Flexible Networks as a Means to Enhance Rural Small Business Competitiveness

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Introduction

The purpose of this paper is to explore the use of flexible networks as tools for local self directed economic development. Current literature abounds with many of the foundation elements of flexible network activities (Rosenfeld 1995; Lichtenstein 1992; Jarillo 1988; Lewis and Weigert 1985), alliance or partnership relationships in marketing channels (Anderson, Hakansson & Johanson 1994; Wilson and Moller 1992; Spekman and Sawhney 1990; Thorelli 1986) and control in network organizations (Pyatt 1995; Larson 1992). The principle area of focus of this paper is on fragmented industries composed primarily of small to medium sized businesses, which some authors believe act and react much as the individual decision makers who own and operate them (White 1988; Granovetter 1985).

In addition, researchers are beginning to analyze the development of social capital among actors in dyadic and network arrangements in markets as well as in purely social settings (Putnam 1993; Tootle & Malecki 1994). Putnam (1993, pp. 167) defines social capital as a collection of features of social organizations. Included in this definition are trust, societal norms and values and interpersonal networks that can improve the efficiency of society by facilitating coordinated actions. In particular, inter-disciplinary research is now being called for to address the complexity of network development and to assist those who participate in network formation. (Anderson et. al. 1994).

In highly fragmented industries consisting of small to medium sized firms, none of which hold commanding positions in the market, collective strategies or networks represent viable strategic options (Dollinger 1990). Consideration of network activities, functions, dimensions and results may offer important insights into the potential of networks or Interfirm Collaborative Initiatives (ICIs) (Chance et al 1995). ICIs are defined as intentional efforts to create or enhance network formation or cooperative activities between three or more commercial entities.

An ICI differs from a network in that an ICI is the set of precursors and motivations to establish networks or other forms of interfirm collaboration and a network is the end result of ICI activity. While an ICI may perform many of the functions and possess many of the characteristics of a network, an ICI should be considered a method by which networks are established.

This paper will provide an understanding of the potential for the use of networks in community economic development. We review marketing, organizational development, small business management and entrepreneurship, sociological, and rural development literature to establish the framework in which to consider interfirm collaborative initiatives and networks. Recent research and literature on networks indicates opportunities for application of this business organizational form. In addition, insights into the problems or obstacles facing small and medium sized businesses in rural areas regarding adoption of, and participation in, networks are presented.

Networks Defined

Networks are defined in the *Catalogue of U. S. Manufacturing Networks* as a relationship of collaboration of at least three firms characterized by interfirm dependence (Lichtenstein 1992). Baker (1992) places special emphasis on the degree of integration across formal boundaries of many types of socially important relationships. The primary purpose of networks is to attain economies of scale through specialization. Networks may be categorized as either hard networks or soft networks (Rosenfeld 1995). Hard networks are those networks in which there is a high degree of inter-dependence based on shared responsibility in product or service delivery. In a hard network there is also a degree of individual business strategy commitment (Bosworth 1995, Lichtenstein 1992, Jarillo 1988). On the other hand, a soft network is one in which a high level of interdependence or individual business strategy commitment has not occurred (Bosworth 1995). Soft networks include such activities as collectively associating to reduce insurance costs or sharing the costs of training programs (Bosworth 1995). It follows that some networks may be categorized as both hard and soft, depending on the mix of programs and services provided.

Regardless of the network type, there exists an element of enhanced business relationship or value added partnership inherent in the business network. Value added partnerships are defined as a set of independent companies that work closely together to manage the flow of goods and services along the entire value added chain (Johnston and Lawrence 1988). Similar definitions for interfirm collaboration and strategic alliances are found in the literature on the subject (Spekman & Sawhney 1990; Rosenfeld 1995). For example, Spekman and Sawhney (1990) define the strategic alliance as a type of "interorganizational relationship in which the partners make substantial investments in developing a long-term collaborative effort and common orientation toward their individual and mutual goals". They cite Arndt (1979) who believes that competitive markets are being replaced by "domesticated markets" consisting of interorganizational systems (IOS); long-term relationships characterized by resource pooling, conscious information management, planned rather than ad hoc exchanges and a willingness to trade autonomy for stability.

Anderson et al. (1994) refer to the emergence of deconstructed firms where specialty functions, once performed in-house, are now purchased from outside firms. Bryne, et al. (1993) identified the "virtual corporation" as a transitory network of firms organized around a specific market opportunity and lasting only as long as that opportunity lasts. Bowersox (1990) refers to these collective activities as "logistics alliances". Wilson and Moller (1992) identify the hybrid organization which is the process element and the key factors that describe a strong relationship as the goals of the process.

Regardless of the descriptive title used to identify the structure of collective business strategies, a common theme is the need to respond to growing competition and a willingness to overcome traditional obstacles to cooperation. Table 1 summarizes a number of views on competitive market structures beyond transactional dyadic relationships.

Table 1. Competitive Market Structures

Authors	Structure Name	Characteristics
Rosenfeld/Lichtenstein Baker	Flexible Networks	At least three firms; interfirm dependence integrated social relations across formal lines
Arndt	Domesticated Markets	Interorganizational systems; long term relationships with resource pooling; conscious information management; planned exchanges; trade autonomy for stability
Johnston & Lawrence	Value Added Partnerships	Independent firms; close working relationship; management of value added chain
Anderson, Hakansson & Johanson	Deconstructed Firm	Specialty functions contracted to external firms
Spekman & Sawhney	Strategic Alliance	Interorganizational relationship with substantial investment in long-term collaborative effort; common orientation towards goals
Bryne, Brandt and Port	Virtual Corporation	Transitory network arranged around a specific opportunity
Bowersox	Logistics Alliances	Dyadic and other formal business arrangements for strategic benefit
Wilson and Moller	Hybrid Model	Process element and key factor; goal is strong relationship

Miles and Snow (1992) state that since the 1980's, around the world, companies have responded to increased competition by restructuring closed and vertically integrated organizations. The new organizations form a variety of flexible systems that more closely reflect networks than traditional pyramidal (top - down) organizational structures. In fact, the network organization may be a superior organizational form required to deal with increased global competitiveness (Best 1990). Biemans (no date) goes even further in expressing the importance of networks. He believes the network form of multi-business organization or interfirm collaboration has become critical for survival and the continued ability to maintain a competitive advantage.

Barriers to Network Development for Small Business

As with any business strategy, not all companies will view formal network participation as viable strategy. Lack of small company participation in networks may be due to serious obstacles faced by the small business owner/manager (Table 2). These obstacles may include lack of time, differences in business strategy, varying levels of business activity, distrust, lack of access to an appropriate organization, remoteness of the small business, lack of communication, among other reasons (Rosenfeld 1995: Putnam 1994; Conway 1994).

Table 2 Barriers to Network Development

?? Lack of Time
?? Differences in Business Strategy
?? Isolation from Influential Industry Peers
?? Varying Levels of Business Activity
?? Distrust of Others
?? Lack of Access to Appropriate Organizations
?? Remote Location of Business
?? Lack of Communication Infrastructure
?? Personal Attitudes
?? Lack of Access to Markets
?? Isolation from Influential Industry Peers

The inability of small companies, characteristic of rural economies, to attain high levels of efficiency through production economies of scale without considerable expense has been documented (Piore & Sabel 1984; Steinhoff & Burgess 1988). These barriers may arise from lack of capital, lack of management expertise, competition from other firms, remote locations and other reasons that may exacerbate the reluctance of the small firm owner manager to adopt a new, unfamiliar business strategy such as network participation (Conway 1994; Putnam 1995).

Benefits of Network Participation

Rosenfeld (1995) states that for the small to medium manufacturer, the most valued functions of a network are to increase sales, increase access to information and enhance the opportunity to learn from one's peers. Stated another way, networks provide economic and political empowerment to small companies. Added power allows individual companies to gain a measure control over the future of their company. This control comes in the form of additional resources available within the network with which small companies can protect themselves from increasing competitiveness in an ever smaller and more crowded global market place (Friedman 1987; Jarillo 1988).

Networks may offer small firms additional tangible benefits including better product quality, reduced production costs, reduced shipping and promotional costs, increased access to resources and better customer service. In addition, there may be benefits based on subjective measures of individual network participants such as new friendships or validation of personal views by peers (Johnston & Lawrence 1988). Table 3 provides a summary of benefits that may accrue to network participants.

Table 3. Benefits of Network Participation

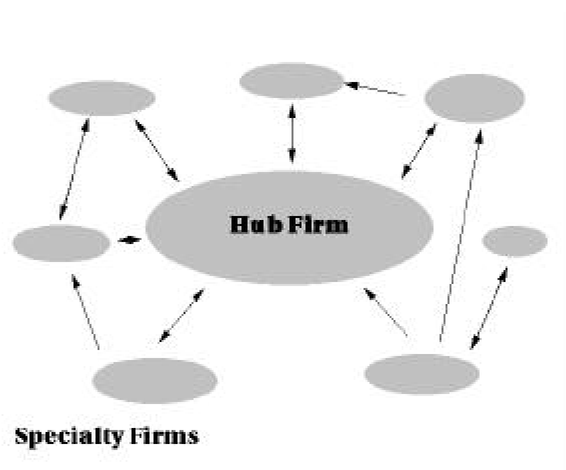
?? Increased sales
?? Increased access to information
?? Opportunity to learn from peers
?? Increased economic and political power
?? Additional resources
?? Increased product quality
?? Shortened production times
?? Reduced production costs
?? Reduced marketing costs
?? Better customer service
?? Other subjective benefits

Classical Network Structure - Northern Italy

Jarillo (1988) reports the phenomenon of networking found its way to the United States after successful implementation in several other countries. In particular, the Emilia-Romagna area of northern Italy's use of networks as formal business practices has attracted worldwide attention. The region is considered by many as the birthplace of modern network structures. Lorenzoni (1982) found that network formation in northern Italy was a process of devolution from a group of 700 very large firms in 1951 to 9,500 small firms by 1976. In most areas where networks have developed on a large scale, the formation of networks was based on the concept of a large "hub" firm subcontracting certain aspects of production to smaller specialized firms. Each specialized firm produces or adds value in a particular area of the production process.

The devolution from vertically integrated conglomerate to a horizontal strategic alliance structure allows the large "hub" firm to achieve economies of scale while maintaining a high degree control over the production and marketing processes (Jarillo 1988). The hub firm realizes these economies of scale because another firm makes the necessary investment in facilities and machinery to supply products or services to the hub firm. In addition, peripheral firms may benefit by realizing consistent reliable sources of supply and sales as well as gaining in overall stability.

Figure 1. Hub Firm Structure



An example of the hub firm network structure is represented by an Italian company's experience in the textile industry. Changes in the textile industry competitive structure and changes in the retail garment industry had forced manufacturers of material to become very flexible. In light of the variety of prints, colors, and fabrics required and the need for shortened production runs, large material producers in northern Italy found it infeasible to invest in the required equipment needed to stay competitive.

Massimo Menichetti, owner of one of northern Italy's textile mills, decided in order to remain competitive he had to divest some production functions. He sold thirty to fifty percent of certain operations of his firm to employees (Jaikurman 1986). Menichetti started a marketing company which helped the new companies market up to 30 percent of these new companies excess services not utilized by the original Menichetti firm. Menichetti's firm was able to fill its customers needs without expanding the original company. In fact, the firm successfully reduced cost and increased service levels (Johnston and Lawrence 1988).

In many cases the hub firm employs a strategy of encouraging, supporting and facilitating collaboration (Anonymous 1995). The hub firm structure implies an agglomeration of firms that some writers have termed industrial districts (Harrison 1992). Harrison refers to spatially concentrated networks of mostly small and medium sized companies using flexible production technology and displaying high levels of inter-dependence, typical of the network structure found in northern Italy.

Other aspects of the classical hub firm network structure is a focus on the mutual benefits received such as strengthening of vertical ties (supplier-buyer relationships), specialization in production processes (production operation management), and reduction in transaction costs (strategic management) as the basis for network formation. All of these aspects reinforce the interdependence of network participants as well as providing incentives to participate. However, a high level of interdependence among networked firms implies there is also a degree of risk that must be overcome by incentives and perceived benefits.

Risk/reward structures aside, the phenomenon of network collaboration is not well established in the United States. Exceptions are the automobile industry where companies have used the principles of networks for decades to lower costs by subcontracting various aspects of production to specialized firms. Aircraft manufacturers, computer manufacturers and office products producers all represent industrial groups which have for years participated in "joint ventures" to gain competitive advantages. Given the continued use of networks by major industrial groups, one must ask the question, "What aspects or dimensions of networks facilitates improvements in competitiveness or profitability?"

Network Dimensions

Martinussen's (1994) four major dimensions of a successful network are presented in Table 4.

Table 4. Network Major Dimensions

1. Joint problem solving
2. Developing and exploiting mutual complimentary
3. Developing supplier buyer linkages
4. Maintaining market sensitivity by individual access to end markets

Joint problem solving is one of the most valued aspects reported by Rosenfeld (1995) and is also one of the expected economies of scale. In the case of the networks, the costs of doing business are not expected to be as high relative to the individual business hiring the services needed to perform the problem solving function alone.

Second, mutual complimentarity is based on knowledge of the capabilities of a competitor who is now viewed as a collaborator. This particular function addresses one of the most important underlying functions of a network; that is socialization or the opportunity to get to know industry peers in a nonthreatening environment. The socialization process develops the fundamental element of trust on which all successful networks are based (Jarillo 1988). Mutual complimentarity development and exploitation also brings mutually beneficial resources to the relationship. When combined with the resources of another company, each participant strengthens their position and expands their individual capabilities. Competitors learn to more freely exchange information and collaborate and innovations can more readily occur. These innovations can create emergent positive outcomes that were not possible with the physical resources available before collaboration began.

Third, developing supplier-buyer relationships strengthens the interdependence of firms in the network, tending to improve overall product/service quality (Johnston and Lawrence 1988). Stronger relationships should lead to more stable marketing channels as companies learn to trust and rely on each other to jointly meet expectations and market demand.

In network development, trust of others is perhaps the most important issue. In network literature, virtually all researchers, regardless of perspective or discipline, discuss the importance of trust among network participants. Sabel (1990) defines trust as the mutual confidence that no one in an exchange will exploit the other's vulnerability. He adds that trust is widely held as a precondition for competitive success and that trust is the result of the experience of participants in a series of transactions between themselves over time. These experiences build an atmosphere where trust can occur. Rector (1992) referred to this period as the socialization process and Han and Wilson (1994) view this as a component of social bonding.

Sociological issues involved in the decision making processes of owner/managers of very small firms play a very important role in attracting companies to networks; especially for very small or micro-firms. Reporting on a study of rural networks in the northwestern United States, Rosenfeld (1995) found that getting to know one's peers in an industry and interacting with them on a face-to-face basis is one of the most valued aspects of network involvement. Lorenzoni (1982) believes that without trust, firms entering into a formal relationship may find that investments and/or hiring decisions based on that relationship result in economic losses. Harrison (1992) says that trust in certain economic relationships is characterized by single sourcing. A breach of trust by a major supplier could have potentially devastating effects on the buyer. In addition, a major buyer that attempts to exercise monopsonistic control over smaller suppliers also presents problems.

Fourth, maintaining market sensitivity through persistent contact with the customer base is a fundamental aspect of marketing. Market sensitivity is critical to a firm which sells to, or produces a product for, the marketplace regardless of customer location in the marketing channel. A network may provide a threshold of demand where larger numbers of customers become aware of the individual company due to the agglomerative effect of a number of firms working jointly. This effect is especially important for very small firms which produce individually but co-market their products through a joint venture or network arrangement.

Small Firms and Network Development

Although network member companies may seem to compete directly for the same customer base (Harrison 1992), there are typically opportunities for all actors through product and service differentiation. For example, consumer incomes and tastes vary and the availability of individual products at a given time may vary as well. Co-marketing offers each company more opportunity for additional sales through learning on a broad scale how changes in end user needs occur.

Because small and medium sized firms make up the majority of firms in virtually any economy, the potential role of networks to facilitate interfirm cooperation for enhancing economic development efforts is becoming increasingly important. The importance of small companies is amplified by Birch (1987). He asserts that small firms are considered to be the most important creators of new jobs. Acs and Audretsch (1990) believe small firms are on the cutting edge for innovations in technology. Although the importance the small firms sector of the U. S. economy is significant, there are no clear and consistent methods or policies to encourage further sector growth through network development.

For example, the level at which government policy to foster small firm economic development should be determined and implemented is still hotly debated. A growing body of practitioners and researchers believe the closer to the location of implementation that policies are developed, the more likely these policies will be successful (Deavers 1991; Fendley & Christenson 1989; Flora et al. 1991; Hackett 1988). Federal policy may best target the overall regional and national economy of the United States by facilitating a smooth flow of capital and labor from weaker to stronger industries instead of between specific locations (Deavers 1991) However, if the opportunity is intended to fine tune policy for local implementation, some researchers believe the fine tuning should be allowed to occur with the cooperation and input of local officials (Deavers 1991; Fendley 1989; Flora et al. 1991; Hackett 1988).

Public sector support of network development for small companies has yielded intriguing results. For example, Rosenfeld (1995), reporting on the efforts of five rural networks in the northwestern United States found that four of the five efforts resulted in profound impacts on state policies and programs. All the participating companies reported growth and overall improvement of company operations. For example, participating companies credit the network with helping them get better information, increase contact with peers, and help with marketing. A renewed sense of optimism, a general good feeling about the network, and increased hope and aspirations were also reported. In addition, local officials felt the networks were a factor in attracting additional investment into the region. The latter finding is fully in keeping with Perroux's thesis that resources will flow to the region where economic success is occurring (Perroux 1955).

Another major obstacle to the development and perpetuation of networks of small businesses is an ample and sustained source of funding for the network's operations (Tootle and Malecki 1994; Summers 1994). In at least one network comprised primarily of very small firms located in rural areas, the inability and/or unwillingness of very small firms to provide financial support for the operation of the was a critical problem. Likewise, the time required for the network to develop alternate funding sources with which to finance its activities may be protracted (Summers 1994).

Public sector support for specific projects which enhance the marketing function and provide an opportunity to "jump start" a network, may be a partial answer to some of the problems facing rural small business networks. Such support could provide important assistance in the early stages of the network's development. Further, public sector support of this type may not be as expensive as long-term tax incentives and other programs offered to industrial recruitment prospects. By providing project specific support to networks of local businesses, government sends positive signals about the attitude of government concerning support of small business. Additionally, unlike recruitment incentives which typically are aimed at only one company, public sector project specific investment made in small business networks spreads the inherent investment risk over a broader base of companies.

Networks can find creative ways to fund operating costs of networking initiatives. Cooperative marketing efforts such as regional showrooms, catalogs, cooperative tradeshows, and information/customer inquiry clearinghouse functions are all network benefits. These benefits serve to promote the network to potential member companies, provide ways to finance network operations, promote the industry and educate consumers about the products and services available from network companies. These services create greater market opportunity for network member companies. Importantly, these opportunities represent scale economies. The marketing economies realized by network participation are unattainable by the individual small company at comparable cost. This ability of a network to assist firms in achieving marketing economies of scale, is an important motivation for network participation. The ability to increase sales with a modest investment was found to be an important expectation of network members and one of the strongest attractors (Rosenfeld 1995).

Conclusion

Rural economic development is a multifaceted and complex economic and sociological issue. Perhaps no single approach may be able meet the needs of each specific area or region. This paper examines networks as a tool to be used to overcome some of the major obstacles to development of small businesses in rural areas. Economic development efforts are unique, depending on the specifics of the area where they occur. However, there exists a significant body of literature which documents the validity of following economic development strategies focusing on the use of networks to assist small companies grow and prosper. Self-development utilizing networks can assist the collective efforts of existing companies and enhance the utilization of resources. The ultimate goal of any network development effort should be long-term sustainability of the economic base and maximization of resources and stability for network member companies.

Bibliography

Anonymous, 1994. Building Synergy: The Hub as Network Catalyst, Firm Connections. V2/No. 3, pp. 2-5.

Acs, Z. J. and D. B. Audretsch, 1990. Innovation and Small Firms. MIT Press, Cambridge, MA.

Anderson, James C., Hakan Hakansson and Jan Johanson, 1994. The Impact of Social Networks on Business Foundings and Profit: A Longitudinal Study.

Arndt, Johan, 1979. Toward a Concept of Domesticated Markets. Journal of Marketing. Vol 43. Fall. Pp. 69-75.

Baker, W. E., 1992. The Network Organization in Theory and Practice, in: N. Nohria and R. G, Eccles (eds.) Networks and Organizations: Structure, Form and Action. Harvard Business School Press, Boston, MA. pp. 397-429.

Best, M., 1990. The New Competition. Harvard University Press, Cambridge, MA.

Biemens, Wim. G.,______. Organizational Networks-Towards a Cross-Fertilization Between Practice and Theory. University of Groningen, The Netherlands.

Birch, D. L., 1987. Job Creation in America: How our Smallest Companies put the Most People to Work. The Free Press, New York.

Bosworth, Brian, 1995. Interfirm Collaboration, Firm Connections, V3/No.1, Jan-Feb. pp. 2,5.

Bowersox, Donald J., 1990. The Strategic Benefits of Logistics Alliances. Harvard Business Review. V90/No. 4. Pp. 33 - 42. July-August.

Bryne, John A., Richard Brandt and Otis Port, (1993). The Virtual Corporation. Business Week. February 8 . Pp. 11, 15.

Chance, N. Paul, Anne Burrell-Smith and Richard Vlosky, 1995. Rural Economic Development for the Secondary Forest Products Industry: Policies and Programs, Working Paper. Louisiana Forest Products Laboratory, School of Forestry, Wildlife and Fisheries, Agricultural Center, LSU.

Chance, N. Paul, Balaji Krishnan and Richard P. Vlosky 1995. Measures of Propensity to Participate in Interfirm Collaborative Initiatives. Unpublished working paper. Louisiana Forest Products Laboratory, School of Forestry, Wildlife and Fisheries, Agricultural Center, LSU.

Conway, Carol, 1994. Trade Development and Industrial Modernization - Flip Sides of a Coin, Firm Connections; V2/No.3, June. pp. 1, 4, 12.

Deavers, Kenneth L., 1989. Lagging Growth and High Poverty - Do We Care? Choices, Second Quarter, pp. 4-7.

Dollinger, Mark, 1991. The Evolution of Collective Strategies in Fragmented Industries. Acadamy of Management Review. Vol. 15:2. Pp.266-285.

Fendley, Kim and James A. Christenson, 1989. Rural Reflation: An Idea for Community Development. Journal of the Community Development Society.

Flora, Cornelia, Jan L. Flora, Gary P. Green and Frederick E. Schmidt, 1991. Rural Economic Development Through Local Self Development, Agriculture and Human Values - Summer pp. 19-24.

Friedman, Robert E. 1987. Flexible Manufacturing Networks, The Entrepreneurial Economy. July/August, pp. 2-4.

Greenhut, M. L., 1956. Plant Location Theory and Practice. University of North Carolina Press. Chapel Hill, NC.

Hackett, Judith C. and Lisa Ann McLemore, 1988. States Agenda for Rural Economic Development, Council of States Government, Lexington, KY.

Han, Sang-Lin and David T. Wilson, 1994. Antecedents of Buyer Commitment to the Seller: A Model of Structural Bonding and Social Bonding. Institute for the Study of Business Markets. Penn State University.

Harrison, Bennett, 1992. Industrial Districts: Old wine in New Bottles? Regional Studies. Vol 26.5. pp. 469-483.

Jaikumar, Ramchandran, 1986. HBS Case Study of Massimo Menichetti.

Jarillo, J. C., 1988. On Strategic Networks, Strategic Management Journal. Vol. 9, pp. 31-41.

Johnston, Russell and Paul Lawrence, 1988. Beyond Vertical Integration - The Rise of the Value Adding Partnership. Harvard Business Review. July/August, pp. 94- 101.

Larson, Andrea, 1992. Network Dyads in Entrepreneurial Settings: A Study of the Governance of Exchange Relationships. Administrative Science Quarterly. Vol. 37. Pp. 76-104. March.

Lewis, J. David and Andrew Weigert, 1985. Trust as a Social Reality. Social Forces. Vol. 63:4. Pp. 967-985. June.

Lichtenstein, Greg A., 1992. A Catalogue of U. S. Manufacturing Networks, U.S. Department of Commerce, National Institute of Standards and Technology, State Technology Program. September.

Lorenzoni, G., 1982, From Vertical Integration to Vertical Disintegration, Working Paper, presented at the Strategic Management Society Conference, Montreal.

Martinussen, Jeff, 1994. More Than an End in Itself-The Export Network as Stepping Stone, Firm Connections, V2/NO.3, May/June. pp. 2, 10.

Miles, R. C. and C. C. Snow, 1992. Causes of Failure in Network Organizations. California Management Review. Summer, pp. 53-72.

Perroux, F., 1955. Note sur la notion de ‘pole de croissance: Economie Applique. Jan- June, pp.307-320.

Piore, M. J. and Charles Sabel, 1984. Second Industrial Divide: Possibilities for Prosperity. Basic Books, New York.

Putnam, Robert D., 1993. Making Democracy Work: Civic Traditions in Modern Italy. Princeton: Princeton University Press.

Putnam, Robert, 1994. The Prosperous Community - Social Capital and Public Life, Firm Connections. Vol. 2/No.2. March/April, pp.5,11-12.

Putnam, Robert D., 1995 (Bowling Alone: America’s Declining Social Capital, Journal of Democracy, Jan. Vol. 6, No. 1, pp.65.

Pyatt, Roger, 1993. The domain of a Soviet-type command network. Journal of Business and Industrial Marketing. Vol. 10:1. Pp. 44-63.

Rector, Christine, 1992. Conference of Network Development Practitioners, National Institute of Standards and Technology, U.S. Department of Commerce, Gaithersburg, MD.

Rosenfeld, Stuart, 1989. Making Connections-After the Factories Revisited. SGPB, Feb.

Rosenfeld, Stuart, 1995. Networks as Rural development Strategy - What Does Evaluation Tell Us? Firm Connections, V2/No.3, March/April, pp.1,4.

Sabel, Charles F., 1990. Studied Trust: Building New Forms of Co-operation in a Volatile Economy, Department of Political Science, MIT.

Spekman, Robert E. and Kirti Sawhney, 1990. Toward a Conceptual Understanding of the Antecedents of Strategic Alliances. Marketing and Science Institute. Working Paper # 90-114. August.

Stienhoff, Dan and John F. Burgess, 1989. Small Business Management Fundamentals, Fifth Edition. McGraw-Hill Book Company.

Summers, Paul 1994. Rural Manufacturing Networks: A Report to The Northwest Area Foundation. Northwest Policy Center.

Thorelli, Hans B., 1986. Networks: Between Markets and Heirarchies. Strategic Management Journal. Vol. 7. January/February. Pp. 35-51.

Tootle, Deborah. and Edward J. Malecki 1994. Manufacturing Networks and Local Community Development. Presentation. Annual Meeting of the Rural Sociological Society. Portland. Oregon. August.

von Thunen, J. H. 1826. ‘Der Isolierte staat in Bziehung auf landwirtschaft und Nationalokonomie,” Hamburg, Germany.

Wilson, David T. and Kristian K. M?ller, 1992. Relationship Development As A Hybrid Model. ISBM Report 19-1992. The Institute for the Study of Business Markets. University Park, PA.