

The Business of Demography

Martin Bell, School of Geography, Planning and Architecture, The University of Queensland, Queensland 4072. Email: martin.bell@uq.edu.au

Paper prepared for the Eleventh Biennial Conference of the Australian Population Association, Sydney, 2-4 October 2002

The interface between demography and business invites a variety of perspectives. The conventional focus is on the way demographic change influences the business environment, and how the so-called demographic perspective can help in achieving business goals. Changes in the size, composition and distribution of the population have substantial implications for the marketing of products and services, and over the past two decades a thriving industry has emerged, concerned with the application of demographic tools to business.

While population dynamics undoubtedly impact on business decisions, the title of this session also invites attention to the reverse linkage: that is, to the way in which business decisions, practices and priorities influence demography. Since employer organisations are outspoken in their calls for population growth to serve business, it seems only reasonable to also examine the way in which business itself has influenced population. Indeed, in light of the debate over maternity leave, and the prime minister's identification of 'work and family' and 'demographics' as two of the government's main policy interests, such a focus would seem well overdue.

While either of these perspectives would offer more than sufficient scope for a single paper, I plan to consider them only briefly here as entrees to what I consider the main fare – namely to examine how both relate to what I have alluded to in the title of this paper – that is, 'The Business of Demography'. To anticipate the main course, I want to argue that close consideration of these two perspectives can add a number of new and challenging items to the agenda for mainstream demographic research.

Applying Demography to Business

Let us turn first to a brief review of business demography, as traditionally defined. According to Pol and Thomas [1997: 1], business demography is 'the application of the content and methods of demography to business problems and opportunities'. On this view, business demography is an applied science based around the use of demographic knowledge, methods and techniques to address issues in a specific domain of economic activity. Pol and Thomas [1977] classify business demography as one branch of *applied demography*, with *public sector* applications, and *estimates and projections* sitting alongside. Applied demography, in turn, is seen as a subset of *social demography*, which is distinguished from *formal demography*, the branch of the science concerned with the development of methods and models. While the separation of public and private sectors

may be of diminishing relevance given the widespread adoption of commercial principles in government, the conceptual split between the development of demographic models and their application implied here represents a more serious split to which I shall return.

In addition to the use of demographic methods and models, another key element of business demography is seen as the introduction of a '*demographic perspective*' into business decisions. The emphasis here is on understanding the way in which population processes, such as ageing, life course transitions, mobility, and the like, influence the business environment. At one level this might involve inserting a demographic dimension into the broader processes of business decision-making. Often, however, it appears to be focused on predicting the next hot segment of the market – of the 'what will the baby-boomers do next? - variety.

Indeed, in the minds of many, business demography is irretrievably tainted, not by the pursuit of profit, but by the indignities drawn down upon the profession at large by the coining of an entire new lexicon designed to identify particular market segments. The shift from adjective to noun, as reflected in reference to '*this demographic*', or '*the demographics of the situation*', has been widely observed to trigger involuntary shudders even among the most market-hardened members of the profession. Closely linked is the view that business demography involves somewhat disreputable activities on the margins of the discipline.

Swanson and colleagues [1996] argue that the broader field of applied demography does differ from what they term '*basic demography*' in several important respects. Central among these is that the substantive work of the former tends to be driven mainly by exogenous forces, namely customers, rather than endogenously by the pursuit of knowledge, as in academia. Allied to this is that causality and understanding become subservient to practical outcomes, in a context that leads to satisficing within defined time and resource constraints. While these forces might potentially put professional standards at risk, they can also be seen as triggers to new approaches in demographic analysis that have wider application. Development of the numerous non-standard data sources that has emerged in the US over the past two decades provides an obvious example.

The literature concerned with applied demography contains a plethora of case studies illustrating the diverse applications of demography to business decisions. In practice, though, these appear to fall into three categories. The first is concerned with the identification of market segments – their origins, magnitude and characteristics. As well as providing much of the content for the magazine *American Demographics*, this is also the primary source of the dubious additions to the demographic lexicon mentioned earlier. The second category, closely related, is comprised principally of issues associated with site location and market area analysis (see, for example, Morrison and Abrahamse 1996). This arguably has its roots as firmly in geography as in demography since it calls not only for population estimates and projections, but also for skills in location/allocation modelling and zone design. A subset of this class which appears to have developed a strong presence in the US, but is mercifully rare in Australia, at least so far, is the demographer as expert witness (see, for example, Smith 1993). The third substantive category of business applications is organisational demography, on the other hand, is unequivocally demographic in scope, both in its use of life table techniques and in its focus on human resources planning (see, for example, Stewman 1988).

It is this third category that connects most readily to the alternate perspective on the title of this session, namely the way in which business has influenced demography.

How Business Affects Demography

Business influences demographic behaviour in a number of ways. On the one hand are a battery of indirect links that operate primarily through the economic climate which business helps to create. Within developed countries, one obvious example is the way economic recession impacts on fertility, leading to delays or cancellation of child-bearing, and a cascade of related effects including older ages at leaving home and postponement of household formation. In a similar way, shifts in industry structure have a spatial dimension which alters the location of economic activity with consequent effects on mobility. In Australia, for example, the northwards population drift from the southeastern states to Queensland can largely be traced to economic restructuring, particularly the shift from a manufacturing to a service-based economy.

These impacts are incidental, in the sense that they result from large scale structural changes in business activity over the medium to long term, and represent by-products, rather than deliberate outcomes of business behaviour. But business also intervenes more directly in demography. Perhaps the most dramatic example is to be found in the infamous triangle of trade which saw some 15 million slaves transported from Africa to the Americas between the late 17th and mid 19th centuries (Castles and Miller 1998: 53). Here, slaves served business both as a commodity in a massive trading enterprise, and as a source of cheap labour. The demographic manifestations are apparent both in the mass migration itself and in its subsequent effects on population composition of the Americas.

While contemporary business would likely disavow the commodification of labour, there is substantial evidence that business continues to exert significant impacts on demographic behaviour, and on the processes of population change. In the brief time available here I want to draw attention to just three such impacts.

The first of these relates to the precipitate decline of Australia's inland towns. Out-migration of surplus labour has been a long standing feature of rural Australia (Rowland 1979) but has accelerated massively over the past decade and a half, in parallel with the progressive withdrawal of public and private services (Bell 1995a). The litany of branch bank closures in Australian country towns over the course of the 1990s has been matched only by the speed downgrading transport services to the next nearest town. While business closures are by no means solely responsible for spiralling population decline, they do reflect the primacy accorded to the pursuit of economic efficiency over social welfare in contemporary regional policy. The view that workers should follow the jobs is now well entrenched in the rules that govern access to the dole in Australia's social welfare system. When globalisation comes to the bush, it is business that makes the decisions and families that bear the cost.

Globalisation also furnishes the second example of the way that business influences population, this time in the form of international migration. Among the myriad features which together transformed the global matrix of trans-national migration during the last decade of the C20, few were perhaps so fundamental as the rise of temporary labour migration among the highly skilled. In Australia, as elsewhere, the significance of this movement was in providing the third plank in support of global integration by opening international borders to the free movement of labour, paralleling earlier liberalisation of the other two key factors of production, commodities and finance. The major impetus for change in the regulations governing skilled temporary entry came, not surprisingly perhaps, from trans-national businesses operating in Australia. While the emergence of this new

form of movement attracted more academic attention than public debate (see, for example, Bell 1995b, Bell and Carr 1994, Brooks *et al* 1994), the numbers involved have grown to be substantial and skilled temporary migration is now firmly entrenched as a feature of the demographic landscape.

In the context of contemporary debate in Australia, the third example must inevitably be drawn from the realm of fertility. No matter which competing theory of fertility behaviour one ascribes to, the inverse correlation between falling fertility and rising female labour force participation is incontrovertible. The evidence assembled by McDonald under the aegis of gender equity theory further demonstrates that a key feature differentiating low fertility countries is the degree to which employment policies and practice are fertility friendly. McDonald argues cogently that if forced into a choice between family and work, the latter prevails.

While recent debate has provided for sustained entertainment in the print media, the grudging reluctance of business to embrace policies which could diminish the conflict between family and work is nevertheless remarkable. The blanket rejection of maternity leave proposals advanced earlier this year by the Commissioner for Equal Opportunity is a case in point. In practice it may be that even a battery of policies combining maternity leave with part-time work and on site child care will prove ineffective as a stimulus to fertility. This is because the efficacy of such policies depends ultimately on the culture of business. While the latter clearly values individual profit over the common good, this also appears to be the general tendency within the wider society. The delicious irony of this preoccupation with short-term accounting horizons is that the very business policies which aim to maximise current labour productivity could well contribute to a crippling shortage of labour over the longer term. Popular discussion has focused around the ABS assumption of a TFR levelling at 1.6, but the long term impacts of a more precipitate decline, say to the level of 1.3 currently observed in Germany, Italy or Japan, provide a remarkable prospect.

The Business of Demography

The notion of feedback loops provides a convenient bridge from which to consider more closely the links and connections involved in these various fields. Turning first to the context of business impacts on population, it seems clear that this turns on the central purpose of demography as a scientific discipline. To borrow an aphorism of the times, this is core business. The role of demography is to clearly explain the dynamics of population change and account for the shifts and changes that are in train, by drawing on the extensive bodies of theory, data and methods that form the hub of the discipline. As Taeuber once observed, ‘population research tends to flourish during periods of crisis or change, especially change regarded as “dangerous”’ [Taeuber 1944: 327]. The vigour with which the profession in Australia has been able to inform debate on contemporary issues is testament to the strength of the discipline as well as to the sustained contribution of its senior practitioners. Contemporary issues have called for us to hone existing tools, rather than develop new ones. In this respect the facility to harness developments in computer graphics has significantly enhanced delivery of the demographic message.

Feedback in the case of ‘business demographics’ is less readily apparent. As mentioned earlier, this is generally seen as a one way flow, involving application of theories and models developed in basic demography to problems in the real world. There is some evidence to confirm this unidirectional flow. Textbooks on business and applied demography tend to be structured around core

demographic materials in the same way as conventional texts, but appended by illustrative applications to business or government (see, for example, Pol 1987, Pol and Thomas 1997, Siegel 2002). In a similar way, there is little feedback from commercial applications of demography in a form which might help refine the core models and methods of the discipline. Where technical innovativeness do take place, the methods are often regarded as commercial IP and remain closed to the regular processes of academic scrutiny.

This is not to deny the very real contributions made by demographers in a number of fields of applied research. There is also a rising body of casebook applications of demography, which are both intriguing and informative (see for example, Kintner *et al* 1994). In general, however, there is little evidence of direct feedback from the ‘applications’ end of the domain in a form that impacts on basic demographic research. This is surprising because close consideration of the types of issues that business demography is concerned with reveals several issues and opportunities for fundamental research. Within the brief time available for this paper I want to mention just three examples.

The first of these has to do with what is perhaps the very foundation of demography: the way we count people. In this connection it is notable that a substantial component of the activities conducted under the auspices of applied demography, at least in the US context, has to do with making population estimates. In Australia, non-government activity in this field has been limited, but there is now rising recognition that the official basis of population statistics, the estimated resident population, is not a suitable measure for all purposes at all times. The notion of a service population captures more fully what seems to be needed – that is, some measure of the population that exerts the true demand for services in a defined locality.

In practice, the most appropriate measure will depend upon the specific purpose for which it is to be used and considerable conceptual development is needed. What does seem clear, however, is that useful estimates of the service population cannot be derived simply by adding some estimate of temporary population numbers to the ERP [see eg Smith 1989, 1994]. Indeed, we need to move beyond the notion of a fixed count to recognise the constant flux of population over space and time. Rather than a single figure alternative, this suggests that emerging needs might best be met by a range of statistics that complement the ERP. As I have argued elsewhere, key dimensions that need to be captured here would seem to be the peak, duration and timing of population flux (Bell 2001). Previous endeavours to construct service population estimates in Australia have floundered on the lack of nationally consistent datasets (see ABS 1996, 1999) but if there is one lesson to be derived from the practice of business and applied demography, it lies in the benefits of the many non-standard data sources available at the local level. The unique resources available to State governments are already proving their value in this regard in the context of alternative estimates for indigenous communities [Taylor and Bell 2001].

The notion of variability in population leads logically to a second challenge for demographic models and methods, namely population projections. As Pol and Thomas (1997: 221-38) point out, business planning is fundamentally concerned with the future and demographic projections are an indispensable ingredient of the decision matrix. But demographic trends like, business itself, are inherently uncertain. The challenge for mainstream demography is to frame projections in a way which moves beyond the conventional approaches based around a range of input assumptions, to one based on confidence intervals. There have been several exciting developments in this field in recent years (see, for example, Tayman *et al.* 1998; Keilman *et al* 2002) and it is encouraging to see a number of papers on the topic at this conference. The real challenge, though, lies in the application

of these techniques to projections at the local level in a way which also takes into account the multi-regional nature of migration.

The local dimension merits particular attention because in practice it is at this level that most business applications are focused. Coincidentally, however, it is also this level at which demographic models and theory are least well developed. While there are numerous candidates for research, one topic which seems fundamental to both basic and applied demography is the way in which age structures at the local level evolve over time. An improved understanding of local population dynamics, in particular the relationship between age, household composition and dwelling structure would significantly benefit planners in both the public and private domains. These linkages would seem to offer precisely the fare for theorising and model development at which demographers excel, but the response to date has been muted, to say the least. Rowland's (1983, 1991) spatial models and categorisation of forces promoting heterogeneity and homogeneity of suburban age profiles, coupled with recent work on housing demography (see, for example, Myers 1990) would appear to offer an excellent foundation for further progress on this topic.

Conclusions

Business applications of demography have attracted much less attention in Australia than in the United States but there is clear evidence of rising interest in the field. Indeed, it is notable that two of the last six Presidential Addresses delivered to the APA were directly concerned with Applied Demography (Hugo 1991, Barker 1994). There is a small number of specialist texts (see, for example, Maher 1991; Martins 1984) and growing interest in topics such as synthetic estimates and applications of GIS. While the pace of development may have been slow, it is probably also true to say that most Australian practitioners would prefer not to emulate all aspects of the American model.

In contrast, it is arguable that Australian demography has secured a vital role in the analysis of social policy in Australia, with demographers routinely cited in media commentary on a range of population-related issues. This might simply reflect the centrality of population, especially immigration, in Australian public affairs, but that recognition is itself due, at least in part, to the way the profession has contributed to informed debate.

What is common to both these facets of demographic work is that they depend on a close interaction with trends in the real world. In the case of business applications, no less than for social policy, it is exposure to these trends and issues that not only ensures the relevance of the discipline, but also offers the potential for development of the new sources, methods and theory that will help drive evolution of the profession itself. Ultimately it is this understanding of the processes of population change, and their application, that constitutes the business of demography.

References Cited

- Australian Bureau of Statistics [1996]: *When ERPs Aren't Enough: a Discussion of Issues Associated with Service Population Estimation*. Demography Working Paper 96/4. Canberra: ABS.
- Australian Bureau of Statistics [1999] *Service Population Pilot Study. An Investigation to Assess the Feasibility of Producing Service Population Estimates for Selected LGAs*. Demography Working Paper 99/3. Perth: ABS.
- Barker, R. [1994]: The state of applied demography in Australia, *Journal of the Australian Population Association*, 11(2), 103-114.
- Bell, M. [1995a]: *Internal Migration in Australia, 1986-1991: Overview Report*, AGPS, Canberra.
- Bell, M. [1995b]: Temporary overseas workers: deregulating the market, *People and Place*, 3(1), 54-58
- Bell, M. [2001]: 'Understanding circulation in Australia', *Journal of Population Research*, 18(1), 1-18
- Bell, M. and Carr, R. [1994]: *Japanese Temporary Residents in the Cairns Tourism Industry*, AGPS, Canberra.
- Brooks, C. , Murphy, J. and Williams, L.S. [1994]: *The Role of Skilled Temporary Residents in the Australian Labour Market*, AGPS, Canberra.
- Castles, S. & Miller, M.J. [1998]: *The Age of Migration* (2nd edition), McMillan Press, London.
- Crispell, D. [1993]: *The Insider's Guide to Demographic Know*, Third Edition, American Demographics Books, New York.
- Dunn, W. [1992]: *Selling the Story: The Layman's Guide to Collecting and Communicating Demographic Information*, American Demographics Books, New York
- Hugo, G.J. [1991]: What population studies can do for business, *Journal of the Australian Population Association*, 8(1), 1-22.
- Keilman, N., Pham, D.Q. and Hetland, A. [2002]: Why population forecasts should be probabilistic - illustrated by the case of Norway, *Demographic Research*, 6, 15. www.demographic-research.org
- Kintner, H.J., Merrick, T.W., Morrison, P.A. and Voss, P.A. [1994]: *Demographics: A Casebook for Business and Government*, Westview Press, Boulder.
- Maher, C. and Burke, T. [1991]: *Informed Decision-Making : the Use of Secondary Data Sources in Policy Studies*, Longman Cheshire: Melbourne.
- Martins, J.M., Yusuf, F. and Hudson, H.M. [1984]: *Population and Business*, Australian Population Association and Statistical Society of New South Wales, Sydney.

- Morrison, P.A. and Abrahamse A.F. [1996]: Applying demographic analysis to store site selection, *Population Research and Policy Review*, 15: 479-489.
- Myers, D. [1990]: *Housing Demography: Linking Demographic Structure and Housing Markets*. University of Wisconsin Press: Madison, Wisconsin
- Pol, L.G. [1987]: *Business Demography: A Guide and Reference for Business Planners and Marketers*, Quorum Books, Westport, Connecticut.
- Pol, L.G. and Thomas, R.K. [1997]: *Demography for Business Decision Making*, Quorum Books, Westport, Connecticut.
- Rowland, D.T. [1979]: *Internal Migration in Australia*, ABS Census Monograph Series, Catalogue 3409.0, Australian Bureau of Statistics, Canberra.
- Rowland, D.T. [1983]: *Population and Educational Planning*, Education Research and Development Committee Report no 36, AGPS, Canberra.
- Rowland, D.T. [1991]: *Ageing in Australia*, Longman Cheshire, Melbourne.
- Siegel, J.S. [2002]: *Applied Demography: Applications to Business, Government, Law and Public Policy*, Academic Press, London.
- Smith, S.K. [1989]: Towards a methodology for estimating temporary residents, *Journal of the American Statistical Association*, 84(406): 430-36.
- Smith, S.K. [1993]: Expert testimony in adversarial legal proceedings, *Population Research and Policy Review*, 12: 43-52.
- Smith, S.K. [1994]: Estimating temporary populations, *Applied Demography*, 9(1): 4-7.
- Stewman, S. [1988]: Organisational Demography, *Annual Review of Sociology*, 14: 173-202.
- Swanson, D.A., Burch, T.K. and Tedrow, L.M. [1996]: What is applied demography? *Population Research and Policy Review*, 15(5-6): 403-18.
- Taeuber, I. [1944]: The development of population projections in Europe and the Americas, *Estadistica*, 2: 323-346.
- Taylor, J. and Bell, M. [2002]: The Indigenous population of Cape York, 1996-2016, *CAEPR Discussion Paper No. 227*, Centre for Aboriginal Economic Policy Research, The Australian National University, Canberra.
- Tayman, J., Schafer, E. and Carter, L. [1998]: The role of population size in the determination and prediction of population forecast errors: an evaluation using confidence intervals for subcounty areas, *Population Research and Policy Review*, 17(1):1-20