

Economic Incentives of a Non-handicapping Built Environment (Case study: Tourism sites)

Yahya Muhammed Bah¹

Abstract

More than 10% of the world population comprises persons with disabilities as a result of mental, physical or sensory impairment. Nevertheless, they are legally entitled to the same rights and obligations as all other human beings. However, too often their lives are handicapped by physical and social barriers that hamper their active and full participation. Because of this, thousands of them in all parts of the globe often face a life that is segregated and debased. The ultimate responsibilities of remedying the conditions that led to their impairment and dealing with the consequences of disabilities rest with the national governments. In spite of this, it doesn't deprive individuals of contributing their quota to national development. In a bid to look at disabilities and related matters from the social perspective – the traditional approach- the study was undertaken to examine the economic benefits of making the built environment accessible to persons with disabilities by focusing on the tourist industry. It concentrated on sites within Stockholm and its environs.

The major tasks of the study were to:

- 1. Examine how the business community views persons with disabilities,*
- 2. Investigate awareness among decision-makers of the market potential of persons with disabilities,*
- 3. Examine the strategies of integrating them into the overall market mix and why,*
- 4. Identify some profit indicators and constraints posing as major hindrances.*

The major findings are:

There is a high level of awareness of the potential market of persons with disabilities and those who have decided to seize the opportunities are reaping the financial rewards as manifested by an increase in accessible rooms, a high-rate occupancy, and the reasonable impact the accessible rooms have on the overall occupancy rate. The major constraints are lack of experts and awareness.

Key Words: persons with disabilities non-handicapping, built environment, accessibility, disability, universal design, and conventional design.

¹University of The Gambia, School of Arts and Sciences, Brikama Campus, The Gambia, West Africa.
yahyamuhammed@yahoo.co.uk

Introduction

Tourism is a rapidly growing industry. Looking at the worldwide picture, tourism nowadays is one of the biggest industries on the planet with international tourism receipts of 27 billion and 130 billion British pounds a year in Europe worldwide respectively. The worldwide growth, representing 12% per annum, over the last ten years, and the competition for this valuable growth market is increasingly demanding across all international frontiers (World Summit on Sustainable Development 2002, Johannesburg, South Africa).

Tourists today are not content with staying within the confines of a resort hotel compound, being bused to individual sites and entertained in places that mainly cater for tourists. Instead, they are increasingly interested in experiencing the diversity of the holiday environment in all its aspects, including its people, culture, architecture, nature and way of life. This trend will be even more marked as consumers become more informed about the options and entitlements, and more sophisticated and less willing to accept poor-quality facilities and services that entail discomfort and stress. Tourists want access to everything that a city or a country has to offer.

The natural and cultural heritage is a material and spiritual resource, providing a narrative of historical development. It has an important role in modern life and should be made physically, intellectually, and/or emotionally accessible to the public. Therefore, at a broader level, the natural and cultural heritage belongs to all. Persons with disabilities and older persons are a growing group of consumers of travel, sports, and other leisure-oriented products and services. However, for the tourist industry to fully tap this growing market, accessible transportation, resorts, museums, restaurants, shops, hotels, etc. are very important. With regard to physical access, families with young children, who are also becoming part of this increasing tourist market, have similar needs like those of persons with disabilities and elderly persons.

Prevalence of Disability

There are relatively few censuses, surveys, and registration sources of information on disability, especially in developing countries, and conceptual and definitional problems abound. However, several attempts have been made to find out roughly how many people in the world are persons with disabilities, what the main causes are and how the disabilities encountered in different countries and regions affect the quality of life.

In 1981 the World Health Organization (WHO) noted that it was impossible to estimate the number of persons with disabilities. A more accurate than 10 per cent of the total population (WHO, 1981) and the WHO range of 7-10 per cent has often been cited. A higher estimated figure is sometimes used when minor disabilities are included. In the developed world, it is estimated that one out of ten citizens has a disability.

Statement of the problem

New environments generally handicap all travellers who move out of their familiar surroundings, despite the exciting aspects. Persons with disability have a right and want to enjoy travel and leisure experiences. Tourism is a means of broadening people's horizons and developing friendships for social groups, which is increasingly less willing to remain segregated from mainstream society. Furthermore, as more and more people acquire disabilities, they too wish to enjoy travel just like everyone else. However, their travel experiences are still characterized by transportation constraints, inaccessible accommodation within tourism sites, and inadequate customer services.

Transportation

Wheelchair travelers often face difficulties in boarding and disembarking from the aircraft, changing flights, and accessing aircraft restrooms. For visually-impaired persons, identifying and retrieving luggage becomes an additional obstacle in the course of their already difficult journey. The pain of long-haul travel in an economy-class seat for someone with stiff limbs or arthritis, the sheer size of modern airports for those with mobility problems and endless planning for all are some of the challenges still facing travellers with disabilities. Many travelers negotiate the structural constraints associated with air travel by using other modes of transportation (e.g. cars, buses, and trains).

Private cars equipped with customized features have the advantage of providing schedule flexibility if used for pleasure travel. However, only a small group of affluent persons with disabilities can afford such cars. These buses have a floor of some 50cm above street level, and feature a hydraulic "kneeling" function, which reduces the step to some 25cm. However, in most developing countries, the availability of such specially designed buses remains limited.

While trains could better accommodate the travel needs of persons with disabilities, in many cases the gap between the door and platform is too wide; access to toilets and compartments is a big constraint, especially for persons with physical disabilities and wheel chair users.

Accommodation

Access through hotels is also problematic. Few hotels have lifts to all floors on slow timers, easy access to reception, pool and bar areas, clear signage, visual alarms and clear access throughout the entire building. While a good number of hotels in some developed countries provide special parking areas, in many cases these are uncovered and quite distant from the main hotel entrances, and steps must be negotiated in order to access the building. Many persons with disabilities find facilities at eating and entertainment areas in certain destinations very difficult to access. Some encounter difficulties when making hotel reservations.

Tourism sites

Most of the constraints encountered by tourists with disabilities in the course of these activities are site inaccessibility. For example, many beaches are not equipped to accommodate wheelchair users. Similarly, poor access to museums, historical monuments, or shopping areas restricts persons with disabilities from enjoying the opportunity of participating in these activities.

Persons with disabilities have equal rights to access to tourism infrastructure, products and services, including employment opportunities and benefits that the tourism industry provides. Thus, the tourism industry should provide the same choices for all consumers to ensure the full participation of persons with disabilities, and the protection of individual rights to travel with dignity.

Objectives of the study

The aim of the study is to:

1. Investigate into the benefits of an accessible built environment (tourism sites) from the economic perspective
2. Increase our knowledge of the situations of persons with disabilities in the tourism industry.

Target group

In accessibility studies, there are four major disability groups that could be the main focus:

1. Orthopedic: ambulant and non-ambulant (wheelchair users)
2. Sensory: visual, hearing
3. Cognitive: mental, developmental, learning difficulties
4. Multiple: a combination of any or all of the above.

However, in this study, I concentrate on persons with orthopaedic disabilities, who are generally those with locomotive disabilities, and herein I focused wheelchair users.

Significance of the study

The significance of the study stemmed from the following:

1. It will contribute to the body of existing knowledge in academia and to other interested parties;
2. It will act as an input for policy makers, thus providing new insights to improve their ability to design effective policies to cater for all tourists;
3. It will provide a base for the pursuit of equal rights and equal opportunities for persons with disabilities;
4. It will be useful to investors who want to tap the market;
5. It was a partial fulfillment of the requirements for the award of the master's degree (MSc) in Economics specializing in Real Estate Management.

Definition of concepts

Persons with disabilities: For the purpose of this study, “persons with disabilities” means any person whose full and effective participation in society on an equal basis with others in travel, accommodation and other tourism services is hindered by the barriers in the environment they are in and by attitudinal barriers.

Tourism for All: This is a form of tourism that involves a collaborative process among stakeholders that enables persons with access requirements, including mobility, vision, hearing and cognitive dimensions of access, to function independently and with equity and dignity through the delivery of universally designed tourism products, services and environment (World Tourism Organization (UNWTO), 2013).

Literature review

It appears that there are relatively few well-documented and analytical studies in the area of economic benefits of making the physically built environment accessible to persons with disabilities. Therefore, it seems that the field has not attracted much interest from economists. These few studies, though general in nature including those mentioned below, have documented some social and economic benefits of a barrier-free built environment.

Business institutions' compliance with anti-discrimination laws

Evan (1995), ADA (Americans with Disability Act) Compliance Motivators and Strategies study uncovered the findings mentioned below. One hospital reported spending too much money on workmen's compensation and disability benefits. For example, legal fees fighting some of these claims cost over \$100,000 per year. They decided to implement the ADA compatible program to get these former employees back on the job. Within the first year, their investment in this training, adapting the built environment and adding one new staff position, had a five-fold return on their investment, and disability-related lawsuits were cut by half.

A food store company reported to have added automatic doors to all their stores because their experiment in adding automatic doors to two of their department stores, although not required by the ADA Guidelines, generated more traffic and value in those stores than did their advertising campaign costing the same amount of money.

One commercial bank also decided to take a pro-active approach in complying with the ADA and made some significant changes in its facilities, procedures and services to better accommodate the needs of persons with disabilities. Since they were ahead of their competitors in this effort, they expected to pick up some new revenue from persons with disabilities whom they could serve better than their competitors.

Then, they realized that persons with disabilities had family members (lots of them) who changed their accounts over to their bank because they appreciated the accommodating approach and service attitude that this bank was showing. The second level of motivation is based on the desire to comply with the law. The third level of motivation is a desire to spend the effort required to do what makes good business sense. This approach is mostly used by companies willing to invest the time to study the options before they act.

Similarly, toilet room and curb ramp modifications undertaken to improve access for people who use wheelchairs also significantly improve access for people who push strollers. In fact, many “unisex toilet rooms” are now being built as family toilet rooms.

The three primary benefits that should be considered under the third level of motivation are, first, the benefits of new customers who have disabilities and who directly benefit from the accommodation. Second, benefit from the public relations advantage point of view is gained by accommodating persons with disabilities. The public supports the goals of ADA by a margin of more than ten to one. Not only did persons with disabilities benefit and begin to use the services of accommodating businesses, but their relatives and friends also became more frequent clients and customers. The third benefit is that individuals who do not have disabilities, but who also benefit from the accommodation, are better able to use the facilities and, therefore, more likely to patronize the business. These include mothers with small children who benefit from curb ramps, proper ramp slopes, larger toilet rooms and toilet stalls, as well as lower controls, operating mechanisms and dispensers, which allow children to use the facilities with less help. Also benefiting from accommodation for persons with disabilities are individuals who have temporary injuries, or are weakened from sicknesses. The fourth major motivating factor behind making accommodations for persons with disabilities is the desire to do what is "right".

Conventional design versus universal design – a comparative study

From the cost comparison method, “is non-handicapping design more expensive than "conventional" design?” was a subject of investigation. The findings were deemed to be both intuitive and useful.

First, cost comparisons can be done in two ways. One, an existing inaccessible building is to be brought up to certain accessibility standards through renovation. What does this renovation cost? Compared to the original construction costs? Second, given an inaccessible building, what would have been the costs, if it had been constructed with universal access right from the beginning? Most often, the studies only take up one type of comparison.

In 1980 the Singapore Urban Redevelopment Authority conducted a similar study by making cost comparison for a large center consisting of commercial offices, a multi-storey car park, a food center and a market. During the study, a controlled costing exercise was carried out to compare the cost of the building with and without facilities of access for persons with disabilities, and the conclusion was that these could be provided for by an additional 0.11 per cent of the total cost.

With regard to multi-family housing, a French study estimated the additional costs for bringing up multi-family housing to an accessibility standard, on an average, ranging from 0.5 to 1.0 per cent of total construction costs in new construction. The Swedish Building Research also made the same estimates for multi-family housing. The Australian Uniform Building Regulations Coordinating Council that also undertook comparative cost studies reported an almost identical result as in Wrightson and Pope (1989). Ratzka, A. D. (1984) revealed that the difference in cost between traditional (real inaccessible) construction and the new type of non-handicapping building construction is negligible.

In Ottawa, a Canadian research on single-family units was also carried out. Nine specially designed units in a project of 54 townhouses cost 8 - 10 per cent more than the others but added only 0.5 per cent to the overall project cost. The effect on rental scale is therefore negligible. However, this cost comparison does not involve universal access, since the other 45 townhouses apparently were not accessible. Also a report by the Canadian Mortgage Housing Company of 17 case studies indicated that, in most cases, the accessibility features added 0.39 - 0.53 per cent to the building cost. In his study of "Project Open House" Dunn (1993) reported that an average of only \$1,500 was spent in 1986 to adapt the existing homes of consumers to make them accessible. He also refers to a US study by the Bartelle Memorial Institute which found that if accessibility is incorporated into a design prior to construction, the cost of making 10 per cent of the units accessible is less than 1 per cent of the total constructions costs.

In the United States, different studies by the U.S. Housing and Urban Development (HUD) have estimated the costs of "adaptable" housing, which is housing with basic access features that can be easily complemented by individuals as needed.

The findings were about one-half of one per cent of new construction costs. In the same vein, the HUD study for guidelines for the Fair Housing Amendments Act of 1988 showed an average cost increase of 0.5 per cent in typical single-family homes in four suburban projects. The results of this study indicate that accessible renovation amounted to 21 per cent of the total construction in single-family units and to a maximum of 1 per cent in high-rise multi-family apartments.

Designing the structures from the very beginning as non-handicapping would have cost only 3 per cent in their single-family example and 0.25 per cent more in the high-rise complex they studied.

Cost- benefit analysis of de-institutionalization

O'Neil (1977) examined the costs and benefits of implementing Section 504 of the 1973 Rehabilitation Act. The Act prohibits discrimination against persons with disabilities, and advocates more programmes in accessibility, plus the provision of elementary and secondary education. In all the cases, the results showed that the pecuniary benefits provided substantial offsets to the pecuniary costs involved. Even if the non-pecuniary benefits are excluded, the cost-benefit results favour the implementation of the regulation. Annual gross cost increase is estimated at around \$1.3 to 4.8 billion. The cost of accessibility programmes and complying with the reasonable accommodation requirements would be less than \$100 million annually. Pecuniary costs would be only slightly higher than the pecuniary benefits. However, the analysis is criticized by its exclusion of transfer payments, distribution effects, administrative costs, and the costs and benefits of the existing law.

A study on the expected benefits from a non-handicapping design revealed the two categories of benefits - tangible benefits, that is, those that can be expressed in dollars and cents and so-called intangible benefits which are more difficult, if not impossible, to quantify. Among tangible benefits was the reduction in accidents, their related costs in terms of health services and loss of production. The reasoning is that accessible environments are also safe environments (see Wrightson and Pope).

Among other tangible benefits is the decreased demand for institutional residential living on the part of many older persons who are often forced to leave their own inaccessible dwellings and move to nursing or old age homes. Given an accessible environment in their previous home, many of them are strongly believed to be able to manage longer by themselves and stay out of institutions. In 1993 Dunn refers, for example, to a study, which found that 50 per cent of the applicants to a residential centre for the aged in Boston were capable of functioning in the community with appropriate support and accessible housing.

In some countries the elderly and persons with disabilities are eligible to use public home help or personal assistance services. An accessible environment reduced the need for such services with savings to the public as a result. With non-handicapping environments, more persons with disabilities can educate themselves and enter the labour market.

Researches into intangible costs of handicapping environments are not only hard but also challenging, especially when it comes to reporting since they have to leave out many factors that are impossible to quantify, but are decisive, nevertheless. Some of the most important costs of handicapping environments fall in this category. Briefly, some of the social costs of inaccessible environments are as follows:

1. Inaccessible environments not only discriminate against persons with disabilities in explicit manners, they also affect them in more subtle ways. For example, it makes them both helpless and dependent on other people.
2. For the people around them and even for persons with disabilities themselves it is not always clear that the problem is not within them, it is not because they are incompetent and passive, but because architects, planners and politicians failed them in terms of equal rights and equal opportunities.

In a comparative study of community versus institutionalization, Murphy and Dattel (1992; see also 57) projected the costs and benefits for 52 mentally ill and mentally retarded patients who were placed in the community from state institutions. The cost for community care included housing and subsistence, as well as the cost of community treatment. Benefits included the cost saving of not having to provide institutional care and the wages/fringe benefits were subjected for present value (a 0.08 discount rate was used) and inflation. Murphy and Dattel's results were organized in terms of 12 patient categories. Their findings indicated that the 10-year projected benefits exceeded the 10-year projected cost of community care, yielding benefit/cost ratios ranging from 0.99 to 11.86. The average ratio was substantially greater than 1, indicating that community care was superior.

Costs of disabling a built environment

In Stockholm, a study in the costs of a disabling environment was conducted, and the following was uncovered. Installing an elevator in a three- or four-storey apartment is claimed to increase the break-even rent by approximately 50 to 70 SEK per sq m housing area a year, in the absence of any subsidies.

Below is a table depicting the results more comprehensively? The estimates are based on the present and future population mix in multi-family tenant housing in Stockholm's senior suburbs, and on the assumption that elevators are installed in each building upon renovation - regardless of whether persons with disabilities live there or not.

In the United States, using cost-benefit analysis is a method to compare the magnitudes of the costs of a given investment to its expected benefits over time in order to assess the desirability of projects. Given the scarcity of resources, those projects would then be given priority where the ratio of expected benefits over costs is higher than in other projects that reported similar benefits. For example, a cost-benefit study undertaken by the U.S. Department of Housing and Urban Development estimated that adapting the existing housing reduces the need for support services and yields benefits that amount to 13 to 22 times the levels of costs, Robinette (1978). Elderly clients of the national demonstration home repair and housing adaptation program felt that these services enabled them to function far more independently, BE&C Engineers Inc., (1977).

A study by Silvia Sherwood (1981) indicated that 50 per cent of the 344 people applying to the Hebrew Rehabilitation Centre for the Aged in Boston in the early 1970s were capable of functioning in the community with appropriate support and accessible housing. An evaluation of "Project Open House", a programme that adapts the homes of individuals with disabilities in New York City, found that adapted housing was a major predictor of the productivity of these individuals, including the amount of time they spent out of bed, working in their homes and participating in community activities, Dunn (1990).

Project Open House spent an average of only \$1,500 in 1986 to adapt the existing homes of consumers (Dunn, 1990). If houses are adapted, prior to construction, the costs are even less than retrofitting homes. If accessibility is incorporated into a design prior to construction, the cost of making 10 per cent of the units accessible is less than 1 per cent of the total constructions costs Buenett, J.J. & Paul, P. (1996).

Most importantly, units can be constructed to be "adaptable" to the individual needs of residents. Doors and corridors can be made wider, counters made adjustable and bathrooms designed so that grab bars can be easily installed to respond to the needs of the consumer. Chollet (1979) estimated that adaptable units can be constructed for only slightly more than conventional ones. Adaptable housing can be constructed so that everyone can use this universal design. The design is blended in so that it is often difficult to see that counters or clothing rods in closets are adjustable for people with different heights.

Nömmik's (1986) study on the economic incentives of elevator installation in Swedish residential buildings revealed that, from the standpoint of national economy, it is a good business to install elevators in older persons' houses. For example, if an elderly person can stay in his or her own apartment for one year, the public purse saves a sum approaching SEK 100,000. An elevator that costs SEK 400,000 to put in will pay for itself if it enables two elderly persons to remain in their own homes for another two or three years.

For landlords and private individuals, it may not always be economical as yet to install an elevator in older three-to-four-storey buildings unless the cost of the elevator can be spread over a large number of flats. If the installation of elevators is going to get up speed, they must be financially feasible both for property managers and for residents. Thus, the financing rules must be elucidated with quickly, so that vendors and buyers can do their calculations on a firm basis. Uncertainty inhibits development, he recounted. The market potential for the new elevators in Sweden can be put at about 50,000 units. This represents an increase of 1000-13000 elevators a year, almost a 50% increase on current elevator production. The scope for the export business may open up in due course, he concluded. Hall (1989) analysis contained case studies of three types of residential structures: high-rise apartments, garden apartments and single-family homes. In the analysis, only easily measurable economic costs and benefits accruing to persons with disabilities were considered. In estimating the benefits from the accessible renovation, Hall used a simple proxy.

Bails (1986) reported that the cost benefits available to a community that provides the physical needs of the aged in planning and design, so that they can remain independent for five extra years, are about \$500 million per 1 million of the population on the 1986 figures. However, this doesn't include the reduction in the cost of providing institutional care. Barhon (1997) studied the economic benefits of the increased accessibility of electronic and information technology to Americans with disabilities. In this study, two methods for measuring the increase in the productivity of the federal workforce were considered to estimate the benefits of the state declaration, which is sometimes referred to as "electronic and information technology standard" or simply "standard". The first method examines the existing wage gap between federal workers, with and without disabilities to estimate the effects of the standard on diminishing this wage gap. The second method estimates the increase in a federal worker's productivity as a member of a workgroup or team to determine the benefits derived from the standard. Each method assumes that a net gain in the productivity of federal workers will be generated by the increased accessibility of electronic and information technology.

Improved access to electronic and technology increases the productivity of federal workers with disability, modeled as percentage increase of the average federal wage for that worker. Although the federal worker with disabilities typically has an average federal wage lower than the average wage of all federal workers, this analysis uses the federal wage of all federal workers on the general schedule which is \$44,824, according to the 1998 OPM data.

Benefits to other individuals and entities include:

1. Federal agencies will experience gains in productivity as workers with disabilities are more able to take advantage of the productivity-enhancing benefits of electronic and information technology.
2. The perceived transaction costs associated with hiring persons with disabilities will be reduced for federal agencies, benefiting both persons with disabilities seeking federal employment and the federal government by expanding the quantity and quality of available employees.
3. Federal employees who are not persons with disabilities, or do not consider themselves to have a disability, may benefit from the increased usability of electronic and information technology associated with disability. For example, the ability to increase the size of the text on a computer screen may be necessary to make the technology accessible to an individual with limited vision, but it can also provide benefits to employees who are moderately farsighted or simply prefer large texts.

Some social studies that are essential in economic decisions have also been conducted. In their study of the pattern of participation of persons with disabilities in leisure and recreation Kern & James (1994) depicted the following patterns. The pattern of participation in outdoor recreation was similar across most activities for persons with and without disabilities. Activities with the highest rates of participation among persons with disabilities also tended to show the highest rate of participation among persons without disabilities.

In outdoor recreation activities, persons with disabilities in middle-age groups reported less

Attitudes towards accessibility seem to indicate that persons with disabilities generally felt that no outdoor recreation should be completely inaccessible. However I agree that more primitive areas will be generally less accessible than less primitive areas. In addition, persons with disabilities tended to favour preservation of the environment over accessibility in the National Wilderness Preservation System.

However, there was a general agreement that environmental modifications in the National Wilderness Preservation System areas should be made accessible to PwDs. Sproates (1996) did a similar study in Canada concentrating on activities such as adventure, watercraft, and culture. The aim of the study was to aid decision-makers in the tourism sector in prioritizing barrier removals.

Watercraft activities

Power boating was one of the most popular for persons with and without disabilities. Approximately, one-quarter of all persons with disabilities had participated in power boating in the previous 12 months. This figure was similar for persons without disabilities.

Participation rates in physically demanding activities such as water skiing and jet skiing showed that persons without disabilities had higher rates of participation regardless of which participation rate was used. When less physically demanding watercraft activities were examined, the relative rates of participation vary on the total versus average rates. For example, the total rates of participation in canoeing indicated that persons with disabilities participated at a higher rate than persons without disabilities, but when age-averaged rates of participations are compared there appears to be no difference. Another example of relative differences in participations based on the rates is seen in rafting, where a higher proportion of persons without disabilities participated, if total participation is used and lower proportion participate if average rate is used.

Strategies of reaching the senior tourist

In his study regarding strategies in hotel services for senior/elderly people, Macy (1998) found the principal marketing tool employed to attract the senior, clientele has been discounted, which has become widespread amongst principal chains. Some hotel groups such as Rodeway, EconoLodge or Holiday Express, spurred on by the American Disability Act, went further to modify their structures and amenities to specific senior needs. Others, such as Howard Johnson, are seeking to reach the senior market by building other products or attractions with hotel services, or, like preferred hotels, are pursuing a “lifestyle marketing” approach to accessing a selected group of wealthy, active mature customers, through forming partnerships with certain purveyors of luxury goods or services. According to another article, in the future, it can be foreseen that these trends will be strongly reinforced around the world, as hoteliers, particularly those dealing with a leisure-oriented clientele, come to realize that special efforts will be needed to compete in this fast-growing market segment.

In a study on senior citizens and tourism in the United States Chestnut, (1993) uncovered that persons aged 50 and above in the United States have: 77 percent of the national financial assets, 80 percent of the money in saving accounts, 68 percent of all money market accounts, and nearly 50 percent of all corporate stocks. Persons aged 50 and above in the United States earn 42 percent of the total after-tax income, buy 48 percent of all the domestic new cars, own their houses in 80 percent of the cases, and 80 percent of those are mortgage free, and have accounts with brokerage firms in 27 percent of cases.

Accessibility from the social perspective

Under the auspices of the ADA in 1993, the Accessibility Design Standard conducted accessibility survey in 30 hotels, motels, inns, and other places of lodging in Florida. The objectives of the study were both to check compliance and tourism site accessibility. The findings were:

Guest room door: Doors and doorways into and within all guest rooms and suites, including bathroom doors and doorways, do not allow 32 inches of clear opening width. As a result persons with disabilities are excluded from accommodations when accessible guest rooms are sold out and also are unable to visit other guests in their rooms.

Guest rooms types and features: In 95 percent of the sample, accessible guest rooms are not dispersed among the various classes of rooms available at a lodging facility and do not provide persons with disabilities the same range of facilities available to others. Therefore, persons with disabilities who desire or may need different classes of accessible guest rooms are denied the range of lodging options that other guests without disabilities can take for granted (e.g. rooms with one or more beds and suites). In addition, 75 per cent of the accessible guest rooms and suites are not equipped with visual alarms and other visual notification devices for individuals who are deaf or hard of hearing. Therefore, these people cannot hear fire alarms, ringing telephones, knocking at the doors or ringing bells.

Accessible routes-interior and exterior: In 85 per cent of the sample, both the exterior pedestrian routes (e.g. sidewalks, walkways and plazas) on a site that people use to travel from public transportation stops, from accessible parking spaces, from passenger loading zones, and from public streets and sidewalks to the accessible entrance(s), and the interior routes (e.g. hallways and corridors) throughout the lodging facility, are not usable by persons who use wheelchairs or other mobility aids, or who are unable to climb steps or stairs.

Therefore, once inside the lodging facility, persons with disabilities cannot get through the facility to the guest rooms, conference rooms, toilet rooms, restaurants, other various accessible elements and spaces.

Research methodology

The study concentrated on sites within and around Stockholm, which has been chosen as the prime case study area because it is the most dominant social, political, economic, etc. centre in Sweden. In addition, Stockholm is claimed to be one of the most accessible cities in the world.

However, there is some evidence that seems to disagree with the foregoing political statement. The principal interest of this study is not for the verifications of such a political statement but to investigate the economic gains of making the physically built environment accessible to persons with disabilities.

Research question

The study was guided by the following research question: **What are the main economic incentives for adapting sites to barrier-free tourism sites?**

Valuation methods

There are different techniques to measure the financial attractiveness of any financial endeavour, for example, the return on investment, net present value, pay-back period, break-even point, internal rate of return. However, I have chosen to look at it from a general perspective focusing more on the initiatives taken (e.g. the construction of accessible rooms) to make enterprises both accessible and be able to cater for the needs of customers with disabilities and why. This is necessary to avoid making unrealistic conclusions by assuming that the entire difference in the estimated income structure of accessible and non-accessible tourist sites, for example, is due to accessibility, as it is likely that one is assuming that the presence of other variables is insignificant.

Since there are different levels of accessibility even within the mobility impairment domain, there is a need for more precision. Therefore, the level of accessibility focused on in this study is the level of accessibility approved by the “Equality for all” (an international European-based organization) that promotes tourism for all which, among other things, is charged with the responsibility of accessing levels of accessibility in various European hotels.

Research methodology

The study adopted both quantitative and qualitative methods of data collection. The combination of approaches was essential to allow the complementarity of findings.

Quantitative method

Data collection was by means of a questionnaire completed by tourist site owners and /or managers. The questions were of two types. One was mainly on the individual’s site expenses, problems, income within a specified period and the other one was geared towards soliciting and acquiring factual and demographic data on visitors and what motivated them to visit or book the place, if possible.

Sampling and sample size

Probability sampling in the form of a simple random sampling, where each site had an equal probability of selection, was adopted. Random selection eliminates subjective bias in the selection process. The sample size constituted 34 accessible tourist sites in Stockholm and its environs.

Qualitative method

The qualitative method was specifically adopted to explore general public views with regard to the economic benefits of non-handicapping tourism sites, especially their perception of the societal benefits from it. The collection of qualitative data relied on three methods:

Data Analysis method

The data analysis process entailed two stages: The initial analysis was coding and table creation, preparation of variables by combining a number of codes, converting codes into variables or developing completely new variables. This was used to provide a summary of patterns that emerged from the responses of the sample.

Limitations of the Study

The following were some of the problems that posed great obstacles in the execution of the study:

Literature: Though there have been studies done in Sweden about disabilities, the majority are in Swedish and are socially or medically oriented. Being a student who can only read and understand the English language, I found it extremely difficult to get the type of materials needed, especially during the literature review.

Funding: There was limited funding for the study. I felt there was a need for financial support since nothing is for free. The travelling expenses were exorbitant, especially for a person with mobility impairment.

Language barrier: Although many Swedes can understand and speak English, for reasons best known to them; it was not unusual to be left stranded without the required help, especially in verbal communication. Therefore, it was a great problem reaching the right person, material, and information at the right time.

Sensitivity of the topic: I quite agree with the fact that Sweden is one of the most open societies but as a foreign student investigating into incomes, I anticipated and experienced the problems of being turned down or even given near-false information. Naturally, this would, to some extent, negatively affect the validity and reality of the results.

Data presentation and interpretation

Introduction

Thirty-four accessible tourist sites in Stockholm and its environs were approached. These include large and small sites with the economic benefits of non-handicapping built environment questionnaires. Of these, 22 sites responded, constituting 65% of the total sample size as can be seen in the table below.

Number of sites approached	Number of sites that responded	Percentage (from total)
34	22	65

The number of sites (22) responding, regardless of the number of telephone calls and e-mail follow-ups, was attributed to reasons such as:

1. The questionnaire never reached the people it was meant for completion (misplaced enroute).
2. Negligence due to compact daily work schedule of the potential respondent.
3. Lack of adequate information, or knowledge, about non-handicapping tourism/accessible tourism/tourism-for-all.
4. Lack of interest in the study due to lack of awareness.
5. Strict company policy with regard to giving out information.

Nevertheless, according to Trost (1994), a response percentage rate of 50%-70% is an average for a postal questionnaire. It is believed that a level of 50% or more can serve as a basis for judgment. A level of 70%, which is considered the highest attainable in the case of a postal questionnaire, can only be reached after intensive personal inquiries. On the other hand, the observed short interval between the questionnaire circulation and in-coming responses, which was approximately one month of each circulation circle, is attributable to: people's interest in the study, the fact that the questionnaires were simple and clearly formulated, which made it easier for respondents to act and respond accordingly, and the high prevalence of well-organized and secured postal services in Sweden.

Presentation of results

Awareness of new market

One of the often-cited phenomena about today's tourism is growing at an alarming rate. Thus, it is highly envisaged that well-functioning sites should be attractive to visitors of all sorts, from every corner of the globe, at any point in time.

In responding to what nationalities constitute the customers of the surveyed properties or tourist facilities worldwide 46% (12) form the majority of the customers followed by Europe 42% (11) while America, Asia and Africa captured 4% (1).

Table 1: Customers' nationalities

	N	%
Europeans	11	50
Americans	01	5
Africans	01	5
Asians	01	5
Global	12	55
Others	00	00
Total	187	100

Being a fast growing industry, it is, without much emphasis, obvious that the industry is a target of many potential investors; rendering it both competitive and intense in the retention and exploration of new clientele. "Tourism for all" being new, huge and untapped could then be a possible option. In response to being aware of tourism for all (i.e. advocate accessible tourism sites), 86% (19) responded in the affirmative while 14% (3) responded in the negative. In a related question as to how they became aware of it, conferences/seminars with 60% (24) appeared as the major source followed by other means 30% (12), personal contacts, 5% (2) newspaper and television adverts.

Table 2: Awareness of Tourism for All

	N	%
Yes	19	86
No	03	14
Total	22	100

Attitudes towards disability and persons with disabilities

Tourism has for a long time been associated with the few financially well-off persons. However, with better understanding of it and its significance in the development of human beings, those erroneous beliefs are gradually losing their place in modern societies, especially in the developed world. In the developing countries, however, tourist sites are still places purely reserved for foreign visitors and the few affluent members of society.

Therefore, with the deeply-rooted but ill-conceived perceptions of disability and persons with disabilities, rarely, if ever, are indigenous persons with disabilities allowed within the premises of tourist sites. In reacting to whether it is necessary to make the tourist industry accessible, all responded in the affirmative. In a follow up-question with regard to the most important factor for making the facilities accessible, 45% (10) of the respondents subscribed to good business as the most important factor for accessible tourism while 41% (9) human rights and 14% (3) were unable to decide between good business sense and human rights.

Table 5: Most important factors for accessible tourist sites

	N	%
Good business	10	45
Human rights	9	41
Both	3	14
Total	22	100

Types of customers with disabilities and means of accommodation

While all respondents reported welcoming customers with disabilities, 64% (14) started from the inception while 36% (8) after inception. In a related issue regarding the types of customers with disabilities mostly welcome, table 7 codes the response. In responding to how they accommodate customers with disabilities, 66% (14) claimed to have some accessible rooms, while 5% (1) reported all rooms as being accessible.

Table 7: Welcomed customers with disabilities

	N	%
Blind	7	17
Deaf and hard of hearing	8	19
Physically handicapped	12	29
All types of disabilities	20	47
Others	5	12
Total	42	100

Number of rooms and occupancy rate

In commenting on whether they have experience in any downward fluctuation in their accessible rooms since the beginning of operations, 64% (14) responded in the negative indirectly indicating an increase. In a follow-up question, that explores the most important factor for the increase in the accessible rooms, 42% (11) subscribed to an increase in demand, 19% (5) meeting international hotel standards and 27 % (7) following government laws. Of direct relevance to an increase in demand is the occupancy rate of the accessible rooms which the majority claimed to have experienced some increment 27% (6), 35% increment, 23% (5) 50% increment, 14% (3) 75% increment, while 27% decided not to share their experiences.

Table 11: Accessible rooms' rate of occupancy

	N	%
5% increment	1	5
15% increment	1	5
35% increment	6	27
50% increment	5	23
75% increment	3	14
Not ready to share	6	27
Total	22	100

As to whether these rooms have any impact on the overall occupancy rate of hotels or resorts, respondents felt this way: 36% (8) agreed while 27% (6) disagreed. Those in agreement share their experiences in relationship to the overall occupancy rate 23% (5) 5% impact, 14% (3) 15% impact and 14% (3) 45% impact while 9% (2) 30% impact, 5% (1), and 36% (8) don't want to share their experiences. With regard to any plan of increasing the extra charges levied on the accessible rooms, especially for customers without disabilities, 64 % (14) claimed to have no plan, 23% (5) claimed to have in the next two to three years.

Marketing activities

At present, the successes of most businesses are not entirely pegged on the product but also on the marketing strategies, bearing in mind the indisputable fact that the market is nearly saturated with products of varying kinds, thereby making the competition very intense.

Therefore, to both retain and capture a new market, good marketing strategies are of great essence. In responding to whether being currently engaged in any activity to market these accessible rooms, 55 % (12) claimed to be engaged in some kinds of marketing activities, 36% (8) did not. For those marketing the rooms, brochures and the Internet 29% (9) are the leading strategies, followed by logo display 26% (8) and 16 % (5) print media. Those yet to be engaged in any marketing- 9 % (2)- claimed to have a plan of doing so in the near future.

Table 2: Awareness of Tourism for All

	N	%
Yes	19	86
No	03	14
Total	22	100

Accessible society

Advocates for accessible built environments (e.g. disabled persons' organizations, universal design institutions, sympathizers.), strongly hold the belief that an accessible environment is not only good for persons with disabilities, but for all segments of society. In response to whether the accessible rooms are sometimes occupied by persons without disabilities, 95% (21)- an overwhelming majority- responded in the positive, especially, when vacant.

Constraints

The difficulties in the attainment of accessible built environments is not only associated with some social issues (e.g. negative attitudes, misconceived beliefs that it affects the beauty of the structure, being complex, and toothless laws), but with some economic matters too, such as being too expensive, scarcity of finances, and not economically viable. "Other negative attitudes arise from the belief that an inclusive environment will be more costly to build than a non-inclusive one, and is likely to be ugly or obtrusive", (Harrison, J. D & Sasiang, E. P.) as cited in Schleien, S. J. (1993). In reacting to any financial losses incurred during the construction or modification period, 45% (10) claimed to have, 32% (7) not to have while 23% (5) declined to share their experiences. In a follow-up question regarding problems encountered during construction or modification, 45% (10) reported not to have had any problem, while 23% (5) had some. For those who had some problems, lack of experts 57% (4) and many expenses 43% (3) appeared as the major constraints.

Table 19: Extent of problems encountered during modifications

	N	%
Yes	5	23
No	10	45
Not ready to share	7	32
Total	22	100

Discussion of results

To analyse and make some concluding remarks, I drew almost all the conclusions based on what the survey results could provide since there are few or no earlier economic studies of this kind to support or otherwise dispute the findings.

Market awareness

The results indicated a high-level awareness of the existence of a potential market by making tourist sites accessible to persons with disabilities. Since the major source of awareness was through conferences/seminars, one can hypothesize a major move of financial and human resources when the market comes in the spotlight of the mass media as revealed by some studies.

According to Goerne (1992), “target vice president somewhat of a pioneer in the print advertisement using adults and children with disabilities said that it was so successful that they can actually point specific products that sold much better because they were modeled by a disabled person”. “The early campaign that depicted children with disabilities lead to 1000 supportive letters and has been the single most successful consumer response we have ever gotten,” according to the Vice President of Wool Marketing (Sagon 1991) as quoted in Watson, P. (1992).

In the same vein, without hesitation, one can also anticipate an increase in the willingness of persons with disabilities to venture into the industry not only because sites will be competing in providing the best services but also the big role that the mass media play in the establishment and reinforcement of what is acceptable. (Hahn (1987) as noted in Chalet, D. J. (1979), for example, points out that advertising promote specific “acceptable physical appearance” that it then reinforces itself. These advertising images tell society who is acceptable in terms of appearance and that transfers to who is acceptable to employ, associate with, communicate with and value.

Attitude towards disabilities and persons with disabilities

The results reveal a high degree of positive attitudinal changes towards persons with disabilities in a market, that is, presume to be purely catering for the so-called “cream of society”, i.e. members of the diplomatic missions, the business community, intellectuals, celebrities, etc. This is a big change and deserves acknowledgement even in comparison to recent times notwithstanding history. For example, Rupert Howell, of the Institute of Practitioners in Advertising, said on British television’s “Tonight” programme (2000) when asked about incorporating persons with disabilities into British advertising: “In the end you have to remember that our job is to sell products for our clients, not to put right the wrongs of the world”.

In the mid-1970s, a National Easter Seals Society executive in the United States tried to persuade a Minneapolis company to use a person with disability in a promotion photo, and had this to explain: “They were horrified at the idea....They told me they would lose sales, it would scare people – they even used the word disgusting” Sagon (1991). Nevertheless, by 1992 the same Easter Seals spokesperson praised companies like K Mart when they began a new television advertisement campaign using a wheelchair-using actress to portray a customer.

To some extent, the above scenarios are a result of the unnecessary emphasis society put on beauty and bodily perfection that has led to the exclusion of persons with disabilities in the images and also ignoring the fact that disability is a natural part of our diverse society. Therefore, in light of the above revelations, there is no doubt that the findings indicate a giant step in the right direction, not only for persons with disabilities but also the entire business community since it is a clear manifestation of the recognition of persons with disabilities as potential customers, and, above all, being equal to the rest of society reckoning with: “Businesses are coming to an understanding of the potential power of tapping the persons with disabilities market and accepting that persons with disabilities should not be viewed as charity cases or regulatory burdens, but rather as profitable targets. Mainstream companies, from financial services to cell phone makers, are going beyond what’s mandated by law and rapidly tailoring products to suit the needs of persons with disabilities to attract them” , Prager, (1999).

According to Carmen Jones of EKA Marketing (1997), “few companies have enjoyed the profitability that results in targeting the consumers who have disabilities.... I believe if the business community were educated about the size and the potential of the market, then advertising programmes with disabled consumers in mind would be created.”

This means companies have learnt, due to their desire for profits, to move away from the past pity narratives of charity, economic powerlessness, and ignorance since business, like any other activity, cannot be expected to take place without some sort of trust, confidence, etc., which, without much emphasis, rests on each party recognizing and accepting each other as equal human beings.

The primary factor for making tourist facilities accessible to persons with disabilities, being that it makes “good business sense”, is not a pointer to profitability alone, but also the existence of a potential and long-lasting market which concurs with Georne (1992), “Companies and advertising agencies are realizing what disability activist and former *Mainstream* magazine publisher Cyndi Jones said in 1992: ‘portraying disabled consumers in advertisements is just as good business...because most places people go to work or to play, have one, if not multitude people who are disabled.’ ”

Barhon (1997) asserts that “in the new millennium, advertisers are realizing that disabled people buy soap, milk, socks, jewelry, make-ups, home improvement goods, use travel services, live in houses, and enjoy nice home furnishing. There is some evidence that the disabled customer is very much more brand loyal than other consumers.” What is both interesting and worth noting from the results is that a good number of the respondents cited “human rights” as the major driving force for accessible tourism, but that leaves a room for anyone in or connected with the business world to wonder how rational that is, especially in a highly competitive market like the hotel industry. Nonetheless, one is not disputing the moral and social obligations companies owe to society.

Advertising researchers Burnett and Paul advocate that trying to attract customers with disabilities helps companies “meet important social responsibilities”, as well enhance the consumer base (1996, p.15) B&Q Diversity Manager KAY Allen pointed out that in addition to profit and legal reasons such as Disability Discrimination Act, businesses have obvious moral reasons. “It’s absolutely right that companies should cover disability as a diversity issue”, (Stirling 1990) as cited in Reuterswärd, L. (1995).

Type of customers with disabilities welcome and means of accommodation

Findings revealed that all surveyed hotels welcome customers with disabilities and special rooms, emerging as the main means of accommodation. Further revelations also indicated that the majority can offer services to all categories of customers with disabilities followed by persons with mobility impairment, visually impairment, etc. as in the order of facilities adaptation.

Noteworthy in the results is not only the fact that even in the business domain accessibility issues have focused more on motor impairment, but the unnoticed fact that with high-level advancement in the health care system, some societies, especially in the developed world, Sweden included, are gradually witnessing a decline in some disabilities, including motor impairment.

On the other hand with an increase in life expectancy, as the result of an efficient and adequate health care system, a large segment of the population is becoming older, and the possibilities of hearing, vision impairment, etc., are obvious. This therefore makes one question the existence of such a big gap between the capability and willingness of hotels to accommodate motor-impaired persons, and the rest. It is my assumption, therefore, that if the scenario continues unchecked, a new market within the same market bracket will ultimately emerge, requesting a step backwards by both the advocates of accessible tourism and facility owners.

Another interesting revelation by the results is the bearings accessibility laws have on tourist sites since, all respondents subscribing to “years back” started operating after the passing of the accessibility legislation. Such empowerment one receives by such legislation makes one respect the system which grants the rights and it gives one the emotional confidence to go forth and explore new opportunities in places which were once, as a practical matter, beliefs, attitudes, and off-limits.

It is my expectation that many persons with disabilities in Sweden will be good customers, and even be employed in some sites in the future than has been in the past, and today, as reiterated by (Kate 1997) as quoted in *Making Europe accessible for tourists with disabilities* (1999) who conducted a survey on the impact of the Americans with Disability Act, and Work Incentive Improvement Act (WITA) and the UK Disability Discrimination Act (DDA). According to him, in both countries, the new disability rights legislation “made the business community more aware of disabled consumers and that there are large numbers of them.

These legislative acts have also given businesses an understanding that disabled persons want to find more and better employment, and, in turn purchase more consumer goods”. Some analysts actually call the Americans with Disability Act a mandate for marketers to begin to recognize the formerly invisible persons with disabilities market, Micheal, J. B. (n.d).

Rooms and Occupancy Rate

The results show a huge increase in the number of accessible rooms, with an increase in demand as the predominant factor, behind it reckoning to some extent with following findings:(Quinn 1995) as captioned in Macy, M. (1998) for example, of the hotel chain Embassy Suites, found out that becoming sensitive to the needs of customers with disabilities leads to more business. A similar study, done in the preparation for the 1996 Atlanta Para Olympics, illustrated that both households with disabled persons (49%) and without disabled persons (35%) highly value good and integral provisions for the needs of persons with disabilities and were ready to buy products and services from companies that showed sensitivity to disabled persons` needs, Dickinson (1996).

With close examination of their rate of occupancy illustrated by table 12, one might not hesitate to concur with an increase in demand as the principal force. However, in the absence of an inquiry into the total number of rooms in each hotel, the majority were unable to comment, one feels the embodiment of some limitations and constraints in further statistical analysis of the data to quantify its significance, although an empirical analysis at a minimum communicates a positive trend or gain. With the government laws scoring the lowest responses, findings seem to support the strong body of opinion that accedes to the contention that “passing laws after laws and starting programmes after programmes would never address the underlying attitudinal, political and economic resistance, to equality for persons with disabilities. However, with evidence of economic profitability of accessible society, the philosophical ideologies underpinning the concepts of normalization and equality will be strong enough to penetrate the resistance of some social and belief systems” (*Barrier-free World for All*, 2001: www. Ed.gov)

According to Sandra Gordon of Easter Seals, “those of us in the non-profit world have tried for years to change the way persons with disabilities are perceived.” “Now it seems the for-profit world, is finally lending a hand, and will make it. Ensuring all persons with disabilities will have access to places and programmes that persons without disabilities have taken for granted, that our built environment will progress to an inclusive one, that persons with disabilities will be more productive and productive longer than ever before, that persons with disabilities can be fully participating members of their families, schools, churches and communities . . .”, Merriam, (1988) & Strauss, (1987).

“If we want to see a stronger enforcement of disability rights laws, if we want to see greater economic opportunities, funding for home and community-based services and assistive technology, education, health... for persons with disability, we need to get organized and make our presence felt in the

marketplace and polling stations”(Dickson, Chairperson of the American Association of People with Disability: www.aapd-dc.org).

Marketing activities

Apparent from the results is that the majority of the respondents are presently engaged in some kind of marketing activities, with Internet and brochures being leading strategies. This, to some extent, reckons with the dominating thinking in the tourism-cum-marketing arena and other markets. That is, if any destination is not on the world web, then the millions of people who now have access to the Internet may ignore it, because they expect that every destination will have a comprehensive presence on the web. Therefore, affirming to the net being the new destination-marketing battleground, and if one is not there fighting hard then one cannot win the battle for tourist dollars.

However, in a further analysis of the data, I found no relationship between the type and number of marketing strategies used and the accessible rooms’ occupancy rate, their impacts on the overall facilities occupancy rate and even their increase in numbers. Therefore, indirectly, it shows the impact of some unobserved variables, namely safety and security, workers’ dedication and attitudes, proximity to other accessible infrastructures, supportive services, etc.

Akin (1998) posits that safety and security are vital to providing quality in tourism. More than any other economic activity, the success or failure of a destination depends on being able to provide a safe and secure environment for visitors. President Clinton pushed for the Act (ADA) with an inclusive societal perspective: “As anyone with disability can tell you, it takes more than a job to enter the workforce. Often, it takes successful transportation, specialized technology or personal assistance”, Clinton (1999).

Constraints

Results point out that the majority had not incurred any financial loss during construction/modification. The most feasible hypothesis to explain it is it does not take much time, taking into account the lack of experts, and too many expenses, being the main constraints reported.

Summary and conclusion

To determine the potential economic impacts, by making the built environment accessible to persons with disabilities, this study analyzed five areas of relevance within the tourism industry in Stockholm city and

its environs. In summary, both the review and analysis reveal the financial gains by hotel companies by making their facilities accessible to customers with disabilities.

Therefore, in light of the results, it is my strong conviction that with more efforts by hoteliers, tour operators, advocates, etc. in both sensitizing the business community and the persons with disabilities community, there are many more benefits to reap.

References

- Akin, S. (1996). Equalization of Opportunities: Proceedings of the fourth World Congress of Disabled people International.
- Bails, (1986). A revisit of Institutionalization. W.H.O. Vol. 13:42
- Barhon, K. (1997). Economic benefits of increased Accessibility of Electronic and Information technology to Americans with Disabilities. Journal of IT Studies, USA
- BE &C Engineer Inc., (1977). Housing the elderly persons: New York Times
- Chestnut, T. J. (1993). A study on Senior citizens and Tourism. Office of Tourism N. Y. United States
- Buenett, J.J. & Paul, P. (1996). Reliable data needed to target mobility-disabled consumers. Marketing News, 30 (24), p. 15
- Chalet, D. J. (1979). A cost-benefit Analysis of accessibility. U.S. Department of Housing and Urban Development, Washington.
- Chollet, (1977). Seminar paper on Adapting Built Environment: New Castle, Australia
- Clinton, W. J. (1999). Remarks by the president on disability initiative (White House press release)
- Dickinson, R. J. (1996). The power of the paralympics. American Demographics, p. D26
- Dunn, (1990). Cost of adapting the built environment. Dept of Social Affairs New York
- Evan, T. (1995). ADA (Americans with Disability Act) Compliance Motivators and Strategies study. New York
- Goerne, C. (1992). Marketing to the disabled: New workplace law stirs interest in largely untapped market.
- Hahn, H. (1987). Advertising the acceptably employable image: Disability and capitalism. Policy Study Journal, 15: 3, 551-5570
- Hall, E. (1989). Journal of Housing Studies. Indiana, USA
- Macy, M. (1998). Strategies in Hotel Services for Seniors. Deptog marketing E-com. Company, Ltd, UK
- Kern & James, (1994). Disability and Recreation- A pattern of participation. Department of Sociology, School of Social Studies. London, UK

- Making Europe accessible for tourists with disabilities (1999). Hand book for tourism industry/European commission, Directorate General XXIII – Tourism unit. Luxembourg: Office for official publication of European communities.
- Merriam, (1988) & Strauss, (1987). *Case Study Research in Education: A Qualitative Approach*. San Francisco: Jossey-Bass
- Micheal, J. B. (n.d.). “Barrier-Free Environment” Dowden, Hutching & Ross, Inc. Stroudsburg, Pennsylvania, U. S. A.
- Murphy & Datel, (1992). De-institutionalization. *DPI Vol. 1:12*
- Nömmik, E. (1986). Elevators make life easier. Swedish Council for Building Research, Stockholm, Sweden.
- O’Neil, D M Discrimination against Handicapped Persons. The cost, benefits and economic impacts of the implementing section 504 of Rehabilitation Act of 1973 covering recipients of HEW financial assistance
- Prager, J. H. (1999). People with disability are the next consumer niche – companies see a market ripe for all-terrain wheelchairs, computers with sticky keys. *Wall street Journal*, p. B1, 2
- Ratzka, A. D. (1984). The costs of disabling environments (A cost-revenue analysis of installing elevators in old houses). Swedish Council for Building Research, Stockholm, Sweden
- Reuterswärd, L. (1995). *Design for Easy Access to Buildings by Physically Disabled Persons*. Lund University, Sweden
- Robinette, (1979). *Research Journal of U. S. Dept of Urban Housing*. United of America
- Schleien, S. J. (1993). Assess and inclusion in community leisure services. *Parks & Recreation*.
- Silvia, S. (1981). *Rehabilitation International Vol. 2, P. 10*
- Sproales, J. (1996). *Disability and Leisure Time. DPI. Vol. 8*, Vancouver, Canada
- Watson, P. (1992). On the National Strategy for the integration of persons with disabilities: (Disabilities, the special issue).
- W. H. O. (1981). *International Classification of Impairments, Disabilities and Handicaps*, Geneva: World Health Organisation.
- William Wrightson and Campbell Pope (1989) *From Barrier free to save environments: The New Zealand experience*, World Rehabilitation Fund Monograph #44, World Rehabilitation Fund, New York.