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Theoretical
article

PROMOTING EQUALITY THROUGH ASSISTIVE TECHNOLOGIES, A SOCIOECONOMIC PERSPECTIVE

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Abstract

The aim of the proposed paper is to identify a possible cost benefit evaluation of assistive technologies in the context of promoting equal opportunities in life. Equal opportunities represent more than just ensuring an equitable framework for all individuals; equality represents recognition and respect for all individuals no matter the differences among us. The paper debates the issues of equality in the context of assistive technologies advance. The use of assistive technology was found to be predictive of enjoyment of human rights and increased capabilities for those with special needs.

Because promoting equality among individuals necessitates more than doing nothing it is obvious that we should think of evaluating the costs and the benefits of such actions taking into consideration socio and economic aspects. The topic has a novelty and an applicability character mostly for our country.

1. Equality of chances

Equal opportunities in the context of the XXI century represent a normative requirement. The context of economic crises that it is been following us for several years now implies centering our attention as economists towards diminishing costs and increase economic welfare. Society's welfare and civil rights empowerment obligate us to act in a spirit of ensuring equality among individuals. Natural free conditions for every one of us to act behave and live no matter physical differences, race gender or religion. European strategy "Europe 2020" underlines the importance of equality and mutual respect in the context of increased economic competitiveness of citizens.

In this context such a topic of equal opportunities becomes more a mandatory requirement. The new context of obvious scarce resources and complexity -diversity of needs implies finding and promoting all necessary means to improve people's life. The economic impact of strategic decision in a context of budget constraints, austerity and cutting funds is directly felt by all of us and more than that by people with disabilities. There is more than ample evidence to suggest a strong relationship between disability and economic and social disadvantage.

In the economic and real context today many international institutions have drawn the attention on the current aging population trend. Within this context it is more than necessary to stimulate and encourage economic activity amongst all those who are willing and able to work, parents, grandparents and disabilities persons.

Equal opportunities in life especially for disabilities individuals necessitate much more effort from authorities and in equal measure from society in general. We believe that a disability person it is not necessarily a person with physical or mental deficit but the sum of all difficulties that an individual meets and could affect a normal development in society in general.

The subject of the present paper is extremely challenging and complex because speaking of equal opportunities among healthy individuals it is very hard to achieve, hard to define and also hard to quantify. More than that speaking of equal opportunities in the context of disabilities individuals it is even more complex.

The aim of the present paper is to try to harmonize in direct manner concepts like: equality of chances, assistive technologies and economic aspects. A disability in general it is directly correlated to a greater effort for society, authorities, families and individuals and because economic aspects in this situation play an important role we could not neglect them.

2. The role of assistive technologies in promoting equality of chances

Technological advance, research and human progress allow nowadays integration of disabilities individuals in labor market. Information technology, assisted distance learning and teleworking are just a few solutions for a natural integration of disabilities individuals in current and social life.

According to Electronic and Information Technology Standards, Assistive technology (AT) refers to any item, piece of equipment, or system, whether acquired commercially, modified, or customized, that is commonly used to increase, maintain, or improve functional capabilities of individuals with disabilities. Given that the spectrum of disabilities varies widely in type and severity, AT encompasses an enormous range of devices, including mobility aids (wheelchairs, canes, and walkers), augmentative communication devices (voice synthesizers and communication boards), prosthetic and orthotic devices, and a myriad of adaptive computer equipment. B. O'Day and P. Corcoran (1994) synthesize that AT can be "low-tech" (a cup-holder for a wheelchair tray) or "high-tech"(brain-computer interfaces for communication and environmental control).

There is a lack of information in the public domain about the potential benefits and consequently a natural apprehension for service users on using and trusting assistive technology. Nowadays we use technology to manage our day-to-day lives, so it seems more than reasonable that we should use it to manage health and social care.

Although there are clearly recognized the novelty and substantial benefits of these technologies and the plus that bring disabilities individuals lives, there is very little information about their impact on equal opportunities.

In specialized literature authors believe that much concern has to be drawn on social impact of such technologies. It is more than clear that promoting assistive technologies improves individual life and also improves the state of equality among individuals. People who are willing to work, to have a social life to enjoy all natural activities and are unable to participate in them because one or other disability thus not allow them, have this opportunity now. The use of assistive technologies by disabilities individuals could have as effect economic and social breakthrough. Increased self esteem, courage, motivation, independence, quality of life are just some of benefits from using AT.

The economic perspective in this context shadows free choice possibilities of disabilities. Not infrequently these persons confront with economic and social barriers that are not exactly negligible. In Table 1 we identified and categorized those barriers by source and impact.

The sum of all social and economical barriers it only stigmatizes, inhibit and glass ceiling any good will and motivation from disabilities individuals.

Such behaviors have serious repercussions in the economic field, disabilities individuals having to live on small incomes or with the help of social security or from there families income (as seen in Figure 1).

The situation it is not benefiting anyone because we must say that is a vicious circle in which individuals are captive. Lack of financial resources causes neglecting own health, reduced access to assistive technologies that help and improve there lives and eventually aggravation of sickness. Health problems causes more dependence on social security and low possibilities to provide for themselves so disabilities individuals become more and more dependent on what the state could give them.

3. A socioeconomic perspective of equal opportunities in the context of assistive technologies

Disabilities individuals are significantly more likely than non-disabled people to be unemployed and economically inactive (Thornton, 2005). Rigg (2005) found that the median annual growth in earnings was 1.4% lower for disabled men and 0.6% lower for disabled women compared to their non-disabled counterparts. Disabilities people are also considered as being more likely to exit work much soon than non-disabilities individuals.

Miller, Gillinson, Huber (2006), refer to all disabilities people having the same choice, control and freedom as any other citizen – at home, at work, and as members of the community. This does not necessarily mean disabilities people doing everything for themselves' but it do mean that any practical assistance people need should be based on their own choices and aspirations'.

Hurstfield , Parashar Uand, Schofield (2007) believe that "a more continuous cost would be the additional practical, financial and emotional support services that would have to be made available for individuals to enable them to take responsibility for their own care package. Disabled and older people, and their relatives, will require information and education on managing the resources allocated to them and, in some cases, acting as employers". Also disabilities individuals usually confront with the situation of employing personal assistants and/or purchasing services and therefore have to face a service cost.

In general speaking costs and benefits of promoting equality for disabilities persons include: support, welfare benefits and taxes, social inclusion and exclusion.

The costs of not respecting equality of opportunities in the context of assistive technologies could be manly directly and indirectly

correlated with technologies. We underline the presence of only a small number of producers for such technologies in the market and therefore absence of competitiveness and presence of high prices.

Another cost directly related to access to assistive technologies is related to the absence or under financing of such technologies which make them to be generally very expensive, the costs of their research and development is often overwhelming. Another directly related cost with these technologies it is the disproportionality between supply and demand for such devices, the demand is much higher than supply and therefore the price for such technologies is substantial. Besides those directly identified and evaluated costs from an accountant point of view we can also enumerate economic costs, with time to identify necessary technology and producer in the market, opportunity costs, tradeoffs between an increase in individual standard of life and decrease of family standard of living .

An important problem in identifying exactly the costs and benefits necessary for this analysis represent the lack of macroeconomic data that could be attributed to the argument that disability benefits are transfer payments and hence redistributive costs. Such opinion practically states that rather than seeing them as an investment those costs are actually measurable economic benefits (Hurstfield J, Parashar Uand Schofield K, 2007).

As early 1970 Berkowitz and Johnson (1970), have tried to estimate costs associated with disability. Theoretically speaking, these costs must include both losses in tax receipts, extra transfers towards disability benefits for the exchequer, lower incomes for disabled people, out of pocket expenses or direct additional costs of disability as well as the social and psychological costs. However, in reality it is difficult to estimate all these costs.

Given the capacity of AT to improve quality of life independence, and economic productivity, providing individuals with the financial means to purchase assistive devices could be economically sensible. (Li, Sellers, 2009)

As for identified benefits we can enumerate: higher self- esteem, capacity to earn own money, some independence, wage gains, aggregate cost savings and improved control over resources.

There are, ongoing efforts to test out approaches that attribute monetary values to these qualitative aspects (Burge, P, Gallo F and Netten A, 2006) and to address the methodological issues of valuing benefits and outcomes from social care programmes (Netten, A., Forder, J. and Shapiro, J. 2006). In addition, the availability of data varied according to the type of costs. Data on the costs of specific aspects of care, for example, informal care, cost variations by setting and types of assistance were extensive, especially at the individual level

(Tibble, 2005; Smith et al, 2004; Burchardt and Zaidi, 2003).

A report by the Social Exclusion Unit (2006) has provided an estimate of the cost to the economy from the relatively lower employment rate of older workers, including older disabled people. The study put the cost to the economy at £19-£31 billion a year in lost output and taxes and increased social payments. It also pointed to the cost to employers who are potentially losing out on skilled workers. The report argues that reduced spending on intensive services, including health services, is among the benefits of increasing participation in society for older people.

It is even more difficult to evaluate the benefits in the case of interventions targeted at disabilities people. The economical benefits are more visible but due to the tricky nature of assessing improved quality of life or health status of such individuals social benefits are more hidden. In this context state assistance it is rather seen as a transfer payment with no immediate social benefits.

Macroeconomic benefits associated with the use of assistive technology refer to earnings due to higher labor force participation, total cost savings, scale economies through special support, control over resources. Besides economic benefits of stricto sensu economic nature we can identify welfare benefits as motivation, confidence and independence in activities, increased participation in social life. The benefits of such technologies are perhaps more difficult to quantify but in terms of human impact are more directly.

As a general conclusion we must say that the support which "society provides to disabilities people is generally not appropriate or fitted to the person, including service provision that is unduly bureaucratic and fragmented across delivery agencies". (Hurstfield J, Parashar Uand Schofield K 2007)

Trying to summarize the issues discussed in this paper and in special literature generally we can say that the policies and practices do not pay enough attention to enabling disabled people to be active citizens.. Also in the literature although there are concerns to identify costs and benefits of promoting equal opportunities for disabilities individuals a common way hasn't been found until now. Studies presented and also our own opinions reflect the complexity of such approach. The role of technological advances, specific tools and assistive technologies is particularly important for ensuring a normal developing environment for all individuals, including those with disabilities. We must emphasize that in the context of economic crisis we are facing, social issues are becoming increasingly negligible, people are getting more pressed by their own problems and difficulties and forget to think

and behave as humans. For disabilities individuals such behavior is more than harmful.

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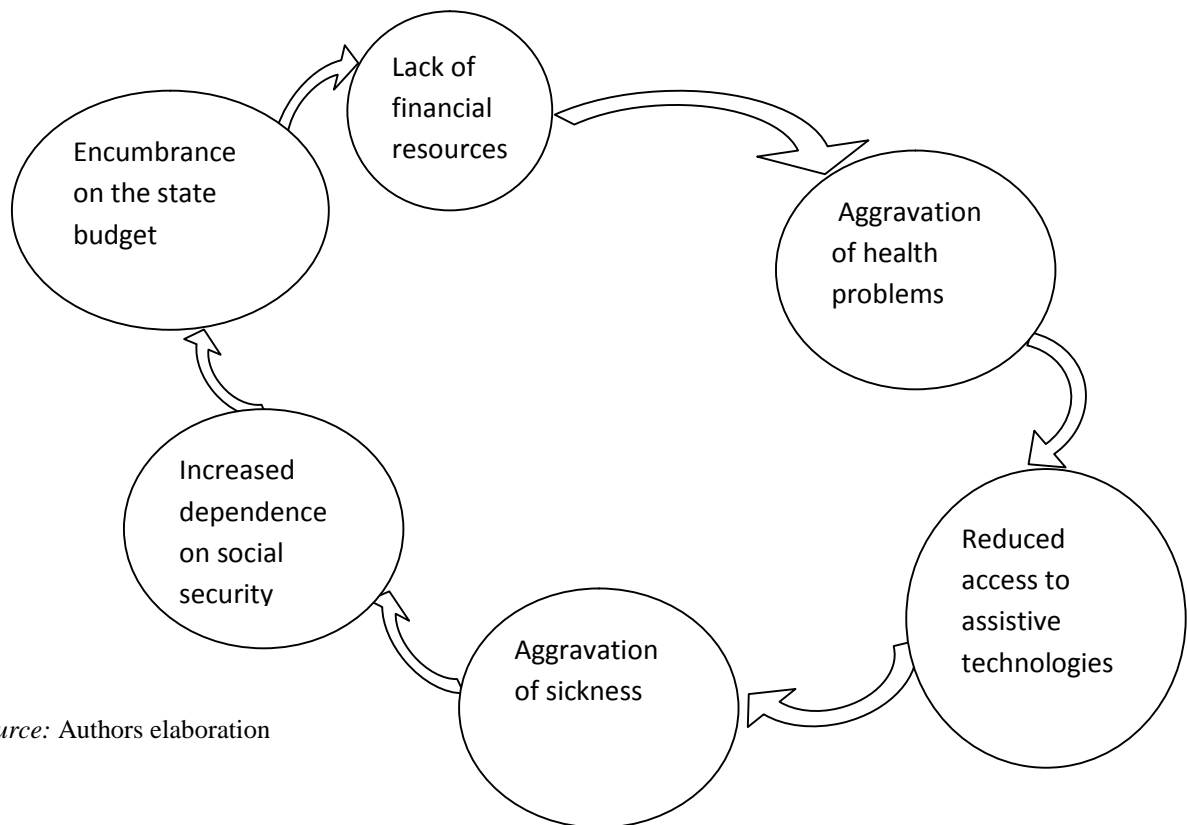
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Matrix of direct and indirect, social and economical barriers

<i>Source</i>	<i>Economic barriers</i>	<i>Social barriers</i>	
<i>Impact</i>	<i>Direct</i>	<ol style="list-style-type: none"> 1. <i>employment barriers</i> 2. <i>no adapted work spaces</i> 3. <i>scarcity</i> 	<ol style="list-style-type: none"> a. <i>mentalities,</i> b. <i>ill will,</i> c. <i>contemptuous attitudes,</i> d. <i>discrimination</i> e. <i>preconceived opinions</i> f. <i>humiliations</i> g. <i>inappropriate behavior</i>
		<ol style="list-style-type: none"> 4. <i>limited transportation possibilities</i> 5. <i>no material and specialized support</i> 6. <i>lack of infrastructure in general</i> 	<ol style="list-style-type: none"> h. <i>petty curiosity</i> i. <i>no moral support</i> j. <i>embarrassing situations,</i> k. <i>misunderstanding,</i> l. <i>lack of patience</i>
	<i>Indirect</i>		

Source: Authors elaboration

Figure No. 1. The vicious circle of confinement for people with disabilities



Source: Authors elaboration

