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

Yahya Muhammed Bah
University of the Gambia, School of Arts and Sciences, Brikam Campus, the Gambia, West Africa

Abstract

More than 10% of the world population are persons with disabilities either 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 in the society 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. By virtue of citizenship as the rest of the populace, everywhere, the ultimate responsibilities of remedying the conditions that led to the impairment and dealing with the consequences of disabilities rest with the governments. In spite of this, it doesn't deprive individuals from contributing. In a drive 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 environ.
The major tasks of the study were to:

- Examine how the business community view persons with disabilities,
- Investigate awareness among decision makers of the market potential of persons with disabilities,
- Examine the strategies of integrating them into the overall market mix and why
- Identifying 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 the persons with disabilities and those who have decided to seize the opportunities are reaping the financial rewards as manifested by increase in accessible rooms, 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.

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

Introduction

Tourism is a rapidly growing industry. Looking at the world wide picture, tourism nowadays is one of the biggest industries on the planet with international tourism receipts of 27 billion pounds a year in Europe and 130 billion pounds a year world-wide. 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).

In Europe for example, Britain in particular, the tourism sector is claimed to be extremely large and is certainly one of the key areas for growth over the next few years. It currently employs 1.75 million persons in the businesses. It presents one in every six new jobs created over the last ten years. It is worth 53 million pounds a year and it has brought in 25.6 million overseas visitors to Britain in 1997 with an expectation that this will rise to 27.5 million people in the millennium year, (Tourism Alliance n.d.)

Tourists today are not only content with staying within the confines of a resort hotel compound, being bussed to individual sites and entertained in places that mainly cater for tourists. Instead, tourists 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 stresses. 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 emotively accessible to the general public. Therefore, at 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, to name a few, are of paramount importance. With regards 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/senior citizens.

Prevalence of Disability

There are relatively few censuses, surveys, and registration sources of information on disability especially in third world 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 are the main causes and how the disabilities encountered in different countries and regions affects quality of life.

The World Health Organization noted in 1981 that it was impossible to estimate the number of persons with disabilities a more accurately than 10 per cent of the total population, (WHO, 1981, p.10) 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. A 1995 ESCAP paper, noting that the estimated prevalent figure has been the subject of much debate because of differing definitions and the different survey methodologies, concludes that global prevalence is probably lower than the10 per cent estimate, and cites a 1992 UNDP

estimate of extensively persons with disabilities in developing countries of around 5 per cent of the population (Helander, UNDP cited in ESCAP, 1995).

In the developed world, it is estimated that one out of ten citizens has a disability. In Sweden, like most countries, one out of every ten persons is a person with disability. Thus, approximately 800,000 inhabitants are persons with disabilities. If families and relatives are included, it is assumed that about 20% of the population is affected in one-way or the other as a result of disability (Nirje et al., 1992).

Statement of the problem

In one way or another, new environments handicap all travellers who move out of their familiar surroundings, the exciting aspects notwithstanding. Persons with disability have a right to, and want to enjoy travel and leisure experiences. Tourism is a mean of broadening horizons and developing friendships for social groups, which increasingly is less willing to remain segregated from mainstreams 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 accommodations within tourism sites, and inadequate customer services.

Transportation

While air travel in general has become easier and airlines increasingly provide friendly services to the average travellers, persons with disabilities still encounter some inconveniences when travelling by air. For example, wheelchair-travellers 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 forward planning for all are some of the challenges still facing travellers with disabilities.

Most travellers negotiate the structural constraints associated with air travel by using other modes of transportation (e.g. cars, buses, trains, etc.). Private automobile 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. In some countries, modern technology greatly facilitates bus travel by persons with disabilities. For example, persons with physical disabilities can now journey by buses equipped with hydraulic lifts, which help them to board easily. Thus, the so-called "low-floor" buses are gradually becoming the standard for intra-urban public transportation in a growing number of countries more especially in the developed world.

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 special 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 remains a big constraint, especially for persons with physical disabilities and wheel chair users.

Accommodation

Reasonable accommodations for persons with disabilities constitute still another set of challenges. For example, very few hotels offer accessible person with disability-friendly rooms with wider entrances, low-level switches, hand dryers, towels racks and beds; chairlifts and room information written in simple and concise language for persons with cognitive disabilities. Of the rooms available, few have ground floor access. Access through hotel 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 that steps must be negotiated in order to access the building.

Another issue related to accommodation facilities and amenities concerns the different types of disability to be provided for. Indeed the needs for the persons with vision or hearing (audio-visual) impairment or intellectual disability are quite different from those with a physical disability. Most of the hotels provide facilities responding more to the special needs of persons with physical disabilities, and especially those in wheelchairs. For example, among hotels that offer wheelchair access, few provide information in braille or in audiovisual format.

Many persons with disabilities find facilities at eating and entertainment areas certain destinations too difficult to access. Some encounter difficulties when making hotel reservations. It was observed that in some hotels, an individual, even when available, could not reserve specific accessible rooms. In other instances, some rooms were promoted as accessible rooms, actually appeared to be inaccessible to persons with disabilities. For example, showers with handrails may well help some persons, but for many wheelchair users, bathtubs present a major barrier.

Tourism sites

Attractions are the elements of a tourism destination that stimulate the purpose of a journey and visit. They may be of leisure-type, such as visiting theme parks or participating in sport events; nature-based, such as seaside tourism or mountain trekking, historical, such as visiting museums or shopping for antiques; or socio-cultural, such as festivals or visiting friends and relatives. 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 opportunities of participating in these activities.

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

Objectives of the study

The aim of the study is to:

1) Investigate into the benefits of accessible built environment (tourism sites) from the economic perspective and to
2) Increase our knowledge of the situations of the 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. Orthopaedic: ambulant and non-ambulant (wheelchair users),
2. Sensory: visual, hearing;
3. Cognitive: mental, developmental, learning difficulties;
4. Multiple: combination of any or all of the above.

However, in this study, I concentrate on persons with orthopaedic disabilities. Persons with orthopaedic disabilities are generally those with locomotive disabilities, which affect their mobility. This could result from the impairment of the trunk, the lower limbs or both. Persons with orthopaedic disabilities may also have impairment of the lower limbs and the trunk as well as the upper limbs. As can be seen above, persons with orthopaedic disabilities are further divided into two subgroups; namely:

Ambulant disabled persons: those who are able, either with or without assistance, to walk and who may walk with or without the aid of devices such as crutches, sticks, braces or walking frames.

Non-ambulant (wheelchair users): are people who use wheelchairs that are unable to walk, either with or without assistance, and who, except for the use of mechanized transport, dependent solely on a wheelchair for mobility. They may propel themselves independently, or may require pushing and manoeuvring by an assistant. While being unable to walk, the majority of this group is able to transfer to and from a wheelchair. To further narrow down the study and be even more specific on the group of study, ***the non-ambulant (wheelchair users) was my main focus.*** Precisely, I concentrated on investigating into the main economic gains enjoy by sites owners/managers who have made their sites accessible by adapting it to the needs of the persons with disabilities.

Significance of the study

The significance of the study stemmed from the following:

1) It will contribute to the stock of existing knowledge as sources of information for academia and other interested parties;
2) It will act as an input for policy makers, thus new insight to improve their ability to design effective policies to carter 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 of great essence to investors who want to tap the market.
5) It was a partial fulfillment of the requirements for the award of Master degree (MSc) in Economics specializing in Real Estate Management.

Theoretical basis of the research
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 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. Furthermore, persons with disabilities include those who have long-term physical, mental,

intellectual or sensory impairments. Others who may be included in this group due to the problems in accessing tourism products and services are people with temporary disabilities, people with crutches during a temporary period, the elderly, people carrying luggage, or people who are big or small in size or stature.

Tourism for All: 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 universal designed tourism products, services and environment (World Tourism Organization (UNWTO) 2013)

Research background

It appears 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 the economists. The few, though general in nature including those mentioned below have documented some social and economic benefits of barrier-free built environment.

Business Institutions Compliance with Anti-discrimination laws

Evan, T. (1995), ADA (Americans with Disability Act) Compliance Motivators and Strategies study uncovered the below mentioned findings. One hospital reported spending too much money on workmen's compensation and disability benefits. For example, legal fees fighting some of these claims were costing over $100,000 per year. They decided to implement the Americans with Disability Act (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 of 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 their 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 well 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.

In many organizations, the study further revealed that their activities are the simple desire to minimize the risk of lawsuits, federal intervention from complaints, and negative publicity. This strategy is perhaps the most common in small businesses and those companies under the severest economic circumstances. This approach is claimed to be similar to the freeway driver who uses a radar detector to allow him to drive 15 or 20 miles over the speed limit without getting caught. The desire is not so much to comply with the law, but not to get caught. In ADA compliance, companies taking this approach typically range from

those who do nothing, to those who put a few signs up indicating that anyone who needs assistance should ask for it. When someone with a disability complains to them about accessibility in their facility, they might respond by removing only the cheapest of the barriers mentioned in the complaint, and claiming that all others were not readily achievable due to difficult financial situations or other reasons.

The second level of motivation is based on the desire to comply with the law. This desire may be backed by a minimal or a substantial commitment to investment in compliance. If the core motivation is to comply with a law that is perceived to be basically fair, the approach is very different from the first level of motivators. Those organizations that wish to comply with the law are best served by calling in an accessibility specialist, or an organization like an umbrella organization that represents people with a variety of disabilities, to review barriers to persons with disabilities in their facilities. The consultant will document those barriers in a way that they can be removed, in phases, if necessary. Some organizations will be able to dedicate one person full-time to study the law and its regulations and guidelines, and to coordinate their compliance efforts. After a month or two of studying the regulations and technical assistance materials affecting their organization, a company with their own coordinator might need very little help to interpret 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 who are willing to invest the time to study the options before they act. If this is the organization's motivator, it is wise to bring together a task force, which includes, at least, a minimum representative from facilities, personnel, legal, finance (or administration), customer service and marketing. Early strategy development should be based on compliance with the law, as well as corporate image and customer demographics. In conclusion, according to the study, the department store mentioned above made their decision to install automatic doors based on marketing sense rather than the ADA, since ADAAG does not even require automatic doors in new facilities. Similar accommodations that might make excellent business sense, but are beyond what is required under the ADA, include offering optional curbside, drive up or home delivery in addition to removing facilities barriers to persons with disabilities. 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 firstly, the benefits of new customers who have disabilities and who directly benefit from the accommodations. Secondly, benefit is from the public relations advantage point of view is gained by accommodating persons with disabilities. The general public supports the goals of the ADA by a margin of more than ten to one. Not only do persons with disabilities benefit and begin to use the services of accommodating businesses, but also their relatives and friends became more frequent clients and customers. The third benefit is that individuals who do not have disabilities, but who also benefit from the accommodations are better able to use the facilities and, therefore, more likely to patronize the business. These include people like 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 accommodations for persons with disabilities are individuals who have temporary injuries, or are weakened from sicknesses. These are not classified as disabilities, and, therefore, not included in the 43 million beneficiaries figure. People who have their hands and arms full of packages benefit more from easily operated hardware and lighter force door closers and, of course, many elderly people will benefit from the accommodations made for persons with disabilities, even though they may not be technically classified as persons with disabilities.

The fourth major motivating factor behind making accommodations for persons with disabilities is the desire to do what is "right". These are the companies who believe "what goes around comes around" and who are willing to follow their instincts even when pure justification for their actions can't be shown beforehand. This motivating attitude is most prevalent in very profitable organizations, but it also appeared in organization where focus on employees and clients is at a high level, or where a key individual has close contact with someone with a disability.

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 standard 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.

Regarding the first type of comparison, what is the cost of accessible retrofitting compared with original construction costs, the estimates range from 0.12 per cent to 0.5 per cent. The other comparisons, how much more it would have cost, if the structures had been designed without barriers right from the beginning, range from 0.006% in the case of the shopping centres to 0.13% in the case of the college classroom.

In Singapore in 1980 the Singapore Urban Redevelopment Authority conducted a similar study by making cost comparison for a large center consisting of commercial offices, multi-storey car park, food center and 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 regards to a multi-family housing, a French study estimated the additional costs for bringing up multi-family housing to accessibility standard, on an average, ranged from between 0.5 and 1.0 per cent of total construction costs in new construction. The Swedish Building Research has 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). Phillipen (1993) a study in Germany on multi-family housing 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. 9 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 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. Dunn (1993) in his study of "Project Open House" reported, an average of only $1,500 was spent in 1986 to adapt existing homes of consumers to make them accessible. He also refers to a US study by 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 are less than 1 per cent of the total constructions costs.

In the United States, different studies by U.S. Housing and Urban Development (HUD) have estimated the costs of "adaptable" housing, which is a housing with basic access features that easily can be complemented by individuals as needed. The findings were about one-half of one per cent of new construction costs. In the same vein, 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 up 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, D. (1977), examined the costs and benefits of implementing Section 504 of the 1973 Rehabilitation Act. The Act prohibits discrimination against persons with disabilities, and advocate for more programmes in accessibility, plus the provision of elementary and secondary education. In all cases, results showed that pecuniary benefits provide substantial offsets to the pecuniary costs involved. Even if non-pecuniary benefits are excluded, the cost-benefit results favor 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 costs and benefits of existing law.

A study on the expected benefits from 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). Examples for safe environment are ramps rather than steps, elevators instead of staircases. According to the World Health Organization (1987) "accidents cause more deaths than any single illness, except cancer and cardiovascular disease". The number of accidents due to stairs and the associated costs to society can be and has been estimated. Another tangible benefit was the increase in housing quality that most access features entail. For example, elevators, wider doors and hallways, kitchens and bathrooms are also quality increasing features that the housing market values in the form of higher rent or property prices.

Among other tangible benefits is the decreased demand for institutional residential living on the part of many older persons who often are forced to leave their own inaccessible dwellings and move to nursing homes or old age homes. Given an accessible environment in their previous home, many of them are strongly believe 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 center for the aged in Boston were capable of functioning in the community with appropriate supports 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. In places where such services are provided, not by the state, but by the family, a non-handicapping environment results in less work for the relatives; often the daughters or wives who will have better opportunities on the labour market outside the home that resulted in higher production and gains to the national economy. Other benefits are more difficult to quantify such as the improvement in persons' with disabilities freedom of movement and social mobility. 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 equally 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 peoples.
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, 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 Datel (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 the 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 Datel´s results were organized in term of 12 patient categories. Their findings indicated that the 10-year projected benefits exceeded 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 the community care was superior.

Costs of Disabling Built environment

In Stockholm, a study in the costs of disabling environment was conducted, and the following was uncovered. Installing an elevator in a three or four story apartment house 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, studies 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 reported similar benefits. For example, a cost-benefit study undertaken by the U.S. Department of Housing and Urban Development, estimated that adapting 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 national demonstration home repair and housing adaptation program felt that these services enable 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 1970's were capable of functioning in the community with appropriate supports and accessible housing. An evaluation of "Project Open House", a program that adapts 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 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 (Bartelle Memorial Institute, 1977). 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, E. (1986), a study on the economic incentive of elevators 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 the landlords and private individuals, it may not always be economically 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 least possible delay, so that vendors and purchasers 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. Scope for export business may open up in due course, he concluded.

Hall, E. (1989), analysis contained case of studies of three types of residential structures: high-rise apartment, garden apartment 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, the author employed a simple proxy. Benefits are taken to be market value of personal assistance that individuals are able to provide for themselves due to the absence of architectural barriers. An estimate of the value of personal care is obtained by subtracting the average rent in residential institutions with no personal services to tenant from average rent in residential institution, which provide such services. However, the study has received a lot of criticism from both academicians and the persons with disabilities themselves. For example, one criticism points out that the differences in cost between the two types of facilities seem a rather indirect indication of effect of accessibility. Hence, both types of institutions are usually housed in accessible structures. Thus, the differences in the level of services required cannot be due to architectural characteristics, it is rather a function of the physical and mental condition of the respective clienteles.

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 is in the order of $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, K. (1997), a study of the economic benefits of increased accessibility of electronic and information technology to Americans with disabilities made some revelations. 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 federal worker's productivity as a member of work-group or team, to determine the benefits derived from the standard. Each method assumes that a net gain in the productivity of the federal workers will be generated by the increased accessibility of electronic and information technology.
Improve access to electronic and technology increases the productivity of the Federal workers with disability, modeled as percentage increase of the average Federal wage for that worker. Although the Federal worker with disabilities typically have 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 1998 OPM data. This assumption was chosen to recognize that greater productivity by one member of Federal team (the worker with disability) leads for a greater productivity for the entire group. The analysis models this spillage effect by applying the percentage increase in productivity to the higher, average Federal wage rate. The dollar of this increase in productivity was calculated by multiplying the average Federal wage by the estimated increase in productivity and then by the number of workers with disabilities in the Federal force. The analysis used two estimates of the number of workers with targeted disabilities to provide a range of potential benefits. The lower bound is the number of workers with targeted disabilities. This data may understate an actual increase in productivity due to some limitations, the author acknowledged. As shown in the table below captioned the standard is projected to increase the value of government outputs by a conservative lower bound estimate of $62.8 million to $125.7 million per year. Considering all the workers with reported disability, the benefits are estimated to range from $375.7 million to $751.3 million.

In concluding his report, the author enumerated his principal findings as: "The primary beneficiaries of the standards are federal employees with disabilities who will have an increase ability to use the same electronic and information technology available to other federal employees. The universal accessibility features will also make it easier for employees with disabilities to change between jobs in the federal government, and may make it possible to work more flexibly in existing positions."

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 increase usability of electronic and information technology associated with disability. For example, the ability to increase 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 very essential in economic decisions have also been conducted. Kern & James (1994) in their study of the pattern of participation of the persons with disabilities in leisure and recreation depicted the following patterns. The pattern of participation in outdoors 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 participation than persons without disabilities. However, in the youngest and oldest age groups, persons with disabilities participate, at rates equal to or greater than persons without disabilities. In nature study activities, persons with disabilities participate at rates higher than persons without disabilities. Although most persons with disabilities reported experiencing few barriers to outdoor recreation, majority of the complainants associated barriers such as problems with their health conditions and physical limitations. Most persons with disabilities did not report needing accommodations or assistive devices for participation in outdoor recreation. Among those requiring assistance, the most common assistive devices/accommodations were mobility aids, a companion/assistant, and architectural modification.

Attitudes towards accessibility seem to indicate that persons with disabilities generally felt that no outdoor recreation should be completely inaccessible, however concord that more primitive areas will be generally less accessible than less primitive areas. In addition, persons with disabilities tended to favour preservation of 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 persons with disabilities.

Sproates, J. (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 removal.

Adventure activities

Adventure activities showed the lowest rate of participation between both persons with and without disabilities. The relative participation was similar across both groups regardless of whether age-average or total participation rates are used. For example, primitive camping had the highest rates of participation for both groups and orienteering had the lowest participation rates. In all activities in this category, the average rate of participation indicated that persons with disabilities participate at higher rates than persons without disabilities. In contrast, total participation rates reflected the opposite pattern, where persons with disabilities participated at higher rates than persons without disabilities.

Watercraft activities

Power boating was one of the most popular for both persons with and without disabilities. Approximately, one-quarter of all persons with disabilities had participated in power boating in the last 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 was 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 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

Macy, M. (1998), in his study regarding strategies in hotel services for senior/elderly, found the principal marketing tool employed to attract the senior clienteles 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, have gone further to modify their structures and amenities to specific senior needs. Other 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 leisure-oriented clienteles, come to realize that special efforts will be needed to compete in this fast growing market segment.

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

Accessibility from the Social Perspective

Culture/historical activities

Cultural and historical activities were among the most frequently reported activities by both groups. Slightly less than half of all respondents had visited a historical site, and approximately one-third had attended concert in the past 12 months. Visitations to archaeological sites showed a lower rate of participation; however, approximately one-fifth of all respondents have visited an archaeological site. In order to obtain a clearer picture of differences in participation rates, participation differences in visiting historical places and attending concerts were compared and the overall results is, in the youngest and the oldest age categories, persons with disabilities had higher rates of participation than persons without disabilities, however, in the age categories these differences were either no real difference, or persons without disabilities participated at higher rates than persons with disabilities.

His conclusions in summary are, the presence of disability does not appear to have consistent relationship to rate of participation in outdoor activities. However, age was noted as a confounding variable in this relationship. Virtually in all activities, young persons participated at a higher rate than

older persons regardless of ability. When age factored into the examination, a general pattern does tend to emerge. At the youngest and oldest age categories, persons with disabilities appear to participate at higher rates than persons without disabilities. In contrast in the middle age categories, persons without disabilities tend to show higher participation than persons with disabilities, however, the magnitude of difference is usually 1-5 per cent.

Accessibility Design Standard, under the auspices of America with Disabilities Act (ADA) in 1993, 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 sites accessibilities. The findings were:

Guest room door: doors and doorways into and within all quest 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 quests without disabilities can take for granted (e.g. rooms with one or more beds, suites, etc.). 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, people who are deaf or hard of hearing 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 methology

The population, sample and sampling

The study concentrated on sites within and around Stockholm city. Stockholm 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 are some evidences that seem to disagree with the foregoing political statement. The principal interest of this study is not for the verifications of such a political statement but rather to investigate the economic gains of making the physically built environment accessible to persons with disabilities.

Sampling and sample size

Probability sampling in the form of a simple random sampling, where each site had equal probability of selection was adopted. Random selection eliminates subjective bias in the selection process. The sample size constituted of 34 accessible tourist sites in Stockholm and environment.
The collection of qualitative data relied on three methods:

1) In-depth, open – it was adopted for two reasons: first, it enabled exploration of first hand encounters (Yin, 1994) and second, it allowed the researcher to counter-check information provided on the spot through follow up questions or request for clarification.
2) Open-ended questions were deployed as a means of getting an overview of the operation and essence of barrier-free tourism sites from owners and managers of sites/agents. Robson, (1993) recommends this method for investigating a particular phenomenon as it allows peoples' views and feelings to emerge during discussion.
3) Participant observation, as a method of data collection was also employed. Basically this method was adopted to understand ongoing social processes, physical features etc., which may otherwise be difficult to gather from interviews. It enables the researcher to discover interrelationships of elements of the research, which cannot be figured out when interviews are being, conducted (Robson, 1993). As such observation method was used to undertake physical evaluation of the surrounding environment. The said method was also used as a check mechanism.

Research tools

In order to realize the objectives of the research study, the study was guided by the following research question:

What are the main economic incentives for adapting sites to barrier-free? Valuation methods

There are different techniques to measure the financial attractiveness of any financial endeavour. For example, the return on investment, net present value, pays back period, break-even point, internal rate of return, etc. However, I have chosen to look at it from a general perspective focusing more on initiatives taken (e.g. construction of accessible rooms) to make enterprises both accessible and be able to cater for the needs of customers with disability 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 are insignificant.

Since there are different levels of accessibilities even within the mobility impairment domain, there is a need for more precision. Therefore, the level of accessibility focused on in this study, was the level of accessibility approved by the " Equality for all", (an international European based organization) that promotes tourism for all which, amongst other things, is charge with the responsibilities of accessing levels of accessibilities in various Europeans hotels. Thus, my criterion of determining accessibilities was solely based on the criteria used by this organization in approving hotels accessibilities. This was very important to adopt for the study because it was conducted in hotels approved accessible by the said institution. Since approval of accessibilities was based on being accessible to all categories of persons with disabilities, and my study focused on accessibility for wheelchair users assumed that all expenses were geared towards access for my target group. This was necessary because it was both time and resources demanding to single out expenses purposefully for my focus group and it was rather unfortunate

that the needed financial and human resources were well beyond my reach. Therefore, all necessary data for the study was obtained from the hotels in Stockholm city and environs approved as accessible by "Equality for all". To ascertain the validity of the data especially the expenses in modifications, consultant firms specialized in adapting built environment were consulted.

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

Quantitative method

Data collection was by means of a questionnaire completed by tourist sites 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 plus, what motivated them to visit or book the place, if possible.

Qualitative method

Qualitative approach is commonly deployed to understand the meaning, process or views of a particular event or group with the researcher being at the center of the study as an instrument of data collection and analysis (Merriam, 1988; Strauss, 1987). It allows the researcher to get closer to what is being studied and share the understanding and perception of others (Shatzman & Strauss, 1973). Qualitative procedures are said to be invaluable in accessing no quantifiable facts (Berg, 1998). This was very crucial for an emerging subject area like the economic incentives of non-handicapping built environment. Bearing in mind, this area being not much researched, one was bound to be confronted with limited information.

The said qualitative method was specifically adopted to explore general public views with regard to the economic benefits of non-handicapping tourism sites. More especially, their perception of the societal benefits from it

Data presentation and data analyzis

Data analysis method

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

Percentage (%) are the favourite here because among other things they are easier to read and interpret, easier to note the magnitude of the phenomenon via the comparison of the presented data reduces explanatory and descriptive statements and above all facilitate the summation of items and detection of errors and omissions.

Data presentation and analysis

A number of 34 accessible tourist sites in Stockholm and environs were approached, large and small 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 below table.

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

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

1) The questionnaire never reached the people it was meant for completion (misplaced en-route).
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 regards 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 basis for judgment. A level of 70%, which is consider 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 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.

Research findings and findings discussions

Research findings

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 global 46% (12) form the majority of the customers followed by Europe 42% (11) while America, Asia and Africa captured 4%(1) respectively.

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 clienteles. "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 for accessible tourism sites), 86% (19) responded in the affirmative while14 % (3) claimed not. In a related question as to how they became aware of it,

conference/seminar with 60% (24) appeared as the major source followed by other means 30% (12) personal contacts, 5% (2) newspaper and television adverts respectively.

Attitudes towards disability and persons with disabilities

Tourism, dating way back in history, has 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 third world, however, tourist sites are still places purely reserved for the foreign visitors and the few affluent members of the society. Therefore, with the deeply rooted but ill-conceived perceptions of disability and persons with disabilities, rarely, if ever, indigenous persons with disabilities are allowed within the premises of tourist sites. In reacting to whether it is necessary to the tourist industry accessible, all responded n the affirmative.

In a follow up question with regards to the most important factor for making the facilities accessible, 45% (10) respondents subscribed to good business as the most important factor for accessible tourism while 41% (9) human right and 14% (3) were unable to lay the cutting between good business sense and human rights.

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 8 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 being accessible.

Number of rooms and occupancy rate

In commenting on whether they have experience any downward fluctuation in their accessible rooms since the beginning of operation, the vast majority 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 increase in demand, 19% (5) meeting international hotel standards and 27 % (7) following government laws. Of direct relevance to increase in demand is occupancy rate of the accessible rooms which majority claimed to experience some increment 27% (6) 35% increment, 23% (5) 50% increment, 14% (3) 75% increment, 27% decided not to share their experiences.

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 respectively. 9% (2) 30% impact, 5% (1), and 36% (8) don't want to share their experiences. With regards to any future plan of increasing the extra charges levy on the accessible rooms especially for customers without disabilities, 64 % (14) claimed to have no plan, 23% (5) claimed 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, and as such, 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) do not. For those marketing the rooms, brochures and the Internet 29% (9) respectively are the leading strategies, followed by logo display 26% (8) and 16 % (5) print media. While those yet to be engaged in any marketing, 9 % (2) claimed to have a plan of doing so in the near future.

Accessible society

Advocate for accessible built environment (e.g. disabled persons' organizations, universal design institutions, sympathizers, etc.), strongly hold on to the belief that 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, more especially, when vacant.

Constraints

The difficulties in the attainment of accessible built environment is not only associated with some social issues (e.g. negative attitudes, misconceived beliefs that it affects the beauty of the structure, being complex, toothless laws etc.), but with some economic matters too, such as, being too expensive, scarcity of finances, not economically viable etc. "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. : Level thinking: the key to inclusive environment. In reacting to any financial losses incurred during 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 have had any problem, 23% (5) have had some. For those have had some problems, lack of experts 57% (4) and many expenses 43% (3) appeared as the major constraints.

Research findings discussions

To analysis 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 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 has been through conference/seminars, one can hypothesize a major move of financial and human resources when the market comes on the spotlight of the mass media as revealed by some studies.

Goerne, K. (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, p. B10).

In the same vein without hesitation, one can also anticipate an increase in the willingness of persons with disabilities to take venture into the industry not only because sites will be competing in providing the best services but also the big role that mass media play in the establishment and reinforcement of what is acceptable. Hahn, R. (1987, p.562) for example, points out that advertising promotes 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 toward disabilities and persons with disabilities

The results revealed a degree positive attitudinal changes towards persons with disabilities in a market, that is, presume to be purely catering for the so call "cream of the society" i.e. members of the diplomatic missions, business community, intellectuals, celebrities, just to name a few. This is a big change and deserve 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" program (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".

A National Easter Seals Society Executive in the United States, in the mid-1970s, 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, Dec. 19, p. B10). Nevertheless, by 1992 the same Easter Seals spokesperson, praised companies like K Mart when they began a new television advertisement campaign using wheelchair-using an actress to portray a customer.

To some extent, the above scenarios are a result of the unnecessary emphasis societies 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 the persons with disabilities community, but also, the entire business society since it is a clear manifestation of the recognition of person 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 Dec. 15, p. B1, 2).

Carmen Jones of EKA Marketing (1997:4), "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 learned, due to their desire for profits, to move away from the past pity narratives of charity, economic powerlessness, ignorance since business like any other activity cannot be expected to take place without some sort of trust, confidence, etc., which without much emphasis, rest 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 Spt. 14, p. 33), "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."
*"*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", Barhon, K. (1997). What is both interesting and worth noting from the results, as 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, more 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 researcher Burnett and Paul, advocate that trying to attract customers with disabilities help 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 reasons 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, 200,p. 10).

Type of customers with disabilities welcome and means of accommodation

Findings revealed 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, motor impairment being one. On the other hand with increase in life expectancy, as a result efficient and adequate health care system, a large segment of the population is becoming older, and the possibilities of hearing, vision impairment, etc., are eminent. Therefore, rendering one to 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, if the scenario continues unchecked; a new market within the same market bracket will ultimately emerge, requesting a step backward by both the advocates of accessible tourism and facilities 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. With 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, off-limits. As such, 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 have been in the past, and today, as reiterated by Kate, H. (1997) 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 called the Americans with Disability Act a mandate for marketers to begin to recognise the formerly invisible persons with disabilities market Stephens and Bergman, (1995:14).

Rooms and occupancy rate

The results show a huge increase in the number of accessible rooms, with increase in demand as the predominant factor, behind it reckoning to some extent with, following findings:
Quinn, (1995) for example, the hotel chain Embassy Suites, found out that becoming sensitive to the needs of customers with disabilities leads to more business. In a similar study, done in the preparation for the 1996 Atlanta Para Olympics, illustrated that both households with (49%) and without disabled person (35%), highly value good and integral provision 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 accord with increase in demand as the principal force. However, in the absence of an inquiry into the total number of rooms in each hotel, leave a lone 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, empirical analysis at a minimum, communicates a positive trend or gain.

With following government laws scoring the lowest responses, findings seem to be supporting the strong body of opinion that accede 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*)*

"Those of us in the non-profit world have tried for years to change the way persons with disabilities are perceived," Sandra Gordon of Easter Seals said. "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 . . .", Roberts and Miller, (1992, p. 40).

"If we want to see a stronger enforcement of disability rights laws, if we want to see a greater economic opportunities, funding for home and community based services and assistive technology, education, health… for persons with disability, we need to get organised and make our presence felt in the marketplace and polling stations", Dickson, J. Chairperson of American Association of people with Disability: www.aapd-dc.org.

Marketing activities

Apparent from the results is that a vast 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 other markets alike. 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 deplored and the accessible rooms' occupancy rate, their impacts on the overall facilities occupancy rate and even their increase in the number. Therefore, indirectly, it is showing the impact of some unobserved variables, namely, safety and security, workers dedication and attitudes, proximity to other accessible infrastructures, supportive services, etc.

Akin (1998), 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 inclusive society perspective: "As anyone with disability can tell you, it takes more than a job to enter the work force. Often, it takes successful transportation, specialized technology or personal assistance," Clinton, (1999).

Constraints

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

Conclusions

To determine the potential economic impacts, by making the built environment accessible to persons with disabilities, this study has analyzed five areas of relevance within the tourist industry in Stockholm city and its environs. In summary, both the review and analysis revealed 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 with some more efforts by hoteliers, tour operators, advocates, etc. in both sensitizing the business society and the persons with disabilities community, there is a lot more to reap.

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