic status of rural compared to urban populations are from the segments of the population that can choose where to live. That is, these are the populations that are mobile and in a more connected globalized economy can look after their personal economic interests wherever they decide to live. These populations are well educated, entrepreneurial and often have capital and other resources. We know that they like to live in communities that are vibrant, that have physical texture, that offer opportunity to become involved in community life (have social capital in the view of some scholars) and that have other amenities unique to their location.

Farm, environmental and other rural policies are more than not at cross purposes with these aspects of the rural communities/economies. Public access to farm land taken out of row crop production, trees along the roadways, open access and trails, a welcoming feeling among community organizations, high-quality of water and air, and other attributes of the local environment are, in many instances, inconsistent with the themes of existing farm and environmental policies. Rural communities will have to have a greater awareness of place and be more sensitive to the place demands of the populations they want to attract, if they are to be successful in growing their economics and decreasing the economic discrepancy between their residents and the residents of urban areas.

The sense of place also extends to diversity. Often rural communities are not welcoming to new populations that are of different ethnicity or origin. This has potentially a very negative feel to populations that the communities want to attract. Many of these populations have/are living in urban areas where diversity is appreciated and celebrated. What this means is that the very culture of rural communities may have to change to make them attractive to the kinds of residents that can be the engine for future growth. This may be complicated by the fact that many of the rural communities have high percentages of older age populations, likely not to be overly interested in dramatic cultural change.

### *Infrastructure*

Two aspects of the infrastructure of rural communities are particularly limiting to growth of farming and the local economy. These are the age or condition of the existing infrastructure and the infrastructure required for access. In the former case, most of the rural communities in the United States are more than a century of age. Their infrastructure has been in place for 50 or more years; i.e., water, sewers, schools, streets, electricity, telecommunications, etc. Much of this infrastructure is in need of replacement or upgrading. Most communities have not planned for the future in terms of escrow accounts for replacement. They have simply used up the capital. How will this infrastructure be upgraded and replaced? The major source of local finance is the property tax. In small-size communities, this may mean high taxes for poor services. Of course, the high property taxes contribute to higher costs of production, disadvantaging farms.

For access, the popular emphasis is on telecommunications, but there are other aspects; air service, public transport, etc. The growth area for business is services. High-end services require access to high-speed broadband telecommunications and other forms of connectedness. These are simply not currently available at competitive prices in most rural communities. The result is a limit on the forms of business that find rural communities to be attractive as locations, and as important limitations on the attractiveness of the communities to the populations with the capacity to lead the growth of the economy. Many of these key population segments are young families with children. Are they going to move to communities

with low-quality high-cost telecommunications services, limited access to public transportation, and that have high hidden costs in terms of infrastructure restitution?

The natural inclination of some communities is to look to state support. But the cost of upgrading and replacing community infrastructure on a state-wide basis is prohibitive. This means that some selectivity in the support of communities will be a part of the related interventions. As well, these rural communities may be not at the scale that the services can be efficiently supplied. There are clear economies of size for communities. This is particularly the case with schools and with public utility services. Maintaining the small inefficient size communities will be high cost to the state and federal government, and to the local residents.

The cost of infrastructure raises a more complicated political problem for rural areas. The available data on rural states show that on average, all of the economic and population growth during the past several decades has occurred in urban counties. Moreover, the rural counties that have grown are almost all near urban areas or areas with special natural attractions. If the strategy of a state is to grow, why not invest to make the urban areas more attractive? Having more attractive urban areas than neighboring states may be an effective economic and development policy. Farms also may benefit from these policies. The concentration of customers in urban markets makes it possible to diversify agriculture and develop in ways that may open possibilities for serving the greater global market. These kinds of enterprise usually start on a small scale, the kind that is typical of periurban agriculture.

### **3. Choices for Farmers, the Rural Economy and Policy Makers**

The review of the pressures of selected structural changes and the economic condition of farms and rural communities suggests that more of the same, whether for farming strategies, community economic development approaches or rural and agricultural policy, will not lead to the outcomes preferred by many. Different sets of choices will have to be made at the individual/firm, community and at higher government levels. In many instances, these choices will involve risk, if for no other reason that they move away from the customs and trends of the past. We are conditioned by our history and the current situation, but we do not have to perpetuate the structural change and current economic conditions by repeating past unfortunate choices.

#### *Farms*

Farmers and those who craft farm policy must recognize that the global economy is at hand. In the related markets, product differentiation and appeal to the high-end segments of the market represents opportunity for improved economic status and fits with the economic interests of the rural communities within which the farms are located. Quality management systems, supply networks that maintain identity preservation, branding to reflect the special but not easily observed characteristics of products and, in general, the shift from commodity to product agriculture is an area of real opportunity for the United States. Many of the requirements for this kind of agriculture are in place--well educated farmers, high investments in infrastructure for assembly and handling of agricultural products, and information and communication systems that can support specialized markets and market access. Not unrelated is the opportunity that is presented by the failed attempts to introduce specialized crops, e.g., GMOs into systems in which quality control has not been a priority.

Product agriculture and related farming system may yield new opportunities for rural communities. First, the production systems for these specialized products are likely of smaller scale. Second, the characteristics of the products may include, for example, the fact that they have been grown and

processed with some type of environmental integrity. Third, the branding may reflect an identification with the community or region. All of this supports the concept of enhancement of rural communities as places--making them more attractive to the populations that can help them grow and develop. Fourth, this type of agriculture fits with the emerging patterns of growth in rural areas. Populations are becoming more clustered in and around urban areas. The related local markets are ideal places for incubation of the product agriculture and agribusiness.

Farm policy must not provide disincentives for this new direction of United States agriculture. There must be a change for the commodity focus of agricultural policy to one that embraces the new product agriculture. Greater emphasis on training, education and research as compared to income subsidies seems to be the direction. Also, stronger emphasis on environmental management approaches that are sensitive to the rural landscape and its improvement are likely components of a product agriculture friendly policy. It may be that an attractive place of production and processing is the way to identify a product that can command a premium from consumers.

Not many proposals for farm policy appear to be on the table that support this vision of the future for U.S. agriculture. Perhaps this is because the policies we have evolved try to serve too many objectives with too few instruments. If the objective is the economic welfare of the farmers, why not use the tried and tested instruments of welfare policy--means testing, retraining, transition support, and limited access. If the objective is industry development, again why not use the tired and tested types of policies--education and technical assistance, incubation, risk sharing, measures to address various types of market failures, and attention to regulatory and other processes that limit innovation and new product development. If the objective is quality of environment, why not again use the tried and tested policies--regional environmental initiatives, approaches that feature the quality of the rural landscape, results versus process (the preoccupation with best practices is a good example of how not to do it), and amenities. Not accidentally, this approach to environmental policy is quite consistent with the enhancement of rural communities as places.

The policy environment is important but equally critical to the development of a new agriculture is the culture and momentum of the past. This is, of course, reflected in the political difficulty of major policy change. The whole set of ideas about property rights and farms may have to be reassessed. We provide one example. In Europe, the concept of living parks has gained acceptance and is growing in importance to farm and the rural economy. The idea is to use the mechanism of a park to capture the distinctiveness of an area and its history and culture and to make access available to the public. Farmers and rural communities benefit from the influx of people who want to experience these unique aspects of the landscape, and from the differentiation that this landscape provides for the farm products. The communities benefit from the efforts to make them special, building on their differences and unique attributes. The result is a market response that improves the economic lot of both the residents and the visitors to the working parks.

These and other types of innovators need to be a part of a grand national experiment that will help the farms in the United States become more prosperous and sustainable. One size will not fit all communities or farming systems. This was apparent as a result of an agriculture futuring conference we held at Iowa State University last year. What came from the conference was that the farms in Iowa are increasingly different--large farms that produce commodities and take advantage of scale, part-time farms that have owners that obtain most of their income from other occupations, specialized farms that are developing to serve the segmented markets by differentiating their products, and farms that are in transition with owners moving out of agriculture. We need an agricultural policy that serves all of these farms, and one that causes these differences to be an attribute to the farmers and the communities in which they live.

## *Communities and the Rural Economy*

The move to a more product-oriented agriculture will bring the interests of farmers and rural communities more in line, but differently than in the past. Still, there are pressures of the structural change that more directly impact communities and call for changes in the policies of the communities themselves and the policy environment in which they operate. We will think of these in two ways, related to the public sector and the private sector. For the public sector, the question is how can the communities be made more competitive, both in terms of attracting the kinds of populations that can make a better future, and in terms of efficiency of the public services provided. For the private sector, the issue is the presence of market failures that may especially disadvantage the rural areas/economies and what can be done to mitigate them locally and on higher governmental levels.

For the public sector, there is the hard reality of size economies that the rural and smaller communities have to face. Public services, other things equal, can be provided at lower cost in larger communities. This implies at least the idea of smaller community cooperation in the provision of public services. Of course, this has already occurred with school consolidation, for example. But there is an increasing question about how other service provision can be consolidated--including the governance structures. At the extreme, there is the possibility that the state and federal policies can provide incentives to consolidate the communities into larger size developments. This has been happening as a part of the decline in most rural areas.

Thus, the themes for the public sector imply coordination and other means to take advantage of the scale economies, making the communities competitive in the supply of public services. In the case of attracting and holding residents, the scale issue is present as well. Communities and local economies are attractive because among other things they supply private services. Here again there is the issue of scale and/or the size of the local market that can sustain the private services sector. The themes are the same as for the public sector, cooperation and consolidation to address in this case the size of market issues.

All of the discussion of consolidation whether due to economies for public services or market scale for privately provided services has abstracted to this point from the actions that might be taken to develop communities that are attractive from the viewpoint of amenities. There are other things that communities can do to differentiate themselves. Interestingly, this is a globalization response much like the one for product as compared to commodity agriculture. It is also a strategy that can give residents a different reason for selection of location--and may work to reduce the importance placed on the cost of public services and the availability of a broad set of private services. Uniqueness is a strong attraction and can be addressed from the aspect of physical appearance, community vitality and culture, or other avenues. The issue is place differentiation.

For the private sector, there is as well the issue of market failures and how they can be addressed. In this case, we will focus on industrial firms instead of the service sector discussed above, although the issue is still with some kind of market failure. How can smaller rural communities attract, hold and grow firms that can be a part of a more diverse economic base? What market failures are related to the apparent inability to grow and diversify as do their urban counterparts? We know that firms locate to be close to low-cost inputs, including raw product, labor, capital, and packaging and other requirements of the finished product. The value-added agriculture efforts have many times not focused on the latter, which in many instances are the high cost items. The places to look for market failures are local capital markets, market access, resources to support start ups, thin choices of suppliers due to location, etc. These are often location specific, and require careful assessments of the functioning of the local markets if interventions are to be successful. Local communities can do something about services competitiveness and uniqueness/differentiation. It is more difficult and tricky to address market failures of the type that may influence the economic base.

### *Farm and Rural Policy*

To an extent, these policy issues have already been addressed implicitly in the discussions of approaches to adjustment by farms and communities/local economies. Thus, we will be brief. The current agricultural policy does not reinforce the opportunities in the global market that are associated with product differentiation. It is also not a rural development policy. It uses a blunt and high-cost set of instruments to meet a complex of objectives. There is reason to reassess this policy. It is high cost and not achieving the started societal objectives. Starting from a clear set of objectives and using tried and tested instruments from other policy arenas seems a good starting place, and would lead to a far different farm policy for U. S. agriculture.

A rural policy needs to be fashioned. The discrepancy between opportunity, broadly defined, between residents of rural and urban locations cries out for attention. This policy must reflect the global market place just as is the case for farm policy. And, one of the features that stands out as an opportunity is differentiation--another way to think of place as a key element of rural policy. The rural communities must also be ready to make the changes that can lead to increased competitiveness. Other things equal, who would choose to live in a place with high-cost public services and limited private services? Perhaps the policy area that has attracted the most attention is the most difficult--the market failures that are in place which lead to a narrow or limited economic base for rural areas. If one has confidence in the private sector, fixing the other problems of rural communities may be the easy way to broaden and expand the economic base.

#### **4 . Concluding Observations**

Pressures of structural change are becoming more intense for farmers and for the rural economy. Both for farming and for the rural communities/economies, different and more targeted policies at the Federal and state levels will be required. We have all seen enough of the outcome of the current farm policy to come to the conclusion that it takes us down an undesirable path for both agriculture and rural communities/economies. And, the global and other conditions that are causing the current farm policy do not deliver are not likely to change. The day is at hand for real innovative thinking on farm and rural policy and for some real political leadership in setting in place a basic change in policy. To date, this has not been evident in the emerging dialogue on the new Farm Bill and/or in the emerging discussion of a more coherent and scientifically justified rural policy. There is a possibility of a new synergy. There is a possibility of a new synergy between rural economy and farm policy, if there is a focus on the global market and product/community differentiation as the key to future success.



# Implications of Structural Change for Farms and Rural Economics



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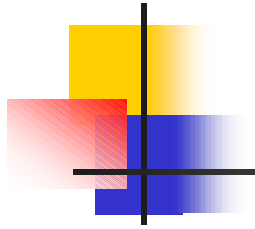
USDA Agricultural Outlook Forum 2001



# 1. Introduction

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- Pressures
  - Technology
  - Globalization
  - Place Policy
  - Infrastructure
- Path Dependence
- Divergent Interests of Farmers and Other Rural Residents
- Political interests and the pace of policy change



## 2. Pressures for Change

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- Technology
- Globalization
- Agricultural and Environmental Policy
- Infrastructure



# *Technology*

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- Productivity Increase
- Scale and Scope Economics
- Agriculture and the Economic Base
- Mobility of Talent
- Incentives to New Industry
- Questions About Value-Added Agriculture



# *Globalization*

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- Open and Freer Access to Markets
- Consumer Driven
- Product Differentiation
- Returns to Scarce Factors
- How Prepared Are Farmers and Rural Communities?



## *Place Policy*

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- Agricultural and Environmental Policy
- Heavy Focus on the Interests of Agriculture
- Attributes of Places that are Attractive
  - Amenities
  - Diversity
  - Participatory



# *Infrastructure*

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- Aging Public Service Capacity
  - High Cost of Replacement
  - Lack of Related Planning
  - Implications for Farms/Community Competitiveness
- Access
  - Telecommunications
  - Air Travel
  - Incidence of Impact
- Hard Choices
  - Build Competitive Urban Areas
  - Invest in Rebuilding Rural Areas
  - Best Overall Growth Strategy



## 3. Choices for Farming, the Rural Economy and for Policymakers

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- Farms
- Rural Communities/Economies
- Farm and Rural Policy





# *Farms and Farming*

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- Global Markets
- Product Differentiation
- Current Policy Incentives
- Link to Rural Economy



# *Rural Communities and the Rural Economy*

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- Global Economy
- Place Competitiveness
  - Public Services
  - Private Services
  - Place
- Industry Policy
- Differentiation, Same as the Response for Farms



# *Farm and Rural Policy*

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- Different Policies
- Farm Policy
  - Complex of Objectives
  - Different Instruments
  - Much to Learn From Other Sectors
- Rural Policy
  - Within Communities
  - Role for State and Federal Government
  - Differentiation



- **Concluding Observations**

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- Disappointment with Current Policy
- Time for Change
- Where is the Framework?
- A New Basis for Linking Farm and Rural Interests