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Deliverable: 5.2.1

Social, cultural and legal challenges of agro-tourism related enterprises of disabled people in the CB area (Greek Part)

PROJECT: Social agri-entrepreneurship for people with disabilities in the crossborder area

AGRI-ABILITY

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(Προκλήσεις επιχειρήσεων του αγροτοτουριστικού τομέα για ΑμΕΑ)
In the frame of the project :Social agri-entrepreneurship for people with disabilities in the cross border area



AgriEnt

Preface

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Foreword

This document provides all related information and description of the methods, means, tools and practical guidelines regarding the engagement of disabled people in agritourism practises. It describes the current situation in agritourism and the the legal and social framework for disabled people and maps the relative laws. In addition, suggest possible solutions for their engagement in agritourism business



Executive Summary

The project aims at the engagement of disabled people in agricultural and rural entrepreneurship. It includes a toolbox that may support a broad range of social enterprises (SE), trainings, ready to use business templates for SE, on-line incubator of SE as one-stop-shop of support, entrepreneurship tools for disabled people, entrepreneurship guidelines, funding opportunities manual, business plans development guide, marketing, promotion and management manual, improvement of practical knowledge and skills, through field labs of capacity building in agriculture/gardening, in agro-tourism and outdoor sporting activities in coastal and inland areas.

1. AGRITOURISM AND FARM SERVICES



Agritourism is a form of alternative to mass tourism based on sustainability, preservation of culture, heritage and traditions in rural areas and has many dimensions: education, accommodation, heritage,

food, health, trade, recreation, etc. It comprises all forms of tourism in which tourists visit farms, eventually stay in them, and experience farming and various forms. Agritourism aims bringing the visitor in touch with the natural environment, agricultural activities, local products, and a community's lifestyle, while at the same time contributing to the host area economic stability. Agritourism is not a phenomenon exclusive in Europe but is flourishing in many parts of the world, as tourists increasingly demand unspoiled destinations and personalized services in a natural environment. refers to any activity, enterprise or business that links agriculture with products, services and experiences in tourism, and there are a couple of constant characteristics: the contact with agricultural activity and the search for authenticity by the tourists. Its relevance is recognized as is an activity supported by European Commission in many ways.

1.1 Definitions

Tourism: "Tourism is a social, cultural and economic phenomenon which entails the movement of people to countries or places outside their usual environment for personal or business/professional purposes. These people are called visitors (which may be either tourists or excursionists; residents or non-residents) and tourism has to do with their activities, some of which imply tourism expenditure." **Sustainable tourism:** "Tourism that takes full account of its current and future economic, social

and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities

“Rural tourism regards the activities of a person travelling and staying in rural areas (without mass tourism) other than those of their usual environment for less than one consecutive year for leisure, business and other purposes (excluding the exercise of an activity remunerated from within the place visited)”. (Eurostat 1998 Community Methodology on Tourism Statistics, European Commission).

1.2 Agritourism or Agritourism:

Agritourism has received research attention by many academics but a comprehensive examination of the existing literature reveals that there is no universal definition of



this type of tourism. Even though, there are many available definitions of agritourism based on a variety of characteristics, there is a relative consistency in the view that the term comprises a wide range of on-farm activities that are offered to the public for educational or recreational purposes. The United States Department of Agriculture, Natural Resources Conservation Service (2004) defines agritourism as “inviting the public onto a farm or ranch to participate in various activities and enjoy an agricultural experience”. According to Niedziolka and Brzozowska, agritourism is “a form of rural tourism which is organized by farmers within the farm limit. It is treated as an additional income for farmers, out of agricultural income”. Also, Hilchey (1993) defines agritourism as “any business conducted by a farmer for the enjoyment or education of the public, to promote the products of the farm and to generate additional farm income”. Che et al. (2005) defines agritourism as “any agricultural operation that caters directly to the general public with retail sales and/or the provision of services involving farm products and conducting sales at the production

location”. Although other definitions exist, the fact remains that tourism and entertainment related farm activities have offered a new diversification enterprise to active farm families. Lacking a formal definition, agritourism can be summarized as anything that connects consumers with the heritage, natural resource or culinary experiences unique to the agricultural industry, or a particular region of the country’s rural areas. For some people it involves any agriculturally based operation or activity that brings visitors to a farm, but it can be specifically a farm stay, or it may include a wide variety of activities, including buying produce direct from a farm stand, picking fruit, feeding animals, etc. Agritourism is a subset of rural tourism that includes resorts, off-site farmers' markets, non-profit agricultural tours, and other leisure and hospitality businesses that attract visitors to the countryside. So agritourism refers to any activity, enterprise or business that links agriculture with products, services and experiences in tourism.

“Agritourism is a form of alternative to mass tourism based on sustainability, preservation of culture, heritage and traditions in rural areas. It comprises all forms of tourism in which tourists visit farms and in rural villages, eventually board in them, and experience farming and various forms of rural life at close hand. It aims at bringing the visitor in touch with the natural environment, agricultural activities, local products, and a community’s lifestyle, while at the same time contributing to the host area economic stability” (AgroTourNet Definitions).

Regardless of the definition, it is important to understand that agritourism is a growing industry that includes the following common aspects:

1. Combines the essential elements of the tourism and agricultural industries,
2. Attracts members of the public to visit agricultural operations
3. Increases farm income
4. Provides recreation, entertainment, and/or educational experiences to visitors.

1.3 Global Trends



Agritourism is not a phenomenon exclusive in Europe, it is a form of niche tourism that is considered a growth industry in many parts of the world, including Europe, Australia, Canada, the United States, the Caribbean, South

America, etc. From a social point of view, it may play a relevant role in gender equality. Women, in many farms, played a key role in agritourism, developing their skills in welcoming, communicating, promoting, establishing a good relationship with the guests, etc.

Agritourism is an international growth sector everywhere. Many destinations are actively working at developing their agritourism products and activities and promoting them as a distinct visitor experience. In Canada, the United States, Europe and Australia agritourism has emerged as a growing component of both agriculture and tourism. Additionally, nature and agricultural based tourism has been identified as the fastest growing segment in travel in the US with a 30% increase in last decade. In some countries like Austria, France, Italy, Switzerland and South East Asia farm-based tourism is reaping millions for farmers. EuroGites, the European Federation for Farm and Village Tourism, offers agritourism experiences from a choice of among 24 countries of Europe.

Until recently, rural development was directly linked to the development of agriculture, which provided employment and generated income for a vast majority of rural population. However, as the agricultural productivity and efficiency of farm employees increased, the structure of rural population started to change; the rate of people working and earning their living mainly in agriculture has gradually declined. Driven by these global trends, agricultural producers worldwide are looking for new opportunities to diversify and add revenue to their businesses. That is why nowadays a growing part of farmers' income is generated by various forms of nonagricultural economic activities, e.g. agritourism (Krzyżanowska, 2011).



The growing popularity of agritourism businesses can be explained by the important potential benefits for both, agricultural operators and public and by the fact that agritourism is seen as a means for enhancing the quality of life and economic viability of rural communities. Agritourism has the ability to increase cash flows to the farms and their surrounding communities, because of the excessive various products demanded by consumers within this sector. Therefore, agritourism today is increasingly recognized as a means of enterprise diversification for most agricultural producers and in most cases, it is developed and adopted by developed farmers, worldwide (Wilson et al, 2006).

Even though, tourism on farms has been recognised as a distinct activity for more than a century in certain parts of Europe and in the world, the term agritourism is a relatively recent phenomenon and it emerged in the late twentieth century. Today, agritourism is an increasingly significant component of rural countryside's and communities in many parts of the world. According to the World Tourism Organization (2011), agritourism is one of the five key strategic directions of a successful global tourism development. There are two major drivers for this growth. Changes to the agricultural sector have forced farmers to seek additional sources of income, of which agritourism is one. At the same time, the rapid industrial development and very dynamic lifestyle of the population are creating the need of new tourist destinations that can offer something more than the common "3 S" patterns (sand, sea, and sun) and deliver original experiences. This has led to growing interest in the rural areas where the needs and requirements of the tourists can be satisfied through the offer of rural and agritourism. Therefore, agritourism is a feature of today's changing countryside's worldwide, since it has been promoted as a policy instrument in many countries; a way to rejuvenate rural and regional economies and to preserve traditional rural societies and landscapes (Busby & Rendle, 2000; Canoves et al., 2004). Governments in different countries and continents have adopted a variety of policies towards farmers and rural landholders. In Europe and North America, there are complex and well-funded programs to preserve farm landscapes and to support farmers and rural communities. Thus, for example, about one-third of all farm businesses in the United Kingdom are now engaged in non-traditional agricultural

enterprises, and farmer involvement in agritourism in France and Italy is even higher (Bernardo et al, 2004).

1.4 Forms of agritourism



Agritourism, internationally, has prevailed in two main forms, based on the type of accommodation, with participation or not, voluntary or not, in agricultural activities: 1) vacation on farms: a reference point for farm

farming where guests participate in agricultural activities. This model is found, mainly in Austria and Germany but is not very popular in Greece. 2) Holidays in rural accommodation (cottages) with bed and breakfast outside urban centers. This model is found mainly in France, Ireland, Britain and Italy. It can be modern, where accommodation is in a hotel or hostel (even outside the farm) and is the most common type in Greece. There is also cooperative accommodation, where accommodation is provided in rural cooperatives, usually run by women.

2. Background and general description of businesses in the agricultural / agri-food, agritourism sector

Tourism is an activity encompassing economy, society and nature. Mass tourism, which is by far the most dominant type, is highly uneven both spatially and economically, with



relatively small diffusion of its economic benefits compared with the high diffusion of its environmental and cultural consequences (Williams 1997). Mass tourists seek

consumable goods and services to intrigue them, without jeopardizing the relaxation they wish to enjoy while being on vacation. On the other hand, local people regard tourism activities, and more specifically mass tourism, as both a threat and an opportunity; a threat due



and local culture and society, and an opportunity because they provide income and employment.

Within this context, alternative tourism offers, or is alleged to offer, quality products and services, puts emphasis on the local character and provides 'authentic' experiences and personal contact between the tourist and the provider of the service. One of the forms of alternative tourism is rural tourism and more specifically agritourism. Agritourism refers to specific places, and its activities are linked with certain local traditions and landscapes; apart from local orientation to production, consumption is also kept local. Therefore, even if expenditures per capita from agritourism are lower than those of other types of tourism, the local character of production and consumption, at least in theory, offers higher added value locally. Other attributes of the local character and the associated added value of agritourism are networks and synergies among farms with which other enterprises and professionals in the area are involved. However, agritourism should not be regarded as the only solution to rural development problems, because—as it is a seasonal and complementary activity in most cases—it is just one of the activities that rural households undertake in order to be reproduced socially and economically (Marsden et al. 2001).

Agritourism has become a central concept in recent debates on rural development policies, practices and initiatives. It is regarded as a valuable and important 'tool' for maintaining farming activities, promoting diversification of economic practices in the

countryside and rural entrepreneurship, assisting in the preservation of cultural landscapes and contributing to the new 'European model of farming' (Commission of the European Communities 1999). Agritourism is considered one of the 'broadening' activities of rural households (along with nature management, among others) in the new multifunctional model of farming and rural development. It also refers to the differentiation of productive activities and the introduction of new ones. Therefore, in theory agritourism contributes to economic development in rural areas without putting much pressure on natural resources or social and community values, thus allowing locals and visitors to interact positively and share common created experiences.

Conceptually, agritourism is part of the rural tourism concept, which is generally defined as tourism taking place in the countryside. This spatial definition covers different types of tourism such as trekking, cultural, culinary, recreation, nature, sports and outdoor activities tourism. Agritourism is one of these types, referring to activities connected with agriculture. The most common agritourist activities include the following:

Residence in small hotels/hostels, spare rooms in farm houses, independent apartments and open areas in the farm. Meals offered on site in small restaurants or taverns, in refreshment rooms or in the open with farm or local products.

Outdoor activities or activities for creative entertainment such as: visits to farm facilities and voluntary participation in farming activities; visits to recreation areas or areas of high natural beauty; outdoor sports and trekking paths; horse-riding activities; visits to enterprises producing local products; participation in local cultural events; visits to local monuments and demonstrations of homemade recipes (pies, jams, pasta, etc.).

The common threads of these activities are diversification, utilization of local natural and cultural resources and establishment of personal relationships between visitors and locals (Iakovidou & Turner 1995)

One type of agritourism is this practised by farmers who are primarily employed in agriculture. Because the agritourism concept is generally connected with the promotion of quality in services and goods, respect for the local heritage and

environment and a local character, its practices may vary from country to country and locality to locality. Some broad targets are connected with agritourism development programmes throughout the EU (LEADER Files 1994). These targets are aimed at involving farmers, for example, in the generation of non -agricultural incomes through pluriactivity and the development of 'new' farm services and products. These targets are also related to the locality in which the activities take place, such as the social and economic development of the area, the improvement of living standards and working conditions of rural populations, the viability of rural communities, the promotion of local agricultural and handicraft products, environmental and landscape protection, and the preservation and utilization of the local architectural and cultural heritage (Geotechnical Chamber of Greece 2000).

The agrotourist product addresses people with urban life styles who seek experiences of rural culture, rural life styles and 'authenticity' or 'natural' experiences.

3. Agritourism in Greece



Agritourism around the Mediterranean is a much more recent phenomenon than in Northern Europe. In countries such as Britain, France, Germany, Austria, Switzerland, the Scandinavian states, the Netherlands and Belgium, agritourism has a longer history,

as the industrial revolution and the rise of urban societies have alienated town dwellers from agriculture since the early twentieth century and created rural tourism as a temporary 'return' to nature for holidays and recreation. Even in mountainous countries with limited potential for intensive production, a good number of farmers are involved in these kinds of activities.



In contrast, in the European Mediterranean countries, the rural exodus was much delayed and it is only recently that the bonds between country and city have been broken. Agritourism in these countries has been much more connected with 'conventional' and mass tourism, which developed after the 1950s, than with agriculture or rural tourism.

Agritourism in Greece has a relatively short history. Its roots can be found in various forms of rural tourism that are common in Greece and take place on religious holidays (Christmas, Easter, local saints' days, when urban dwellers visit the countryside) and at weekends. This rural tourism was renamed 'agritourism' after the 1980s and coincides with two developments. The first was Greece's entry to the European Economic Community in 1981, followed by the launching of a series of programmes and initiatives for local and rural development. The second was the growing emphasis on issues such as gender equality and the living standards of rural populations, especially in mountainous and less favoured areas. Gender equality and agritourism are interrelated in a number of 'women's agritourism cooperatives', namely cooperatives of women in rural areas, which produce local products and/or offer accommodation. This development was supported technically and economically by various public and private agencies such as the General Secretariat of Gender Equality, the Greek Ministry of Agriculture, the Agricultural Bank of Greece, the Pan-Hellenic Confederation of Agricultural Cooperatives Union, the Greek National Tourism Organization and the Hellenic Organization of SMEs (small and medium-size enterprises) and Handicraft. Today, such cooperatives are still producing local products such as sweets, jams, pies, soft drinks, pasta, etc.

'Farmers and agritourism' was another initiative of similar scope that was also launched in the mid-1980s as a type of tourism for mountainous and less favoured areas. The Greek Ministry for Agriculture provided an overall agritourism development plan for Greece, giving priority to areas with declining economies or population, and to border and peripheral areas and those with little or no mass tourism. Financial aid was provided by European Union measures, namely Regulation 797/85 for structural investments in agricultural holdings and the LEADER initiative.



Farmers who wanted to develop agritourism activities and met some standards were subsidized, those in mountain areas and islands (excluding areas with massive tourist sectors) receiving more. Aid continued with Regulations 2328/91, 950/97 and 1257/99, which were subsequently replaced by 797/85 and the LEADER II and LEADER PLUS initiatives with minor changes. However, this general initiative did not include the establishment of an advisory body that could help farmers manage their units, promote their services and/or products and establish contact with other units in the area. This assisting body was very important (LEADER files 1994) for people who had no previous experience in managing a complex unit, let alone a tourist one. Therefore, the plan was implemented by private enterprises (farms or small cooperatives), resulting mainly in the building of rooms, rural houses, small hostels or other types of accommodation in rural areas.

The targets of agritourist programmes, as set out by the Greek Ministry for Agriculture, are:

- diversification of activities for farmers;
- new and non-agricultural incomes for farmers;
- development of new activities in rural areas;

improvement of living standards and working conditions for rural populations;

- prevention of rural depopulation;
- promotion of and support for rural women's social and economic role; promotion and support of local food and handicraft products; environmental protection;
- preservation of the cultural heritage;
- utilization of the architectural heritage.

At the business level, agritourism is the connecting link of the primary and secondary sectors with the tertiary one. That is, the production and processing of agricultural and livestock products, with the provision of services and tourism. On the contrary, it helps the local economy, creates jobs, promotes ecological consciousness



and protects the countryside from desertion and migration, which, unfortunately, is a very common phenomenon in the Greek province.

The categories of enterprises that are included in agritourism are the following: 1) Agritourism accommodation 2) Stores / Showcases of agri-tourism products 3) Agritourism centers for recreation and entertainment 4) Multifunctional farms 5) Traditional production enterprises 6) Workshops of folk art 7) Travel organizing agencies or the implementation of programs of outdoor activities and tours of ecotourism and cultural interest . A proper institutional and legal framework is needed to develop agritourism in order to ensure the sustainability and excellence of the Greek countryside .

Four types are involved in agricultural activities:

- 1st type: where tourists who most often stay off the farm do not participate in non-working farm agritourism.
- 2nd type: where tourists, although staying inside a farm, passively monitor without participating (working farm, passive contact agritourism).
- 3rd type: where tourists have indirect contact with agricultural activities as they consume products produced on the farm (working farm, indirect contact agritourism).
- 4th type: where tourists have direct contact with a "special sample" of agricultural activity (working farm, direct contact staged agritourism).

Agritourism falls into two general categories, namely:

1) **pure agritourism**, where tourists are either engaged in agricultural activities such as harvesting, fruit and vegetable growing, beekeeping, milking, animal care, cheese making, or in purely recreational, such as horseback riding, hiking, fishing, mountaineering, hunting, etc. (vacation - recreation)

2) **complex agritourism**, where tourists can, in addition to the activities of classical agritourism, meet their other needs, such as health-well-being, religion, sports, nature worship, culture, etc.

The main forms of **pure agritourism** in Greece are:

1) agritourism in villages of special natural beauty (mountainous and non-mountainous) that attract visitors, utilizing the beauty of their location 2) agritourism in island or coastal areas which mainly use the sun and the sea during the summer months 3) agritourism in traditional settlements that have to show a special architecture that attracts the city residents 4) agritourism near protected areas, such as national parks and wetlands which, in addition to natural beauty, enrich visitors' knowledge of ecology 5) agritourism in cooperative accommodation, where members of cooperatives, mainly women, offer their own products or local production and authentic hospitality .

The main forms of **complex agritourism** in Greece are:

1) agritourism in areas with thermal springs, known as spa towns, where in special hydrotherapy centers tourists are subjected to some treatment, in a combination of detoxification and physical relaxation 2) agritourism in mountain villages with a possible organized ski resort that is a tourist attraction 3) agritourism in rural areas with recreational-sports facilities 4) agritourism in camping areas, located in the vicinity of villages. One special form is the agritourism of children's camps with full hospitality and offer of educational, recreational and sports program 5) agritourism in centers of passing tourists who are in special nodes and receive passers-by to offer them hospitality 6) agritourism in rural areas where historical and cultural sites exist (ancient towns or temples, museums, monasteries etc). Holidays in these areas are



associated with spiritual and cultural interests.

In Greece all the above forms of agritourism are located in rural areas, where the types of accommodation are mainly rooms, within the home of the rural

family, or accommodation that is an extension of the main residence or is completely independent of it, so as to ensure the privacy of residents and visitors. Two of the most well-known forms of agritourism are Wine Tourism and Fisheries Tourism as in Greece, since ancient times, both vineyards and wine and the sea and its richness are inextricably linked to tradition. There is an opportunity for the Greek tourism industry in the future in these sectors, as they are not yet exploited.

3.1. Agritourism destination

According to the official website of the Association of Agritourism Associations of Greece, the agritourism destination is a rural area, which gathers, cumulatively, the following characteristics: a distinct geographical and / or administrative unit, from a morphological and historical point of view, which does not include settlements with more than 3,000 inhabitants (this criterion is calculated per settlement and not in the whole area). 2) the inhabitants are mainly engaged in the primary sector (agriculture, animal husbandry, fishing). 3) no mass tourism or other non-mild forms of tourism, have been developed in this area, with the exception of settlements with special traditional characteristics that have an activity in agritourism and the development of mass tourism does not affect them.

3.2. Advantages and benefits of agritourism

According to the Greek Ministry of Rural Development and Food, agritourism contributes to the creation of positive social, cultural and environmental impacts. Also it responds, on the one hand, to the need for farmers to earn additional income, and on the other hand, to the need of the inhabitants of urban centers to re-connect with nature. Agritourism gives impetus to the local community, contributes to the production of traditional products, preserves traditional arts and crafts that would otherwise have disappeared, contributes to the revival of customs and traditional events, preserves the architectural heritage, is a channel of communication for large isolated areas and presents new opportunities for young people in these areas. Through agritourism, the cultural heritage and uniqueness of each region is protected and the tourist is given the chance to get acquainted to the rural areas and



occupations, local products, traditional cuisine and the daily life of the inhabitants, the cultural heritage of each area. The visitor is offered the opportunity to connect with nature through participating in outdoor activities.

In this light, agritourism is an important form of tourism development with economic, socio-cultural and environmental implications and contributes to: 1) strengthening entrepreneurship, by developing the three sectors of a country's economy (primary, secondary and tertiary) 2) strengthening and increasing agricultural income 3) improving the quality of life and work of the rural population 4) avoiding leakage of the rural population from their place of residence, as it makes them more attractive 5) ensuring the creation of new jobs 6) improving and disposing of local agricultural and craft products 7) environmental protection. It is a tourist activity that is friendly to natural resources and promotes the protection of natural environment. 8) Preservation, promotion and utilization of architectural and cultural heritage.9) creation of development infrastructure projects 10) improvement and distribution of local and agricultural products 11) acquaintance with nature and psychological satisfaction for the tourist 12) promotion of the female farmer to an essential and dynamic link of the agritourism 13) to encourage, enhance and maintain the customs and traditions, folk myths and legends of the local community, as these features are of interest to visitors and are a reason to visit.

Activities that utilize the cultural, religious, folkloric, architectural, and gastronomic elements of the area have a special place in agritourism. Taking advantage of the opportunity to visit and tour old monasteries, churches, bridges, wineries, cheese factories, craft workshops, participate in festivals and local festivals, pick olives or



vintage, and even local cuisine lessons, all can contribute to give agritourism the distinct local identity and to make it a unique product.

In agritourism it is clear that we seek authenticity and uniqueness in every form and expression. Greece has a remarkable diversity in the special local characteristics, which make it a unique country. In Greece there is a potential that can create a specialized agritourism model for each region. So there is no way to mimic similar models, nor to apply a specific agritourism model on a single scale. Whether it's accommodation, business or any agritourism activity, the difference lies in discovering the unique, original elements of each area, the resources that no one has yet explored or thought of utilizing. The more original, the better we highlight agritourism in its special and quality form. Imagination and research play a big role in this endeavor.

The revival of the local traditions, the forgotten customs or the musical sounds, the architectural trends, the old arts, the monuments covered by time, the contribution of the elderly to remember old habits, stories, traces, paths, recipes, beverage preparations. Everything in agritourism matters and only the locals can identify and highlight it. The country has the unique privilege of having inexhaustible resources that vary from region to region, rare natural beauty, history, tradition, gastronomy, architecture, traditional arts, musical tradition culture, religious monuments, villages, traditional settlements, habitats, wetlands, flora and fauna, legends, traditions, local festivals, festivals, seas, forests, mountains, trails, gorges, all form a rare mosaic landscape, a colorful experience creating a blessed place. The advantage is that Greece is a country with uniqueness and homogeneity, which gives the advantage of prominence and uniqueness. Agritourism should be an integral part of a greater tourism plan or a rural development strategy. Consequently, synergy among holdings or enterprises in the same area should be encouraged, as well as promotion of tourism services, consulting services, training and management of units. (Iakovidou et al. 1999; Anthopoulou et al. 2000).

To promote agritourism in Greece , there should be some managerial and marketing support from public agencies. Farmers need such support as they lack relevant experience or funds to recruit specialized personnel from outside. Synergies and cooperation with other holdings and rural enterprises are essential to create local

networking in favour of rural development. Farmers should focus on additional agrotourist services besides accommodation and provide activities relevant either to farming (i.e. participation in production, management practices, demonstrations, etc.) or to the farm itself (i.e. walking and trekking activities, activities related to animals, horse-riding, etc.). They should use their own produce or other locally and traditionally made products for breakfasts, sell such products directly to tourists or guide them to other enterprises. Finally, they should provide information about the area, its farming or cultural history and what it can offer to a tourist. Agritourism should be based on the successful models of other countries, but certainly the local characteristics can shape the agritourism adapted to the needs, the peculiarities and the advantages of each place

3.3. Agritourism enterprises

The agritourism activity is a diversified tourism activity that develops small-scale infrastructure projects with mild interventions to the environment and provides accommodation, travel, catering leisure, sightseeing,



touring, in order for the visitor to get to know the rural area and the agricultural occupations as well as the cultural elements and the authentic characteristics of the place, the local products, traditional cuisine and the daily life of the inhabitants of the countryside. In 2010, as part of a nationwide meeting, SEAGE and other relevant associations presented a report of criteria that converge on the following characteristics:

1) agritourism accommodation of all forms, with the possibility of breakfast, with a maximum capacity of forty beds 2) agritourism centers for catering and leisure (restaurants, taverns and traditional cafes). The offered delicacies using traditional recipes to use as first materials local products 3) laboratories for production,



exhibition and sale of traditional local products, local delicacies and folk art products of their region 4) small production units, such as wineries, olive mills, cheese shops etc. a. with an exhibition and tasting area outside the production area 5) visitable farms, agro-campsites, straw huts, tree houses, shelters from straw bales and clay, with completely ecological swimming pools, with natural biological cleaning, with green roofs 6) industrial monuments that have been used in outdoor production very important role in the development of the hinterland by connecting culture with tourism, highlighting the uniqueness of each region. 7) tourist offices - organizers or providers of outdoor and non-outdoor activities and tours of ecotourism and cultural interest

The special features of a agritourism business, as promoted by the local Associations of Agricultural Cooperatives, are the promotion of, local agricultural products and artifacts, the agricultural area and agricultural occupations, the cultural elements and the authentic features of the place, the traditional cuisine and the daily life of the inhabitants of the countryside, with full respect for man and the environment, not excluding other forms of tourism.. Gastronomy is an integral part of the quality and provision of agritourism. The food offered must combine quality with the sufficient quantity and variety, coming from traditional recipes. A prerequisite must be the use of local products, without elasticity and exceptions. The purpose is that the food, made from simple, local, fresh ingredients, brings back memories and the warmth of the family table to the visitor. To enhance the quality of both products and services, a certification for organic farming would be beneficial. Most visitors tend to stock up on local products and want to repeat these purchases, even when they return to their home countries, opening up new perspectives and future in local trade.

An agritourism business must be owned by a farmer or farmers, registered in the Register of Farmers and Agricultural Holdings, or its capital must belong, at least 50%, to a farmer or farmers registered in the Register of Farmers and Agricultural Holdings. Any income of a professional farmer comes from agritourism, is declared and taxed as agricultural income, if his individual net agricultural income exceeds 50% of his total individual income. Farmers, in their work in agritourism, as an additional activity of their main occupation, are insured with the Agricultural Insurance Organization, since

their individual net agricultural income exceeds 50% of their total individual income. Decrees of the Ministers of Environment, Energy and Climate Change, Health and Social Solidarity, Rural Development and Food and Culture and Tourism, issued within a year from the entry into force of this law, regulate in particular the conservation and number of domestic and other animals in the facilities of agritourism companies and any related issues for the purpose of either the distribution of agricultural products to third parties, or the information and entertainment of visitors-tourists, in particular by offering them agricultural products of their own production or processing.

The institutionalization of the "Multifunctional Farm", legitimized all those farm owners who processed and sold agricultural products (household products) inside or outside their business, until now, informally. Those who maintained such a farm to this day could not fit into a specific legal framework, which created many problems. From the moment the special signal of the "Multifunctional Farm" is received, provided by the Ministry of Agriculture, the process of selling household products will be legal in all counts. The Multifunctional Farm is a cornerstone for new small-scale businesses, who want to capitalize on the quality of their products.

3.4. THE REGION OF THRACE CASE



The Region of Thrace faces two major problems: Low income,

accompanied by high unemployment and, intense restructuring of the productive system. These major problems are due to weaknesses and distortions, which characterize both the current situation and the permanent trends and are summarized as follows: Reduced efficiency and competitiveness of the local agricultural economy (agri-food sector), reduced local industry competitiveness, introverted tertiary sector and unsatisfactory development of the tourism industry, low-efficiency infrastructure and support structures that do not aid the competitiveness of the economy in the long run, low level / added value of public services provided and low attractiveness of the region as a place of business establishment and individuals. In order to tackle these



problems, one should take advantage of the dynamics of the primary sector, the natural resources and beauty, the cultural diversity and the strategic position of the area.

4. AGRICULTURAL ECONOMY

The long-term reduced efficiency & competitiveness of local agricultural economy is attributed to: Structural problems (small size, fragmentation) that do not allow efficient use of equipment and water resources. Distortions due to CAP, like extensive crops production resulting to minimum presence of "new" / "dynamic" products. Low standardization level due to de-industrialisation, high cost of inputs (energy, raw materials, etc.), and ways of disposing of products (dependence on road transport at increasing cost). Low technological level of cultivation methods due to: incomplete training of farmers and lack of scientific support structures (research and advice).

The above weaknesses can be addressed by utilising the region's: remarkable plains, pastures and forests, rich water resources, high value products, extended geothermal fields, significant knowledge in the animal production and dynamics of the aquaculture industry in the international market.

4.1. Economy:

Sectors and activities that need to be strengthened for the further development of the region's economy are:

- The primary sector and especially its sub-sectors: animal production products, livestock grains, agroforestry, tree cultivation, winemaking, greenhouse crops.

- Processing, and especially the sub-branches: food, drinks, non-metallic minerals, plastics.
- Tourism, agritourism and related businesses.



- Enhancing competitiveness & business success with: Rapid integration of existing technology, production of domestic innovation, utilization of sustainable energy resources (geothermal energy) to reduce production costs and business opportunities
- Expansion of advanced sectors by further investment and interconnection of productive activities.
- Improving international business competitiveness through export promotion and import substitution.

4.2. Social sector

Improving the provision of health and welfare services through:

- Targeted actions for equal access to health and welfare services
- Technological modernization of health units.
- Increasing employment and fighting poverty through: Design and implementation of integrated local plans and initiatives, development of policies for inclusion in the labor market of people who are out of work, education, lifelong learning (main targeting: disabled people, young people
- Development of social infrastructure to support special population groups (the elderly, the disabled, etc.)
- Development of social economy.

- Improving infrastructure, education services and lifelong learning with:
 - Development of building infrastructure,
 - Targeted actions for equal access to basic education services. Enhancement of the participation of local professionals like farmers, people working on tourism and industry, in lifelong learning.

Agritourism, when combined with other forms of alternative tourism, is able to provide a tourist product that is integrated and friendly to the environment, nature, local people and the principles of sustainable development.

5. EU LEGISLATION ON AGRITOURISM



There isn't a unique legislation on Agritourism and Rural Tourism in Europe, it is something which is in the hand of each State. Therefore, a special European regulation on Agritourism doesn't exist.

However, special references in the legislation of European Union can be found:

- Quality and origin of products, with several regulations on certification of processes and origin, food safety, guarantee for consumers.
- Promotion of diversification of farmers' activities, especially through the funds of the Rural Development Program launched by the 2° Pillar of the CAP.
- Protection of landscape and nature, with special regulation on protected areas, such as the sites included in the "Nature 2000 network".

In any case, it is important to state that tourism regulations usually cover just the typical touristic activities such accommodation or outdoor activities, but the range of educational experiences, the agricultural production, sales or the entertainment may have different and specific regulations which may change a lot in each country.



5.1. EU Legal Framework

According to data from the European agritourism network AgroTourNet, in Greece only 1% of tourists choose agritourism units for their holidays, while in Europe, agritourism attracts 5% of the total number of tourists and an increase of 15% -20% per year. The need to establish a common tourism policy, recognizing the role of tourism in European integration, was realized in 1984. The European Council in 1986, established a process of cooperation in the tourism sector between EU Member States and in particular in the provision of services to tourists. The first Council of Tourism Ministers convened in 1988. The Council declared 1990 the "Year of European Tourism" and its goal was to promote the economic role of European tourism and focus on increasing European tourism and promoting alternative forms of tourism. The importance of the European tourism industry is clear and included in all European treaties. In Maastricht in 1992 it was agreed by the European Council, through Article 2, to implement common EU policies that would lead to the promotion of economic activities with full respect for the environment. (European Union, 2016). Also, in the Treaty of Lisbon in 2007, special reference is made to tourism. With this Treaty, the EU establishes a coherent framework where it can promote the competitiveness of tourism businesses, creating the right environment for their development and favoring the cooperation of Member States to implement common tourism policies. (European Union, 2007). The European Commission is making efforts to implement, in cooperation with Member States and stakeholders, a series of actions aimed at strengthening European tourism and its competitiveness. As a result, Directive 90/314 / EEC was issued in 1992, which established common rules for organized travel and removed obstacles arising from the different legal frameworks in Member States Greece has incorporated it in 11- 09-1996. (EEC Council, 1990)

The European Parliament's Resolution 2014/2241 (INI) notes the importance of agritourism as a key factor in sustainability and development. In particular, it is emphasized that tourism should be based on strategies that protect and enhance natural resources and cultural heritage through the promotion and preservation of local folk traditions, local culture and local products (European Parliament, 2015) In our country, a relevant legislation was adopted in 2008, with Law 3658/2008



"Measures for the protection of cultural property and other provisions". After all, nature with its products, leads to the creation of strong economic and diplomatic ties at the international level (Maniatis, 2015). It also emphasizes the paramount importance of agritourism in coastal, mountainous and island areas and proposes as a means of preserving them. In addition, it proposes thematic tourism as a means of combating the negative effects of mass tourism and at the same time as a means of highlighting thematic tourism (wine tourism, gastronomic tourism, agritourism, etc.). Through thematic tourism, the connection of a place or a wider area with tourist routes is achieved at local, national and European level. It is also a measure to develop co-operation between regions and states, and to reduce tourism seasonality, especially in the Mediterranean countries. In addition, this resolution promotes the establishment of a quality trademark for European tourism in order to support the quality of tourism services with respect to cultural and natural heritage. In 2013, the European Union introduced the "ETIS" system, which is the European indicator for sustainable management of European tourist destinations. Maintaining safety standards in tourism businesses is an element of their high quality and is welcomed by the European Commission's Green Book entitled "Safety of tourist accommodation services".

In order to define, work and support agritourism at European level, the agro-tourism network AgroTourNet - a sub-program of Leonardo Da Vinci - was formed, with eight countries participating (Greece, Cyprus, Bulgaria, Czech Republic, France, Lithuania, Netherlands and Britain). Its ultimate goal was to attract investment, certify agritourism accommodation and utilize ICT (Information and Communication Technologies, eg the Internet). Worth mentioning is also the European LEADER program, which was the largest funder of agritourism. Its strategic goal is to give incentives for investment proposals in disadvantaged areas of the country. Its priority, as a measure of development strategy of the Greek province, is rural tourism. The number of those working in agritourism activities is increasing, as is the number of traditional accommodation. Most rural settlements offer accommodation in traditional stone-made guesthouses. More than 600 agritourism accommodations are

registered nationally, and about 1,000 businesses and Cooperatives, among them 107 women cooperatives. (YAAT, 2016) (Evanthia Notara 2018)

5.2. Rural Development Program 2014-2020

The Rural Development Program (RDP) for the 2014-2020 programming period is the most important development tool for drawing up a series of policy measures for the agricultural sector



and the rural areas of the country, aiming to raise the Greek agricultural economy and redefine the productive, developmental model. The vision of the RDP 2014-2020 is "Integrated development and sustainable competitiveness of the rural area". It aims to protect the environment, strengthen the competitiveness of the agri-food sector, and highlight the multifunctional nature of rural areas. The Rural Development Program 2014-2020 was approved in December 2015. The participation of the European Agricultural Fund for Rural Development (EGTAA) for Greece during the Programming Period 2014-2020 amounts to approximately € 4.7 billion, which correspond to approximately € 6 billion in public spending.

The RDP's strategic objectives specialize in five key operational priorities, which are: 1) Enhancing the competitiveness and productivity of the primary sector. 2) The



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upgrading of human resources and the strengthening of entrepreneurship. 3) The strengthening of domestic agricultural products. 4) The protection of natural resources and the environment in general, tackling and adapting to climate change. 5) The strengthening of the social fabric in rural areas.

The **common policy for agriculture and rural areas (CAP)**, supports agritourism in



many ways, with specific measures and other type of financial intervention. In the new regulations, covering the period 2014 – 2020, the CAP provide many actions concerned:

Special actions: through the Regulation of rural development, the CAP envisages two types of support:

1/ Supports for farmers: the intervention co-finance with a contribution the investments of farmers aimed to diversify their activity implementing agritourism.

2/Support for local communities: through the special program LEADER, the EU provide for the financial support to improve the rural villages, to realize itineraries, promotional activity and other actions enhancing the territories. (European Policies Supporting Agritourism)

~Direct payment: within the first pillar supporting the farmers according to the cultivated surface, an additional payment is provided for the “greening”, defining some rules for a sustainable agriculture

~Rural development: other measures of this program can help farmers involved in agritourism in two ways:

- Aid for maintenance of agriculture in low competitiveness conditions: payment per hectare for disadvantaged areas, adoption of organic agriculture or actions enhancing environment and landscape.

- Valorisation of products: measures to support the additional costs for promotional activities and for the certification of products or processes approved by the EU.(European Policies Supporting Agritourism).

6. THE RELATIONSHIP BETWEEN AGRITOURISM AND RURAL TOURISM

Although rural tourism and agritourism are often seen as synonyms and although they are strongly interrelated, they have settings that differ from each other. While rural tourism is a general term and it can be defined as all forms of tourism practiced in the rural area, one of the characteristics making agritourism different from rural tourism is that it occurs on a working farm and not just in a rural area (Barbieri, 2010; Phillip, Hunter & Blackstock, 2010). Agritourism is regarded as a more limited concept making

reference to several forms of tourism concerning agricultural activities and/or agricultural facilities. This particular form of rural tourism is organized by farmers, usually as a secondary activity, while agriculture remains their main occupation and source of income.

Sznajder et al (2009) argued that three features differentiate agritourism from more general types of rural tourism: Participation in the process of food production, a chance to learn about the lives of rural people and having direct contact with domesticated animals and experiencing the countryside.

6.1. The role of agritourism in the development of rural areas

Agritourism plays a huge role in the activation of rural areas, by generating significant contributions to the process of rural development. The popularity of this type of tourism reflects the fact that it offers benefits to both the farmer and the tourist, but also it can provide considerable benefits for the communities as it has the potential to uplift their status.

Agritourism can provide many benefits and they should be understood as complex outcomes leading to interrelated sustainable improvements. The potential benefits of agritourism can be summarised in the following three categories of impacts:

6.1.1. Economic Impact

- Increased income of the local community
- Intensifying and diversifying the economic activities
- Employment opportunities
- Poverty alleviation

6.1.2. Social Impact

- Community empowerment
- Preservation of the rural lifestyle and culture
- Village community development

6.1.3. Environmental impact

- Environmental sustainability
- Sustainable environmental resource management

In addition to above mentioned positive impact of agritourism, Williams et al, 2001 highlighted a wide range of positive effects of agritourism on other sectors of the industry. For the sector of agriculture, agritourism is an instrument of:

- Enlarging households' operations;
- Innovative utilization of agricultural products;
- Increasing the profitability of farms;
- Focus on an additional customer niche;
- Stimulating the sales of farm products;
- Increasing the economic and social importance of rural agricultural areas;
- Modernizing the rural living and facilities;
- Offering possibilities for self-improvement through education and gaining entrepreneurial skills;
- Facilitating farms' sustainability.

From tourism and hospitality industry perspective, agritourism is considered as a means of:

- Differentiating a tourism product;
- Stimulating the inflow of tourists in remote zones;
- Extending the season for tourism activities;
- Stimulating the inflow of foreign currencies to domestic industries.

From the perspective of regional development and community improvement, agritourism may become a driver for:

- Stimulating economic activities in rural areas during the visits of travelling tourists;
- Improving public facilities in rural regions;
- Preserving cultural and historical heritages of local communities;
- Inducing farmers to proceed with agricultural activities despite many challenges of the industry of agriculture.

- Facilitating rural economy;
- Creating new socio-economic opportunities for rural populations.

In sum, agritourism is seen as a way to diversify a farmer 's income stream, reducing dependence on volatile commodity prices as well as supplementing core farming

income. Agritourism activities provide opportunities to more fully utilize farm resources, such as lower grade land, and provide income for family members, which in turn may contribute to the stabilization and sustainability of rural economies.

Furthermore, agritourism provides a vehicle for the tourism industry, agriculture community and other local economic development organizations to coordinate economic development and promotional activities within the local community, region and state. Outside of the financial incentives, agritourism provides the agricultural community the opportunity to teach the general public about agriculture.

Taking into account the positive aspects of agritourism we must also remember that the effects of its development are not always beneficial. This is primarily due to increased inflow of people, which contributes to higher consumption of water and increase in the amount of household waste. Moreover, in principle, all forms of tourism go along with the development of transportation which in turn implies the need to allocate additional land for transportation infrastructure, increased pollution and noise. Providing accommodation may require construction of additional facilities, sometimes architecturally inadequate to the area. However, when thinking about the development of agritourism, a number of conditions must be met in order to allow the development of this type of tourism. These include:

A largely authentic natural landscape. In addition to the beauty of the landscape itself, it is important to have other cultural, historical or natural attractions.

Good transport links, because even attractive regions can be almost impossible to market for tourism if they are not easily accessible from the population centres.

A certain level of infrastructure must be in place: e.g. transport, accommodation and catering facilities.

Stable political conditions: this is essential for marketing even major tourist attractions.

Acceptance among the population: local people must be in favour of tourism.

Furthermore, an important aspect is to strengthen awareness of local communities concerning benefits resulting from the development of this non-agricultural source of income. Only then it will trigger a multiplier effect that will eventually lead to reduction of unemployment, job creation in sectors serving tourists,

revenue growth and will improve both living standard and working conditions of the population actively involved. Improving the visibility of rural values, processing, traditional crafts, rural buildings can become a powerful magnet for tourists, tourists looking for new unconventional forms of recreation. Benefits of the development of agritourism can become real if there is visible involvement and close cooperation between both – service providers and local authorities (government).

7. GOING THROUGH THE ACTIVITIES IN AGRITOURISM

Landscape and territory are the main resources of rural areas. It is important that farmers offer the opportunity to their guests to make the most of them.

7.1. Sports and outdoor :

Many activities can be organized by the farmer or within a small network of close farmers, the more common are:

- Swimming pool.
- Horse riding and excursions with horses.
- Other local activities

(for example mini-golf, tennis, games for children).

- Trekking, climbing, rafting and other sports.
- Thematic itineraries connected with agriculture.
- Guided tours of towns, museums and other cultural sites. In some cases it is necessary to provide for a qualified staff with adequate professional skills (like for activities such as horse riding or swimming).



7.2. Tasting and selling Food



Many guests consider the breakfast as the most important impact with the agritourism. In providing for breakfast, it is recommended:

- The use of handmade or local products as essential
- The offer of savoury and sweet breakfast

– In case of

camping or apartment, can be pleasant for guests to have access to the breakfast in a common area, or some local products to consume in their own space. Other options are restoration, catering and cooking. In any case, it is important to base any of them on the utilisation of own and local products and recipes, as that's the differential value.

Another way to promote the farmer's products is through tasting and direct selling. Many farmers, especially in the wine sector, provide the creation of special tasting rooms within the farm. The tasting rooms must be equipped with all comforts for guests, space for exhibition, taste preparation, washing space for supplies. The tasting activity can be organised as a daily activity for guests, linked with a shop, as an independent business for groups of visitors, by creating special tasting events

Also, to increase the offer for food service and sales, many farmers begin to transform raw material, producing pasta, jam, sauces and other handicraft's products. A good marketing strategy is essential for a successful point of purchase, and it is convenient to:

- ensure traceability and certificated quality of products.
- offer a wide choice of products.
- present the products directly or through brochures and other informative tools.
- offer the opportunity to taste the products.

Many farmers set point-of-purchase within their farms, to promote their products and eventually sell them, alone or with products from other local farmers.

One of the aims of agritourism is to offer the opportunity to have knowledge of the traditions by approaching them practically. Many farmers managing agritourism



organize laboratories and short training sessions for guests, both children and adults, related to their activity, for example: –Wine tasting, honey tasting or other products –Cooking traditional meals or bread –Handcrafting processes for food products – Having knowledge of local nature and plants .

The **types of accommodation** might depend on available space, type of buildings or the farm itself. The main types are:

- Rooms rented within the farmer house.
- Apartments rented in separate buildings.
- Agri-camping in equipped areas.
- Thematic hotels.

Key points: The style of buildings and furniture, which must be simple and match with the environment. The interaction with the guests related to the farm's activity. The farmer must provide for breakfast based on local products or, in case of rented apartment or camping, offer to the guests some home-made products.

7.3. Skills

Agritourism, as described, can be carried out in a very basic way or it can combine many different activities. Therefore, the definition of the needs in terms of professional skills of the farmer depends on the type of provided activity. Three different levels of skills related to agritourism can be identified:

Basic level: the farmer is involved only in accommodation activities

Advanced level: the farmer is involved in a multi-services activity Specialized level: the farmer is involved in special activities (didactic, social help, horse riding, ...).

For the management of a basic multi-services activity, four important additional skills are needed:

1. Management of food service: including management of structures and supplies, hygienic rules, cooking, knowledge of local traditions
2. Advanced communication: advanced knowledge of Internet, social networks, other applications useful for managing marketing activities
3. Commercial marketing: the staff must be able to organise tasting events and/or direct sales of products
4. Territorial marketing: the staff must offer at the guests information on his area and on the possible itineraries

Some additional skills can be necessary if the management will provide some special activities, for example: Horse riding and excursions: the instructor must have good professional skills to teach horse riding to other people, ensuring their absolute safety. Didactic activities: in this case too, the person responsible of laboratories or courses must be able to teach, ensuring complete safety. Management of swimming pool: in some countries' legislation the presence of a lifeguard is required when the pool is open.

7.4. Key Points

Seasonality of demand: There are two main ways to solve this problem: Provide the guests with offers and activities during the whole year or diversify the target, offering other services (for example didactic farms) during autumn and winter or from Monday to Friday.

Management of multi-service activity: Putting a multi-service activity in place can be surely a way of diversifying the offer, but it is necessary to have at disposal a multi-tasking staff with several professional skills. Many farmers got over this issue involving their families and diversifying skills and function.

Time management: The seasonality of demand determines issues in time management. In case of family run agritourism, the solution is easy, in other cases it is necessary to employ seasonal staff.

7.5. External key points

If the farm is located in an isolated area, this could be one of the major problems for agritourism. Therefore, for this type of activity some additional key points might show up:

Marketing: good marketing strategies are crucial to meet guests. Fortunately, the development of ICT helps promoting agritourism, but is necessary for farmers to promote their activity participating in network and guides.

Territorial marketing: in many areas, agritourism remain isolated also because of a bad promotion. Farmers must involve the local institutions and other businesses to start a joined territorial promotion.

7.6. Marketing

The entrepreneur should identify his target group, and list the places and ways he can reach them. A farm agritourism experience provides an excellent opportunity for day-trippers, so he should start by focusing on media outreach in communities within one hour's drive of the farm and target major population centers.

Advertising can be expensive, so one should be selective and, if possible, choose free coverage like tourist services directories, local webs, Local/County Tourism Agency.. In order to build a marketing image and presence, one should develop a logo and unifying marketing theme that captures his standards. All of the strategies to promote the farm should be organized into a marketing plan that includes: who target market is, where and how to reach them, promotion and advertising plan for the year, and a list of the connections needed to get known in the public. The farmer should take time to plan out the whole year in the fall and winter prior to the next season.

Territorial marketing: Public and private strategies, involving local administrations, municipalities, tourism offices and other subjects. It's important for the guests to feel they belong to a community proud of its own traditions.

Exchange of products and services: often the single farms cannot have an offer covering the whole needs of clients. To solve this problem, they can create special networks to offer a complete range of products and services to the guests.

Promotion of the territory: realizing handbooks, guides, web sites and other tools crucial for the enhancement of the areas.

Creation of itineraries: creation of paths for trekking, itineraries through nature and traditions, local museums and so on.

Organization of social and cultural events: festivals, fairs, concerts, exhibitions...

7.7. Income Sources:

A tour fee provides the visitor access to the services of a knowledgeable guide or at least a guidebook for self-directed tours. A tourist paying this fee desires information about and access to farm areas restricted to other visitors. In return for their fee, the farm would provide a ticket or badge indicating their status as a paying participant in the tour. Self-guided tours are generally free, however, group tours often involve

significant staff time to prepare and host the tours. An admission fee is charged to participate in events and activities, or tour special areas of a farm operation, like the ticket to enter an amusement park, museum, or sports event.

Sales of Fresh Farm Products, sales of Processed Farm Products, Craft/Souvenir Sales, Activity Fees (bread-baking Class, pies, jam, jelly or fruit syrups making class, wine making, cheese making, etc. Tasting Fee, Food Service.

Facility/Grounds Rental Renting out the farm setting, for dances, classes, country weddings, family reunions, birthday parties and other special events.

There are many players in each territory who can provide a really valuable support: Specialized associations: many associations, representing farmers or the tourism sector, provide for specific promotion systems, using ITC and, in some case, able to manage the booking service too.

Consultants: many technicians make their effort to help farmers in the management, elaborating business plan, indicating the mandatory rules, suggesting opportunities.

Trainers and training agencies: an updated training activity is essential for a good management of agritourism.

Mentors: this new figure, normally is another farmer with good experience, can be very useful, as he gives the opportunity to compare the different experiences and to follow practical suggestion of other entrepreneurs.

Local institutions: many local administrations are strongly involved in the promotion of their territory, and can offer some important common services, useful for farmers.

7.8. Visitor Expectations

People who visit the farm are not farmers and have little understanding of farms in general. However, many visitors will generally expect the following: – The main farm area to be clean and well-maintained. – The farm to have



sanitary public bathrooms with a toilet and sink. – Parking easy to find and adequate.
– Visitor facilities to be safe and accessible for all visitors, especially small children, older adults and people with disabilities. The farm meets the visitor's image of a farm. It is convenient to promote the farm as a modern, efficiency-driven business that integrates new technology with old-fashioned farming principles.

8. AGRICULTURAL; BUSINESS

Entrepreneurship refers to the ability to take high risks, prosper, manage and organize a new business enterprise to earn the profit. Agricultural Entrepreneurship, also known as Agripreneurship, means the term which is associated with the marketing as well as manufacturing of different agricultural products and inputs too.

Small farmers produce food for their family but at the same token, they sell a small portion of their products into several markets and it increases the level of market sales. So, the working of the small farmers indicates that they are an agricultural entrepreneur. In this way, the Entrepreneurs can work solely and keep the profit from the manufacture or they can be a part of Farmer's group and sell the crop collectively and get the profit accordingly. Moreover, the farmers enter into the business relationships with other value chain partners such as agents, and also, this forms an approach of contractual marketing which may lead to large business industries at the end if they get success.

Agricultural business or Agribusiness is the business related to agricultural production. The term is a portmanteau of agriculture and business and was coined in 1957 by John Davis and Ray Goldberg. It includes agrichemicals, breeding, crop production (farming or contract farming), distribution, farm machinery, processing, and seed supply, as well as marketing and retail sales. All agents of the food and fiber value chain and those institutions that influence it are part of the agribusiness system. Within the agriculture industry, "agribusiness" refers to the range of activities and disciplines encompassed by modern food production. There are academic degrees specializing in agribusiness, departments of agribusiness, agribusiness trade associations, and agribusiness publications. In the context of agribusiness



management in academia, each individual element of agriculture production and distribution may be described as agribusinesses. However, the term "agribusiness" most often emphasizes the "interdependence" of these various sectors within the production chain.

Among critics of large-scale, industrialized, vertically integrated food production, the term agribusiness is used negatively, synonymous with corporate farming. As such, it is often contrasted with smaller family-owned farms.

Traditionally, agriculture is seen as a low-tech industry with limited dynamics dominated by numerous small family firms which are mostly focused on doing things better rather than doing new things. Over the last decade, this situation has changed dramatically due to economic liberalization, a reduced protection of agricultural markets, and a fast changing, more critical, society. Agricultural companies increasingly have to adapt to the vagaries of the market, changing consumer habits, enhanced environmental regulations, new requirements for product quality, chain management, food safety, sustainability, and so on. These changes have cleared the way for new entrants, innovation, and portfolio entrepreneurship. It is recognized by politicians, practitioners as well as scientists that farmers and growers increasingly require entrepreneurship, besides sound management and craftsmanship, to be sustainable in the future. Recent studies show that agricultural entrepreneurship is not only wishful thinking or a new hype: it has a profound impact on business growth and survival.

A classic question posed in debates about agricultural entrepreneurship is whether it is different from entrepreneurship in nonagricultural firms. The answer is yes and no, depending on the type of research question and research paradigm employed. Certain elements of entrepreneurship seem to be relatively universal, context independent (e.g., the importance of opportunities, pro-activeness, risk taking, and entrepreneurial self-efficacy), other elements are more dependent on the type and context of entrepreneurship (e.g., entrepreneurial learning). For studying agricultural entrepreneurship, the following characteristics have to be taken into consideration: The agricultural sector. Historically, the agricultural working setting did not necessarily educate entrepreneurial behavior. Over the last 50 years, in many western countries,



agriculture became a highly specialized domain focused on efficiency and productivity. For instance, in Europe, post-war agricultural modernization was very successful for its original aims, to provide food security. However, this system did not stimulate diversification and innovative entrepreneurship. Farmers were trained to be craftsmen, producing food and fibers. The development of an entrepreneurial identity, skills, and behavior are, consequently, not self-evident. The direct farm environment. Farms are strongly regionally embedded: A convenient geographical location is therefore an important factor for entrepreneurial opportunities. The opportunities to develop new activities are much bigger when the family farm is located in an attractive region with other businesses, close to urbanized areas (providing a market), with good infrastructure and a well-developed supporting network (Wilson 2006). Agriculture is dominated by small family farms. The family farming culture and associated logic influences agricultural entrepreneurship. Unlike general entrepreneurs, farming families are less driven by ideas of growth and profit maximization. Higher priority is given to survival, preserving family heritage, autonomy, rural lifestyle, and passing through a healthy farm on to the next generation. Moreover, family farms are passed on through from father to son. This selection process creates communities lacking heterogeneity with a strong tension toward conformity. The presence of other generations in the farm, in combination with a conservative mentality, does not particularly stimulate change and innovative thinking. Gender. Farm women play an important role in agricultural entrepreneurship. Farm women are, in many cases, the ones who initiate and develop new on-farm business activities (Bock 2004). The initial entrepreneurial behaviors of farm women are characterized by "fitting in and multitasking." Typically, farm women start by fitting their new activities into the existing farm and combine entrepreneurship with existing farm and family duties. However, farm women change their strategy over time and develop themselves as more expert entrepreneurs: investing in further development, taking risks and identifying, and presenting themselves as entrepreneurs.

The rapid global urbanization and the migration of people from rural areas to the big cities lead to an increasing demand for healthy and sustainable food supplies in the



urban zones. The security of food is paramount to social wellbeing and economic performance. The search is on for solutions regarding food safety, animal welfare, habitation and waste-disposal, as well as education, governance and social fairness. Modern farming, including raising crops for food and fuel, and raising animals for food, wool, and more, is a complex industry. As farmers learn to compete and remain viable in a global marketplace, they draw upon business principles and a complex network of agriculture and business professionals. This includes taking advantage of new advances in farming, such as bioengineering, mechanization, and new breeding practices, deciding how to sell crops, whether locally or on a commodities exchange, and managing and insuring land in the most profitable manner. As an agricultural business professional, you might work in any of these areas, either as a farmer or as a business professional supporting farmers.

Thanks to its variety of natural resources and land conditions, Europe is an important region for the global agricultural industry, both in terms of agricultural land and agricultural production. Traditionally, the industry can be divided into three major sectors: farming, fisheries and aquaculture and forestry. The latest technological developments, such as the use of agrochemicals for fertilizers and pesticides, have sharply increased yields from cultivation (Davis and Goldberg 1957).

9. DISABILITY

9.1. Disability description

Disability can be defined as an outcome of complex interactions between the functional limitations of an individual and the social and physical environment. Functional limitations can arise from a person's physical, intellectual or mental conditions (British Government department for international development 2000). Moreover, "Disability" is a word often used in daily conversations and holds different meanings for different people. Do these different meanings matter? What is there to



be gained by trying to define disability more precisely and to attempt to use the word in consistent ways? The use of common terms and definitions provides individuals with a basis for a common understanding. In this way, communication is assisted, transparency in social programs is improved, and needs are better met

through accurate identification and understanding of what people require.

Disability groups and other organizations may have their own definitions of disability. The concept of disability is complex, and there are historical, social, legal and philosophical influences on its interpretation. The experience of disability is unique to each person but there are common impacting factors. There are common aspects also in the rights of people to access specific disability services provided directly or indirectly by governments. The need for some agreed definitions, largely to ensure that disability support programs are fair about who is to receive benefits and why, has prompted much discussion and debate.

Lets take a look at some definitions of the word "Disability" as defined by various organizations around the world.

Definition of Disability Under the Disability Discrimination Act (DDA)

The Disability Discrimination Act (DDA) defines a disabled person as someone who has a physical or mental impairment that has a substantial and long-term adverse effect on his or her ability to carry out normal day-to-day activities.

The DDA sets out the circumstances under which a person is 'disabled'. A person is considered to be disabled if:

They have a mental or physical impairment



The impairment has an adverse effect on their ability to carry out normal day-to-day activities

The adverse effect is substantial and long-term (meaning it has lasted for 12 months, or is likely to last for more than 12 months or for the rest of the person's life).

In addition, there are also some special provisions under the Act that cover, for example, progressive conditions and past disabilities. In defining 'normal day-to-day activities' the DDA states that at least one of the following areas must be badly affected:

- Mobility
- Manual dexterity
- Physical coordination
- Continence
- Ability to lift, carry or move everyday objects
- Speech, hearing or eyesight
- Memory or ability to concentrate, learn or understand
- Understanding of the risk of physical danger.

Disability is a global phenomenon. The first *World Report on Disability* (2011) issued by the World Health Organization and the World Bank has estimated that more than one billion people, namely 15% of the world population, are affected by some form of disability. Some have called it the “world’s third nation”. Moreover, the social borders of this “nation” are extended even further: disability pervades the everyday life of families and social institutions such as schools, workplaces, cultural and recreational associations, health and social services. Approximately 16 per cent of Europe’s working-age population is afflicted with a long-standing health problem or a disability (European commission 2007). Due to the ongoing ageing of citizens of industrialized countries and the associated increased susceptibility to mental and physical disorders this figure is likely to increase in the future.

Disability is also a growing phenomenon. In the 70s only 10% of the world population was affected by some form of disability. The number of disabled people will most certainly continue to grow in the future due to an aging population and the higher impact of disabling chronic diseases. The growth will become even more serious in

specific areas at risk because of additional health, social, and cultural factors. Environmental pollution, unhealthy lifestyles, work-related injuries, wars and violence – all these phenomena can have disabling effects (WHO and World Bank 2011). The abovementioned dynamics remind us that a person can become affected by some form of disability at any point in time, especially under the pressure of the aging process. Consequently, a new conception of disability has arisen according to which disability is a universal phenomenon intrinsic to the human condition and a powerful sign of our vulnerability (Bickenbach *et al.* 1999).

The 2006 United Nations (UN) Convention on the Rights of Persons with Disabilities (CRPD) is aware of this need and precludes a deep change of the policies relative to disability. Countries which subscribe to CRPD are committed to promote, protect, and guarantee the full and equal enjoyment of the fundamental rights and freedom to all disabled people. Among the inspiring principles of CRPD we find the following (art. 3): the respect for the inherent dignity, individual autonomy, including the freedom to make one's own choices, and independence of persons; non-discrimination; respect for difference and acceptance of persons with disabilities as part of human diversity and humanity; full and effective participation and inclusion in society.

Definitions of disability are shaped by two contrasting concepts: the medical model of disability and the social model of disability. The emergence of a different conception of disability, the so-called “social model”, alternative to the “medical model”, has redefined the identity of people with disabilities and has motivated a development of new inclusive policies . While the notion of social disadvantage is common to both models, their respective account of that notion is completely different.

In short, the medical model treats disability as a characteristic of the person and restrictions in activity are explained in terms of individuals' bodily capabilities, with impairments treated implicitly as a form of negative human capital. In contrast, the social model of disability, pioneered by Oliver (1990) assumes that people with impairments are disabled by societal attitudes, institutions and environmental barriers rather than individual characteristics. This model distinguishes ‘impairment’ (i.e. a limitation of the mind and body) from ‘disability’ (i.e. social exclusion). These

distinctions are important because they influence the definition of ‘disabled’ in different contexts, especially within the context of eligibility for support in public support and active labour market programmes. Although they are contrary to one another, the medical and the social model have some elements in common. First, disability is for both a negative deviation from the social norms. Second, both take the social disadvantage to be a mere relation of “dis-adaptation” that does not recognize the intentionality of people with disabilities.

Disabled people are treated in different ways depending on how their disability is perceived with respect to the socially accepted criteria defining what a full personality is. Western culture has produced certain stereotypes of disability. Categorizing a subject based on stereotypes allows another subject to reaffirm his own self-image when this is threatened (Fein and Spenser, 2000). Disability would provide then some kind of support for an ontology of perfection, which Western culture usually identifies with the independency typical of adulthood, with the capacity for physical and social autonomy.

The World Health Organisation (WHO) International Classification of Functioning, Disability and Health defines ‘disabilities’ as an umbrella term referring to impairments, activity limitations, and participation restrictions:

- An **impairment** is a problem in body function or structure, including physical impairments (e.g. dysfunction of the musculoskeletal, neurological, cardiac, circulatory and respiratory body systems); mental illness or disorder (e.g. schizophrenia, neuroses and psychotic conditions, anxiety and emotional disorders, phobias, depression); cognitive impairments (e.g. brain injuries, dementia); sensory impairments (e.g. sight loss or blindness); and intellectual or developmental impairments (e.g. below average general intellectual function).
- An **activity limitation** is a difficulty encountered by an individual in executing a task or action.
- A **participation restriction** is a problem experienced by an individual in involvement in life situations.

Impairments, limitations and restrictions vary in terms of numerous characteristics, i.e. type, severity, stability, duration and time of onset. They may be stable,

constituting a permanent condition, be slowly degenerative or impose episodic, fluctuating or recurring restrictions on activities (Boyd, 2012).

Longitudinal survey panel data from the United Kingdom suggests that the status of being 'disabled' is, for most, a temporary one. The long-term disabled constitute a relatively small proportion of working age people who experience disability; 27% of those who reported a disability in the UK indicated that they were impacted by the disability for seven consecutive years. Individuals may suffer from multiple conditions or impairments. The onset of impairments also varies between individuals. Some are born with an impairment while others acquire them during childhood or adult life as a consequence of accident, ill health or ageing. Impairment might occur suddenly or entail a gradual deterioration in health over time. Evidence from the UK indicates that only 11% of the disabled adult population is born with their disability, 12% acquire it in childhood, and 75% become disabled during their working life. This highlights that no two experiences of disability are the same; nor are disabled people equally disadvantaged in the labour market. Disability is therefore a complex phenomenon involving interaction between a person's body and the society in which they live.

Diversity in impairment and disability should discourage the use of a simple binary division between 'the disabled' and 'the non-disabled' for two reasons. First, the two populations are fluid rather than fixed. A significant proportion of people are affected by disability at some point during their working lives. Second, disabled people are a highly differentiated group, varying not only in terms of impairment characteristics but also in terms of other personal and household characteristics (i.e. gender, ethnicity, age, education, family structure) and socioeconomic circumstances that influence labour market participation rates (e.g. educational attainment).

9.2. Disability and cultural exclusion

The available evidence primarily concerns the condition of disabled people living in developed countries. The *World Report on Disability* (WHO and World Bank 2011) sketches a picture in which the condition of disabled people presents many disadvantages compared to that of people without disabilities, including health, educational, work, and financial disadvantages. It is necessary to implement new

inclusive policies in order to counterbalance this situation. The World Bank has recently defined **social inclusion** as “the process of improving the ability, opportunity, and dignity of people, *disadvantaged on the basis of their identity*, to take part in society” (World Bank 2013). The analysis of the phenomena of exclusion is often limited to point out that some social groups are at times underrepresented, but we need is a more rigorous reflection on why this happens and on all the processes generating social exclusion. (Ferrucci 2004, 2014).

9.3. Disability in Entrepreneurship



The risk of poverty in the EU is significantly higher for disabled people than for people without disabilities. 21.1 per cent of disabled people face that risk, compared to 14.9 per cent of people without disabilities. A main reason

for this disparity can be found in the low employment rates of disabled people, which are a cause for and/or a consequence of their social exclusion (Greve 2009; Hauben et al. 2012). Labor market integration of disabled people through employment is still a major problem in European countries. Employment rates of disabled people are approximately 20 per cent lower than for non-disabled people. Private and public institutions across Europe in many cases do not even fulfill quota-obligations for disabled people. Therefore, workforce of people with disabilities is a severely underutilized resource in Europe.

To escape poverty and social exclusion disabled people attempt to take an alternative pathway towards labor market integration. Self-employment or entrepreneurship

seems to be a viable opportunity for disabled people in parts of Europe as well as in the United States of America (Eichhorst et al. 2010; Bureau of Labor Statistics 2013). Both terms are closely connected, and can be defined as follows:



Self-employment: “Those who work for profit or fees in their own business, profession, trade or operate a farm” (Becker 1984).

Entrepreneurship: A combination of the activities discovery, evaluation and exploitation of opportunities to introduce e. g. goods and services, processes and organisation structures that were not existent before.

Current data from the U.S. Bureau of Labor illustrates that in the U.S. almost twice as many people with disabilities are self-employed compared to people with no disabilities (Bureau of Labor Statistics 2013). Data material from the European Union Statistics on Income and Living Conditions (EU-SILC) shows that the self-employment rates of disabled people in southern European countries like Greece, Portugal and Romania are significantly higher (average of 31.7%) than self-employment rates of people without disabilities (average of 20.51%) in these countries. The average of the southern European countries even lies above the EU-15 average (28.11%), excluding France (Eichhorst et al. 2010). However, high self-employment rates do not equal low poverty risk. Referring to an analysis of the Czech statistical office, the at-risk-of-poverty rate in Greece is about 40.8 per cent. Portugal has a poverty risk rate of 64.5 per cent. Romania’s at-risk-of-poverty rate hits approximately 65.1 per cent. The defined at-risk-of-poverty threshold for these inquiries refers to the Eurostat methodology and is at 60 per cent of the median equalized national household income. (Eurostat 2010). States that had their national risk of poverty threshold above the EU 15 poverty threshold, had a lower at-risk-of-poverty rate and vice versa. In fact, the high poverty risk rates in southern Europe are a result of economic and political

circumstances. Instead, the leading question is how self-employment rates of disabled people in European countries can be sustainably increased through technology. We will try to illustrate current barriers for disabled people aiming to become an entrepreneur and provide best practice policy examples that support the elimination of these barriers through the application of technology and make recommendations for required policy actions dealing with technology, which will promote disabled people to approach the pathway into self-employment.

9.4. The role of technology



An individual's decision for the path of self-employment is influenced by different factors. One factor is simply put the calculation of opportunity costs. For example, if the benefits of being unemployed are higher than benefits of self-employment, a decision

towards self-employment will probably not be made. Another factor is the degree of independence which positively correlates with the likelihood of self-employment. But the most important factor for becoming self-employed might be self-motivation, as it is the driver which results from factors like opportunity costs or independence. Referring to Csikszentmihalyi's flow theory, motivation can be achieved or maintained if a person's capabilities are sufficient to cope with the demands of a specific situation. If a person's capabilities are insufficient for the task, the individual is more likely to abandon it. Disabled people are often disadvantaged to handle a complex situation like self-employment. The task is much more difficult for disabled people and in some cases even impossible compared to people without disabilities. Due to their disability they lack specific capabilities e.g. visual or mobile capabilities which aggravates self-employment. In many cases, disabled people don't possess the required skills for self-



employment as their education is substandard (National organisation on disability 2004). This handicap can easily decline self-motivation and further lead to damaged self-esteem. Under these conditions self-employment experience is much more unlikely. To increase the self-employment of disabled people it is therefore necessary to preserve self-motivation and self-esteem by diminishing disadvantages for people with disabilities. Technology is an important factor for disabled people to achieve and maintain self-motivation and self-esteem and to participate in social environment. Assistive technologies (AT), accessible websites and accessible applications enable disabled people to be part of the society. For example, artificial limbs, retina implants or screen readers, which enhance inclusion and self-esteem, establish important conditions for disabled people to start a business. Moreover, technology is a crucial factor for starting a business today. Using state-of-the-art technologies like computer systems, including software and hardware, or manufacturing processes is essential to compete in today's global landscape.

The individual person perspective refers to the basic attitude, e. g. self-esteem and self confidence, of disabled entrepreneurs. The information society perspective concentrates on the access to data materials, which are necessary to start a successful business. At last, the business organisational perspective regards the necessity and opportunity for disabled people to structure business processes and apply appropriate leadership styles. Technology supports an individual to efficiently manage all three perspectives to become self-employed. However, specific capabilities are required to utilize ordinary technology in an efficient and successful way subject to the context. Exemplarily requirements are the capability to perceive technology, the capability to operate with technology or the capability to understand technology. Generally, a higher education level would imply more distinct capabilities to use technology. Yet people with disabilities like physical or cognitive impairments often are limited regarding these capabilities, even if they have a high education. In most cases this is due to inappropriate technologies that do not meet the requirements of people with disabilities. Therefore, the efficient utilization of technology is often not possible for disabled people. This means people with disabilities have disadvantages to obtain independent individuality (individual person perspective) as well as necessary

information for self-employment (information society perspective) and to vanquish barriers to organise their business in a competitive manner (business organisational perspective). To strengthen the self-employment of disabled people it is therefore indispensable to provide AT to them.

9.5. The role of policy

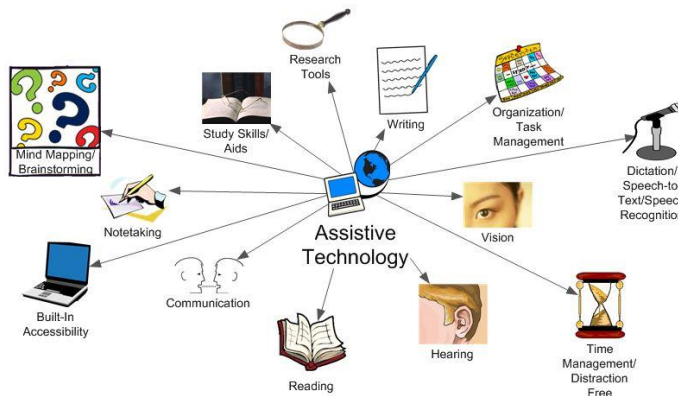


Providing accessible technology for disabled entrepreneurs is a multifarious endeavor. Three important roles for policy can be identified. First, policy has to expedite research, development and dissemination of e. g. AT. Secondly, policy has to ascertain that disabled entrepreneurs are able to afford that technology or know how to apply for public sponsorships. Third, policy has to ensure that once disabled entrepreneurs own AT, they are able to use these technologies to successfully manage processes that are necessary and obligatory for starting and maintaining a business. The first two roles are of rather great importance according to several studies, which investigated positive impacts of AT on education, employment and independence of disabled people. The third role is a significant challenge for policy, as it requires committing involved public and private institutions to accessibility. In more general, policy is an important factor of influence to promote the development and deployment of accessible technologies like AT and information technology (IT)-accessibility. However, compared to the whole market, accessibility refers to a rather small target group which in fact easily leads to negligence and/or oblivion of this topic. The role of policy has to be in supporting and announcing research and development projects with a focus on accessibility and giving incentives to developers for creating accessible technologies. Facing the ongoing demographic reality, Europe's population evolves towards an ageing society (European commission 2012). Regarding technology, requirements of disabled and elderly people are overlapping. Moreover, ageing increases the susceptibility to disabilities. So, by increasing efforts into e.g. ambient assisted living and accessible technologies, this

would support both, the self-employment of disabled and elderly people, which will be an important factor for people with disabilities in future.

9.6. Accessible technology

History and development of accessible technologies



Subject to one's disability, many different variants of accessible technology can be found. Basically, accessible technology can be distinguished into AT and IT-

accessibility. Each of them either supports one perspective of self-employment, for instance the individual person perspective, or all three perspectives. The history of AT dates back into the early 1890's when the first hearing aid was patented. In 1936 the first artificial speech synthesizer was developed by H. W. Dudley for Bell Laboratories. Bell Laboratories also developed the first speech recognition system. In 1975 Kurzweil Technology invented the first optical character recognition (OCR) technology, which allows the translation of written text into digital language. IT-accessibility became an important topic in the late 1990's, when the U.S. Government amended section 508 of the Rehabilitation Act of 1973. Section 508 requires all IT purchased by the U.S. Government to comply with specific accessibility standards. After section 508 came into effect, governments of other countries started to consider and adopt similar laws and regulations. For example, the German government passed an equality act in 2002, which summons the public sector to provide only accessible websites and software applications (German Federal Ministry of Justice 2007). To evaluate whether IT is accessible or not several IT-accessibility standards has been defined over the last years. To implement these standards, European countries pursue the strategy of third-party IT accessibility certifications (European Commission 2008). To date, these technologies have been drastically improved and extended to enhance the inclusion



of disabled people. Current research on AT concentrates for example on gesture-based input devices for the interaction with information, cloud-based AT like screen readers or screen magnifiers that allow disabled people a location-independent access to computer systems and brain-computer interfaces that allow the operation of computer systems or the control of artificial limbs with one's mind . While the first two technologies already have been successfully commercialized, the latter is still to be explored extensively. Efforts on IT-accessibility focus on the generation and acknowledgement of common international standards, like web content accessibility guidelines 2.0 (WCAG 2008). Even though, EU policies were able to embody laws that compel and standards that support public institutions to provide IT-accessibility (United Nations 2008; The National Archives 1995; German Federal Ministry of Justice 2007; WCAG 2008; W3C 2006), a study on web accessibility in European countries conducted by the European commission came to the result that not a single public website fulfills the requirements of the international standard WCAG. A similar study conducted by the disability rights commission in 2004 investigated 1.000 private and public websites referring to the guidelines of the World Wide Web consortium. The study found that 81 per cent of the investigated websites fail to fulfil basic accessibility requirements (Disability rights commission 2004). These results have a major impact on the individual person, information society and business organisational perspective for disabled people. They illustrate that the current IT-accessibility is insufficient and thereby does not support the inclusion of people with disabilities. The development of current and future accessible technologies can significantly support disabled people in one or more self-employment perspectives, respectively.

9.7. Barriers for disabled people regarding self-employment perspectives:

As mentioned above, AT like retina implants or artificial limbs on the one side improve inclusion, but on the other side they enhance self-esteem of disabled people. From an individual person perspective self-esteem is an important factor for self-employment. It increases a person's belief in its capabilities and thereby strengthens a person's confidence that with his own abilities significant contributions to society can be realized. However, self-esteem is only one facet of successful self-employment. To

start a prosperous business a person has to analyse the market, find a demand and generate a concept how to satisfy this demand. For all these steps the most valuable resource is information. In today's information society gathering information is most efficient with computer systems. To enable people with different kinds of disabilities access to computer systems various AT has been developed. Blind people can use braille keyboards or touch screens to scan digital information. The latter requires the application of screen reader software that is capable to read out loud all the information displayed on the screen. Physically disabled people, who are not able to operate computer systems by mouse and keyboard devices, can use wands and sticks to simulate keyboard functionalities or trackballs to simulate mouse functionalities. Sip-and-puff systems allow them to communicate with computer systems by using air pressure on a straw, tube or wand (Microsoft Accessibility 2013). A promising technology, especially for physically disabled people, is the execution of computer actions and commands by speech or eye tracking. This allows a more convenient and efficient way to scan and gather information for people with certain disabilities. Research is continuously evolving these techniques to provide more accurate solutions to users. A major prerequisite for the operation of these AT are websites and applications that fulfill accessibility standards like WCAG 2.0. A successful business requires a specific degree of organisation, depending on business size. Business organisation includes strategy, technology to carry out this strategy and an entrepreneur or employers who work towards the achievement of business objectives. To generate a business strategy and make a decision for a technology entrepreneurs need information. Nowadays most information is available in digital form. Regarding blind people, the information has to be perceivable, for instance information on a website. Regarding physically disabled people the information needs to be embedded in an operable structure. By applying web accessibility standards like WCAG 2.0 the accessibility of information on the web can be assured. Further, the achievement of business objectives needs continuous planning and monitoring. To enable disabled entrepreneurs in these activities accessible business applications like business process management or enterprise resource planning systems have to be provided or developed. Finally, employers need appropriate leadership to be directed

towards business objectives. As leadership style significantly depends on self-confidence and self-esteem, and AT have a major influence in providing these characteristics to people with disabilities.

10. LAWS AND REGULATION ON THE RIGHTS OF PERSONS WITH DISABILITIES



Laws and regulations affecting employment for people with disabilities, found in many places, include anti-discrimination laws and affirmative action. General employment laws also often regulate retention and other employment-related issues of those who become disabled while working. But the implementation and effectiveness of disability protection provisions varies

considerably. Often they are poorly enforced and not well known .

Anti-discrimination laws make it illegal to make decisions about a person's employment on the basis of their disability. In the formal sector the reasonable accommodation requirement refers to adapting the job and the workplace to make employment easier for people with disabilities, where this does not impose an undue burden. The requirements are expected to reduce employment discrimination, increase access to the workplace, and change perceptions about the ability of people with disabilities to be productive workers. Examples of reasonable accommodations include ensuring recruitment and selection procedures are accessible to all, adapting the working environment, modifying working times and other working arrangements, and providing screen-reader software and other assistive There is mixed evidence on the success of anti-discrimination laws in bringing people with disabilities into the workforce. On the whole, such laws seem to have been more successful in preventing discrimination among those who are already employed. Some anti-discrimination

measures call for “affirmative action” in employment. In 2000 the Council of the European Union called on its member states to introduce, by 2006, policies on the employment of people with disabilities.

10.1. EU legal framework



The EU has developed a disability strategy (European Commission, 2010), which outlines actions to address specific barriers to full participation in society for people with disabilities. The EU and its Member States have been given a strong mandate to address the social and economic situation of people with disabilities by several charters, treaties and conventions, including:

- **The Charter of Fundamental Rights of the European Union**, which states the need to respect and protect human dignity, ensure the integration of people with disabilities in the community and prohibit discrimination: Article 1 of the Charter states that ‘Human dignity is inviolable. It must be respected and protected.’ Article 26 states that ‘the EU recognises and respects the right of persons with disabilities to benefit from measures designed to ensure their independence, social and occupational integration and participation in the life of the community.’ In addition, Article 21 prohibits any discrimination on the basis of disability.
- **The Treaty on the Functioning of the European Union**, which requires the Union to fight discrimination based on disability when defining and implementing its policies and activities (Article 10) and gives it the power to adopt legislation to address such discrimination (Article 19).
- **The United Nations Convention on the Rights of Persons with Disabilities**, which is a legally binding instrument that protects and safeguards human rights and fundamental freedoms of persons with disabilities. The EU and its Member States are parties of the Convention, and it will soon apply throughout the EU .

The 2006 United Nations (UN) Convention on the Rights of Persons with Disabilities (CRPD) precludes a deep change of the policies relative to disability. Countries which subscribe to CRPD are committed to promote, protect, and guarantee the full and equal enjoyment of the fundamental rights and freedom to all disabled people. The UN Convention requires States Parties to protect and safeguard all human rights and fundamental freedoms of persons with disabilities. According to it, people with disabilities include those who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others.

Among the inspiring principles of CRPD we find the following (art. 3): the respect for the inherent dignity, individual autonomy, including the freedom to make one's own choices, and independence of persons; non-discrimination; respect for difference and acceptance of persons with disabilities as part of human diversity and humanity; full and effective participation and inclusion in society.

10.2. Europe 2020 Strategy



The European Union has taken a strong position to support the active participation of people with disabilities in society and the economy. This is evident in the Europe 2020 Strategy, which aims to create smart, sustainable and inclusive growth to build a society that includes everyone. The EU developed a strategy to empower people with disabilities to enjoy full rights and benefits from participating in society. The strategy focuses on eliminating barriers for people with disabilities in eight action areas: Accessibility, Participation, Equality, Employment, Education and training, Social protection, Health, and External action (i.e. actions outside of the EU).

To reduce barriers in these areas, a four-pronged strategy has been developed to raise awareness; provide financial resources to support and research programmes; improve data collection and monitoring; and implement the UN-required governance mechanisms across the Commission and with Member States. Entrepreneurship is

indirectly supported by this Strategy through the reduction of barriers. Full economic and social participation of people with disabilities is essential if the Strategy is to succeed in creating smart, sustainable and inclusive growth. It aims to improve the lives of individuals, as well as bringing wider benefits for society and the economy without undue burden on industry and administrations. Eight main areas for action are identified: Accessibility, Participation, Equality, Employment, Education and training, Social protection, Health, and External Action. The references to national actions are intended to supplement action at EU level, rather than to cover all national obligations under the UN Convention.

11. LEGISLATION FOR DISABLED PEOPLE IN GREECE

The above mentioned charters, treaties and conventions, are ratified and incorporated in Greek legislation. Law 4488/2017, in particular, Part D of the Law, establishes a general framework for



the application of the provisions of the United Nations Convention on the Rights of Persons with Disabilities and the Optional Protocol for the rights of Persons with Disabilities (first article of Law 4074/2012), in order to remove the obstacles that hinder the full and equal participation of Persons with Disabilities in the social, economic and political life of the country.

Constitutional Framework for the Legal Protection of Persons with Disabilities .

The Greek Constitution stipulates in Article 4 that all Greeks are equal before the law and that Greek men and women have equal rights and obligations. This article establishes the principle of equality between the two sexes, as well as the principle of gender equality. This constitutional guarantee of the principle of equality before the law is the cornerstone of the regulatory framework for disabled people and their treatment by the state, while the principle of gender equality ensure that women with



disabilities are equal members of society and are protected from the state just like men.

According to Article 21 par. 2 of the Constitution, large families, war and peace invalids, war victims, widows and orphans of those who fell in the war, as well as those suffering from incurable physical or mental illness have the right to special care by the State, while, in accordance with paragraph 3, the State takes care of the health of its citizens and takes special measures to protect youth, old age, disability and the poor. This article establishes the welfare state of justice and the welfare policy state, which is exercised through specific laws that comply with this constitutional requirement.

Article 21 par. 6 explicitly refers to the rights of persons with disabilities, stating the following: "People with disabilities have the right to enjoy all measures that ensure their autonomy, professional integration and participation in the social, economic and political life of the country." With this provision, the Greek Constitution is harmonized with the most progressive Constitutions of other countries and the welfare model for disability is adopted. Specifically, this provision combined with Articles 4 and 116 par. 2, allows the legislature to take all measures necessary to protect or facilitate people with disabilities, among other groups of people who face inequality. Article 22 also establishes the right of disabled people to work. In general, the provision of employment, employment conditions, education, promotions, on-the-job training and the entire status of employment of the disabled are regulated, in the sense that discrimination in the above matters due to disability is prohibited. Article 25 protects human rights and decrees that all rights of a person as an individual and as a member of society are respected by the state. The disabled, as beneficiaries of the above rights, are under the protection and guarantee of the state and enjoy all aspects of political, social, economic and cultural life. Of course, the abuse of a right is prohibited, ie the exercise of the right is not allowed to exceed the limits of the economic and social purpose of the right and the limits set by the right itself.

Apart from the Constitution, many laws are established to protect and care for people with disabilities. Some examples are:

Civil Law, as regulated by the Civil Code (PD 456/1984), provides for the legal capacity, tort, judicial assistance, Inheritance Law, Family Law etc. and also has many regulations and restrictions on legal acts of persons with disabilities.

Criminal Law, regulated by the Penal Code (PD 283/1985), provides for regulations concerning the disabled in the provisions for reduced imputation. The law does not positively define what is "capacity to be attributed", but lists those cases which, when present, imply the non-existence of that capacity.

In the new Civil Service Code, (Law 3528/2007), there are provisions and regulations, concerning people with disabilities.

There are also provisions for the disabled persons in many Greek laws, that regulate issues concerning their education, work, social security, ability to move in public transportation, access in buildings, tax releases and exclusions, financial aids and benefits etc.

12. EUROPEAN UNION AND DISABILITY



One in six people in the European Union (EU) has a disability that ranges from mild to severe making around 80 million who are often prevented from taking part fully in society and the economy because

of environmental and attitudinal barriers. For people with disabilities the rate of poverty is 70% higher than the average, partly due to limited access to employment. Over a third of people aged over 75 have disabilities that restrict them to some extent, and over 20% are considerably restricted. Furthermore, these numbers are set to rise as the EU's population ages.

Disabilities are extremely diverse and are not a fixed characteristic of individuals. Many disabilities are invisible to the eye yet popular stereotypes of disabled people as permanent wheelchair users or as blind from birth persist. Disability affects a wide range of socioeconomic outcomes, including labour market participation. People with



disabilities face many barriers in the labour market and disability is consistently found to have a negative effect on labour market outcomes, including employment rates and earnings. Variations in disability (i.e. type, severity, quantity) influence labour market participation rates, types of occupation and earnings. Locomotor impairments exert a substantial negative impact on employment prospects, as does mental health challenges and learning difficulties.

Disabilities vary widely in type, severity, stability, duration and time of onset. These characteristics influence individual capacities and willingness to become entrepreneurs and to sustain such a status. Self-employment is appropriate for many in this population because it can provide more flexibility than paid employment in terms of workload, work schedule and work location, which can allow for better management of disability and lifestyle. Efforts are needed to increase awareness about the desirability and feasibility of entrepreneurship by people experiencing disabilities, both among disabled and non-disabled populations.

There is some evidence that targeted entrepreneurship training and start-up support programmes can be effective for disabled people, but they are expensive to deliver and the size of the target group will not always justify separate provision. There is strong potential to adapt existing training and start-up programmes to the needs of the disabled. Business advisors should be ready to recommend self-employment as a career option to the disabled, longer support should be available if necessary, adapted formats (such as Braille) should be used, and language should be adapted to the realities of the clients. Partnerships between business support organisations and specialist disabled support organisations can also help.

The benefits trap problem should be addressed by ensuring that the welfare system does not cut benefits too quickly on transition to entrepreneurship or discriminate unfairly against those disabled people who chose to become entrepreneurs.

The use of assistive technologies and improvements in IT and Internet accessibility for disabled business users should be encouraged. The use of assistive technologies for entrepreneurs (brain-computer interfaces, computer readers for blind people, etc.) can be favoured through grants, loans and training in their use. The integration of technological interfaces for disabled people in key accounting, taxation and other

business management software can be encouraged. Better interfaces for disabled people on Internet websites are also needed, starting with improvements in accessibility of online government services, such as business registration and tax filing, and promotion of standards for the development of private websites that are friendly to disabled people.

Employer discrimination is a strong influence on the supply of jobs for disabled people (Meager and Higgins, 2011), although employer perceptions about individuals' capacity to work may diverge considerably from their actual capacity to work. The risk of poverty in the EU is significantly higher for disabled people than for people without disabilities – 21.1% of disabled people face that risk, compared to 14.9% of people without disabilities (Hauben et al., 2012). The main reason for this disparity can be found in the low employment rates of disabled people, which are a cause for and/or a consequence of their social exclusion.

13. ENTREPRENEURSHIP REGARDING PEOPLE WITH DISABILITIES



What is an entrepreneur? An entrepreneur is someone who produces for the market. An entrepreneur is a determined and creative leader, always looking for opportunities to improve and expand his business. An entrepreneur

likes to take calculated risks, and assumes responsibility for both profits and losses. An entrepreneur is passionate about growing his business and is constantly looking for new opportunities. Entrepreneurs are also innovators. They always look for better and more efficient and profitable ways to do things. Being innovative is an important quality for a farmer-entrepreneur, especially when the business faces strong competition or operates in a rapidly changing environment

Disabled individuals are a highly underutilized asset in the workforce. Unfortunately, having a disability means you are statistically more likely than your able-bodied peers to suffer with un- or under-employment. Don't let your disability stand in your way of success. We've got answers to your most common concerns about becoming a disability entrepreneur, starting a business, managing a business, and ways to pay for your entrepreneurial endeavors. However, information regarding the labour market activities of people with disabilities are rather limited . Available data are quite dated and comparability across Member States can be problematic due to the different definitions of disability used in different labour force surveys. Nonetheless, the available data suggest that people with disabilities are more likely to be unemployed or inactive (Pagán, 2009; Greve, 2009). The risk of poverty in the EU is significantly higher for disabled people than for people without disabilities. 21.1 per cent of disabled people face that risk, compared to 14.9 per cent of people without disabilities (Hauben et al. 2012). A main reason for this disparity can be found in the low employment rates of disabled people, which are a cause for and/or a consequence of their social exclusion (Greve 2009; Hauben et al. 2012). Labor market integration of disabled people through employment is still a major problem in European countries. Employment rates of disabled people are approximately 20 per cent lower than for non-disabled people (Eichhorst et al. 2010). Private and public institutions across Europe in many cases do not even fulfill quota-obligations for disabled people (Greve 2009). Therefore, workforce of people with disabilities is a severely underutilized resource in Europe. Those who are working are often employed in low-skilled, low-paying occupations. Data from the European Union Statistics on Income and Living Conditions (EU-SILC) suggest that across the EU, people with disabilities are as likely as those without disabilities to be self-employed. However, people with disabilities are more likely to be inactive in the labour market. (Applica/CESEP/European Centre, 2007).





Disability Entrepreneurs are persons who don't let their physical challenges hold them back from achieving their entrepreneurial vision. To be a successful disability entrepreneur requires commitment, tenacity and a healthy dose of creativity.

There is large variation in self-employment rates of people with disabilities across Member States. The self-employment rates of people with disabilities are relatively low in many north-eastern EU countries and higher in southern EU countries. For example, the self-employment rates for people with disabilities in Bulgaria, the Czech Republic, Denmark, Germany, Estonia, Latvia, Lithuania, Slovenia and Slovakia were below the 5% level in 2007, while the rates exceed the 15% level in Greece, Italy, Cyprus, Poland, Portugal and Romania. This variation can be explained by several factors, including the generosity of disability benefits and the ease of accessing them, the extent to which people with disabilities are included or excluded from society and education, employer discrimination, demographic factors and the incidence of severe disabilities, including variations in the definition of disability used in collecting the statistics.

There are also differences in self-employment activities based on the type and severity of impairment or disability. For example, self-employment rates were higher among people who were severely limited in their daily activities than among those reporting some or no limitation. Moreover, people with disabilities are more likely to operate as a home-based business.

14. BENEFITS OF ENTREPRENEURSHIP FOR PEOPLE WITH DISABILITIES

Thus it is observed that disabled people attempt to diversify towards labor market integration in order to escape poverty and social. Self-employment or entrepreneurship seems to be a viable opportunity for disabled people in parts of Europe as well as in the United States of America (Eichhorst et al. 2010; Bureau of Labor Statistics 2013). Entrepreneurship and self-employment has long been seen as a route for disadvantaged groups to enter the labour market, and as a way for them to escape poverty, marginalisation and achieve a better balance between disability status and working life. The disabled are more likely to be self-employed than the non-



disabled, especially the most severely disabled, and their enterprises to be largely micro-enterprises and home-based. Yet self-employment is characterised by higher job stress, hard work, long hours, emotional energy and high risk. Barriers to self-employment include limited work history, misconceptions regarding the abilities of disabled people as business owners, gender, education, lack of training, finance and business support, and the loss of benefits.

As both terms are closely connected, a clear differentiation is not appropriate for the content of this paper. Therefore, the author refers to following definitions and will use both terms synonymously in further progress: Self-employment: “Those who work for profit or fees in their own business, profession, trade or operate a farm”. Entrepreneurship: A combination of the activities discovery, evaluation and exploitation of opportunities to introduce e. g. goods and services, processes and organisation structures that were not existent before (Shane 2003). Current data from the U.S. Bureau of Labor illustrates that in the U.S. almost twice as many people with disabilities are self-employed compared to people with no disabilities (Bureau of Labor Statistics 2013). Data material from the European Union Statistics on Income and Living Conditions (EU-SILC) shows that the self-employment rates of disabled people in southern European countries like Greece, Portugal and Romania are significantly higher (average of 31.7%) than self-employment rates of people without disabilities (average of 20.51%) in these countries (Eichhorst et al. 2010).¹ The average of the southern European countries even lies above the EU-15 average (28.11%), excluding France (Eichhorst et al. 2010). However, high self-employment rates do not equal low poverty risk. Referring to an analysis of the Czech statistical office, the at-risk-of-poverty rate in Greece is about 40.8 per cent. Portugal has a poverty risk rate of 64.5 per cent. Romania’s at-risk-of-poverty rate hits approximately 65.1 per cent (Dvornáková 2012). The defined at-risk-of-poverty threshold for these inquiries refers to the Eurostat methodology and is at 60 per cent of the median equalized national household income (Eurostat 2010). States that had their national risk of poverty threshold above the EU 15 poverty threshold had a lower at-risk-of-poverty rate and vice versa. In fact, the high poverty risk rates in southern Europe are a result of economic and political circumstances, which are not in the focus of this background



paper. Instead, the leading question is how self-employment rates of disabled people in European countries can be sustainably increased through technology. Therefore, this background paper will illustrate current barriers for disabled people aiming to become an entrepreneur and provide best practice policy examples that support the elimination of these barriers through the application of technology. To conclude, this paper will make recommendations for required policy actions dealing with technology, which will promote disabled people to approach the pathway into self-employment.

People can be attracted to self-employment for any number of reasons. While some enter self-employment out of necessity, many seek to take advantage of an opportunity, gain independence and autonomy, improve their work–life balance, increase their satisfaction for work activities and attempt to increase their income and other material benefits. One of the greatest benefits is that self-employment provides an entry into the labour market as employer discrimination is frequently reported (Boylan and Burchardt, 2002; EMDA, 2009). Employer discrimination is often highest for those impairments or limitations that are subject to greater prejudice by employers such as those with mental and physical disabilities. For these people, self-employment might offer the only opportunity for active labour market participation and with it, improved income and living standard. Another important advantage of self-employment for those with disabilities is that it provides a better adjustment between disability status and working life through more flexibility in work pacing, hours worked and location of work (Doyel, 2002; Pagán, 2009). Self-employment can provide a sense of self-empowerment because entrepreneurship can provide a person with the opportunity to take control of their disability and labour market participation, and be socially and economically active to the extent possible for their situation.

Overall, the characteristics inherent in people with disabilities also position them to succeed in entrepreneurship. These characteristics have been identified in the USA to include creative problem-solving skills, flexibility, grace under pressure, persistence, sense of humour, willingness to ask for help, and resourcefulness. Whether pushed or pulled towards entrepreneurship, the individual with a disability has traits that support the desire that many people have for self-sufficiency. Self-sufficiency through



entrepreneurship may relate to gaining independence, improving work–life balance increasing happiness and satisfaction with their career, capitalising on an identified opportunity, and to increasing income and quality of life.

Nevertheless, self-employment can facilitate active social and economic participation and give control to the individual over their participation. Entrepreneurship can allow flexibility in workload, work hours and work location, providing more flexibility in coping with disability than can be often found in paid employment. While business creation and self-employment are not suitable for all, there are several ways in which policymakers can improve their support for entrepreneurship for people with disabilities.

A first approach is to review current business start-up support offerings to ensure that it is available in accessible formats and to educate business advisors on the potential and risks that business start-up and self-employment have for people with disabilities. It is a realistic career option for many and they should not be discouraged based on disability alone. An important element of improving information on business start-up for people with disabilities is to increase the amount of information available on the impact of business creation and self-employment income on benefit payments received by individuals. Many people with disabilities receive different forms of public support including disability insurance payments, housing allowances, minimum income supports, etc. and it is important for their decision to start a business.

A second area of action for governments is to support the development and adoption of assistive technologies. Development of these technologies is vitally important for much of this population to more fully participate in daily life. International cooperation is important in this field and governments should seek partnerships with other governments, international organisations and the business sector to ensure common standards and platforms.

Third, there is a limited evidence base that supports the development of targeted training and support that is tailored to the needs and challenges of entrepreneurs and potential entrepreneurs with various disabilities. e. Finally, governments should be doing more to ensure that all public websites are accessible. With the Internet

becoming the primary way in which governments and citizens interact, much more can be done to improve the accessibility of online business services such as business

15. BARRIERS FOR DISABLED PEOPLE REGARDING SELF-EMPLOYMENT



Anyone interested in entrepreneurship has the potential to face significant barriers. For those with a disability, these barriers may be even

more pronounced. For people with a disability, barriers can be summarised into three primary categories: financial, societal, and personal. Financial challenges associated with disabled entrepreneurship first include access to capital. People with disabilities tend to be unemployed or underemployed resulting in less personal savings with which to launch their business endeavor. This creates a significant barrier for disabled people who wish to engage in entrepreneurial activity. This challenge, faced by nearly all entrepreneurs, is heightened due to several other factors such as lower levels of education, discrimination from financial institutions, and ability to access information on available funding sources. A second financial challenge is the issue referred to by the OECD as the 'benefits trap' (Halabisky, 2014). Individuals who are disabled may not engage in entrepreneurial endeavours as they do not want to risk losing all or a portion of their benefits if generating their own income. While support mechanisms may be in place to reduce this risk, perception and awareness constraints still exist with this particular financial challenge (Office of Disability Employment Policy, 2013). Societal challenges can be looked at from the perspective of society at large, as well as from the view of people with disabilities. In Australia, it has been identified that people with disabilities are unfairly discriminated against and face higher levels of exclusion. Discrimination by consumers is a problem associated with how individuals with disabilities are viewed by society at large, where customers may choose not to



purchase goods and services produced and provided by those with a disability (Boylan & Burchardt, 2003; Jones & Latrielle, 2011). Rizzo (2002) notes that this may extend beyond consumers and into relationships with suppliers and other stakeholders who create increased challenges for disabled entrepreneurs. The types of support services for business have also been identified as a societal barrier for increasing disabled entrepreneurship (Halabisky, 2014). Government services in most developed nations include small business training options for people with disabilities, but internal barriers exist within the support systems developed by governments. Support workers may discourage entrepreneurial endeavours due to higher risk, concern for their clients, and misconceptions of an individual's abilities (Doyel, 2002). Emphasis is also placed more on support services for finding employment than on entrepreneurship, reflecting self-employment options as more of a secondary option within support systems (Wehman, Griffin, & Hammis, 2003). There is also lack of connection between various support programmes and having the correct infrastructure in place to support people with disabilities engaging in entrepreneurial activities (Yamamoto & Alverson, 2013). Together these barriers represent gaps in awareness, holes in support services, and challenges when services are spread between multiple departments. Other identified service delivery barriers, as highlighted by Halabisky (2014), include lack of tailored training (duration, time, accommodation for lack of previous education), inadequacies in the types of training offered for certain types of disabilities such as mobility restrictions or content for the deaf or blind, inability to connect the individual to the idea of being an entrepreneur. The disabled individuals who may be well positioned to succeed in entrepreneurial endeavours also face personal barriers. The first of these is a lack of confidence in themselves and the ability to perceive success in an entrepreneurial endeavour (Halabisky, 2014). The lack of confidence can be increased when family and friends are not supportive (Halabisky, 2014). The confidence problem has been identified as a particular issue for those with mental health disabilities (EMDA, 2009). Additionally, at a personal level, are the lack of business knowledge, experience, and skills. OECD reported on the barriers for entrepreneurship among the disabled, highlights the lack of skills being connected to level of education and work experience. This problem is identified in several studies,



as examined by Parker et al. (2014), with the challenge being identified as a barrier that must be dealt with by those with a disability and by those providing support services. Theoretical foundations of disability Despite the lack of empirical data on the integration of entrepreneurship and disability, a summary of theoretical DMs may provide insights regarding options for disabled people to participate in entrepreneurship activities. We also provide, in our opinion, a DM that will provide the most suitable foundation for action undertaken in the process of planning accessible entrepreneurship initiatives in the future. The integration of DM and entrepreneurship activities certainly requires additional research and insight; the authors only provide suggestions in this regard. The evolution of concepts and DM has predominantly been conditioned by socio-economic and legislative changes, evidenced by numerous DM, for example, ethical, medical, social, biopsychosocial, geographical, and economic models (Zajadacz, 2015). The most frequently discussed models are the medical and social models, often presented as opposing concepts (Buhalis & Darcy, 2011). The medical model of disability assumes that disability is connected to the individual and is above all their own personal tragedy. The social model assumes that disability is not due to individual characteristics but rather the result of existing restricting factors in the environment, which multiply an individual's dysfunction and hinder or prevent participation in the full scope of life in society (Buhalis & Darcy, 2011). The biopsychosocial model assumes that disability is complex phenomena that integrate both the level of a person's body (medical) and a complex and primarily social phenomena. Recent research by Zajadacz (2015) identified that the biopsychosocial model provides a balanced approach, giving appropriate weight to the different aspects of disability as a dynamic interaction between health conditions and contextual factors, both personal and environmental. Due to the dynamic nature of entrepreneurship activities and initiatives (Halabisky, 2014), the authors propose the integration of a biopsychosocial model approach to disability. .People with disabilities face plenty of barriers that impede or even prevent them to start their own business. This section will illustrate most important barriers for disabled people in key elements of entrepreneurship that can be diminished or even

eliminated through technology. The regarded elements are business resources, general conditions, organisational structures and customer relationship.

It is shown that most barriers for successful entrepreneurship emerge from constraints referring to physical impairments and the inaccessibility of information and communication technology. The next section will provide exemplarily projects and policies from European member countries aiming to diminish or eliminate these barriers.



In addition to facing the general challenges to business startup that all entrepreneurs face, entrepreneurs with disabilities are likely to face specific barriers to entering and sustaining entrepreneurship activities. Some of these barriers, arguably, are very deep-rooted social-structural constraints that impose severe limits on life chances for certain groups of disabled people. These barriers include:

- Lack of confidence and limited aspirations – people with disabilities may have difficulty identifying a business opportunity, developing this business idea and engaging with the available support infrastructure in a meaningful way, which contributes to low levels of confidence related to business start-up. This is further compounded by the unsupportive role of family and friends who often discourage start-up. This challenge is especially relevant for those with mental health challenges.
- The benefits trap – surveys indicate that there is often a fear of losing the security of regular benefit income when other income is generated. Awareness of eligibility for benefits is incomplete among the population of people with disabilities and contributes to perceptions of self-employment as ‘risky’.
- Lack of relevant business knowledge and skills – people with disabilities often lack specialist business management, legal and financial skills and knowledge due to limited relevant education and employment experience.



- Access to start-up capital – people with disabilities often experience difficulties financing new start-ups due to limited personal financial resources (savings, home ownership), which, in turn, are partly due to poor education and the concentration of disabled employees in low-paid occupations; poor credit rating after long-term benefit receipt; disinterest/ discrimination on the part of banks; lack of accessible information on sources of grants and loans.
- Consumer discrimination – self-employment can be deterred by customer discrimination, reducing the demand for goods and services produced, as well as the rewards to self-employment.
- Increased labour costs – some entrepreneurs with disabilities need to hire assistants to help them undertake tasks that many people without disabilities may be able to do on their own (e.g. moving merchandise, inputting data into computer software), which increases their labour costs and puts them at a competitive disadvantage
- Lack of appropriate business support services – this barrier has a number of dimensions due to the individual nature that disabilities have.

First, business advisers are often reluctant to recommend self-employment as a career option for disabled people and sometimes actively attempt to dissuade them. Second, and crucially, training is not always tailored to individual needs and therefore of limited value to particular programme recipients. For some, support might need to be provided over an extended period of time for recipients with recurring conditions or particular stresses. Third, support services may not be available in particular formats (e.g. Braille), which makes the support service inaccessible for certain segments of the population of people with disabilities. Fourth, premises where support is provided may not be accessible for individuals with conditions and impairments that impact their mobility. Moreover, this barrier can be increased by challenges related to transport to and from support centres for those with mobility challenges. Fifth, support programmes may use language that is off-putting to people with disabilities. For example, entrepreneurs who experience disability often have lower growth aspirations and may not identify with terms such as ‘entrepreneur’ because they do not see themselves as exploiting an opportunity or being innovative. Sixth, the diversity of impairment and disability means that some disabled entrepreneurs might

not perceive themselves as ‘disabled’ and prefer to be supported under mainstream, rather than disability-specific, services. There is evidence that particular groups of disabled people face multiple sources of disadvantage in European labour markets (Greve, 2009, Boylan and Burchardt, 2002).

Disability is more likely to affect vulnerable subgroups within society, for example, the old and the poor (World Health Organisation/World Bank, 2011) and people who experience disability may face multiple forms of social exclusion and sources of labour market disadvantage. Women, older people and ethnic minority and migrant people who experience a disability are likely to face greater levels of labour market disadvantage. Disability-related barriers to entrepreneurship might, therefore, be compounded by gender, ethnicity and age barriers as well as deprived socioeconomic contexts.

15.1. Business resources



A successful business requires resources like public relations, funding, suppliers or employees. To acquire these resources and build networks it is essential for entrepreneurs to be able to communicate with business partners. In business world, communication can be distinguished into different communication channels. The most disseminated channels are e-mail,

phone call or voice mail, face-to-face conversation, fax and letter. Depending on one’s disability, a person will prefer one channel to the other. For instance, a physically disabled entrepreneur using a wheelchair will prefer e-mail, phone call and letter to face-to-face conversation, if it requires the disabled entrepreneur to visit the business partner in an unknown and maybe inaccessible area or building. For some groups of disabled people, for example blind people, communication channels like paper-based fax or letters are completely inaccessible. These groups require digital communication



channels like e-mail or phone call. Even though, most parts of business to business communication is channeled through e-mails and phone calls nowadays, important fragments like the negotiation of terms and conditions or the conclusion of contracts still require paper-based communication or face-to-face conversation. Besides communication channels, it is essential to have access to information about business resources, e. g. bank conditions, supplier proposals or recruiting platforms. Up to a certain level this information can be most efficiently gathered on the World Wide Web. As mentioned before, the information on the web has to be accessible for people with disabilities. It must be anticipated that currently, a blind entrepreneur or an entrepreneur who is not able to operate keyboard and mouse devices would have major disadvantages to find appropriate proposals from suppliers, necessary information about bank conditions or suitable employees from recruiting platforms, as the web lacks accessibility.

15.2. General conditions

Starting a business requires the entrepreneur to fulfill general conditions before and after business formation. Basically, the fulfillment of these conditions is an exhausting process, which demands the entrepreneur to overcome certain bureaucracies. Before starting a business he has to register the business to the authorities. Depending on the authorities' organisation, the entrepreneur whether has to physically visit the authorities or alternatively can print the necessary form and send it per post. Generally, wheelchairs and artificial limbs enable physically disabled people a certain degree of mobility that facilitates them to choose the first alternative. Be that as it may, for many disabled people as well as people without disabilities it is more convenient to fill out the requested form and send it per post. This in turn presupposes specific requirements to the form. The form has to be self-explaining, so entrepreneurs with low literacy are able to fill it out. To consider the demands of blind entrepreneurs the form has to meet specific accessibility standards to ensure that it can be perceived and operated by those people. After starting a business, he needs to submit its tax declaration annually. To do so, most EU countries provide a paper-based and an electronic form. While a paper-based form is sufficient for most people with



disabilities, blind people and people who cannot use their hands require an electronic form, so that a screen reader can read out loud the content for the blind and/or data entries can be executed by e. g. voice commands for the physical impaired. However, most tax return forms from EU authorities do not fulfill the necessary accessibility requirements.

In addition to personal tax declaration, the entrepreneur has to close the yearly accounts in a properly way. A properly annual closure requires a sound accounting. Generally, specific software applications are applied to implement appropriate accounting standards. These software applications require the user to operate with keyboard and mouse devices. If a physically disabled person is not capable of using such devices, he would need to employ or assign someone for the job. Even though, this would raise additional costs and therefore discriminate the person against an entrepreneur without disabilities, who is capable of handling accounting by itself, the physically disabled entrepreneur could at least monitor the accounting. Different from blind users, who are not able to operate accounting software due to a lack of accessibility and have to completely depend on someone hired for the job. The incapacity of monitoring accounting can have legal consequences for the blind entrepreneur, since the entrepreneur is liable for accounting errors. In fact, there are many more important business systems such as asset management tools, supply chain management tools or customer relationship management tools. Some of these tools do have a direct relation to law and therefore have a different importance for disabled entrepreneurs than tools that are not directly related to law.

15.3. Organisational structures

An entrepreneur is demanded to establish an appropriate organisational structure to be able to act and react in the marketplace. Technology plays major significance for e. g. workplace operations, business operations, business accounting or business marketing. So, being not capable to apply such technologies would result in competitive disadvantages for the entrepreneur. Regarding people with disabilities, one must assume that certain groups of disabled entrepreneurs would not be able to apply these technologies for establishing organisational structures, due to accessibility



issues of technology. The management of business operations includes the planning, governing and monitoring of processes and resources. These are essentials to allocate budgets to necessary and promising business areas and thereby maintain competitiveness. Entrepreneurs apply specific software applications to increase efficiency of such business operations. Nowadays, every single function referring to the establishment of organisational structures is deeply intermeshed with technology, in particular IT. It is inevitable for disabled entrepreneurs to apply such IT, if they seek to build necessary structures to successfully compete in the global landscape. However, most IT including these functionalities do not meet the requirements of disabled people and thereby cannot be applied by many disabled entrepreneurs.

15.4. Customer relationship

The three aforementioned key elements of entrepreneurship are meaningless, if there are no customers to sell the products or services to. It is the challenge of every entrepreneur to transform the customer from an abstract, unknown construct into a concrete individual, whose needs, wants and buying patterns are revealed to the entrepreneur. To learn about one's customers an entrepreneur can make use of communication channels. Regarding startup businesses with a small customer base, face-to-face communication is a viable and effective method. Certainly, this requires a specific degree of mobility from the entrepreneur to visit its customers. Physically disabled people sitting in a wheelchair or missing a limb are often not able to undertake such field services. Technology can provide solutions and support to those people. Modified automobiles enable people in a wheelchair the level of mobility that is required to efficiently manage customer relationships through field services. Artificial limbs can vanquish shame and return self-esteem to people with missing limbs, which supports them to appear with self-confidence to the customer. Regarding an established business with a big customer base, face-to face communication quickly loses viability and efficiency. Other methods and technologies are required to gather customer intelligence. Again, information and communication technologies provide efficient and effective solutions. Customer relationship management (CRM) software applications are capable to track and store information about every customer. The

data contains order information, support information, requests, complaints, interviews and survey responses. These are valuable information enabling an entrepreneur to expand its competitive advantage. Blind entrepreneurs and those who are not able to use keyboard and mouse devices most likely won't be able to access these information, which raises competitive disadvantages.

15.5. Facilitating entrepreneurship with technology

Technology can help people with disabilities maintain an active, independent lifestyle and participate fully in society. Within this context, these technologies are referred to as **assistive technologies**, which are products that increase, maintain, or improve functional capabilities of people with disabilities. These technologies are wide-ranging and include, for example, artificial limbs, retina implants and specialised computer software. The history of assistive technology dates back to the early 1890s when the first hearing aid was patented. In 1936, the first artificial speech synthesizer was developed by H. W. Dudley for Bell Laboratories. Bell Laboratories also developed the first speech recognition system in 1952. In 1975 Kurzweil Technology invented the first optical character recognition (OCR) technology, which allows the translation of written text into digital language. Current research and development related to assistive technologies concentrates on, for example, gesture-based input devices for interaction with information systems, cloud-based assistive technologies (e.g. screen readers or screen magnifiers) that allow disabled people location-independent access to computer systems and brain-computer interfaces that allow the operation of computer systems or the control of artificial limbs with one's mind. While the first two technologies already have been successfully commercialized, the latter is still to be explored extensively.

Assistive technologies are evolving at a rapid pace. Although they are not directly aimed at supporting entrepreneurship, these technologies can help someone in business creation in three broad ways. First, improving an individual's ability to participate in society increases their self-esteem and confidence, increasing the likelihood of starting a business. Collecting and managing information is critical for full participation in today's society and various assistive technologies enable people with



different kinds of disabilities to have access to computer systems. Blind people can use Braille keyboards or touch screens to scan digital information. The latter requires the application of screen reader software that is capable of reading out loud all of the information displayed on the screen. People with physical disabilities, who are not able to operate computer systems by mouse and keyboard devices, can use wands and sticks to simulate keyboard functionalities or trackballs to simulate mouse functionalities. Sip-and-puff systems allow users to communicate with computer systems by using air pressure on a straw, tube or wand (Microsoft Accessibility, 2013). A promising technology, especially for physically disabled people, is the execution of computer actions and commands by speech or eye tracking. This allows a more convenient and efficient way to scan and gather information for people with certain disabilities. Research is continuously evolving these techniques to provide more accurate solutions to end users. Second, assistive technologies can help people with disabilities interact with customers and develop relationships with suppliers, business partners and financiers. Communication can occur through different channels and the most disseminated channels are e-mail, telephone or voicemail, face-to-face conversation, fax and letter. Depending on one's disability, an individual will prefer one channel to the other. For instance, a physically disabled entrepreneur using a wheelchair may prefer e-mail or phone calls over face-to-face conversations if they require the disabled entrepreneur to visit the business partner in an unknown and possibly inaccessible area or building. Third, technologies can help entrepreneurs with disabilities to manage and control their business processes. In addition to the information and communication issues already discussed, the achievement of business objectives needs continuous planning and monitoring. Much work is still needed in this area because many business process management applications or enterprise resource planning systems are incompatible with many accessible technologies.

In addition to assistive technologies, **information technologies (IT)** can facilitate entrepreneurship for people with a disability. IT-accessibility became an important topic in the late 1990s, when the US government amended section 508 of the Rehabilitation Act of 1973, which now requires all IT purchased by the US government



to comply with specific accessibility standards. This was followed by similar action by other governments. For example, the German government passed an equality act in 2002, which summons the public sector to provide only accessible websites and software applications (German Federal Ministry of Justice, 2007). Recent efforts on IT-accessibility focus on the generation and acknowledgement of common international standards like Web Content Accessibility Guidelines 2.0, which is a major prerequisite for the operation of many assistive technologies.

Even though EU policies were able to embody laws that compel and standards that support public institutions to provide IT-accessibility (United Nations, 2008; The National Archives, 1995; German Federal Ministry of Justice, 2007; WCAG, 2008), several studies on web accessibility in the EU found that very few public sector websites meet these international standards. For example, a study conducted in 2009 tested the conformance level of 102 public sector websites and found that none of them met the WCAG standard. An earlier study conducted by the Disability Rights Commission in 2004 investigated 1000 private and public websites and found that 81% of the investigated websites did not fulfil basic accessibility requirements (Disability Rights Commission, 2004). These results have a major impact on the individual person, information society and business organisational perspective for disabled people. They illustrate that current IT-accessibility is insufficient and thereby does not support the inclusion of people with disabilities in online activities.

Given the prominence of the Internet in today's society and business environment, improving the accessibility of IT remains a priority for the industry and government. Computer software and the Internet are also increasingly essential for small businesses to help entrepreneurs manage tasks such as communication, inventory management and accounting. Furthermore, many interactions between small businesses and governments are now online. For example, in many EU countries business registration and the filing of taxes can be completed online. Governments and business support agencies also provide a wealth of business support services and information through online portals.

16. POLICY RECOMMENDATIONS ON DISABLED PEOPLE IN ENTREPRENEURSHIP

As earlier discussed, the current Australian employment and small business training policies do offer support for interested disabled individuals to engage in entrepreneurship. A well established access point into entrepreneurial and small business training and supports is necessary. The scheme has proven to be accessible and has been found to have a high rate of success for the disabled. Similar policy-based programmes exist in other nations and have been found to lead to high levels of success. Other policy platforms should also be developed that will lead to increased success. Implementing a biopsychosocial model approach to disability, we recommend the following initiatives.

Increased awareness

An initial and extremely important step for the disabled is to increase awareness of entrepreneurial activity. There is a lack of awareness of the self-employment and small business ownership among those facing a disability. Non profit organisations supported by the central or local governments can also play a crucial role. Awareness is further hindered by a lack of confidence in individuals and limited support to engage in entrepreneurial endeavours from family and friends. Promotion and education around the viability, opportunities, and risks of entrepreneurship is a first step to increasing entrepreneurial engagement. In Europe, three groups have been identified as needing to be targeted, those with disabilities, their support networks, and business advisors (Halabisky, 2014). Through increased awareness, those with ideas and passion may be willing to take the initiative to achieve a business start-up. Entrepreneurship can play a role in supporting participation in the labour market and society for people with disabilities. While entrepreneurship is not for everyone and may not be feasible for those with severe or multiple disabilities, it is a feasible option for many people with disabilities. The approach taken to support labour market participation for people with disabilities in the EU tends to favour increasing participation through employment rather than self-employment or business creation. A common approach in the EU is to use employment quotas that require public and private organisations to employ a certain number or proportion of people with



disabilities; however, a number of countries such as Denmark, Estonia, Latvia, the Netherlands, Finland, Sweden and the United Kingdom do not use this approach . Recognising the range of disabilities and impairments, there are several examples of policy actions that support self-employment and business creation for people with disabilities. This includes the incorporation of self-employment in general active labour market programmes as well as schemes that are dedicated to supporting people with disabilities in business creation.

Promotion of entrepreneurship activities for people with disabilities should aim to reach three target groups: people with disabilities; their role models and support networks, such as family and friends; and business advisors. One method of increasing awareness of entrepreneurship among people with disabilities is to raise the profile of entrepreneurship and self-employment in labour market support programmes. Many labour market programmes for people with disabilities focus exclusively on job placement, often within the public sector, and ignore, or even discourage self-employment (Enabled4Enterprise, 2008; EMDA, 2009). It is important to provide enterprise awareness training for advisers whose responsibilities include supporting disabled individuals. This should be disability-specific training rather than simply generic diversity training. This type of training should seek to educate advisers on the possibilities self-employment might afford disabled people as a work option and must also cover the challenges and risks. In addition, it should seek to overcome adviser reluctance to recommend self-employment as a viable option. Increasing adviser confidence to provide support to disabled entrepreneurs might, indirectly, increase the confidence of the target group of entrepreneurs. Policy makers can also promote business creation for people with disabilities, using role models with disabilities. It is important to showcase these inspiring examples for potential entrepreneurs with disabilities to demonstrate that business creation and self-employment can be achievable. These role models should also be included in broader promotional campaigns related to entrepreneurship and self-employment to show that self-employment is not an atypical activity for people with disabilities. This is important not only to individuals with disabilities but also for addressing negative stereotypes and attitudes in society. Another approach to increasing awareness is to promote



entrepreneurship through high profile awards for entrepreneurs with disabilities. This provides public recognition for success and in some cases financial rewards are provided to support further business development. Awards are also an effective method of attracting media attention to showcase success stories, increase awareness of the potential for entrepreneurship among people with disabilities and inspire potential entrepreneurs.

An example of award programme is the Stelios Award for Disabled Entrepreneurs (United Kingdom) which are administered in partnership with Leonard Cheshire Disability charity (<http://www.stelios.com/entrepreneurship/award-for-disabledentrepreneurs-in-the-uk.html>). The awards receive considerable media attention and provide financial rewards to help entrepreneurs grow their business. The European Commission is also active in this area, operating the European Enterprise Promotion Awards (see Box 2) and sponsoring the First European Award for Social Entrepreneurship and Disability (<http://www.csr-d.eu/social-entrepreneurship-and-disability-award>).

16.1. Entrepreneurial skills training



Expansion of existing small business start-up training programmes is another policy recommendation that can lead to more interest, attempts, and success in small business start-ups. Expanding

access to existing programmes and bringing in new technologies to deliver training that supports disability and accommodates lower education levels is key. Programmes can also be tailored to specific audiences with specific disabilities. Business training and support services that are not currently accessible to those with a disability can be expanded and adapted to be inclusive of the disabled. Furthermore, we recommend an empowerment of the entrepreneurship model as advocated by Balcazar et al.

(2014). Under this model, disabled people would receive business start-up training in a supportive and understanding context to deal with their increased challenges.

16.1.1. Advisory skill training

Beyond increasing the available entrepreneurial training for the disabled is increasing the capacity of those involved in training. The provision of training to support workers and business mentors to understand disabled impairments, so that training can be adjusted to fit better with client needs, is an important policy recommendation. For those who are unaccustomed to working with the disabled, this may require sensitivity training and the ability to help identify and determine how to exploit business opportunities that may be viable to increase self-employment. This may require involvement of organisations that deal with the disabled to expand their services or have them engaged in training of the trainers.

16.1.2. Technology access and assistive technology acquisition

Special units should be established in part to increase support and access to technologies for assistance of those with a disability. This access needs to be provided with respect to accessing the internet and integrating technology platforms to work with various assistive technologies. Provision of electronic services and web-based content that includes material useful for training and required for legal business requirements must be incorporated to reduce societal impediments for potential disabled entrepreneurs. This can be extended into financial support for the acquisition of assistive technology that would allow individuals with a disability to see their self-employment opportunity come to fruition. This can be extended by provision of existing technologies and can involve support for research and development of new products and services for the disabled.

16.1.3. Access to financial support

Arguably the largest hurdle for any start-up is accessing capital. This constraint is even more pronounced among the disabled. The disabled have less work experience, education, and savings; together these create an obvious barrier for the individual to

access capital and financial support. Additionally, these barriers increase the stigma of the disabled as a bad investment option for those with available financial resources. Several policy options exist including accessibility of information to make the disabled entrepreneur



business ready, increased participation in venture capital events, and business networking to reduce uncertainty within the larger group of financial stakeholders, or the creation of specific funds to support disabled entrepreneurial endeavours at the microenterprise and small business levels. Reducing the barriers to accessing capital and information on how to find capital is key to increased entrepreneurial engagement.

A good place for policymakers to start when looking to improve access to finance for potential entrepreneurs with disabilities is to ensure that existing financial supports are accessible and available to people with disabilities. This includes ensuring that information on sources of financing is available in accessible formats and the financing programmes do not discriminate based on disability. Second, policymakers can help bridge the gap between potential entrepreneurs and investors by helping disabled entrepreneurs become investment-ready and by facilitating access to investors with networking events, ‘pitching events’ and business competitions. The aim is to help entrepreneurs understand how the financial industry operates and the requirements for receiving investment. They can go even further by bringing investors and entrepreneurs together in special events. Face-to-face contact is important to build networks and relationships, and entrepreneurs can use the opportunity to ‘sell’ their entrepreneurial project. An example of such an approach is ‘Enabled4Growth’ which was a small project in London, United Kingdom, that aimed to support disabled entrepreneurs in accessing finance to expand their business. While it did not directly provide funding for the participants, it provided training entrepreneurs on how to be



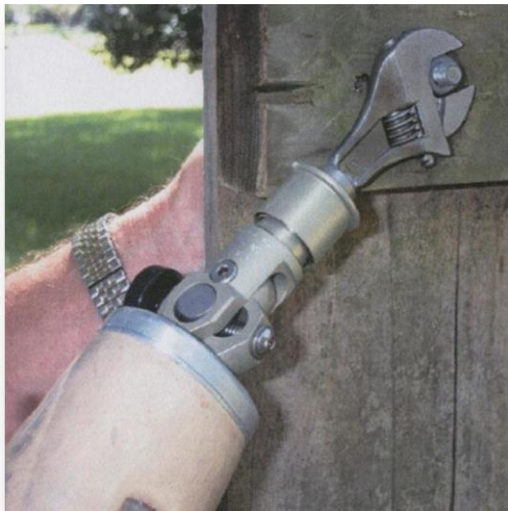
investment-ready, to help with funding applications and to host networking events where entrepreneurs could meet investors.

Financial support might also extend to the issue of benefits. The benefit system should be flexible enough to encourage individuals to create new firms but also to support those unable to make them work. This flexibility should be communicated effectively to those at whom the system is targeted, so unjustified fears are mitigated, reducing a key barrier to business start-up.

Policy makers can take two approaches to facilitate the development of entrepreneurial skill-sets for people with disabilities. One approach is to provide more support to people with disabilities in the education system. People with disabilities are only half as likely to complete vocational training or higher education as people without disabilities and one of the principal barriers is the lack, or inaccessibility, of assistive technologies which are rehabilitative, adaptive and assistive devices that enable disabled people to perform particular tasks (e.g. enabling mobility, allowing the use of specific artefacts such as furniture and computer keyboards, facilitating communications). Improving the availability and accessibility of these technologies is a first step to increasing educational attainment that will lead to increased skill levels and other individual benefits. This can have a positive influence for entrepreneurship activities as higher educational attainment for people with disabilities leads to better labour market outcomes, including self-employment. Policy makers can also examine the wide variety of existing non-financial supports to ensure that they are accessible for people with disabilities. Alternatively, tailored programmes for entrepreneurship training can be developed such as 'Ready to Start' in the United Kingdom. This approach can overcome small group support provision, has demonstrated the most successful outcomes (Arnold and Ipsen, 2005; Enabled4Enterprise, 2009a, b; EMDA, 2009). Tailored approaches need to assess individuals' business potential, ensure the feasibility of the business idea, address skill and knowledge deficiencies with business education, training and technical support, support the development of a realistic business plan and support adjustments as the business is realised. While effective, such tailored approaches are highly resource intensive and can therefore be difficult to launch. An effective approach to overcome this challenge is for policy makers to

work with specialised organisations who are already active in supporting people with disabilities. This will improve outreach to the target clients and will allow policy makers to benefit from the credibility and experience of existing organisations.

16.1.4. Support the development, acquisition and use of assistive technologies



Assistive technology can be life changing for people with disabilities. They are becoming more sophisticated, increasingly portable, less expensive and easier to use, and as result, hold greater potential for improving the inclusion of people with disabilities in economic activities and in entrepreneurship.

Existing European policy currently supports the development of assistive technologies

for a wide range of applications such as, ambient living, accessible transport and accessible computer-interaction. To further support technological development in these areas, governments can take two actions. First they can continue to support research in these areas through research grants. In particular, more incentives could be provided to develop assistive technologies that relate to business software and business organisational tools. Second, actions can be taken to improve standardisation in the assistive technology market. To address this, the European Commission is supporting a number of projects such as Cloud4all, which promotes the development of assistive technologies related to information technologies. In addition to supporting the development of these technologies, policymakers can also support the acquisition and use of assistive technologies by entrepreneurs with disabilities. This is often done by providing direct financial support, such as a grant, that assists in the acquisition of special equipment and technologies needed when starting a business.

One example of this approach can be found in Greece where the European Social Fund supports a self-employment scheme for the vulnerable unemployed, which provides grants to cover business start-up costs for unemployed people from vulnerable

groups. Unemployed people with disabilities are also eligible to receive additional grants to cover up to 90 % of the cost of adapting their workplace to their disability. (OECD/The European Commission (2013). Policy can also support training so that people with disabilities know how to properly use assistive technologies and information and communication technologies so that they can maximise participation in society and the labour market.

16.1.5. Continue to improve Internet and IT accessibility

The Internet and mobile communication technologies have become an integral part of society as they are now primary methods of communication and accessing information. However, the benefits are not shared by all because many people with disabilities have difficulty using many of these new technologies as they are often developed on different platforms that are incompatible with assistive technologies. Policymakers can do more to support the development and implementation of accessibility standards that would improve access to these technologies for people with disabilities.

Many EU countries passed laws and policies regarding the accessibility of websites and software applications for the public and private sector. However, evidence suggests that there is still a long way to go towards achieving the stated objectives in this regard. The first area of action for policymakers is to improve the IT-accessibility of public websites. This is critical for people with disabilities who are considering self-employment because many public services are now online.

Another important area for action is to harmonise the standards and obligations in IT-accessibility across the EU. The Internet holds great potential for entrepreneurs with disabilities because it can help them overcome challenges related to communication and mobility. However, the vast majority of websites are not in accessible formats and are not compatible with assistive technologies. To make a significant impact in this area, large international efforts are required.

17. PROJECTS AND POLICIES IN EUROPEAN MEMBER COUNTRIES



To overcome discrimination and increase the inclusion of vulnerable and marginalised groups the European Union follows a three-fold approach embedded within the European Disability Strategy 2010-2020 (European commission 2010):

- Enhancement of access to mainstream services and opportunities,
- enforcement of legislation to overcome discrimination and
- development of targeted

approaches to respond to the specific needs in each group.

Within the Seventh Framework Programme (FP7) the European Union initiates different projects such as Digital Agenda for Europe to reach their goals. The project aims to ensure the full accessibility of public sector websites by 2015 (European commission 2013).

Horizon 2020 will combine all research provided by the Framework Programmes, the innovation related activities of the Competitiveness and Innovation Framework Programme (CIP) and the European Institute of Innovation and Technology.

17.1. Policy recommendations

There are projects that concentrate on the development and improvement of technologies, which support disabled people in becoming entrepreneurs. However, the average of self-employed people with disabilities in northern and central European countries lies below 10 per cent. The average of self-employed disabled people in the EU-27 (excluding Malta and France) is about 12.74 per cent compared to 12.16 per cent of self-employed people without disabilities. Although these figures



seem fairly even, one must consider that the unemployment rate of people with disabilities in Europe is approximately at 60 per cent, while the unemployment rate of people without disabilities is about 36 per cent (European commission 2007). This would imply a higher rate of self-employment among disabled people. Nevertheless, disabled people still face plenty of insuperable barriers which prevent them to become self-employed. It is in the responsibility of policy to develop appropriate measures to diminish and eliminate these barriers for people with disabilities.

17.2. Recommendations for appropriate policy measures regarding technology.

17.2.1. Regulation of IT-accessibility laws

European countries made a commitment towards IT-accessibility by signing the convention on the rights of persons with disabilities (United Nations 2008). In addition to that, many European countries passed laws and policies regarding the accessibility of web sites and software applications for the public and private sector (W3C 2006). However, there is still a poor level of IT-accessibility in the public sector, which in many cases is compelled by law to provide IT-accessibility. IT-accessibility of the public sector is of rather great importance for disabled people to become self-employed. Many bureaucratic processes and required information, necessary to start a business, can be accessed through the web.

Besides IT-accessibility in the public sector, self-employed people with disabilities also need the opportunity to communicate with private market actors like suppliers, potential employees or banks. But most of current laws do not go into IT-accessibility for the private sector. The best practice would be to make IT-accessibility obligatory for the public and private sector and harmonize the legal situation of European countries. As this probably will arise serious conflicts between government and the private sector, policy should first tighten IT-accessibility laws for European public institutions. After European public institutions obtained an appropriate level of IT-accessibility, policy may focus on how the European private sector can be convinced and supported, by e. g. subsidies, to take more responsibility for their IT-accessibility.

17.2.2. Educational framework

In general, education plays a significant role in entering and remaining self-employment. But facts and figures from the national organisation on disability show that only 13 per cent of persons with mild and 2 per cent of persons with severe disabilities complete college degrees. In comparison, approximately 25 per cent of people without disabilities complete their college degrees (National organisation on disability 2004). Research revealed that disabled people with higher education had less difficulty in the working world than disabled people with less education and are more likely to gain financial success and improved 11 vocational options. One of the prime barriers for disabled people to achieve higher education is the lack or inaccessibility of AT. Two studies in this field also detected a major lack of disability support providers at colleges that should help disabled people to identify and use appropriate AT for educational purposes. Policy has to focus these problems and provide solutions to ensure that disabled students get proper education tailored to their needs. For instance, this may happen through disability support providers within colleges or through external institutions which undertake this task. The major goal for policy should be to ensure equal access to education for disabled people to increase their opportunities on the labour market.

17.2.3. AT market standardization

To expedite the complete inclusion of disabled people it is inevitable to provide technologies that neutralize the impairments induced by diminished functions or the total loss of functions. To generate and disseminate appropriate accessible technologies, research and development (R&D) efforts in universities as well as other public and private organisations are necessary. Common standards are needed to reduce complexity and incompatibility of accessible technologies and enable AT industry players in the European market to grow and prosper. Currently the European market for AT is too fragmented and distinct to allow industry players growth and prosperity. Plenty of national and regional regulations across Europe regarding AT aggravate or prevent suppliers of AT to profitably sell their products and services.



Therefore, European policy should concentrate on single market standardization, which would be obligatory to ensure compliance of industry and service providers. Experiences from the U.S. AT market have shown that obligatory standards had a vast impact on the lives of disabled people and can positively affect their self-employment.

17.2.4. Technology funding

Currently European policy mainly supports the development of accessible technologies for disabled people with a wide range of application areas such as, ambient living, accessible transport, accessible computer-interaction and many more (European Commission 2013b). In fact, many of these projects more or less affect the entrepreneurship of disabled people in some way. However, there is not a single call for projects that regard technology for disabled people from an entrepreneurial perspective. For example, there is an urgent need to initiate projects that concern with business critical software applications, such as CRM tools, accounting tools or business organisation tools for disabled entrepreneurs. In addition, it seems that public institutions do not completely understand difficulties for people with disabilities regarding e. g. business registration or tax declaration. It is necessary to identify and comprehend technology requirements of disabled entrepreneurs, as these can be different and more complex to requirements of disabled non entrepreneurs. If the entrepreneurship of disabled people is a serious target, European policy has to advertise such projects and provide the necessary funds for implementation and uptake.

18. ISSUES OF HYGIENE, SAFETY AND ACCESSIBILITY IN RELATION TO THE ACTIVITY IN THE AGRICULTURAL SECTOR

Farming is one of the most dangerous occupations worldwide. Only one in 10 workplaces are farms, yet they account for one quarter of all work-related deaths. Children under 15 years and adults over 65 years are more likely than others to be injured or killed on farms. Males are more likely to be injured than females.

You can reduce the risk of farm injuries and illness at your farm by evaluating the risks and minimising them. Accidents can be prevented through better farmer and worker education, making sure equipment is well maintained and has adequate safety features, having safety procedures in place, and training every worker and family member about potential dangers.

Every farm is different, but hazards common to most farms include:



- animals – injuries inflicted by animals can include bites, kicks, crushing, ramming, trampling, and transmission of certain infectious diseases such as giardia, salmonella, ringworm and leptospirosis
- chemicals – pesticides and herbicides can cause injuries such as burns, respiratory illness or poisoning
- confined spaces – such as silos, water tanks, milk vats and manure pits may contain unsafe atmospheres, which can cause poisoning or suffocation
- electricity – dangers include faulty switches, cords, machinery or overhead power lines
- heights – falls from ladders, rooftops, silos and windmills are a major cause of injury



- machinery – hazards include tractors without roll-over protection structures (ROPS), power take-off (PTO) shafts, chainsaws, augers, motorbikes and machinery with unguarded moving parts
- noise pollution – noise from livestock, machinery and guns can affect your hearing
- vehicles – crashes or falls from motorbikes, two-wheel and quad bikes, tractors, utes and horses can result in major injuries
- water – drowning can occur in as little as five centimetres of water. Dams, lakes, ponds, rivers, channels, tanks, drums and creeks are all hazards. Young children are particularly at risk
- weather – hazards include sunburn, heat stroke, dehydration and hypothermia.
- Making your farm a safer workplace

Suggestions for making your farm a safer place to work include:

- Regularly walk around your farm and assess potential dangers.
- Consult with farm safety advisers– they may provide free consultations.
- Create a safe and contained play area for young children close to the house and away from hazards.
- Make sure everyone working on the farm is properly educated on farm risks and trained in first aid.
- Keep all equipment in good repair.
- Store dangerous items such as machinery, firearms and chemicals behind locked doors and remove keys to a safe place.
- Find ways to improve safety, such as fitting roll-over protection (ROPS) and seatbelts to tractors, or replacing dangerous chemicals with less toxic varieties.
- Keep a log of injuries and near-misses to pinpoint areas for improvement.
- Consult with other workers and family members on how to improve safety.
- Write a safety plan together that includes ways to identify hazards and minimise potential risks.



- Always use appropriate safety equipment, such as machinery guards and shields, helmets, gloves, goggles or breathing apparatus.
- Make sure everyone understands and uses safety procedures, especially children.
- If using four-wheel motorbikes, make sure you are using them in line with the recommendations – remember they are not all-terrain vehicles.

Draw up an emergency plan

An emergency plan is vital. Some suggestions include:

- Make sure there is easy access to a suitable and well-stocked first aid kit.
- Make sure at least one person on the farm is trained in first aid.
- Keep emergency numbers and correct addresses next to the telephone. If you or someone else needs to call 000, they need the correct address.
- Plan routes to the nearest hospital – make sure it has an emergency department.
- Regularly talk through your emergency plan with your family and other workers.
- Make sure your children understand what to do in an emergency.

18.1 Aid innovations widely used in agriculture

The Assistive Technology device encompasses some sort of device, alteration or system to assist a person with an impairment. This may be a costly or low-cost, but it is essentially support someone to do a job that could make possible at least in sometime. Although innovation will make life easier for everybody, aid technology can make sure to do agriculture for people with disabilities possible. Many types of Assistive technology device can be used on ranch. Such supporting technologies may be intended for a disabled person to carry out a work, technology designed for both the general population but of particular importance for individuals with disabilities or technical work activities which can transform the way a job is carried out.

If someone becomes disabled and cannot enjoy simple hobbies, one way to alleviate some assistive technology device is to make the garden easier to access. Gardening is



a very effective form of relaxation if the sore sometimes limited joints of the handicapped person are not stressed. Assistive Technology is used to allow disabled people to sit easily and safely. Some instruments are mentioned below.

Raised bed with wheel chair Gardening: This is a technique of plantation for disability. Raised bed gardens can be very beneficial to a disabled person, not only makes gardening possible, but are also highly therapeutic. It makes them to feel happier and healthier. It may have many purposes such as providing an isolated area in which the disabled person who cannot tend to normal garden can grow flowers, herbs or vegetables or cater. Locomotor disability, vision impairment and old age people cannot walk along hence to fulfill their mobility requirements with a raised bed built to make it accessible to wheelchairs. This raised garden bed is a U-shaped for wheel chair access and easy access to planting areas. Raise gardens bed are suitable for areas cultivate in a poor soiled or where planting is to be encouraged. This can make a major difference because the person is going to have to sit next to the bed and twist his or her body to work in the garden. The bed can be managed to make more available to a user of a wheelchair by placing the bed on top of the legs allowing the user to sit closer to the legs below to their plantation. Raised beds prevent from the pesticides and weeds.

Swivel seats: It may offer a great alternative to wheelchair-accessible vehicles and make the move to and outside standard vehicles easier for both driver and passenger. swivel seat can be used to rotate their seat up to 90degree from the vehicle and helps them for garden access and paving, rolling garden cart seat help to person with disability with limited flexibility access and safety to and around the garden designed by ergo mobility assessment in Bolney, Agrability in Australia and USA is the best seller provides this assistive technology for the PWD. It is a good convenient technology can adopted in their vehicle seat in tractor also. It is available in Indian online market in amazon.

Folding garden kneeling stone: Makes gardening with this kneeler safer; this has a kneeling frame or a comfortable seat or footstool in reversed condition. This green stool has vital arms to help the user stand up again. It assist to gardeners who are in need of help for getting up and down. This device specially designed for movement



impairment people and oldage people whom are using the garden. For ease of use, it is made of heavy duty impact resistant plastic with a foam knee pad attached handles. Its size is 63x 25x 24 cm. This device is familiar in UK country.

Wilkinson Sword Folding Kneeler and Seat: It is good for taking the pressure out of gardening, this kneeler is aimed to support to user weight while working in the user garden with a supportive foam cushion on a solid steel frame. The frame is cleverly designed so that when standing up, the legs also act as side handles for additional support. Besides, it can be used as a comfortable seat if the user turns it upside down. It is easy to store and can be folded flat to fit in the shed or garage of the owner. Particularly locomotor disorder people and old age people can access this device.

Pistol grip tools: This grips are intended for less energy and for maintaining alignment of the forearm and wrist. It helps to the person with disability by dig the soil for plantation. The grip is consider as a hand for disabilities. This device is specially designed for the people impairment with hand.

Ergonomic garden tools: The tools are made of large, textured handles, no slip handles to improve grip. And long handle serves as a trigger to drive the users energy to a tool and make to impact more effective so that user can plant for less energy. Long-handled devices are aimed for gardens who have to sit or stand up on a chair due to arthritis or other disabilities to gain additional scope.

18.2 Handling assistive technology in livestock

There is a risk involved in handling of livestock by disabled people involve in farming activities. The possibility of secondary injury from existing injuries or disabilities during the handling of animals is extremely high. Most Assistive Technologies are used to support and protect disabled farmers from further injury. Such devices help to prevent or reduce direct animal interaction. The majority of these types of assistive technologies are used both in cattle and milk operations.

Livestock guards and Fencing gates: Domestic livestock are prone to predations from different wild and domesticated animals, particularly sheep and goats, hen, dog and so on. The people with impairment is difficult to handle with these animal, so the livestock guards will assist the need to open or close the gates without stopping their



vehicle. This fence gate is accessed by swing back system and free from any remote or system access.

All Terrain Vehicle (ATV) : Cattle Guard is setting up in a fence, making an ATV, but not for the cattle. The system has 3 simple separated parts made from 1 inch of a steel tubing to be packed and transported by one person in the bed of a pick-up truck. By these facilities the Person with Disability can easily ride with their vehicle and inspect their domestic animals easily.

General Livestock: Continuous scoop feed bunk cleaner is used by the common people as well as the 'agrability' is specially designed with easy access feed bunk blower is powered by tractor that assist to the disabilities can operate this loader bucket frame has designed to remove estimated 75 percent of snow from crust and or bits of fodder by way of universal mounts. In the Snow fog region this instrument normally serves for protecting the domestic animals. A person with disability can get easy assistance from the U.S. nation.

Feeding Aids and Accessories: People with disabilities face difficulties when they are supposed to handle cattle herds to feed them, particularly locomotor disability category people cannot easy to move that they can use Feed Dispenser Cordless-Drill, electric hot knife, motorized feedcart and so on. By using the feedstar belt gives feed directly to farmer pets – as often as they want, both night and day. The following equipment's are the type of flexibility will help them to highly involve in a dairy breed activities. Combination Bale Hauler-Feeder Ground-Level Pen Walk-In Feeder Overhead Bedding or Roughage Dispensing System Weldy Portable Feed Bunk Swing-out door feeder Elevator grain feeder and so on All these Assistive technology device helps to easy accessible by the disabled people for feeds their pets. These devices widely manufactured by the Agrability in USA,UK and Australia. Livestock Healthy Equipment: Automatic syringe is used to treat a large number of animals at one time with vaccinations or medications. When pressed, the syringe grips each shot with a certain dose without re-filling of it on every time. This would be particularly useful for visually impaired growers, as they could give accurate doses without looking at the syringe tube gradients. The following equipment's are the types of help for access the healthcare of Livestock.



Homemade Mobile Cattle Oiler Illuminated Hoof Pick Infrared Thermometer Gun Livestock Paint-Marking Pistol/Pellet Kit ☐ Livestock Repeater Syringe Long Shot Medi-Dart Needle-Free Livestock Injection System RAU Animal Immobilizer Single-Motion Vaccinator and Marker and so on. All these assistive technology devices used by the disabled farmers accessed for measure and prevent the healthy condition of the live stocks. If a sick livestock may be detected-and handled earlier than this with the Fever-Sensing Ear Tag called the Fever Tag. It looks like an ID tag that contains a microprocessor of computer which helps to automatically monitor animal’s body temperature. It will easily shows to the disabled farmers when their livestock crossed over 130 degree temperature, the tag started to blink and create a little noise automatically. Then the VI farmer can easily identify the sick livestock easily. There are a plenty of assistive technology devices are made in ergonomics for person with disability.

18.2.1 Dairy breeds



The following are specific for dairy activities in addition to certain AT devices listed in the section.

1. Automatic milker for easy milker detachment.
2. Foot milking airlifting tools will help them for getting milk from the

cow. 3. Carrier rail to move easily from one milking station to the other. 4. Super mixer for the specialty diet of dairy cattle and so on.

These technological devices assist them for dairy breed activities. The Locomotor Handicapped, Hearing Handicapped, Ortho Handicapped people can easily use this device for their business activities in agricultural and its allied activities. This device is used for automatic milk brewing, making a move easily from one milk station to the other and so on. Many dairy-related support strategies Assistive Technology device



include crowd gates, air-operated entrance and exit gates in a farm, electric feed carts, coiled floor mats, and cow surveillance systems also help to assist to the person with disability. The changes make a significant impact in the everyday life of a disabled farmers on the field.

And dairy parlor wheelchair is also used to Locomotor Handicapped farmer who need to roam that they can use the pipe of parlor to pill their chair around which compactly and high enough to allow it from the ground to reach the cows. It is really amazed to involve them into certain activities.

18.2..2 Production of crops

Indicators for automatic grain are used for graining the bins. And tractors, crane are used for cultivating paddy, wheats and so on.



Modification of the tractor: Today disabled people can operate the crane, tractor and heavy vehicles for agriculture purposes. There are numerous instances of Assistive Technology implementations and related tractor improvements in order to respond to disabled farmers ' needs.

Spinner Knob: A basic spinner knob on the gear stick can be quite useful in giving better braking power for people with disability to use this prosthetic devices or low grip. Although new tractors only need modest steering power, but the disabilities make it problematic to clutch the typical navigating wheel. To avoid this problem a spinner button can be added to help individuals with a disability to effectively control the tractor.

Specially designed seating arrangements in tractor: People from traumatic brain injuries, particularly those who are wheelchair bound, were assisted by custom seats, air-ride seat tractors and construction equipment, this retrofitted seat is designed to protect operators with some disabilities. The operators are lower-frequency and other potential sources of comforting by means of cushioning, sitting angle, handle bar grips

and positioning of the shoulder and elbow. This chair will automatically transit like get in and get down to their wheel chair.

Station of docking: For those living with mobility issues is the docking station to connecting device. Such devices require operators, without leaving their seats, to connect or unplug machines.

When the disabled operators are using the tractors for their production of crops, these facilities will help them to operate easily. Additional steps are applied to the tractor for disabilities can easily get in and get down from the tractor without anyone help. This is the greatest advantage of ergonomic system.

18.2.3. Poultry



Disabled persons who carried their business in poultry farms are enabled with technology that will assist by auto-reverse device that enables the birds to go outside for a while and indoors protected during the night without

anybody having to open or close the access gate of the coop. It is easy for the disabilities. A few technology will help for their business sector such as,

1. Feather picker 2. Incredible egg washer helps to wash the coops egg 3. Poultry catching hook and so on.

In normal people are also using this technique for their business. It is easy to handle and also reduce their working hour.

18.2.4. Assistive technology and secondary injuries

Disabled farmers in farm activity are prone to accidental risk and have a chance for secondary injury. Primary injuries can result in vulnerabilities that may result in further



injury. For instance a farmer with arthritis, may lose his grip and fall; the fall may causes the secondary injury. With some of these uncertainties in mind, assistive devices are designed to compensate for shortcomings and decrease the risk for more injury. Disabilities and wounds that exist can affect neither time of reaction and skills of motor. Therefore, people with sustained injuries and or person with disability involved in physically demanding and otherwise risky farming operations significantly increase their risk of secondary accidents.

The effect of secondary accidents can be draining to those who are already trying to manage the main accident. The secondary wounds may cause permanent damage in many cases as new accidents affect pre-existing conditions. In other situations, additional recovery time may be required. The impact of secondary injury on the farmer and the farmer's family may be profound.

Most agricultural operations are high-risk. For this reason, the simple approach for people with disabilities and primary injuries to avoid secondary injuries is not to play an active role in farming. This is often not always an acceptable alternative, so the rancher should make an effort to avoid excessive-risk activities. Activities such as livestock handling, heavy-rise work and equipment maintenance are all classified as high-risk operations. If this is not a choice as well, the operator should make every attempt to implement assistive technologies which can reduce the risk of secondary injury. In general, Assistive Technology helps to injured farmers for to continue farming with reduced secondary injury opportunities. It should be remembered, however, that routine use of Assistive Technology results in secondary injuries. These situations often occur when home-made Assistive Technology are used that do not follow design standards, or when commercially available Assistive Technology are used without adequately matching them with the abilities of the consumer. Secondary accidents can also occur when using Assistive Technology without proper training.



18.2. Suitability of a device across nations

1. In Australia, LD people using modified Chrysler Voyager is a wheel chair friendly vehicle modification. Dr Trust is a portable foldable manual wheelchair for pain relief is used in USA. In Canada, this same device is used as a transport chairs, reclining back wheelchairs. 2. Grab for round bales is a heavy duty equipment for farming activities commonly used in USA, Australia with the same name. The Agrability market is common in both countries. 3. Fencing gate is commonly used in Canada, USA, Australia, India 4. Heavy hitter post pounder is a heavy vehicle used for ploughing the paddy or wheat in USA and Australia, In India and Canada it is named as Wheatheart commonly used by all non-disabled farmers. The agrability marketer specially designed by lightweight machines for the people with impairment. 5. Powerdeck loading system for pick up is a heavy vehicle specially designed to disabled farmers used in USA (agrability). Tractor access hand winch system is used in Australia (Agrability). Triple L power deck is commonly used all the farmers in Canada. Differently abled people can use this technology. In India heavy vehicle is used to all common people for agricultural activities. 6. Additional seat for easy quad transfer technology used in USA and Australia. All terrain Vehicle is adapted this additional seat for easy quad transfer technology in Canada. 7. Easy use irrigation system device used in USA, Australia commonly for disabled farmers. 8. Modified Ferris Zero Turn Mower is used in USA, Canada, Australia and India. It helps to mowing grass in farm land. 9. Pool access winch is used in Australia, USA and Canada. It helps for LD, arthritis type of disabled people. 10. Transportable hydraulic hoist is access tractor used in USA, Australia, and Canada. The disability can use this technology for their farming activities.

19. CONCLUSION

The rural economic development is considered as an indicator of the economy of any country. Nowadays rural economies in most part of the world are facing the socio-economic challenges associated with an inefficient usage of natural resources, weaknesses in rural infrastructure, unemployment and increasing tendency of depopulation of rural areas. Therefore, rural economy enhancement is taken into consideration by many states as a vital factor of economic prosperity.

Agritourism has become a central concept in recent debates on rural development policies, practices and initiatives. It is regarded as a valuable and important tool for maintaining farming activities, promoting diversification of economic practices in the countryside and rural entrepreneurship and assisting in the preservation of cultural landscapes. So agritourism contributes to economic development in rural areas without putting much pressure on natural resources or social and community values, thus allowing locals and visitors to interact positively and share common created experiences.

In addition, in Greece agritourism started in the not very economically developed areas of the country, having substantial and long-term goals. Thus, the development and utilization was promoted mainly in mountainous and disadvantaged areas with basic infrastructure projects and priority was given to areas with a declining rural economy and population. In the Greek countryside, the model of the isolated farm is not found, ie the coexistence of the workplace together with the living space of the rural family, which is usually found in Northern European countries. Also, the rural house is located in the settlement, while the agricultural holding is independent of the residential area and is located away from it. Therefore, agritourists do not come into direct contact with agricultural activities and are not clearly integrated into rural life. The form of agritourism that best suits the Greek reality, is the system of hospitality in agritourism accommodation "Bed and breakfast", as they are formed in England. Also, agritourism development in Greece is based mainly on the local and cultural specificity of each region, as well as the degree of development of local business initiatives. It is understandable that agritourism in Greece can not be developed to the



extent and in the way it was developed in other countries. Besides, a key difference is the fact that in Greece we are talking about rural tourism, a concept that is more in line with what our country offers, than with the concept of agritourism.

Compared to other European countries analyzed in previous chapters, it is observed that while in countries such as Germany, Austria, France and the United Kingdom, the state plays a key role in the development of agritourism, but also in the promotion of agritourism product, in Greece, the initiative was initially private and there was no cooperation between the owners of agritourism accommodation. There was neither a single strategy for the support and monitoring of agritourism, nor training and consulting actions in matters of not only service but also provision of services, such as in Italy, Austria and Germany.

An additional element that does not promote the development of agritourism is the lack of national planning and legal coverage of the agritourism action framework, as exists in Italy for example. There should be coordinating and recording agencies for agritourism accommodation that will supervise and coordinate agritourism businesses and activities, in order to ensure healthy competition and to have a common direction and orientation. Undoubtedly, in the agritourism of Greece, a special place is occupied by the women agritourism cooperatives, which are recorded and especially mentioned in various sources. Greece gathers numerous elements that could contribute, with proper management, to the large-scale development of agritourism. The World Bank has recently defined social inclusion as “the process of improving the ability, opportunity, and dignity of people, disadvantaged on the basis of their identity, to take part in society”. The analysis of the phenomena of exclusion is often limited to point out that some social groups are at times underrepresented, but what is needed is a more rigorous reflection on why this happens and on all the processes generating social exclusion, not only those related to a situation of deprivation. People with disabilities living in rural areas can play an active part in the economic growth of their community in the agritourism sector. Everyone can find an activity that suits him and is easy for him to carry out. Through training, people with disabilities obtain self-confidence and self-reliance. Training in activities such as beekeeping, silk worm farming and raising and taking care of small animals such as hens, goats, sheep, could

make persons with disabilities active members of society, working in the operation and successful managers of agribusinesses.

By using different methods and ways of accomplishing various tasks, persons with disabilities can successfully establish and work productively in agribusiness enterprises. More needs to be done to provide them with the opportunity to expand their skills, markets and job opportunities so they can participate in a greater range of income-generating activities. Agribusiness is one of the world's major income-generating sources and offers employment opportunities with a wide range of activities suitable for people with different capabilities, skills, interests and aptitudes.

Involvement of disabled people in agriculture paves a way for Greece's inclusive economic growth. Irrespective of general beliefs that age old people and disabled people in hardly can engage in agriculture and allied activities, they can perform better in that sector with the help of profound adoption and application of assistive devices in their day- to-day regular activities. Right selection and adoption of available assistive technologies applied across the agriculture communities worldwide will make them able handed in performing their agriculture occupation in India. The existing shortfall in the technology adoption could be met through effective awareness programme, propaganda, media advertisement and supporting role of the government, specialized organization, NGO and others. It would help for the overall development of the disabled people engaged in agriculture and allied activities and for the equitable development of the society. Technology will improve the efficiency and effectiveness of their performance in their working field. Ultimately, it would contributes for the human development of the nation.

19.1 Overall recommendations

The state should provide services in the following areas which are related to applying the Disability Management approach in the farming sector.

1. Expand enabling policies at all levels, and establish/strengthen networks that support persons with disabilities, and the public and private sectors engaged in disabilityinclusive agribusiness development;

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2. Develop and implement disability-inclusive policies and strategies that improve access to productive resources and assets, including credit within the agribusiness sector;
3. Promote employment and job opportunities, and create disability-friendly business environments and customer services in the agribusiness sector;
4. Support research and development, and invest in accessible technologies and infrastructure that will enable persons with disabilities to draw on their unique knowledge and abilities for effective engagement in agribusiness;
5. Improve access of persons with disabilities to affordable credit by providing reasonable provisions such as acceptable credit/interest terms, from the finance sector;
6. Create a certification/accreditation system which could add value to disability-inclusive agribusiness products and services;
7. Further promote evidence-based research on disability-inclusive agribusiness across Asia and the Pacific to identify, promote and share good practice models for future replication;
8. Enhance skill development opportunities and on-the-job training for persons with disabilities to include them in agribusiness;
9. Raise awareness of the importance of disability-inclusive agribusiness development, share accessible information and advocate for concerted actions among sectors and partners;
10. Consider the potential of disability-inclusive agribusiness in the discussion of the forthcoming Sustainable Development Goals (SDGs);
11. Form a network to strengthen coordination and to follow up the Recommendations at the national and regional level for actual implementation, and to meet together in the next 2 years to review and discuss the progress of disability-inclusive agribusiness.

12. Provide training in the land based sector,
- 13 Inclusion of Health and Safety, and Promotion of Health in training courses.
- 14 Provision of training to persons with disability, provided such training can be reasonably accommodated.
- 15 Provision of advice on farming systems to optimise farm household income where disability occurs.
- 16 Provision of advice on farm facilities design, equipment use and use of work time
 - Provision of advice on farm business management
- 17 Identify and quantify disability issues
- 18 Identify what services and supports are required.
- 19 Disability related issues are considered in all projects, where relevant.



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