6. THE BEST CASE

The best case scenario for post-disaster economic recovery is that in which institutions and resources survive largely intact. In the case of nuclear attack, it is assumed that the powers involved confine themselves to a strictly limited exchange, perhaps destroying one or two major cities and or military targets. It is reasonable to assume, in such a scenario, that belligerents would not target their respective capital cities. The whole notion of limited warfare collapses if the opponent is decapitated and unable to concur in a truce and restrain its own forces. Therefore, although localized devastation may be total, with major loss of life and property, the primary institutions of government and finance may be assumed to survive in recognizable form.

The contemporary US economy is, therefore, the baseline for this scenario, as it is for those of greater destructive impact. However, the more traumatic disruptions of the worse cases are expected to reduce the number and complexity of surviving markets. The best case retains the diversity of non-market and market structures exhibited by the existing economy.

Clearly, it is impractical to attempt a description of each market in the US according to type of product or service. Instead, we concentrate on recovery in the disaster area and some of the effects that may occur in the economy within this area. However, we point out that all of the exchange structures can be found in various degrees in the US economy, although subsistence and peasant marketplaces play only a limited role. Thus, some of the more general interactions between exchange structures and formal US institutions are discussed in the section on the necessary and facilitating functions of exchange activity.

Analysis of recovery within the disaster area is subject to the arguments made in chapter one, where it was pointed out that the level of devastation may be so great as to exceed the combined emergency resources of the entire US However, our interest lies primarily in the period following the initial emergency period, what is more appropriately thought of as the reconstruction period.

6.1 LEVEL AND SCOPE OF THE RECOVERY EFFORT

Reconstruction in the disaster area may fall under three cases. First is the case where the damage is so great that the rest of the country decides, explicitly or implicitly, not to offer any assistance for the reconstruction of infrastructure or resources. In effect, the area will be treated as if it does not belong to the rest of the US economic, legal or political systems and thus, restoration of social order and resource development within the area is expected to proceed along the lines of the worst case scenario. However, this is not a very likely case because such neglect is inconsistent with past disaster

relief actions and would likely be politically unacceptable to the surviving population.

In the second case, the outside system may restore the major components of the institutions, such as a legal system and agencies to enforce civil order, but decline to offer reconstruction relief in the way of subsidies to reduce the cost of attracting or developing commercial resources. This case is more likely than the first, especially if the disaster has already imposed a tremendous burden on the rest of the economy to pay for emergency services. Where institutions are restored but resources are left largely in a devastated state, it would appear that we have the conditions for the institution intensive scenario and the reader is referred to chapter nine. The stability of market structures to bring about economic recovery would be very dependent on the level of conflict between area groups and the established authority.

There is, however, one important difference between the case just described and the institution intensive conditions discussed in chapter nine. In the institution intensive scenario, resources are scarce throughout, including those that the institutions need to maintain and to enforce authority. This will not be true in the best case, where outside resources can and probably would be used in attempts to maintain the authority of the outside system. This would not alter many of the authority-maintenance problems. In fact, it may simply exacerbate the damages (social and physical) by prolonging the period where each side has the capability to engage in conflict. An example of this kind of phenomenon is the clash between law-enforcement agencies and inner-city groups (Libman-Rubenstein 1979).

Finally, relief programs may be implemented to assist both institutional and resource development. This case would correspond to the general pattern of relief actions following many localized disasters, and thus, suggests the most likely decision of the outside sources of aid.

6.2 ECONOMIC RECOVERY WITHIN THE DISASTER AREA

Hill (1987) provides an extensive review of the analyses that address the economic recovery question from regional disasters. In general, he finds that recovery resources do not benefit all groups equally. An understanding of the exchange repercussions requires a distinction between groups that are included in the recovery program and those that are excluded.

6.2.1 Exchange Structures of the Groups Included in the Recovery Programs

One of the more important conclusions of the Hill (1987) review of the literature is that the local disaster produces almost no negative long-term effects on the local economy and, in fact, may result in a net positive effect. This result is produced in most of the studies that

Hill examines. Further, he finds that the studies support the proposition that there is little effect on the availability of resources once outside sources begin to augment the damaged resource base. Six major considerations that will affect exchange activities in the recovery area include:

- A major source of the aid to the disaster area comes from the inflow of funds and technical assistance provided by federal and state agencies. Thus, the relief programs stimulate new construction of production facilities as well as an opportunity for owners of existing establishments to improve their facilities. While the inflow of funds is clearly a factor in the recovery success, one question that was not addressed by Hill is the possible influence of changes in the underlying market structures.

- There are several aspects of the relief programs that suggest that the rules of the dominant market structures are altered. For example, studies show that, immediately following a disaster, community networks emerge to deal with emergency and recovery activities. In addition, the community networks may enhance market power on the demand side of the market, thus, there may be some downward pressure on prices from countervailing market power.

- After the relief effort is underway, the environment may become purged of many of the inefficiencies of local monopoly, oligopoly, or imperfect competition in the process of allocating the relief funds, especially in the face of long-standing supply networks. If the old rule for pricing followed a posted-price (or fixed price) scheme and the new rules imply competitive bidding for agency funds, then we would expect an improvement in efficiency. Plott (1986) argues that this result can be expected where the posted-price system encourages price leaders and followers.

- With the relief funds and the need for new resources in the area to undertake the reconstruction activities, new firms should enter the market that are not part of the old network. Thus, a new market structure would emerge with rules that invoke greater competition among the suppliers, perhaps as a move from an oligopolist structure to imperfect competition.

- Another likely change in the rules results from the lower private information costs where government agencies undertake information collection and distribution activities. This has the effect of not only increasing the information flows within the disaster area, but also for the outside economic system where information is costly. Furthermore, with the greater access to funds and public-agency encouragement, the risk of starting a new business in the disaster area is probably reduced as well. Greater information flows and reductions in uncertainty will both be conducive to the use of more competitive rules.

- Resources may be removed to the non-formal sector by groups largely excluded from the recovery program.

These six factors suggest that improved economic performance, or at least, the absence of long-term economic impacts, may be due partially to changes in the underlying rules of formal and informal market structures and the inflow of disaster funds. However, it is puzzling that these changes do not produce dramatic or permanent effects for the disaster area. Two causes why the performance improvements may be dampened are the reversion of the rules to less competitive structures over time and the removal of some resources from the formal market structures.

First, reversion of the rules to less competitive structures could result if there are real, transaction-cost factors underlying the less competitive rules as suggested by Williamson and others. These factors would begin to appear again as the relief efforts subsided and removed their beneficial influences on price setting, information, and risk. Secondly, the fact that not all groups will have equal access to the relief programs will encourage them to seek out other channels for their exchange activity, and they may remove their resources from the formal market structures.

Finally, it is possible that the local-recovery program has no significant effect on the local economy other than perhaps causing a short-term flurry of construction activities. In other words, government intervention causes a short-term boom to the local economy, but over time, the level of economic activity recedes to its pre-disaster level. In this case, once the subsidies are removed, there may be little permanent change in the economic performance of the area. However, it remains to be answered why the local economy does not sustain at least some of the gains from having older facilities replaced with new facilities.

6.2.2 Exchange Structures of the Groups Excluded From the Recovery Programs

The American economy is no exception to the observation that most societies have several interrelated and overlapping systems of exchange (Bohannan 1955, Polanyi 1944, Davis 1972). We actually live in a multi-centric economy in which formal market structures co-exist with many sub-economies.

Ferman and Ferman (1973) have pointed out that modern industrial society produces conditions that provide fertile ground for this development. Ethnic and cultural distinctions, and an unequal distribution of wealth and income create economic categories of people that are largely excluded from the formal economy. The formal sector fails to provide goods and services for these excluded groups at prices they can afford because it is burdened with high transaction costs including costly mechanisms for regulating standards of production and distribution. For example, economic specialization resulting from the demands of a complex technological system that requires high degrees of

technical expertise, together with the growth of protectionist trade unions and professional associations, coalesce, so that some goods and services are not widely available or are too expensive for large sectors of the population (Robinson and Henry 1977). These same factors exclude many people from jobs in rewarding areas of employment (Ferman and Ferman 1973).

The result of these exclusions and failures is to provide a context for the emergence of a range of intimate and associational structures for low-cost or unavailable goods and services. In fact, any disaster-recovery effort, while attempting to restore the foundations for economic growth, may also exacerbate the gap in access to resources for low-income or disadvantaged groups when entry rules to either supply or demand are altered. Thus, constraints on resource mobility, especially the labor resource, may be worsened by relief efforts that do not account for the resource needs of these groups.

6.3 FUNCTIONS

Having outlined some important features of the disaster economy in the case where outside aid is available for reconstruction of infrastructure and commercial activity, we expect to find all of the exchange structures implied by the modern US economy in varying degrees. These structures would include all of the non-market and market exchange structures discussed in chapters four and five. Further, we would expect the subsistence exchange structure, the peasant marketplace (as found in open flea markets), and prestige types to play only a limited role.

We can now consider to what extent available exchange structures and formal institutions perform the basic functions constituting exchange activity outlined in chapter one. In this way, we can illustrate which market structures are sufficient on their own to generate what we commonly regard as business as usual, and which structures rely heavily on extra-market institutions to function at all. To highlight this point, we first discuss the role the formal institutions in the US in performing the functions, and then consider the role of particular exchange structures. As each function is examined, it should be noted that the underlying interest throughout refers to the extent that the function is performed by the exchange structure, unimpeded by additional extra-market regulations.

1. Define property rights. In best case scenario, property rights are defined by laws rooted in custom (common law) or enacted through legislation. Certain property is governed by common property rules, e.g., oceans, airspace, but most property is subject to the rules of private property. Ownership is legitimated through possession, documents proving legitimate acquisition (receipts), or registration with a regulatory or local governing authority, e.g., county clerks.

   Only the intimate exchange structure and the criminal variant of the associational market can be said to include

rules that define explicitly property rights in a way that does not rely on the extra-market legal system. In the former case this is accomplished through the conditions imposed on network membership with respect to the right to use and manage. In the latter case, this occurs through property that is illegal in the external system. Formal markets take property rights as given from the extra-market legal system, however, they may define the means by which property can be transferred, as with any good that can be exchanged. Furthermore, these markets can affect the distribution of property rights since the value of the rights is usually a market outcome.

2. Convey supply/demand information. General economic information is conveyed through formally constituted exchanges such as stock and commodity exchanges. These institutional channels of information are supplemented by the news media, government agencies and publications, and the advertising media.

The intimate, associational, perfect competition, and imperfect competition market structures fulfill this function to meet the desires of their trading agents. Information is transferred quite frequently and uniformly through either network rules underlying face-to-face interactions or the price signal. As market power becomes more concentrated in the less-competitive structures, traders may establish rules that reduce the flow of information to retain secrecy and limit the entry of potential competitors in the market.

3. Provide opportunity for legitimate transactions. For goods that are non-exclusive in consumption, i.e. public goods like police and fire protection, this function is performed by local and federal government agencies. By providing these services, the agencies effectively create the opportunity for traders to purchase them in the absence of their provision by the private markets. For private goods, this function is performed largely by the extensive network of wholesale and retail outlets in the US economy. At times, government intervention is used to expand what coexist as private opportunities by undertaking commercial activities such as the provision of electrical power (Tennessee Valley Authority) or educational services.

The rules in the formal market structures imply that increasing degrees of market power, and thus, decreasing degrees of competition, should act to limit the opportunities for legitimate transaction. In the non-market structures, membership is likely to be motivated by a desire to expand the opportunities for and/or gain from exchange relative to those obtainable in outside structures.

4. Limit provisions of legitimate contracts. In the first instance, the provisions of legitimate contracts are limited

by state and federal law. Legislatures and courts outlaw exchange of certain goods and services, e.g., sexual services, children, endangered species, and limit others, e.g., pharmaceuticals and explosives. Market institutions also may limit contracts, e.g., insurance contracts, but may rely still on regulatory agencies and the courts to enforce compliance with the limitations.

In the non-market structures, this function is performed by the rules of the network, or in the case of the criminal variant of the associational market, by the rules of the criminal corporation. In the formal markets, limitations that are additional to those of the extra-market legal and regulatory system would stem from an inequality in market power or market failure. Because of uncertainty or the presence of externalities, suppliers may be unwilling to offer a complete set of contracts to demanders because they are too risky or do not adequately compensate suppliers for their efforts.

5. Enforce contracts other than by physical coercion. The enforcement of contracts is carried out largely by the legal and regulatory systems and through the use of sanctions. These sanctions include expulsion from the activity, e.g., revocation of a license, fines, and imprisonment.

All the exchange structures also imply some enforcement of contracts. However, the nature of the enforcement changes from social pressure in the non-market exchange structures to monetary penalties in the formal markets. In the less competitive markets, enforcement of contracts can be initiated by the withdrawal of payment or supply.

6. Settle disputes. This function largely will be performed by the state and federal court systems. Private and public mediators may also assist in the settlement process between parties in a dispute. In addition, religious institutions, regulatory agencies, and private associations often engage in dispute settlement where disputes arise among their members or between their members and outside groups.

An exchange structure may perform dispute settlement continuously where there is negotiation after consumption, as in the intimate market or where prices are subject to negotiation after consumption has taken place, e.g., formal market exchanges with continuing contractual obligations. However, these adjustments require that parties can be identified cheaply so that negotiated compensation is possible.

7. Maintain civil order. The institutional responsibility for civil order operations resides with the state and federal lawmakers. Their decisions are enforced by the courts, police, and in times of emergency, the military. The intimate

exchange structures and criminal variant of the associational market are the only two structures with rules that do not rely almost entirely on these extra-market systems to maintain civil order among their members. In the former case, the network rules preclude relying on the outside system. In the latter case, traders simply do not have the option because trading networks exist outside the protection of the formal legal system.

8. Legitimate other functions. This function is carried out by Congress and state legislatures for society at large and by the governing bodies of institutions such as stock and commodity exchanges, corporations, and professional associations at the micro level.

The intimate exchange structure attempts to use its network rules to legitimate other functions, like a society within a society. In the market structures, enforcement and pricing are legitimated by the structure subject to approval by whatever existing governing body oversees the transaction activities. For example, functions may be legitimated by external legal or regulatory systems, e.g., the Nuclear Regulatory Commission, or internal governing mechanisms, e.g., the Executive Board of a corporation.

9. Guarantee currency and close substitutes. Currency is guaranteed by the US government with various responsibilities falling on the Federal Reserve Bank and the Treasury for all of the exchange structures in the best case. The value of close substitutes is established, but not necessarily guaranteed, by the primary market system for their exchange. The primary market and markets for authenticity activities may be internal or external to the exchange structure of interest.

10. Administer distributive justice, including taxation. This function is determined primarily by federal and state legislatures and charities. Policies determined by these institutions are executed by regulatory agencies, the IRS, state and local tax officers, and charitable organizations.

The intimate exchange structure is the only structure where redistribution, over and above the formal-institutional programs, will be attempted by rules affecting the haves and the have-nots. In the associational, perfectly competitive, and imperfectly competitive markets, there will be a tendency to maintain the status quo because they are near the point of balanced reciprocity. In the formal markets where market power is pervasive (e.g., monopoly and oligopoly) or the criminal variant of the associational structure there will be a tendency to reallocate from the have-nots to the haves. Taxation in an explicit rule to redistribute wealth among members of the social network, occurs only within the intimate and criminal structures.

11. Monitor and modify operations in response to changing circumstances. At the federal and state levels of government, this function is performed extensively to respond to the needs and demands of various constituencies. Monitoring and reporting information is a major function of many public agencies, since information is often treated as a public good. For example, the US Department of Agriculture regularly monitors and reports information about changing market conditions, technology, or price expectations to reduce informational transaction costs and assist traders in modifying their operations.

    In addition, monitoring and modification of operations is performed independently by all of the exchange structures to various degrees. In perfectly and imperfectly competitive markets, this function is accomplished by the rules fostering competition among traders. Suppliers that do not respond to changing circumstances are not likely to stay in business very long given the price taking position of traders and the minimal excess profit levels. In markets with greater concentrations of market power, how well this function is performed depends on suppliers' expectations regarding protection of their market shares. Where rivalry is great, suppliers are likely to invest heavily in research and development and monitoring activities (Stiglitz 1986). Where the threat of competition is small, the supplier is likely to ignore changing conditions and be reluctant to modify operations.

12. Mitigate risk. In the best case, public and private insurance institutions are principal institutions for mitigating risk. Regulatory controls also act to limit risks by restricting risky activities. For example, the Federal Deposit Insurance Corporation combines an insurance mechanism with regulatory controls on savings deposits to mitigate the risks of bank failures. Risks may be partially mitigated for some groups to increase their willingness to take risks, e.g., the limitation placed on nuclear-power operators' liability under the Price Anderson Act.

    In the intimate and associational exchange structures, the social and network rules are relied on to insure members against the cost of risks. In the formal markets, risk is mitigated through an associated insurance market, by rules controlling input and output resources (mergers), or the diversification of production or consumption activities.

13. Exploit comparative advantage, specialization, and division of labor. The formal institutions perform this function in the same sense that they expand the opportunities for legitimate transactions. Encouragement of certain activities to develop a new industry, provision of information or educational programs, and interregional commerce commissions are all means

of supporting the diversity of goods and services in the economy.

All of the market exchange structures exploit comparative advantage, specialization, and division of labor as responses to profit incentives. This result derives directly from the primary reliance of the rules on demand and supply conditions to allocate and to distribute goods and services. In the intimate exchange structure, there is an attempt to prevent specialization in labor since this goes against the consumer as producer philosophy. If members are too specialized, then their services are not interchangeable, a condition that is not consistent with the process of maintaining group cohesion.

14. Reduce transaction costs for intertemporal or interregional transactions. Formal institutions perform this function by increasing the availability of credit, e.g., Small Business Administration, decreasing uncertainty through the provision of information, e.g., leading regional indicators, and price stabilization, e.g., Federal Reserve Board control over the money supply to stabilize interest rates.

In the intimate exchange structure, intertemporal costs are reduced by the rules fostering delayed reciprocity, which is analogous to credit. In the formal market structures, intertemporal and interregional transaction costs may underlie the sustainability of the structure. For example, firms may lower interregional transaction costs by conducting business activities through a network of wholly or partially owned subsidiaries. Such rules increase the degree of market power but lowers their production costs.

6.4 CONCLUSION

From the discussion above, it appears that intimate structures are very self-sufficient, with one great flaw: they rely on the external system for many of their needed goods. In the recovery area, the intimate and associational structures may initially play a very important role, but once reconstruction is under way, their roles should diminish relative to the formal market structures. This transition is likely because of the preservation of institutions that currently support market activities. Thus, we expect property rights and the use of currency and credit in the recovery area to be restored quickly to the procedures used in the current US economy.

Government restoration programs in the recovery area are likely to be aimed at encouraging the perfectly and imperfectly competitive market structures. There may be an increase in the competitiveness in the region due to the inflow of restoration funds and government efforts to reduce transaction costs. However, according to the empirical studies of disaster-recovery areas, supply and demand improvements do not persist over time.

Outside the recovery area, exchange activities are likely to be conducted as they were before the disaster with most economic transactions taking place in imperfectly competitive or oligopolistic markets. The fourteen functions illustrate how interdependent these markets are with the myriad of formal institutions in the US. In fact, without the support of the formal institutions, many of the existing markets would fail to operate or, at least, would be far less extensive than they are currently.