

# INTER-GENERATIONAL FAIRNESS: FOOL'S GOLD?

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## Abstract

Inter-generational fairness is quickly becoming one of the most high-profile rallying cries against increases to tax rates or user fees despite the significant infrastructure funding required for the present and the future. It is a highly emotional issue that often trumps other aspects of the debate and this can lead to paralysis by analysis or overly influence development of appropriate public policies while infrastructure continues to crumble around us. There is no easy way to deal with the significant financial deficit and asset backlog since they both belong to a number of generations. Is inter-generational fairness possible to achieve? This is a multi-dimensional problem requiring a multi-dimensional solution. Understanding those various dimensions and possible options and communicating them clearly and successfully to an increasingly sceptical and tax-weary public is essential for community decisions to be made. This is even more important in terms of the baby-boomer generation, which is on the cusp of retirement and fixed incomes, and is most inclined to wave the banner of inter-generational fairness and little or no tax increases.

**Key Words:** inter-generational, fairness, asset, management, financial, backlog, deficit, social policy, infrastructure, outcomes

## Introduction

This conference's focus on current and future infrastructure challenges brings with it difficult discussions in terms of developing social policies that are fair, both financially and in terms of service levels. The goal is to move forward with a clear vision of what needs to be done and a clear plan to accomplish it. The first step is to understand the basic issues and associated variables. This paper will hopefully assist managers in starting that discussion within their community.

## Essential Element: Social Policy

There are many professions involved in developing and managing infrastructure: engineers draft technical policies, planners draft planning policies, accountants draft financial policies, and so on. However, social policy does not belong to any specific profession and yet it is the cornerstone of any service delivery. It is essential to developing asset management policies that are fair to several generations. But this need is often understated—if it is recognized at all—until the asset is built or, worse yet, needs to be replaced.

This is particularly true for assets that provide what is commonly referred to as “soft” services, such as community halls, libraries, parks and recreational facilities, public

housing and long-term care facilities for seniors. In most cases, administrators in these areas are experts at and focused on service delivery rather than the management of the hard asset (e.g. buildings) that allow them to provide the service. For purposes of illustrating basic principles, this paper will focus in particular on long-term care facilities for seniors. The basic principles however apply to any other service (read: asset) that a community wishes to receive, from urban forestry to recreational facilities to roads and water/sewer pipes.

Inter-generational fairness is an emotional issue. It comes up every time government wishes to deal with the backlog in infrastructure funding since that funding must come from somewhere and someone...and there is only the taxpayer! This usually leads to paralysis by analysis with few substantive policy decisions being made while infrastructure continues to crumble exponentially faster. Meanwhile, services are expanded in other areas with debt being foisted on future generations.

What does social equity and inter-generational fairness mean anyway? Is it, and should it, be measured on a financial basis, an asset per capita basis, an asset per client basis, or all of the above? In other words, does it come down to the community

or the individual? Are services offered on a universal basis, or are they limited? If they are limited, how do we decide who gets what and who pays for it? Should revenues be strictly user-based, or is the "public good" taken into account and if so how? Ahhh, things get so complicated when you move away from the hard asset that we are trained so well to manage and for which formulae exist. Complications arise when we bring the human element or the beneficiary of those services into the discussion.

### Past, Present and Future: all Fair?

Was the past fair? One could argue that it was since government services were not as extensive and debt levels were limited. However, this changed in the 50's and 60's as a result of significant population growth, as well as an expansion of public and community services.

Is the present fair? It can be difficult to argue that the present is fair when we consider that we face a significant backlog as a result of underfunding, as well as significant increases in debt levels to be repaid by future generations.

Will the future be fair? Only if the right social policies are successfully developed and implemented. Community expectations need to be managed and better balanced between services provided and revenues. These expectations have to be combined with a clear and firm plan on how to deal with the existing backlog, for which the responsibility lies with a number of generations. There is also a need to recognize that the current situation is not so much an issue of inter-generational fairness as it is a result of past and current public policies and practices. Assigning blame serves no purpose. However, it is paramount to change those policies and practices so that the conditions that led to today's problems are not repeated. The boomer generation, as well as every generation that followed, have generally been underpaying for services received. As a result, society is at a crossroads, where changes and tough decisions need to be made.

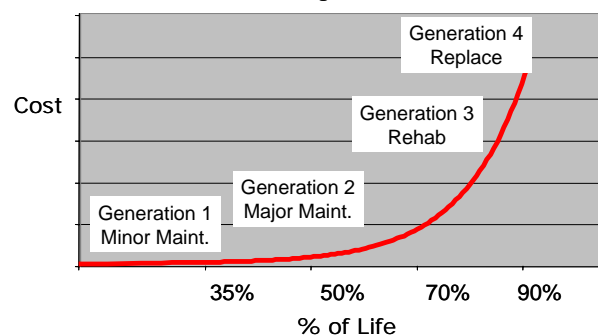
### Basic Principles

For simplicity's sake, a 25-year timeframe was used as a generic definition of what constitutes a generation. Most infrastructure

lasts for 2 – 4 generations, or 50 – 100 years. In reality, the actual services that these assets provide often extend beyond the life of the hard assets and even increase over time through a culture of entitlement.

Figure 1 illustrates a generic representation of increasing costs over time for a typical asset with a 100-year life span. Generation 4 faces the highest costs of all to maintain service levels, and eventually has to replace the asset. By contrast, Generation 1 may have built the asset, but it has only minor maintenance to contend with. In other words, each succeeding generation faces exponentially higher costs as the asset ages. In this way, each generation takes care of its own costs but this does not address the issue of fairness between generations, since they all benefit from these services, at least at the community level.

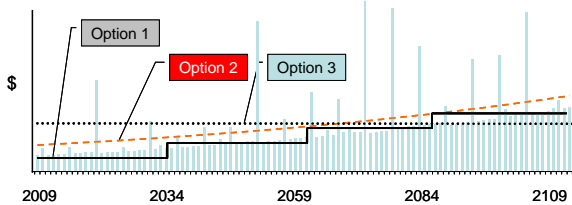
Figure 1



Even if the basis for inter-generational fairness were limited to cost per capita, there would still be complexities to deal with, as Figure 2 illustrates. Figure 2 is based on a 100-year asset. Option 1 shows every generation taking care of its own costs, with significant stepped increases as deterioration occurs. There is no inter-generational fairness under this option. Option 3 simply averages costs and spreads them out evenly over 100 years. This assigns an unfair load in the early stages because consumers are asked to pay too much, and great financial benefits in the late stages because consumers do not pay enough. It could be argued that this option is also unfair since proportionally fewer people pay the initial amount. Assuming that population increases in the community over time, cost per capita decreases over time. Option 2, on the other hand, illustrates the results of a public policy that closes the funding gap by imposing pre-committed annual increases to base

revenues that are proportional to population increases. The result is that cost per capita remains the same over time without the stepped increases in Option 1.

Figure 2

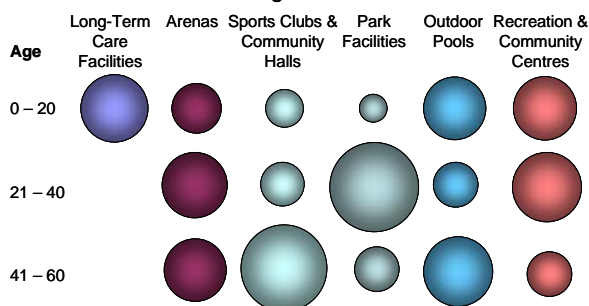


### The Challenge: Uneven Asset Bubbles

It would appear that Option 2 in Figure 2 is close to the ideal option. However, it does not take into account the importance of assets in a community and their contribution to the public good. It also does not take into account the sources of those revenues, which may consist of user fees, general taxes, or a combination of both. Furthermore, services, along with the relevant assets to support them, are always in a dynamic state. They may change over time as a result of legislation, new demands or changing expectations. It is also quite difficult to look at an asset in a vacuum, without considering the system as a whole or the community as an integration of many assets.

Even if we were to try to break down assets on a generational basis in order to try to apportion costs to that generation, we run into significant problems since the amount of infrastructure varies considerably from one generation to the next. This is illustrated in Figure 3 for a number of community assets in the Hamilton report<sup>1</sup>.

Figure 3



Another source of complexity is that the benefits accrue from one generation to the next, with no corresponding change to the amount that is paid for these benefits.

### Example: Long-Term Care Facilities

A 2009 State of Infrastructure Report for Community Facilities for the City of Hamilton, Ontario, Canada<sup>1</sup> illustrates some of these challenges very clearly. The City of Hamilton operates two long-term care facilities for seniors, while other similar facilities are run by the private sector. The facilities are generally in very good condition, having been renovated and expanded over the last few years. Long-term care facilities provide numerous vital services and programs, including nursing and personal care on a 24-hour basis, administration of medication, complete meal services, and assistance with daily living activities to the city's senior citizens and other individuals who are unable to take care of themselves. All long-term care facilities are licensed by the Province of Ontario Ministry of Health and Long-Term Care. Revenues partly come from the province of Ontario and the residents themselves, with local taxpayers picking up the difference through their annual tax bill.

This paper is limited to presenting the part of the report that deals with the challenges of establishing a level of service in the future that is "fair" to the community and to the residents. Other aspects of the report, such as sustainable funding levels and debt management, are excluded for the sake of brevity. The following discussion illustrates the challenges communities will face in trying to define inter-generational fairness while looking to the future.

Level of service (LOS) can be measured using at least three different standards. It can be absolute, meaning that the number of long-term care beds the city provides does not change regardless of the demand. This is referred to as the status quo option. LOS can also be measured relative to the general population, wherein the number of beds per capita remains the same. This is referred to as the population-based option. The third option calls for the number of available beds to be based on the current ratio of number of seniors receiving the service to the current number of seniors living in the city. It is referred to as the demographic-based option. Deciding which metrics to use to determine the level of service is as important as determining the level of service itself.

Based on national statistics and other technical studies, it is projected that the number of seniors requiring assistance will grow at a faster rate than the city's overall population over the next 30 years. The senior population will then decrease over the next 20 years, before stabilizing for the following 50 years to follow the general growth in population. The study period was for 100 years, or from 2008 to 2108. For the sake of simplicity and to ensure basic understanding of the underlying principles, costs were not inflated.

Three Level of Service (LOS) options were considered within the analysis: status quo, population-based and demographic-based. The results were quite interesting in that they illustrate the difficulties and complexities in making these types of decisions.

#### Status Quo LOS:

Under first LOS option, the number of long-term care beds presently available will remain unchanged over the next 100 years. The facilities themselves will not be expanded and no new facilities will be added to the existing inventory. This scenario would be adequate to maintain the existing level of service so long as the population of the city remains static. However, it is expected that the city's population will increase over time. The city currently has eight beds per 10,000 residents. By 2034, the number of beds per 10,000 residents would shrink to six, as a result of the increase in the general population. Eventually, by 2108, there would only be three beds per 10,000 residents. Since the number of beds does not increase while population does, the cost per capita for the service would shrink since it is spread out over a larger population. For example, the cost per capita in 2009 is \$2.37; if the number of beds was kept the same, the cost would drop to \$1.82 by 2034 and to only \$0.83 by 2108. The cost per capita and level of service decreases at the same rate if the city maintains the status quo. Put another way, each Hamilton resident pays less for the service from year to year; however, their opportunity to access that service also decreases year after year. Is it fair that future generations pay less in the future than we currently do, and that fewer residents (proportionately) have access to that service?

#### Population-based LOS:

This second LOS option assumes that the demand is a constant as a percentage of the population growth in the city. Note that, as a result of the baby boomer generation, the overall rate of growth of the city is projected to be slower than the rate of growth in the number of seniors, at least in the next 25 years. This assumption therefore includes projections for an expansion of the facilities at the same rate of growth as the overall population. This means that the per capita cost of \$2.37 from 2009 would remain the same for the next 100 years when inflation is not taken into account—there would be more people to pay for more beds. This also means that the percentage of the population having access to the service also remains unchanged, i.e., the number of beds would remain at eight per 10,000 residents. This may be fair to the community at large, but is it fair to the growing population of seniors who also pay taxes and may be in need of the service?

#### Demographic-based LOS:

Long-term care facilities are unique when compared to most other community facilities in that they are generally utilized only by a limited group. Recent data from Statistics Canada confirm that demand for long-term care services within the segment of the population above the age of 75 is growing faster than the general population. Just as it does under the population-based demand model, the number of beds required also increases under the demographic-based demand model. However, it increases at a greater rate than general population growth until 2040, and it then shrinks for approximately 20 years before stabilizing to reflect the overall population growth in the community. Under this scenario, in all three eras, the number of beds required would change based on the number of seniors. This may be fair to the particular demographic group that needs access to the service, but is it fair to the community at large?

The difference between the three LOS models is shown in Figure 4. Recall that the status quo means that the number of beds does not change from its current figure; population-based LOS means the number of beds increases in direct proportionality to the overall growth of the community; and finally, demographic-based LOS means that the

number of beds required will increase at the same rate as the number of seniors does.

Figure 4

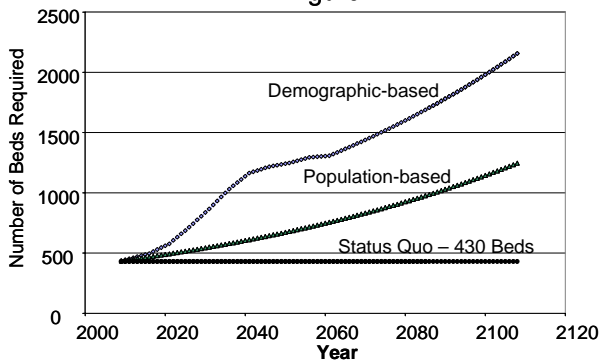
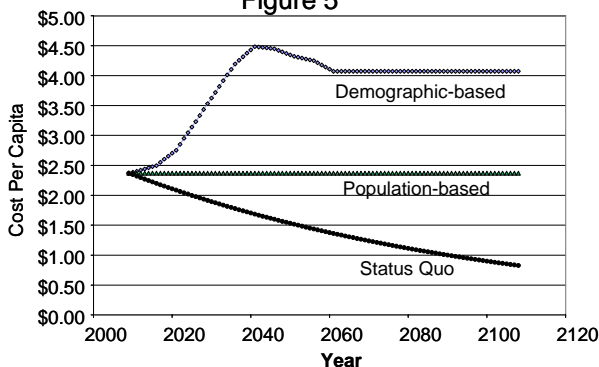


Figure 5 illustrates the cost per capita for each of the LOS scenarios.

Figure 5



Under the status quo option, the cost per capita decreases over time since a larger population is paying for a fixed number of beds. Under the population-based scenario, the cost per capita remains constant over time as the number of beds increases at the same rate as the population. And under the demographic-based scenario, demand for beds increases for the first 30 years as the population ages, resulting in a temporary increase to per capita costs. By then, the Baby Boomer bubble has worked its way through the system. In the following 20 years, the rate of growth of the general population is greater than the rate of growth of demand for long-term care, which explains decreased cost per capita. Beyond 2061, the cost per capita remains constant, as the demand for long-term care beds increases at the same rate as the general population growth.

### Conclusion

There are many other issues that need to be considered as part of this debate. Examples include dynamic demands, increasing demands, advancements in technology,

changing legislation, research and development, investing and building for growth, benefits to society and so on. All generations have gained from investments by past generations, and future generations will gain from current initiatives. Society as a whole and communities are better for it. In the end, inter-generational fairness may be impossible to achieve—in fact, it may even be unfair to try to achieve it. But that does not negate the urgent need for social policy. Infrastructure needs to be socially effective, hence the need for social policies. Social policies shift the focus from actual assets to people. This leads to the development of desired community outcomes, as opposed to the inputs and outputs that we are more familiar and comfortable with. The general lack of engagement in developing social policies surrounding asset management is quickly becoming an increasingly complex and urgent problem as more and more infrastructure must be replaced and/or improved in the coming decades. The shifting clientele only serves to further complicate the matter. The problem is that no solution is perfect. However, no dialogue means no debate, which in turn means no decisions are taken while the hourglass empties. Changing course is not an easy task to accomplish, since charting a new one belongs to no profession in particular. One profession needs to step forward; if it is not engineers, then who will it be? What is needed is engineering with both a conscience and a consciousness if we are to move towards lifecycle management and sustainable communities with desired outcomes.

### References

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### Author Biography



Léo Gohier received a Civil engineering degree from the University of Ottawa and a Public Administration degree from the University of Western Ontario. He has

a keen interest in social history and spent seven years working in the restoration of historic sites. This work experience was his introduction to the concepts of sustainability. He has spent the last 35 years working in the environmental field, both in the public and private sector. He has actively participated in the creation of concepts supporting integrated and sustainable asset management. He was on the original Steering Committee for the National Infrastructure Guide. In the last ten years, he has successfully developed and implemented a number of programs focussed on building a sustainable community. He can be reached at [leogohier@mountaincable.net](mailto:leogohier@mountaincable.net) or 23 San Marino Crescent, Hamilton, ON, Canada L9C 2B6.