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# Chapter 5
# Social and Economic Benefits Assessment in Terms of Social Innovation

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## 5.1. Assessment Benefits Derived from Social Innovation in the Polish Economic Reality

The assessment of the studied socio-economic phenomena poses many methodological problems, mainly due to their high degree of complexity and the multitude of approaches to the researched area. However, taking into account the results of the survey, it should be noted that the knowledge of the average Polish participant in social life in this area is small. However, this is not due to the lack of social interest but the lack of credible and reliable feedback from the creators or owners of the innovation. There is nothing to prevent some part of the Polish budget from being spent on social campaigns promoting a healthy lifestyle, etc. There are no objections to promoting the most innovative solutions in particular areas of social life. Social innovation stems from a long-term study of social needs combined with a dialogue between specialists in a given field, entrepreneurs, and society. The role of the authorities is also indispensable here, as they play an important role in creating the business environment, for example through legislation. The lack of knowledge about the benefits arising from social innovation or its role in the economy is not conducive to promoting positive behaviour among society. As a result, the Polish economy is perceived as ineffective and non-innovative.

Social innovation may be defined in various aspects. By and large, it is understood as new, more effective methods and tools for solving social problems in various areas of social life. The nature of social innovation is not uniform, either. The related implementation may take the form of new solutions or improvements. The same applies to the subject of innovation itself as it may relate to manufactured

products, processes, methods of optimising the consumption of production factors. At this stage, it is necessary to indicate what kind of social innovation has recently been implemented in the Polish economic reality. The European Union has been supporting the development of innovative projects for years, also in social terms. Currently, social innovation is financed both at the national and pan-European level. The European Social Fund under the Operational Programme Knowledge Education Development 2014–2020, Priority Axis IV Social Innovation and Transnational Cooperation, Measure 4.1 Social Innovation serves as one of he funding sources. The specific objectives for the priority axis are as follows:

- increasing the use of social innovation to improve the effectiveness of selected aspects of public policies in the area of ESF impact;
- strengthening professional competencies and key people with the use of transnational mobility programmes;
- implementation of new solutions, in particular in the field of professional activation, lifelong learning and creation and implementation of public policies, thanks to cooperation with foreign partners.

The financial contribution for this purpose is EUR 659,591,124.

The exemplary set of social innovation elaborated upon above contributes to the process of solving key social problems, thus constituting the so-called social entrepreneurship. Aspects of this entrepreneurship are stimulated by the European Commission through various types of financial models. In the 2014–2020 budget perspective, social innovation was included in the regulations on structural funds – both the European Social Fund and the European Regional Development Fund. Programmes supporting social innovation include: the Programme for Employment and Social Innovation combining the three existing Progress Programmes, EURES and the European Progress Microfinance Mechanism, the URBACT Programme and Horizon 2020.[1] Social innovation, due to its experimental nature, is often burdened with a high implementation risk, therefore public funds should be the funding source of such initiatives. Social innovation has been implemented and disseminated in Poland to the extent of the following areas: activities for sustainable education, sustainable transport, supporting active and healthy ageing, supporting disabled and unemployed people in the protection of their physical and mental health.

1 B. Skubiak, (2016), *Innowacje społeczne w teorii i praktyce*, "Barometr Regionalny. Analizy i Prognozy", vol. 14, no. 1, Wydawnictwo Akademii Zamojskiej, Zamość, p. 33.

**Table 5.1.** Examples of social innovation financed with the EU funds and other sources (Poland and the world)

| Name/title of social innovation | Brief description of the innovation | Who is the innovation aimed at? |
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| Innovative shopping bag for a rehabilitation walker | Multifunctional bag with attachments for a rehabilitation walker. | The product is dedicated to the elderly with limited mobility and people with disabilities who move with the use of a walker/ rehabilitation walker. |
| Innovative system for detecting epilepsy attacks, bradycardia, tachycardia and falls | Open Seizure Detector is an application that is configured with digital equipment. Its task is to detect seizures during tonic-clonic seizures in the case of epilepsy, arrhythmias and falls. In addition, it alerts caregivers about the occurrence of an attack or fall. | The innovation is addressed to elderly people with limited mobility and/or perception and to people with disabilities. |
| A website with information on how to adapt a home to people with disabilities, along with a database of potential contractors | The website is available at: https://brakbarrier.pl. The website collects architectural and functional information on how to adapt the living space for people with disabilities. The website contains a database of potential contractors. | The target group of the website includes: elderly people with limited perception and/or mobility as well as people with disabilities, members of their families. |
| A mobile application for seniors for smartphones with a simple and clear interface: Mobi Seni App | The application contributes to the increase in activity, establishing and maintaining contacts and provides the ability to call for help in an emergency with an indication of the location of the person calling for help. | Social innovation is intended for elderly people with limited mobility and/or perception as well as for people living alone or spending time alone as well as carers and family members of these people. |
| Leisure without barriers – fishing without barriers | It is a model of safe location marking for independent pursuit of fishing passion by people with disabilities and elderly people with limited perception and/or mobility. | The solution is dedicated to people with disabilities and seniors with limited perception and/or mobility – interested in fishing. An indirect target group includes the Polish Angling Association and regional and local fishing associations. |

**Table 5.1** (cont.)

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| Tool Eloquently Available | Social innovation consists in developing a tool for alternative communication (www.spektrumkomunikacji.pl). In this alternative form of communication, graphic symbols and photos are used in communication processes in everyday life by non-speaking people affected by autism as well as other people with speech dysfunctions. | The innovation is dedicated to non-speaking people and to representatives of non-governmental organisations and institutions working in the environment of non-speaking people who, thanks to the use of developed tools, have easier communication with people with disabilities. |
| Polish Institute of Sensory Accessibility | It is a developed set of guidelines for creating places adapted in terms of accessibility for sensory sensitive people (people with sensory integration disorders/SI disorders). The effect of innovation is available on the website www.instytutdostepnosci.pl along with a database of sensory accessible places. | The solution is addressed to people on the autism spectrum with sensory integration disorders and other people with disabilities who have been diagnosed with sensory disorders. |
| Mutual support telephone | The innovation consists in the use of conscious laughter as a therapeutic method based on mutual cooperation of seniors using the telephone. Innovation involves the use of developed methods of consciously evoking laughter. | The innovation is addressed to seniors with limited perception and/or mobility who, due to their psychophysical condition caused by their personal and/or health situation, require the use of innovative therapeutic methods. |
| Expedition education available to everyone | It is an innovative, comprehensive model of improving accessibility for people with various disabilities to education, culture, and art through experience in contact with monuments, attractions, and tourist services. The model is based on the preparation and development of programmes for visiting and experiencing a place based on the matrixes of verification of the availability and adequacy of attractions and services for various groups of people with special needs. | The innovation is dedicated to: people with disabilities, in particular people with physical disabilities, and visually impaired, with hearing impairment, intellectual disabilities, with mental disorders or diseases, with communication difficulties and elderly people with limited perception and mobility. |

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| FiveApp | A smartphone application that facilitates communication for people with hearing impairment. | The innovation facilitates communication for people with hearing impairment, who can communicate in American Sign Language (ASL). |
| Dressing | Raincoat for people in wheelchairs. | Uniclothing is a universal, waterproof and innovative rain cover, designed taking into account the needs of people with physical disabilities, moving in a wheelchair. |
| Device supporting the function of the upper limb for people after a stroke with its permanent dysfunction | The tested product is a „glove" for people after a stroke, with consequences in the form of upper limb contracture. Thanks to the use of a set of mechanical and elastic elements connected together in a specific way, the device facilitates the mapping of the lost limb function and the performance of activities previously inaccessible without the help of a caregiver. | Innovation for people with disabilities in result of strokes. |
| b-Link software | The aim of the b-Link project is to provide people with physical disabilities with a tool in the form of a program that allows them to work on a computer and use the Internet by blinking their eyelids. With this program installed on the computer, the user can display and navigate the web pages, control the mouse cursor, type on the keyboard, operate a package of office or e-mail programs and turn off the computer. | The program dedicated to people with physical disabilities is available on the TP and Orange websites. It is available in the Polish, English and French language versions. |
| Reducing the weight of PET bottles by Coca Cola | Reducing the weight of the bottle contributes to reducing the amount of waste, and thus to preserving raw material resources for future generations and improving the cleanliness of the environment. | Social innovation for every use. The aim of the implementation is to build awareness of waste management in households by making the public aware of waste recycling and mitigating the adverse impact on the natural environment. |

**Table 5.1** (cont.)

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| Integrated reporting – Grupa Lotos | Thanks to integrated reporting, Lotos enables its stakeholders to make a comprehensive, measurable, objective assessment of its overall involvement in sustainable development issues through an integrated and user-friendly presentation of financial and non-financial statements on business operations and activities in the financial year. | Social benefits:<br>building trust and credibility among the company's stakeholders, thanks to data transparency;<br>supplementing the company's financial data with ESG data for investors interested in SRI investments;<br>responding to the needs and expectations of stakeholders;<br>opening to dialogue and social consultations through the use of new communication channels;<br>mitigating the adverse impact on the environment due to paperless reporting. |
| Rondo 1 building | Rondo 1 is the first building in Europe with an implemented DALI lighting control system. | Social benefits:<br>mitigating the adverse impact on the natural environment;<br>increasing employees' awareness of environmental issues;<br>responding to stakeholders' expectations in the context of care for the environment. |
| Mitigating the environmental impact in the supply chain – Raben Group | In terms of the car fleet, an eco-driving culture has been implemented, the purpose of which is to limit and monitor the amount of fuel consumed. The truck fleet has been replaced with the natural environment in mind (300 vehicles). The Group also has its own petrol stations, thanks to which it monitors the quality of fuel and emissions of exhaust gases into the atmosphere. Drivers have been offered eco-driving training, which has reduced the average fuel consumption from 31.2 to 30.76 litres per kilometre. | Social benefits<br>mitigating the adverse impact on the natural environment;<br>improving the living standards of local communities. |

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| Samsung Hope Relay – Go Help | An application used while walking, cycling or jogging, giving you the opportunity to add your kilometres travelled to the general pool. For every kilometre travelled, Samsung has donated 1 Pound Sterling (PLN 1 in Poland) to organisations supporting children and young people. In Poland, the aim has been to subsidise summer camps for children from SOS Children's Villages. | Social benefits:<br>opportunity to get involved in supporting those in need for whom the company operates;<br>promoting the idea of volunteering among customers;<br>additional motivation to undertake physical activity. |
| Proof Glasses | Proof is a company that makes sunglasses by hand. It has been the social innovation to base the production of glasses on natural raw materials, primarily wood. | Social benefits:<br>respect for natural environment resources;<br>obtaining raw materials from sustainable sources;<br>donating part of the profit to social purposes (eye surgery in India, tree planting in Haiti). |
| tarbucks™ Shared Planet™ | Shared Planet™ is a campaign aimed at expanding customers' knowledge of the origin of coffee, its ethical cultivation and purchase, and thus the supply chain of the product to Starbucks coffee shops. It is to make customers aware that coffee beans obtained in coffee shops are grown with care for the natural environment, and the purchase itself is based on the Fair Trade Standard. | Social benefits:<br>support for local communities;<br>mitigation of the adverse impact on the natural environment and combating climate change;<br>transparent communication with the environment thanks to the GRI guidelines;<br>consumer education on the supply chain of products offered by Starbucks. |
| Management of waste from the leather industry in agrotechnics – Łukasiewicz – Institute of Leather Industry (currently Łukasiewicz – Lodz Institute of Technology) | The implementation of the projects included activities aimed at increasing the yield of various plant species using the by-products of the leather industry. | The results of the conducted research will be applicable in many sectors of the economy, especially in agriculture. Among other things, a new material based on collagen preparations and seed coating technology has been developed in order to increase resistance to drought and the use of waste biomass to develop a new foliar preparation containing a fungicide and plant biostimulators. |

**Table 5.1** (cont.)

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| Environmental responsibility – Łukasiewicz – Institute of Leather Industry (currently Łukasiewicz – Lodz Institute of Technology) | Tools have been developed to calculate the carbon footprint in the footwear sector, which allows to estimate greenhouse gas (GHG) emission during the production of footwear. | The aim of the project has been to provide footwear companies with a tool that will allow the industry to identify the most important aspects of production for the purpose of reducing greenhouse gas emission. |
| Unit operations in the field of processing tannery waste for re-use – Łukasiewicz – Institute of Leather Industry (currently Łukasiewicz – Lodz Institute of Technology) | Work carried out in the field of methods of collecting tannery shavings derived from chromium and chromium-free tanning processes, for the purpose of which mineral additives are used. As a result of the conducted work, a loose, agglomerated granular bed containing both mineral and organic components is obtained, that is easy to store, transport and dose. | The developed methods make it possible to process and change the physical properties of the waste output – shavings derived from chromium and chromium-free tanning processes, often stored at the tanning plant and sent for disposal. |
| DOM model | The innovation focuses on carers of children with cancer in order to provide new tools that will enable them to use the resources of their own family and the closest environment in handling childhood cancer, and consequently also help the child. The main element is to enhance the knowledge and awareness of local employees of social welfare institutions, psychologists, educators, therapists, social partners, and teachers about the possibilities and ways of supporting families struggling with this problem. | Support for families taking care of children undergoing cancer therapy or after cancer treatment, taking into account the local institutions. |

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| Your way | This is a modern program created by Altix company in cooperation with the Chance for the Blind Foundation. The application developed in 2017 helps the people with visual impairment to move independently, which makes it easier for them to remain mobile in public space. YourWay works by connecting to small transmitters (so-called beacons) that are found in various places or on devices. After connecting to the beacon, it will transmit information and the application will read what it receives. There is also a version in which a speaker tag will play information in the form of audio instead of the application. | This is a solution that supports people with visual impairment in moving around the city successfully. |
| Together you can do more | It is a model of supporting sports activities of visually impaired people based on engaging them in Nordic walking in the company of professionally prepared sports guides (assistants). This is a new form of rehabilitation and leisure, which significantly mobilises people with visual impairment to: be active, increase the degree of independence, improve self-esteem, optimism of life, overcome physical disabilities and learn to interact with the environment, and even take up new family and social roles, including professional. | Nordic walking for people with visual impairment |
| You_good_eat | The model of workshops in the field of natural nutrition for parents of disabled children contains a guide and a related dossier as well as an educational film and measurement tools that support healthy eating for the whole family. | For parents of disabled children |

**Table 5.1** (cont.)

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| ONCO-Yoga | The activities undertaken as part of the project consist in development of a program and organisation of the Integrated Support Course for Chronically Ill People and their Carers, which covers the areas crucial for the well-being of the patient, including the closest relatives and/or carers. | The project is addressed to people professionally caring for chronically ill people as well as volunteers, social workers, animators and family carers. |
| EasyMove | The mobile caterpillar platform for wheelchairs allows you to move without leaving your own wheelchair on surfaces inaccessible to wheelchairs (e.g. beach, forest paths). | Innovation dedicated to people with disabilities in wheelchairs. |
| Szu on the trail of memory and Gates of memory | The game facilitates spending time to the satisfaction of people with neurological disease. The book for preschool and early school children makes it easier for the youngest family members to live with people suffering from neurological disease. | Innovation dedicated to people with neurological disease. |
| Less loneliness | Improving the well-being of seniors in their relationship with students is an innovation that serves older people who live independently for various reasons and suffer from loneliness and a sense of isolation. The licence includes recruitment and verification procedures for people associated within the solution, templates of contracts and survey announcements for employees of non-governmental organisations and social workers. | Innovation dedicated to lonely, elderly and rejected people. |

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| Gynaecology available | The solution not only makes it easier for the disabled to find a gynaecology clinic that meets the accessibility requirements but is also aimed at making doctors and medical staff aware of this important issue. This innovation is a website with a search engine for available gynaecological clinics along with an educational section for women with disabilities and for health care personnel: www.dostepnaginekologia.pl. | It is a solution for gynaecological care, obstetrics and motherhood addressed to women with disabilities. |
| MedInterview | It is a platform for conducting a pre-anamnesis (preliminary medical interview) using a website containing questions and suggested answers available in the Polish and the Polish Sign Language (PJM). The aim of the project is to increase the accessibility of medical facilities in Primary Health Care. | Innovation dedicated to various groups of patients, but above all, to patients with hearing impairment. |
| Lagging of Health | It is a guide for conducting a conversation between an oncologist and a patient and a binder for a cancer patient. | Innovation dedicated to adults with disabilities that have developed as a result of cancer and related cancer therapy. |
| Childbirth of a Woman with Hearing Impairment | It is an educational platform with a tutorial for a woman with hearing impairment within the framework of the childbirth course, from the beginning of labour to the delivery itself – http://porodgluchej.pl. The priority of the project is to raise the awareness of a patient with hearing impairment and her safety as far as the labour and delivery is concerned. The project is also to prevent undesirable obstetric complications that may be hazardous to life and health of patients with hearing impairment and their offspring. | The direct target group of the Project „Childbirth of a Woman with Hearing Impairment" includes women of reproductive age – between 15 and 49 years old, with disabilities, i.e. hearing impairment (from birth or those who developed hearing impairment in the prelingual period, i.e. before acquiring the phonic language), using the Polish Sign Language. |

**Table 5.1** (cont.)

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| Dentistry without barriers – adaptation and admission qualification of patients with disabilities | The main objective of social innovation is to improve access to dental care for children, adolescents and young adults with disabilities, especially those with intellectual disabilities, by adapting and defining the rules of qualification for prophylaxis and treatment procedures already in the place of education. As part of the project, a model for conducting an adaptation session to a visit to the dentist's has been developed to be used during classes at school. A mobile dental station has been arranged for (a chair, lamp, small dental equipment, personal protective equipment as well as disinfectants). The developed model facilitates the initial admission/treatment qualification and adaptation of students to dental procedures in well-known school conditions, with the participation of people assisting students/pupils in everyday life (pedagogues, psychologists, nurses). | The innovation is dedicated to pupils/students with intellectual disabilities and other dysfunctions and/or chronic disease, who are educated in special schools. |
| Everyone can save! | This is a first aid course dedicated to people with mild and/or moderate intellectual disabilities, who will know how to respond in the event of Sudden Cardiac Arrest (SCA) and the need to perform Cardiopulmonary Resuscitation (CPR). | The target group includes adult people with mild or moderate intellectual disabilities. |
| On wheels at the hairdresser's | The innovation consists in tailoring the services offered by hairdressing salons to the needs of people in wheelchairs by developing prototypes of devices that allow to serve a person in a wheelchair in the salon. | The target group includes the people with disabilities moving by means of various types of wheelchairs. |

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| The neighbour can | It is a method of building an aware local community in which people with dementia and their carers are supported and included in its everyday life. The innovation aims to improve the opportunities of this social group in terms of using such areas as trade, services and cultural life in the local environment. | The solution is aimed at elderly people with disturbed perception, and more specifically, patients with neurodegenerative disease. |
| AR | It is an application-aided therapeutic methodology for people with autism and their carers/families in therapy, the aim of which will be to improve the opportunities for those people to be activated in various areas of everyday life. The application is based on augmented reality technologies, which is currently a very dynamically developing area in the digital world. It is widely used in education, training, medicine, services, etc. | The target group includes children and teenagers with a high-functioning autism certificate, aged 7–18 years. |
| Passion Incubator | The innovation consists in the integration of sports and artistic activities and the related methodology aimed at social inclusion of the participants in the classes, in opposition to the focus on individual results and achievements. As part of the Innovation, a comprehensive model for organising and conducting additional sports and artistic activities has been developed in the form of a textbook enriched with an incentive system for participants of classes and places friendly for people with disabilities marked with special stickers in order to increase the availability of additional activities for children and the youth. | The target group of the project includes children with mobility, intellectual and/or multiple disabilities. |

**Table 5.1** (cont.)

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| „KanGur +"<br>Universal Transport Cocoon | It is a universal Transport Cocoon that is a „connector" between a disabled person and e.g. a wheelchair, bus seat, etc. It will allow you to carry out an ordinary safe walk without fear of slipping the person from the wheelchair or passenger seat when going on a trip by bus. The intention of the creator has been to incorporate solutions available in the market (carriers and stabilising pillows) but insufficient for the needs of a person who has problems with muscle tone into the innovation that allows to carry a disabled person while maintaining stability. | The target group of the innovation includes people with disabilities, mainly people who are dependent, in a vegetative state, after strokes, with paralysis – unable to independently maintain a stable position during transport. |
| On the path available | This innovation consists in developing a standard for marking Nordic Walking routes for people with visual disabilities and the elderly. | The target group of the innovation includes people with visual disabilities. |
| Alone on the road | It is a developed and tested model for conducting classes for visually impaired people who have partially lost their sight as a result of diseases or accidents, for the purpose of facilitating their return to independent use of a car (adults) and learning to ride a bicycle (children and adolescents). | The main target group of the solution includes visually impaired people who have partially lost their sight as a result of diseases or accidents, both adults and children/young people. |
| SIMNEY – carrier for carrying disabled people on the go | The main objective of the social innovation, under which the transport sling has been created, is to improve mobility of people with disabilities. The transport carrier will improve the mobility of physically disabled people by facilitating their movement from the stroller to the chair in means of transport such as cars, coaches, planes, etc. | The target group includes all people who use a wheelchair on a daily basis. |

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| Read me a book | The innovation is a combination of volunteer service with the opportunities offered by the mass media – radio. It consists in combining 3 well-known activities, i.e. reading books on the radio, reading books by volunteers for the elderly and dependants, interviews with authors of books on the radio. The innovation of the idea stems from the fact that the elderly, in addition to access to literature and contact with volunteers, gain the opportunity to actively engage in interviews with the authors of books in their own homes. | The implementation of the project will allow the elderly with limited mobility not only to read the book but also to go a step further – to attend a meeting with authors, which will be broadcast on the radio. |
| siphonophores | It is a method dedicated to visually impaired people to allow them to proactively view art and cultural exhibits displayed in galleries/museums. The aim of the project has been to solve the problems related to the lack of sufficient accessibility of the public space in museums and art galleries – the paintings and sculptures contained therein – for visually impaired people, so that they could experience this art through their own eyes. | The target group includes the disabled people with specific visual impairments, i.e. people with a central field of vision with a narrowed field of 10 to 20 degrees, able to distinguish colours. |
| Art Available | The innovation comes forward with an art creation method for children with disabilities, that consists of: development of technological solutions that facilitate the participation of children with special needs in the event, and development of innovative workshop and artistic work with a disabled child. | The target group includes children and the youth with disabilities and developmental disorders from 5 to about 13 years old. |
| The Multisensory Dictionary of Art | It is an educational tool dedicated to children and young people with visual disabilities, that is to teach the history of art in an attractive way. This allows them to better understand the culture around them. | The target group of the innovation includes the visually impaired youth who are 12–18 years of age, 6th – 8th grade pupils/students at primary school and secondary schools. |

**Table 5.1** (cont.)

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| „Counteracting Digital Exclusion in Lubelskie Voivodeship" implemented under the contract No POIG.08.03.00-06-049/10-00 of 2011, co-financed by the EU under the European Regional Development Fund and implemented under the Innovative Economy Operational Programme for the years 2007–2013, Priority Axis 8 Information Society – increasing the Innovativeness of the Economy, Measure 8.3 Counteracting digital exclusion – eInclusion. | The project totally valued at PLN 18,445,445 in its outcome provided for free access to the Internet and the purchase of necessary devices and software for households in 47 boroughs and two districts of the Lubelskie Voivodeship at risk of exclusion from active participation in the information society due to difficult financial situation or disability. | Innovation addressed to all inhabitants of the Lubelskie Voivodeship. The implementation of the project has contributed to improvement of the quality of life of the residents thanks to the access to computer hardware and the Internet. |
| Lublin Vocational Qualifications Framework – a model of effective cooperation between vocational schools and employers | The innovation has given rise to an innovative model of effective cooperation between vocational schools and employers in the Lubelskie Voivodeship based on the accreditation system „Lubelskie Framework of Vocational Qualifications". As part of the project, a model of vocational education has been delivered in accordance with the suggestions and proposals of employers. The aim has been to adapt the curriculum to the expectations of the labour market. | The innovation addressed to young people and employers has allowed for the creation of a youth education model in accordance with the needs of the labour market in the region. |
| Innovative Integral Programs of Early Social Intervention | An innovation project counteracting social exclusion of young people in the Lubelskie Voivodeship. | The main target group of the innovation includes young people with educational difficulties and problems of social maladjustment. |

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| Brilliant Woman | The aim of the innovation has been to increase the activity of women in the face of the problems posed by the labour market in 2011–2015. | Social innovation addressed to women from Świdnica District, that has come forward with advisory and training support as well as financial assistance for 35 women in the amount of PLN 40,000 zloty for setting up their own business. |
| Success in your hands | The aim of the project has been to develop entrepreneurship in Chełm and Włodawa Districts by means of developing the skills of running a business and self-employment with the capital support in the form of subsidies and training and consultancy/ advisory support. In effect of those activities, new businesses have been set up. | Innovation addressed to the local community interested in support for the purpose of starting their own business. |
| Science for business, business for science | The innovation project covering the knowledge transfer between scientific institutions and enterprises in the area of technology, process, IT, energy and marketing. Mutual exchange of employees through the organisation of internships has allowed for the transfer of experience in the sphere of practical and scientific and didactic activities. | All stakeholders have been the beneficiaries of the innovation. |
| Lifelong learning for adult mobility in the labour market | The aim of the project has been to support public schools for adults from the Lubelskie Voivodship in adjusting the educational offer to the changing socio-economic conditions through the use of innovative teaching methods and the forecast of factors influencing lifelong learning in the region. | Innovation addressed to schools. |
| Friendly office, new quality of services | The aim of the project has been to improve the quality and accessibility of public services provided by the local municipality office. | Innovation addressed to the entire local community. |

**Table 5.1** (cont.)

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| Support and Activation Programme for Seniors in the City of Lublin for 2013–2015 | The aim of the innovation was to equalise opportunities and prevent social exclusion of seniors, organise activities in the field of health protection and preventive health care, social activation of seniors, creating a positive image of the elderly in the local community. | Social innovation addressed to seniors in the programme area. |
| Ambitious and enterprising | The aim of the project has been to boost professional engagement through training, internships and financial support, which contributes to improvement of the professional qualifications of unemployed people with a varied age structure. | Social innovation addressed to the local community interested in boosting professional engagement. |
| I-Cane: mobility solutions for the visually impaired, for global use | The innovation has come forward with a touch interface for visually impaired people, that leads a person along an unfamiliar route. | A social innovation aimed at the visually impaired community. |
| DAIN: digital activist integration network | DAIN is based on the philosophy of inclusion through community-based learning. The basic idea is that digitally excluded people can best reach out and train their fellow citizens who live in the same locality and have a similar social background. | Social innovation addressed to the digitally excluded community. |
| Innovativeness of the public sector – immigration policy in Portugal | Social innovation stemming from the need to facilitate communication between public administration in Portugal and immigrants. National Immigrant Support Centres (CNAIs) have been established to respond to a number of challenges identified by immigrants in the field of communication. Mediators have been recruited, trained, certified to be included in the process of providing administrative services. | Social innovation addressed to public administration in Portugal and immigrants struggling with communication problems. |

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| North Rhine-Westphalia State Programme „Social Integration City": District Renewal Support | The government of North Rhine-Westphalia has developed an integrated policy supporting 80 urban regeneration programmes in its state. The Integrated Local Action Plan defines how the development, reorganisation and modernisation of a given area is to take place. Integrated Local Action Plans (LAPs) are implemented in districts. 55 Municipalities are responsible for the preparation and implementation of the LAP, e.g. applying for funding and ensuring that the local plan meets the needs of the city as a whole. | A social innovation aimed at the public administration of North Rhine-Westphalia. |
| An integrated action plan for Pongrác housing estate in Köbánya District in Budapest | The Pongrác estate is an isolated area of Köbánya surrounded by non-residential areas. The strategy aims to eliminate the causes of land segregation, making it a better place to live. Activities focus on: strengthening the residential function of the estate, renovation of buildings, strengthening the urban functions of the district by improving streets and parking lots; improving safety through road signs and speed bumps, new streetlights and cameras, renovation of playgrounds; the creation of a new football field; the creation of small gardens and open spaces between houses, a new public agora for outdoor recreation and other community building activities. | Social innovation addressed to the community living in an area excluded in terms of access to basic infrastructure. |

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|---|---|---|
| Supporting social entrepreneurship at the regional level: Yorkshire Key Fund and Social Enterprise Support Centre | The Yorkshire Key Fund was launched in 2007 under the ERDF South Yorkshire Objective 1 Programme for the period 2000–2006. The Start and Grow Fund supports small start-up social enterprise projects with loans of up to €25,000 and grants of €2,000 to €5,000. There is a preparation fee of 1% and interest at a fixed rate of 6.5%. Loans are granted for a maximum of five years. Social enterprises in Yorkshire also benefited from the Social Entrepreneurship Support Centre (SESC), which provided non-financial support for business planning and strategic development. | Social innovation addressed to the community wanting to start their own business. |
| Using public procurement in an innovative way: the City of Nantes | The city of Nantes in north-west France is known as a leading innovator in the use of social clauses in public procurement to provide jobs for the long-term unemployed. France revised its public procurement rules in 2006, allowing for the condition that part of the work must be carried out by a specific target group in need of professional involvement. Nantes Metropole and the surrounding suburban administrations (Chantenay, Vannes, Doulon and Malakoff) awarded contracts using this clause. The works included swimming pools, roads, bus lines and a media centre. Types of occupations include bricklayers' helpers, carpenters, painters, construction workers, pavers, landscaping staff, plumbers. | A social innovation aimed at the community of the Nantes region, in particular the long-term unemployed. |

| 1 | 2 | 3 |
|---|---|---|
| New forms of social services – STEP Migrant one-stop shop | STEP is based in the small town of Dungannon in Northern Ireland. It was founded in 1997 to work with local communities and was initially funded under the EU's PEACE programme. In the early 2000s, Northern Ireland has gone from a no-migrant zone to a labor-intensive place. Employment agencies brought migrants from Portugal and East Timor, and after accession to the EU in 2004, from Poland and Lithuania. STEP started working with these marginalised communities and gradually expanded its services using a combination of EU funds, provincial contracts and grants. The public bodies in Northern Ireland did not have the experience to work with such a wide variety of clients or to provide the language support to make this possible. STEP currently assists over 6,000 migrants a year with one-on-one advice on legal, health, employment, housing, social services, immigration and more from specialist advisers. Their work has led to improvement of the conditions imposed by unscrupulous employment agencies. | Social innovation addressed to public administration and immigrants wishing to work in Ireland. |

**Table 5.1** (cont.)

| 1 | 2 | 3 |
|---|---|---|
| Kiút programme, self-employment and microcredit for Roma in Hungary | Kiút aims to support Roma to work in the formal economy by setting up a business. The microcredit programme provides assistance by lending start-up money to small businesses to generate enough income to service the loan and generate additional income for Roma families. Clients receive constant advice and administrative, financial and business assistance. A clear and important goal of the programme is to encourage women to participate in the programme. | Social innovation addressed to Roma families living in Hungary, running or wanting to run their own business there. |

**Source:** https://innoes.pl/innowacje/2 (accessed: 22.12.2022), joint responsibility. *Wspólna odpowiedzialność. Rola innowacji*, edited by N. Ćwik, (2013), Forum Odpowiedzialnego Biznesu, pp. 115–130; https://www.gov.pl/web/fundusze-regiony/innowatorzy-spoleczni (accessed: 06.01.2023); https://www.szansadlaniewidomych.org/index.php/yourway/ (accessed: 01.06.2023); https://emidruk.nazwa.pl/kopiainkubator/razem-mozna-wiecej/ (accessed: 06.01.2023); https://www.psychesomapolis.org/onco-joga (accessed: 06.01.2023); http://www.inkubatorwielkichjutra.pl/zwiekszenie-dostepnosci-do-uslug-medyczny/ (accessed: 06.01.2023); Z. Wacławski, (2017), *Rola innowacji społecznych w rozwoju regionu województwa lubelskiego – przykłady dobrych praktyk*, "Nierówności Społeczne a Wzrost Gospodarczy", No 50 (2/2017), Uniwersytet Rzeszowski, Rzeszów, pp. 463–368; *Guide to Social Innovation 2013,* European Commission, pp. 30–36.

One of the widely known measures of innovation is the Summary Innovation Index (SII) – developed by the Maastricht Economic and Social Research and Training Centre on Innovation and Technology (UNU-MERIT) and the Joint Research Centre (JRC). The information on the state of innovation in the surveyed countries aggregated in the SII includes a number of indicators in the field of research and innovation, divided into inputs (inputs) and effects (outputs). The SII is a weighted average of 25 Innovation Union Scoreboard (IUS) indicators divided into three groups:

- innovation potential, i.e. factors conducive to innovation, such as: human resources, an open and attractive research system, funding and support;
- innovative activity of enterprises, i.e. investments of enterprises and their entrepreneurship, links between enterprises, intellectual assets;
- the results of enterprises' activities presented in two dimensions: innovators and economic effects.[2]

The SII indicator is used for synthetically assessing the level of innovation in the EU countries. Eight dimensions of innovation and 25 indicators make it possible to analyse the achievements of the European Union's innovation system. As part of measuring innovation, the Innovation Union Scoreboard studies distinguish 3 main types of indicators: enablers, activities, outputs and 8 dimensions of innovation, taking into account a total of 25 various indicators.

The research results contained in the latest study show that, as compared to the previous ones, the level of innovation changes both between countries and within four groups:

1. Innovation leaders.
2. Catching up countries.
3. Moderate innovators.
4. Humble innovators.

**Table 5.2.** *Summary Innovation Index* (SII). Comparison of the indicator level for the EU countries in 2022 and 2015

| Country | Value 2022 | Level | Country | Value 2015 | Level |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| Sweden | 149.32 | Innovation Leader | Sweden | 138.77 | Innovation Leader |
| Finland | 149.17 | Innovation Leader | Denmark | 136.87 | Innovation Leader |
| Denmark | 148.19 | Innovation Leader | Netherlands | 132.33 | Innovation Leader |
| Netherlands | 142.26 | Innovation Leader | Finland | 129.63 | Innovation Leader |

2 A. Masternak-Janus, M. Rybaczewska-Błażejowska, (2013), *Analiza efektywności innowacyjnej przedsiębiorstw przemysłowych w Polsce z wykorzystaniem metody DEA*, "Ekonomia i Zarządzanie", no. 4**,** Oficyna Wydawnicza Politechniki Białostockiej, Białystok, p. 494.

**Table 5.2** (cont.)

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| Belgium | 141.67 | innovation Leader | Luxembourg | 129.11 | Strong Innovator |
| Ireland | 130.66 | Strong Innovator | Austria | 125.46 | Strong Innovator |
| Luxembourg | 130.47 | Strong Innovator | Belgium | 124.86 | Innovation Leader |
| Austria | 130.07 | Strong Innovator | Ireland | 123.58 | Strong Innovator |
| Germany | 129.16 | Strong Innovator | Germany | 121.73 | Strong Innovator |
| Cyprus | 117.64 | Strong Innovator | France | 116.88 | Strong Innovator |
| France | 115.87 | Strong Innovator | Slovenia | 100.85 | Moderate Innovator |
| Estonia | 110.24 | Strong Innovator | Spain | 88.93 | Moderate Innovator |
| Slovenia | 102.80 | Moderate Innovator | Portugal | 88.45 | Moderate Innovator |
| Czechia | 101.60 | Moderate Innovator | Malta | 86.12 | Moderate Innovator |
| Italy | 100.62 | Moderate Innovator | Estonia | 85.85 | Strong Innovator |
| Spain | 97.54 | Moderate Innovator | Italy | 83.13 | Moderate Innovator |
| Portugal | 94.83 | Moderate Innovator | Czechia | 81.82 | Moderate Innovator |
| Malta | 92.79 | Moderate Innovator | Cyprus | 79.47 | Strong Innovator |
| Lithuania | 91.81 | Moderate Innovator | Lithuania | 71.96 | Moderate Innovator |
| Greece | 88.25 | Moderate Innovator | Hungary | 69.39 | Emerging Innovator |
| Hungary | 76.58 | Emerging Innovator | Slovakia | 65.97 | Emerging Innovator |
| Croatia | 73.03 | Emerging Innovator | Greece | 64.04 | Moderate Innovator |
| Slovakia | 70.49 | Emerging Innovator | Croatia | 57.51 | Emerging Innovator |
| Poland | 66.54 | Emerging Innovator | Poland | 55.21 | Emerging Innovator |
| Latvia | 56.13 | Emerging Innovator | Latvia | 51.41 | Emerging Innovator |
| Bulgaria | 49.66 | Emerging Innovator | Bulgaria | 48.03 | Emerging Innovator |
| Romania | 35.69 | Emerging Innovator | Romania | 35.61 | Emerging Innovator |

**Source:** own study based on: https://ec.europa.eu/research-and-innovation/en/statistics/performance-indicators/european-innovation-scoreboard/eis# (accessed: 06.01.2023).

Comparing the SII results in 2015 and 2022 presented above, it can be seen that in 2022 Belgium was separated from the most innovative countries, while in the previous edition it was among the Innovation leaders. The following economies are still at the top of the ranking: Sweden, Finland, Denmark and the Netherlands. The lowest SII level in 2022 was demonstrated by: Romania, Bulgaria, Latvia, Poland, Slovakia, Croatia and Hungary. Therefore, there are no significant changes in this respect as compared to 2015.

**Table 5.3.** Comparison of selected SII indicators for Poland and Slovenia in 2022

| Country | R&D expenditure in the public sector | R&D expenditure in the business sector | SMEs introducing product innovation | Employment in innovative enterprises | Top R&D spending enterprises | Innovative SMEs collaborating with others | PCT patent applications |
|---|---|---|---|---|---|---|---|
| Poland | 64.52 | 64.34 | 55.05 | 50.79 | 0.88 | 64.81 | 35.61 |
| Slovenia | 70.97 | 117.83 | 170.50 | 98.58 | 8.01 | 144.69 | 62.77 |

**Source:** own study based on: https://ec.europa.eu/research-and-innovation/en/statistics/performance-indicators/european-innovation-scoreboard/eis# (accessed: 06.01.2023).

In order to become a Moderate Innovator in the coming years, Poland must effectively change its approach to innovation. In the table above, Poland has been compared with Slovenia that currently is a Moderate Innovator, and has achieved the highest level of the SII index in its group. The above data shows that in Poland the percentage share of public funds in financing innovation is still too high, and the percentage share of private sector funds is too low, which translates into significantly lower values of partial indicators in the SII innovation assessment. Innovation is also expressed through patent activity. In this respect, Poland is at the end of the list, far behind, for example, Slovenia. The partial index for Poland is 100% lower than the one displayed by the best Moderate Innovator. The greatest disproportions between the surveyed countries result from the differentiated level of implementation of product innovation by the SME sector and the cooperation of the SME sector with other entities to the extent of innovation development and implementation. Poland differs significantly from Slovenia in those two areas, thus overcoming those disproportions may be difficult to achieve.

Another indicator used for assessing innovation at the national level is the Global Innovation Index (GII) – developed by Cornell University, INSEAD and the World Intellectual Property Organisation (WIPO). Published annually since 2007, the Global Innovation Index shows the advancement of countries and economies in terms of their innovation. On the basis of 80 indicators, such as e.g. the number of patent applications, the level of education, the quality of scientific publications (number of citations), or the involvement of the economy in the development of innovation The World Intellectual Property Organisation calculated innovation indicators for 131 countries around the world. The report published in 2022 shows that the most innovative European countries include: Sweden, the Netherlands, Germany and Finland. Thus, a similarity with the classification developed by SII may be noted. The least innovative economies included: Romania, Slovakia, Greece and Croatia. Poland was ranked 38th in the ranking, which gives it one of the last positions among European countries. The report shows that in 2022

Poland fared better in terms of innovative products than in the case of expenditure on innovation.[3] Slovenia, with which Poland was compared by the level of the SII index in 2022, was ranked 33rd.

**Table 5.4.** Comparison of selected GII indicators in 2022 for Poland and Slovenia

| Indicator | Poland | Slovenia |
|---|---|---|
| Researchers, FTE/mn pop | 29 | 16 |
| Gross expenditure on R&D, % GDP | 31 | 17 |
| GERD performed by business, % GDP | 27 | 14 |
| GERD financed by business, % | 28 | 13 |
| GERD financed by abroad, % of GDP | 38 | 10 |
| Patent families/bn PPP$ GDP | 36 | 25 |
| Patents by origin/bn PPP$ GDP | 23 | 19 |
| PCT patents by origin/bn PPP$ GDP | 42 | 27 |

**Source:** own study based on: https://www.globalinnovationindex.org/analysis-comparison (accessed: 07.01.2023).

GII serves as another ranking that, through synthetic indicators of innovation, shows how big the disproportion between Poland and other European countries in terms of innovation is. One of the main sources of concern for the Polish government should be the structure of financing innovation and improvement of the institutional management efficiency in terms of implementation (commercialisation) of various types of innovation, primarily those of a social nature.

## 5.2. Description of Research Methodology and Tools

The purpose of the research conducted in the period from October to December 2022 was to diagnose social and economic needs and the effects of social innovation in the opinion of Polish participants in social life. Although the research on the social effects of innovation has a long standing tradition, the constant changes in this area make the results quickly outdated. Poland's accession to the European Union, globalisation, the development of information technologies, and the recent pandemic or social unrest have significantly influenced the development and

3 https://www.globalinnovationindex.org/analysis-economy (accessed: 07.01.2023).

various applications of social innovation. The increase in social awareness regarding a healthy lifestyle or maintaining the right balance between work and family life has contributed to a new approach to social innovation that is increasingly perceived as an essential sphere of social life. The topic of social innovation is still inherent in social sciences and continues to be a challenge for researchers, as the explication of the genesis of new trends in the area of innovation or R&D may merely contribute to further development of the indicated research topic.

The research objective adopted in the project obviously translated into the criteria for selecting the research sample. The study on the perception of social innovation in the current economic reality demanded that the participants of the Polish socio-economic ecosystem be included in the study. The study used a non-random (non-probability) sample selection. Those are sampling techniques that do not use sampling procedures, but other procedures, based primarily on subjective decisions, based on known objective data, relating to the knowledge of the structure of the studied population. During the survey period, complete responses were obtained from 408 respondents.

The statements of people who are participants in social life constitute an important source of information in the conducted empirical study on the perception of social innovation by the society. In theoretical terms, the form of those statements may vary, for example: it may be a free, formalised interview or a survey questionnaire. From the point of view of this study and its objectives, the most appropriate research tool seems to be a questionnaire. The development of technology, primarily including information technology, and the easy availability of various electronic communication channels have made survey research one of the most willingly used methods of obtaining information in the information society. The answers obtained in this way will provide knowledge on how the participants of social life perceive social innovation, in which areas the aforementioned social innovation is most expected by the society or what factors limiting and stimulating development of such initiatives in the economy are the most important.

This study was conducted via an electronic survey sheet. The selection of the research sample was based on purposive sampling – this is the most typical case of non-random sampling. It involves a completely subjective selection of surveyed units for the sample, in the hope of obtaining the broadest and most complete information. Currently, electronic methods of survey research are more and more widely used. Research carried out by means of an electronic questionnaire is completed by a respondent (CAWI – Computer Assisted Web Interviewing ). With the advent of computers, the process of collecting survey responses has become much simpler and faster. An important factor determining the choice of a research tool is the time-consuming and cost-intensive nature of the research process. An electronic survey is finalised much faster than in the case of a traditional form, in addition, in the case of an electronic survey, it is not necessary to print the questionnaires and process the data into an electronic version. The CAWI survey

is an online survey technique that fits into the quantitative methodology of market and opinion research. Obtaining data from respondents is ensured by electronic questionnaires available via web browsers, and supervision over their completion is ensured by dedicated research software – it inter alia controls the degree of examination of the sample under consideration, the appropriate sequence of questions asked as well as the verification and correct recording of the answers obtained. In this study, it has been decided to use the CAWI method to conduct a survey using the surveyeo.pl tool. The advantage of this method is its multimedia nature, speed of obtaining results, lower cost, and the ability to reach various types of recipients. In addition, it should be noted that the use of the CAWI research method enables the researcher to independently carry out survey research, thanks to which it is possible to reduce research costs and speed up the implementation time. Contrary to appearances, independent implementation of online research is fast and intuitive. The researcher retains full control over the course of the study and can track the results in real time.

The survey questionnaire included closed-ended questions, single-response and multi-response questions as well as questions with the use of a scoring scale. In total 14 questions were supposed to be responded by the respondents (including the metric). Closed questions contained predetermined answers. Based on the answers collected as part of closed questions, it is possible to calculate the distribution of answers, determine the central tendency in the answers and the correlations between them (85% of questions). The closed questions also included questions that differed in the number of answers provided by the respondent (single-response and multi-response). As the name suggests, single-response questions can be answered only once (75% of closed questions), while multi-answer questions involve a multi-part list of alternatives, out of which a respondent chooses the most adequate answers (25% of closed questions). The last group of questions consisted of questions using interval scales. The analysis of data obtained using this type of a scoring scale is vector-related in nature and focuses on determining the direction and intensity of recognised attitudes and assessments. They have a polarised form, divided into positive or negative attitudes and evaluations. The most frequently used scoring scale in this type of questions is the five-point Likert scale, the numerical values of which express the following assessments:

- negative assessment;
- rather negative assessment;
- neutral assessment;
- rather positive assessment;
- positive assessment.[4]

The research tool was constructed in such a way that the questions using the Likert scale (accounting for 15% of the questions in the survey) were extensive. On

4 Ł. Błuszkowski, D. Midler, (2007), *Wywiad jako metoda badawcza*, [in:] K. Kuciński (ed.), *Doktoranci o metodologii nauk ekonomicznych*, Szkoła Główna Handlowa, Warszawa, p. 211.

average, 10 partial answers were matched to each question, to which a respondent had to assign a numerical answer. The scoring scales created in this way not only made it possible to determine the possession of certain competencies, but also made it possible to examine the intensity of selected features.

## 5.3. Perception of Social Innovation – Surveying Outcome

The statistical analysis of the results of the survey conducted in respect of a group of 408 respondents presented in this part of the work was performed using an Excel spreadsheet. The analysis of the survey results is a synthetic summary of the collected statistical figures in the form of resulting tables, charts and conclusions. The survey was divided into two parts – one referred to the demographic and social characteristics of a respondent, and the other – substantive content.


**Chart 5.1.** Composition of respondents
**Source:** own study.

The respondents were dominated by women (251 people). They accounted for 62% of the total group under consideration.

The respondents in the study were mostly people aged 19–49 years. They constituted 68% of the total group under consideration. From the second age group including those between 50–59 and over 60 years of age, 26% of respondents participated in the survey. The smallest group was represented by people under 18 (7%). On this basis, it is plausible to conclude that the people most interested in participating in this study were young and middle-aged people. There is a high probability that the interest in social innovation was the major motivation to participate in the study. The graph shows a clear difference in the development of this feature among the study participants.

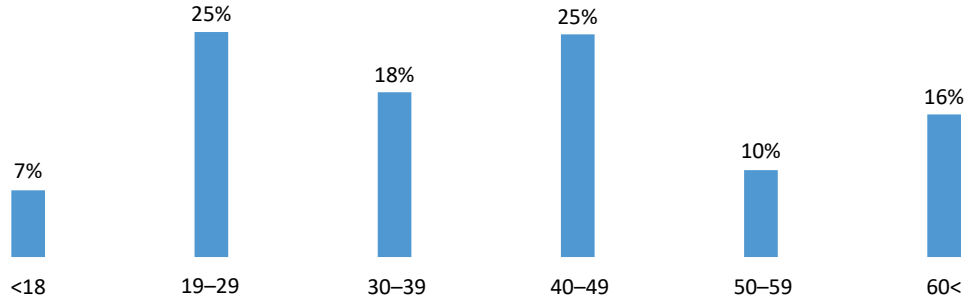


**Chart 5.2.** Age of Respondents
**Source:** own study.


**Chart 5.3.** Family Background of Respondents
**Source:** own study.

The diversity of the origin of the respondents is also noteworthy. The dominant group of respondents was represented by inhabitants of a city (73%). In this context, it should be noted that the differences in the family background of the study participants did not result from the availability of the Internet. Currently, approximately 92% of Polish households have access to the Internet. It can therefore be assumed that the interest in the study was higher among city dwellers, who had greater access to various types of information, which has been one of the benefits of spatial concentration of entities.

The structure of the respondents in terms of education indicates that the dominant group was represented by people with vocational or secondary education (56%), followed by the participants of the study, who were graduates of master's studies (27%), bachelor's studies (15%) and persons with the academic title of doctor (2%).

Summing up the part of the research outcome to the extent of the characteristics of the surveyed respondents, it should be noted that the dominant group was represented by women, aged 19 to 49 years, living in the city, with secondary or vocational education.

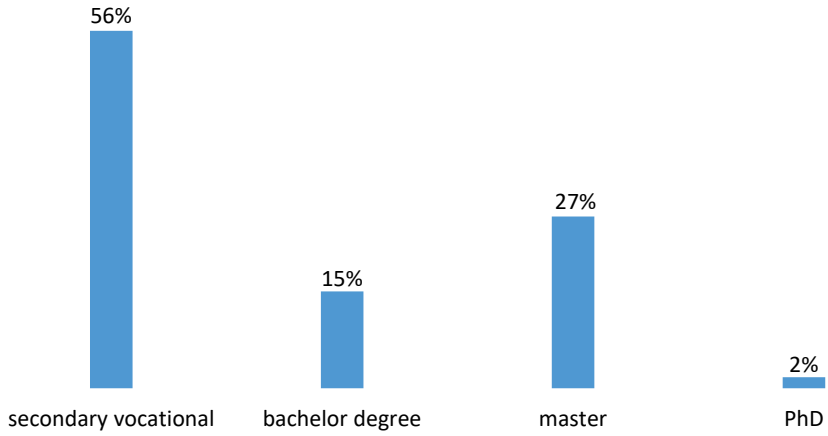


**Chart 5.4.** Educational Background of Respondents
**Source:** own study.

**Table 5.5.** Structure of the answers: Question no 1: Which statement according to Which country is most defined by social innovation?

| Statement / Scoring Scale | 1. – I strongly disagree, | 2. – I rather disagree, | 3. – I have no opinion, | 4. – I rather agree, | 5. – I strongly agree |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| serve to improve the quality of life of society | 3% | 6% | 29% | 32% | 30% |
| use interdisciplinary knowledge to develop new social solutions | 3% | 8% | 38% | 31% | 20% |
| bring together specialists from various fields | 3% | 9% | 35% | 30% | 23% |
| solve problems that have never existed before solutions in the social area | 3% | 8% | 41% | 29% | 19% |
| improve the comfort of life | 3% | 7% | 33% | 29% | 28% |
| fill the market gap in the field of new products/services of a social nature | 3% | 8% | 36% | 33% | 20% |

**Table 5.5** (cont.)

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| have nothing to do with social development – these are products / services for which we pay more when we are tempted by product marketing and social fashion | 16% | 15% | 41% | 18% | 10% |

**Source:** own study.

Attempting to examine how social innovation is perceived, the respondents indicated that in the vast majority, this dimension of innovation serves to improve the quality of social life (30%). Next, the indication concerning "improvement of the comfort of life" was rated the highest (28% of respondents). It should be noted that respondents who perceived social innovation in a negative way accounted for approx. 3% of indications. Therefore, it can be unequivocally stated that the dominant belief among the respondents was that social innovation constitutes an added value for society, mainly in the form of an increase in the comfort of living. It can therefore be concluded that the participants of the study had sufficient knowledge and hand been familiar with the subject matter.

**Table 5.6.** Structure % of answers: Question no 2: Please indicate (max. 3) factors that favour the implementation of social innovation in the economic reality

| **Factor** | **Transparent legislation** | **Increased availability of financing for SMEs, local government units, business-related institutions,** | **Greater financial outlays on R&D by the Government,** | **Organization culture** | **Tax incentives for entrepreneurs** | **Initiating the implementation of social innovation by the Government through various types of government programs** | **Others** |
|---|---|---|---|---|---|---|---|
| Number of responses | 194 | 135 | 133 | 157 | 181 | 133 | 4 |
| % | 48% | 33% | 33% | 38% | 44% | 33% | 1% |

**Source:** own study.

Answering the question about the factors stimulating the development of social innovation, respondents most often indicated transparent legislation (48%) and tax incentives for entrepreneurs (44%). The survey did not ask the respondents about their occupation, therefore it is not known whether there were entrepreneurs among the respondents. Nevertheless, the answers indicate an important and significant participation of entrepreneurs in creating social innovation. Entrepreneurs, in order to be able to develop by offering socially innovative products and services, should, according to the respondents, be encouraged by tax reliefs and the law and legal regulations. Among other factors, there was a statement that the demand for development and innovation arose from people who were becoming more and more indulgent and needed newer and simpler solutions. It can therefore be concluded that lifestyle is an additional factor stimulating innovation.

**Table 5.7.** Structure % of answers: Question no 3: In what areas, according to Your social innovation are most needed? (max. 3)

| Factor | New technologies | Natural resources and their protection | Sustainable agriculture | Mobility | Health and safety | Education and training | Media, technology and mobile systems | Others |
|---|---|---|---|---|---|---|---|---|
| Number of responses | 185 | 201 | 119 | 94 | 204 | 148 | 4 | 5 |
| % | 45% | 49% | 29% | 23% | 50% | 36% | 1% | 1% |

**Source:** own study.

The structure of the respondents' answers indicates that social innovation is most expected by society in the area of health and safety (50%). Next, the survey participants indicated the need to create social innovation in the area of natural resources (49%) and new technologies (45%). On the other hand, innovation in the field of mobile technologies and systems turned out to be the least popular among the respondents (1%). The results of the study show that the interest in social innovation in the area of health care may result from the change in the age structure of the Polish society. This causes serious economic and social challenges for the entire Polish health care system. This means more expenses to ensure adequate living comfort and work efficiency. Social innovation in the area of health care is becoming one of the most important areas of financial and institutional support by the state administration in Poland.

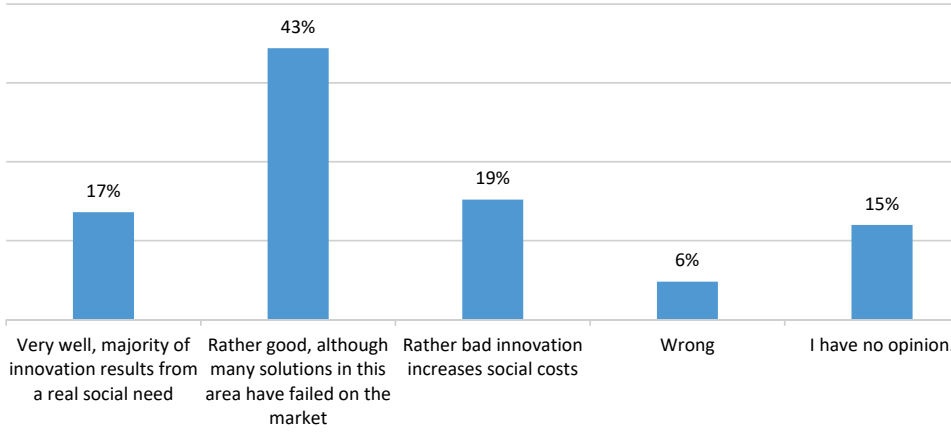


**Chart 5.5.** Structure % of answers: Question no 4: I assess the effects of social innovation (in Poland and in the world) in the area of health care…
**Source:** own study.

The structure of answers to the question concerning the perception of the effects of social innovation is diversified. More than a half of the respondents assess social innovation favourably. As many as 43% of the respondents answered that this type of innovation was an added value, although they were aware that many solutions of this type had not been used in social life. Social innovation in the area of health and safety was rated very well by 17% of respondents. In this part, the respondents strongly emphasised the fact that they believed in the effectiveness of social innovation in the area of health care. Probably those are the respondents who are also users of innovative solutions in reality. Social innovation was negatively assessed by 25% of respondents, and 15% have no opinion in this regard.

**Table 5.8.** Structure % of answers: Question no 4: Please refer to the following statements…

| Statement / scale | 1. – I strongly disagree, | 2. – I rather disagree, | 3. – I have no opinion, | 4. – I rather agree, | 5. – I strongly agree |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| Social innovation in the field of health care should be a priority in the development policy of every society | 4% | 4% | 28% | 31% | 33% |

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| I am not aware of any social innovation in the area of health protection and improving the safety of its functioning | 9% | 15% | 46% | 18% | 13% |
| I know numerous examples of social innovation in the field of health care and improving the safety of its functioning | 11% | 14% | 44% | 19% | 12% |
| Podiatric prophylaxis is an important element of public health protection | 6% | 10% | 46% | 24% | 15% |
| Innovation in the field of podiatry is an important category of social innovation | 6% | 10% | 46% | 25% | 13% |
| We should pay more attention to social innovation in podiatric prevention | 3% | 10% | 45% | 29% | 13% |
| There is a lack of social awareness regarding the possibility of improving the comfort of using footwear | 4% | 11% | 39% | 28% | 18% |
| Problems of a subological nature are underestimated by society | 3% | 9% | 40% | 29% | 19% |
| I prefer to pay more for shoes that have certificates of conformity. I am sure that the shoes I have sneered at will have a positive effect on my health | 6% | 10% | 39% | 30% | 15% |

**Table 5.8** (cont.)

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|---|---|---|---|
| Podological prophylaxis should be an element of parental education in educational institutions | 4% | 10% | 42% | 28% | 15% |
| Certification of each type of footwear should be mandatory | 4% | 10% | 42% | 27% | 18% |

**Source:** own study.

The dominant belief among the respondents was that social innovation in the field of health care should be a priority in the development policy of every society (33% of the respondents strongly agreed). At the same time, this confirmed the answers of the respondents to question no 3. Additionally, 19% of the respondents marked "5" in the Likert Room, expressing the view that podiatric problems are underestimated by the society. It proves that the Polish society has no expectations in terms of innovation that would improve the comfort of using footwear because podiatric problems are regarded as a minor common inconvenience. On the other hand, as many as 11% of respondents strongly disagreed with the statement that examples of social innovation in the area of health care were commonly known to them.

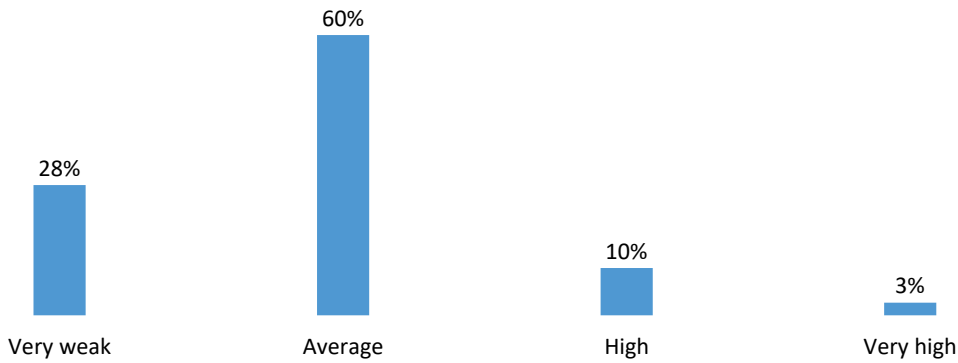


**Chart 5.6.** Structure % of answers: Question no 6: How do you assess your knowledge in the field of podiatric prophylaxis?
**Source:** own study.

Respondents assessed their knowledge in the field of podiatric prophylaxis at an average level (60%) and very low (28%). This proves that knowledge in this field is not promoted in Poland. The only source of information in the field of podiatry is the Internet, but an awareness-raising campaign targeted at

specific social groups would most likely change the proportions indicated on the chart. This is evidenced by the structure of the respondents' answers in the next question.

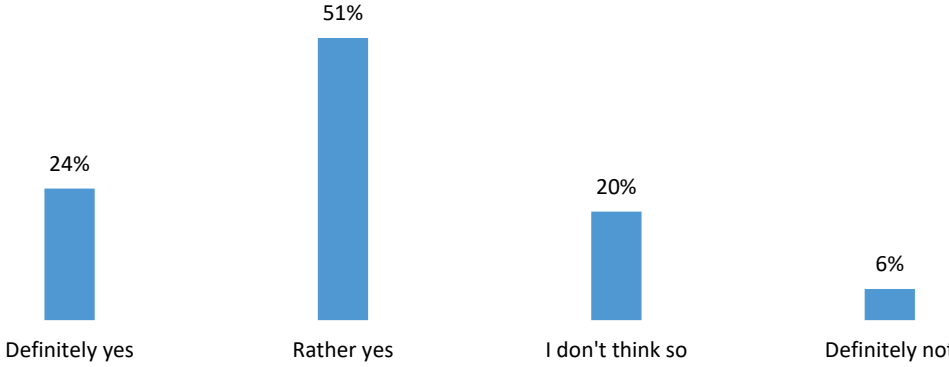


**Chart 5.7.** Structure % of answers: Question no 7: Do you think that increasing social awareness, e.g. through social advertising, free preventive campaigns in the field of podiatry, would contribute to increasing the rationality of shoe purchases?
**Source:** own study.

Respondents in 75% of cases answered that the increase in social awareness in the field of podiatry prevention would contribute to increasing the rationality of footwear purchases. It can be assumed that social campaigns in the above-mentioned scope would influence the development of social knowledge in the field of podiatric problems.

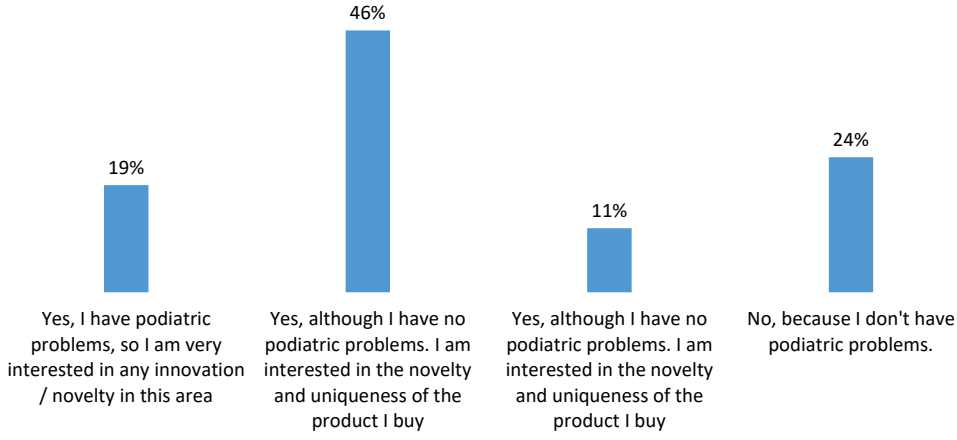


**Chart 5.8.** Structure % of answers: Question no 8: Are you interested in innovation to improve the functionality of footwear?
**Source:** own study.

The next question concerned the respondents' interest in innovation in terms of improving the usable functionality of footwear. As many as 65% of respondents expressed interest in this type of innovation in footwear products, out of which 19% stated that it resulted from podiatric problems. Among the respondents there were people (46%) who were interested in innovation in this field, despite the fact that they did not have podiatric problems. The study shows that 24% of respondents are definitely not interested in innovation to the extent of footwear due to the lack of podiatric problems.

**Table 5.9.** Structure % of answers: Question no 9: Please indicate what innovation in terms of increasing the comfort of using footwear would you be interested in (please indicate the 3 most important ones)?

| Factor | Eco-friendly footwear manufacturing materials, biodegradability | Implementation of IT tools that would measure various types of parameters of footwear use and their impact on foot health | Specialist innovation in footwear, e.g. for people who practise active sports, resistant to weather conditions | Innovation that increase the safety of use, e.g. the use of anti-slip materials or lining materials inside the shoe | Innovation in the field of shoe inserts, e.g. foot-shaped, cooling, eliminating the effects of sweating | Innovation in the construction of footwear, e.g. reducing the load on the spine in the joints when walking | Others |
|---|---|---|---|---|---|---|---|
| Number of responses | 163 | 94 | 141 | 139 | 133 | 128 | 7 |
| % | 40% | 23% | 35% | 34% | 33% | 31% | 2% |

**Source:** own study.

Respondents, when answering the question about the types of innovation that increase the comfort of using footwear, were not unanimous. Most respondents were in favour of ecological and biodegradable materials that footwear should be made of. Next (35%), the respondents pointed to specialist innovation, e.g. in footwear for athletes. Only 1% fewer respondents emphasised the importance of innovation that increased the safety of footwear use. The fewest respondents (23%) reported interest in implementing IT tools that would measure the parameters inside the footwear. It can therefore be concluded that the dominant view among the respondents was that innovative solutions in footwear should concern structural elements.

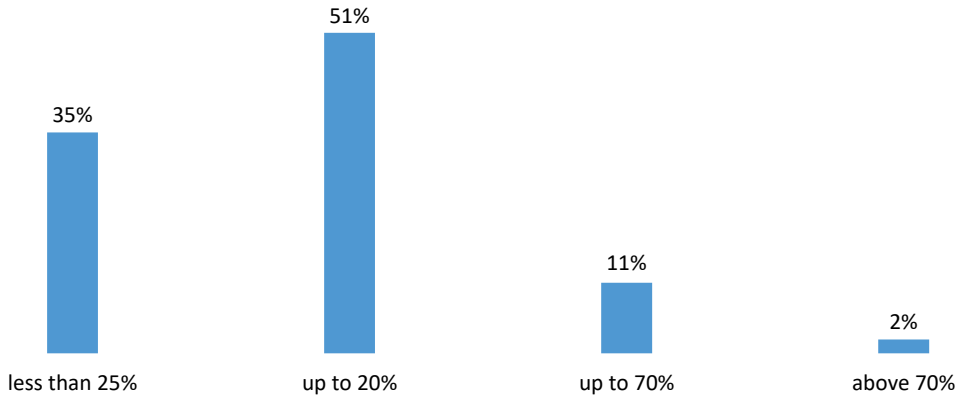


**Chart 5.9.** Structure % of answers: Question no 10: What price increase would you accept for footwear with one of the previously marked innovation?
**Source:** own study.

The last question, that the respondents had to face, concerned the acceptable level of price increase for footwear that would have one of the previously indicated types of innovation. Most respondents (51%) would be able to accept an increase in the price of their favourite footwear up to 20%. Only 11% of respondents are able to pay more for shoes – up to 70%, and 2% – over 70%. Probably, the highest footwear price rise for the footwear that has the desired type of innovation affects people suffering from podiatric disorders. From earlier statements, it can be concluded that 77 (19%) of the respondents have podiatric problems.

## 5.4. Social Innovation Development Prospects until 2050

In recent years, the role of social innovation in the development of society has been increasing, which is also due to the increase in the innovativeness of society. The ending financial perspective, including the Europe 2020 strategy, has been conducive to the development of social innovation mainly by launching financial streams supporting the competitiveness of the European economy by creating social networks conducive to creativity and innovation. It is therefore important in the current financial perspective to ensure the creation of institutional and financial foundations for the development of social innovation. Effective use of the opportunities generated by the European Union is possible only in the case of establishing cooperation between state, business, and civil society institutions in

order to develop the best – and accepted by stakeholders – solutions in the field of implementing social innovation. First, however, the strengths and weaknesses of the development of social innovation in the current economic reality should be indicated. Since social innovation is boosted by societal immediate needs and requirements and expectations, the business sector expenditure on innovation in terms of a percentage share of the GDP and the expenditure incurred on R&D activity by all economic operators conducting this activity in a given year in a given country (GERD – Gross expenditures on research and development.) constitute most frequently used indicators to assess the innovativeness of enterprises.

**Table 5.10.** Expenditures (GERD) on R&D by sectors in the years 2004–2020 (average share %)

| Country | Business enterprise sector | Government sector | Higher education sector |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **Belgium** | 61% | 23% | 2% |
| **Bulgaria** | 30% | 40% | 0% |
| **Czechia** | 41% | 39% | 1% |
| **Denmark** | 60% | 28% | 0% |
| **Germany** | 66% | 29% | no date |
| **Estonia** | 43% | 43% | 1% |
| **Ireland** | 52% | 28% | 1% |
| **Greece** | 35% | 48% | 2% |
| **Spain** | 46% | 42% | 4% |
| **France** | 54% | 36% | 2% |
| **Croatia** | 39% | 46% | 3% |
| **Italy** | 47% | 40% | 1% |
| **Cyprus** | 22% | 56% | 4% |
| **Latvia** | 30% | 36% | 2% |
| **Lithuania** | 31% | 43% | 2% |
| **Luxembourg** | 42% | 36% | 1% |
| **Hungary** | 48% | 38% | 0% |
| **Malta** | 51% | 30% | 1% |
| **Netherlands** | 53% | 33% | 0% |
| **Austria** | 49% | 33% | 0% |
| **Poland** | 38% | 50% | 3% |
| **Portugal** | 44% | 45% | 3% |
| **Romania** | 40% | 49% | 2% |
| **Slovenia** | 61% | 29% | 0% |

| 1 | 2 | 3 | 4 |
|---|---|---|---|
| **Slovakia** | 38% | 46% | 1% |
| **Finland** | 62% | 26% | 0% |
| **Sweden** | 61% | 26% | 1% |
| **Iceland** | 43% | 36% | 2% |

**Source:** own elaboration based on data from Eurostat.

The innovativeness of the economy, apart from other factors, is influenced not only by the size of the related expenses, but also by their subjective structure. Data for the period 2004–2020 presents the course of this phenomenon for the EU countries according to individual sources of financing this type of activity. The structure of the total expenditure on R&D in the analysed period was as follows: the private sector provided 46% of funds on average, the government sector supplied 38% of funds on average, and the higher education sector provided 2% of funds on average. In the context of the analysis presented above, it is noteworthy that the sectoral structure of expenditure reflects the relative state of innovation systems in respective economies. In most economies, the private sector accounts for the largest percentage share of R&D funding. In the most innovative economies, i.e. the economies of Denmark, Germany, Slovenia, Finland and Sweden, the private sector funded 62% of innovation volume on average. In the case of the most innovative countries, a small percentage share of public funds in overall funding sources for the total R&D activity is noticeable. The indicated trend can be seen in the above-mentioned economies, where the average percentage share of public expenditure in financing innovation is equivalent to 27%, and in the higher education sector it is less than 1%. The situation is different in less innovative countries, where high expenditures from public funds may be the result of small expenditures of enterprises on research and development activities. Romania, Poland, Cyprus are the examples of such countries.

**Table 5.11.** Average expenses incurred by enterprises on innovation in the breakdown by the number of employees in the EU in terms of the percentage share of the GDP in 2004–2020

| Country | Average 1–9 | Average 10–49 | Average 50–249 |
|---|---|---|---|
| 1 | 2 | 3 | 4 |
| **Belgium** | 3% | 13% | 19% |
| **Bulgaria** | 2% | 4% | 5% |
| **Czech Republic** | 1% | 5% | 14% |
| **Denmark** | 5% | 15% | 10% |
| **Germany** | 1% | 4% | 5% |
| **Estonia** | 4% | 9% | 17% |

**Table 5.11** (cont.)

| 1 | 2 | 3 | 4 |
|---|---|---|---|
| **Ireland** | 2% | 11% | 6% |
| **Greece** | 1% | 3% | 3% |
| **Spain** | 2% | 9% | 14% |
| **France** | 2% | 8% | 10% |
| **Croatia** | 0% | 2% | 6% |
| **Italy** | 2% | 6% | 9% |
| **Cyprus** | 2% | 3% | 3% |
| **Latvia** | 2% | 2% | 4% |
| **Lithuania** | 1% | 5% | 7% |
| **Hungary** | 2% | 5% | 8% |
| **Malta** | 2% | 9% | 12% |
| **Netherlands** | 7% | 11% | 15% |
| **Austria** | 3% | 11% | 14% |
| **Poland** | 1% | 2% | 6% |
| **Portugal** | 2% | 7% | 13% |
| **Romania** | 0% | 1% | 2% |
| **Slovenia** | 4% | 13% | 21% |
| **Slovakia** | 0% | 2% | 6% |
| **Finland** | 6% | 15% | 22% |
| **Iceland** | 13% | 21% | 13% |
| **Sweden** | no data | 15% | 10% |

**Source:** own elaboration based on data from Eurostat.

The above data indicates a significant diversification of enterprises in terms of expenditure on innovation incurred by them. The average percentage share of expenditure on innovation in the GDP among micro-enterprises is dominant in Iceland (13%). Other EU countries record it below 10% of the GDP, from which it can be indicated that a significant role of the smallest enterprises in financing innovation is noticeable in the Netherlands (7%) and Finland (6%). In the case of the Netherlands, the data in the Eurostat database is not complete, hence it can only be stated that the financing of innovation by micro-enterprises is at a higher level than the European average. The group of countries where micro-enterprises do not finance innovation with their own funds includes: Croatia, Romania and Slovakia. The next group consists of small enterprises that prove the percentage share in financing innovation in the analysed period to be higher than in the previous group. Among the countries with the highest percentage shares in financing are:

Iceland (21%), Sweden (15%), Finland (15%) and Denmark (15%), while medium-sized enterprises from Romania (1% ), Poland (2%), Slovakia (2%), Latvia (2%) and Croatia (2%). In the case of Poland, however, the higher dynamics of expenditure of medium-sized enterprises on innovative activity should be noted, in contrast to the other countries in this group. Since 2016 this kind of spending has been on a rise by an average of 1 pp. In 2020 Polish medium-sized enterprises spent up to 5% of the GDP on innovation. The countries, where spending on innovation by large enterprises was the highest, include: Finland (22%), Slovenia (21%) and Belgium (19%). This is a significant difference as compared to the previous lists because Belgium and Slovenia are not found in any of the previous ones. Moreover, in terms of participation in financing innovation by small and medium-sized enterprises, those countries oscillate around the EU average. When analysing the presented average data in detail, it can be pointed out that throughout the research period (2004–2020) those countries were characteristic of a high percentage share of expenditures incurred by large enterprises on innovative activities. In Slovenia, the highest percentage share of this type of spending was recorded in the years: 2011–2015 (max. 30% in 2011), while in Belgium those are the years: 2013–2019 (max. 35% in 2019). In Finland, the maximum level of that indicator was reached in 2020 (29%) but it should be noted that the financing of innovation by the largest enterprises was evenly distributed over the period under review.

**Table 5.12.** Patent applications to the European Patent Office (EPO) per capita by priority year in the years 2006–2017

| TIME | 2006 | 2007 | 2008 | 2009 | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| **Belgium** | 147 | 148 | 141 | 132 | 140 | 138 | 136 | 138 | 138 | 140 | 140 | 146 |
| **Bulgaria** | 4 | 2 | 2 | 2 | 2 | 4 | 5 | 5 | 7 | 4 | 4 | 4 |
| **Czech Republic** | 15 | 18 | 20 | 17 | 18 | 21 | 22 | 24 | 26 | 28 | 30 | 34 |
| **Denmark** | 210 | 241 | 239 | 218 | 233 | 264 | 236 | 242 | 245 | 241 | 240 | 247 |
| **Germany** | 293 | 296 | 282 | 286 | 287 | 281 | 268 | 261 | 257 | 259 | 245 | 229 |
| **Estonia** | 16 | 21 | 26 | 34 | 29 | 21 | 18 | 21 | 18 | 29 | 25 | 28 |
| **Ireland** | 69 | 76 | 74 | 77 | 71 | 81 | 68 | 72 | 72 | 82 | 77 | 78 |
| **Greece** | 10 | 9 | 9 | 8 | 6 | 8 | 9 | 10 | 11 | 9 | 9 | 8 |
| **Spain** | 31 | 31 | 32 | 33 | 33 | 32 | 32 | 32 | 33 | 35 | 35 | 36 |
| **France** | 135 | 136 | 137 | 135 | 131 | 137 | 136 | 137 | 139 | 144 | 143 | 142 |
| **Croatia** | 8 | 7 | 7 | 5 | 7 | 4 | 5 | 4 | 3 | 4 | 5 | 5 |
| **Italy** | 87 | 85 | 81 | 75 | 76 | 74 | 73 | 72 | 70 | 72 | 70 | 68 |
| **Cyprus** | 9 | 14 | 14 | 19 | 9 | 7 | 3 | 9 | 9 | 10 | 11 | 11 |

**Table 5.12** (cont.)

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Latvia** | 7 | 7 | 10 | 9 | 7 | 9 | 13 | 33 | 42 | 13 | 11 | 11 |
| **Lithuania** | 3 | 3 | 5 | 3 | 5 | 6 | 11 | 14 | 17 | 8 | 7 | 8 |
| **Luxembourg** | 228 | 155 | 193 | 151 | 153 | 136 | 128 | 121 | 111 | 116 | 107 | 94 |
| **Hungary** | 16 | 19 | 18 | 18 | 20 | 22 | 21 | 22 | 23 | 21 | 20 | 20 |
| **Malta** | 17 | 17 | 13 | 19 | 8 | 1 | 13 | 12 | 13 | 17 | 15 | 14 |
| **Netherlands** | 229 | 205 | 211 | 210 | 185 | 207 | 203 | 201 | 206 | 207 | 203 | 204 |
| **Austria** | 212 | 208 | 196 | 205 | 212 | 215 | 222 | 226 | 231 | 233 | 233 | 231 |
| **Poland** | 4 | 5 | 6 | 8 | 10 | 10 | 13 | 14 | 16 | 15 | 17 | 18 |
| **Portugal** | 10 | 12 | 11 | 9 | 9 | 11 | 11 | 11 | 12 | 13 | 13 | 14 |
| **Romania** | 1 | 2 | 2 | 2 | 2 | 3 | 4 | 4 | 5 | 5 | 5 | 5 |
| **Slovenia** | 50 | 60 | 69 | 61 | 52 | 55 | 62 | 62 | 66 | 58 | 54 | 55 |
| **Slovakia** | 8 | 7 | 7 | 5 | 9 | 10 | 8 | 9 | 9 | 8 | 10 | 10 |
| **Finland** | 257 | 242 | 239 | 247 | 260 | 251 | 303 | 322 | 342 | 253 | 240 | 236 |
| **Sweden** | 292 | 313 | 304 | 284 | 302 | 301 | 325 | 339 | 350 | 300 | 294 | 283 |
| **Iceland** | 101 | 81 | 79 | 81 | 57 | 71 | 87 | 88 | 98 | no date | no date | no date |

**Source:** Elaboration based on Eurostat data.

The table above shows how patent activity in respective EU countries has developed over the last few years. The data shows that the largest number of patent applications per capita were submitted in such countries as: Sweden, Finland, Austria, Denmark and Germany.

Throughout the period under review, the highest patent activity is proven by three European countries: Sweden, Finland and Germany. Over the period under review in Sweden min. the number of patent applications is 285 per capita (2017) and the maximum is 350 per capita in 2014. In the case of Germany min. the rate equalled 229 notifications per capita in 2017, and the maximum one equalled 296 notifications per capita in 2007. Finland, on the other hand, recorded the largest number of applications in 2014 (342) and the least one in 2017 (236). The fewest patent applications per capita in the analysed period were recorded by: Romania (3 on average), Bulgaria (4 on average) and Croatia (5 on average).

Innovation is developed by innovators, i.e. people who lead to the application of new and improved ways of producing products, rendering services, etc., in practice. Therefore, an important factor determining the development of innovation in the economy is to create an environment where innovators can develop and implement their ideas. One of the basic indicators of the level of innovation development in the country is the structure of employment and its changes.

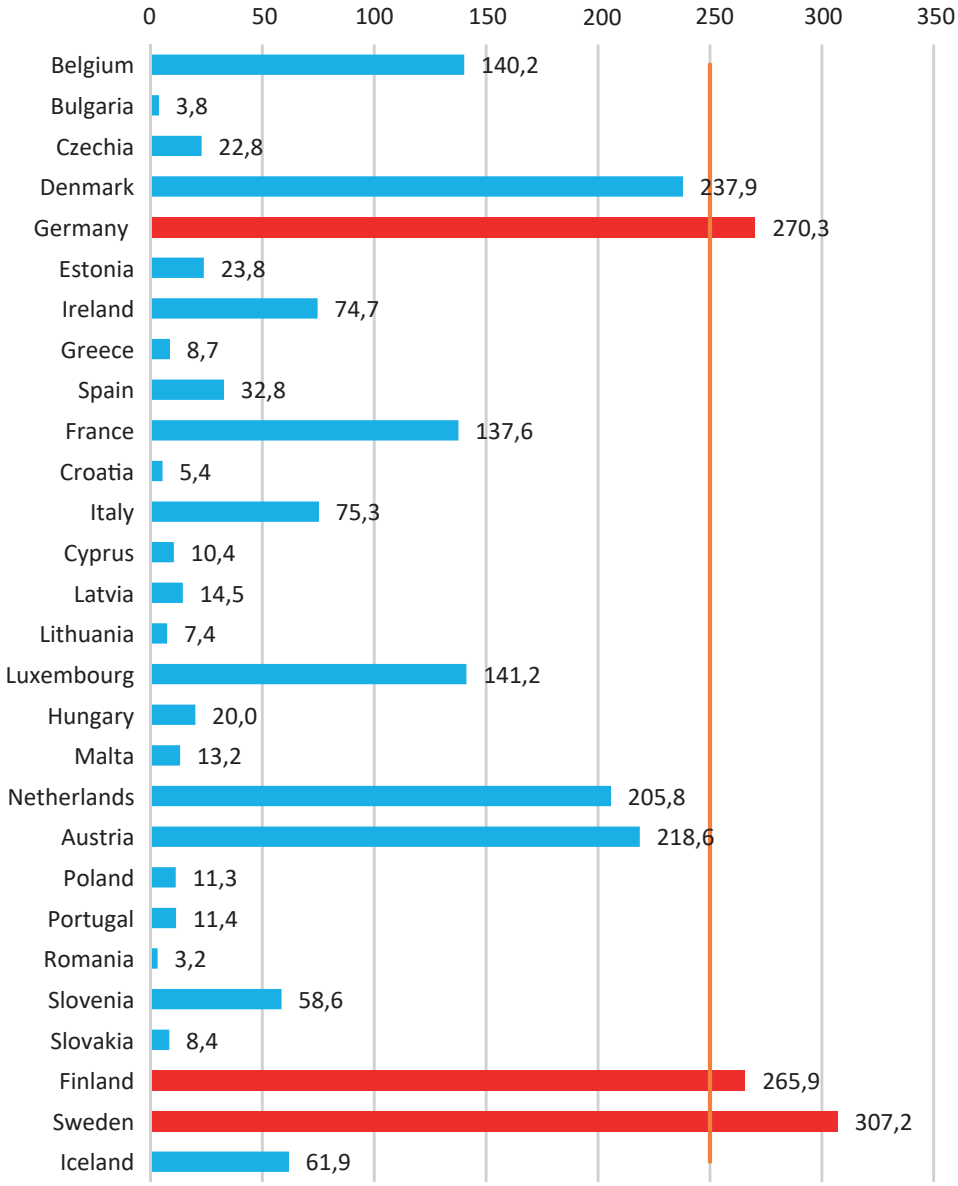


**Chart 5.10.** Patent applications to the European Patent Office (EPO) per capita by priority year in the years 2006–2017 (average)
**Source:** own elaboration based on Eurostat data.

**Table 5.13.** Percentage share of employees in the sector: enterprises, government, higher education in the years 2004–2020 in the EU countries (average values in terms of %) of total employment in the R&D sector

| Country | Enterprise sector | Government sector | Higher education sector |
|---|---|---|---|
| **Belgium** | 51% | 6% | 42% |
| **Bulgaria** | 26% | 41% | 32% |
| **Czech Republic** | 47% | 19% | 34% |
| **Denmark** | 56% | 4% | 39% |
| **Germany** | 50% | 13% | 37% |
| **Estonia** | 30% | 11% | 58% |
| **Ireland** | 51% | 3% | 49% |
| **Greece** | 16% | 20% | 61% |
| **Spain** | 38% | 16% | 46% |
| **France** | 57% | 10% | 32% |
| **Croatia** | 19% | 26% | 55% |
| **Italy** | 47% | 13% | 38% |
| **Cyprus** | 22% | 20% | 48% |
| **Latvia** | 18% | 16% | 66% |
| **Lithuania** | 17% | 16% | 67% |
| **Luxembourg** | 68% | 20% | 16% |
| **Hungary** | 36% | 18% | 45% |
| **Malta** | 43% | 3% | 54% |
| **Netherlands** | 66% | 9% | 25% |
| **Austria** | 54% | 6% | 39% |
| **Poland** | 26% | 14% | 59% |
| **Portugal** | 34% | 8% | 52% |
| **Romania** | 29% | 26% | 44% |
| **Slovenia** | 54% | 17% | 29% |
| **Slovakia** | 20% | 19% | 61% |
| **Finland** | 52% | 10% | 37% |
| **Sweden** | 53% | 8% | 38% |
| **Iceland** | 43% | 17% | 38% |

**Source:** own elaboration based on Eurostat data.

Based on the data presented in the table above, it can be concluded that in the countries that are characterised by the highest level of innovation (e.g. according to the *European Union Innovation Scoreboard* ), the percentage share of people employed in R&D in the enterprise sector is dominant. In countries such as Luxemburg[5] and

5 *Strong Innovators*, European Innovation Scoreboard 2022.

the Netherlands,[6] the average level of this indicator was 68% and 66%, respectively. The analysis carried out at the level of consecutive years shows that in the case of Luxemburg this percentage share had been successively decreasing since 2004 (in 2004 – 83%, in 2014 – 61%, and in 2020 – 57%), which is the opposite trend in relation to the Netherlands (in 2004 – 56%, in 2014 – 74%, and in 2020 – 75%). The smallest percentage share of innovators employed by the private sector concerns such countries as: Latvia (18%) or Lithuania (17%). In those countries, the vast majority of innovators are employed by universities, which is 66% and 67%, respectively. As far as the percentage share of the government sector in employing R&D personnel is concerned, only Bulgaria has a dominant tendency in this respect (41% on average), although this indicator in the analysed years shows a clear downward trend (2004 – 61%, 2014 – 36%, 2020 – 25%) in favour of the rising percentage share in the private sector. In the case of higher education, apart from Latvia and Lithuania, the ranking is dominated by countries such as: Greece (61%), Slovakia (61%), Poland (59%) and Estonia (58%). It should be noted that in countries where the percentage share of employment of R&D personnel in academia is dominant, the innovation potential is not effectively used. Many ideas and solutions developed by academics employed at universities are not commercialised. The difficulty in establishing the cooperation between universities and entrepreneurs and the costs of creating innovation are the factors that limit the implementation of innovation.

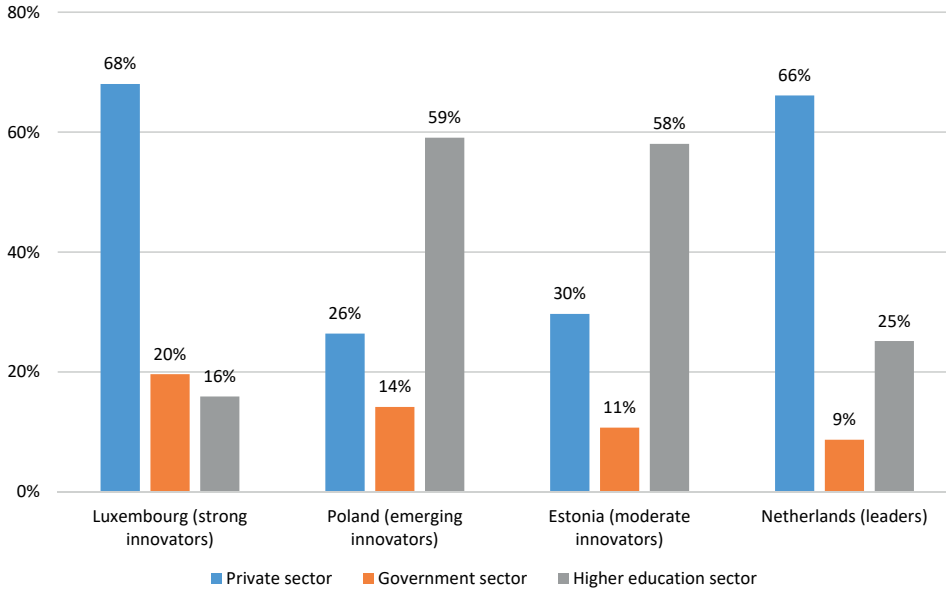


**Chart 5.11.** Comparison of the selected EU countries and the R&D employment in respective (average values in 2004–2020)
**Source:** own elaboration based on Eurostat data.

6 *Innovation Leaders*, European Innovation Scoreboard 2022.

The chart above shows clear differences between countries that represent different levels of innovation in recent rankings. Poland, regarded by the European Innovation Scoreboard[7] 2022 as emerging innovators, has a similar employment composition to Estonia (moderate innovators). Both countries are characterised by a dominant percentage share of R&D employment at universities, and therefore a "frozen" ability to boost and implement innovation in economic practice. The situation is different in the group of the most innovative countries.

Poland, despite the innovation-related potential (including social ones), is not considered to be one of the economies that can effectively take advantage of this potential. Still, in the Polish economic reality, there is no effective cooperation between entrepreneurs and institutions that have all the conditions to successfully launch a new product or service in the market. Despite many years following the European Union accession, availability of the EU financial assistance, the opportunity to enjoy the know-how transfer from more developed economies, Poland does not have a well-developed innovation booster policy. Although it should be emphasised that the willingness of entrepreneurs to create social innovation that would meet the needs of specific social groups is becoming more and more visible. Entrepreneurs have become aware that social innovation is less likely to fail. This is due to the fact that social innovation is "tailor-made" to social needs. Furthermore, this type of innovation should be particularly "taken care of" by government institutions that have the greatest capacity to stimulate pro-innovation processes and initiatives.

- In the coming years, the support for the development of social innovation in Poland should boost innovation that may combat emerging economic shock.

The crisis caused by e.g. a pandemic or armed conflicts will certainly affect innovation over the next decade. When determining aid packages, state authorities should make decisions based on social needs resulting from emerging turmoil. In the era of COVID-19, the potential for new breakthroughs and technologies has definitely increased – especially in the field of information technology or biotechnology. Unleashing this potential, however, will depend to a large extent on the appropriate support that should be provided by the State.

- The support for the development of social innovation in Poland should also aim at pro-investment policy.

Poland is ranked last place in the innovation rankings due to problems with funding sources for innovation. Currently, due to the recent economic shock, investors have started investing in larger enterprises – at the expense of start-ups. Healthcare, robotics and online education have become popular areas of investment. It should therefore be expected that technological innovation will be massively generated by the largest companies located in such countries as the United States, Singapore or China.

7 European Innovation Scoreboard 2022.

- The support for the development of social innovation in Poland should also build the potential of science and technology clusters.

Innovation is concentrated in scientific and technological centres in selected high-income countries with extensive experience in cooperation with entrepreneurs. In Poland, this topic is still neglected. There is a lack of financial resources for innovation support centres and a reliable system of the related financial clearance. This year, the ranking of the largest scientific and technological centres in the world has been for the first time prepared on the basis of the total number of patents and scientific publications n the breakdown by the size of the centre. The new financial perspective has given rise to the greater intensification of undertakings carried out by the centres located in the US and Europe, as compared to their Asian counterparts. This proves the growing potential of European innovation support centres. Within the next decade, there may be a significant shift of enterprises interested in innovation from different parts of the world to take advantage of the knowledge and technology of the European science and technology clusters.