DEMOGRAPHIC DATA AND STRATEGIC ANALYSIS

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INTRODUCTION

Advances in information technology transform the collection and analysis of demographic data. As organizations witness the proliferation of computer networks, powerful programs develop for data base management and statistical analysis with an ever growing capacity to retrieve, store, and recall data at higher speeds. These developments provide managers with potent tools for learning about and monitoring the human component of the environment. This, in turn, can help managers develop a better understanding of the context in which their organizations function.

Some writers on strategic planning include the study of demographic variables as part of the broader probe of en environment (Vogel and Swanson, 1988; Kaufman and Jacobs, 1987; Steiner, 1979; Morrison, 1988; Sorkin *et al.*, 1985). Others, including writers of leading textbooks on strategic planning, do not address the issue of demography directly and devote little space to discussing its importance (Bryson, 1988; Fahey, 1989; Hatten and Hatten, 1987; Boseman and Phatak, 1989; Quinn *et al.*, 1988; Thompson and Strickland, 1987).

Yet, there seem to be some good reasons to justify not only the study of present and emerging characteristics of the population, but for making it the preliminary/meta stage of any strategic planning effort. After all, characteristics of the population determine the demand for goods and services and, thus, the survival of the organization producing them.

This article suggests that demographic education is a necessary preparation for strategic planning. It seems that demographic analysis should take place before strategic planning. Thus, demographic analysis should be a part of the initial stage of the effort. The results of this analysis should then be used to guide the development and design of the rest of the strategic planning process itself.

Gronhaug and Falkenberg (1989:349) note that "the basic idea behind strategic management is that a firm needs to match its capabilities to its ever changing environment if it is to obtain best performance." Like them, this article acknowledges that the strengths and weaknesses of an organization cannot be assessed in a vacuum. However, this article sets out to correct a flaw in the logic from which some writers derive the basic idea of strategic planning as stated above.

Gronhaug and Falkenberg (*Ibid.*), for example, conclude that strengths and weaknesses "are relative, as the firm's offerings in the market place will be compared with those of its competitors." However, as demonstrated by the American automobile industry in the 1970s, comparison with the competition may not be enough. To the dismay of the car manufacturers in the United States, the competition was also oblivious to important changes in the environment. As it turned out, each of the manufacturers was paying too much attention to competitors but not enough attention to its other stakeholders. The obsession of car manufacturers with the competition since the end of the war in 1945 may have been the reason for the development of the myopic vision in Detroit.

Because of this obsession, "the environment" became a synonym for "the competition" even though the latter is only one component of the environment car manufacturers should have considered. If, as Gronhaug and Falkenberg (1989:350) conclude, "It is of crucial importance to develop **relevant** capabilities, and **use** these capabilities in the best possible way," organizations cannot limit the study of the environment to the study of competitors. In the same vein, it is unlikely that an organization will develop "relevant capabilities" without understanding the full makeup of the population that interacts with the organization.

This article asserts that, since changes in demography alter the relevant environment of an organization, understanding demographic trends can focus the strategic planning effort on critical issues. While this assertion holds true for all organizations, it is of particular importance in the case of public agencies. The reason is that an

analysis of the environment, or the context in which the strategic public planning unit (SPPU) operates, is the first critical phase of the strategic planning process (Montanari and Bracker, 1986:253).

The article starts by examining the promise of demographic analysis. It goes on to explore how demographic insight can facilitate unity of perspective. It concludes by looking at some of the necessary issues in demographic education.

PROMISE OF DEMOGRAPHIC ANALYSIS

Heretofore, the cumbersome access to demographic data has seriously constrained its widespread use in strategic planning efforts. Plotnick (1989) cites the virtual lack of data on poverty from the states as one reason for federal intervention in programs dealing with poverty. Robert Woods (1979:19) describes how the nature of, and access to, population data constrained the process of demographic analysis in the past. However, dramatic advances in information technology have changed the nature and potential benefits of demographic analysis.

Since it is now possible to tap and bring together data from many sources, to process larger amounts of data, and to subject data to rigorous analysis, demographic studies should get the attention of all managers. New computer hardware and software, as well as telecommunication and networking capabilities, facilitate easier retrieval, storage, sharing, and dissemination of data. This alleviates many of the technical constraints which hindered demographic analysis. In addition, the use of relational data bases and improved querying facilities allow managers to use simple language rather than a formula or a statistical notation to generate information about the characteristics of subgroups, to conduct complex analysis of the general and target populations, and to improve their forecasting capacity.

As a result of these advances, a large volume of data is now available about localities and salient subgroups of people (Woods, 1979:9). Demographic data can be generated for local situations by modeling and extrapolating from international, national, regional or state data banks. To learn about the possible implications of any change in the execution of a given program, managers can import such data directly into their computer simulations and spreadsheets. The results can then be presented numerically, as a graph or as an overlay for a map of the area under study.

The state-of-the-art in computer hardware and software provides

managers with new means for studying the human component of the environment. It gives them new capabilities to communicate their perspective to stakeholders, both within and outside the organization, making the study and the communication of demographic data more appealing than ever before.

The importance of understanding and being familiar with basic demographic trends increases due to the availability of supplementary information from non-governmental sources. Without the knowledge and understanding of demography, a manager cannot retrieve and make efficient use of ancillary data for specific communities. This, in turn, deprives organizations of the ability to fine tune operations, to be responsive to changing needs, and thus to enhance productivity.

The aborted attempt by Lotus Development Corp. in 1991 to introduce "MarketPlace," a comprehensive data base about individuals and consumers of goods and services, was the result of growing public concern about the invasion of privacy (Fisher, 1991). Yet, the corporate interest in developing the product and the willingness of others to purchase it may be another important milestone in the history of information technology. Automated registry of data on individuals as consumers and on their purchase histories, shopping habits, and other aspects of their daily activities has grown enormously in recent years.

Such data from various commercial sources can be valuable to government planners as well. It may provide, for example, important intelligence about the way individuals and households manage their financial affairs. This, in turn, may help government agencies learn important things about the needs of various services in areas such as health, education, welfare, transportation, and educational services. The easy access to such data and the ability to manipulate it allow agencies to study the demography of a given community. Now agencies can also control for the characteristics of those generating specific demand and/or supply of goods and services in the same and/or other communities. Thus, public administrators can better assess the role their agencies may (or must) play in the present or in the near (or distant) future to be responsive to changing needs.

Important intelligence with a direct bearing on the demand for governmental services (as provider or regulator) can be derived from a prudent analysis of credit bureau reports, airline frequent flier programs that track individual travel behavior, bar-code scanners that track supermarket purchases, and the purchase histories

credit-card companies maintain (Morrison, 1990:14). Such data reveal service preferences, expectations about level and quality of service, and willingness to pay for various levels of service. These data may indicate the predispositions and expectations of a given community (or a subgroup) towards government services as well. In the case of public services that may be contracted out, data about consumers' behavior in a given community may reveal what individuals are willing to pay for various levels of service.

Technological advances influence our ability to use various levels of aggregation and to relate the use of products and services to specific individuals, households, neighborhoods or communities. However, to harness this ability for the purpose of improving planning and decision-making, managers must be able to relate this information to relevant demographic data. Now computer technology and modeling techniques allow the interested manager to examine such linkages. The relationship between demographic characteristics and individual behavior can then be examined at various level of aggregation, from single households to a whole nation and over different periods of time.

By controlling for specific demographic variables, a manager can learn how an observed trend at the system level (*e.g.*, a state or a country) relates to developments in a given subsystem (*e.g.*, a city or a neighborhood). The interested manager can now study and present to others the existing and future demographic conditions of a community in the context of general population trends. To use an analogy, a manager can look at the demography of a given community in a way that is similar to the study of weather by meteorologists on television. Such insights, the authors assert, are a precondition to a proactive approach to planning.

Demographic analysis provides a new type of input to the planning process. A major premise of such analysis is that organizations do not exist independently of the communities they serve or those in which they operate. They interact with the various bodies they affect and are affected by them (Rogers, 1981:169). In order to deal adequately with these environments, organizations must develop a better understanding of the forces and factors that shape these environments. The ability to identify, define, and describe precisely the environment is necessary for proper identification of key stakeholders and for developing successful strategies for dealing with them. As Martine and Faria (1988:57 noted, "More data/better data and more research/better research will guarantee ... more 'adequate'

or 'rational' policies."

The question is: How much and what data are relevant to the mission of an organization in the public sector? To answer this, managers must ponder whether it is realistic (or desirable) to examine markets for public goods and services by using the same market-oriented approach which guides organizations in the private sector. To be effective they must find new ways to tailor government services to meet the needs of specific subgroups.

Current legislation which mandates the mainstreaming of school children, affirmative action employment policies or the necessary arrangements to accommodate disabled employees indicates a trend. Such legislation suggests that the polity expects public agencies to address the needs of specific publics as a preferred way for meeting its needs as a collective. In order to comply with such mandates, public administrations, like marketing experts in the private sector, must know about each subgroup and the broader population from which the subgroup is derived. For example, to address the needs of children in foster homes, administrators must know about other children who are raised in their natural families.

Understanding demographic trends and the demographic reality is necessary if an agency is to be responsive to actual needs and demands for service. Because the public market place has many similarities to private markets in terms of the competition for re-sources and support (*i.e.*, market share), understanding demograph-ics is a condition for effectiveness and efficiency. Without this under-standing, an agency may retain programs to meet old needs beyond their usefulness and ignore new needs that are growing in impor-tance.

In the private sector, the study of demographic trends is a way of learning about prospective demands for goods and services, availabil-ity of an adequate labor force, and the geographic location of mar-kets. It is a way of getting a better understanding about the future characteristics of an important environmental component--the population. The logic that justifies the use of demographic analysis in strategic planning for the private sector seems to be as applicable in the public sector because a profile of the population is equally as important in determining the results.

STRATEGY MANAGEMENT; UNITY OF PERSPECTIVE

Strategic planning requires an iterative process between the

assessment of the environment for opportunities and threats and an evaluation of organizational strengths and weaknesses. Most managers learn to be aware of environmental threats and opportunities in order to capitalize on strengths and avoid areas of weakness. Therefore, "strategic planning has to do more with outlining preferred procedures for carrying out those assessments and evaluations than with establishing why they make sense" (Halachmi, 1991:248).

In the private sector, formal strategic planning efforts are common and, in fact, are found in most large companies (Mercer, 1986:9). In the public sector, too, strategic planning has been widely embraced as a promising approach for dealing with turbulent environment (Preble, 1983; Bryson, 1988; Eadie, 1983). A large volume of literature espouses the need for private-sector like strategic planning in the public arena (Eadie, 1983; Smith and Hagard, 1982; Kaufman and Jacobs 1987; Bryson and Roering, 1987). Such works as the Reagan administration's 1982 *Urban Policy Report* and the HUD-funded *Strategic Planning Guide* provided encouragement at the federal level for these efforts (Kaufman and Jacobs, 1987).

At the state level, strategic planning can in part be attributed to inducements from federal agencies, to requests by legislators and political appointees with private sector backgrounds, and to the efforts of professional associations. The efforts of the Council of State Planning Agencies (CSPA) (1988) to develop strategic planning guidelines for state planners is one such example. At the local level, too, a distinct body of literature has emerged which espouses the need for a strategic approach to planning (Bryson and Roering, 1987; Mercer, 1988).

Strategic planning is the primary element but not the essence of strategic management. The other components of strategic management include implementation and evaluation. Derkinderen and Crum (1988) suggest that the past decade has seen a focus on strategic management as a leading factor in advancing managerial capabilities for two reasons. First, the process focuses attention on making decisions that are consistent with whatever reliable information is available at the time. Second, decisions can be made which position the organization most effectively to meet future challenges of the environment (Derkinderen and Crum, 1988:29). As noted by Bryson and Roering (1987:11), "Strategic planning focuses on achieving the best 'fit' between the organization and its environment."

However, there may be a different reason for improved performance following the introduction of strategic management. As pointed

out by Halachmi (1982), the introduction of a common orientation throughout the organization creates favorable conditions for improved performance. The reason is that involvement in the implementation of a strategic plan that was sanctioned by top management facilitates the development of a shared (and a verifiable) perspective by all the decision-makers. The strategic plan directs all members of the organization to consider the implications of any decision on the interface of the organization and its environment in toto. As such, it contributes to a shared out-in perspective.

Moreover, since the strategic logic of each decision can be verified by reference to the strategic plan, organization members are encouraged to consider the implications of such decisions on the interface with the environment by other members, *i.e.*, to use an inside-inside-out perspective. The outcome, according to Halachmi (1992), is that the common strategic orientation of all decision-makers results in what Charles Lindblom (1965:35-43) refers to as "parametric adjustments."

Without the strategic orientation that emphasizes the importance of looking from both the outside in and the inside out, some decision-makers may ignore certain aspects of the interface of the organization with its environment. As shown by Halachmi and Taylor (1978), staff units whose mission it is to regulate other units or agencies tend to use in their decision-making a "domestic" (*i.e.*, inside-inside) perspective which focuses only on inter-organizational implications. This perspective usually disregards the implications of decisions that are meant to affect the inner workings of the organization for the way the agency interfaces with the environment.

In short, the strategic posture enhances management ability because it facilitates a common frame of reference and a joint perspective--the interface with the environment. This, in turn, fosters coordination and consistent decision-making, freeing managers to concentrate on the environment instead of spending their time resolving inter-departmental conflicts.

While embracing the interface with the environment as the common perspective has the promise of improving organizational performance, organizations can do more. The thesis of this article is that, when employees share a common understanding of demography and relevant demographic trends, the organization can refine the shared perspective about its interface with the environment. The result can be a greatly enhanced strategic management process.

Gronhaug and Falkenberg (1989) draw on earlier writers to

develop the argument for replacing an "inside-out" with an "outside-in" perspective. They start their discussion by reminding the reader that organizations consist of individuals with limited cognitive capacity. They reiterate the claim of organization theorists that environments are not given realities but are created through a process of attention and interpretation and that the human actor does not react to the environment but instead enacts it (*Ibid.*, 350). They go on to point out that factors such as organizational structure, structure of information systems, and activities conducted by the organization are important determinants in the organization enactment process.

Because of cognitive limitations and biased information, subjectively constructed environments may be more or less biased. To understand this point, Gronhaug and Falkenberg (1989:350) submit that, since managers and employees are all members of the organization, "they are embedded in an organizational structure: they share values and information; they communicate; they perform actions and compare with the past. Thus, the firm's perception of its own strategy will be subject to an inside-out perspective." Such a perspective tends to ignore changes in the environment and thus the need to alter strategies in order to cope with the new reality.

The study and understanding of demographic trends by all members of the organization have the promise of helping the organization gain a common outside-in perspective. Such a perspective may develop even if the members are not involved in the implementation of a specific strategic plan. The reason is that the analysis of demographic characteristics of a given community is not as open to subjective bias due to tunneled vision or wishful thinking as are other data the organization may collect about the environment. The availability of independent data and analysis by demographers who are not affiliated with the organization serves as a safeguard against subjective perceptions. A common understanding of the environment is therefore the first step toward the sharing of a common outside-in perspective throughout the organization.

DEMOGRAPHY AND STRATEGIC MANAGEMENT

Although many factors can be examined in an analysis of the environment, organizations are limited by practical considerations from analyzing too many variables in depth. Hence, as part of the meta-strategic planning effort (the planning of the strategic planning process), organizations must decide which factors and/or what

dimensions are likely to be more critical for the interface of the organization with the environment.

In order to get the most out of the strategic planning effort, a demographic study of the target community or target area should take place. Only with the results of this study at hand can the organization be in a position to proceed with the strategic planning process. The reason is that a better understanding of the present and future profile of the population, in both the immediate and remote environments, can help the identification of other strategic forces or factors in the environment.

For all organizations, understanding demography is necessary for understanding and predicting the demand for goods and services, the location of markets, the availability of an adequate labor force, and the economics of resource utilization. However, while the study of demographic trends is recognized as an important element of market research for firms in the private sector, its promise for improving performance in the public sector is yet to be realized.

Public agencies tend to use a reactive rather than a proactive approach to planning. The result is that rational analysis associated with the study of demography is often missing. While the use of a reactive rather than a proactive approach in the public sector can be explained, it is hard to find a convincing excuse for the limited use of demographic analysis by public administrators. In the private sector, projected demographic trends are a primary consideration. The present make-up of the population is secondary in importance. In contrast, public administrators base their decisions on the proven or expressed demand for goods and services which may have to do with the immediate past or present demography. Projected demand, which must be based on a study of demographic trends, is used only as a secondary argument in support of decisions.

In making decisions, public agencies tend to use short term considerations that coincide with the electoral cycle. For example, in the public sector the decision to build a school will be influenced by the fact that the people living in a new development demand such a service. The locality is likely to underwrite the cost of a school building that could last fifty years even though in fifteen years there may not be enough students in the new development to keep the school building open. A private entrepreneur would make such an investment only when demographic data about the future, not the present, suggests growth that would guarantee full or satisfactory utilization of such a building.

It is interesting to note that the typical posture of public sector decision-making, characterized by Lindblom (1958) as "muddling through," emphasizes the past (for incrementalism is meaningless without relying on the past) and has little consideration for the future. In contrast, the private sector emphasizes a future orientation that is unconstrained by past decisions. This posture is evident by the emphasis on the values for variables like the return on investment, return on equity, market share, and rate of growth for selecting a preferred course of action.

DEMOGRAPHIC CONSIDERATIONS

Most strategic planning designs do not address the issue of demographic analysis directly. Instead, they provide room for demographic analysis as part of a broader study that is typically labeled the "environmental assessment" (Duchane, 1985:33), "environmental scan" (Sorkin, Ferris, and Hudak, 1982:28), "situation audit/analysis" (Steiner, 1979:122) or "internal/external analysis" (Fisher, 1990:4).

However, demographic analysis need not be formal or systematic. In fact, much of the demographic analysis which occurs in organizations is done "off process," that is, in an informal way. In the words of Steiner (1979:124):

> The situation audit is not something that can or should be completed in the planning process solely on a formal basis. A very important part, if not the most important part, of the situation audit is done continuously in the personal surveillance of environments by individual managers. This type of environmental scanning is performed in a variety of ways from methodically reading business journals to casually conversing with fellow managers at lunch,

When it comes to "situation audit" in the broadest sense, Steiner's observation is well taken. However, it is not hard to see that the said observation leaves the issue of studying and understanding demography to chance. Issues involving demographic analysis might be overlooked by the manager, undermining the quality of the strategic plan. This possibility increases when one considers the fact that managers increasingly rely on information they obtain from subordinates and on informal reports rather than on formal reports and outside sources (Augilar, 1967:69-70; Stevenson, 1976). Thus,

strategic planning designs that do not call for demographic analysis as a distinctive part of the formative stage of the planning may lead to defective strategic plans.

DEMOGRAPHIC EDUCATION AND ANALYSIS

While the particular variables that should be included in the demographic analysis may vary from one case to another, it is possible to identify some broad issues that should always be examined. These include sweeping forces which affect not only a given organization but all other organizations and the environment in general. Naisbitt (1982) labeled these forces "megatrends." Some of the forces to be included in the first batch of megatrends are: the move from a national to a world economy, the move from an institutional to a self-help orientation, and the move from an industrial to an information-based society (*Ibid.*). More recently, Naisbitt and Aburdene (1990) identified a new batch of megatrends which included the emergence of free market socialism, the rise of the pacific rim or the privatization of the welfare state.

With the advent of the global village, a minimal understanding of sweeping demographic trends, across national, regional, state, and local boundaries, is a must. The global village means, among other things, that, coupled with the closing in of the world which brings nations closer to each other, there is a growing global exchange of information in real time. One result from the emergence of a global village is that demands for goods and services in one place may have an immediate effect on the demand and/or supply of the same in other places. As is the case for a single country, the global demand of goods and services is influenced by demography.

Yet, information on the relationships between demographic changes at one level (*e.g.*, a continent) and related to demographic issues at other levels (*e.g.*, individual countries) is currently used only by professional demographers and is available only through professional publications. For most administrators, non-technical reports on critical demographic trends are not readily available. This shortage underlines the need to include demographic education as a formal part of the preparation for any strategic planning effort.

Understanding principles of demography and the inter-connectiveness of demographic trends is essential for establishing the correct framework and selecting appropriate variables for an organization-specific demographic analysis. Indeed, precisely because

managers rely on subordinates for insights, demographic education should not be limited to upper level employees. An educated work force, one that understands the importance of demography, may identify for the organization important trends even before they are observed by professional demographers.

In order to educate and maintain such a work force, organizations may need to secure the services of professional demographers who should be used in close proximity, and with easy access to, managers who authorize and develop strategic plans. According to Martine and Faria (1988), demographers are destined for a greater role in the organization. They believe that it would be reasonable "to expect that demographers should interact with other analysts, other pressure groups, and other sectors of the society to negotiate solutions which will benefit a wider segment of the population" (*Ibid.*, 59).

Last, but not least, is the need to increase the use of the data from the national census by increasing public awareness to its availability. By law, the federal government collects and compiles a new amalgam of data about regions, communities, subgroups, and households every ten years. The data from the national census (as well as demographic data from other sources) can now be accessed if one knows where to look for them. Yet, most managers in both the public and the private sectors do not know where to look for such data or even what data are available.

The primary goal of the national census is to provide the numerical basis for reapportionment of electoral districts. However, it seems to these writers that the public will get a better return on the tax monies that were used for the census if its results were used for decision-making on other matters. From a societal point of view, the incremental cost of educating managers about the data that become available after each census can lead to planning and improved responsiveness.

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