INDIVIDUAL INCENTIVES, COLLECTIVE ACTION
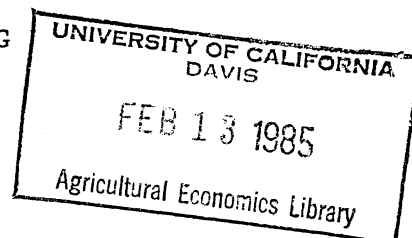
AND THE POLITICAL ECONOMY OF

FARMLAND PRESERVATION ZONING

by

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Neo-classical economic theory has been quite successful in explaining
individual behavior in the marketplace and has rightly earned the reputation as
the most rigorous branch of social science theory. However, neo-classical
theory has been less successful in predicting or explaining the behavior of
large groups or organizations in the marketplace. Herbert Simon's paradigm,
developed into what is currently known as organization theory, was an attempt to
explain the actions of complex organizations (corporations) in the marketplace
[Simon]. Neo-classical theory has been even less successful in explaining the
behavior of groups or complex organizations when the interaction takes place in
the political arena as opposed to the market. The view of government as a
solitary, rational actor with some objective function (the elusive social
welfare function?), diligently seeking to maximize the value of that objective
function has led economists to see irrational behavior rampant throughout the
political system, in contrast to the political scientist who lacks the
sophisticated theoretical base for analysis but who understands the interactions

and the functional aspects of politics that produce policies that, on their face, seem contradictory.[*]

The purpose of this paper is not to explore the general theoretical implications of neo-classical economics as applied to governmental behavior, for such a task has been ably carried out by others [Mueller; Schmid]. Rather, the purpose here is to apply the economist's neo-classical view of the world to a case of adoption of land use controls by local governments in Wisconsin. The approach will be conceptual rather than empirical, although empirical evidence will be used to illustrate the basic points.

The conclusion is that the economist's emphasis on the analysis of incentives as guides to individual behavior is quite useful in analyzing individual political behavior, but can be used to analyze collective action only with considerable attention to an institutional analysis of the rules under which individuals interact in the political system.

In the next section the basic outlines of the Wisconsin Farmland Preservation Law (FPL) are sketched, followed by a brief overview of individual and local government response. The third section will analyze the incentives influencing individual behavior and the results when individuals act upon the incentives in the political arena rather than the marketplace. The final section will very briefly note some implications for policy, methodology and future research.

SUMMARY OF THE LAW

The Farmland Preservation Law (FPL) was adopted in June 1977 and went into effect in December of that year. During the first five years (1977-1982) any

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[*] For an excellent case study of the functional aspects of these interactions, see [Redman].

qualified landowner could sign a contract with the state, agreeing to keep his
land in agricultural use in exchange for eligibility for state income tax
credits under a circuit-breaker formula based on taxable household income (farm
+ nonfarm + miscellaneous sources) and the property tax on the farm real estate.
To qualify the farm must have contained 35 or more acres, have produced $6,000
in gross farm sales in the past year or an average of $6,000 per year over the
previous three years, and have had a Soil Conservation Service farm plan in
effect or under development. All initial contracts expired in 1982. A farmer
with an initial contract was eligible for tax credits at the 50% level--i.e.
would receive 50% of the credit calculated under the formula.

After 1982 no farmer was eligible for tax credits unless the local
governments (county and often township as well)[*] adopted some type of policy to
preserve farmland.

Local governments are not required to act, but continued tax relief is
dependent on some form of local government action and the level of tax credit
depends on the strength of the local program. The requirements vary according
to the type of county:

(1) <u>Urban Counties</u>: Land in counties with a population density of 100 or
more people per square mile must be in an exclusive agricultural zone, which
must meet state standards including the provision that no residences can be
constructed unless occupied by the farm family or workers. Rezonings require
full public hearings and must meet state standards for findings of fact to
justify a rezoning action. Farmers in the exclusive agricultural zone are
eligible for tax credits at the 70% level under the formula.

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[*]
    A governmental township in Wisconsin is called a town. A small incorporated
settlement is called a village. The term "town" will be used in this paper. A
town often, but not always, coincides with a survey township.

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(2) <u>Rural Counties</u>: Land in a county with a population density less than 100 people per square mile county) can also qualify for credits at the 70% level through exclusive agricultural zoning. Alternatively, land can qualify if it is included in a preservation district in a county agricultural preservation plan and if the owner signs a 10-25 year contract with the state, similar to the initial contracts except that farm operations must be carried out in accordance with the soil conservation plan. Agricultural preservation plans must meet state standards for both content and process, and grants are available from the state to finance the planning effort. Landowners are then eligible for credits at the 70% level under the formula.

(3) <u>Urban or Rural Counties</u>: In either urban or rural counties, if the land is covered by both exclusive agricultural zoning and is in a preservation district under a farmland preservation plan adopted by the county, the landowner is eligible for income tax credits at the 100% level under the formula.

A very significant change included in the FPL was a subtle change in the complex process for adopting exclusive agricultural zoning. This subtle change had the effect of drastically altering the relative influence of different groups in the political process of adopting zoning and, combined with the significant changes in individual incentives, led to a major change in collective behavior.

Under "old" zoning law a county could amend its zoning ordinance by vote of the county board, but the change would not go into effect unless approved by a majority of towns within a specified number of days. If approved by a majority of towns the new zoning rules were in effect in all towns. The FPL made an important change in the process for adopting exclusive agricultural zoning. The county Board adopts an amendment to its ordinance creating the provisions for an exclusive agricultural zone and providing that all land previously zoned

agricultural would be contained in the new exclusive zone. But this change does not go into effect in any town unless approved by the Town Board on a town-by-town basis.

In other words, each Town Board had an individual veto over the application of the new exclusive agricultural zoning provisions in its own town. A majority of towns cannot block the adoption of the change in a few towns that might favor it. Conversely, the majority could not impose the change on towns that might not want it. Thus, for this particular type of zoning change, towns act individually in accepting or rejecting the application of exclusive agricultural zoning in their town. As will be shown below, the combination of changes in individual incentives and the change in the rules for collective action resulted in a great deal of land use policy change.

RESPONSE TO THE LAW

It is useful to examine the response to the law at two points in time, to observe the process and trend in the response. The two points will be at the end of 1980, after three years of the program and at the end of 1983, six years after the program took effect. This section will be necessarily very brief.

Agreements. The trend in signing preservation agreements is clouded by the fact that, as a county adopts exclusive agricultural zoning, agreements are not required for tax credit eligibility. As of December, 1980, about 1,304 farmers had signed farmland preservation agreements, and an additional 761 applications were being processed by county or state governments. About 536,900 acres of agricultural land are covered by the total of 2,065 agreements signed or in process. The number of applications for farmland preservation agreements grew rapidly in 1977-78 but grew more slowly after that, probably due to the rapid

increase in the number of counties qualifying landowners for tax credits through exclusive agricultural zoning. It is clear from both survey research and from a quick comparison of the 1980 and 1983 data, that agreements generate a "demonstration effect" -- large initial enrollments lead to large numbers of applicants in subsequent years. Information supplied by a 1980 survey of 322 farmers with agreements indicated that 85% had suggested to others that they find out more about the program.

By the end of 1983, 3204 long-term agreements were in effect or being processed by the state. About 742,500 acres were included in agreements at the end of 1983. This growth is particularly remarkable because of the simultaneous rapid spread of exclusive agricultural zoning which eliminated the need for contracts in zoned areas.
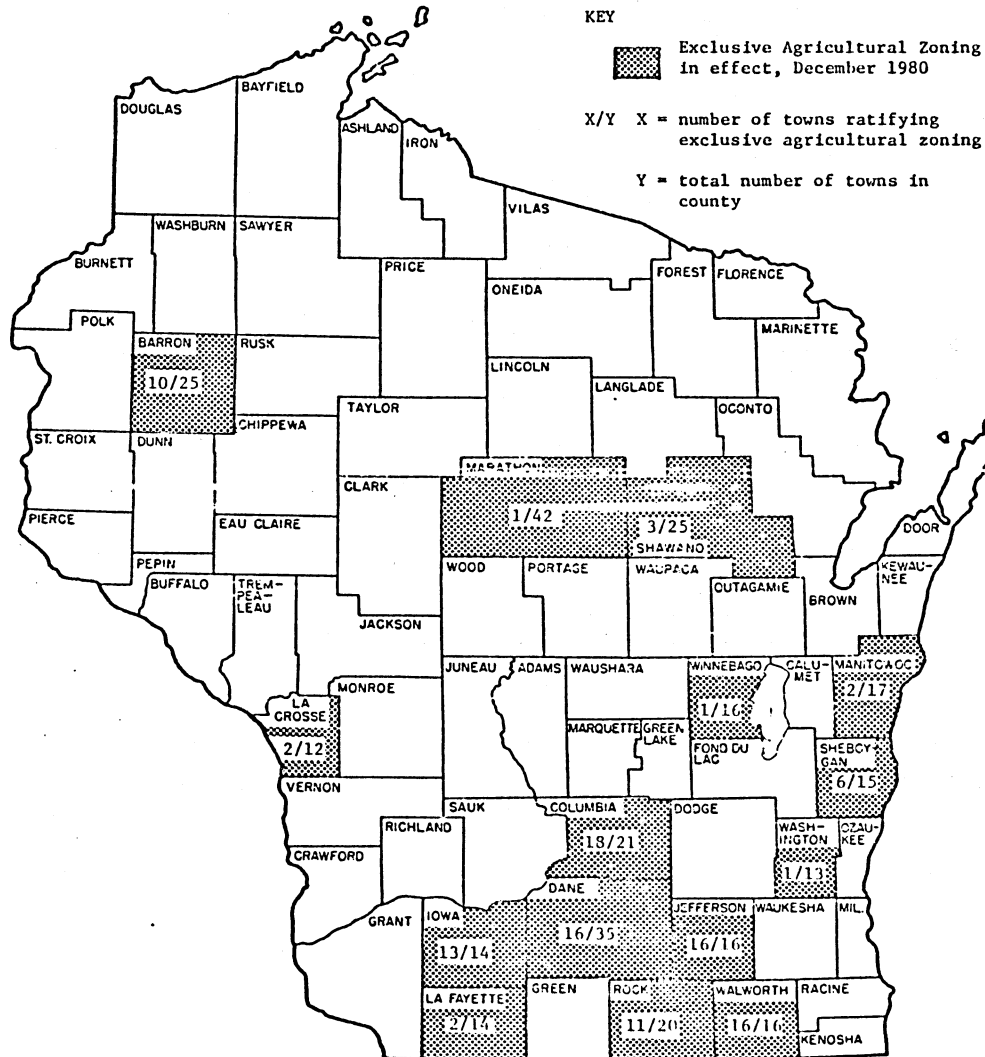
Zoning. By December, 1980, part of all of the land in 15 counties was covered by exclusive agricultural zoning ordinances (See Map 1A), including nine of the 18 urban counties, as defined in the FPL. At the end of 1980 approximately 2.51 million acres of farmland, 13.8% of the state's total, were included in exclusive agricultural zones, and about 12,407 farms were eligible for 1980 tax credits through zoning.

By the end of 1983 part or all of the land in 32 counties was covered by exclusive agricultural zoning, including 16 of the 18 urban counties where zoning is required for tax credit eligibility. This zoning covered approximately 4.2 million acres of farmland, about 23 percent of the state's total and included over 21,000 farms. About 60 percent of the zoned land is in urban counties.

Two points about this zoning activity are significant. First, zoning is concentrated in the area of the state where both the development pressure is greatest and the cropland capability is highest. Second, a significant trend appears when the zoning activity is analyzed on a town level. During 1977-78

MAP 1A
Exclusive Agricultural Zoning in Wisconsin Counties, 1980

KEY

Exclusive Agricultural Zoning
in effect, December 1980

X/Y   X = number of towns ratifying
exclusive agricultural zoning

Y = total number of towns in
county

MAP 1B
Exclusive Agricultural Zoning in Wisconsin Counties, 1983

KEY

Exclusive Agricultural Zoning
in effect, December 1983

X/Y   X = number of towns ratifying
exclusive agricultural zoning

Y = total number of towns in
county
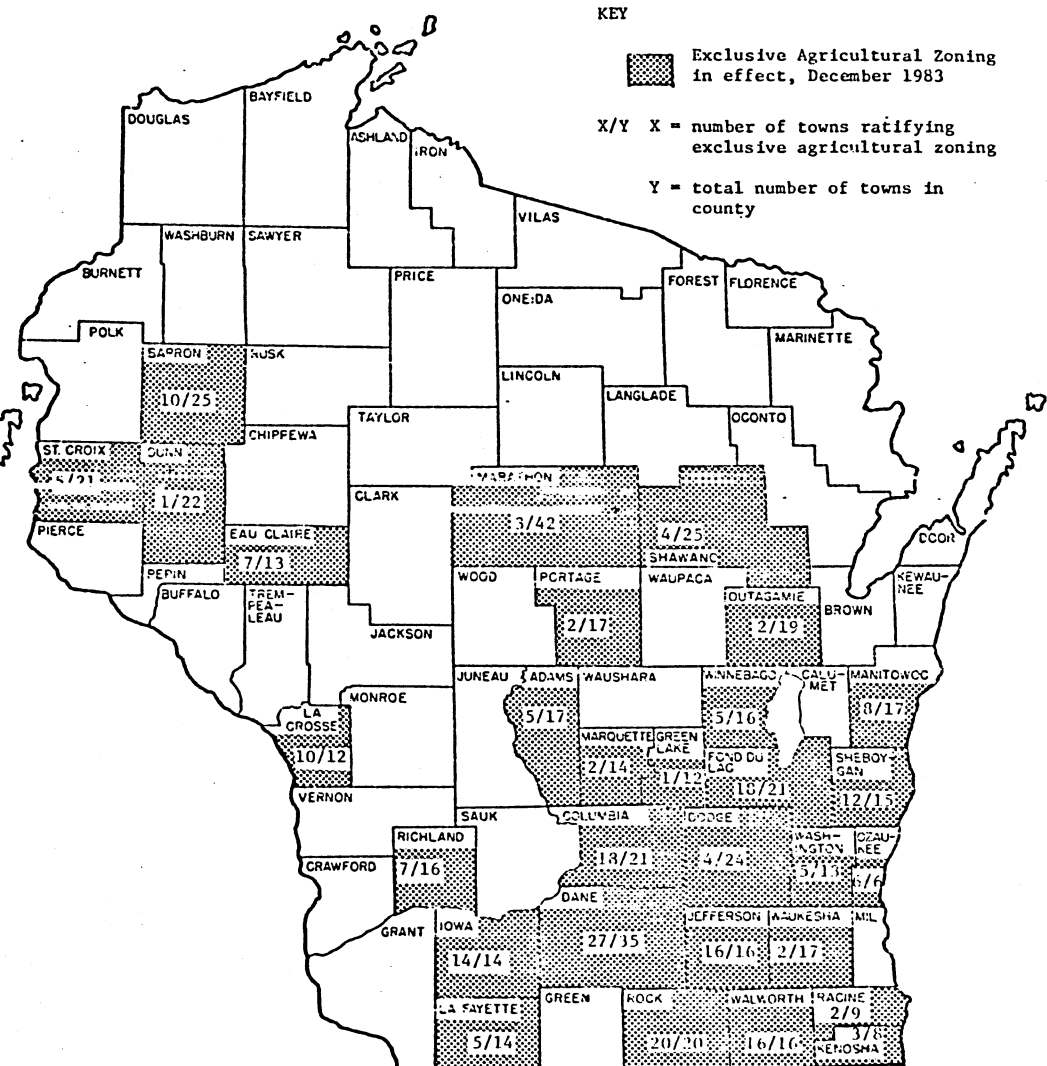
the tendency was for all the towns in a county to adopt the EAZ at once. In three of the four cases the county had enacted some type of EAZ prior to the state law and the modifications in the ordinances were minor. Since 1978 a sequence of actions have occurred in counties adopting EAZ: (1) the County Board adopts the ordinance; (2) a few towns (usually 2 or 3) ratify the change and it is in effect in only a small part of the county; (3) gradually over time other towns ratify the EAZ as either the demonstration effect of tax credits takes hold, the feared ill-effects of EAZ do not materialize in the early-adopting towns, or a town or county planning process is completed. Counties such as Dane (where Madison is located) or LaCrosse are good examples of this sequence. Finally, studies of EAZ enforcement in five counties in 1977-81 showed that the zoning was being strictly enforced, although the zoning was of recent vintage in two of the counties.

Planning. By the end of 1980, 20 counties (of 71 total) had certified agricultural preservation plans and 39 additional counties were engaged in projects to develop plans. About 92% of the state's farmland was in counties with mapping and planning projects completed or under way. State grants for mapping and planning averaged $25,700 per county for the 57 counties that received funds. By the end of 1983, 61 counties had certified agricultural preservation plans and nine counties were in the process of preparing or adopting plans. Virtually all of the state's farmland was included in a county plan.

Tax Credits. By the end of 1980, 4275 claims had been received for tax credits covering the 1979 tax year. Credits averaged $1403 per household, for a total tax expenditure of over $6 million for the state. A study of 1979 claimants showed that they were typical of the average, family-sized farm in Wisconsin, in terms of size of farm, income, property taxes and other characteristics. By the end of 1983, 10,811 claims had been paid for the 1982

tax year. The average tax credit per household was $1562 and the total (tax expenditure) cost to the state was $16.9 million. The tax credit has a significant effect on farm income and the local economy particularly in counties with both exclusive agricultural zoning and certified preservation plans such as Dane County (1532 farm households, $2.5 million in credits), Iowa County (996 households, $2.2 million in credits), or Jefferson County (1089 households, $1.6 million in credits).

In summary, it is clear that the response to the FPL has been quite substantial, especially considering the fact that zoning was not mandated, that traditional rural philosophical objections to land use controls are ubiquitous and that tax credit eligibility could be established in most counties without zoning. The reasons for this surprising response will be explored in the next section.

INDIVIDUAL INCENTIVES AND COLLECTIVE BEHAVIOR

The response to the FPL cannot be understood without an understanding of the changes in individual incentives created by the law. Many studies of individual response to farmland tax relief or land use policies emphasize the importance of the change in the incentives faced by the individual in making individual economic choices, particularly as these choices relate to the decision to sell or develop farmland [Roberts and Brown; Keene et al; Hansen and Schwartz].

What is different in the Wisconsin case is that an analysis of incentives must focus on the incentive to engage in collective action, the incentive created by the FPL for the individual to become active in the political process to influence local government to act on planning or zoning. At the same time, the FPL changes the incentives faced by individuals acting as elected officials

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in the political process. Thus, any analysis of the FPL must go beyond the type of comparisons of the tax relief incentive to keep land in farm use versus the capital gain incentive to develop land that forms the basis for much of the work in the use value assessment/land use change literature.

However, an analysis of the individual incentives to engage in collective action is not sufficient. Although the individual incentives in the FPL lead to changes in individual action in the political arena, the _rules_ under which the political game is played are also changed by the FPL. Thus, any analysis of incentives and behavior must begin with an analysis of the "rules of the game." This is the subject of the first section.

Changes in Action Channels

The institutional analysis of the rules of the zoning game can be best accomplished by incorporating the concept of "action channels" as developed by Allison and others [Allison]. The political system is considered pluralistic, with many individual actors, groups and organizations vying for influence over the outcomes of struggles in the political arena. The context for any given struggle is set by the "rules of the game" that prescribe the path that an issue must take on it way to resolution. For example, the action channel for a bill in the Congress is established by the formal and informal rules of the Congress (committee jurisdiction, etc.) and some rules established by the Constitution (passage by both houses, signed by president, etc.). Although there may be more than one possible channel for action on any issue, the rules that define the action channels also define the ease with which the various actors can influence the outcome. In fact, a part of the political struggle over an issue is often over which action channel will be used to formulate policy, because the action channel is an important determinant of relative power. Some actors will be

positioned in places along the action channel that give them considerable power to influence the outcome, independent of the other determinants of power such as information, money, numerical strength or others.

The FPL changed the action channel for deciding on agricultural zoning issues at the county and town levels. Figure 1 depicts the changes in diagram form. Prior to 1977, if an individual farmer living in Town X wanted to have exclusive agricultural zoning, he could attempt to influence his town board or county board representatives. These influences may have been weak or strong, depending on the individual, but the individual was clearly not acting from a position of power in the action channel. The town board, on the other hand, could request that the county adopt a change in zoning to allow exclusive agricultural zoning. However, this town's request would be met by opposition from individuals in all other towns and other town boards who did not want to be covered by this type of zoning. Since the change would be adopted by majority vote of the towns, the County Board frequently would listen carefully to objections from other towns and the change would be very difficult to enact.

Even if the change were adopted by the county board, it would be submitted to a majority vote of the towns. In the diagram, "All Other Towns" are shown as having considerable influence over the outcome. Thus, in order for exclusive agricultural zoning to be adopted anywhere in a county it was necessary to have very substantial support in many towns in order to carry a majority in the approval process. "All Other Towns" were the actors most critically positioned on the action channel. Thus, proponents of the status quo were at a distinct advantage under the zoning rules in effect until 1977. A vocal minority dedicated to opposition to zoning in half the towns could block change anywhere in the county. This is a reasonable depiction of the reality in most of the counties in the state prior to 1977.
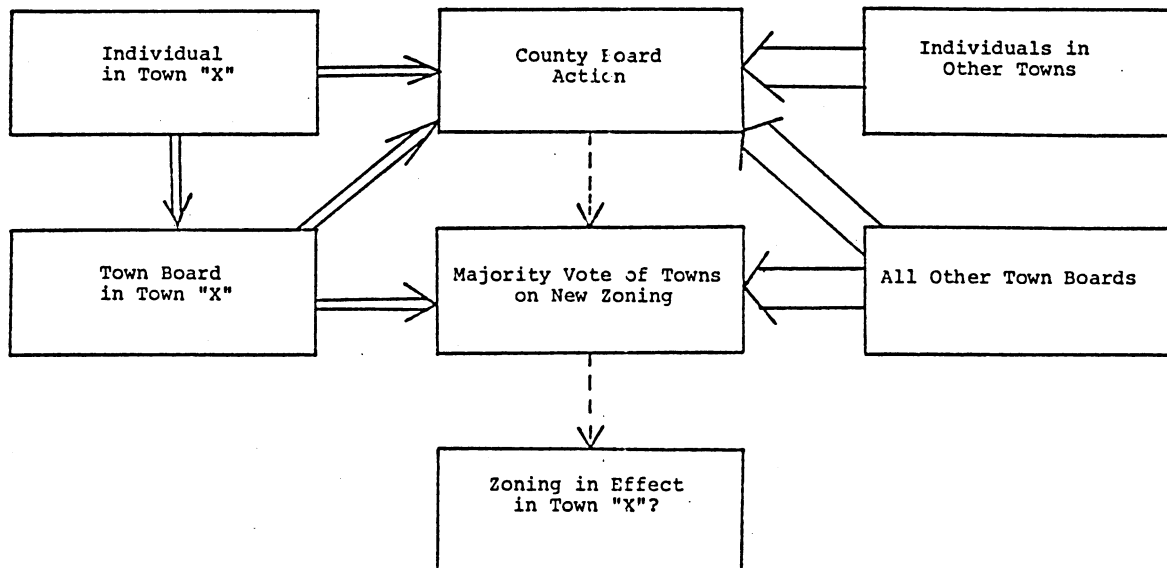
Figure 1

ACTION CHANNELS FOR ADOPTION OF
EXCLUSIVE AGRICULTURAL ZONING

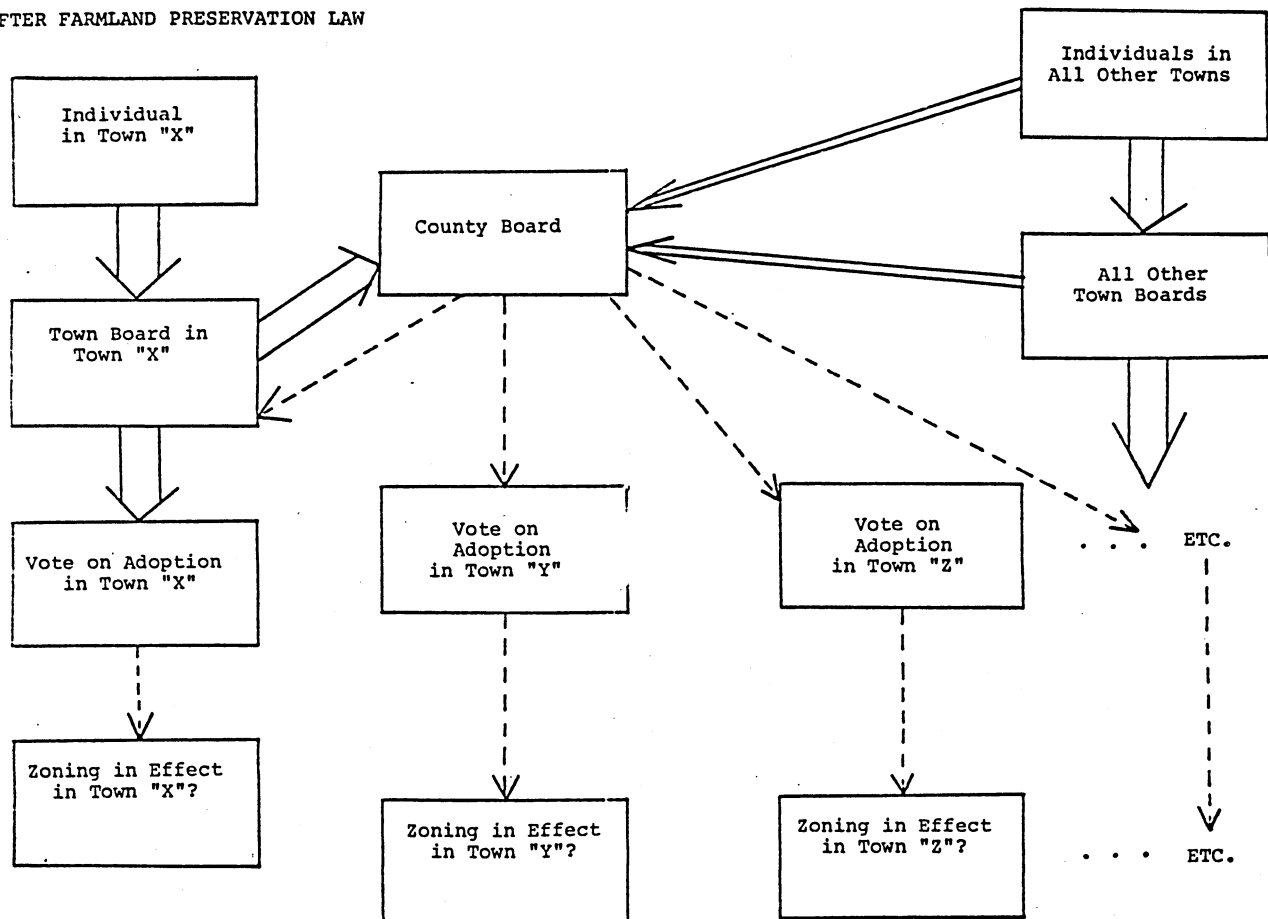PRIOR TO 1977 FARMLAND PRESERVATION LAW

Key:

- - - - -> Action Channel

=====> Width of arrow indicates relative power of actors

AFTER FARMLAND PRESERVATION LAW

The FPL created a significant change in the action channel. The town board
in Town X could request that the county adopt an exclusive agricultural zoning
ordinance and could argue that the objections of individuals in other towns, and
objections of other town boards were irrelevant because the exclusive
agricultural zoning would not apply in the other towns unless the respective
town boards wanted the change. The individual town boards gained considerable
power as a result, as did individuals within those towns who were committed to
change in the zoning. Thus, the arrows in Figure 1 indicating relative power
for the town board and individuals in Town X are substantially greater in the
second part of the diagram. By the same token, the power of "All Other Towns"
was substantially diminished by the change. A "no" vote by a town board had no
effect outside the town boundaries--it simply prevents the new exclusive
agricultural zoning provisions from going into effect in that particular town.
In the same way, individuals who are adamantly opposed to any form of land use
control are reduced to a position of having effective power only within their
own town.

It is difficult to understate the importance of this change. Local control
and home rule are extremely important concepts in rural Wisconsin. County
zoning changes were often opposed on the argument that the county should not be
able to impose its will on the people of any town--town affairs should be
controlled by town people. Under the FPL this is precisely what occurs--the
vote of one town board on adoption of a zoning change does not effect people in
other towns. Thus, if farmers and the board of Town X want exclusive
agricultural zoning, they can argue that the county should adopt it so the town
can have local determination of its land use policy--and that by adopting the
zoning the county is not imposing anything on any other town. And, individuals

from other towns who oppose zoning are placed in the awkward position of having to abandon their local control arguments as they journey to other towns to try to make a convincing case, as outsiders, against a policy desired by local town residents.

This change in the action channel had a major effect on the incentives and the actions of individuals in the political arena.

Incentives to Enter the Political Process

The changes in the FPL led to significant changes in individual behavior in the collective action process. The most pervasive and obvious change was that a large number of farmers began to work for local zoning at the town level. This, combined with some incentives for local officials and the change in the rules of the zoning process led to the widespread adoption of the exclusive agricultural zoning evidenced on the maps. To understand this change it is useful to conceptualize the incentives faced by the individual, using a neo-classical framework.

Let an individual's propensity to act in the political process be indicated by the following relationship:

$$P = p(E_L, E_T, A, S, C)$$

where,

P = Propensity to act in the political process, working for adoption of exclusive agricultural zoning

E_L = Economic gain from the land use control aspects of the zoning

E_T = Economic gain from the tax credit aspects of the zoning

A = Attitude toward land use control

S = Perception of likelihood of success

C = Personal cost of the political activity

and

$$\frac{\partial P}{\partial E_L} > o \quad , \quad \frac{\partial P}{\partial E_T} > o \quad ,$$

$$\frac{\partial P}{\partial A} > o \quad , \quad \frac{\partial P}{\partial S} > o \quad , \quad \frac{\partial P}{\partial C} < o.$$

This relationship can be interpreted easily. First, the individual's propensity to act to induce zoning change is a function of the economic gain to the individual from the adoption of exclusive agricultural zoning. The higher the economic gain the more likely it is the individual will act. Economic gain may occur because a good farm operation is protected from the threat of disruption by nonfarm influences (the most common gain), or by perceptions that zoning will stabilize land prices and property taxes in the long run and allow agriculture to survive in the area, or others. This "gain" could be negative, and in this case would represent the loss of development opportunity that zoning would bring. The net gain is negative for the small proportion of farmers with developable land near a city, but prior to the FPL these farmers dominated the local political process. The propensity to act can also be depicted as a function of the tax gain from zoning, i.e. the opportunity to qualify for income tax credits. Obviously this is just another aspect of economic gain.

An individual's willingness to act is also a function of his attitudes toward land use controls--imagine attitudes arrayed on some appropriate scale of 1 to 100 with 100 being most favorable to the concept of land use control by government.

The individual's propensity to act is also a function of his perception of the likelihood of success and the personal costs he will incur by his actions. These deserve more explanation.

Suppose that the perception of likelihood of success is a function of the individual's perception of how likely it is that his neighbors and fellow

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townsmen will support his efforts, and his perception of how the "rules of the game" allow his voice to be heard in the political process. So:

$$S = s(P_N, R)$$

where

P_N = Propensity of neighbors to act to urge adoption of zoning[*]

R = Perception of how the "rules of the game" allow his influence to be effective

and

$$\frac{\partial S}{\partial P_N} > o \quad , \quad \frac{\partial S}{\partial R} > o$$

This relationship simply means that an individual is more likely to engage in political activity to induce local zoning the more he believes that his neighbors will support his efforts and the more the "rules of the game" are structured in such a way that his influence is likely to be effective in the system.

The personal costs may be represented:

$$C = c(T, \Delta SS),$$

where

$$SS = ss(A_c, P_N),$$

and

T = time likely to be spent in the effort to change the zoning rules

SS = "social status" as effected by the political activity which itself is a function of

A_c = attitudes in the community toward zoning and attitudes toward the individual as leader, and

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[*] The term "neighbors" is intentionally left undefined. A careful review of the social-psychological literature on individual behavior and attitudes of significant others might indicate a more useful specification. For example, "neighbors" in the success function might be defined in terms of politically-active farmers in the town, whereas "neighbors" in the cost function below might be defined in terms of farmers with high socio-economic status.

P_N = Propensity of neighbors to act to urge adoption of zoning,

and

$$\frac{\partial C}{\partial T} > 0 \quad , \quad \frac{\partial C}{\partial A_c} < 0 \quad , \quad \frac{\partial C}{\partial P_N} < 0$$

This relationship depicts the cost to the individual of his involvement in political activity to influence adoption of exclusive agricultural zoning. One component of this cost is simply the time cost the individual incurs when he becomes involved in any political activity. Another component of cost is his possible loss of status or respect in the eyes of others if he takes unpopular positions. This "social status" cost is a function of the prevailing community attitudes toward zoning and is also influenced by how many of his neighbors are acting in a similar manner.

Although this skeleton of a conceptual model is very elementary, it is a useful means of analyzing the effects of the FPL. <u>The FPL increases all those factors that increase the propensity to act and either does not effect or decreases the factors that decrease the propensity to act</u>.

The economic gain from land use controls (E_L) is not significantly altered by the FPL, comparing the gains from zoning before and after 1977, had zoning been enacted. However, the economic gain from the tax credit (E_T) is quite significant, averaging $1562 per claimant household in 1983 and ranging up to $4200 at its maximum. In addition the individual is likely to discover that at least some of his fellow farmers in the town are more likely to act to support exclusive agricultural zoning (P_N) thereby reducing the social status cost of action and increasing the probability of success at the same time. The change in the rules of the game (R) also increases the probability of success. Finally, the time cost (T) is likely to fall because of the change in the zoning process rules and the increased probability that his fellow townsmen would also act, or at least that the FPL would lower the level and intensity of opposition.

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Thus, for the individual acting as an entrepreneur in the political system, the FPL clearly increases his propensity to act to urge the adoption of exclusive agricultural zoning. Note that it is not necessarily important that the individual begin, or end, at a position of support for the zoning. If he were opposed prior to 1977, the FPL would serve to reduce the level or intensity of his opposition. His position, post-FPL may or may not be favorable to zoning, on balance. But the significant point is that individuals, and the collection of individuals in a town, are shifted by the FPL to a position more favorable to exclusive agricultural zoning.

Incentives to Act as a Local Official

The FPL also effects the incentives faced by individuals when they act in the capacity of local elected officials. Let us consider the incentives faced by the local official elected to the county board, as these incentives are affected by the FPL. The propensity of this elected official to act to adopt exclusive agricultural zoning can be conceptualized:

$$Z = z(H, G, A, B, F),$$

where

H = harm to constituents from adoption of zoning

G = gains to constituents from adoption of zoning

B = blame accruing to individual elected official from adoption of a policy which harms one or more constituents

F = fiscal cost to local people from adoption of zoning

and

$$\frac{\partial Z}{\partial H} < 0 \quad , \quad \frac{\partial Z}{\partial G} > 0 \quad , \quad \frac{\partial Z}{\partial B} < 0 \quad , \quad \frac{\partial Z}{\partial F} < 0 \ .$$

This series of relationships describes individual officials' behavior in the political system. First, the official will consider the harm to all those restricted by the zoning and the gain to all those farmers who benefit from the zoning restrictions. To make the point most simply, the greater the number of people who benefit from the zoning, and the greater the level of their benefit, the higher the probability the local official will act to adopt zoning. This does not imply any benefit-cost analysis of zoning on the part of the local official. All that is necessary here is the observation that, compared to pre-1977, the FPL increased the number of people who would benefit from zoning, increased the level of benefits from zoning, and had no effect on, or decreased, the harm. This leads unambiguously to an increase in the propensity to act to adopt zoning.

The propensity to act is also a function of the degree to which the county board official is "blamed" for the restrictions on an individual's land. And, the higher the fiscal cost of the zoning action the less likely it is that the official will act.

The FPL influenced both of these incentives toward more action to adopt zoning. First, because of the change in the rules governing the approval of a county-adopted zoning change at the town level, the county board member can always shift any blame to the town board, arguing that it was the town board that had the real decision on adoption and that his vote for exclusive agricultural zoning was meant only to offer town government and town people the opportunity to have this type of zoning if they wanted it. This "shifting of blame" is not necessarily a cynical political maneuver but in fact is an accurate description of the reasoning of many county board officials and is not inappropriate, given the facts of the adoption process.

Second, if the county board official did not act to adopt zoning he could be blamed for cutting off the tax credits of farmers who had been realizing an increase in their household income over as much as the previous 5 years.

Clearly no political officeholder wants to be the one who denied property tax relief to farmers, especially when the fiscal cost to local government is zero since the tax relief comes in the form of a state income tax credit. Finally, the state system of grants allowed local officials to begin planning programs as a prelude to zoning with little or no cost to local taxpayers.

Thus, even a simple model of incentives influencing individual behavior in the political arena gives a very clear sense of why the FPL was successful in generating so much local government action to adopt exclusive agricultural zoning. Individuals, acting both as individual entrepreneurs, maximizing their own advantage in the political arena, and individuals acting in the capacity of local officials had very strong incentives to work for the adoption of exclusive agricultural zoning at the local level.

CONCLUSIONS

Discussion of the research implications could fill several pages. However, the basic research implication is that <u>careful attention to individual incentives and the institutional rules under which these incentives are translated into collective action</u> can result in conceptual models which capture the richness of individual and collective behavior and which provide a rigorous conceptual framework for analyzing complex change. The use of neo-classical economic theory in analyzing zoning policy need not stop at the rather sterile point of observing that individuals would rather be free to exercise a development right than share that ability to exercise the right with local government. Examining individual incentives in the political arena, with careful attention to the institutional rules governing interaction can result in useful conceptual models that can be applied in complex areas. A more useful neo-classical analysis, emphasizing the incentives to individuals as

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entrepreneurs and as political actors, is useful in analyzing collective behavior if the full range of incentives is considered and if the neo-classical principles are applied to individuals rather than to government as if it were a unitary actor with some objective function. Otherwise it is too easy to lose sight of the important institutional "rules of the game" and how changes in those rules effect action channels and may drastically alter outcomes.

An obvious implication of the discussion is the need to develop more sophisticated theoretical models that can generate testable hypotheses about individual incentives and political behavior. In many respects the conceptual model developed in this paper was based on observed behavior of individuals and local governments so its suitability for analyzing the FPL in Wisconsin should be no surprise. More attention to individual incentives to act both as homo economus and homo politicus, and careful attention to an institutional analysis of the rules of the game will enable economists to more accurately and usefully conceptualize and empirically analyze complex economic/political systems. This paper and discussion offer only a very tentative beginning in one small area of application--local action in planning and zoning of agricultural land.

References

Allison, Graham. <u>Essence of Decision: Explaining the Cuban Missile Crisis</u>,

Little, Brown and Company, Boston, 1971.

Hansen, D. and S. Schwartz. "Landowner Behavior at The Rural-Urban Fringe in

Response to Preferential Property Taxation," <u>Land Economics</u> 51: 341-354,

November, 1975.

Keene, John C., D. Berry, R. Coughlin, J. Farnam, E. Kelly, T. Plaut and

A. Strong. <u>Untaxing Open Space</u>, U.S. Council on Environmental Quality,

Washington, D.C., 1976.

Mueller, Peter. <u>Public Choice</u>, Cambridge University Press, New York, 1979.

Redman, Eric. <u>The Dance of Legislation</u>, Simon and Schuster, New York, 1973.

Roberts, Neal A. and H.J. Brown, eds. <u>Property Tax Preferences for Agricultural</u>

<u>Land</u>. Allanheld, Osmun and Co., New York, 1980.

Schmid, A. Alan. <u>Property, Power and Public Choice</u>, Praeger Publishers, New

York, 1978.

Simon, Herbert. <u>Administrative Behavior</u> (third edition), Free Press, New York,

1976.