The Aging / Workforce Equation:

A Framework for Understanding the Impact of Global Aging on the Supply of Labor in the More Developed World

Prepared for the
United States Senate – Special Committee on Aging
February 27, 2003

Hudson Institute
Indianapolis, Indiana

Presented by Gary L. Geipel, Ph.D. [1]
Vice President and Chief Operating Officer

Introduction

The rapid aging of populations in the industrialized countries, and resulting population declines in many cases, will have a profound impact on the size, composition, and cost of the available labor force in the developed world during the coming decades. The precise implications of global aging for the workforce will vary widely between countries, regions, and specific industry clusters, however, due to a variety of important factors. As policymakers and business decision-makers alike begin to grapple with the impact of aging on the workforce, a simple framework can be helpful in envisioning both the magnitude of the challenge and the range of potential responses. This paper offers such a framework.

What might be called the Aging / Workforce Equation has four components. First, there is a set of general conditions and trends that together constitute the challenge of global aging as seen from the workforce perspective. Second, there are a number of current conditions that vary from country to country and region to region, which either exacerbate or mitigate the workforce challenge arising from global aging. Third, there is a set of policy levers that political and business leaders can manipulate to improve the ability of a particular country or sector to navigate the workforce challenge of global aging. Fourth, a small group of "wildcard" factors have the potential to significantly improve or worsen the assumed problems of aging on a global scale. A solid body of data collection and analysis has occurred to illuminate the various components of this equation, but policy researchers only are beginning to consider how the pieces fit together. Hudson Institute's forthcoming study, *Beyond Workforce 2020* (to be published in 2004) will examine the Aging / Workforce Equation in detail.

Figure 1: **The Aging / Workforce Equation**

Global Aging + Country/Region Factors + Policy Levers + Wildcards
= Workforce Outcomes

[1] Gary L. Geipel can be reached at Hudson Institute, 5395 Emerson Way, P.O. Box 26-919, Indianapolis, IN 46226; phone (317) 549-4105; fax (317) 545-9639; email gary@hudson.org

Part I of the Equation:
The Mega-Phenomenon of Global Aging and its Implications for the Workforce

The story here is becoming familiar. Contrary to widespread assumptions of only a few years ago, the rate of world population growth is slowing markedly, and total world population now is expected to peak between 2040 and 2050 at between 8 and 9 billion persons before beginning to decline. Of course, many countries in the developed world already have reached the peak of this curve and are beginning to "depopulate." One quarter of the 211 designated regions making up the European Union now have declining populations and Europe as a whole will experience increasing *negative* rates of population change from now through at least mid-century according to United Nations (UN) projections.[2] Logically in this situation, the only age cohorts that will grow in size in the depopulating countries during the coming decades are the older cohorts, consisting of people who have left or soon will leave the active workforce (see Table 1 in the Appendix).

At least seven general implications for the workforce can be assumed to result from the aging of indigenous populations across most of the developed world. Some of these remain hypotheses, though the evidence for them is mounting:

a) **"Domestic supplies" of labor will decline** in many developed countries or grow at very small rates compared with previous decades (see Table 2 in the Appendix).

b) **Aging will exert a "double whammy" effect on supplies of high-skilled workers** – removing large numbers of the most experienced workers from labor force due to retirement and death, even as the cohort of young and freshly minted university graduates declines due to low birth rates.

c) As a result, **the global "Battle for Talent" will intensify**. Regions within countries will battle for dwindling supplies of indigenous high-skilled labor while a blistering seller's market will prevail globally for the talents of high-skilled workers willing to emigrate to other countries.

d) Aging will exert **another kind of "double whammy" effect on indigenous supplies of low-skilled workers**. An increasing wage premium for skilled work can be expected to lure a larger share of a shrinking pool of younger workers away from low-skilled service jobs, even as the demand for low-skilled service workers exerted by the elderly (in the entertainment, travel, nursing home, and personal-services industries, for example) increases along with their share of the population.

e) Medium- and large-sized manufacturing and services firms in the developed world can be expected to **accelerate the trend of locating/relocating labor-intensive operations in countries where labor shortages are less severe**. (Note

[2] See http://www.un.org/esa/population/publications/worldageing19502050

that not a single new automobile assembly plant has opened in Germany or Japan in the last decade.)

f) An intense Battle for Talent can be expected to exert steady upward pressure on the costs of high-skilled labor, including wages and competitive benefits packages. Increasing relocation trends (see point e) also should have the effect of reducing wage/benefits differentials between developed and developing countries (or, more precisely, between the rapidly aging and more slowly aging countries). What might be summed up as **the "Globalization of Human Resources" will continue apace in the early 21st Century**.

g) **Efforts to substitute capital/technology for labor in the larger economic-growth equation will intensify**, but the large-scale success of such efforts will depend on one or more revolutionary technology breakthroughs of a labor-saving character. While such breakthroughs are possible, they cannot be considered certain (see Wildcards).

Part II of the Equation:
National/Regional Factors

The consequences of global aging for labor supplies and costs will vary widely from country to country and region to region. Indeed, the differences are likely to be profound. By understanding such differences, we can begin to project the most severe workforce trouble spots in the developed world.

With regard to the workforce challenge of global aging, eight sets of national and regional differences are particularly significant at the present time. (It is worth reiterating that these peculiarities reflect *current conditions* and are in most cases not beyond the influence of policy levers to be discussed later.)

a) The most basic difference between countries has to do with the severity of the aging phenomenon as a result of existing demographics. **Some developed countries – especially Australia and the U.S. – will not age as rapidly due to higher birth rates**, attributable in part to existing immigrants. (The *Aging Vulnerability Index* produced by the CSIS Global Aging Initiative provides a valuable service by analyzing and ranking the developed countries based on current demographics and a variety of fiscal and political factors.[3])

b) Attractiveness to immigration clearly is another major distinguishing factor between countries. **Countries able to attract and retain large numbers of young immigrants fare better in the Battle for Talent**. The immigration-policy competition of recent years – with the proliferation of H1B-type programs in most of the developed countries – is but one element of this attractiveness. Arguably more important are a country's cultural tolerance of immigration, the existence and adequacy of institutions designed to assimilate immigrants, and the presence

[3] See http://www.csis.org/gai/aging_index.pdf

of existing immigrant communities that act as magnets to potential new arrivals. The "Anglosphere" countries of Australia, Britain, Canada, and the U.S. fare best in current international comparisons of attractiveness to immigrants. Japan, with its strong cultural hostility to immigrants, is at the opposite end of the spectrum, and the continental European nations fall in between.

c) Other factors under the heading of "success breeds success" also influence the relative talent pull of countries – or indeed regions within countries. Cities or regions with natural advantages attributable to climate, recreation, cultural diversity, and an existing youthful demography do better, particularly in the competition for skilled workers.[4] In this way, **workforce competition actually may exacerbate demographic differences between countries and regions, as "young and educated" attracts "young and educated" in the most economically successful regions while other regions bring together aging natives and low-skilled immigrants in an uneasy mix**. Already, one of the most disturbing statistics in European eyes must surely be the fact that France and Germany consistently rank among the top five countries supplying H1B visa recipients to the United States. Though they live in countries crying out for skilled workers, many young Europeans still seek to attach themselves to the Silicon Valleys of the U.S.

d) The relative attractiveness and magnetism of higher education systems deserves separate attention in this calculus. **Countries able to attract students in pursuit of their terminal degrees have a built-in advantage in the Battle for Talent** resulting from immigration. Simply put, if students come to a place because of its university, then they are more likely to become attached to the place and to remain after their studies conclude. This factor currently bestows a great advantage on the U.S., with its highly sought-after degree programs and ethnically diverse institutions of higher learning.

e) Anecdotal evidence suggests that **attitudes about retirement still vary widely between cultures and countries**, making it more acceptable for aging workers in some places to remain in the workforce. The 80-year-old WalMart greeter, for example, is a peculiarly American phenomenon. In continental Europe, meanwhile, even highly educated professional people appear to be much more focused on accelerating their retirements than on finding ways to extend their working lives.

f) Similarly, **the size and cultural acceptance of a country's voluntary sector or "civil society" can mitigate the negative consequences of an aging and shrinking workforce**. Large numbers of older volunteers engaged in social-service delivery and/or willing to make large private donations of time and treasure to the betterment of a community cannot but help to offset the workforce

[4] Recent research on the links between economic development and qualities of place includes Richard Florida, *The Rise of the Creative Class* (Basic Books, 2002).

shortfalls otherwise imposed by a large cohort of elderly, non-contributing "dependents." Again, the U.S. currently fares well in such civil society measures.

g) Putting ongoing cultural differences about retirement aside, the sheer prevalence of the so-called "knowledge economy" in a given country or region also eases the impact of an aging workforce. This is because aging – short of senility – create no barriers to employment in jobs that depend on brains rather than brawn. Indeed, a 70-year-old who has kept up her skills and "seen it all and done it all" may prove considerably more valuable in a knowledge firm than a 25-year-old with no practical experience. **The bottom line: Age does not necessarily correlate with declining productivity in a knowledge economy.**

h) It is a reasonable hypothesis that **countries, regions, and some industry sectors can ease the negative aging / workforce effects through superior application of network-enabling technologies**. The most well-known current examples of a networked workforce are the growing cadres of customer-service agents and low-end programmers/software developers in India, linked to their U.S. client/parent firms by sophisticated telephony and high-speed Internet connections. Such arrangements allow firms to tap distant, well-educated workers without requiring their emigration to another country – but the relevance, practicality, and quality of execution of networked workforces vary widely from industry to industry and country to country. Barring additional technology breakthroughs, they are unlikely to serve as a large-scale panacea.

Part III of the Equation:
Policy Levers

It has been said that "demography is destiny," and indeed there has been a tendency for policymakers to adopt fatalistic attitudes, defer responses to another generation, or otherwise shrink from efforts to accommodate or to overcome demographic trends. With regard to its fiscal and entitlement implications, the political risks of responding to global aging are indeed large. The options may be more palatable with regard to the workforce issues raised by global aging, however.

Policy – defined here to include public and private strategies – can ease the negative implications of global aging on the workforce in at least six areas.

a) The reduction or removal of financial incentives for complete disengagement from the workforce on the part of older adults constitutes a board category of important policy responses. **The countries and firms that overcome or profit from an aging workforce will be those that succeed in blurring what still remains a rigid dividing line between "work" and "retirement,"** generally centered on the magic age of 65. Examples include eliminating "use or lose it" retirement benefits, not denying certain benefits (e.g. private health insurance) to people who remain employed past "retirement age," using tax-code changes to

encourage (or at least not to discourage) older adults to remain in the labor force, and creating more flexible part-time employment arrangements.

b) Another broad category of policy levers fall under the heading of education or "lifelong learning." **Real or perceived biases against the training of older workers must be removed**, if an aging workforce is to remain current in its knowledge and skills up to, and beyond, the age of 65. Countries and regions are likely to be best served *not* by a proliferation of programs designed specifically for older adults but by more sophisticated strategies recognizing that in a knowledge economy, education must be a constant and truly lifelong undertaking. Policies and programs that make it easier for a 40-year-old worker to retrain or to gain new skills are in most cases the same policies and programs that will benefit a 60-year-old worker. Enlightened public and private policy, then, will focus on the design of new curriculum, delivery, and education-finance strategies for *all* adults – while making sure that older adults face no discrimination or discouragement in taking advantage of these lifelong-learning opportunities.

c) Health-care policy also has a large role to play in the Aging / Workforce Equation. Rates of disability among older Americans already have fallen substantially in recent years – dropping 1.6% per year from 1989 to 1994 and 2.6% per year from 1994 to 1999 – with the remarkable result that were fewer disabled Americans (about 7 million) in 1999 than there were 17 years ago, even though the number of older adults in American increased greatly during that same period.[5] **Health-care strategies aimed squarely at preventing the debilitating illnesses of "old age" will – in an aging workforce – pay disproportionate dividends in the number of people who still "feel like working" into their 70s or even 80s.** Case-management techniques and other "outcomes-based" health-care approaches now gaining currency in the medical and private-insurance sectors show early promise of reducing long-term disability even further – while at the same time easing the financial burden of treating conditions previously allowed to arise or to become chronic in older adults.

d) Immigration policy clearly will become an even more competitive arena between countries in the Battle for Talent. **Strategies that most efficiently link the workforce needs of a particular economy to the "recruitment" of matching immigrants will give successful countries an edge**, as their existing population grows older. This implies the refinement of H1B-type visa policies and a more strategic approach to immigration policy in general.

e) Policies designed to increase workforce participation by women are of less relevance to the U.S. but potentially great significance to other aging countries – in which larger numbers of women either never enter the workforce or end their working lives even earlier than men. Labor-force participation rates among women are at least 10 points lower in Europe and Japan than in the U.S.

---

[5] See National Institutes of Health, "Dramatic Decline in Disability Continues for Older Americans" (May 7, 2001), www.nia.nih.gov/news/pr/2001/0507.htm

f) Similarly, the European countries in particular can reap disproportionate benefit in the Aging / Workforce Equation with policies designed to change cultural attitudes surrounding the employment of older adults.

Part IV of the Equation:
Wildcards

At least four areas of unforeseeable change – wildcards – deserve special attention in understanding the potential impact of global aging on the workforce.

a) The precise course of medical research and its resulting breakthroughs cannot be completely foreseen. Some researchers now speak openly, however, about the prospect that **"hyper-aging" may become a reality in the lifetimes of many people already born**. The potential products of research into the human genome, nano-technology, and the causes and treatment of cancer and heart disease – among other fields – could extend the *average* human lifespan by decades. If we find ourselves in a world where 65 truly is "middle age," then every global-aging calculation will be re-written – certainly including dire predictions of worker shortages.

b) Similarly, other technology revolutions as yet unforeseen may alter the requirements of human labor. One might speculate, for example, on the marriage of artificial-intelligence and robotics breakthroughs. **If revolutionary advances permit enormous productivity gains, then the traditional contributions of "labor" to the macroeconomic output equation might diminish in importance** – easing the dilemmas posed by an aging workforce.

c) Not every wildcard moves the equation in a positive direction, however. The projected aging of the population in the developed world and the slowing of population growth in the world as a whole are the result of human choices. A horrible "wildcard scenario" arises, however, if additional declines in the world's population occur as a result of factors outside human control. The AIDS epidemic in Africa already qualifies as such a calamity, and other **unforeseen outbreaks of incurable diseases could reduce the world's supply of potential workers** even further.

d) Finally, the threat posed by terrorism is not irrelevant here. **One or more additional terror attacks of the magnitude of 9-11 could lead to visa restrictions and border controls that end the "Globalization of Human Resources"** on which the more positive Aging / Workforce scenarios depend.

Appendix

Table 1: Population Change by Age Group, 2000-2030

Age ▸	0-25	25-64	65+	Total
Canada	1.7%	11.9%	122.7%	22.6%
France	-7.5	-1.3	58.0	6.2
Germany	-24.5	-15.1	60.0	-5.3
Italy	-31.8	-19.0	39.5	-11.7
Japan	-26.5	-15.8	66.4	-4.6
UK	-14.8	-8.7	78.3	3.2
USA	9.7	18.9	107.9	26.6

Source: UN data (2001), assembled by CSIS Global Aging Initiative.

Table 2: Labor Supply Growth Rates

	1960s	1970s	1980s	1990s	2000s
Australia	2.49%	1.96%	2.32%	1.34%	0.88%
Canada	2.66	3.60	1.75	1.17	0.73
France	0.94	0.93	0.57	0.57	0.10
Germany	0.15	0.43	0.86	0.69	-0.12
Italy	-0.52	0.84	0.52	0.10	-0.43
Japan	1.34	0.92	1.23	0.58	-0.26
UK	0.07	0.57	0.68	0.28	0.25
USA	1.74	2.60	1.64	1.13	0.97

Source: “The Decade of the Employee,” Watson Wyatt Worldwide (15 November 2002).