

SOME NOTES ON THE ECONOMICS OF DISABILITY

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December 4, 2000
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Prepared for Disability and Law Conference, Canberra

Introduction

Current economic thinking is dominated by an ideology which sees markets as capable of solving solvable problems, and other problems as unsolvable by any other means. This circular thinking has hijacked the word “rational”. This use of the word rational reminds me of how, during the Cold War, one could predict that a state which called itself Democratic was less likely than any other to actually be “democratic”.

I want to discuss two practical issues which are very important to people with disabilities – the development of accommodative disability policies, and the development of an individualised disability allowance. My arguments are based on the “mixed economy” ideology which dominated Economics from the 1950s through to the 1980s.

Measuring the Benefits of Accommodative Disability Policies

Even “mixed economy” economists have traditionally seen disability issues in terms of welfare. As such, they have seen expenditure on “Disability” as a redistributive “cost” without any “benefits” other than the moral and spiritual value gained by donors for “doing good” and the aesthetic value gained by ensuring that people with disability are not forced to litter the footpaths as beggars. By ignoring benefits, there is never an “investment” perspective and it therefore never makes sense to make buildings or transport accessible; or to provide quality personal care; or to offer quality educational opportunities. It is always a cost and never an investment.

The lack of a proper benefits methodology was highlighted in two Regulatory Impact Statements which were completed four years ago to assess the Accessible Transport Standards¹ and accessibility-related changes to the Building Code of Australia². Both RISes were required to conduct cost-benefit analyses.

Given that the committee charged with making changes to the Building Code is made up principally of industry representatives and government officials, it should come as no surprise that there was a relatively well developed – and upwardly biased - methodology for measuring costs. With only two disability representatives on the committee - neither with any

¹ Commonwealth Attorney-General, *Regulation Impact Statement on Draft Disability Standards for Accessible Public Transport*, Canberra, 1998. ISBN 0 642 47113 4

² Australian Building Codes Board, *Regulatory Impact Statement for the amendment of the Building Code of Australia provisions for access and facilities for people with a disability*, Canberra, 1998

Economics training - it should come as no surprise that the benefits methodology was meaningless and in now way comparable to the costs.³

In the Building Code RIS, benefits were measured comparing the proportion of people with particular impairments who experienced access difficulties with the proportion who felt their difficulties would be decreased. While the benefits methodology for the Transport Standards RIS was not as crude as that for the Building Code RIS, it was a deficient profit-centre-oriented accountant's exercise rather than an infrastructure-oriented economists' exercise.

There are in fact at least two methodologies for measuring benefits which are well established in Economics and which should have been applied in those cases, and which are possibly useful at a more general level as well

Firstly, there is the well-established "opportunity cost" methodology. Simply put, people who are unemployed or underemployed are a wasted resource. They could be doing something productive which is of value to others – either in the market, or in the community. They might not be as productive as others for a host of reasons which will often have more to do with social, attitudinal, historical and physical barriers than with the impairment but even if they are less productive in every activity than other workers, this does not mean they are unproductive. One measure of the benefits of accommodative disability policies is therefore the potential production that is lost through unemployment and underemployment. In an economy increasingly dominated by intellectual production, this methodology suits people with physical disabilities while not suiting people with intellectual disabilities.

A second less well-developed but equally valid methodology is an "insurance" methodology. This methodology asks the following question. How much would an informed "economic wo/man" be willing to pay to guarantee that in the event that s/he (or a close family member or associate) were to acquire a disability, s/he would not have to face the adverse social and financial implications of having a disability? The question is similar to the question asked daily in insurance markets. How much would an informed wo/man be willing to pay to guarantee that in the event that her/his house burned down, s/he would not have to face the adverse financial implications of the fire.

Actuaries would have no conceptual problem with the latter question. They would multiply the probability of a fire with the expected loss and arrive at what technicians would call a "fair

³ For a full critique of both studies, see the two Physical Disability Council of NSW submissions, *Transport Regulations Impact Statement* and *Building Outcome & Regulations Impact Statement* on the PDCN Web site, www.pdcnsw.org.au/doc.htm

premium”. Salesmen would then add a distribution margin, actuaries would add a margin for their assessment of measurement errors, and the owners of capital would add a profit margin. The result would be the actual “market premium”.

Economists would consider these premiums legitimate additions to the National Product because the fact that the premiums are voluntarily and freely paid by consumers can be taken to imply that the premiums are at least equal to the value of service provided by the insurance. The service offered for the premium is the feeling of security provided to the consumer by her/his knowledge that in the event of a fire, s/he would face no financial disaster.

In theory, actuaries would have no more problem with estimating a premium for disability insurance than they would for the fire insurance. They would multiply the probability of a particular disability by the dollar value of the expected adverse effects associated with the disability, and they would add the results across all disabilities to derive a “fair premium”. There would be additions to account for risk measurement, marketing costs, risk-bearing etc.

The problem that arises for disabilities which is less problematical for fires is the difficulty or impossibility of objectively observing and verifying the likely adverse effects attributable to a disability. It is because of this difficulty or impossibility that there is no market for insuring against these adverse effects. Where the observation and verification is less problematical there are in fact markets which insure against the adverse effects of disability, but as verification and observation becomes more problematical, the market disappears. Thus for example, one can, if one is fully employed, insure against the loss of income in the event of a disability - up to a maximum period or maximum amount. The market disappears for long-term disability insurance where estimates of income loss begin to be less easily verifiable.

It is far more difficult to estimate the income loss of an unborn child. It is likewise far more difficult to measure the dollar value of non-financial adverse effects. Hence, no insurance. More on this below.

The fact that the market does not exist does not mean that citizens would not feel a greater sense of security for knowing that they or an associate – spouse, child, friend - would not need to face all the adverse effects of disability. The market vacuum does not mean that people would not be willing to pay for the security of knowing that adverse effects will be minimised if they make such a payment. The market vacuum does not mean that the total willingness to pay is less than the total cost of policies to offset adverse effects, and it does

not therefore mean that there is no benefit to be derived from accommodative policies. The market vacuum exists because potential suppliers do not have an observable and verifiable way of measuring or implementing true offsets to the adverse effects of disability. That there is no market merely means that people are deprived of a service for which they would be willing to pay. The traditional economic argument is that **where a market is missing because of asymmetric information, there is a role for government intervention**⁴. But that is traditional economics rather than “rationalist ideology”.

There is a long tradition in Applied Economic cost-benefit analysis of trying to estimate the amount that people would be willing to pay, but do not actually pay because there is no market. The estimates are known as “shadow prices” and they are considered estimates of the benefits of the service for people would be willing to pay. Roads, rail networks, dams and even military system choices have been made using “shadow price” estimates. The actual estimates are of course subject to debate in any practical situation, but that should come as no surprise since any organisational investment decision involves debate about the numbers, their meaning, and the extent to which they can be extrapolated into the future.

Of course not everyone is willing to pay for the security of knowing that adverse effects will be offset in the future if a premium is paid in the present. Some people would not pay because they are not risk averse and actually love risk. Others would not pay because they underestimate the probability of acquiring a disability and/or the dollar value of the adverse effects of a disability. Others would not pay because they couldn't afford to do so with their limited incomes.

Let me illustrate the above with a simplified numerical example. If wheelchair users make up 0.5 % of the population, then it is reasonable to estimate that a currently ambulant person will at some time in the future become a wheelchair user with a probability of 0.005. If the adverse effects in terms of income loss due to an inaccessible building and transport infrastructure were \$4,000 per year, then the amount that risk-averse individuals would be willing to pay to avoid the adverse effects of an inaccessible building and transport infrastructure would be at least \$20 per year i.e. 4,000 multiplied by 0.005. This would be the “fair” premium that risk-neutral fully informed consumers would be willing to pay for the sense of security gained from knowing that if they or an associate acquired a disability which made wheelchair usage essential, they would be able to frequent the same places that they were able to frequent before they acquired their disability.

⁴ Michael L. Katz and Harvey S. Rose, *Microeconomics*, Richard Irwin, 1991, Chapter 15, p. 606 ff.

Applying this premium to 20 million Australians, this means that the benefits of a fully accessible building and transport infrastructure would be about \$400 million per year. This compares more than favourably with the estimated annual cost of implementing the Transport Standards and changes in the Building Code.

A similar calculation can be made for people with intellectual disabilities or acquired brain injury. If there were a 1.5% probability of acquiring a brain injury or having an intellectual disability for which the annual adverse effects are \$20,000 per year, then the amount risk-averse individuals would be willing to pay to avoid these adverse effects would be \$300 per year⁵. Applied to 20 million Australians, this would mean that the benefits of a policy of accommodating the needs of people with intellectual disability or brain injury would be at least \$6,000 million per year.

This methodology crosses disabilities.

Measuring Adverse Effects

As alluded to earlier, the least complex measurable adverse effect of disability to an individual is income loss. For people who acquire a disability this is measurable immediately as they move from full-time employment participation to part-time employment or unemployment. For parents forced into unemployment or underemployment as a result of their child's disability, the estimate is more complex because changes in employment participation "might have" occurred even if the child did not have a disability. Similarly, in the long term, there "may have" been a change to part-time employment participation even for a person whose demographic suggests that most others in similar situations were employed full-time e.g. a 50-year old male. The effect becomes even more complex if one tries to anticipate what income "would otherwise have been" e.g. would the person have otherwise become CEO? For people born with disability and denied equality of educational opportunity, the measuring complexities multiply.

Also measurable, but even more complex is the additional costs attributable to disability. I don't have time to go into this fully today, but let me just point out that the traditional survey instrument which asks people to list their expenditures in order to find some sort of magic number across a wide range of people with a wide range of impairments is methodologically wrong – no - stupid. They are prone to both significant over-reporting and under-reporting errors, and they tell us more about a person's income than they do about a person's needs.

⁵ These estimates are for illustrative purposes only and are not actual estimates.

There is significant under-reporting because many of the additional costs due to disability are internalised. If you are a wheelchair user and rent a unit that is larger for turning circles and closer to amenities than would be the case if you were not a wheelchair user, then you will pay a premium for your housing which could be up to 10% of your rent. This sort of cost is attributable to disability but will hardly make it into any expenditure survey. If you think it is routine to pay a higher price for groceries at the local convenience store because you have less opportunity to get to the supermarket to take advantage of bargains, then you will not attribute the 15% higher price paid for groceries to your disability. If you think everyone makes phone calls to find out whether the place they are going to is accessible or not, then you will not think about attributing part of your phone costs to your disability.

If you have internalised that your time is worth nothing, or the survey instrument does not allow for the measurement of time costs, then all the time wasted in negotiating, waiting, arguing and advocating will not be measured as a cost attributable to disability. Nor will you attribute the lower income resulting from not being promoted as an additional cost attributable to your disability when the lack of promotion might be because you are seen as a “loner” because you never go to the inaccessible pub, or “unreliable” because of the unreliability of building and transport access, or because you are seen as “slow” because you do not have decent adaptive equipment at work.

There is also significant over-reporting because an accurate measure of the additional costs attributable to disability necessarily involves calculating the difference between an observable actual expenditures and a hypothetical estimate of the expenditure that “would have been” in the absence of a disability. By way of illustration, let me take the example of a wheelchair user who is dependent on taxis. The additional cost attributable to disability is the difference between the fare and either what it would have cost to run a car or what it would have cost to use public transport. While probability models can be used to inform the estimated additional cost due to disability, it is clear that an expenditure survey will not do so, and that using the total taxi fare involves an upward bias. There may be similar potential over-reporting errors for lawn-mowing services, computers, and a host of other goods and services which are consumed generally for non-disability purposes by most people but may be absolutely essential for some people with disabilities.

Finally, expenditures surveys are significantly biased downward by the fact that they are based on incomes which are themselves lower than what they would have been had there been no disability. A recent Department of Family and Community Services survey sought to find

out the additional costs due to disability by surveying 1,000 DSP recipients. Is it any surprise that the additional costs were found to be low when the recipients only had \$10,000.

Expenditure surveys are not only methodologically hopeless but they are also biased against people with disabilities and tell us nothing at all about needs.

The other non-monetary adverse effects - the loss of opportunity to participate in the social and recreational activities of the community – are even more difficult to measure, and even if measurable, are even more difficult to verify and validate in individual circumstances.

Where to?

The insurance methodology is a valid methodology for measuring the benefits of accommodative disability policy. The methodology cuts across all disabilities because every individual has a finite probability of themselves acquiring or having an associate acquire any type of disability and of subsequently facing an adverse effect as a result of that disability. It is relevant to the whole population because most people would be willing to pay something to avoid the adverse effects of a disability. Finally, by measuring the benefits of accommodative policy, such policies become potential investments rather than cost sinks and thereby changes the disability policy language from a charity framework to an investment framework.

The actual measurement exercise is not simple, but measurement exercises are never simple, and they always involves guesswork, assumptions and models. Where benefits are greater than costs, there may be a case for some sort of government intervention to offset the adverse effects of disability. The interventions will vary from the development of building and transport standards, housing and accommodation supports, wage and equipment subsidies, and an individual disability allowance. The government intervention is required because a market cannot exist where information about the nature of demand is not readily observable and verifiable. Unfortunately government intervention does not sit well with the currently dominant political culture.

One of the government interventions high on the agendas of all peak disability groups as well as the government is the nature of the income support allowances for people with disabilities. Peak disability groups are calling for an individualised disability allowance to replace the current Disability Support Pension which take a one-size fits all approach and does not allow for any of the additional costs attributable to disability. I have outlined some of the difficulties involved with the survey methodology traditionally used to develop the number which might determine the parameters of such an allowance. I hope that I have shown that the traditional

expenditure survey methodologies are useless. A more useful methodology is that developed by the UNSW Social Policy and Research Centre's Budget Studies, which develops needs-based numbers as developed by consumer focus-groups and professionals.

Income Loss

There are a number of sources of income loss to a person with a disability and/or their family and each of these sources of income loss has a different policy implication, but I don't have time here to go into this now.

Firstly, income loss may be due to labour market discrimination which results in unemployment or lower income than would be the case if there was no discrimination.

Income loss may be due to lower productivity which results from an inadequate social infrastructure. This means that you get to work late (and develop a bad reputation and work less than your colleagues) because of unreliable taxis and inaccessible public transport; you can't network and communicate seamlessly with work colleagues and clients (and therefore are less likely to get promotions) because of inaccessible building design; you spend time negotiating and planning access, transport, carers instead of working etc..

Income loss may be due to lower productivity resulting from factors associated with a person's impairment. The lower productivity may be due to the impairment itself, or it may be due to the cost of aids and equipment and personal supports required to ensure the same level of production as other workers. This lower productivity will be passed on to the worker by one means or another which leads to lower income.

Finally, income loss may be due to the inadequacy of home supports which force family members to act as "carers" where they could otherwise be earning income in the labour market. This is particularly pertinent to parents of children with disabilities, spouses, and parents of adults with some disabilities.

I want to expand on the second point. When you are kept waiting for a taxi, or you have to go the long way round to get into a building, or you have to waste time arguing and managing access, you are losing time. There is a long tradition in economic cost-benefit analysis of valuing time. This is not surprising given that the capitalist system is essentially based on valuing of time. This is an area which is unexplored with respect to people with disability, but let me just say that highways and rail systems are built using an equation where "wasted" time is measured as a benefit at half the wage rate.

This “wasted time” is ignored in cost of disability surveys to the peril of people with disabilities for it implies that the value of time is zero. By measuring the value of wasted time at zero, any cost-benefit study for creating access will underestimate the benefits of creating access. This in turn leads to less access than otherwise would be the case. This in turn reduces employment opportunities and thus confirms the initial implied assumption of time being valueless wages are be zero. The argument is circular.

BIOGRAPHY

Dr. Jack Frisch is currently a full time volunteer disability advocate who sometimes gets paid for his “troubles”. He is currently completing work commissioned by the Physical Disability of Australia on the additional costs of living and employment participation for people with physical disabilities. He occasionally represents the Physical Disability Council of NSW and/or Australia and the National Caucus of Disability Consumer Organisations on government taskforces and reference committees.

Dr. Frisch has a Ph.D. in Economics from Princeton University. He has been a lecturer in the Department of Economics at UNSW and at the Australian Graduate School of Management, and he has worked in finance and consulting in Australia’s banking sector.