

## Chapter x

### The New Rural Economy

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#### **Abstract**

The NRE is the rural face of globalization, complex and dynamic. The NRE is described here as the outcome, sector by sector, aspect by aspect, of retooling the whole rural economy through digital technology in all its forms. The money to be made in today's NRE is from learning how to organize the consequent access to global knowledge to combine it with local relatively immobile assets. The key to holding on to that money is to do this in exclusive ways not available or understandable to others in their markets. Property rights emerge as the strategic issue. Rural economies do not transform themselves into vital NREs until they self-organize to gain new property rights and then rebundle them in productive profitable tradable ways.

The defining feature of the formal rural economy is the unique forms of uncertainty around rates of return on investment in new organization. The informal rural economy is a way of organizing to handle some of these forms of uncertainty, featuring considerable job mobility, transactions based on relationships, incomplete pricing and audacious nascent entrepreneurs building equity from very little start-up capital. Revenue accrues by providing services to the formal economy. New tradables for both the formal and informal parts are driven by the global demand for an ever widening array of rural functions. These are increasing in value within the wider economy, but markets are not generally forming fast enough to offset the weakness in the old commodity base. More effective governance is a necessary companion to the rural investment process to acquire needed new knowledge property rights and develop markets. The emerging NRE raises profound implications for a whole different strategic agenda for rural households, governments, NGOs, and businesses.

#### **What is the NRE?**

The argument proposed in this chapter is that the New Rural Economy (NRE) is an irreversible paradigm shift in organization. The new paradigm is an organization of knowledge-based assets with an end-user perspective. The old paradigm is a production-based organization of land, labour, and capital assets with a supplier/provider perspective. Several new features of this emerging rural economy are introduced in this chapter along with some of the debates. The many new concepts and ways of viewing the NRE cannot all be reviewed here. However, those that are highlighted contain profound implications for a whole different strategic agenda for rural households, governments, NGOs, and businesses.

The 'New Economy' is an emerging set of properties in the economy at large. These are described as: globalizing, knowledge-based, churning, digitizing, jobless income growth, high productivity, and a fast growing service sector (Atkinson, 2002). To become 'new' is a process of knowledge retooling by firms, households, and governing institutions

(Sporleder and Moss, 2002). Socially and financially driven learning institutions are displacing command and control production units and supply chains as the source of productivity growth. The New Economy integrates knowledge exploration and exploitation (Wojan, 2000).

The NRE, the rural version of this New Economy, is also an always emerging series of new situations. Kilkenny's (1999) summary of the usual meaning of 'rural' is a comfortable starting point: remote, with low population density and dependent on natural resources for base earnings. The NRE looks 'rural'. It retains the appearance of a resource extraction economy with its farm landscapes including towns and villages, wetlands, lakes, wildlife, forests, and coastal seascapes and ports. However, the NRE has become largely a service economy, with services accounting for about 75% of gross rural product in most places. The original resource base is an increasingly precarious source of growth.

The large service sector in the NRE relies on imports from metro and global sources, more so than its metro counterpart (Freshwater, 2000). Remittances from pension plans, government transfers, and tourism are displacing commodity earnings in the economic base. Formal education is replacing occupational succession or apprenticeship as the source of knowledge (Apedaile, 2000). Multiple interests dominate single issues in governance for leading new rural economies (see chapter in this book by Odagiri and Jean).

The leading edge of the NRE discovers new functions all the time and, therefore, new ways of organizing. These lie well beyond the conventional production of food and fibre, personal and business services. Some of these functions are carbon sequestration, protection of habitat for wildlife and humans, residential space and amenities, urban waste processing, environmental security, food security, leisure and recreation amenities, and heritage preservation (Apedaile, 2000). These functions reflect changing urban demand.

Response to urban demand by the NRE often clashes with traditional resource and manufacturing industries and their political constituencies. The outcome of rural-urban confrontation may not add to and could even damage the economic base because it is often expressed as regulations rather than mortgagable market opportunities.

The trailing edge of the NRE, like the New Economy, also includes a steadily growing informal economy (IE). Unimaginable new uncertainty around losing it all, from the open and global nature of the NRE, is growing rapidly at the household level (Shiller, 2003b). Reimer (2000) has demonstrated the relative instability of incomes in globally exposed Canadian rural economies. For a more complete reading of Shiller's thoughts, refer to his book (2003a) and for Reimer's thinking refer to his homepage (no date).

It is useful to think of the NRE as a multi-level system. The rural household is the micro-level of the NRE, organized around fundamental human purpose. The rural business and commercial level of the NRE is organized around production and transaction purposes. It is also possible and often useful to consider a regional NRE organized around territorial governance or ecosphere features, such as watersheds. Municipal, provincial, or national levels of the NRE are organized around administrative and political functions. Aggregation issues arise when moving from one level or rationale for organization to another, especially in terms of interpreting averages and similarities or

differences. Interconnectedness and dynamics make linear thinking with its presumption of causality obsolete.

The NRE carries with it new concepts and conjecture about outcomes, sustainability, and strategy. Some of these new concepts are self-organization, co-evolution, emerging properties, creative destruction, network embeddedness, equity risk premiums, economic churning, social capital and cohesion, and economic gardening. Because of the complexity of the NRE, it is only natural that these new concepts originate for the most part from knowledge management theories, adaptive systems, and complexity dynamics.

This chapter is a synthesis of institutional features of the NRE. The first part covers the new functions of the NRE in a global context, including retooling with knowledge assets. The second part examines the knowledge, learning, and creative talent in the retooling process. Emphasis is placed on organization of assets around knowledge as the principal source of opportunity for generating and retaining future economic rents. Property rights and governance are reviewed as core issues for favourable outcomes in the NRE.

### **New Functions, New Issues**

One way the NRE is not different from the old rural economy is in its need for a growing economic base of tradables. The commodity trading base has lost much of its growth potential for wealth creation, which originally attracted labour and investment. Now, new tradables are emerging within the economic base driven by the global demand for an ever widening array of rural functions. These are increasing in value within the wider economy, but not generally fast enough to offset the weakness in the old commodity economic base. The form in which these new demands are presented is the problem.

These demands are in part generated by all citizens exercising their common rights, and in part a reflection of changing tastes and preferences. Pricing, solid connections between providers and users, and consequent investment remain weak at this stage of the evolution of the NRE. Markets for active recreation, tourism, and rural residences, especially in metro-adjacent rural areas, are strengthening. However, markets for the common property rights and their outputs are not yet well enough developed to attract investment or recurrent expenditure. They are handled, therefore, in a regulatory framework as externalities (side-effects) of economic enterprise. The emerging NRE is learning about how to organize knowledge and property rights to finance and pay for the operating costs of performing these functions, locally and globally such as envisaged by the Kyoto Agreement. As this learning progresses, such as for markets for carbon sequestration, these functions may join the economic base to drive rural growth.

The new issues centre on the investment needed to add these new functions to the tradable rural economic base. In the case of common property rights, a strong argument for government investment can be made because the costs and benefits are not connected, despite active debate over user-pay models to recover investment. NRE enterprises incur private costs. Yet a growing proportion of the benefits are collective (case of a public good). In the case of transactions, either in emerging markets such as for carbon sequestration (Feng *et al.*, 2002), in quasi-markets for public services (Le Grand and Bartlett, 1993), or in politically negotiated social and economic contracts,

investment would only happen when expected private returns rooted in public choice are associated with cost recovery.

One approach is to combine the outputs of these new functions with marketable services or goods, in the form of 'joint products'. This approach enables the familiar strategy of differentiating ordinary things in a joint product format and segmenting metro and global markets to recover a price premium. The premium would be attributed to the otherwise unmarketable attribute. Rural joint products, especially involving amenities are well suited to small business or not-for-profits with household economy agendas.

The conjecture made here is that the new functions and their attendant issues tend to move the NRE to consider contract types of links between consumers and suppliers of the public benefit functions to supplement current markets and to allow invention of new market relationships, such as for joint products. Cross-cutting organization prompted by the opportunity to trade outside the local rural economy could stimulate new political constituencies and erode 'warlord' style rural politics. As the NRE and New Economy at large discover the nature of the free-rider commons relationship between rural and urban citizens, incentives should arise to incite investment in the rural economy. Stronger rural/urban ties may be expected to reduce debilitating rural equity risk premiums on a wide range of enterprise by broadening the base for sharing uncertainty beyond these valued functions and importantly, beyond individual towns, villages, and counties.

### **Retooling**

The NRE may be described as the outcome, sector by sector, aspect by aspect of retooling the whole rural economy through digital technology in all its forms. The old economy artisan/mechanical cost curve is flattened and lowered by size economies as IT is incorporated by existing firms (Apedaile, 2000). This means a wider range of output within an enterprise is possible before expansion brings higher unit costs, a powerful stimulant to 'scaling-up' rural business. Small and medium sized enterprises have to expand output somehow to gain access to the ever lower reaches of the emerging cost structures, or risk accepting lower living standards and shedding labour, a driver of the informal economy.

Scaling-up with IT retooling brings larger cost savings through productivity than does scaling-up without IT. The focus on optimizing combinations of all property rights as opposed to those associated with physical inputs, shifts interest to knowledge, both in its management and accumulation. It is control over knowledge through an innovative organization of its use, such as structurally embedded networks, that captures economic rents. The consequent expansion of output capacity works as an incentive to overcome obstacles to expansion, the so-called 'scaling-up syndrome' for firms and farms at early stages of digitization. The cost structure changes by increasing the proportion of marketing and service costs relative to production costs.

The Achilles heel of rural retooling is that many of the needed knowledge-based property rights are held outside the rural economy. These rights are held globally so that global rent seeking, as part of geopolitical manoeuvring, is an occupational hazard for rural firms participating in the globalization process itself. Thus retooling with biotechnology and IT can bleed off economic rents to their global owners such as Monsanto's powerful exclusive proprietary rights to their business organization models, not to mention their intellectual property rights secured by patents. The rural income opportunities from

retooling are easily sidelined and confined to minor rents from local idiosyncratic proprietary rights invented by local rural firms.

Thus the strategic issues for retooling extend to specialization in knowledge-intensive tradable producer services and consumer goods that combine globally open-access knowledge rights in unique excludable proprietary combinations. This mouthful means that rural enterprise considering retooling should go for openly accessible knowledge, such as that found on the internet. The money to be made in today's NRE is from learning how to organize global knowledge with local relatively immobile assets in exclusive ways not available or understandable to others in their markets. This can involve reciprocal and associative relationships in contracts to out-fox competing bureaucratic and market relationships.

### **Human Knowledge and its Organization: The Heartbeat of the NRE**

Why does faster closing of the knowledge gap seem to marginalize rural assets organized in small independent household firms, the workhorses of the NRE? Globalization in effect closes the knowledge distance between global, metro, and rural opportunities.

Local assets and hard work are no substitute for learning and organizing. Historically, rural economies have been driven by the can-do problem-solving tradition of artisan farmers, fishers, forestry workers, and commerce. In marked contrast, the NRE is about extracting value from human knowledge, acquired tactically within an emerging culture of 'global' trading and technology relationships.

The NRE does not appear well positioned to learn about tactical access to knowledge as fast as its economic boundaries and relationships are rearranged by the New Economy at large. A recent spate of articles in the *American Journal of Agricultural Economics* provides examples as evidence. Rural locations are at a statistically significant disadvantage in the United States as locations for hi-tech firms (Goetz and Rupasingha, 2002). McGranahan (2002) cannot find any evidence in the literature or from his considerable work in the United States about how the local rural context improves knowledge retooling or technology uptake. This process appears to be idiosyncratic for rural places. The rural-urban digital divide is widening, 5.7 years in 2000 for the United States from 3.4 years in 1996, as public policy and capital costs steer ISDN (*Integrated Services Digital Network*) investment by telecommunications firms to urban territories (Gabe and Abel, 2002). Based on Granovetter's (1985) pioneering work on embeddedness of networks and the distinction between strong and weak ties, Sporleder and Moss (2002) suggest that rural firms are characterized by weak interdependency (embeddedness), reliance on relational ties, low social capital, low redundancy, low cohesion, hard to share tacit knowledge and high levels of opportunism. For a concise discussion of the issues raised in this literature read Kilkenny (2002).

The debate around a rural knowledge lag is beginning to be informed from a very different angle. Agent-based modelling (ABM) overcomes the limitations of mathematical models, which must rely on average behaviour, with an ability to accommodate many autonomous and diverse agents operating under simple rules in an artificial society (Deans and Axtell, 2000; Tesfatsion, 2002).

ABM suggests that places and their talent pools evolve in patterns of size relationship reminiscent of Zipf's Law. Size can be any measure such as value of output, concentration of population and wealth, which proxy for clusters of talent. Zipf's Law expressed for places implies that the largest place is ten times larger than the tenth ranked place and so on. Put another way, one should expect that there be ten times as many tenth ranked talent clusters as ninth ranked clusters, and by extension a large number of small talent clusters such as rural places. The Law also applies to corporations and firms (Zipf, website).

Place does matter, because amenities for life are organized in places, defining the organization of the wellness part of the objective of the NRE. Talent concentrates in larger areas, according to Florida (2002a), because of ease of entry and place amenities. Specifically ease of entry is defined in terms of people as acceptance of diversity, or as a 'plug and play' community. The pattern of vital places develops through competition for talent, even if unknowingly by autonomous agents with simple rules in the ABM models, such that places gain and lose ground. The process, part of the general argument around economies of agglomeration, leaves rural places in catch-up status, losing ground to urban places unless they can out-compete larger population densities for talent. See Florida's 'The Rise of the Creative Class: and how its transforming work, leisure, community and everyday life' (2002b) and his home page (no date) for his wider arguments around the issue of talent and creativity in the economy.

Talent matters for the formation of rural firms. The formation of rural firms matters because the household in the New Economy seems unsuited as a learning institution with productive responsibilities in society. Extending Florida's arguments and evidence (2002a), the lack of internal diversity within households could be expected to repel talent and thus the learning and lifestyle that stimulate creativity. Thus new kinds of production organizations and communities are emerging features of the NRE.

It seems that the outflow of human knowledge to urban and metro economies from rural places may have been slowing in North America. US evidence based on educational attainment suggests that outflows in the 1980s may have stopped by the early 1990s (McGranahan *et al.*, 1998). Wojan (2000), using similarly aggregate US data for the southern United States, argues that the reversal could be explained by lower skill operator labour concentrating in rural places, while the rural/urban distribution of higher skilled labour is not changing.

The evidence points to talent at organizing knowledge as the real heartbeat of the leading edge NREs. Technical knowledge in contrast, such as used in farm operations and software applications is embodied in industrial inputs and information infrastructure available to household enterprises in capital and input markets. Minimal learning is required. This is the smart machine syndrome. This kind of knowledge increases productivity of labour. But to increase productivity of all rural assets requires reorganization of these assets, increased size of enterprise, and new markets. These are all strategic and tactical issues increasingly beyond the learning capacity of household enterprise. The consequent uncertainty tightens the bounds on rational household action, and increases asymmetry of information where households relate to markets.

### **Organizational Change: The Money-maker**

The New Economy is characterized as an integration of conception and execution tasks (Wojan, 2000). Integration was the principal organisational characteristic of rural household enterprise when artisan technology formed the knowledge base of the rural economy. Separation took place through task specialization during the industrial revolution of natural resource extraction. Mechanical and operator skills replaced labour.

Now, the integration of conception and execution appears to have moved on to organizational knowledge as opposed to technical knowledge. The technical knowledge retooling in the NRE is happening in separate organizational units. The 2003 50-series Flexicoil zero-till air drill is an example of smart mechanical knowledge, conceived and put into the field globally, not by the farmer operating the drill. Integrated conception and execution in the NRE happens instead at the enterprise level around the organization by farmers in this case, of rights to assets and financial equity, including social relations: not around the invention, design, testing, and production of tillage equipment, which is now more efficiently accomplished as a specialized function in the New Economy at large.

Therefore, the NRE represents the integrated conception and execution of structural reorganization to enable and be enabled by these separately developed 'smart' technologies. This process of self-organization for rural institutions involves the creative deconstruction of family organizations and communities originally built to take up 'add-on' industrial technology. The process is called creative by Schumpeter (1975) because it is the way by which the whole rural economy is repeatedly brought back to its learning culture to figure out how to combine conception and execution tasks. However, in the current version of the NRE, the apprenticeship learning model with trial and error and its organization around communities are unsuited because of the speed of change with IT. Creative social skills, teamwork, and methods for rapid assimilation of information and learning are necessary if established rural communities are to keep pace in the NRE.

Furthermore, the argument can be made that the household is no longer an institution well suited to conceiving and executing enterprise in the NRE. The economy at large is increasingly called upon to perform these organizing functions in low-cost contractual ways seeking value in the knowledge of household members rather than in their labour and its day-to-day organization. The consequences do not bode well for the wealth objectives of rural households unless the rights to their knowledge and its organization are somehow made exclusive.

### **New Rural Economy: Rebundling New Property Rights**

Productivity, output, income, and population in the rural economy used to be based on labour plus access to real property. The family farm is the pre-eminent example. Real property is land, water, and endowed resources such as fish stocks and forests, and of course, plant and equipment. Strong rural economies were those that held comparative advantage, based on endowment and organization of these real property assets. The firm was understood within resource-based production and transaction cost theories.

Crown rights to real property limit emergence of the NRE, because they are managed in this old context, through mercantile relationships between the Crown and the private economy. This former model impedes the integration of conception and execution of organizational knowledge in rural places, because the links between costs and benefits are tenuous. Crown rights in the 2000s are really citizens' rights under agency of the Crown, such as public lands, not government assets. The diversity of citizen interests

translates into a need to differentiate their rights and those of the private firms assigned these rights. Rights must be separable to enable creative new organizations of knowledge into bundles of diverse kinds and forms of property rights matching the diversity of emerging rural institutions. Transaction of undifferentiated rights to extract rents, between the Crown and private firms, confines acceptance of new functions by the rural economic base.

Innovations in organization of participation by rural labour, investors, and governing institutions, often from the same households, are impeded. Rural economies, such as the coastal rural fisheries and forest dependent communities can conceive new organization of enterprise but cannot execute new organizational structures because the Crown acts not as agent but as owner/gatekeeper of resource rights. Business and social partnerships to tap local equity, both individual and collective, are precluded as part of restructuring rural economic and social organisation. With many options to rebundle real property with knowledge rights ruled out, the local learning culture and self-organization is inhibited. This is the essential meaning of dependency for resource-dependent economies.

Knowledge property rights are a partial substitute for dysfunctional organization of Crown rights. Substitution defines the emerging NRE as much more than a resource extraction economy. Information rights, proprietary rights in the way business is organized, intellectual property, and rights to environmental security are beginning to be valued more highly than real property, even for productivity purposes. The exclusivity of rights over intellectual and social capital influences learning and changes the way each firm is designed by enabling costs of transactions to be externalized.

The wealth-creating NRE emerges when the rural economy takes control over these rights developing an educated knowledgeable and networked population. Instead of comprising mainly 'operating occupations', the NRE fuses conceptual knowledge gained by innovative learning and organization, with operative functions on the job site. IT allows this learning to bypass middlemen and link rural rent-seeking through education and learning directly into global markets. The distinction between urban and rural knowledge loses its importance as a defining feature of the new rural.

Property rights issues are essentially strategic issues. Rural economies do not transform into NREs until they self-organize to gain these new property rights and then rebundle them in productive profitable tradable ways. The correlation between income growth and how far an economy has emerged toward leading edge NRE status is high, 70% for US states in 2002 (Atkinson, 2002). This correlation reflects the economic rents flowing from various rights associated with knowledge. Each type of right earns its own characteristic rents. These are higher or lower according to where the rights are on the array between totally excludable and open-access. At the open-access extreme, rents are difficult to capture and hold within the rural economy itself, encouraging substitution of political means for markets. It would seem that only by bundling open-access rights strategically with other excludable rights can a rural economic unit capture rent in a market framework.

The strategic opportunities for growth through organization of property rights in the NRE are as disruptive as they are limitless, because of the monopoly bias of organizational rights. These rights are referred to as proprietary rights. The opportunities for the aspiring NRE lie in building contractual relationships among holders of various forms of

rights. The goal is to redirect rents into the rural economy that normally flow asymmetrically to outside holders of proprietary knowledge.

For example, external poultry processors in a US case bundle input rights to reduce the information rents available to rural producers. The processors own or construct privileged access to the proprietary and often the intellectual property rights for which they extract rents. The broiler producers in marked contrast are confined by the processors to rents from operating knowledge. Even these rents are discounted for uncertainty independent of the operators' own actions, before being downloaded by bracketing firms buying the broilers and supplying the rations (Goodhue, 2000). Bracketing refers to integrated upstream and downstream functions of input supply and output processing. This example illustrates why intensive livestock operations may not be a contribution to building leading NREs, nor to their income and wealth objectives. Value is extracted as fast as it is added by the strategic configuration of proprietary rights. Conceptualization and execution of organizational knowledge has been separated, returning this rural economy to an almost feudal status as labour provider and uncertainty absorber.

### **Governance for a Rapidly Emerging NRE: Not-so-cool Rivalry**

Governance is a necessary companion to the rural investment process to acquire knowledge property rights. The emerging transformation into an NRE does not happen with households and people alone. Governance is about order and organization, accountability and latitude for tactical discretion.

In this chapter, four types of rural governing institutions are highlighted. These are households, governments, markets, and voluntary organizations including religious congregations, together with their social capital. The pattern of local governing functions changes in an emerging NRE. Their old job was to organize public services and ensure orderly transactions. Their new job is to promote, facilitate, and participate in acquiring knowledge, learning with private enterprise about strategic and innovative ways to organize intellectual and organizational rights to knowledge. Bundling these rights dynamically is essential to off-loading uncertainty from the NRE into the global economy or to prevent off-loading onto the NRE, as the above broiler example teaches.

Rural households are micro-conglomerates governing many functions in their pursuit of wealth. Over the twentieth century, conglomerate organization of economic functions has declined as the economy learned how to govern these transactions (the uncertainty component of transaction costs) within markets instead of in-house organization. Rural households also have outsourced a large part of their informal consumer transactions in the form of restaurant meals, energy utilities, recreation, entertainment and leisure, and learning. They have also outsourced draught power, soil amendments, pest management, transport, construction, and many services on the production side.

This outsourcing is the same process of privatization of transactions for functions originally internalized within bureaucracies both government and corporate. In this sense, as formal transaction costs have diminished, markets have grown more important for the success of the NRE than has government in its present form. As private interests associate around common interest, the role for government in organizing and transacting innovative bundles of property rights declines. The General Will, as defined by Rousseau (1997 ed.), finds other ways of expression than through the State.

The government part of governance necessarily takes on an increasingly intermediary companion role in the emerging NRE, as opposed to command and control. As global restructuring of governance takes place, the Nation State loses relevance as the sole arbiter of the General Will, especially over knowledge-based property rights. Democracy and liberty become local issues for citizens of the emerging NRE. The tendency for the State version of arbitration of the General Will to be rule-based has endowed current winners with rights to consolidate their winnings and exclude others from future competition through political means. This bias is a hangover of the command and control form of government. Rural enterprise constrained by rules, rather than common interest governance, is denied the agility to capture and organize the knowledge needed for global competitiveness earned with productivity.

Markets are increasingly influential in governing the NRE. They prompt the emergence of new business organizations that integrate industries territorially and across government jurisdictions shifting uncertainty to others, covering the risk component of transaction costs. They concentrate proprietary rights to organizational capacity in markets to improve rents while experiencing lower transaction costs. Liberalization of trade and harmonization of mercantile policy are improving market conduct and lowering distance-related transaction costs. Declining transaction costs for information, a key ingredient to performance, improve market governance.

Markets govern distribution and allocation to achieve efficiency. In their rarely perfect forms, they maximize human welfare for given scarce resources. Price discovery is the central governing process for markets. Price discovery is, however, just one cost of transaction. The knowledge feature of emerging NREs introduces the distinct issue of transaction costs for knowledge by markets in their governing role.

Knowledge is uncertain by nature, especially strategic knowledge about competitors or other potential players in a transaction. Thus it is transacted within alliances and networks, often as adjuncts to formal markets. Organizational knowledge is proprietary by nature. When consolidated in large transaction firms, the outcome is great asymmetry of its governing power over transactions, and consequent market inefficiency. The cost of accepting asymmetry is acceptance of an outflow of rural economic rents, the base for rural wealth creation. The cost of correcting asymmetry is data collection, timeliness, institutional change, and sometimes substitutes for market price discovery such as cronyism, patronage, and nepotism.

Volunteer associations or non-governmental organizations (NGOs) are also important players in rural governance. They govern because, like households, markets and governments, they organize activities and assets in unique ways. Often called social enterprises or social entrepreneurs, their primary strength is mobilizing community assets around community purpose for mutual and public benefit.

Volunteer organizations face an increasingly difficult time in the NRE. They rely on experiential learning, one of the slower modes of learning. People learn social skills and how to apply them by doing over time. Youth gain experience in team work prior to entering the workforce, such as in 4-H. Communities learn about needs and how to finance and serve these needs in a grant system that features frequently changing eligibility criteria. This volunteer learning has trouble keeping up with that of its market and bureaucratic cohorts in governance, sharing obstacles similar to those faced by

households in becoming knowledge-driven governing institutions. Rural political leadership travels the same learning routes.

Rural governance in all its forms is mainly about investment in self-organization and easy entrance for creative talent. The evolution of agriculture is a useful metaphor. As for agriculture historically, governance has to shift to gardening and farming from hunting and gathering, as rural governing bodies seek relationships based on long run mutual interest as opposed to self interest. Investment by these governing bodies in their own knowledge replaces prodigal behaviour. They learn that hunting down firms and gathering them to their own tax base at the expense of neighbouring communities is a zero sum game. The opposite 'economic gardening strategy', as promoted by Gibbons (no date), is about nurturing existing firms and a cool habitat for talent, as opposed to recruiting firms from away.

Economic gardening is an investment in learning and self-organization, where politicians understand that local strength depends on strength of neighbouring regions, not extraction of their neighbours' rights to economic rents and enterprise. This understanding in the new governance is the foundation argument for revitalizing rural/urban interchange with the goal of rural wealth and wellness.

Traditional rural governance is challenged as the NRE emerges. The four governing institutions of household, government, market, and voluntary association are not used to seeking seamless common interest across jurisdictions and constituencies of interest. Mainstreet and political rivalry prevents investment in global knowledge from pooling to local advantage. This challenge for governance is really about reversing destructive predatory responses to devitalization experience.

### **The New Formal and Informal Rural Economies: Siamese Twins**

The formal part of the NRE drives growth and wealth. It is the economic base, the producer of goods and services that are traded formally outside the place and bring earnings into the place as a return on equity tied to that place. It is also the supplier of more and more consumer and producer goods and services in the form of franchises, box-stores, and retail chains. Its participants populate rural governing institutions.

The new formal economy is usually the leading edge of the knowledge retooling process. Knowledge property rights from the global economy are acquired and rebundled, in however a rudimentary way, by the formal economy with its in-place property rights. It seeks to capture economic rents from self organization. The resource, manufacturing, professional services, and commerce sectors are where to look for the leading edges of the formal rural economy.

The new informal economy is probably not 'new', nor is it the obsolete part of the NRE according to a recent literature review (Apedaile, 2003). The informal economy is called informal because of the nature of transactions. Most households and firms make some informal transactions in that the whole price is not discovered in a market and therefore goes unrecorded, making transactions untraceable. The rural informal economy, though to a large extent self-providing, sells into the formal economy and re-circulates its 'economic base' earnings locally. The informal economy provides personal services, cultural authenticity, and often an idiosyncratic coolness. It has also a not-so-cool survivalist aspect for households unable or unwilling to compete within the kinds of

uncertainty of the formal economy, such as for the un- and under-employed. It is an entry point for youth. It is an incubator for petty entrepreneurship. The informal economy does not usually contribute to growth. Remittances likely are the main substitute for earnings in a weak to non-existent economic base.

Growth in the size of the informal economy generally suggests that the NRE may be bringing with it an emerging structural problem. The formal component is becoming a social and economic enclave within an increasingly pervasive informal economy, matched by an emerging ghetto of multi-generation survivalist households (underclass). The middle households are pulled gradually toward one or other of these poles, the so-called disappearing middle. This polarization may contribute to deterioration of social cohesion and stratification of local social capital and of access to global social capital.

The rural informal economy could be an asset in the co-evolution of the New Rural Economy within the New Economy. The defining feature of the rural formal economy is the uncertainty for rates of return on investment. Globalization is putting the formal economy on fast-forward. Shiller (2003b) explains clearly how the consequent uncertainty can destroy wealth as fast as it is created. Diseases, such as SARS (*Severe Acute Respiratory Syndrome*) and BSE (*'mad cow' disease*), and geopolitical struggle using war and terrorism have more effect on share and property values than the best efforts of rural entrepreneurs and workers to be productive and efficient. This uncertainty for asset value of property rights undermines both equity-based finance and credit worthiness, part of the equity risk premium facing investors. The informal economy enables considerable risk spreading for employers in the formal side of the NRE. The informal economy can be a source of flexibility and competitiveness for the formal part of the NRE.

Concern over the changes happening in rural Canada reflects discomfort with the attributes of the informal rural economy. The informal economy is growing steadily throughout the developed world. It is poorly understood and its merit is rarely accorded. The literature generally does not view the informal economy as an asset for rural growth. Freshwater (2000), draws attention to the internationalization of rural underdevelopment. As long as much of the world's economy remains underdeveloped, he says, standards of living in developed rural economies will be tugged downward by international capital and financial mobility. A dollar invested in rural Canada has to compete on rate of return with a dollar invested in rural China. Markets enable that competition take place. The informal economy is an alternative.

Nevertheless, the informal economy is seen as a structural problem. It is organized around depreciated assets, often by discouraged entrepreneurs. It constitutes a workforce, some of which are obliged to accept social assistance or to work under substandard terms and conditions, the 'decent wage deficit'. The informal economy works around the edges of the law, with cunning and audacity as its principle attributes. Households heavily involved with the informal economy work with few property rights, relying for their subsistence mainly on open-access commonly held property rights, flea markets, temporary work, and schemes.

Most rural youth launch their careers into the informal economy, because growth in the formal part of their local economy is jobless. They enter adult economic life with few knowledge rights to trade. Volunteer associations, summer work, and the family business organization of rural economies provide work experience, overlapping with high

school. However, the informal economy cannot carry young new entrants beyond this initial stage, without sidelining them in economic dead ends. Rural youth understand and feel compelled to migrate.

More positively, the rural informal economy is an attractor for assets from the formal economy as they become globally uncompetitive, and provides an opportunity for knowledge retooling, especially in terms of self-confidence training and basic education. The household organization of the rural informal economy, increasingly unsuitable for the formal economy, may regain relevance for emerging environmental and amenity functions of the NRE. Informal transactions that characterize these new functions, yet are not understood in market terms, are also the hallmark of the informal economy. Reciprocity frameworks (family and kin) for informal trading coexist well with associative (common interest) frameworks for organizing the assets and indigenous knowledge property rights in the rural informal economy. These are needed to perform the emerging rural functions. The challenge is not to convert the informal into the formal, but to enable informal organization to access 'knowledge economy' rights from away, which are the main source of value-added income in the NRE.

### **Summary: Exciting Times**

The NRE is the rural face of globalization, complex and dynamic. The cliché 'adapt or die' means that rural institutions, households, markets, governments, and volunteer associations are under pressure to retool and self-organize to gain from globalization. Transaction costs for information and knowledge technology are coming down. The way rural assets are organized and property rights rearranged is where the money is. Places now compete on strategic talent, learning ability, and a 'plug and play' ambiance more so than on cheap land and labour.

Knowledge retooling in enterprises changes their learning culture and that of the community. The active uptake of knowledge becomes the main asset upon which to build the economic base of a place. Existing business is the place where retooling has to begin. "If growth is not organic, it is not permanent" attributed anecdotally to Edward Zore, CEO of Northwestern Mutual, the largest life insurer in the United States.

The main structural feature of the NRE appears to be the emergence of a growing informal economy with an embedded enclave formal economy and ghetto survivalist core. Although poorly understood, the informal economy is usually viewed as a bad sign. It is seen as a poverty sump, using depreciated assets, being disenfranchised from property rights, having low skills and being a drag on wages and incomes in the formal rural economy. The formal part of the NRE seems to be withdrawing into an enclave increasingly disassociated from the rural community, developing its own social capital oriented globally. The formal rural economy is generally the backbone of the economic base, but when it is an enclave with low to zero multipliers, contributes little either to the real productivity of the place or to its growth.

The NRE is about inventing organizations for the knowledge needed to finance investment, handle uncertainty and pay for the operating costs of performing its functions, locally and globally. Once that happens, these functions may join the rural economic base to drive autonomous local growth. Currently, only in metro-adjacent NREs is this process keeping ahead of weakness in the commodity economic base.

The purpose of the NRE is to generate both rural wealth and wellness. Work on the evolution of societies using agent-based models to recognize the diversity in many autonomous and different rural households/residents, suggests that some of the emerging properties of the NRE at some levels can lead to extinction, one of the issues some communities face in today's NRE. However, the diversity of the actors suggests that outcomes for rural communities can be better understood, though not anticipated, in terms of reinventing governance to reduce risk premiums on investment. A promising line of inquiry for all levels in the NRE system is the likely effects of new rules and norms in the New Economy upon performance of the NRE.

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