

THE EVOLVING ROLE OF DEMOGRAPHY IN THE U. S. BUSINESS ARENA¹

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ABSTRACT

Business demography encompasses applications of demographic concepts, data, and techniques to the practical concerns of business decision makers. Within the U.S., it has evolved continually, in response to tangible problems rather than the scientific quest to advance knowledge or improve measurement. Practitioners address problems and inform decision making within specific business contexts; their applications reflect the availability of new data sources, computer technology, and analytical methods, and changes in the business environment itself. Here I provide an overview of this eclectic, loosely organized field and illustrate the widening interface of demography in the U.S. and the world of business. The multitude of activities under way in both America and Australia can offer useful insights into the evolution of business demography generally. Hopefully my observations and illustrations from the U.S. will sharpen our collective understanding of this fascinating and evolving area of demographic endeavor and anticipate the likely directions of its future growth.

Demographers contribute to business decision making because they can envision business problems differently than business people ordinarily do. We can offer fresh perspectives and expose executives to new concepts and perspectives—for example, distinguishing age, period, and cohort effects reshaping a consumer market. In doing so, demographers help elevate management thinking from an operational to a strategic level or become catalysts for organizational and strategic action—by simply exposing business minds to hard data on “changing demographics.”

New applications and trends toward globalization are pushing business demographers increasingly into broader areas with national and international implications. Noteworthy recent developments have driven—and will continue to drive—the field’s advancement. First, spatially referenced data allow for the aggregation of individual-level data into a variety of customized geographic areas (e.g., consumer market areas, school districts, traffic analysis zones). Second, geographic information systems (GIS) technology has greatly facilitated the collection, organization, manipulation, and analysis of spatially referenced data. Third, proprietary

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databases derived from customer records have become more common. Many businesses have developed automated data registries on individual customers (e.g., supermarket bar-code scanners that track each shopper's purchases), affording unprecedented opportunities for targeting consumers based on personal characteristics and purchase histories. Lastly, computer power has increased exponentially and the technology for storing, retrieving, and matching data has advanced rapidly, permitting many new applications.

INTRODUCTION

Business demography encompasses applications of demographic concepts, data, and techniques to the practical concerns of business decision makers. Within the U.S., it has evolved continually in response to tangible problems rather than the scientific quest to advance knowledge or improve measurement. Practitioners address problems and inform decision making within specific business contexts; their applications reflect the availability of new data sources, computer technology, and analytical methods, and changes in the business environment itself.

This paper provides an overview of this eclectic, loosely organized field and illustrates the widening of interface of demography in the U.S. and the world of business. That interface strikes me as being more clearly defined here in Australia than in America. Still, the multitude of activities under way in both countries can offer useful insights into the evolution of business demography generally. Hopefully my observations and illustrations from the U.S. will sharpen our collective understanding of this fascinating and evolving area of demographic endeavor, and point to the likely directions of its future growth.

EVOLUTION OF THE FIELD

In their day-to-day work, business executives rarely step back and analyze the underlying demographic forces affecting a company's operation. Occasionally, applied demographers in the U.S. are called upon to address business concerns with, for example, marketing, human resource planning, or site evaluation. Demographers contribute to business decision making because they can envision business problems differently than business people ordinarily do--for example, distinguishing among age, period, and cohort effects that may reshape a market. They can inform and advise, offer fresh perspectives, and expose executives to new concepts and perspectives. In doing so, demographers help elevate management thinking from an operational to a strategic level or become catalysts for organizational and strategic action—by simply exposing business minds to hard data on “changing demographics.”

How have these developments arisen? The emergence of business demography as a distinct field in America coincided with release of 1970 census data in machine-readable form,

launching an “electronic data” industry. Comprised initially of a few data vendor companies, this embryonic industry matured into what is presently a broad and well differentiated commercial sector. Demographically-oriented firms today specialize in survey research, trend analysis, marketing, mapping, and software development; virtually all provide census data and population estimates and projections. Businesses today routinely base decisions on the advice of consultants and employees skilled in collecting, analyzing, and interpreting demographic data.

Reflecting these developments, the Population Association of America (PAA) formed a Committee on Business Demography in 1982 which (together with PAA’s Committee on State and Local Demography) launched publication of the *Applied Demography* newsletter in 1985.² By 2001, its subscriber base exceeded 400. During this period, two commercially-oriented magazines (*American Demographics* and *Business Geographics*) made their debut, reporting on developments in demographic trends and business applications.

Business demography thereby coalesced into what is now a recognizable (and arguably well-established) field (see Kintner et al., 1997; Pol and Thomas, 1997; Smith and Morrison, forthcoming a, b), but one that remains loosely defined and organized. What are the defining characteristics of this emergent field? What distinguishes it from other types of demographic inquiry, and from applied research and analysis generally?

In America, business demography falls within the broader area of applied (as distinct from academic) demography. Applied demography, as envisioned by Jacob Siegel, is the subfield of demography focusing on practical applications of demographic materials and methods—more specifically, “a decision-oriented science concerned with aiding managers, administrators, and government officials in making practical decisions congruent with the policy or goals of the organization or institution for which they work” (Siegel, 2002: 2). As with business demography, much of what Americans regard as applied demography is driven by problems rather than the quest to further knowledge or perfect scientific measurement. Applied demographers arm themselves with demographic knowledge and draw upon whatever data may be available to address tangible problems.

Given its focus on using knowledge rather than advancing it, business demography--like much of applied demography generally--lacks the elegance of scientific inquiry. With academic

² Further information on this Newsletter is posted on PAA’s website: www.popassoc.org/

demography, the focus is on adding bricks to an ever-expanding patio of knowledge. Business demography, by contrast, resembles an untidy subterranean realm beneath that patio: Analysts pursuing problems burrow outward in various directions beneath the scientific brickwork above. Like an anthill, business demography exhibits complexity without apparent design. Lack of intellectual coherence, though, is no impediment to continued outward tunneling.

THE PRACTITIONERS

Professionally, business demographers in the U.S. are diversely situated but linked through a national network of personal contacts and affiliations. They fall into three distinct groups. First are analysts employed by private companies, whose work focuses primarily on the business activities or concerns of their employers (e.g., human resources, market analyses, customer profiles, and site selection). Second are analysts with firms that contract out to clients who need demographic data and analysis—for example, estimates or projections of population situated within five miles of a specific location. Third are individual consultants who work on specific projects for particular clients. Private consulting is more often a part-time pursuit than a full-time activity.

Not all practitioners possess formal demographic training. Many bring backgrounds in economics, geography, marketing, statistics, survey research, real estate, or other disciplines. Even those with formal demographic training acquire their job skills primarily through work experience rather than academic training. In American, few academic demography programs extend their demographic focus to business applications, and few business schools offer training in demographic applications. One learns business demography on the job.

The requisite skills business demographers need are beyond the scope of what academic training programs currently provide. In addition to applying general demographic knowledge and techniques, business demographers must be able to:

- Explain and interpret demographic realities to audiences unfamiliar with demographic perspectives and techniques.
- Identify important effects and potential issues that demographic changes may pose for a specific firm or industry.
- Construct demographic assumptions about the future to serve decision makers' needs.

- Be conversant with a range of disciplinary frameworks and theories (e.g., economics, finance, marketing, psychology, sociology, and geography) that inform decision making within a specific business context.

METHODS AND DATA

The demographic concepts, measures, and techniques business demographers use typically focus on consumer units (e.g., individuals, households, families), demographic events (e.g., births, deaths, marriages, divorces, migration), and the distribution of demographic characteristics and events across geographic market areas (e.g., regions, metropolitan areas, trade areas). Often, we merely extend common demographic concepts and measures to fit the needs of specific projects. For example, one can conduct cohort analyses of magazine subscribers, construct life tables for cohorts of automobiles, or develop age-standardized rates of beer consumption (Siegel, 2002: 254-262).

Data sources include publicly available censuses, surveys, and administrative records; proprietary surveys (e.g., of new or repeat purchasers of a product); and firm-specific files recording a firm's own customers and business transactions. Exponential increases in computing power and data storage capacity have greatly expanded the possibilities for organizing, integrating, and analyzing such data. Advances in geocoding and displaying spatial information have been especially influential, as many analyses call for data grouped into customer service areas, market analysis zones, and other uniquely defined geographic areas.

ILLUSTRATIVE APPLICATIONS

The business concerns that American demographers address are exceedingly varied. Applications include marketing and retailing, strategic human resource planning, and site evaluation, to name only a few. The following illustrations suggest the range of such applications.

Marketing and Retailing

Demographic information and analysis have become essential to identifying, locating, and understanding the diverse consumer groups that form markets for goods and services. For example, newspaper publishers and editors recognize that they must adapt to powerful

demographic and societal changes that are transforming reading habits and readers' interests. Many readers live alone, are divorced or remarried, or are cohabiting. Among married couples, fewer have children at home but more anticipate future eldercare obligations. Accompanying these diverse lifestyles are new interests and obligations. Demographers can identify the changing demographics of newspaper readership, helping publishers cater to collections of small audiences with certain shared interests who comprise an increasingly segmented readership. Demographers can also devise and calibrate specialized tools for segmenting customers (e.g., Lauderdale and Kestenbaum, 2000; Mitchell, 1995).

Costs of Health Care Benefits

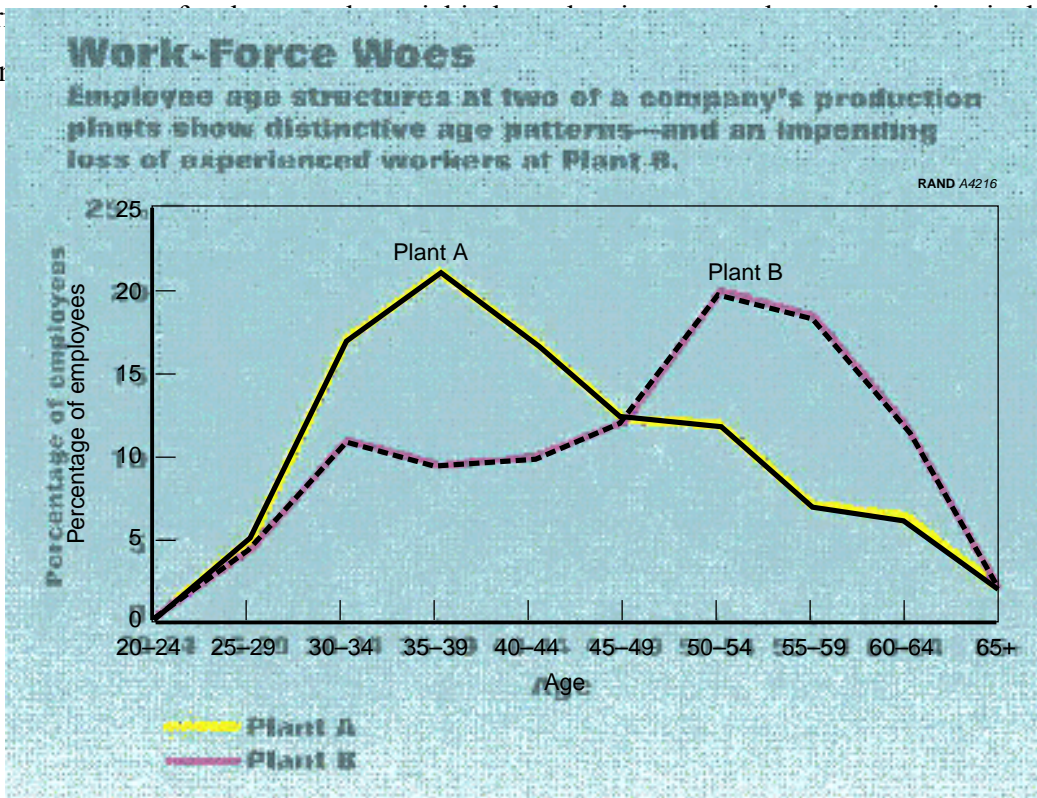
Applications of business demography to the structure and dynamics of large corporate workforces have strategic implications for managing the cost of health benefits. Most Americans receive health benefits through employers, making groups of employees (and their families) the basis for healthcare financing. How do changes in workforce size affect the cost of health benefits? Does reducing the workforce by a certain percentage reduce healthcare costs by the same percentage? Do employers have complete control over the number of persons receiving company-sponsored health benefits?

To answer these questions, Kintner and Swanson (1996) analyzed three possible sources of change in the health benefits group associated with salaried employees at General Motors (GM). Those sources are: (1) flows into and out of GM related to employment processes; (2) flows into and out of the health benefits group related to demographic processes; and (3) transfers from active employment to retirement or layoff.

The GM health benefits group includes employees and their dependents. Employees become eligible for benefits through hiring; they lose benefits through quits, discharges, and deaths. Employees also leave this group through layoff or retirement (but may still be eligible for health benefits). The flows into the health benefits group include new hires and their families, plus births and marriages to employees already belonging to the group. The group loses members through quits, deaths, divorces, and lost eligibility. Transfers occur through retirement and layoffs.

Kintner and Swanson estimated these flows using record-matching techniques and identified the relative contributions of employment and demographic processes to changing group size. Their analysis revealed the limits that GM faces in controlling the size of its health benefits group. GM's use of window retirement packages for downsizing affords some control, as does control over hiring and firing. Nevertheless, demographic processes unrelated to

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Human Resource Planning

A company may operate several production facilities which opened at different stages in its history. One byproduct of such sequential expansion may be a workforce whose age structure differs widely across facilities, with attendant human resource implications. As part of a consulting project, the author studied a company that operated several production facilities across the nation. Some opened as early as the 1940s, others as late as the 1980s. Each plant depended heavily on a small cadre of experienced engineering and maintenance employees to repair mechanical breakdowns, which impose costly reductions in output.

This company had compiled age data for its overall workforce, but had never examined them separately by facility. Doing so revealed that the workforce at certain plants exhibited distinctive age structures. Figure 1 compares age structures at two of the company's plants. Plant A has an age structure similar to that of the entire company. Plant B, by contrast, began operations 40 years ago and has a disproportionately older work force. The majority of Plant B's employees are nearing retirement age, foreshadowing the impending loss of highly experienced employees—precisely those employees whose skills would be most difficult to replace.

These elementary demographic insights carry several important messages about how the company might prepare for the future. To cushion future losses of worker skills through retirement, a prudent manager might view existing skills as assets whose value will sharply appreciate in the years ahead. A forward-looking company might conserve those assets, perhaps by establishing an “un-retirement bank” of retirees who would be willing to fill in part-time when the need arose. Plant B is an obvious pilot site in which to test such an innovation, perhaps as a first step toward instituting it across the company.

Site Selection

Geographic proximity to consumer markets is highly important since most retail transactions are made at specific locations. Productive retail sites are generally located in the midst of dense consumer populations or are readily accessible to the potential users of a firm's goods and services. Local availability of an appropriately skilled labor force also is critical for many businesses. Evaluating a proposed site—or weighing the comparative merits of several competing sites—is another way demographers support business decision making (e.g., Morrison and Abrahamse, 1996; Voss, 1997).

Spotting Hidden Market Opportunities

Demographers sometimes are called upon to highlight the long-term significance of impending population shifts for consumer markets. Characterizing market evolution with reference to changing age structure, household makeup, and spatial distribution introduces new perspectives on potential opportunities. Consider how a demographic perspective can inform

business thinking on the potential market for a relatively new product: the low-speed electric neighborhood vehicle (Morrison, 2002).

Neighborhood vehicles (NVs) encompass a wide range of lightweight contraptions for transporting people within settings that are sheltered from conventional automobile traffic. Unlike golf carts (ubiquitous in retirement communities), NVs travel faster and afford passenger-cargo configurations that can be adapted to fit the varied needs of households at different stages in the life cycle. For example, the same NV platform might suit the needs of four passengers (e.g., grandparents with visiting children or grandchildren) or two passengers (e.g., a childless couple with six bags of groceries).

The most likely settings for NVs are master-planned residential communities, either gated or otherwise separated from regular automotive traffic. Such communities represent several distinct markets that might form distinctive niches for NVs—for example, retirement communities populated by older adults; golf and leisure communities populated by empty-nesters; and new towns (e.g., Columbia, Maryland and Celebration, Florida) populated by a broad spectrum of locally-oriented suburbanites. Other potential markets include sprawling health or industrial park campuses and controlled-access national parks.

Although the market for NVs was largely undeveloped at the end of the twentieth century, three ongoing developments are likely to spark consumer interest. First is the proliferation of compact communities, both residential and commercial, within which new types of personal transportation are required. The common denominator in such communities is the need to shuttle around conveniently in settings that are unsuitable for automobiles or public transportation. Second is the growing proportion of one- and two-person “empty-nest” households, which aligns well with the capacity limits of the NV. These households might desire NVs as an alternative to a second car or as a discretionary indulgence analogous to a snowmobile or powerboat. Third is the rapidly expanding elderly population, which will initially promote the spread of leisure communities for relatively young, active retirees, but will eventually lead to large numbers of people with health and mobility limitations.

The customer base for NVs is spatially and demographically concentrated, but is likely to grow rapidly during the coming years. Within this market, distinct niches will likely materialize

that can be targeted with different variants of an NV built on a common platform. Demographic insights can spark new ideas and nurture a strategic business vision for this nascent industry.

Characterizing and Tracking Emerging Markets

As markets have globalized, business interest has focused on the emergence of consumers within the massive populations of developing countries like India and China. Given their combination of rapid population and economic growth, these countries offer tremendous opportunities for pursuing burgeoning but largely untapped consumer markets. Anticipating the future growth of these markets poses distinctive problems amenable to demographic analysis (e.g., Morrison, Levin, and Seever, 1996).

A defining characteristic of emerging economies is rapid economic growth and the ripening market potential that accompanies such growth. Anticipating future growth of consumer markets poses distinctive problems amenable to demographic analysis. With only the barest minimum of data, demographic accounting models can capture the upward economic mobility of newly prosperous consumers (e.g., Morrison, Levin, and Seever, 1996).

DRIVING FORCES SHAPING THE FUTURE

The place of demography and demographers in the American business arena reflects an emphasis on using knowledge rather than advancing it. The field is an eclectic and continually evolving one. In any given era, it mirrors contemporary issues to which demographic perspectives and data apply, and it is those concerns that continue to drive the growth of business demography as an evolving body of practice. New applications and trends toward globalization are pushing it increasingly into broader areas with national and international implications. Future opportunities in business demography promise to be many and diverse.

Noteworthy recent developments have driven—and will continue to drive—the field’s advancement. First, spatially referenced data allow for the aggregation of individual-level data into a variety of customized geographic areas (e.g., consumer market areas, school districts, traffic analysis zones). New or enhanced data sources permit analyses that were virtually impossible until recently.

Second, geographic information systems (GIS) technology has greatly facilitated the collection, organization, manipulation, and analysis of spatially referenced data. GIS can be used to select sites, develop population or customer profiles, screen potential markets, launch new products, and improve the visual presentation of information.

Third, proprietary databases derived from customer records have become more common. Many businesses have developed automated data registries on individual customers. Examples include airline frequent-flier programs that track individual travel behavior; supermarket bar code scanners that track each shopper's purchases; and purchase histories recorded by credit card companies. These data afford unprecedented opportunities for targeting consumers based on personal characteristics and purchase histories. "You are where you live"—the marketer's dictum from the 1980s—has been replaced by "You are what you just bought." Data from both public and private sources will become increasingly available in the coming years, at ever smaller geographic scales.

Lastly, computer power has increased exponentially and the technology for storing, retrieving, and matching data has advanced rapidly, permitting many new applications. The Internet has facilitated the collection of data from widely divergent sources, promoted the immediate sharing of information across vast distances, and provided businesses with a powerful marketing tool.

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