MANAGING SKILL SHORTAGES IN THE AUSTRALIAN PUBLIC SERVICE

Abstract

Acute skills shortages have significantly affected governments' capacity to conduct policy over the last decade. Yet, responses to the challenge remain patchy. In Australia, as elsewhere, the public service is facing growing divergence between its own urge to undertake systematic workforce planning and slow, inadequate or inexistent response by most of its line agencies. The article analyses recent survey, audit and administrative data together with agency, academic, and practitioner research to analyse the roots of this puzzle and evaluate current trends. The lack of response to planning requirements originate in the elusiveness of the concept, lack of resources, devolution reforms, policy constraints, mistrust about the methods involved, and informational issues. Current efforts target the calibration of baseline workforce requirements but too often remain disconnected from strategic and contextual analysis. Successes and failures in workforce planning implementation are illustrated through five case studies, which suggest important roles for leadership commitment, organisational culture and the allocation of sufficient resources. The nature and extent of strategic risk emerges as an important factor of implementation in the agencies examined in this study.

INTRODUCTION

There is currently a sense of urgency about the problem posed by workforce ageing, capacity constraints and skill shortages in the Australian Public Service (APS). To address the looming crisis, the Australian Public Service Commission (APSC) has called upon APS agencies to undertake systematic workforce planning. However, various reviews by the National Audit Office suggest that workforce planning in APS agencies is either not occurring or being done effectively. The systematic failure to address this issue not only reduces the strategic vision of the public sector in difficult times, but also imposes large efficiency costs and severely weakens the quantum and quality of the services delivered. The Management Advisory Committee of the APS recently put the potential risks of inaction in foreboding terms for the future conduct of public policy in Australia:

> "…we will not be able to retain the skills we need to deliver the high quality policy, programmes and services that a government expects of a professional public service…nor will we meet the expectations of the Australian Community" (MAC 2005: vii).

Similar concerns are commonly found in other Anglo-American countries, but hey have not translated into much scientific literature. Although there is considerable practitioner interest (and concern), there is little academic research on the progress of workforce planning efforts in the public services of most OECD countries. Studies are rare, and multidisciplinary perspectives too often estranged.. The public administration literature has a long tradition documenting *sui generic* personnel practices, but there is less emphasis on planning for needs or service-wide capabilities. Public sector economics tends to see these issues as market pricing mechanisms constrained by regulatory frameworks. Operational research theory studies 'manpower planning' in terms of Markovian, and semi-Markovian processes, but these methods are complex and of little practical use to human resource (HR) managers. Organisational theory has studied the nature and organization of work as a means of building commitment cultures, and human resource theory has addressed in-service training and the liberation of employee potential, but statistical evaluations have hardly gone beyond commenting on current

labour shortages. Overall then, the existing academic literature offers little guidance to assist practitioners.

This article makes three contributions to this field; a review of agency, academic and practitioner literature (both from a domestic and international perspective), an analysis of the factors contributing to or detracting from the adoption of sound workforce planning practice, and a review of progress on the ground in selected Australian public sector agencies. In doing so, the article critically appraises the state of readiness of the Australian Public Service in confronting its single most important resource crisis.

The discussion is organised as follows. First I define workforce planning and review the literature, identifying gaps and suggesting future avenues for research. I concentrate on the specific issues faced by APS agencies: why is workforce planning important both for high turnover and high retention agencies? I then consider the various dimensions of the workforce planning conundrum and the factors that constrain implementation capacity. Several case studies illustrate the variety of approaches and outcomes in selected APS agencies. I conclude by revisiting the standard workforce planning framework and evaluate progress against this benchmark. Is public sector workforce planning really in a dead-end? What is currently missing in workforce planning policy to help it contribute more effectively to improved public sector governance?

WORKFORCE PLANNING: WHAT'S IN A NAME?

More than a decade ago, David Ripley, chief workforce planner with the Tennessee Valley Authority, provided a simple and effective practitioner view of the workforce planning paradigm, describing it as "the systematic assessment of future human workforce needs and the determination of the actions required to meet those needs" (Ripley 1995: 83). Others have since gone beyond the pure technical analysis of current workforce assessments, HR needs and action plans by stressing the inclusion of strategic management, turnover management and evaluation processes (Idris and Eldridge 1998), which

they benchmark against the Bismarckian notion of 'having the right people at the right place at the right time with the right skills' (Anderson 2004, Pynes 2004).

Meeting future organisation objectives and strategic directions is the corner stone of the workforce planning challenge. The Australian National Audit Office (ANAO) views workforce planning as "…a key strategic activity cascading from an organisation's corporate planning process" enabling it to "…best use its human capital to achieve its outputs and outcomes" (ANAO 2002: 11). Projections lie at the heart of good workforce planning. For instance, other reports by the National Audit Office (ANAO 2001, 2005) define workforce planning as "a continuous process to shape the workforce to ensure it is capable of delivering organisational objectives now and in the future", whereas others put it as: "…achieving the affordable numbers of people having the requisite competencies to deliver the capability outputs required by the government" (Dept. of Defence 2003, MAV 2006).

In the professional sector, workforce planning often proceeds by 'compartmental' analysis in which the rates of change in supply and demand for a specific job occupation or skill are analysed and extrapolated through time (Mackay and Lee 2005). In the medical and allied sector, the starting point can be a benchmark or 'baseline need' (possibly based on customers' demand for public services or on strategic considerations), which is then factored up by an expansion parameter based on demographic trends among service recipients, rate of technological change, indicators of economic growth, etc. (Productivity Commission 2005). These trends are projected over periods varying from 1 to 20 years using time series and any other relevant past and current information. Alternatively the starting point is generated using scenario modelling. Similar exercises are then conducted on labour supply, projecting job occupations decomposed by age and gender cohorts, adding new entrants, subtracting losses and accounting for expected variations in hours worked, gender and age participation over time. If there are gaps between expected workforce requirements and workforce supply, the projections then try to integrate policy intervention such as in the areas of education, training or immigration.

In more general terms, Anderson (2004) articulates workforce planning around four dimensions: (i) the strategic direction of the organisation, which defines required future organisational capabilities, (ii) labour demand considerations (workforce needed to meet product or service demand), (iii) labour supply considerations (currently employed workforce and factors affecting its change in size and composition) and (iv) gaps and solution analysis (the supply-demand matching process). The boundaries of the organization have some importance too: it is sometimes argued that workforce planning tends to be more efficient when directed towards the business-unit rather than managed at the corporate level (Ripley 1995, Simon 2003).

In its most elementary form, workforce planning always comes down to two types of requirements:

- organizational vision: articulating future requirements around overall strategic goals, based on roles and competencies and;

- informational control: projecting future requirements, based on attrition rates and replacement parameters.

The former puts the accent on identifying core competencies, factors contributing to high performance, changes in the nature of the organization, etc. whereas the latter focuses on the data requirements needed to monitor changes in product or service markets (which influence workforce demand) and changes either in internal workforce composition (attrition, over-retention, etc.) or in external demographic factors (which both influence workforce supply).

CONTEMPORARY RESEARCH

Contemporary research into public sector workforce planning in Australia lays its roots almost entirely in the investigations of the Commonwealth's Management Advisory Committee (MAC 2003, 2004, 2005), the Public Service Commission (APSC 2003b), isolated agency studies such as conducted by Insolvency and Trustee Services Australia (ITSA), the Department of Defence (ANAO 1996, Dept. of Defence 2003), the Department of Education, Science and Technology (DEST), The Australian

Customs Services, the Department of Immigration and Multicultural and Indigenous Affairs - DIMIA - (ANAO 2002) and various evaluations by the Australian National Audit Office - ANAO - (ANAO 1996, 2001, 2005).

With plenty of applicants for every position, and large internal labour markets, past studies of the public service in Australia have had good reasons to ignore broader planning needs. Instead, they focused on technical instruments of personnel management such as examination, recruitment, selection, promotion, discipline, separation and eventually mobility (Caiden 1965), which is only one (relatively short-term) aspect of workforce planning. Standard setting and implementation was the dominant paradigm – it was largely insular in focus and accepted the broader labour market as a given. Limited appreciation of manpower planning problems was shown in initial recruitment of core and specialist skills - a perennial topic from the 1940s onwards (Spann 1979). The last comprehensive study of personnel policies in the public sector (Corbett, et al. 1989) has no chapter on workforce planning among its 31 contributions, although it noted that innovation and development suffers where no 'comprehensive management agency embracing organization, personnel and industrial relations functions' exists (p.80).

International studies were similarly mixed. The burgeoning world-wide literature on new public management (NPM) that emerged throughout the 1990s does not emphasize workforce planning or capability planning – preferring to define the problem in terms of human resource management considerations or outsourcing. The private sector management literature within its broader areas of management considers staff development and relationship building as core responsibilities of leadership, but less emphasis is placed on future planning. Over the last decade, a smaller, dedicated international literature on 'new personnel economics' asks questions of how to develop an optimal workforce including optimal policies for attraction, retention, remuneration, and prevention of early severance of key staff – but being more micro in focus does not explicitly address workforce planning, nor has its economic insights been applied yet to the public sector context.

By contrast, there is growing overseas interest in these topics from corresponding public sector management agencies. The State Services Commission of New Zealand has recently proposed agencies begin 'managing capability' both for now and for 'investing in the future' (SSCNZ 2002). In Canada a major report on the drift away of 'new professionals' from the public service was released in 2004 by IPAC Canada (IPAC 2004). In the US, the President's Management Agenda 2002 raised the alarm over 'paradoxical results' in public service human resource management (HRM), criticising blind, one-size-fits-all workforce reductions, poor job search guidance, lack of strategies to reward performance or deal with the lack of it, skill erosion, impending retirement threats, barriers to relocation and to flexible HRM, etc. (OMB 2002). The Executive Office of the President Office of Management and Budget summarised the situation in the Federal public service in the following, echoing terms:

> "A workforce with steadily increasing numbers of supervisors and steadily declining accountability – a workforce that feels more and more overworked at the same time as its skills move further and further out of balance with the needs of the public it serves" (OMB 2002 : 11)

The agenda urged Federal agencies to move towards long-term HR planning. Workforce metrics and forecasting capabilities are now developing fast in many US States administrations (Young 2003, Anderson 2004, Holinsworth 2004) and in most Federal agencies such as the US Department of Health and Human Service (HHS 1999), the US Army (Emmerich, et al. 2004a, 2004b, Nichiporuk 2005), the US Office of Personnel Management (Anderson 2004), the US Department of Labor (Karoly and Panis 2004), the US Agency for International Development, USAID, (GAO 2003) and the Government Accountability Office (GAO 2005), to name just a few. However, the nature of the task is such that the challenge remains; workforce planning is never quite 'achieved', requiring almost perpetual re-engineering. As with the public sector audits conducted in Australia, various reviews have revealed familiar patterns of unpreparedness, lack of resources and lukewarm commitment in US agencies (GAO 2003, Young 2003).

PLANNING FOR WORKFORCE SHORTAGES

It is important to recognise that in practice there is no such thing as *the* workforce planning model. There is a large variety of workforce planning tools and processes, adapted to different circumstances (Anderson 2004), ranging from basic worksheet computations to complex stochastic modelling of manpower systems (Bartholomew and Morris 1971, Clough, et al. 1974, Bartholomew 1982). The *execution* of workforce planning can also take various paths such as centralized, decentralized or hybrid, elective or mandated, contingent or developmental, etc. (Young 2003). The mosaic of models and approaches only adds to the complexity of the concept. Yet, whichever approach is elected, execution always consists of a sequence of actions, starting with the set-up of planning teams in business units, assessment of current workforce skills, core existing competencies and observed attrition rates, evaluation of future requirements based on both organisational and informational data, and forecasts of future labour supply based on external information. Workforce planning is the process that matches supply forecasts with demand projections (gap analysis), identifies areas of critical expected skill shortages (given strategic objectives) and areas of excess supply, then examines possible solutions (eg. personnel economics, career planning, retention policies, performance pay, additional funding, etc.).

This section brings together elements common to most workforce planning exercises in a 'basic' or 'benchmark' workforce planning framework. Successful workforce planning consists of integrating within the strategic framework five governance processes:

(i)   Current workforce assessment (inclusive of succession management)

(ii)   Current and future workforce demand projections (strategic capability)

(iii)   Labour supply forecasts

(iv)   Policy remedies (e.g. human relations, personnel economics, etc.)

(v)   Performance evaluation

The benchmark planning procedure therefore first involves determining expected attrition rates (resignation, retirements, transfers, dismissals and retrenchments, as a percentage of total workforce) using information flowing from succession management, retirement plans inclusive of superannuation policies, etc. The second tenet consists of determining expected changes in labour demand, due to technological change, operational changes, agency expansion or reduction, etc. (similarly to the health sector, the focus is here on the 'capacity to deliver') including impacts on workload and competencies (volume and skill composition). Last, the procedure needs to control for potential response from labour supply, with emphasis on demographic and education developments) among skills currently employed and required in the future (contextual analysis.

These three building blocks could respectively be approached as: (i) 'transaction-based' planning, which consists of tracking internal HR movements, (ii) 'process-based' planning, which considers strategic factors such as technological change, job re-engineering, business re-orientation, etc. and (iii) 'event-based' planning, which consists of tracking outside factors such as policy, economic, demographic factors (Kwansah-Aidoo 1998). To these traditional features of workforce planning, we add: (iv) new personnel economics: anticipating and managing the needs and expectations of existing employees, and (v) performance evaluation, for which a set of criteria and recommendations have been established by the National Audit Office (ANAO 2001, 2005). This amalgamation allows us to elaborate a basic theoretical framework at the intersection of the models most commonly found in the workforce planning literature.

Figure 1 illustrates in a simplified way how these elementary building blocks relate to each other. The basic model consists of an *internal* process, 'baseline workforce assessment', focused on movements of currently employed staff (*insiders*) and largely dependant on HRM qualitative and quantitative data reporting, and an *external* process, which we term 'contextual forecasting', which consists of factoring in all relevant outside parameters affecting the external supply of skills (*outsiders*). Demand planning is both internal and external, and unrelated to factors determining labour supply, instead focusing on the characteristics of the future required positions.

[Take in Figure 1]

APSC publications make explicit the considerable importance the APS lends to transaction-based planning (of which the APSED database is the main data feeder) and personnel economics (steered by detailed yearly surveys of employee satisfaction, retention, attraction, remuneration, etc). Yet, the most recent public assessment (APSC 2007 : 56) indicates significant deterioration in the management of skill set information, a traditionally reliable bastion. Despite the wealth of information obtained from employee surveys, succession and talent management, pillars of personnel economics, are still rarely adopted. Furthermore, process- and events-based planning are not being developed either. In a recent yearly report (APSC 2007), the APSC confesses that:

> "Not all agencies, however, are responding at a strategic level to the increasing competition for scarce skills and talents…For those agencies that are well-advanced down this [baseline workforce planning] path, the next step is for workforce planning to be more linked with wider business planning procedures" (p. 77).

The ANAO audit report (2005) makes it very clear this area (point ii in figure 1) remains vastly under-researched, as is the management of contextual external factors (point iii).

THE DIMENSIONS OF THE PROBLEM IN AUSTRALIA

In a recent audit by the Australian National Audit Office, 45 major APS agencies reported experiencing shortages in various specific skills such as accountants, lawyers, economists and information, communications & technology (ICT) professionals (ANAO 2005). To give an idea of the extent of the crisis, the Australian Taxation Office reported current shortages of about 1,000 skilled professionals (ANAO 2005). The APS as a whole only numbered 133,581 full and part-time staff in 2005 (APSC 2007). A recent State of the Service Report (2007) indicates that all aspects of the crisis have worsened over the last two years. Nearly all agencies report acute difficulties in recruiting skilled professionals and two thirds are strained by the attrition of experienced employees and

unsatisfactory skill/requirement matches There is increasing evidence of declines in leadership indicators, of inter-agency talents poaching, of lost expertise and capacity through retirements, etc. In 2007, reported shortages in core capacity areas such as ICT professionals, financial-, HR and project managers have increased by up to 30 percent in the space of one year.

Graduate recruitment and current supply

The APS no longer relies exclusively on its targeted graduate programs, instead using standard entry – recruiting existing graduates, and some agencies have abandoned targeted graduate entry programs entirely[1]. The APS is generally considered an 'employer of choice', still attracting the highest quality graduates (specialised analytical skills such as engineers, economists, statisticians) but not all agencies share the same experience. The Office of Prime Minister and Cabinet (PM&C) can attract annually around 750 applicants for a handful of positions (Shergold 2004). The Australian Treasury, the Department of Foreign Affairs and Trade (DFAT) and the Department of Defence are other 'agencies of choice', offering careers that traditionally appeal to graduates through pecuniary and non-pecuniary incentives (prestige, recognition, status, international postings).

Other, more technocratic agencies, such as the Australian Bureau of Statistics (ABS), the Australian Customs Services (ACS), the Australian Taxation Office (ATO) and many others fare much worse and find it difficult to attract and hold good quality recruits with relevant skills and qualifications. A third type of more decentralised, street-level agency has no trouble attracting thousands of applicants for less-skilled work – eg. Centrelink, which can receive up to 20,000 applications for 100 call-centre operatives jobs (Wilden 2004). However, this does not mean that decentralized agencies are selecting well, attracting the right mix of skills, holding high quality employees or investing effectively in their longer-term public careers. Attrition and labour turnover are a constant source of concern. The Management Advisory Committee for instance stresses that: 'there would be benefits in all APS

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[1] Traditionally, graduate entry programs used to offer entry level employment at all levels of government to graduates with little work experience to supplement base entry at APS levels 1 and 2, which targeted non-graduate applicants. These distinctions have now vanished, base entry is now at APS levels 3 and 4 and graduates are now mainly recruited through general selection processes (MAC 2005, Taylor 2008).

agencies reviewing their current graduate intake levels, using workforce planning techniques and strategies" (MAC 2005: 70). It is important to know more about the motivations and aspirations of university graduates contemplating careers in the APS. Case-study research for instance hints that discipline (university degree and university background) and job attributes are very important drivers for newly graduated job seekers (Taylor 2005).

There are also frictional and structural issues. Recruitment regulations, originally meant to ensure the integrity and merit of appointments, make it very difficult to successfully hire top candidates when the labour market is tight. It is not rare for agencies to take two, three or even five months in making an employment offer to their first-ranked candidates. Good candidates usually have various options and very often, talent is poached by more flexible organisations before an offer by the public service is actually made. This problem has led to both cynical responses by agencies (accepting that realistic targets are fifth or sixth-ranked candidates and making offers accordingly) and stop-and-go responses by which the agency makes cascading offers that keep being rejected with considerable time being wasted in the process. Another problem is that agencies are often not reliable judges of the skills they need. There tends to be large gaps between the skills described in job advertisements and the actual requisites of the position to be filled, often reflecting large discrepancies between what agencies actually do and what they believe they do. This in turn has severe implications for skill retention, to which I now turn.

Retention of talent and corporate memory

Overall, there is a perception that with the exception of a few specific types of skills, graduate *recruitment*, by contrast with employee *retention*, is not a major short-term concern for the APS (MAC 2003:47). The public service at the federal and state levels benefits sufficiently from its 'employer of choice' status with graduates and school leavers. However, APSC statistics show that the APS loses considerable portions of this intake within 5 years of employment (APSC 2005, 2007). The median length of service is 2 years and under one-third of new recruits intend to stay for 10 years.

In profile terms the talent pool of each entry is exported to the private sector (and often re-contracted by the public sector through consulting services at a much larger cost) until only a small residue of individuals remain in their 40s. In short, many younger civil servants use the APS as a training ground for their eventual professional careers in the private sector.

This problem was noted in the *Organisational Renewal* report (MAC 2003) as a perennial factor mitigating against any notions of workforce planning at the point of recruitment. The report urged agencies to adopt 'more systematic workforce planning and succession management', which in this context seems to particularly target retention issues. Almost all agencies report difficulties in retaining high-quality staff and retaining sufficient numbers of high-flyers in senior levels of management - leading to another problem of dwindling talent pools in mid-senior grades and difficulties in re-attracting staff and increasing lateral entry. The central issue here is leadership attrition. The latest MAC report indicates that between 55 and 70 percent of current higher executive levels are over 45 years of age and will be replaced by less experienced, fast-tracked or externally recruited leaders (MAC 2005: 80-1). Various agencies in Australia (ATO, Defence) and abroad (UK, Canada) have responded to the looming crisis by developing leadership training programs. Yet, leadership is not acquired through leadership seminars and country retreats, but by building in-house experience and mentoring high quality recruits. Both these approaches are threatened by the retirement of the baby boom generation and the difficulties of retaining high quality generations X and Y recruits long enough for leadership skills to be acquired or transferred.

There are associated concerns over the continual loss of corporate memory (especially generational) and core skills at medium and higher executive levels, but agencies at times take the wrong diagnostic and therefore come with the wrong answers. Hanley et al (2006) for instance note that although future skill shortages are taken seriously in the Victorian public service, this tends to be linked exclusively to the recruitment of younger workers, with no reference to the retention and passing-on of knowledge of older workers. Rather than designing policies aimed at retaining the internal knowledge and expertise of older workers (education, training, mentoring etc.), agencies have usually responded by outsourcing

the problem to consultancy firms, reducing the potential for in-house solutions (Wooden, et al. 2000). This is of particular concern since some Australian and overseas studies find that the net benefits of employing older workers exceed those of their replacement by younger ones, the lower job turnover rate, higher loyalty and corporate memory compensating for the higher wages (McNaught and Barth 1992, Brooke 2003). However, most States seem at least to be aware that they need more focus on knowledge retention and succession planning, but they find it difficult to elaborate appropriate responses.

These problem are also apparent in the APS and the Management Advisory Committee reports mere embryonic response from just a few 2005 APS agencies such as Family and Community Services (FACS), the Department of Employment and Workplace Relations (DEWR), the Department of Industry, Tourism and Resources (DITR) and Centrelink (MAC 2005: 77). Public policy can also play an important role here by promoting and formulating workplace arrangements more adapted to the demands of older workers, as is illustrated in subsequent sections (e.g. case studies). Another problem is retirement and superannuation policy. Many agencies realise that policies promoting early retirement only lead to the early loss of their best human resources (Jones 1995). Public policy should be designed to make longer careers an attractive option, relative to early retirement (APSC 2003a, b). There are also internal issues with the difficulty to link performance evaluation and performance pay to actual merit (due to a certain lack of indicators in the public sector), which generates problems of equity that further weaken retention policies (Isaac 2001).

The sense of urgency about the issue (Shergold 2004, APSC 2005) is compounded by a realisation that little is happening in practice amongst APS agencies (ANAO 2005, MAC 2005). In 2007, staff and agency surveys indicated that fewer agencies considered themselves 'workforce planning effective' over 2006-7 than in the previous year (APSC 2007). These figures have since improved but doubts remain about the maturity of the processes put in place and about their current state of progress. Agency responses have proved slow and unsatisfactory (ANAO 2002, 2005, APSC 2005). As noted in the State of the Service report (APSC 2005) and in reports from the National Audit Office (ANAO

2005), there is still a generalised neglect of any forms of serious workforce planning either by central or line agencies. The State of the Service report (APSC 2005: 154) for instance stresses 'few [agencies], if any, could claim to have successfully embedded workforce planning into their business processes'.

The National Audit Office was more scathing in its conclusions, lamenting that 'an assessment of the demand for and supply of, labour was rare' (ANAO 2005: 63) and 'consideration of external labour market information was, in most of the reviewed agencies, sporadic and ad hoc', (ibid: 15). The National Audit Office further argues that 'links between analysis and strategy are not yet well developed' (ibid: 17) and 'the majority of agencies do not have an appropriate measurement framework in place to assess their workforce planning activities…there is a risk of over-confidence in agencies' ability to respond to the challenges demographic change poses' (ibid: 89-90). This situation is not specific to Australia. As suggested above, similar shortcomings have been the norm in various parts of the US public sector (GAO 2003, Young 2003, Johnson and Brown 2004).

Although this is less common, there are also deficiencies in identifying the skills and qualifications of *current* employees, with some agencies failing to collect comprehensive data on the tertiary education of their new recruits (MAC 2005). Furthermore, the management of existing 'baseline' workforce profiles can be deficient. Some agencies fail in their daily human relations management to address workforce ageing and the loss of skills, collective memory and experience. A recent study of workforce planning in the public service of the State of Victoria reports that of all agencies surveyed, only three had taken an interest in the ageing of their workforce and only two were able to provide an age profile (Hanley, et al. 2006). The study cautions on an ironic note that "HR managers…saw ageing in terms of the provision of services to their ageing customer base rather than as a feature of their workforce" (Hanley et al 2006 : 39).

FACTORS OF INERTIA

Why did workforce planning fail to kick off in the Australian public service when other sectors of activity managed to produce a relatively enviable track record (particularly the medical and allied sector)? There are various sources of explanations; lack of resources, governance reforms, isolation of HR departments, mistrust.

Lack of Resources

The failure to undertake adequate workforce planning by public agencies may be a symptom of the lack of relevant expertise in these organisations. Many of the respondents to the survey of agencies conducted by the National Audit Office attributed lack of progress to skill shortages in the ability to conduct forecasting exercises in practice or to integrate these projections into existing business plans, which is consistent with other assessments of personnel intrinsic difficulties with the strategic and technical nature of workforce planning assignments (Sinclair and Robinson 2003, Pynes 2004). Other factors often reported include a lack of awareness among line managers, lack of resources (funding, technology, time), and difficulties in retrieving accurate and meaningful data (ANAO 2005).

Devolution of the HR function

Second, it is now commonly suggested that some aspects of the reforms known as new public management have been detrimental to the capacity of agencies to plan for workforce requirements (Zeffane and Mayo 1994a, Colley 2001, ANAO 2002). The ever shorter nature of the employment relationship and the high mobility and job expectations of young public servants make forecasting exercises a more complex matter than in the past. The lack of central coordination of personal issues that followed devolution of personnel operations to agencies' line management presents obstacles for individual *and* whole of government approaches to workforce planning (Colley 2001, Anderson, et al. 2002, Podger 2004, APSC 2005), somehow leaving the onus on agencies to decide whether or not to conduct such research. Being somewhat orthogonal concepts, the decentralized HR autonomy enjoyed by line agencies for the last twenty years and the 'central planning' nature of workforce projections

recommended by the APSC do not reinforce each other and many agencies appear to have assigned a low priority to the matter.

Isolation of the HR function

A third reason for inertia, not specific to the Australian context, is that agency leaders are usually poor at integrating HRM functions with organisational strategy and tend to deny HR departments the leeway needed to project and suggest new organizational structures, particularly when these stir established organizational culture (Pynes 2004, Clark and Colling 2005). HR departments traditionally perform two main functions: (i) custodians of HR policy in the organisation and (ii) providers of training and staff development. Although these functions are important at the big picture level, they are not perceived as such by organisations' executives on a daily basis. Line HR managers usually know of particular skills shortfalls but have limited autonomy and are not rewarded for showing initiative and entrepreneurship (MAC 2005: 39). A related problem is the occasional lack of hierarchical support and engagement for integrating workforce planning processes into business plans.

Mistrust of methods

The lack of progress has also been hampered by mistrust over the capacity of traditional forms of workforce planning to resolve specific workforce requirement problems. Some executives and HR professionals believe rigid workforce planning is too often erroneous, assumption-dependent or misdiagnosed. They suggest workforce planning has a poor track record and when used by agencies tends to be done badly. In their view, price mechanisms in self-regulating markets will sort out future shortages, so that agencies need do little except assess their employment needs accurately. It is true that rigid plans have frequently 'gotten it wrong' as circumstances changed and some may even have exacerbated the problems.

Well before it became of interest to the APSC, workforce planning had registered considerable interest with the Australian government in relation to specific domestic industries such as medicine and health

(AMWAC 2003, 2005, Productivity Commission 2005), or, more recently, science and technology skills (DEST 2006). The planning of workforce requirements in the medical sector has generated a voluminous academic and agency-based literature on the subject in Australia and most other OECD countries, which is reviewed in (HHS 1999) and (AMWAC 2003). Numerous forecasting exercises have been conducted for a whole range of medical and allied professions with much controversy (Hays, et al. 1998, O'Dea and Kilham 2002). For instance there have been issues of arbitrariness in the definition of baseline needs and ignorance of accompanying economic indicators such as income, wages and prices. As a consequence, projections for general practitioners (GP) in 1998 indicated an excess supply of skills in Australia (AMWAC 2000), only to be severely contradicted two years later by a separate workforce planning exercise commissioned by the Australian Medical Association (ACCESS Economics 2002) and a demonstrated shortage of skills in the GP market ever since.

The failures and difficulties inherent to workforce planning exercises are powerful arguments to discredit the value of these techniques. Indeed, 'getting it wrong' is a regular feature of workforce planning exercises and a cogent reminder that such endeavours are necessary but not sufficient conditions for successfully addressing the contingencies imposed by changing workforce conditions.

Imperfect information

Last but not least, public agencies are traditionally unprepared in retention matters, with imperfect knowledge of what keeps employees within the organisation, particularly younger workers. Implicitly, there is a high diminishing marginal utility (DMU[2]) of dollars earned among civil servants and compensation and pecuniary rewards are unlikely drivers of public workforce participation. Another problem is the mismatch between the way positions are advertised and the actual characteristics of the positions, which often leads to poor retention rates. In both cases, the APSC is at a disadvantage, not knowing the reactions and future intentions of its new recruits, and both issues have become the subject of increased scrutiny by the ANAO and the APSC (ANAO 2008, APSC 2008).

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[2] DMU is an economic concept that suggests that the same income increment (say $10,000) yields ever lower utility (ie. satisfaction from dollars earned) at higher and higher levels of income.

Failure to overcome each of these barriers will see the opportunity cost of inertia reach undesirable proportions in terms of public output forgone or in terms of crisis averted. There is an opportunity cost incurred at every moment by not being prepared for input or output market contingencies, employing the right skills at the wrong place or time or failing to recognise what are the 'right' skills needed by the organisation. This opportunity cost (foregone services provision, premium salaries paid for scarce skills, loss of human capital, budget cuts, etc.) translates into accumulated inefficiency, lost resources and missed opportunities for the APS. Recent reports such as the State of the Service 2006-7 (p. 56) and 2007-8 (p. 79) leave no doubt that the APS is genuinely worried about factors of inertia and their impact. Thus the benefits of careful and regular workforce planning go well beyond pure dollar cost and business risk considerations (Kwansah-Aidoo 1998, ANAO 2001). Workforce planning:

- contributes to agency strategic objectives;

- provides knowledge for decision-making under uncertainty;

- improves efficient resource usage and profitability by reducing turnover costs;

- moderates disruptions in policy implementation;

- enhances long-term thinking competencies;

- helps reduce employment conflicts;

- enables rapid and strategic-compatible reaction to change and;

- links HR expenditure with business outputs

Workforce planning is a mere tool in an array of efficient governance instruments (strategic planning, risk management, etc.), but it is an essential one: not having it indicates an incomplete governance toolkit. It is essential for the public service to isolate the roots of- and build a deep understanding of its own inaction. The following section illustrates the HR challenges faced by selected agencies and their attempts to meet them.

WORKFORCE PLANNING IN SELECTED APS AGENCIES

In Australia, the main sources of information for progress evaluation are various audits of APS agencies performed by the National Audit Office in 2005 (ANAO 2005), several comprehensive MAC reports, regular employee and agency surveys conducted by the ASPC and reported through its yearly State of the Service reports, some agency work and a few research articles. According to the ANAO, by 2005 only 28 percent of the agencies had established workforce planning processes. The 2005 audit measured workforce planning performance against a set of four criteria not dissimilar to the main planning stages suggested in figure 1, namely: (C1) - assessing both labour supply and demand against required capability and integration into business planning; (C2) - assessing potential skill gap between current and desired competencies and conducting forecasting models of relevant demographic changes; (C3) - assessment informs all relevant business strategies (including HR services); (C4) - measuring incremental progress with feedback to overall organisation performance. Agencies were ranked according to their self-assessment against these criteria, rather than by independent assessment of performance. Of 86 agencies concerned, only nine had sufficiently advanced processes to qualify for an audit. Five agencies achieved a 'fully effective framework' ranking according to criterion C1 (ANAO 2005 : 45-64), only three agencies satisfied criterion C2 (*ibid*. p. 65-73), eight agencies met criterion C3 (p. 74-81) and seven agencies cleared criterion C4 (p. 82-90). Expectedly, the overall assessment of workforce planning progress in the APS as a whole was negative.

However, it is worth examining the processes of those agencies that developed effective or quasi-effective workforce planning responses. I do not examine the case of audit performers who have since been broken up into different entities, such as the Department of Education, Science and Technology (now part of the Department of Education, Employment and Workplace Relations and the Department of Innovation, Industry, Science and Research). Nor do I consider the case of agencies with a stable workforce, and lesser exposure to acute labour supply shortages, such as the Bureau of Meteorology and the Department of Foreign Affairs and Trade – as these agencies have always had a large pool of recruitment. Instead I briefly examine below the responses of 5 important and growing public sector

organisations facing either considerable geo-strategic challenges or thorny policy implementation issues that require hard to find competencies.

The Department of Defence

The Department of Defence has long had specific workforce planning problems, mainly in the recruitment of large numbers of young employees (soldiers/sailors) very few of whom are retained beyond their 40s due essentially to the impact of service duties on family life, family planning and attractive external options in the civilian labour market. The response, which focuses on fast-tracked long-term service incentives schemes, is just one aspect of Defence's succession management policies. Similar issues affect other Defence departments all across the OECD and public audits regularly stress ongoing manning shortfalls, and retention problems among military personnel (NAO 2006).

Defence's hierarchical pyramid is typically indicative of its workforce recruitment and retention problems. Defence reports a 'diamond' shape structure for the classification of its APS workforce with high frequencies at EL1 and EL2 executive levels (middle management), due to outsourcing at the bottom (professional skills) and lateral entry at the top for senior managerial positions (Dept of Defence 2003: xv). The APSC refers to such upward adjustment of the APS classification as the 'classification creep'[3] and has repeatedly expressed concern for this practice as it threatens the fluidity of movements within the APS internal labour market and impacts negatively on the APSC's merit principle. Classification creep is symptomatic of agencies responding to a situation of acute skill shortages.

Traditionally, the workforce planning preoccupations of Defence were with military (ADF) personnel, not its civilian (APS) workforce. This is no longer exclusively the case. The civilian Defence workforce now totals 21,736 (up from 18,579 in 2005 when the workforce planning audit was

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[3] The APSC defines classification 'creep' as: 'agencies…assigning a higher classification level to a particular job, not because of changes in the work value of the jobs, but as a way of paying higher remuneration to attract or retain skills in short supply (APSC 2008 : 106).

conducted). Furthermore, Defence also indirectly employs thousands of non-APS industry civilians and professional service providers (PSP) who fill vacant line positions (often for highly specialised professional skills such as system and platform maintenance). In August 2003 Defence issued the Strategic Workforce Planning Review (Dept. of Defence 2003), which concluded one of the most comprehensive workforce planning exercises ever conducted in the APS. The Review emphasized the need to plan for human resources in a holistic or 'total workforce' terms (i.e. including ADF and APS staff, and all contractors) in order to avoid a 'sealed boxes' syndrome whereby workforce components are managed and planned in isolation of each other. For instance capability may be retained by outsourcing in-house specialised skills at risk of departure to a 'close' defence industry partner providing services to the organisation (i.e. replacing an ADF staff with a PSP).

The exercise used a largely statistical-profile methodology, extrapolating trends in retention and replacement needs, and including a comprehensive review of demand and supply factors integrated with overall organisation goals and capability. The 2005 Workforce Planning Audit lauded the systematic analysis of external environment impacts and scans of potential labour supply for each occupational group (ANAO 2005: 51-2, 58, 62-3, 69, 71, 77), and the use of long-term planning horizons (often 10 years+). There was systematic assessment of the impact of workforce planning on organisational capability, identification and analysis of workforce gaps, analysis of consequences of current and future gaps on capability and implications for risk management. Hence, the organisation was able to target and prioritise the gaps carrying maximal capability threats. Defence's professional approach to workforce planning has not resolved all its problems, as witnessed by the classification creep and the extent of outsourcing, but it has introduced clarity and maturity in the way the department matches its capacity to deliver with its organisational objectives.

The Department of Immigration and Citizenship

Recently reorganised into the larger Department of Immigration and Citizenship (DIAC, with about 8,000 employees), the Department of Immigration, Multicultural and Indigenous Affairs (DIMIA, then

DIMA as it was known in 2005) was a mid-size agency occupying 5,442 employees. The main function of the Department is to manage migrants' applications, flows and integration, assess asylum claims, manage unauthorised arrivals, and securing travel in and out of the country's borders through identification procedures and documents. As with Defence, the Department therefore operates in a highly geo-strategic environment characterised by international crises, the political values of the day, and occasional controversies about mandatory detention policy and offshore case management.

The Department has a younger workforce and a higher female staff representation than the APS average. A noticeable portion of the workforce works on posting overseas. Over the last decade DIMIA regularly reported a diamond shape structure for its APS workforce, reflecting a consistent pattern of recruitment difficulties, with bottlenecks at the APS3, APS6 and EL1 levels (ANAO 2002: 31), and more recently at levels APS4 and APS5 as well (DIAC 2008). In retention matters, the attrition rates of 7.5 percent in 2007 was well within the InfoHRM target benchmark of 9.73 percent for APS agencies. DIMIA has generally sought to promote non-ongoing employment arrangements to retain the know-how of retired employees (particularly at high managerial levels), often to collaborate on specific short-term projects (up to 1 year). For instance, former directors were contracted on this basis to manage the HR set-up of newly-developed business areas or to lead short-term projects on security-related matters (APSC 2003a).

DIMIA's original workforce planning model is described in the *Workforce Planning framework 1999-2000,* which adopts a bottom-up devolved approach. The 2002 and 2005 audits note comprehensive data collection from multiple sources, but find little connection between strategic planning and funding mechanisms (see e.g. figures 2.1 and 2.2 in ANAO 2002 : 38-39). Despite much emphasis on training needs notably through the HRMIS system and the Performance and Learning scheme (PAL), the lack of understanding of the skills required and the type of training needed, failing succession management and poor execution (little evaluation, no regularity etc.) made it very difficult for the agency to connect its HR activities to business requirements (ANAO 2005 : 79). This is progressively changing. DIAC's recent annual reports mention stronger integration of business, budget and

workforce planning practice through its *Workforce Planning Strategy 2006-8*, the *Workforce Plan 2007-8* and its *People Plan 2008-10*, including environmental scans and scenario modelling. All units and offices have to integrate a workforce plan into their business plans in order to integrate workforce needs, trends and risks into the department's strategic plan over a medium-term horizons (3 years). Workforce planning reporting is also increasingly targeted by setting up analyst networks and developing computerised reporting tools .

The Australian Customs Service

The Australian Customs Service (ACS) is Australia's border protection agency, monitoring and preventing the illegal movement of people and commodities in and out of Australia's air and coastal borders. The role of the ACS workforce requires a capacity for careful inter-agency coordination, short-time interventions and law enforcement competencies in a context of growing international trade and travel. At the time of the 2005 ANAO audit, the ACS workforce numbered 4,963, but in the mere space of three years it grew by 25 percent to a 6,293 staff strong organisation (June 2008).

The ACS performed very well in the 2005 ANAO audit, scoring high against all four criteria of workforce planning progress. The ACS implements forecasting and scenario-modelling tools at business unit level in response to government security requirements, its core business activity. Systematic demand and supply assessments are regularly conducted, with continuing assessment of performance and competencies through quarterly metrics reports. In practice, staff data is broken down by headcount, full-time equivalent, age group, occupational group, etc. and benchmarked against employability in appropriate business units.

The ACS HR department is involved in matching staff requirements data with budgetary constraints. The auditors' only doubts were about adequate integration of the capability dimension in scenario modelling (ANAO 2005: 49-50, 67-8). Old-fashioned but effective HR processes such as internal mobility keep the workforce polyvalent and adaptable, a strong recommendation of the latest ANAO

audit of recruitment capacity in the APS (ANAO 2008). Staff redeployment or re-assignment is common. Retention rates are high (at 90+ % in recent years) and separation rates accordingly low.

The Department of Family, Housing, Community Services and Indigenous Affairs

In 2005, Family and Community Services (FACS; 1869 employees) was a relatively less prominent department than the three agencies just examined. It has since been restructured into the much larger FaHCSIA agency, absorbing housing services and indigenous affairs. Although its geostrategic challenges are relatively minor, the social and service delivery issues it confronts (disability services, childcare, family relationships, etc.) are complex and difficult to resolve. The diamond-shaped workforce profile is more accentuated than in the other agencies considered here, with two thirds of the workforce employed in the APS6-EL2 range (FaHCSIA 2008). At 13.7 percent in 2008, attrition rates are high and well above recommended InfoHRM target benchmarks for APS agencies. This data suggests that FaHCSIA is commonly confronting larger than average recruitment and retention challenges.

From the late 1990s FACS undertook medium term workforce planning (5 years projections) adopting a very specific HR planning model emphasising diagnosing of future capability shifts and use of scenario modelling (Kane and Stanton 1994). In 2002 FACS produced its *Workforce Planning Report* with comprehensive current workforce assessment, and projections developed through scenario modelling and gap analysis (ANAO 2005: 55, 67, 78). As with the Australian Customs Office, mobility programs were developed to preserve corporate memory and promote the acquisition of organisation-wide skills. In retention matters, the department developed policies to encourage the continued employment of retirement-age employees, including flexibility and mobility arrangements such as home-based work, mentoring roles on existing projects, designing corporate memory projects, providing health rebates and childcare services to grandchildren, etc. As with DIMIA, the audit reports of the mid 2000's revealed strong concerns about strategic integration (criteria C3) and performance

measurement (criteria C4), which the department is now attempting to address by integrating its *People Strategy 2009-10* into its *Strategic Framework 2008-10* (FaHCSIA 2009).

The Australian Taxation Office

Like Defence, the Australian Taxation Office (ATO) is one of the largest public-sector organisations in Australia (totalling 24,254 staff in 2008) and like Defence, the technical nature of its work means that the ATO faces some of the most acute skills shortages in the country, particularly in ICT competencies, accountants, economists and legal advisers. The workforce profile is older than the APS average and, in keeping with its workforce shortages issues, follows the 'classic' bottleneck pattern at APS3, APS6 and EL1 levels, which constitute about 20 percent of the workforce each (ATO 2008). The separation rate over 2007-8 was a modest 6 percent, 93 percent of which consisted of attrition (voluntary resignations and retirements), suggesting a more stable workforce than the other agencies considered in this study.

As early as the late 1980s the ATO developed computerised workforce planning programs integrating both strategic (positions required) and people planning issues (Saliba 1993). These early exercises matched the jobs/competencies required by expected client demand, economic developments, corporate plans, ageing customer base, etc. with the personal objectives of the current workforce as determined by feedback loops (performance reviews, feedback interviews, training and development, etc). The ATO uses an 'endogenous gap' model that combines economics (jobs) and management (careers) approaches to planning future organisation staffing. The approach models type and volume of skills likely to be demanded together with data on surviving workforce by APS classification level and career stages at any point in time, with projections of entry and exit likelihoods (including lateral entries). However, practical progresses with the performance of such systems has been slow.

As with FACS, the ATO has spent considerable attention to the retention of older staff, allowing a 7am to 7pm modularity of hours worked (subject to operational constraints), part-time arrangements,

and carer's leave entitlements (APSC 2003a), and current workforce planning practice still targets talent management and succession risks, which shows in low job turnover rates. However, there is still little evidence of workforce planning integration into strategic planning, and recruitment of the required skills remains a nightmare. A 2008 audit report by the ANAO stresses that '…[the ATO and two other audited agencies] had not implemented workforce planning processes that were able to identify capability gaps, and had not tailored recruitment initiatives in response to clearly identified skill shortages' (ANAO 2008 : 18).

Wrap up

These case studies reveal that although many agencies face similar difficulties with recruitment and retention, practical management responses vary widely. Some agencies such as Defence and Customs embraced integration of workforce planning into strategic planning early on, developing a strong long-term capacity to deal with the skill shortages they faced. Other agencies reacted at different speeds to the recommendations of audit reports and it is still too early to evaluate their responses, although there is some sense of progress at Immigration and Citizenship. The last two case studies examine a high turnover agency (FaHCSIA) and a low turnover agency (ATO) but reveal no particular connection between the degree of job turnover and the level of preparedness - although this proposition should be checked further with large-scale quantitative methods. Geo-strategically exposed agencies appear more committed and better prepared to plan for workforce shortages than domestically-oriented agencies. Hence, strategic risk appears to be a more important factor of implementation than the actual extent of the skill shortages. Importantly, these different responses to the same crisis suggest that factors of inertia are not insuperable and can be overcome with the right level of leadership and resources commitment.

FINANCIAL CRISIS AND WORKFORCE CRISIS

The global financial crisis (GFC) may have altered some of the parameters of this study, both in terms of supply and demand. On the supply side, what was for many years referred to as 'the tightening

labour market' and the 'skills crisis' can no longer be taken for granted. As unemployment rises, public sector agencies should find it easier than in the past to recruit the talents and competencies they need. However, there are several caveats to this proposition. First, the skills released to the market through lost jobs may not match with the skills demanded by government agencies. Lost jobs and advertised jobs are very unlikely to match one-to-one. In an economic crisis, the most-demanded skills and the best talents are usually not retrenched first (although it may happen with downsizing). Second, the financial crisis does not resolve many of the long-term causes for labour supply challenges in public sector agencies, such as workforce ageing and the failings of the education system to produce the required skills (although it may affect retirement decisions at the margin through lost superannuation income).

On the demand side, the budgetary consequences of the crisis (e.g. servicing additional government debt) will, in the long term, constrain the programs and policy objectives of many governments, which in turn may reduce agencies' demand for skilled labour. For instance, in its latest State of the Service report, the APSC already mentions new fiscal measures (increased efficiency dividend, review of programs expenditure) as a 'source of pressure' to maintaining core activities in many smaller agencies (APSC 2008: 7). Such developments may increase the role of retention strategies and reduce the focus on recruitment processes.

However, at least in the short-run, agencies involved with the provision of welfare, education, heath and infrastructure will probably be expected to deliver more rather than less services, as governments' share of aggregate expenditure expands - various governments having intervened massively in their economy in the hope of defusing the socio-economic impact of the financial crisis. Furthermore, there are also reality checks to the promise of ever higher efficiency in public services, and additional staff will be required in spite of upgraded efficiency objectives.

In practice, it is still too early to tell how the various effects of the financial crisis will translate in terms of skills availability in Australia and elsewhere. If past business cycles are any reference

experience suggests that, together with other resource management contingencies affecting organisational capacity before the financial crisis (such as commodity prices), the impact of the financial crisis on skill shortages will be short-lived. Some clarity will be gained in November 2009 when the APSC releases current workforce statistics in its State of the Service 2008-9. In Australia, the growth of the APS over recent years might have ground to a halt in 2008-9. Yet, despite the severity of the global financial crisis, it would be a surprise if workforce planning does not keep (or soon regain) its rank among high government priorities, as it consistently has in the previous five to ten years.

CONCLUDING REMARKS

In this article I reviewed the workforce planning literature in the Australian and international public sectors, and the specific progress made by Australian public sector agencies against the benchmarks set by government recommendations and public audits. I discussed the main challenges in recruitment, and especially in retention matters (ageing among older generations, mobility among younger generations). I highlighted the growing contrast between the sense of urgency emanating from supervisory bodies such as the MAC and the APSC, and mostly slow or confused responses among agencies on the ground. I discussed possible rationales for lags and inertia, and illustrated both these issues and the progress of some agencies through several case studies.

APS agencies generally know their baseline workforce well, but they often have limited knowledge of external sources of skills and their dynamics, nor do they fully grasp or control the organisational constraints and objectives that shape workforce demand. The case studies presented in this paper suggest that some strategically exposed agencies have done significant progress with workforce planning implementation. The various causes for workforce planning inertia discussed in the paper have generally slowed down efforts elsewhere. Strategic risk emerges as an important driver of implementation. Importantly, these different responses to the same crisis suggest that factors of inertia are not insuperable and can be overcome with the right level of leadership and resources commitment.

Although the global financial crisis and rising unemployment levels may ease the pressure for professional and managerial skills in specific agencies, the long-term nature of the threats and challenges suggests this impact will be short-lived. Only forewarned agencies will be appropriately equipped to address the future challenges of an ageing and tightening labour market. Innovative ways to prepare for looming capacity shortfalls are urgently needed. In Australia, a few public sector agencies have taken a deeper interest in these questions, both from a managerial and economic perspective.

There is a pressing need to develop cost-effective models of public sector workforce planning that are both easy to use and to tailor to specific contexts. These models must go beyond the baseline workforce analysis mostly conducted today, factoring in strategic directions and objectives together with resource, demographic and macroeconomic constraints. They should also acknowledge that there are limits to the remedies and deliverables of workforce planning. Long-term intricate trade-offs between workforce capacity, economic resources, social demands, policy objectives and political factors are beyond the reach of any model.

The findings of this article suggest a need for more policy research geared at solving some of the practical problems posed by inadequate workforce planning and unexpected skill shortages. Concretely, future research should be engineered to (i) better advise how to integrate the HR function and the workforce planning process into strategic planning; (ii) determine the adequate set of incentives and resources to promote workforce planning implementation; (iii) develop simple yet effective ways to capture external labour market information and assimilate its dynamics; (iv) establish the exact relationship between leadership commitment, organisational culture and planning outcomes, and the factors determining leadership commitment. This article showed that far from being restricted to Australia, issues of workforce shortage and planning currently have a wide coverage, severely affecting the policy capacity of a number of important OECD countries.

Consequently, the research agenda suggested above also has the potential to reach a wide international audience.

ACKNOWLEDGEMENTS

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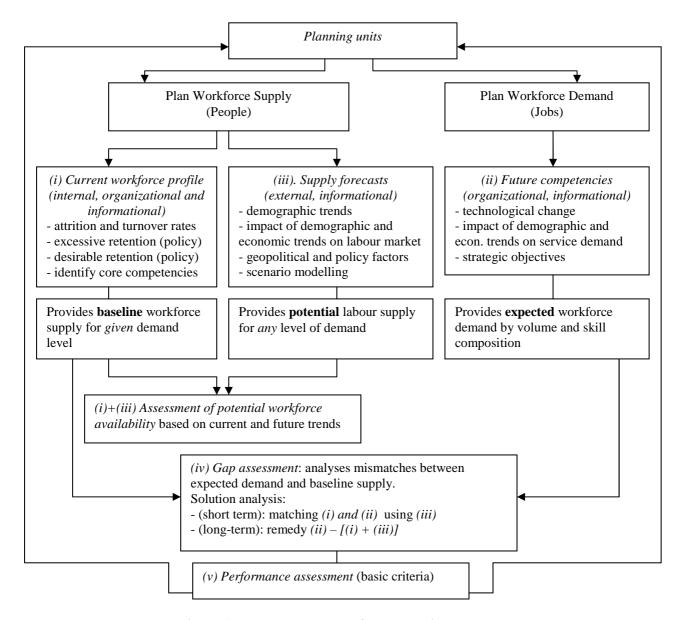
TABLES AND FIGURES

Figure 1. The complete workforce planning cycle