

Rural NEETs and Sustainability - Diverse, Multisectoral, and Multifunctional Environments Shaping Rural Areas and Daily Life

Report elaborated by Working Group 4 (WG1):
Rural NEETs social networks and social inclusion



November 2022

From 2012 and 2021, there has been a notably positive trend in school to work transitions across EU countries. For instance, rates of early school departure from education and training have declined by 2.9 percentage points between 2012 and 2021. In some countries, such as Portugal or France, the reduction of the numbers has even reached into double digits. Beyond this, tertiary education attainment of those aged 30–34 has increased by 7.1 percentage points. Likewise, youth unemployment has dropped 7.8 percentage points, whilst NEET rates have also decreased by 2.9 percentage points. This promising evolution of several indicators of the school to work transition was, however, interrupted by the COVID-19 pandemic crisis. This was especially true between 2020 and 2021, with Southern, Eastern and Baltic countries displaying a slower recovery to pre-pandemic levels. The major justification for this development is the combination of a favorable economic environment, thereby leading to an increase of job offers with the implementation of the Youth Guarantee being adopted by the different EU member states in order to tackle NEET rates.

Sadly, this optimistic scenario does not operate evenly across the continent. Non-EU countries continue to struggle with very significant NEET rates. Moreover, Northern and Central European countries fared much better than Southern and Eastern countries in reducing NEETs numbers. Furthermore, sub-national NEET rates vis-à-vis national disparities continue to be very significant in Southern and Eastern countries. Overall, in these countries remote and predominantly rural areas tend to display a higher proportion of NEETs. This represents a remarkable challenge for the viability of already vulnerable territories which are struggling with shrinking demographics and declining economies.

Finding ways to promote NEETs' social inclusion is, therefore, a building block of restoring rural communities' sustainability in the long term. The COST Action Rural NEET Youth Network (RNYN) brings together multiple stakeholders, from researchers to policymakers and non-governmental organizations with the intention of informing research policies and programs that can ultimately promote rural NEETs' social inclusion. As part of that vision, RNYN is now delivering a series of four reports which collate promising practices, programs, and case studies. Our reports cover four topics traversing RNYN's thematic working groups: social inclusion; formal and non-formal education; employment and employment services; and, rural development. Altogether, we hope that these multiple angles of analysis will inspire further research or collaboration between institutions and people interested in moving forward rural NEETs, but also rural youth in general.

These reports were only made been possible with curiosity, research, and the commitment of dozens of RNYN members. However, we would not have fully fulfilled this challenging goal of our Action Plan without the outstanding co-ordination of the following persons: Maria Fernandes-Jesus; Tatiana Ferreira; Paul Flynn; Heidi Paabort; Claudia Petrescu; Òscar Prieto-Flores; Alen Mujčinović; Štefan Bojnec; and finally, our working groups leaders and vice-leaders. As the RNYN Chair, I cannot thank them enough for making this possible.

The Action Chair

Francisco Simões

Editorial Graphic Design by Carmen Fernández Toré: gue240@gmail.com
Cover image by Nataliya Vaitkevich en Pexels

This publication is based upon work from COST Action CA 18213: Rural NEET Youth Network: Modeling the risks underlying rural NEETs social exclusion, supported by COST (European Cooperation in Science and Technology).

© COST CA18213, February 2023

Reproduction is authorized provided the source is acknowledged. Please cite this publication as “Rural NEETs and Sustainability – Diverse, Multisectoral, and Multifunctional Environments Shaping Rural Areas and Daily Life”

ISBN: 978-989-781-755-7

COST (European Cooperation in Science and Technology) is a funding agency for research and innovation networks. Our Actions help connect research initiatives across Europe and enable scientists to grow their ideas by sharing them with their peers. This boosts their research, career and innovation.

Visit: www.rnyobservatory.eu - www.cost.eu



COST Action CA18213
Rural NEET Youth Network:
Modeling the risks underlying rural
NEETs social exclusion



WORKING GROUP 4
Rural NEETs and
Sustainability
COST Action CA18213:
RURAL NEET YOUTH

Rural NEETs and Sustainability - Diverse,
Multisectoral, and Multifunctional
Environments Shaping Rural Areas and
Daily Life

LIST OF AUTHORS

Aleksandra Nikolić (BA)
Alen Mujčinović (BA)
Anđelka Stojanović (RS)
Anita Busljeta Tonkovic (HR)
Daniela Mamucevska (MK)
Florian Miti (AL)
Ilkay Unay-Gailhard (DE)
Ivan Sulc (HR)
Jale Tosun (DE)
Messaoud Lazreg (DZ)
Michelle Perello (FR)
Milojka Domajnko (SI)
Slaven Gasparovic (HR)
Štefan Bojnec (SI)
Tereza Pilarova (CZ)
Vesela Radović (RS)
Yasar Selman Gultekin (TR)



COST Action CA18213
Rural NEET Youth Network:
Modeling the risks underlying rural
NEETs social exclusion



WORKING GROUP 4
Rural NEETs and
Sustainability
COST Action CA18213:
RURAL NEET YOUTH

Rural NEETs and Sustainability - Diverse,
Multisectoral, and Multifunctional
Environments Shaping Rural Areas and
Daily Life

EDITORS

Alen Mujcinovic – a.mujcinovic@ppf.unsa.ba
University Of Sarajevo, Faculty Of Agriculture And Food Sciences
Institute Of Agricultural And Food Industry Economics
(Bosnia and Herzegovina)

Stefan Bojnec – stefan.bojnec@siol.net
University of Primorska, Faculty of Management (Slovenia)

ACTION CHAIR

Dr Francisco Simões – francisco.simoese@iscte-iul.pt
Cis-Iscte (Portugal)

ACTION VICE CHAIR

Liena Hacatrjana – liena.hacatrjana@lu.lv
University of Latvia (Latvia)

SCIENCE COMMUNICATION COORDINATOR

Mariano Soler-Porta – mariano.soler@uma.es
Malaga University (UMA) (Spain)

INDEX

Opening note	3
Index	11
List of figures and tables	12
1. Contextualisation	17
2. Methodology	23
3. Case studies	25
SOCIO-ECONOMIC CONDITIONS	25
General overview on rural areas underdevelopment and possible solutions	25
Challenges and opportunities associated with rural development	30
Analysis of digital development level in rural areas	40
Youth in rural areas: rural dreams	47
Analysis of public transportation options and mobility in rural areas	51
Roadmap for the Prevention of Rural Youth Social Exclusion	53
EDUCATION AND UNEMPLOYMENT	57
The rural youth gender gap in education and unemployment	57
GENDER DIMENSION	67
Gender equality in rural areas: research needs and policy opportunities	67
Role of female farmers in rural development – challenges and obstacles	69
Environmental concerns of young female farmers: a short literature review	77
EMPLOYMENT OPPORTUNITIES	81
Role of community forestry in rural development and youth engagement	81
The Role of Sustainable and Neo-endogenous Development in Creating	83
Making Rural Areas More Attractive to Youth – Application of Industry 4.0 Tools	87
Roles of eco-farms and social enterprises for rural NEETs	91

POLICY RESPONSE	93
Models to analyse and explain general policy response in terms of rural development	93
The EU Youth guarantee – a quick overview	95
The reinforced youth guarantee	101
Disparities/communalities	113
Implications and recommendations	115
References	119

List of figures

Figure 1. Bibliographic mapping of keywords “rural youth” and “agriculture”	31
Figure 2. Challenges associated with rural areas/rural youth – visible vs less visible challenges/problems	32
Figure 3. World urban and rural population projected to 2050 (left) and growth of megacities (right)	32
Figure 4. Food system improvements	33
Figure 5. Sustainability & Multifunctionality – creating value for all	34
Figure 6. Value pyramid and current production capacity in B&H	35
Figure 7. Gaps in digital skills	36
Figure 8. Technological change and inequality through the ages	37
Figure 9. Transition of the market towards more sustainably produced products	37
Figure 10. Collaborative approach for better future	39
Figure 11. Households with fixed broadband internet connection	42
Figure 12. Households with mobile broadband internet connection	42
Figure 13. Individuals used the internet on a desktop computer	43
Figure 14. Individuals used the internet on a mobile phone or smartphone	43
Figure 15. Individuals – internet use in the last 3 months	44
Figure 16. Individuals carried out at least one of the financial activities over the internet	44

Figure 17. Internet purchases by individuals	45
Figure 18. E-government activities of individuals via websites	45
Figure 19. Share of rural youth (aged 15–24) by gender in 2021	58
Figure 20. Participation rate in education and training (last 4 weeks) rural youth (aged 18–24 in %) 2021	59
Figure 21. Educational attainment rural youth (ISCED 0–2) (aged 15–24 in %) 2021	59
Figure 22. Educational attainment rural youth (ISCED 5–8) (aged 15–24 in %) 2021	60
Figure 23. Rural early school leavers (aged 18–24 in %) 2021	61
Figure 24. Rural early school leavers (aged 18–24, EU 27 average in %) 2021	62
Figure 25. Share unemployed rural youth (aged 15–24 in %) 2021	63
Figure 26. Share unemployed rural youth (aged 15–24, EU 27 average in %) 2010–2021	64
Figure 27. Rural NEETs (aged 15–24 in %) 2021	65
Figure 28. Rural NEETs (aged 15–24, EU 27 average in %) 2010–2021	66
Figure 29. Evolution of the world’s rural and urban population (1990–2030)	69
Figure 30. Global labor underutilisation composition in rural and urban areas by sex (2019) (LEFT) AND Participation of the world’s young population in employment, education or training in rural and urban areas by sex (2019) (RIGHT)	70
Figure 31. Share of employees in total employment by sex and rural/urban areas (2019)	71
Figure 32. Complexity of rural areas	72
Figure 33. Employment in agriculture, female (% of female employment), male (% of male employment) and total (% of total employment) (modeled ILO estimate)	73
Figure 34. Visual representation of Web of Science search on terms „Rural“ and, Entrepreneurship“ (LEFT) and „Entrepreneurship“ and „Female“ (RIGHT)	76
Figure 35. Technology enriched agrifood system	88
Figure 36. Framework for public policies and interventions in youth development	90
Figure 37. The NEET rates for youth aged 15–24 in 2013, as a percentage of total population	102

Figure 38. Annual rates of NEET as a percentage of total population for EU-27 during the period 2013–2021 (yearly data)	103
Figure 39. The NEET rates for youth aged 15–24 in 2020, as a percentage of total population	103
Figure 40. In YG programmes beyond the 4 months target in 2016 and 2018	108
Figure 41. Timely and positive exists of users before 4 months in 2016 and 2018	109
Figure 42. NEETs reached by the YG (% of NEET) in 2016 and 2018	110
Figure 43. Outcomes: positive follow up after 6 months of exits in 2016 and 2018	110



1. CONTEXTUALISATION

Rural areas are very complex zones of analysis, with many interacting components influencing development patterns and socio-economic conditions. In turn, these lead to desirable or non-desirable solutions. Given that many rural areas are struggling to attract youth, the development of attractive and stimulating environments, as well as a vast number of policy interventions, measures, and action plans were introduced to mitigate and reverse negative trends therein. As identified in this report, diverse, multisectoral, and multifunctional attributes of rural areas pose a significant challenge to the creation of successful policy mechanisms. Therefore, it is necessary to map out and address such attributes whilst raising awareness amongst stakeholders vis-à-vis the pertinent factors, but also to address less prominent factors. In particular, interactions amongst the factors influencing development patterns in some regions and consequently influencing the success of the policy intervention. Some of the identified concepts, theories, and business models are used here to raise awareness regarding the necessity of changing perceptions towards rural areas as being “agricultural dominant”, “isolated”, and “traditional” in terms of doing the business and policy interventions. Such perceptions must be shifted towards the understanding that rural areas were – and will be – important if not crucial in achieving sustainable development and wellbeing for all. Major concepts, theories, and business models which will be addressed in this report include:

- **Agri-environmental measures.** These can be considered as an important element in the circular economy concept in relation to agriculture and rural areas. Besides protecting the environment, they are an important element of agricultural and rural development and are supported by government subsidies for voluntary participation.
- **Agroforestry.** This concept covers the land-use systems and practices using forest trees and agricultural crops integration, which provide multiple benefits to farmers (Nair, 1989; Sances, 1995; Leakey, 1996).
- **Bonding social capital.** This refers to the ability of different communities to work together towards a common aim whilst bridging social capital with their ability to liaise with the outside world (Baynes et al., 2015).



- **Climate-resilient farming and food production.** This is necessary in order to cope with climate risks, vulnerability of farmlands, and the adaptive capacity of farming practices to cope with climate change and climate hazards (i.e., drought, flooding, and different natural disasters).
- **Community-led local development (CLLD).** This is a development approach, wherein local community members work together to identify goals that are important to them, develop and implement plans to achieve those goals, and create collaborative relationships internally and with external actors. This transpires whilst simultaneously building on community strengths and local leadership. Community-Led Development (CLD) is characterised by 11 attributes: participation and inclusion; voice; community assets; capacity development; sustainability; transformative capacity; collective planning and action; accountability; community leadership; adaptability; and, collaboration (Veda et al., 2021).
- **Eco-entrepreneurship.** Sometimes referred to as eco-preneurship, sustainable entrepreneurship, or green entrepreneurship (Mars and Lounsbury, 2009; Sáez-Martínez et al., 2014; Santini, 2017; Rosario et al., 2022). It includes focusing on new business models, based on the principles of sustainability, as the first priority when comparing agribusiness and other related businesses beyond the traditional modes of entrepreneurship. Eco-entrepreneurship and related concepts can be considered under the remit of entrepreneurship.
- **Ecosystem services (ES).** This concept is broadly defined as both goods and services from natural ecosystems by humans. ES is underpinned by four main categories: regulating, provisioning, cultural, and supporting services. ES covers the production of food and water, the control of climate and disease, nutrient cycles and oxygen production, and mental and recreational benefits (Falkenmark et al., 2007; Birkhofer et al., 2015; Sala et al., 2017).
- **Ecotourism.** This concept was first defined at a world ecotourism summit held by the United Nations World Tourism Organisation (UNWTO) in 2002. According to the definition of ecotourism by UNWTO (2002), it includes an approach or attitude which ensures the sustainability of Earth's natural resources, supports the economic development of local peoples, whilst preserving and observing their social and



cultural integrity (WTO, 2002). Ecotourism concept combines economic, social, and ecological conservation in terms of sustainability (Fennell, 2020).

- **Governance.** This concept, unlike “government”, includes the actions of the state but also stakeholders such as communities, businesses, and NGOs (Elkington, 2006; Lemos and Agrawal 2006).
- **Green economy policy measures.** These can provide economic benefits by way of resource security, economic stability, and the creation of green jobs. They can have impacts on economic, social, and environmental sustainability. Economic sustainability can be observed via its impact upon rural employment e.g., green jobs on farms. Social sustainability can be seen in the maintaining of populations in agriculture and in rural farming societies. Environmental sustainability can result in a healthier environment not only for farmers and people living in rural areas, but also for consumers. Environmental sustainability based on long-term concepts can assure protection of natural agricultural and rural resources, resulting in less polluted soil, water, and air for future generations.
- **Industry 4.0.** This refers to cutting edge technologies (Zareiyan and Korjani 2018) that connect cyber and physical objects with the primary agenda in order to enhance the level of data generation, usage, and information integration across the supply chain (Esmailian et al. 2020). In turn, this results in creating engaging and interactive automated activities (Sestino et al. 2020) focused upon intelligent, anticipative, self-organising, self-structuring business processes thereby allowing value generation and innovative services to emerge. (Esmailian et al. 2020) Evidently, this leads to an improved quality of life for all (Nikolić et al., 2022).
- **Localised supply chains.** This refers to producing, manufacturing, and shipping goods locally. Their role was strengthened during the Covid-19 pandemic due to disruptions in logistics and global supply chains. Despite of their increasing importance, there is not yet a clear and simple definition of ‘local food’ or a ‘short supply chain’ applicable to all 27 European Member States. This is due to the diversity of European regions and the short supply chains which have developed therein. Several criteria have been chosen across Member States to define short supply chains. Nonetheless, the basic principles remain the same: i) the distance between producer and consumer (proximity) should be as short as possible; ii) the number



of intermediaries involved in the supply chain should be as few as possible; and, iii) understanding and communication between the producer and consumer should also be promoted as much as possible given that recognising the 'story' behind the product adds value to the consumers' purchase, and thereby develops a long-term loyalty to the brand (EU Rural Review, 2012). According to the European rural development regulation (1305/2013), a 'short supply chain' means a supply chain involving a limited number of economic operators, committed to co-operation, local economic development, and close geographical and social relations between producers, processors and consumers. It is important to note that this regulation recognises the importance of social relationships between people involved in the food chain.

- **Multifunctionality.** This "maps" the functional relationships underlying rural development processes and provides insight into the specific reconfigurations in the use of resources such as land, labour, knowledge, and nature (Knickel & Renting, 2000).
- **Smart specialisation strategy (S3).** This approach '...combines industrial, educational and innovation policies to suggest that countries or regions identify and select a limited number of priority areas for knowledge-based investments, focusing on their strengths and comparative advantages. Aimed at more effective spending of public resources, concentrating on certain domains of knowledge or expertise; the creation of synergies between public support mechanisms for R&D and innovation, industrial promotion and training institutions; the elimination of fragmentation and duplication of policy interventions that may result in a waste of public resources; the identification of the strongest or promising domains for entrepreneurship and growth through a careful analysis of the existing capabilities, assets, competences, competitive advantages in a city, region or country; mechanisms to enable strategic development based on multi-faceted and multi-governance interactions; mapping and benchmarking of clusters including analyses of the role and influence of key players; evidence-based monitoring and evaluation systems to select the knowledge domains and innovation projects...' (OECD, 2013).
- **Sustainability.** This is defined as a 'meeting the needs of the present without compromising the ability of future generations to meet their own needs' (UN, 1987). Sustainability is an holistic approach that considers ecological, social and economic dimensions, required to assure wellbeing for all.



- **Sustainable farming and food production.** This aims to reduce the environmental and climate impact of primary food production by reducing the use and risk of chemical pesticides, fertilisers, and sales of antimicrobials, whilst also increasing agricultural land via organic farming. It also seeks to improve animal welfare, protect plant health, and promote adoption of new green business models, circular bio-based economies, as well as the shift to sustainable fish and seafood production (EC, 2022).
- **Theory of diffusion of innovation.** This explains how and why new ideas and practices are adopted, and the patterns and speed at which new ideas, practices or products spread within a population (Rogers, 2003). Rogers defines diffusion as ‘the process in which an innovation is communicated through certain channels over time amongst the members of a social system’ (p. 5). Innovation, communication channels, time, and social systems are the four key components driving the diffusion of innovations (Rogers, 2003).
- **Theory of neo-endogenous development.** This rests on the principle that supra-local factors are crucial for rural development, however, distinct local rural areas should retain their own potential to shape their own future. The basic premise of the neo-endogenous development theory is the recognition of the specific rural and local communities as the main actors in shaping and improving overall socioeconomic conditions. Human, social, cultural, and especially natural sources of capital of a certain community in a specific rural area are considered as key elements of any development therein (Ray, 2001; Ray, 2001a; Marango et al., 2021: 118).
- **Theory of sustainable development.** This was formulated in the 1980’s. At its core, it carries the environment as the basis for the establishment of all other development plans. This theory basically carries two important prerequisites for development planning – the capacity of the natural environment, and the needs of the poorest (Gale, 2022). The theory of sustainable development sees the development as ‘the process of improving the quality of human life that takes place within the framework of the so-called carrying capacity of sustainable ecosystems’ (Šimleša 2010: 15). It defines the integral sustainability as constant, parallel, and networked self-renewal of the entire natural and social fabric. This self-renewal implies the balance of all dimensions of sustainability – ecological, economic, sociocultural, and political (Lay, 2007).



2. METHODOLOGY

The concept of sustainability is gaining importance, attracting interest from policymakers, governmental, and non-governmental representatives, farmers, industry, and society in general. Whilst there are many definitions of such a concept, the one initially defined by the UN in 1987 is as follows: ‘...meeting the needs of the present without compromising the ability of future generations to meet their own needs...’ This perfectly fits the scope and objectives of the Action CA18213. The multifunctionality of the sustainability concept offers many opportunities, but also brings many challenges and barriers to reaching sustainable development. In this report, we tried to identify some of the key elements necessary for the improvement of position of youths generally, and NEETs in particular. Specifically, that which could lead to rural development and improvements in general well-being. Given the complex nature of rural development and the many interactions in such environments, it is impossible to map them all; therefore, we followed the initial insights provided by the Manual for the Classification of Intervention Best-Practices with Rural NEETs (Petrescu et al., 2021) and Manual for the Methodological Best-Practices in Research Dedicated to Rural NEETs (Erdogan et al., 2021). To that end, we have focused upon several areas that we regard as important. A combination of desk research, rapid assessment review, bibliographic mapping, and other methods to assess secondary data is undertaken, whilst commonalities and disparities were extracted from such analyses thus highlighting the importance of further studies and a tailor-made approach in both rural and youth development. Finally, the report is structured with series of small case studies which address, in broader terms: (i) socio-economic conditions; (ii) education and unemployment; (iii) gender disparities; (iv) employment opportunities; and, (v) policy responses tackling youth situations and rural development opportunities. Some case studies are country specific, and some may be transferable and adjustable to the circumstances of other countries or rural ecosystems.



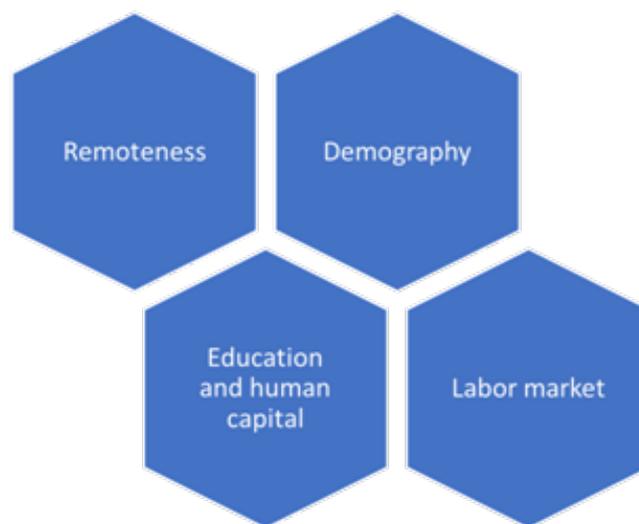
3. CASE STUDIES

SOCIO-ECONOMIC CONDITIONS

General overview on rural areas underdevelopment and possible solutions

Florian Miti¹

Rural areas typically have less maintained infrastructure and find it more difficult to access attractive markets because of their remoteness. Communities in rural areas also face disadvantages in terms of legal and social protections, especially with women having difficulties in accessing land, education, and other support systems which help with economic development.



Rural areas in Europe are presently facing various challenges resulting from factors connected to globalisation trends, environmental and energy concerns, demographic changes, technological transformation, and social inequality. Despite remarkable differences amongst rural areas, it has been shown that the metrics of average living standards, such as GDP per head, is generally lower in rural than in urban areas. To close this gap, several policies have been applied in developing and developed economies, including investments in rural electrification, access to ITC technologies, gender parity, better access to credit, etc. Recent external developments, such as the Russian invasion of Ukraine, have brought severe price shocks in food, energy, and fertilisers in the global markets. These are sweeping across rural Europe probably with a greater inten-

¹ University "Ismael Qemali" Vlore, Albania¹ florian_m2002@yahoo.com



sity than in the most developed urban areas due to the crucial role that these inputs have in the agricultural sector.

Main reasons behind the underdevelopment of rural areas

1. Demography (aging and gender disparities)

Demographic data contains some basic information regarding the characteristics of poverty in rural areas. Whilst approximately 59% of the European population lives in rural regions, the greatest shares of the rural population are in Bulgaria, Romania, Lithuania, and Norway (Bertolini et al., 2008). In Eastern European countries, the exodus from rural to urban areas (mainly to the capital city) is a concerning phenomenon. Moreover, migration of young people abroad risks leading to a general impoverishment of rural areas. This phenomenon is particularly present in Bulgaria, Lithuania, Poland, and Romania (Bertolini et al., 2008). As for the Western European countries, it is interesting that the long-established urbanisation process that draws the population out of more remote rural areas into urban or more accessible rural areas is opposed to a more recent counter-urbanisation flow from urban areas into accessible rural areas (made possible by new transport and ICT infrastructure). This is particularly evident for France and the UK.

As a consequence of both lower birth rates and an increase in life expectancy, Europe's population is aging. The most difficult situation of aging in the labour market in rural areas is that of Bulgaria, Italy, and France (Bertolini et al., 2008). Aging not only unfavourably affects the demographic trend (and thus reduces local labor supply in the future), it also poses a risk to the future sustainability of social protection systems.

Gender imbalances in some rural parts of Southern and Eastern European States, where high rural-to-urban migration of females has caused a "masculinisation" of the rural population, have also led to a secondary effect on lowering fertility rates further (Bertolini et al., 2008).

2. Remoteness (transport, housing, access to healthcare)

Remoteness is an important element addressing difficulties in rural areas. In some remote rural areas, it is connected with the ongoing process of reduction of existing public and private services (e.g., accessibility of schools, postal offices, banks, libraries, and kindergartens). The concentration of the main services in urban areas can



impact upon the quality of life of groups already at risk of social exclusion i.e., health services for the elderly or disabled, childcare facilities for female workers, etc.

Housing conditions in rural areas appear to be worse than those in urban areas. Generally speaking, young people, unemployed, low-skilled, and those with low-incomes report the worst housing conditions (Bertolini et al., 2008).

Transport also plays an important role in increasing the demand for residential houses in rural areas. Limited transport infrastructure remains a problem in many rural regions, increasing the distance from markets and, more generally, social isolation of some social groups. This aspect is more relevant in rural regions of Eastern Europe which is characterised by high dispersion and numerous small villages, where providing traditional public transport services is both difficult and very expensive (Bertolini et al., 2008).

Basic health care services are harder to provide in areas with low demographic density. Many isolated rural areas suffer from a lack or poor medical infrastructure and staff. Doctors, dentists, nurses, and pharmacists are less present in rural areas; moreover, in those areas characterised by remoteness, it is sometimes very difficult to find specialists. This problem is particularly relevant for social groups such as the elderly and children. The accessibility of medical assistance is even lower for vulnerable ethnic minorities and undocumented migrants.

3. Education and human capital

Education and training are key determinants of human capital which, in turn, impacts upon the rates of economic growth within the respective area. In rural areas, as compared with urban areas, there is a higher risk of inter-generational transmission of poverty. Migration, which is often seen by the young as the only channel towards social progress, contributes further to the aging of the population as well as the economic decline of rural areas.

4. Labour market

The role of agriculture is still significant in rural areas in terms of employment. Here, the risk of poverty is higher due to lower incomes and work seasonality. Farmers in Eastern European countries have faced additional problems connected to the economic transition from state to privately-owned farms. The fragmentation of farms,



and small dimensions of economic activities therein, represent important determinants of poverty and exclusion for farmers and their families.

Threats and Possible solutions

Despite remarkable differences between rural areas, it has been shown that the average living standard, such as GDP per head, is generally lower in rural than in urban areas. To close this gap, several policies have been applied in developing and developed economies, including investments in rural electrification, access to ITC technologies, gender parity, better access to credit, etc. The four determinants of rural areas specified above may interact and generate “vicious circles”, which can reproduce and exacerbate the phenomenon of poverty in rural areas. Policies are therefore needed to cope with, and indeed break, these vicious circles (Bertolini et al., 2008).

Analogously, the risk of the “demography circle” starts with the unfavourable demographic situation of many rural areas: namely, a large elderly population, few young people, and low density combine to negatively affect the economic performance of the area. This can be compounded by low birth rates and the migration of young people which work to worsen the demographic situation.

Gender problems manifest differently between eastern and western countries: in western countries, a specific problem concerns the category of aged single women; in eastern and southern countries, there is instead a problem of out-migration of rural women due to labour market-related barriers. In the first case, the policy measures are focused on problems linked to remoteness; in the second, anti-discriminatory policies are more pertinent.

Poor infrastructure may generate the “remoteness circle”. This can negatively impact upon the economic performance of the area, thus fostering out-migration; this, in turn, has negative consequences on the demographic situation, thus representing a further obstacle to the development of infrastructure. Commuting may help reduce unemployment in rural areas; however, it may divert demand for key services away from local providers towards nearby urban ones. Commuting may also lead to house price inflation in rural areas.

The “education circle” is generated by the low educational levels of most of the rural population. This causes a low employment rate and, consequently, may increase



the poverty rate which, concomitantly, negatively affects the chance of receiving a high-quality education.

Finally, the “labour market circle” begins with poor labour market opportunities in many rural areas, thereby forcing qualified people to migrate and thus worsening the quality of the local labour force. On the other hand, a low-skilled labour force discourages investment in domestic or foreign firms in an area thus resulting in a further deterioration of the localised labour market.

The diffusion of ICT in rural areas offers another tool for stimulating economic development and improving the labour market capacity. To that end, the adoption of human capital policies and investment in ITC infrastructures are important for reducing the existing technological gap between rural and urban areas.

Evolution of policy intervention

Until the late 1970s, a “top-down” rural development model prevailed. This approach saw its main challenge as overcoming rural differences and distinctiveness through the promotion of universal technical skills and the modernisation of physical infrastructure. This exogenous model was later criticised for promoting ‘dependent development, destructive development, distorted development and dictated development’ (Lowe et al., 1995). The alternative “bottom-up” (or, endogenous) rural development model is instead founded upon the use of locally distinctive resources and assets. In the late 1990s, neo-endogenous models (networked development) emerged, and these supported the idea that social and economic development processes include a mix of both bottom-up and top-down elements. In this later model, the balance of internal and external control of development processes is fundamental. Networked rural development models imply an emphasis on local capacity-building because communities and institutions are involved in governance at a variety of scales.



Challenges and opportunities associated with rural development

Alen Mujčinović² and Štefan Bojnec³

Rural areas cover 44.6% of the total EU territory, accounting for almost 30% of its population (EU, 2021). Rural areas therefore play an important role in economic growth, social pluralism, and the well-being of the population whilst promoting environmental aesthetics. Diverse, multidimensional, multisectoral, multifunctional (Knickel & Renting, 2000) characteristics of rural areas always pose a significant challenge when addressing general development paths, whilst the necessity to possess insights and skills from a wide range of disciplines is mandatory. Identification of challenges, and opportunities for youth in such an environment, becomes more difficult despite the development of better methods and new policy instruments (Anderson, 2003). Therefore, we tried to identify challenges and opportunities associated with rural areas/rural development and outline the complexity of interactions which might influence youth to stay in rural areas, apply new and innovative business models, and thereby transform rural areas.

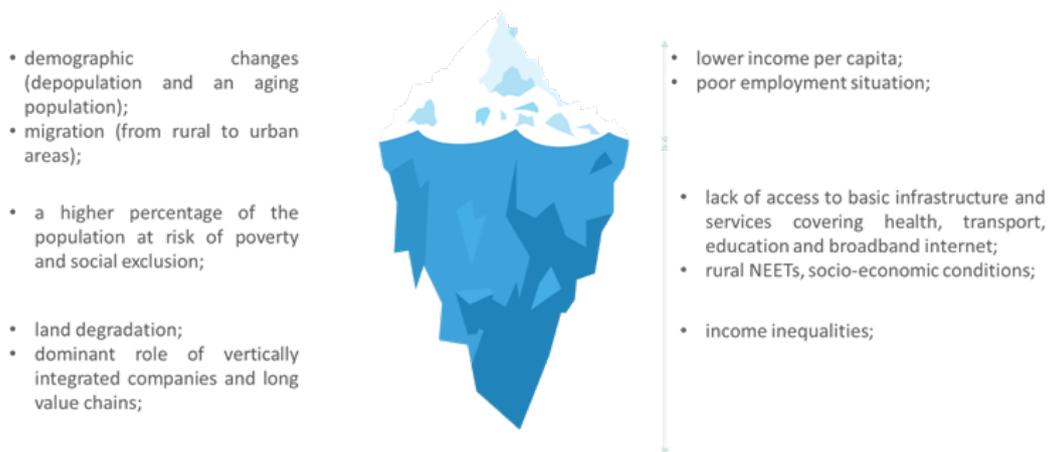
The multifunctionality of the sector is explained through the service sector in rural areas that has been expanding rapidly and, as agriculture and industry shrink further, a rise of on- and off-farm non-farming employment activities and incomes, i.e., farm tourism, or the integration of care services into farms, become more prominent (Scoones, 2009). There is a wide range of non-agricultural activities (the multisectoral dimension) such as with agriculture-related natural resources – fishing and forestry – and services to agriculture (including input supply, marketing, transport, finance, agricultural processing). Diversification of activities has been geared towards improving the competitiveness of rural areas, providing provision of alternative sources of income, and strengthening social cohesion in rural areas. These goals have also been identified as Common Agricultural Policy goals under the second pillar of rural development. To achieve such research objectives, a rapid review was conducted using the Web of Science database. Rapid reviews (RRs) are seen as an efficient tool for quick and structured reviews of available secondary sources and are well-used by policy-makers and researchers (Grant & Booth, 2009; Moher et al., 2015; Tricco et al., 2015). Systematic review methods are streamlined and processes are accelerated to complete reviews

² University of Sarajevo, Faculty of Agriculture and Food Sciences, Zmaja od Bosne 6, 71 000 Sarajevo, Bosnia and Herzegovina, a.mujcinovic@ppf.unsa.ba

³ University of Primorska, Faculty of Management, Izolska vrata 2, SI-6001 Koper-Capodistria, Slovenia, stefan.bojnec@fm-kp.si

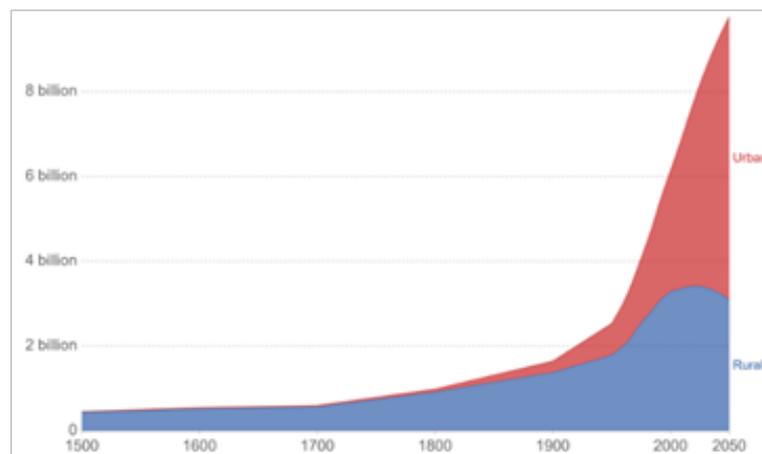
with the facilitation and introduction of a wide range of new, modern, and innovative activities, such as the production of high-quality and region-specific products, nature conservation and landscape management, agritourism, and the development of short-supply chains.

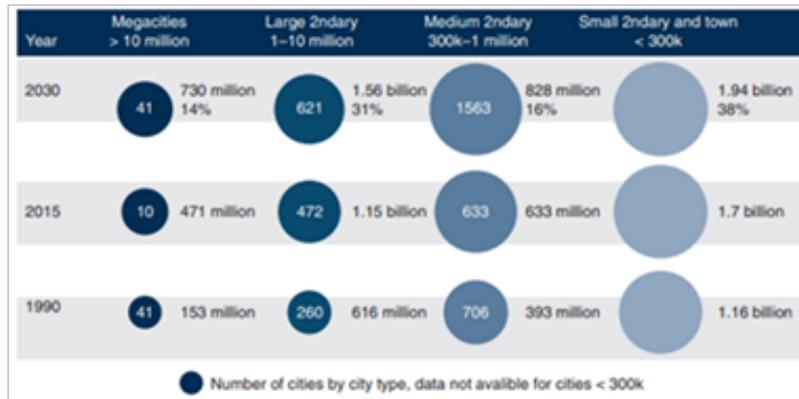
Figure 2. Challenges associated with rural areas/rural youth – visible vs less visible challenges/problems



One prominent trend we observed is the marked migration of the population from rural to urban areas, where it is expected that by the end of 2050, 70% of the total population will live in cities (Figure 3).

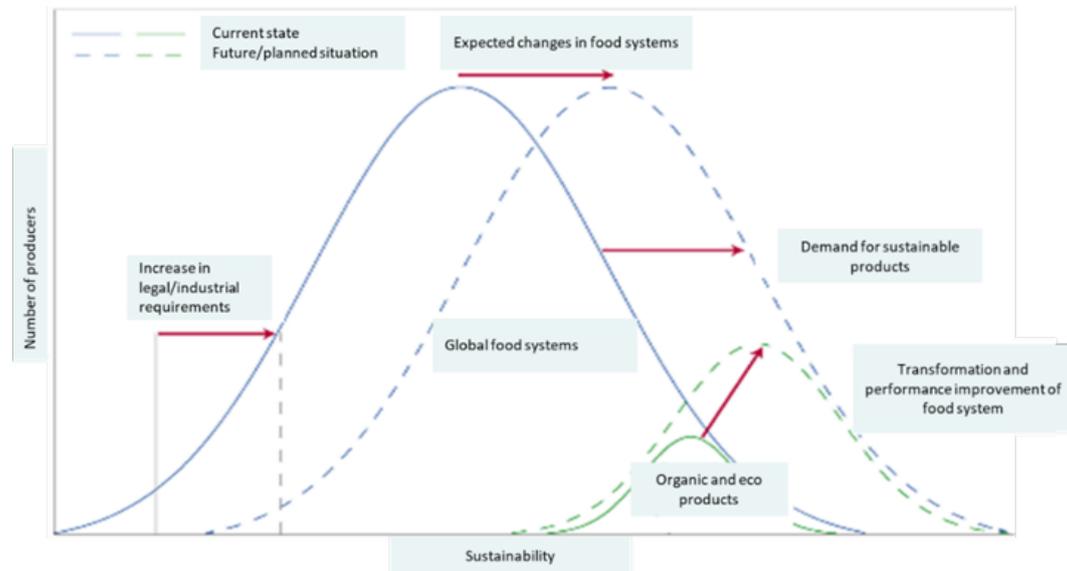
Figure 3. World urban and rural population projected to 2050 (OurWorldData, 2020) and growth of megacities (UN, 2019)





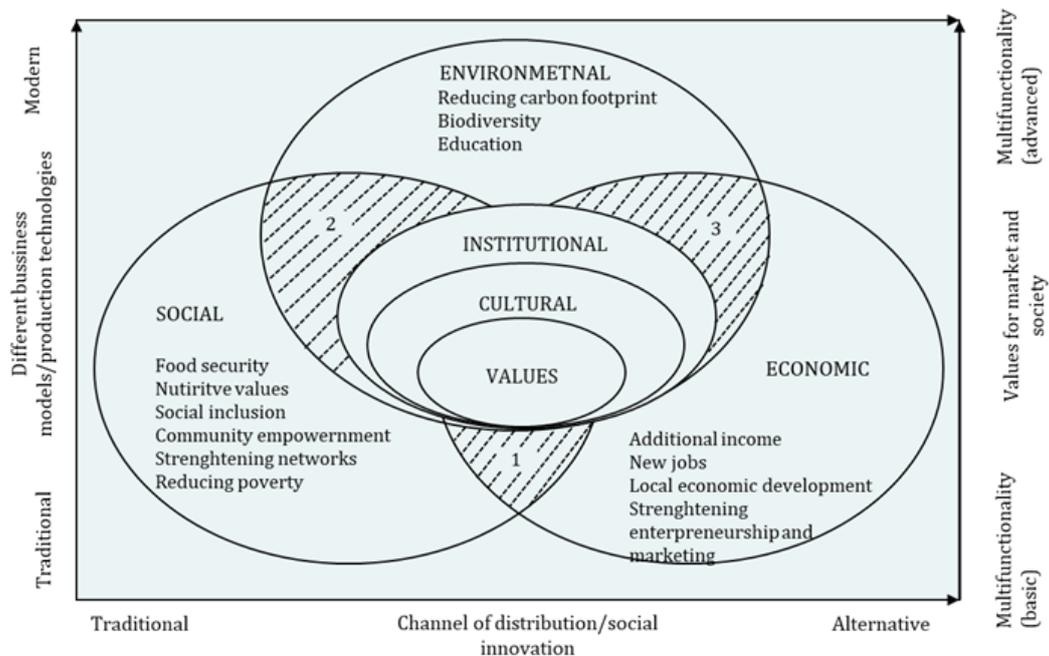
As a consequence of such trends, cities gain enormous economic, social, and political power (Figure 4). They are becoming local hubs – i.e., knowledge centres, having strong demographic weight in terms of the number of citizens, economic weight in terms of GDP contribution, and also becoming strong production/consumption systems. A combination of such elements leads toward de-ruralisation, strong migration from rural to urban regions, as well as “occupation” of land in rural/peri-urban/sub-urban regions, and many attendant negative consequences.

Figure 4. Food system improvements (based on Willer et al., 2013; Eyhorn et al., 2019)



Over the last four decades, the importance of EU Agri-Environmental Schemes (AESs) as voluntary tools geared towards enhancing the rural environment beyond legal requirements has greatly increased, both in terms of expenditure and participation (Riley, 2016). AESs sometimes require a long period to produce the desired environmental benefits, often going beyond the ordinary contract duration (Swetnam et al., 2004). Furthermore, they may require relevant changes to farming practices, resulting in more complex and lengthy decision-making patterns (Gamon and Scofield, 1998; Jackson-Smith et al., 2010; Karali et al., 2014, Pedzisa et al., 2015; Defrancesco et al., 2018). Once accomplished, adoption should thus be accompanied by steady behavioural changes (Figure 4) (Reimer et al., 2014), whilst early withdrawals from the schemes may jeopardise or even nullify the AESs' long-term success (Wilson and Hart, 2001; Burton and Paragahawewa, 2011; Riley, 2016). The agri-food sector is very competitive (De Medeiros et al., 2014), characterised by unsustainable practices (Reisch et al., 2013; Forssell & Lankoski, 2015), and strongly aims for innovations as a source of sustainable growth and competitive advantage (Geroski et al., 1993). Multifunctionality of rural areas, namely on-farm and off-farm employment activities is desired and a necessary approach in the 21st century (Knickel & Renting, 2000) (Figure 5).

Figure 5. Sustainability & Multifunctionality – creating value for all (Nikolić et al., 2022; Tavanti, 2010; Dubbeling & de Zeeuw, 2007)

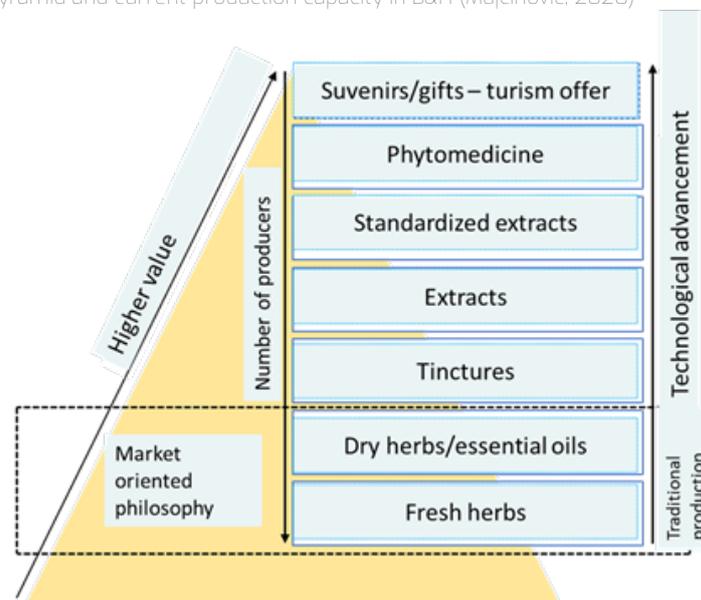


The interaction of multiple and diverse factors renders the food system as the most complex, and therefore the search for a solution is both difficult and will increase in future. Farmers are facing many challenges from climate change, biodiversity loss, water pollution, soil pollution, to consumers rapidly evolving requirements. Combined, these exert strong pressure on the viability of agricultural business. Some of the most important challenges (and opportunities) are identified and presented here (Figure 6).

CHALLENGES AND BARRIERS – for doing agricultural business

- “Land access” encompasses the availability of land and ownership security, desirable physical and economic attributes, and the level of transparency and fairness of transactions thereof (Ahene, 2009). Prominent ‘push’ factors (Sumberg et al., 2012) force youth out of agriculture-based livelihoods against their will such that youth, therefore, rely on the land rental markets where they are also constrained by a lack of capital and negotiation skills to acquire viable land units.
- Poor knowledge and entrepreneurial skills (Aker, 2019; Daum, 2019; Holden and Otsuka, 2014; Mwaura, 2017; Scoones et al., 2019; Sumberg et al., 2017).

Figure 6. Value pyramid and current production capacity in B&H (Mujčinović, 2020)





- Social factors – rural families’ negative views regarding agriculture (Simoes, 2018; Simoes and Drumonde 2016); Subjective factors – self-perceptions, specifically rural youth usually depict themselves as low-skilled persons, dependent on their families, aiming to move to the city, and to complete post-secondary education (Farrugia, 2016; Kuhmonen et al., 2016); Objective factors – agriculture is uncertain, entailing low-wages, limited access to the land – big companies accumulating soil-use (Nag et al., 2018), lack of knowledge (Jean-Philippe et al., 2017; Simoes, 2018; Simoes & Rio 2020); lack of government support (Mujčinović et al., 2021).
- Digital and other technologies can mitigate market failures and enhance youth engagement in agriculture (Irungu et al., 2015; Obong et al., 2018; Zulu et al., 2021). Still controversial, assumptions of superior youth capabilities in using modern technology and in entrepreneurship (agribusiness) still dominate (IFAD, 2019; Sumberg & Hunt, 2019). However, there is a strong limitation in terms of unequal development of ICT development in urban and peri-urban and rural areas, whilst it is also evident that developing countries are struggling with digital skills compared to developed countries (Figure 8).

Figure 7. Gaps in digital skills (UNCTAD based on ITU 2018; 2019)

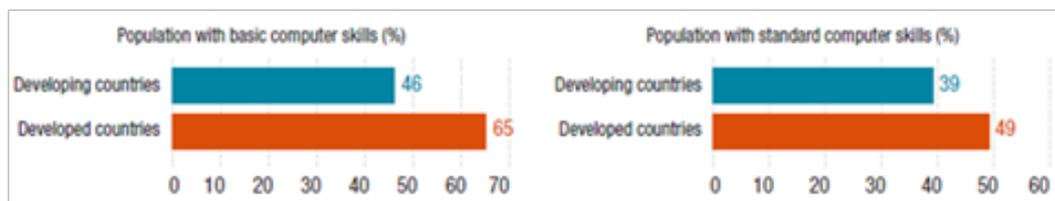
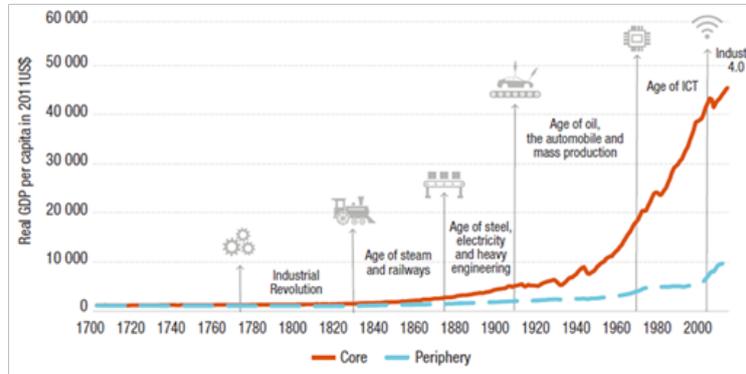
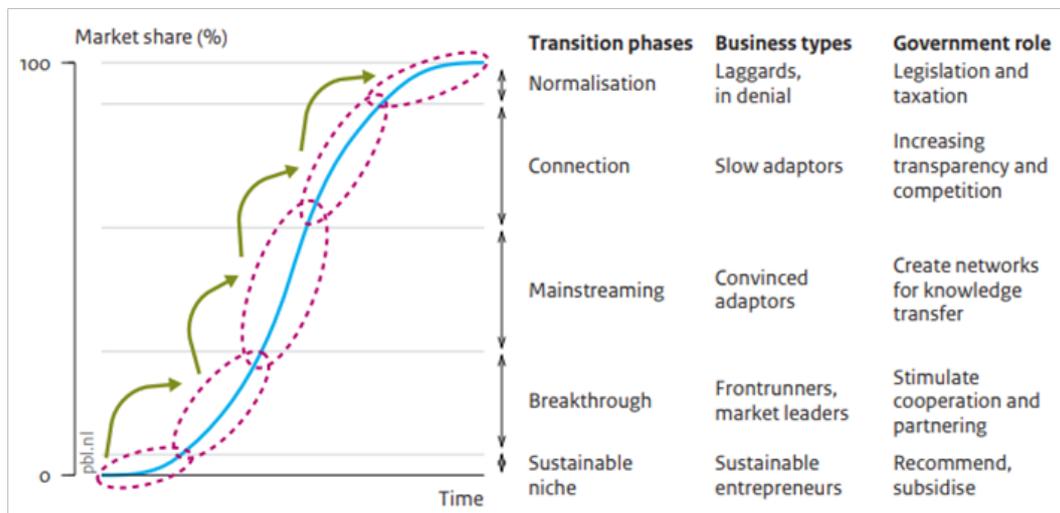


Figure 8. Technological change and inequality through the ages (UNCTAD, 2020)



Transition and diffusion of innovative business practices in rural areas required specific attention and solutions from policymakers as (Figure 9).

Figure 9. Transition of the market towards more sustainably produced products (PBL, 2013)



Transition is a long process, and depends upon many factors. Whilst some countries are doing better, others have failed to make rural areas more attractive to youth and in general. The theory of “diffusion of innovation” explains how innovations, new technology, and other achievements (social norms etc.) transfer into society, culture, community, and the environment in general (Rogers, 2003). Briefly, diffusion of innovation depends on many factors: prior experience and practice; needs/problems which innovation is

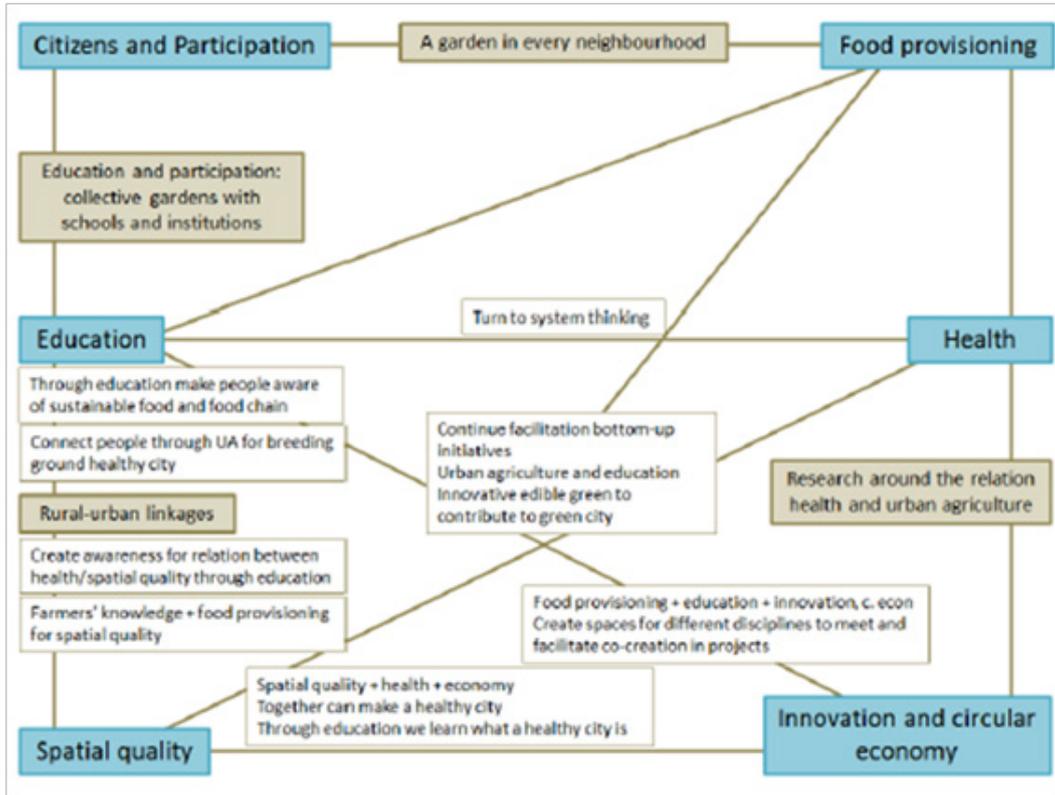


tackling/solving; innovativeness; social norms; characteristics of the decision-maker; socio-economic conditions; personal values; means of communication; characteristics of said innovation; comparative advantage; comparability; complexity; possibility to experiment; and, the possibility to monitor. Such factors influence the intensity and efficiency of communication, and because of such factors, it is necessary to develop an environment which stimulates the growth of such competencies amongst the actors, especially youth. Specifically, the primary goal is to enable conditions for faster diffusion of innovation.

How can such innovation be accomplished? Individual members of the community gather, having the same/similar values, and align activities to achieve success. Formation of formal or informal networks (associations, cooperatives, alliances, hubs, science centres, etc.) and facilitation of the innovation process thereby creating a positive image, and attracting new adopters (i.e., youth newcomers) along the value chain (Figure 10). In addition, actual diverse and context-based aspirations, experiences, interests, and capabilities of the youth should be maximised where possible (Daum, 2019; Djurfeldt et al., 2019). There is often a mismatch between youth aspirations and available opportunities on the one hand, and between youth skills and available jobs on the other (Djurfeldt et al., 2019). Early exposure to agricultural experiences and career paths during the middle and high school years can be a critical element in positively influencing the agricultural perceptions and attitudes of youth (Jean-Philippe et al., 2017). Strong promotion of positive images of rural areas must be disseminated: nature; an everyone knows everyone community; neighbourliness; peace; solidarity; a spirit of cooperation (Rye, 2006); a milieu which is beautiful, cosy, quiet, pleasant and which actively includes the local youth (Thissen et al., 2010); cultural heritage; clean and ethical food; open space; and peaceful experiences.



Figure 10. Collaborative approach for better future (Hebinck et al., 2016)





Analysis of digital development level in rural areas

Andelka Stojanović⁴

Despite the efforts of United Nations member states to fulfil the goals of the Agenda 2030 programme on Sustainable Development Goals, adopted in 2015, few can boast that they are close to actually achieving these goals. Sustainable development goals were adopted keeping in mind the challenges the world is facing today. Starting with the fact that billions of people still live in poverty, and that the gap between the rich and the poor is deepening, a particular concern of these goals is unemployment, especially amongst young and marginalised groups. Special attention within the targets is focused on increasing the number of youth and adults with relevant skills for employment, decent jobs, entrepreneurship, sustainable development, and sustainable lifestyles (SDG 4.4, 4.7). Promoting sustainable economic growth and youth employment is achieved via targets which promote technological upgrading and innovation, and expansion of micro-, small- and medium-sized enterprises (SDG 8.2, 8.3), with a focus upon reducing the proportion of youth not in employment, education, or training (SDG 8.5, 8.6). Specific parts are dedicated to developing countries, where access to information and communication technologies and the internet is underscored (SDG 9.c). (UN, 2015).

However, it remains necessary to invest much effort and to intensify activities in order to fulfil the 17 interconnected sustainable development goals, and 169 targets, by 2030. During 2020, as part of dealing with youth unemployment, the European Commission created a Youth Employment Support package to initiate activities so that young people are more likely to reach their full potential. Furthermore, the Commission emphasises green and digital transition as the basis of youth employment policies in the future.

Another important document is the Digital agenda for Europe 2020–2030, which focuses on the changes taking place under the influence of digital technologies, especially in the business field. The 2030 Digital Compass, proposed by the EU in 2021, represents a set of goals to be met by 2030 in order to empower people and businesses in the direction of a sustainable society in the future (EC, 2021). Each of these initiatives strives to build a more humane and balanced society according to a sustainable pers-

4 *University of Belgrade, Technical Faculty Bor, anstojanovic@tfbor.bg.ac.rs*



pective. However, in reality, the situation is a little different. Many scientific studies and analyses conducted by European Union institutions and other international institutions (e.g., World Bank, OECD) highlight strong disparities in the world economy with regards to living standards, human rights, employment, and education. The consequence of these inequalities is also a significant digital gap which manifests in various forms as a differential marker between developed and developing countries, between small and large companies, and finally, as a difference between urban and rural areas.

Rural communities have the same potential to be innovative and progressive as do urban ones. However, in rural areas, several problems diminish that potential and marginalise people. One of the main contributors to such differences is a lack of adequate access to the necessary information. Digital inequality affects young rural people in particular, reducing their potential to access the necessary information adequately and thereby successfully achieve inclusion in economic flows and the transition to the labour market. The digital divide has shown its differential demographic impact during the COVID-19 pandemic. The dynamics of many aspects of life were significantly hindered, and indeed became even unmanageable, without adequate ICT resources. Education and employment faced severe obstacles since, for many, distance education was almost impossible, as well as remote working. The social gap has in fact deepened, indicating that the digital divide cannot be ignored (Lai & Widmar, 2021). This report lightens the severity of the digital divide between urban and rural areas within European countries. The digital divide is assessed through a multidimensional approach using data from the Eurostat database. The available data covers 32 countries, and average values of the digital economy and society indicators are analysed and compared based on the settlement type.

First, it was analysed the availability of ICT infrastructure in rural areas. Fixed and mobile broadband access are essential prerequisites for digital transformation. However, rural areas lag behind urban areas in broadband accessibility, which is one of the leading causes of the digital divide (i.e., service type, price, quality and reliability) (Hollman et al., 2021). Figure 11 reveals that broadband coverage in rural areas remains a particular challenge, with almost 30% of households in Europe's rural zones without fixed broadband network coverage. 49% of rural homes do not have access to a mobile broadband internet connection (Figure 12).

Figure 11. Households with fixed broadband internet connection [isoc_ci_it_h]

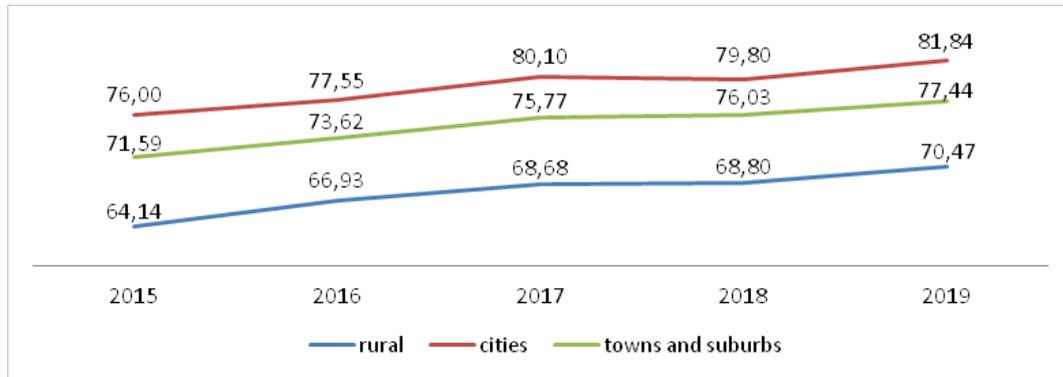
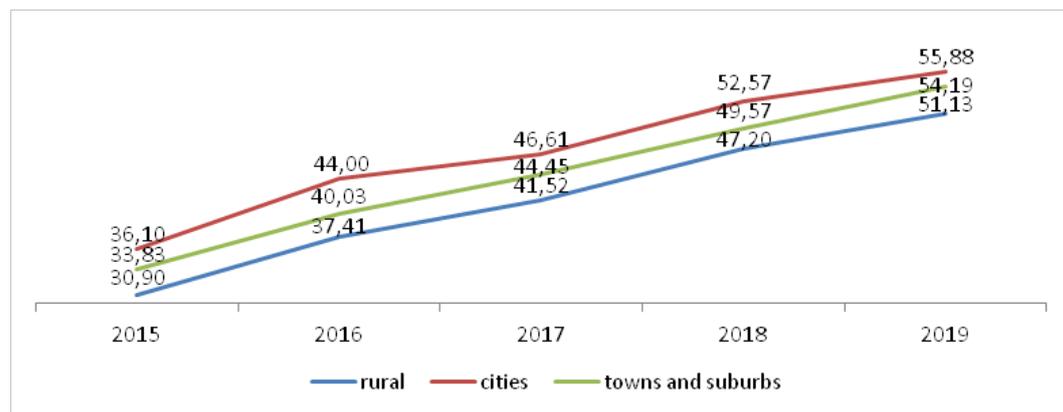


Figure 12. Households with mobile broadband internet connection [isoc_ci_it_h]



Beyond geographic coverage, devices used to access the internet are an important measure of the digital level of development. In general, a decrease in desktop computer usage for accessing the internet and increased use of mobile phones can be observed (Figure 13 and 14). Although 70% of households in rural areas have access to the internet, only 33% use a desktop computer. This marks the second major limitation of digital development in rural areas. The significant penetration of mobile phones improves connectivity statistics and solves certain deficiencies in the ICT infrastructure. However, using the internet on a mobile phone does not increase digital literacy, nor increase competences useful in overcoming young rural people's social and economic issues.

Figure 13. Individuals used the internet on a desktop computer [isoc_ci_dev_i]

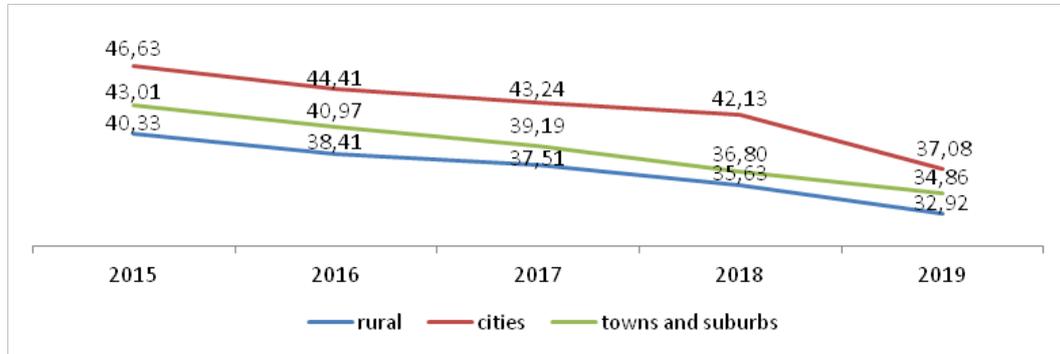
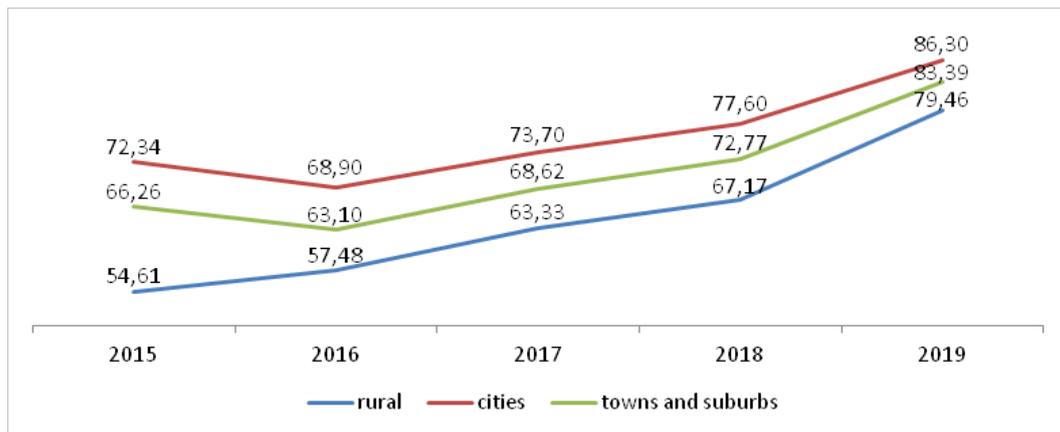
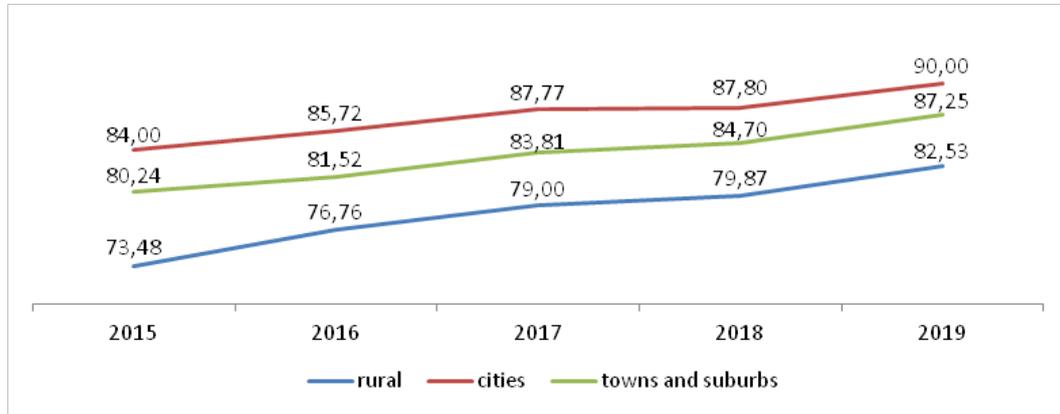


Figure 14. Individuals used the internet on a mobile phone or smartphone [isoc_ci_dev_i]



Digitisation is a process that goes beyond technology and involves specific skills and a mindset motivated to use ICT (Meyn, 2020). It can be said that a culture of resistance in rural areas can be a serious obstacle in the adoption of ICT. For the estimation of internet intensity use, data on the use in the last three months was analysed (Figure 15). About 83% of individuals in rural areas used the internet in the last three months, and the indices have shown a growing trend in recent years.

Figure 15. Individuals - internet use in the last 3 months [isoc_ci_ifp_iu]



The report also provides insight into the use of financial services and online purchases conducted by individuals. Economic activities were estimated as a percentage of individuals who carried out at least one financial activity over the internet, and the rate is very low, only 17% in 2019 (Figure 16). The percentage of individuals living in rural areas who carried out purchases over the internet is 45% (Figure 17). The low level of financial activities can indicate problems for rural businesses to be competitive and economically sustainable, having difficulties in accessing and timely adoption of innovation in industry and ICT, and problems connecting with suppliers and markets (Morris et al., 2022).

Figure 16. Individuals carried out at least one of the financial activities over the internet [isoc_ec_ifi]

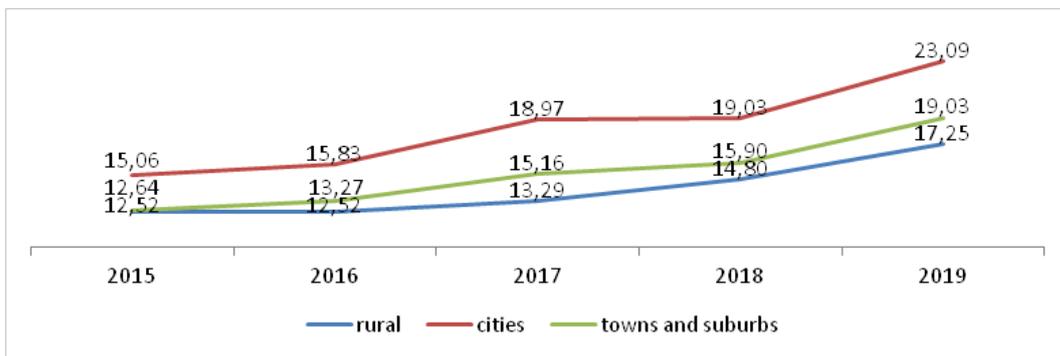
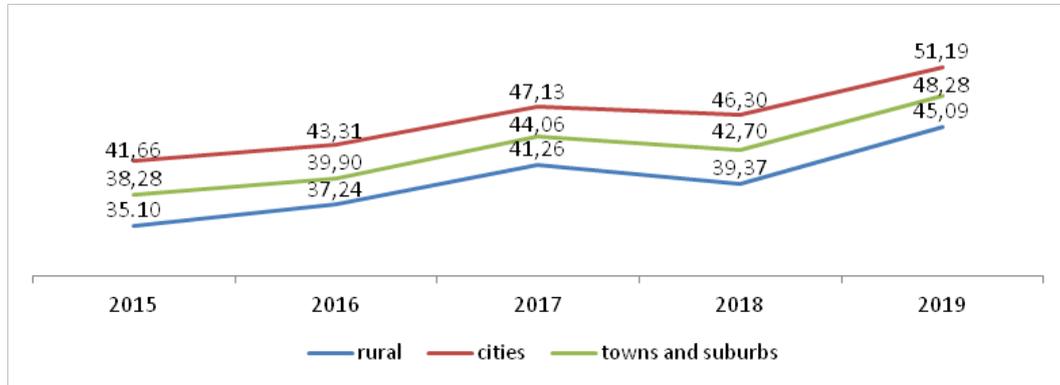
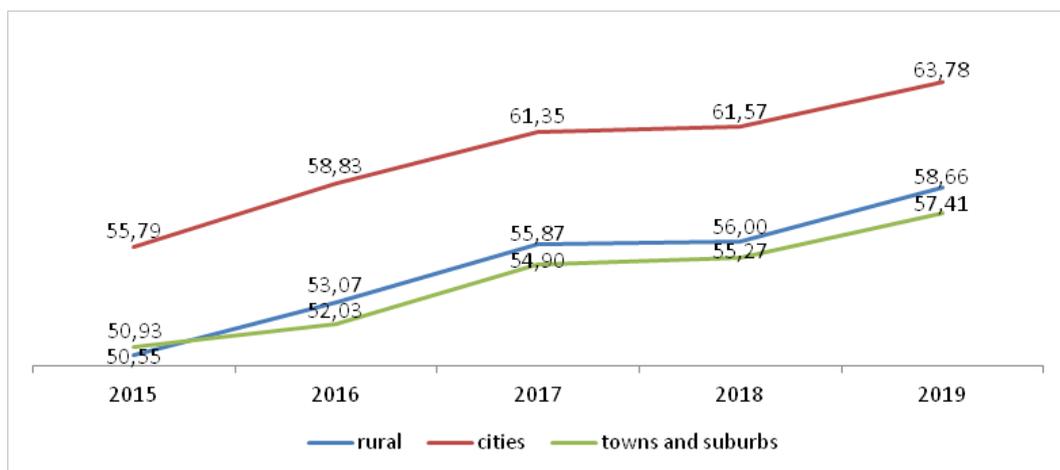


Figure 17. Internet purchases by individuals [isoc_ec_ibuy]



In recent years, many government services and access to public information have been linked to ICT. On the one hand, e-government can be a point of connection for people from urban and rural areas. On the other hand, to take full advantage of these services, rural people must have the ability and skills to use them (Ye & Yang, 2020). Data analysis reveals that only 57% of individuals from rural areas have had some interaction with public authorities in the last 12 months (Figure 18).

Figure 18. E-government activities of individuals via websites [isoc_ciegi_ac]





COST Action CA18213
Rural NEET Youth Network:
Modeling the risks underlying rural
NEETs social exclusion



WORKING GROUP 4
Rural NEETs and
Sustainability
COST Action CA18213:
RURAL NEET YOUTH

Rural NEETs and Sustainability - Diverse,
Multisectoral, and Multifunctional
Environments Shaping Rural Areas and
Daily Life

The role of digitalisation in the future of rural areas must be prominent given that it is a trend which already affects agriculture, business, and the life of the rural population. Digital transformation can help young rural people reach their full potential in the coming period. The first and most significant transformation in digitalisation of the rural regions requires work to increase the digital competencies of the population, given that boosting connectivity isn't enough. It is about ensuring that each young person overcomes resilience and recognises the potential of digital technology for reaching economic and social opportunities. Transformation of the existing rural environment towards adopting digital technologies requires a specific approach to meet the needs of the rural population. It can be achieved through new educational and business models which promote agro-industry as connected to industry 4.0, smart villages, digital ecosystems, and reducing the distance from "farm to fork".



Youth in rural areas: rural dreams

Michelle Perello⁵

The Horizon 2020 Ruralisation projects address rural regeneration by focusing on two main elements: access to land, and youth participation and inclusion. Within the framework of one specific Work Package to project, coordinated by the team of Prof. Tuomas Kuhmonen from Turku University, they have built an extensive futures dreams inventory (Kuhmonen et al., 2021). The inventory has been built based on a sample of young people (18–30 years) living in 20 regions in 10 European countries. Young people have been invited to describe their dream future in about 15 years (the year 2035). The dream future consisted of the livelihood recipe (how do you earn your living?), the accommodation recipe (where do you live?), and the lifestyle recipe (how do you live?) as well as the obstacles for realising the dream. The inventories were carried out in national languages and they followed a shared format. The inventories resulted in 2,208 responses.

The responses were analysed per type of dream area, which thus made it possible to compare profiles of these dream areas, namely: city centre; city areas outside the city centres; suburbs in the city area; rural areas close to cities; rural villages; and, remote rural areas.

At the highest feasible level of abstraction, the dreams targeted to the city centres could be featured as the dreams of rather young people and people who dream about mobile, eventful, international, creative, successful city lives and the balancing effect of regularity. The dreams targeted to the city areas outside the centre were characterised by communal, cosy, and stable life in the urban fabric, which also allowed for mobility, internationality, and personal development in diverse ways. The dreams destined to the suburbs in the city areas tended to be characterised by a flexible, responsible as well as peaceful and home-centric 'basic' form of living on the outskirts of a city. The dream futures targeted to the rural areas close to cities were profiled by a clear preference for the countryside as a living environment that included waters, animals, private space and a garden – a dream of family life in which work life was a subordinate of the rural lifestyle. Futures dreams targeted to the rural villages were manifestations of the local

⁵ *Consulta Europa Projects and Innovation, emailmichelle.perello@consulta-europa.com*



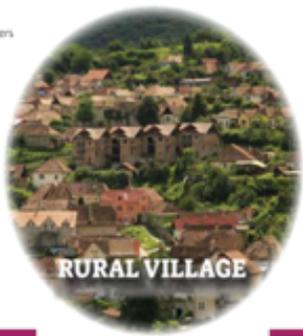
paradigm in a rural fabric. Finally, the dreams of the future targeted to the remote rural areas were flavoured by the ideal of living in nature and with nature – and having an agency to do this. The future dreams were studied also from the perspective of professional status. Regarding these results, the dreams of becoming a farm entrepreneur were dreams of very entrepreneurial ‘seniors amongst the juniors’ who dreamed about farming and living in the green with the animals, vehicles, and community members. The dreams of becoming a non-farming entrepreneur were featured by a flexible, self-determined life where creativity and nature-based recreation were balanced with work duties, however, the personal capacity was a specific challenge. The dreams of being not employed as an entrepreneur (but rather as a salaried worker) were essentially manifesting various forms of ordinary life with work and leisure combined with a social and developmental orientation.

LIVELIHOOD RECIPE	ACCOMMODATION RECIPE	LIFESTYLE RECIPE
Economic activity <ul style="list-style-type: none"> Financial and insurance services Information and communication Other service activities Professional, scientific and technical activities Arts, entertainment and recreation Administrative and support service activities Public administration and defence, compulsory social security 	Location <ul style="list-style-type: none"> Within a city Some local services available Public transport services House <ul style="list-style-type: none"> Apartment Close a second home, villa or cottage Modern house 	Hobbies <ul style="list-style-type: none"> Talking, hearing Fashion, clothing and beauty Going out for shopping, coffee, dinner, pub, movies Gaming Reading Cultural affairs Creative hobbies: visual arts, singing, photography, theater
Attributes <ul style="list-style-type: none"> Travel for work Outside labour market International work environment Working abroad Social interaction Appreciated work Stable, regular job Self-actualisation Preference work Project work Balance of work and leisure Career, high position Creative work 		Value orientation, behavioural tendency <ul style="list-style-type: none"> Regular lifestyle Successful life: business, career, wealth Successful life Calm, quiet, slow lifestyle Ordinary lifestyle, work and leisure Walking local food and services Simple lifestyle
 <p>CITY CENTRE</p>		
OBSTACLES <ul style="list-style-type: none"> Uncertainty of the future Personal attitude (business, publicness, preferences) Coronavirus pandemic (disease) and/or other pandemics Environment (e.g. climate change) Getting or keeping a suitable job or business Lack or insufficiency of skills and competences Unspecified obstacles Getting the needed education 		POTENTIAL RESIDENTS <ul style="list-style-type: none"> Current place of residence: city centre Place of residence open birth, city centre Country of birth: other than current country of residence Education: primary level completed Housing arrangement: living alone (and possibly child or children) Family status: single Potential external event (sickness, employment status, unemployment) Age group: 18-24 years
CODE <ul style="list-style-type: none"> Strong profiler: bold font (location quotient >2) Weak profiler: regular font (location quotient 1.2-2) Profilers are presented in order of magnitude 		

LIVELIHOOD RECIPE	ACCOMMODATION RECIPE	LIFESTYLE RECIPE
Economic activity <ul style="list-style-type: none"> Real estate activities Water supply, sewage, waste management and remediation activities Information and communication Electricity, gas, steam and air conditioning supply Professional, scientific and technical activities Education 	Location <ul style="list-style-type: none"> Public transport services City nearby Good for children Peaceful location House <ul style="list-style-type: none"> Semi-detached house Townend house 	Hobbies <ul style="list-style-type: none"> Gaming Cooking Reading Creative hobbies: visual arts, writing, photography, theater Music
Attributes <ul style="list-style-type: none"> Freelance work Working alone Project work Responsible actor Career, high position Helping others Not place bound work Nice work community Routine work Flexible work terms and hours Self-actualisation 		Value orientation, behavioural tendency <ul style="list-style-type: none"> Living with little stuff, sharing High work orientation Forming Balance of work, leisure and family life Green, peaceful, open environment
 <p>SUBURB IN A CITY AREA</p>		
OBSTACLES <ul style="list-style-type: none"> Working conditions (lack of flexibility, precariousness etc.) Personal attitude (business, publicness, preferences etc.) Potential external event (sickness, accident etc.) Lack of courage and self-confidence 		POTENTIAL RESIDENTS <ul style="list-style-type: none"> Current place of residence: suburb in a city area Place of residence open birth: suburb in a city area Housing arrangement: living with relatives or other people (and possible child or children)
CODE <ul style="list-style-type: none"> Strong profiler: bold font (location quotient >2) Weak profiler: regular font (location quotient 1.2-2) 		



LIVELIHOOD RECIPE	ACCOMMODATION RECIPE	LIFESTYLE RECIPE
Economic activity <ul style="list-style-type: none"> ▣ Agriculture, forestry and fishing ▣ Water supply, sewage, waste management and remediation activities ▣ Financial and insurance activities ▣ Electricity, gas, steam and air conditioning supply ▣ Accommodation and food service activities Attributes <ul style="list-style-type: none"> ▣ Working outdoors ▣ Working alone ▣ Outside labour market ▣ Working with animals ▣ Self-sufficiency ▣ Not place-bound work ▣ Remote work, telework ▣ Nature, environment ▣ Versatile tasks ▣ Part-time work ▣ Doing by hands ▣ Freelance work ▣ Entrepreneurship ▣ Appreciated work ▣ Self-actualisation 	Location <ul style="list-style-type: none"> ▣ No neighbours too close ▣ In the countryside ▣ Water (sea, lake, river) nearby ▣ Nature nearby or within nature House <ul style="list-style-type: none"> ▣ Farmhouse ▣ Environmentally friendly housing ▣ Possibility to keep animals ▣ Garage or barn ▣ Large house ▣ Small house ▣ Own yard 	Hobbies <ul style="list-style-type: none"> ▣ Cars, motorbikes, machines, motorcycling ▣ Animals ▣ Enjoying the outdoors: hiking, cycling, walking ▣ Sailing, boating ▣ Garden ▣ Community activities Value orientation, behavioural tendency <ul style="list-style-type: none"> ▣ Self-sufficiency ▣ Entrepreneurial orientation ▣ Simple lifestyle ▣ Independence, freedom ▣ Sustainable lifestyle ▣ Spiritual lifestyle ▣ Calm, quiet, slow lifestyle ▣ High work orientation ▣ Valuing local food and services
 <p>REMOTE RURAL AREA</p>		
OBSTACLES <ul style="list-style-type: none"> ▣ Society (economy, debt, taxation, regulation, unrest, values, politics etc.) ▣ Unspecified obstacles ▣ Obscurity of own thoughts and dreams ▣ Lack of insufficiency of money 	POTENTIAL RESIDENTS <ul style="list-style-type: none"> ▣ Current place of residence: remote rural area ▣ Place of residence upon birth: remote rural area ▣ Entrepreneur status: farm entrepreneur ▣ Children: yes ▣ Housing arrangement: living with a partner (and possibly child or children) ▣ Gender: male ▣ Entrepreneurship status: other than farm entrepreneur ▣ Age group: 25–30 years ▣ Employment status: employed 	
CODE <ul style="list-style-type: none"> ▣ Strong profiler: bold font (location quotient >2) ▣ Weak profiler: regular font (location quotient 1.2–2) ▣ Profilers are presented in order of magnitude 		

LIVELIHOOD RECIPE	ACCOMMODATION RECIPE	LIFESTYLE RECIPE
Economic activity <ul style="list-style-type: none"> ▣ Transportation and storage ▣ Agriculture, forestry and fishing ▣ Wholesale and retail trade; repair of motor vehicles and motorcycles ▣ Electricity, gas, steam and air conditioning supply ▣ Accommodation and food service activities ▣ Administrative and support service activities ▣ Education Attributes <ul style="list-style-type: none"> ▣ Working with animals ▣ Self-sufficiency ▣ Commonality ▣ Doing by hands ▣ Freelance work ▣ Entrepreneurship ▣ Working with children and youngsters ▣ Social interaction ▣ Nature, environment ▣ Routine work ▣ Career, high position 	Location <ul style="list-style-type: none"> ▣ Village or small town ▣ In the countryside ▣ Good for children House <ul style="list-style-type: none"> ▣ Garage or barn ▣ Farmhouse ▣ Old house ▣ Semi-detached house 	Hobbies <ul style="list-style-type: none"> ▣ Cars, motorbikes, machines, motorcycling ▣ Community activities ▣ Garden ▣ Fashion, clothing and beauty Value orientation, behavioural tendency <ul style="list-style-type: none"> ▣ Acceptance of diversity ▣ Valuing local food and services ▣ Self-sufficiency ▣ Social orientation, interaction ▣ Green, peaceful, open environment ▣ Political, societal or community activities
 <p>RURAL VILLAGE</p>		
OBSTACLES <ul style="list-style-type: none"> ▣ Unspecified obstacles ▣ Finding a suitable and affordable place or house ▣ Society (economy, debt, taxation, regulation, unrest, values, politics etc.) ▣ Limitation of the dream location (jobs, houses, services etc.) ▣ Environment (e.g. climate change) 	POTENTIAL RESIDENTS <ul style="list-style-type: none"> ▣ Current place of residence: rural village ▣ Place of residence upon birth: rural village ▣ Entrepreneur status: farm entrepreneur ▣ Employment status: out of labour force ▣ Employment status: employed ▣ Children: yes 	
CODE <ul style="list-style-type: none"> ▣ Strong profiler: bold font (location quotient >2) ▣ Weak profiler: regular font (location quotient 1.2–2) ▣ Profilers are presented in order of magnitude 		



LIVELIHOOD RECIPE	ACCOMMODATION RECIPE	LIFESTYLE RECIPE
Economic activity <ul style="list-style-type: none"> Water supply, sewage, waste management and remediation activities Construction Real estate activities Manufacturing Transportation and storage Attributes <ul style="list-style-type: none"> Short travel to work Moving because of work opportunities Working with children or youngsters Not place-bound work Self-sufficiency 	Location <ul style="list-style-type: none"> No neighbours nearby Water (sea, lake, river) nearby In the countryside House <ul style="list-style-type: none"> Large yard Possibility to keep animals Own yard Old house 	Hobbies <ul style="list-style-type: none"> Garden Animals Value orientation, behavioural tendency <ul style="list-style-type: none"> Living with little stuff, sharing High work orientation Homing Balance of work, leisure and family life Green, peaceful, open environment
<p>RURAL AREA CLOSE TO A CITY (COMMUTING DISTANCE)</p>		
OBSTACLES <ul style="list-style-type: none"> Working conditions (lack of flexibility, precariousness etc.) Coronavirus pandemic (temporarily) or other pandemics Potential external event (sickness, accident etc.) Personal life (partner, family, children etc.) 		POTENTIAL RESIDENTS <ul style="list-style-type: none"> Current place of residence: rural area close to a city (commuting distance) Place of residence upon birth: rural area close to a city (commuting distance) Education: tertiary level completed
CODE <ul style="list-style-type: none"> Strong profiler: bold font (location quotient >2) Weak profiler: regular font (location quotient 1.2-2) Profilers are presented in order of magnitude 		

LIVELIHOOD RECIPE	ACCOMMODATION RECIPE	LIFESTYLE RECIPE
Economic activity <ul style="list-style-type: none"> Arts, entertainment and recreation Other service activities Professional, scientific and technical activities Attributes <ul style="list-style-type: none"> Moving because of work opportunities Working abroad Routine work Challenge Appreciated work Outside labour market Creative work Stable, regular job Nice work community Meaningful work, making an impact International work environment 	Location <ul style="list-style-type: none"> Public transport services Within a city Diverse local services available Nice neighbours City nearby Peaceful location House <ul style="list-style-type: none"> Towned house Apartment Semi-detached house Also a second home, villa or cottage Modern house 	Hobbies <ul style="list-style-type: none"> Music Traveling Fashion, clothing and beauty Reading Value orientation, behavioural tendency <ul style="list-style-type: none"> Homing Careful lifestyle Helping others Healthy lifestyle Personal development
<p>CITY AREA OUTSIDE THE CENTRE</p>		
OBSTACLES <ul style="list-style-type: none"> Uncertainty of the future Obscurity of own thoughts and dreams Personal health problems Lack of courage and self-confidence 		POTENTIAL RESIDENTS <ul style="list-style-type: none"> Current place of residence: city area outside the centre Place of residence upon birth: city area outside the centre Education: primary level completed Employment status: out of labour force Employment status: unemployed Employment status: student
CODE <ul style="list-style-type: none"> Strong profiler: bold font (location quotient >2) Weak profiler: regular font (location quotient 1.2-2) Profilers are presented in order of magnitude 		



Analysis of public transportation options and mobility in rural areas

Slaven Gasparovic⁶; Anita Busljeta Tonkovic⁷; Ivan Sulc⁸

Mobility is a human need and one of the fundamental and important characteristics of human activity in that it fulfils the basic need to get from one place to another. Mobility enables social, cultural, political, and economic activities and is therefore the recurring feature where transport has the greatest social impact, apart from the physical characteristics of the individual. The quality of provided transportation options also influences accessibility. Limited mobility and accessibility lead to transport shortcomings and by extension social exclusion. These situations could threaten the sustainable development of rural areas and NEETs, especially in terms of the social and economic aspects of sustainability (Hurni, 2006; Gašparović, 2016). Rural areas are severely affected by transport problems because they are characterised by physical and social heterogeneity, a low population density, and the small number of inhabitants. Certain areas (e.g., urban or rural areas) may be transport disadvantaged. Such a disadvantage could be reflected through low frequency public transport or indeed its total absence, inadequate roads, and lack of sidewalks and/or lighting (Murray & Davis, 2001).

In many countries, rural areas are characterised by (necessary) car ownership and limited mobility and accessibility owing to poor availability of public transport. Based on the assumption that public transport is a service that should be available to everyone, the simplest approach to exploring transport disadvantaged spaces is to look at the interrelation between the space and the public transport network. Transport disadvantaged spaces are areas where public transport is unavailable or very limited (Murray & Davis, 2001; Hurni, 2007). People's mobility may be affected by the fact that public transport is unavailable or infrequent in a particular area, that the transport option is unaffordable, that the living location is unfavourable in terms of transport and desired activities, and so on. Different social groups use public transport for different reasons, so this study is based on the interrelation between space and the public transport sys-

6 University of Zagreb, Faculty of Science, Department of Geography, Marulicev trg 19/II., 10000 Zagreb, Croatia; slaveng@geog.pmf.hr

7 Institute of Social Sciences Ivo Pilar, Centar Gospic, Trg Stjepana Radica 14, 53000 Gospic, Croatia; anita.busljeta.tonkovic@pilar.hr

8 University of Zagreb, Faculty of Science, Department of Geography, Marulicev trg 19/II., 10000 Zagreb, Croatia; isulc@geog.pmf.hr



tem. Public transport is a particular problem in rural areas and is often characterised by a lower level of development, low frequency, inadequate timetables, distant stops, etc. (Fawcet, 2009; Knowles et al., 2010). Such problems affect all public transport users, including young people and NEETs. Public transport problems could also lead to a greater need for personal transport, resulting in inequality, disadvantage, and exclusion for those who are unable to drive or who are forced to use a car (Oliva & Camarero, 2019). Young people will be particularly vulnerable to this (Gašparović, 2016). One could assume that public transport could be an option for more sustainable rural areas, which could be an option for rural NEETs compared to (necessary) car use or the inability to drive. This research could uncover if public transport is an option that can be utilised, or if it is a reason for (necessary) car ownership and use but which also limits the mobility of NEETs.

The main objective of the research is to analyse the characteristics of public transport in the rural region of Lika, Croatia by examining the development of public transport and its timetables/frequencies. Lika is a rural region in the mountainous part of Croatia, characterised by depopulation and a low number of inhabitants. The methodology of the study is primarily based on the usage of tools of GIS and the public transport spatial analysis and its timetables. The research shows that Lika is characterised by a low developed and poorly spatially distributed public transport network. From a public transport perspective, mobility and accessibility are very poor in Lika, as public transport lines are poorly developed and have an extremely low frequency. Local public transport is weakly developed, with mainly the settlements located along the state roads being connected, however, many other areas of Lika are excluded from it. Moreover, Lika is also very poorly connected by public transport to other parts of Croatia, especially when considering Zagreb and the macro-regional centres of Rijeka and Split. When considered, this could demonstrate how poor public transport connectivity negatively affects young people's daily lives, directly influencing their mobility and accessibility to various life services, and thereby leading to (necessary) car ownership. This issue can also be considered under the broader rubric of the social and economic pillars of rural sustainability.



Roadmap for the Prevention of Rural Youth Social Exclusion

Vesela Radovic⁹

Serbia's international position is oriented toward EU integration, whilst at the same time maintaining good relations with neighbouring countries. Hence, Serbia is engaged in many regional cooperation initiatives, and one of them is the Regional Youth Cooperation Office (RYCO). Young people and regional cooperation are very important for the EU, especially this year, the "European Year of Youth". Youth have an enormous role in the processes which create new social values, accelerate reconciliation processes, and strive in enhancing peace-building efforts in the country and a region which retains the scars of the past era of war and conflicts.

Despite a wide variety of policy interventions related to rural development, especially those which have targeted the rural youth population in the Republic of Serbia over the last few decades, the social disintegration of rural communities has accelerated, gradually encompassing a larger share of the population. The dynamic of the life values of rural youth is one of the most important factors in changing traditional rural communities.

In this brief note, the author addressed the urgent need to understand various factors which contribute to a sense of social exclusion or inclusion of rural NEETs and which are pretty poorly understood. Rural NEETs faced structural inequalities encountered through a lack of housing, employment, and transport. These conditions generate a twofold exclusion: firstly, they constitute one specific way by which they are excluded from rural life; secondly, rural NEETs have few opportunities to experience urban youth culture. However, policymakers have to understand this complexity in fact generates new insights into rural sustainable development. Policymakers have to create adequate policy, based on the results of the research which has placed NEETs at the centre of research. However, such work depends partly on mutual trust between researcher and research volunteers and a willingness to engage with rural NEETs on their terms and in their own spaces. In some of the previous work, that methodology was applied successfully. The NEETs constructed their identities in part by recognising and articulating their difference to a group other than themselves (urban youth).

9 *Institute for Multidisciplinary Research, Belgrade University, veselaradovic@imsi.bg.ac.rs*



Interested parties in the creation of public policies – despite recognising the issues relating to the NEETs group in Serbian rural areas – admit their insufficient activity and justify it by the lack of reliable data and group dynamics. They claim that the status of the members of the group changes dynamically, through employment in occasional and temporary jobs, training organised by the National Employment Service, marriage and departure to another local community etc. The NEETs group in some Serbian regions is also a partly of interest vis-à-vis national security because of the possibility of radicalisation which exists therein. In one piece of research, UNDP and CESID present existing drivers of radicalisation which could lead to violent extremism. In sum, this research on youth in Serbia has endeavoured to provide a general overview of the opinions of young people and draw attention to any weak points, pressures, and triggers that could lead to radicalisation (UNDP & CESID, 2016). Further research has warned policy-makers regarding the rise of the Far Right, and the dangers of its normalisation and progress towards becoming legitimised: specifically, this is because state institutions and pro-regime media increasingly support, tolerate, or ignore it (Biserko, 2022). One author stated that: ‘those who succumbed to the influence of the radicalisers were mostly young people, of lower economic status, from dysfunctional families, from rural families, some also engaged in crime or were alcoholics and caused incidents in the community’ (Bujak–Stanko, 2022). The present Russia–Ukraine war only exacerbates the situation, and political and social polarisation have risen accordingly. In practice, based on all mentioned above, it is obvious that there is a need for a new roadmap for rural youth inclusion within Serbian society. As part of this process, the first step is establishing intensive cooperation between the government, civil society, local community, and youth in order to support NEETs and young people in general. To that end, the new Serbian Government (2022), the Ministry of Tourism and Youth (minister Husein Memić), as well as the Ministry of Rural Welfare (minister Milan Krkobabić), will continue with realisation of several key youth-specific programs in the future. Despite many previous efforts of various stakeholders, there is a lot of space for improvement of youth status in rural communities. Emphasising the need for family agriculture through microfinance institutions, as well as fostering investments focused on rural areas could be one of the most visible actions, however, many others have to be created and presented.

In the future policymakers in Serbia, as well as in the EU have to understand that improvement activities have to be designed to spark conversation and thereby help develop a plan to move the community/or agency along the path to becoming fully inclusive of NEETs. Serbia, as a Western Balkan country, shares many similar issues related to



COST Action CA18213
Rural NEET Youth Network:
Modeling the risks underlying rural
NEETs social exclusion



WORKING GROUP 4
Rural NEETs and
Sustainability
COST Action CA18213:
RURAL NEET YOUTH

Rural NEETs and Sustainability - Diverse,
Multisectoral, and Multifunctional
Environments Shaping Rural Areas and
Daily Life

rural youth social exclusion with neighbouring countries (BiH, Croatia, Kosovo etc.) In the border region, there are rural communities where numerous minorities and citizens from both countries live and work together. In some of them, there remains visible signs of suffering from previous conflicts and wars. The peacebuilding process in those communities is ongoing. These processes are not easily achieved, and their success requires enormous challenges towards entrenched attitudes and an increased awareness in order to create a roadmap that is adequate for rural society. However, there is no simple recipe for this given that every rural community has to take into account its own issues. Young people`s voices are central to the realisation of this task. Furthermore, achievement of the benefits of a sustained engagement with young people are manifold and by undertaking this admittedly daunting task, we can achieve a better understanding of the dimensions and effects which direct their lives.



EDUCATION AND UNEMPLOYMENT

The rural youth gender gap in education and unemployment

Jalen Tosun¹⁰

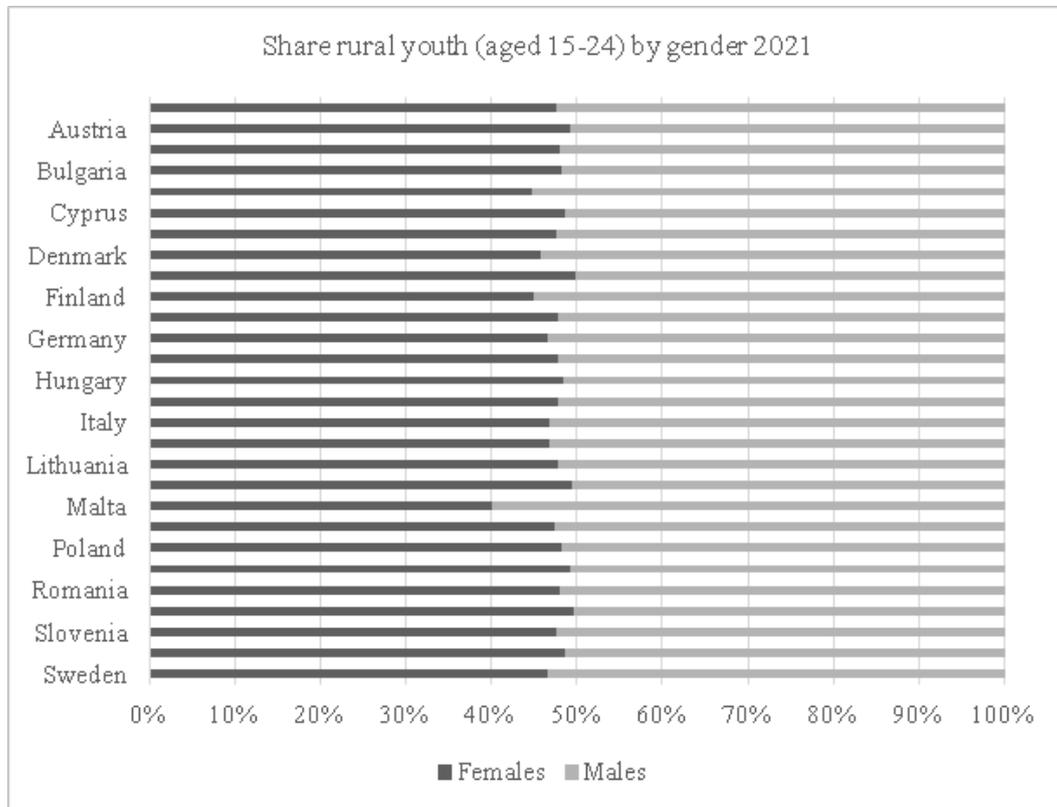
In the context of its latest Youth Strategy 2019–2027, the European Union (EU) has acknowledged the importance of gender equality and support for young people living in rural areas (European Council, 2018). Whilst youth belong to a disadvantaged age group, the intersection with other characteristics such as social class, ethnicity, gender, and place of residence can further increase the disadvantage they experience. The latter two issues are the subject of this report.

Research on young people and rurality – which analyses educational contexts and employment opportunities – identifies underemployment, out-migration, and higher rates of poverty and marginalisation as major challenges (e.g., Shucksmith and Brown 2006; Corbett 2009; Wenham 2020). However, fewer studies exist on the specifically gendered differences of rural youth and their learning and working experiences (see e.g., Unay-Gailhard 2016; Nunes de Almeida and Simões 2020).

Therefore, this report focuses upon the intersection of rural youth and gender in terms of educational pathways and labour markets within the EU. To that end, the following question arises: What is the status quo of the divide between male and female rural youth in Europe; and, did the COVID-19 crisis increase inequalities? To start with, 25% of the EU youth population aged 15 to 24 lived in rural areas in 2021 (Eurostat 2022; LFST_R_PGAWWSN).

¹⁰ University of Heidelberg, Germany, jale.tosun@ipw.uni-heidelberg.de

Figure 19. Share of rural youth (aged 15-24) by gender in 2021 [LFST_R_PGAWWSN]

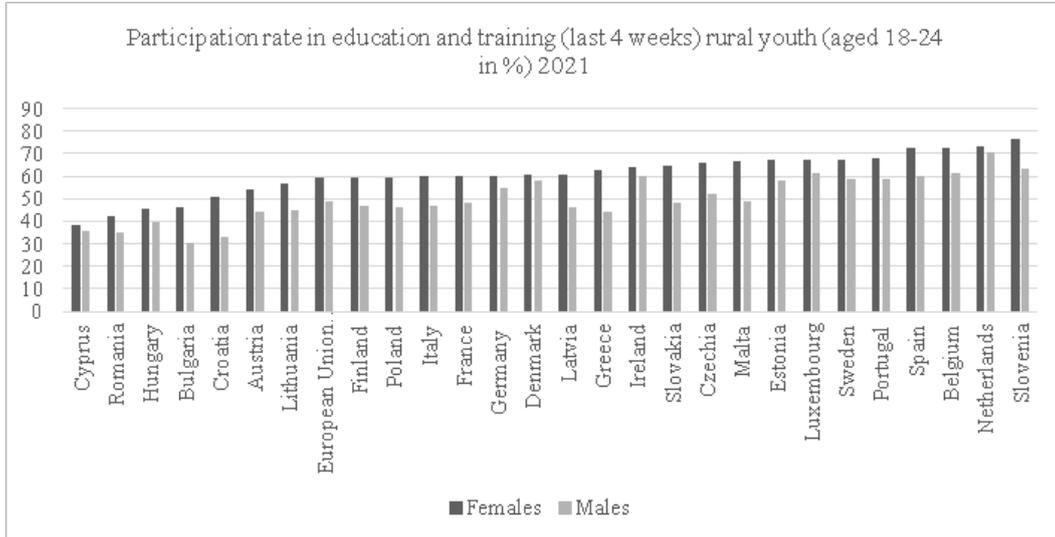


In all 27 EU countries, more young males than females live in rural areas although these are minor differences of a few percent (Figure 19). Malta is an exception since its rural youth population is comprised of 40% women and 60% men.

When asked about their participation in education and training (during the last 4 weeks) (Eurostat 2022: [TRNG_LFS_14]), more young females than males living in rural areas reported taking part in qualification measures.

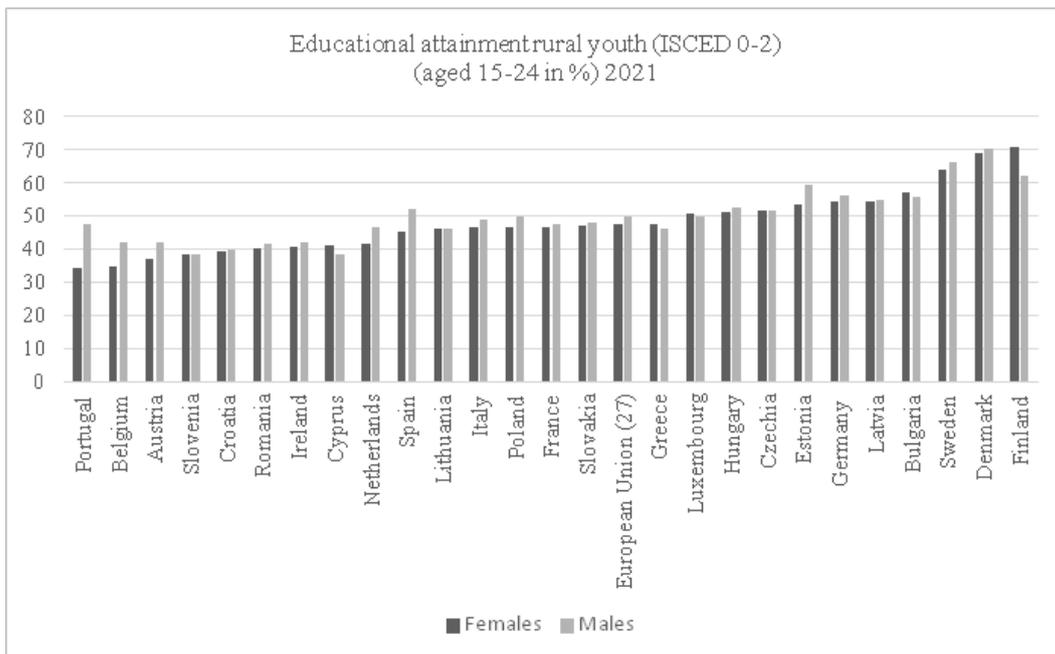
On average, of the 27 EU member countries, the participation rate was 59.60% for rural young women, exceeding that of men (49.20%) by ten percentage points (Figure 20).

Figure 20. Participation rate in education and training (last 4 weeks) rural youth (aged 18-24 in %) 2021 (TRNG_LFS_14)



Educational attainment is often used as a proxy for human capital, and represents another decisive factor for individual chances in the labour market as well as macroeconomic prospects for rural regions. For early childhood to lower secondary education (ISCED 0-2) the levels are very similar for both genders (Eurostat 2022: [EDAT_LFS_9913]) (Figure 21).

Figure 21. Educational attainment rural youth (ISCED 0-2) (aged 15-24 in %) 2021 [EDAT_LFS_9913]

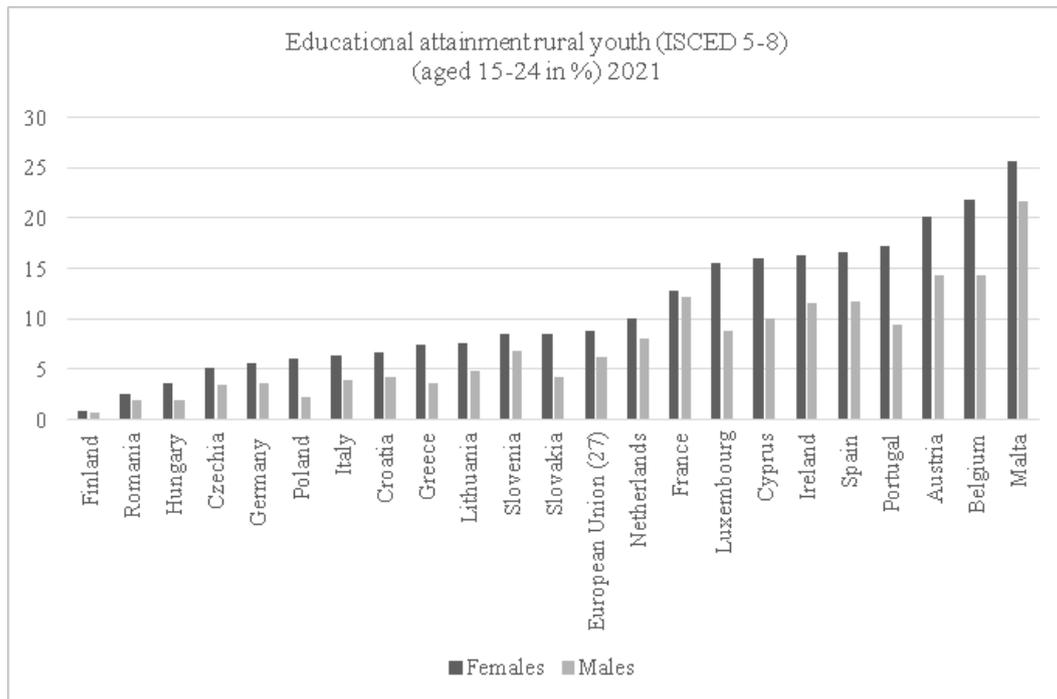


Note: data missing for Malta



In the sector of tertiary education (ISCED 5-8) young females have a higher share of tertiary education than males living in rural areas in all EU member countries (Figure 22).

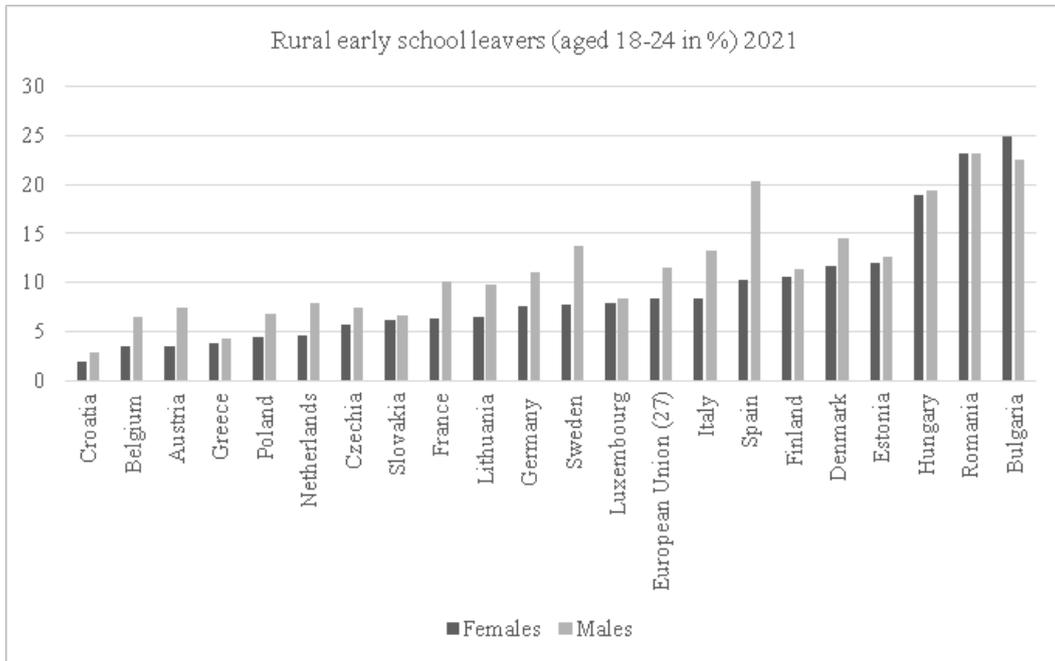
Figure 22. Educational attainment rural youth (ISCED 5-8) (aged 15-24 in %) 2021 [EDAT_LFS_9913]



Note: data missing for Bulgaria, Denmark, Estonia, Latvia and Sweden

One problem that is prominent in rural areas is the early school leaving phenomenon (Eurostat 2022: [EDAT_LFSE_30]).

Figure 23. Rural early school leavers (aged 18-24 in %) 2021 [EDAT_LFSE_30]

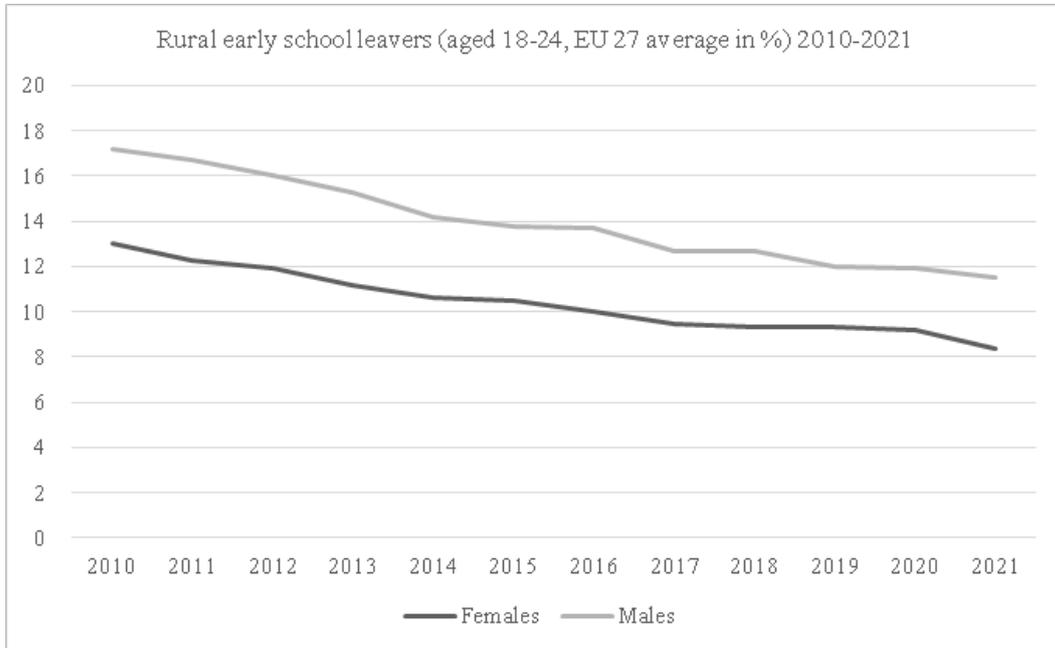


Note: data missing for Cyprus, Ireland, Latvia, Malta, Portugal, Slovenia

Most European countries have higher shares of male school dropout rates than females. In Spain, the differences were most notable with 20% of men and 10% of women leaving school early (Figure 23). Likewise, countries such as Denmark, Germany and Sweden display a gender gap. Nevertheless, over the last decade, a positive development could be recorded since the share of rural school dropouts decreased steadily for both genders.



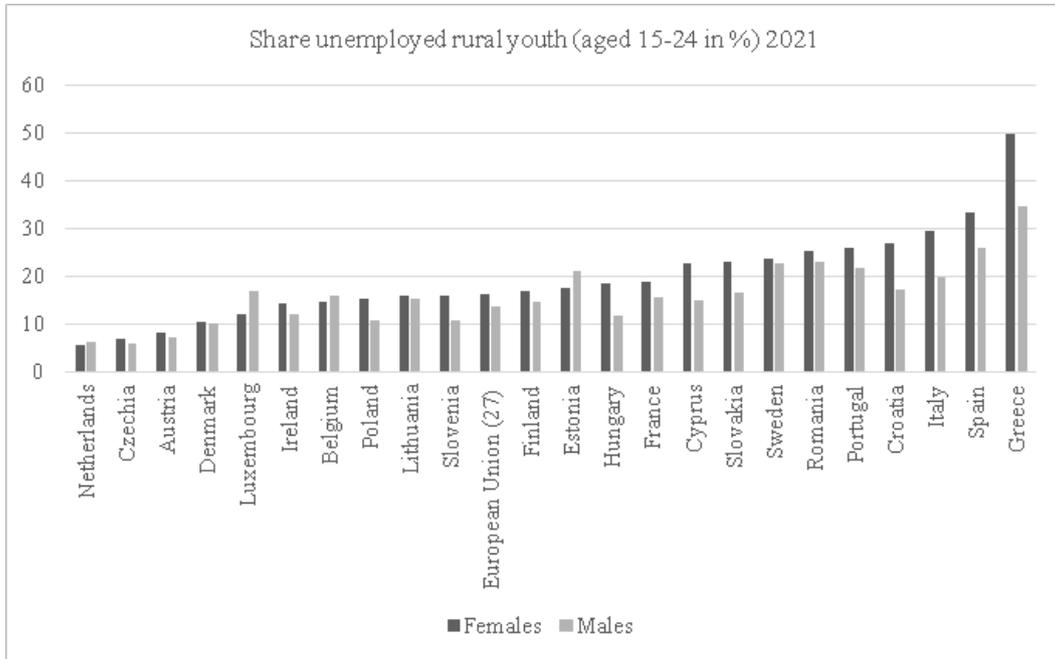
Figure 24. Rural early school leavers (aged 18-24, EU 27 average in %) 2021 [EDAT_LFSE_30]



In summary, rural young women on average stay longer in the education systems and reach higher education more often than their male peers living in rural areas (Figure 24).

A look at the labour market reveals the opposite gender divide in particular for rural youth unemployment (Eurostat 2022: [LFST_R_URGAU]).

Figure 25. Share unemployed rural youth (aged 15-24 in %) 2021 (LFST_R_URGAU)

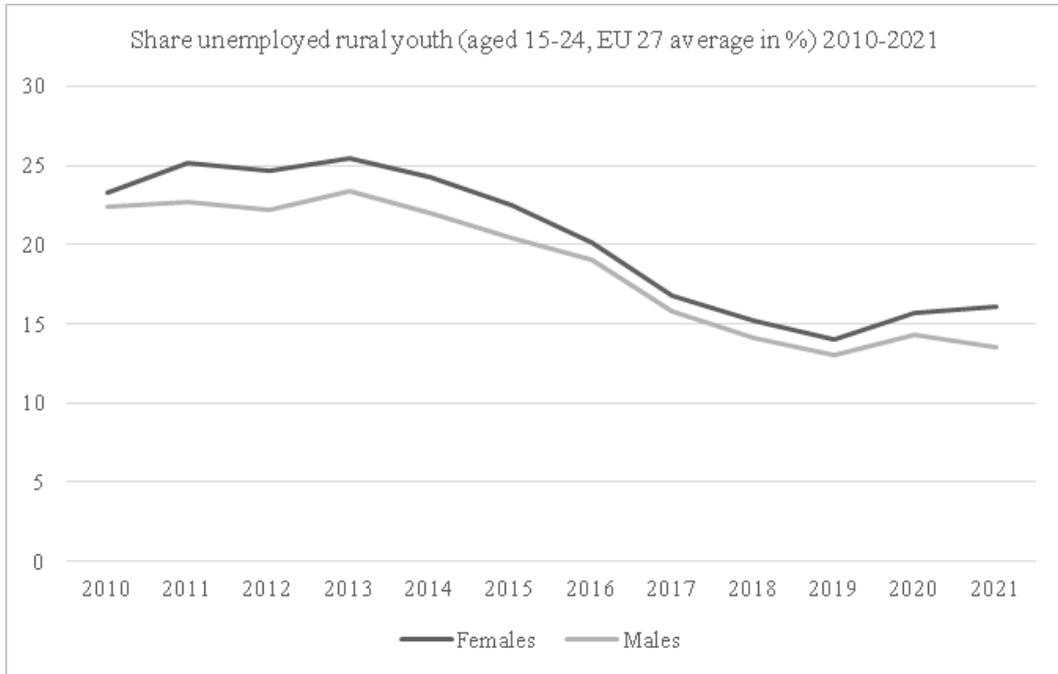


Note: data missing for: Bulgaria, Germany, Latvia and Malta

In the majority of cases, young women were more often unemployed than men (Figure 25). This is especially visible in Greece, where 49,80% of the female and 34,70% of the male rural youth population did not have a job in 2021. In addition, in Spain, Italy and Croatia the gender differences in unemployment were also more pronounced. Belgium, Estonia, Luxembourg and the Netherlands were exceptions since men were more often without employment than women. The share of rural youth unemployment for both genders for the EU 27 average decreased between 2013 and 2019, and the gender gap narrowed (Figure 26). Since the beginning of the pandemic, however, the share of unemployment has increased again and with it the inequality between young rural men and women.



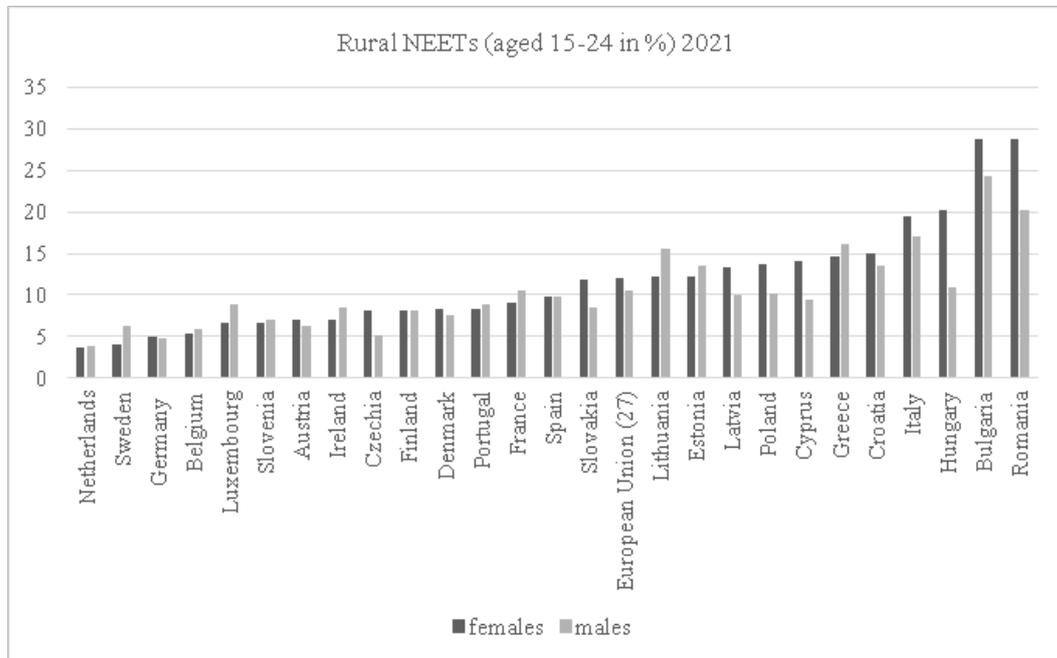
Figure 26. Share unemployed rural youth (aged 15-24, EU 27 average in %) 2010-2021 [LFST_R_URGAU]



Note: data missing for: Bulgaria, Germany, Latvia and Malta

Lastly, the category 'Not in Education, Employment or Training' (NEETs) shows more mixed results (Eurostat 2022: [EDAT_LFSE_29]).

Figure 27. Rural NEETs (aged 15-24 in %) 2021 [EDAT_LFSE_29]



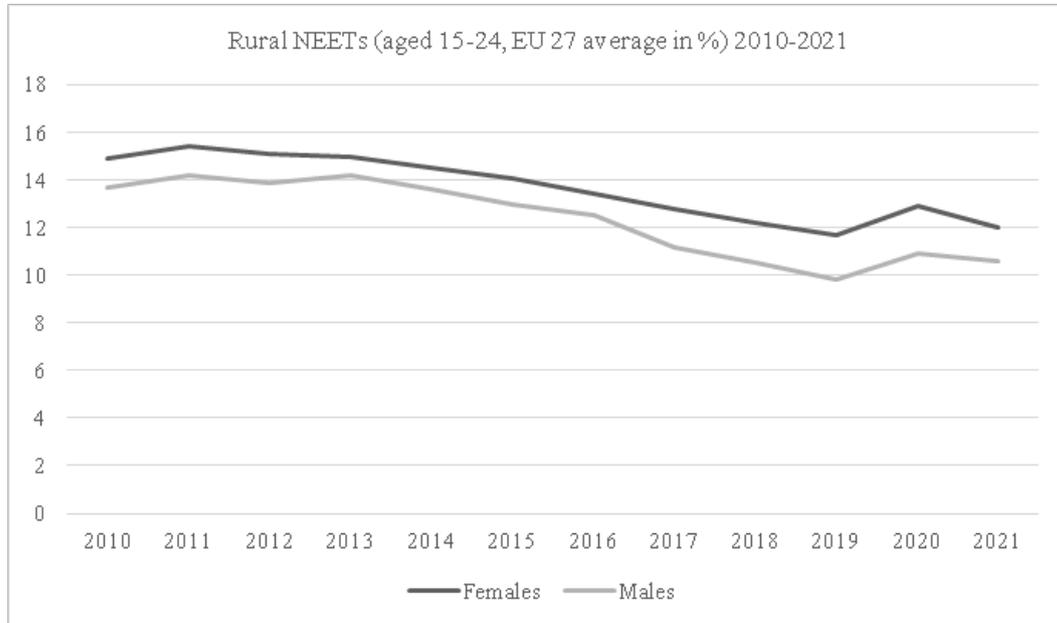
Note: data missing for: Bulgaria, Germany, Latvia and Malta

In some countries such as Hungary, Romania and Bulgaria significantly more rural young women belong to this group than men, whereas it is vice versa in other EU states including, for example, Sweden, Luxembourg, Lithuania and Greece (Figure 27).

Even though the total share of rural NEETs decreased since 2011, it increased with the start of the pandemic just to fall again in 2021 (Figure 28). The overall trend in the last decade indicates that females face a higher risk of becoming NEET than their male peers.



Figure 28. Rural NEETs (aged 15-24, EU 27 average in %) 2010-2021 [EDAT_LFSE_29]



In conclusion, this analysis has shown that, like previous studies, the size and direction of gender gaps in poverty and social exclusion varies between national states (Meulders et al. 2006:8). These disparities result from different labour market conditions and welfare regimes within EU countries.

Whilst many women living in rural areas seem to have similar or even better access to the education system, the same does not hold for the transition to the labour market. Reasons for this include: young women are over-represented in lower-paid occupations; and, they tend to become economically inactive when taking over family responsibilities thereby leaving them at risk of poverty also in later stages of life (ibid). Furthermore, the COVID-19 pandemic has increased differences between men and women, especially in terms of unemployment and NEETs.

More research on the patterns of gendered inequalities and underlying causal mechanisms is needed and could support policymakers seeking to improve the situation for both genders as well as enhance educational and work-related environments such that rural youth have an incentive to stay.



GENDER DIMENSION

Gender equality in rural areas: research needs and policy opportunities

Michelle Perello¹¹

Nearly one-third of the European Union's population lives in rural areas, approximately 137 million people. Rural areas are affected by specific negative trends and challenges such as population loss in peripheral rural areas, lower gross domestic product (GDP) per capita, and poor access to essential services and amenities, namely water, electricity, and broadband. The Covid-19 pandemic has worsened some challenges that impact upon rural opportunities and made more evident how access to digital infrastructure is needed to support rural development. Alongside rural-specific challenges, European countries also face the global challenge of climate change, environmental degradation and food security.

To address rural areas' specific challenges, in 2021, the European Commission put forward a Long-Term Vision for Rural Areas and more recently initiated a Rural Pact and Rural Action Plan. At the core of EU policies for rural development – and of other more transversal EU policies such as the Green Deal – is innovation and support for innovation and entrepreneurship. Despite the widespread acknowledgment today of the need for gender inclusivity in research and innovation, which have made compulsory, for instance, the adoption of a Gender Equality Plan for public research and non-research organisations applying to Horizon Europe programmes, in agriculture and rural entrepreneurship we nonetheless observe a general male dominance. In agriculture, for example, 96% of EU farms are family-run, but women manage only 28% of them (Eurostat, 2018). In order to support gender equality in rural areas, more knowledge needs to be produced through the provision of more comprehensive gender-disaggregated data on the participation of women in agricultural and other rural entrepreneurial activities and on the factors inhibiting or hampering wider participation. As observed in other sectors, education, gender stereotyping, lack of confidence, and difficulties in reconciling work and family obligations are at the root of lower female participation. When it comes to rural areas, problems accessing resources (e.g., land, finance and

¹¹ *Consulta Europa Projects and Innovation, emailmichelle.perello@consulta-europa.com*



business networks) along with patriarchal inheritance practices, are the key barriers facing women-led agriculture and enterprise (Price & Conn, 2012).

Alongside this, there is a need to improve understanding and recognition of women's roles in contributing to environmental protection owing to their more sustainable attitudes and behaviours (Buckingham et al., 2020) but also more socially inclusive practices. Women can be at the forefront of environmentally sustainable farming practices, such as organic farming, smaller-scale extensive farming, and localised supply chains (Ball, 2019). Based on research results, more effective policy and governance frameworks can be formulated both to support and build female participation in rural areas as well as utilising women's potential for contribution towards rural regeneration. Despite the requirement for gender mainstreaming in EU policy, gaps remain. Shortall (2015) analyses this within the context of the Common Agricultural Policy, showing that policy advances focus on gender inequality symptoms rather than the causes. Particular areas of need highlighted by Franić and Kovačićek (2019) are: targeting policy measures towards creating a supporting infrastructure for female-led sustainable; and, climate-resilient farming and food production.

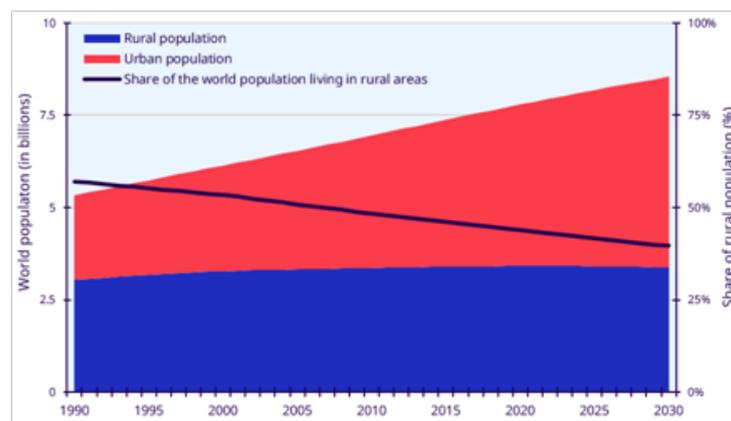


Role of female farmers in rural development – challenges and obstacles

Alen Mujčinović¹²

There is no unified definition of rural and urban areas, however rural decline is today an undisputed fact and it has become a global issue (Liu & Li, 2017). All over the world (Figure 29), countries are experiencing strong rural decline (Hedlund & Lundholm, 2015; Li et al., 2019; Yin, 2021). Although “rural decline” was first labelled as “rural renewal” in the US (Anding & Gustafson, 1968), the term has evolved and nowadays numerous expressions exists e.g., “rural decline”, “community destruction”, “dying rural communities”, “marginal community” and the “hollowing out” of the countryside. Each describe the downward spiral of decreasing employment, depopulation, economic depression and deteriorating quality of life in the countryside (Li et al., 2019). A general explanation regarding rural decline is the outcomes owing to the differences in living standards between rural and urban areas (Young, 2013). Living standards have both an economic and a social component, and the bigger the economic and social differences between the city and the countryside are, the higher outmigration from rural areas can be expected. Depopulation, particularly the outward migration of young adults, is the main expression of the shrinkage of rural communities and local economies (Amcoff & Westholm, 2007; Luck et al., 2010).

Figure 29. Evolution of the world's rural and urban population (1990-2030)



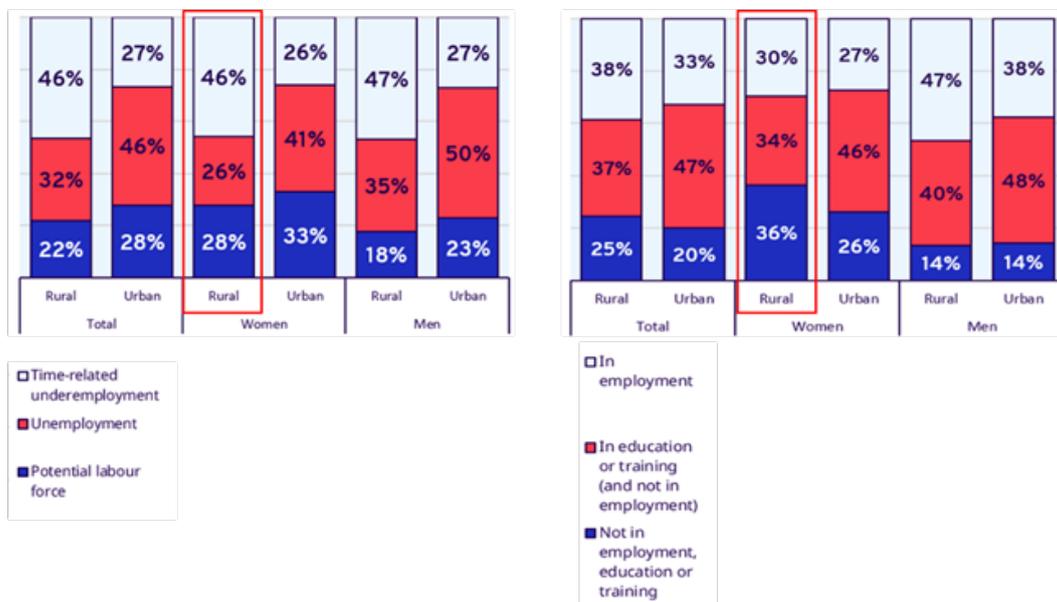
Source: ILOSTAT, ILO modelled estimates, November 2019

¹² University of Sarajevo, Faculty of Agriculture and Food Sciences, Zmaja od Bosne 6, 71 000 Sarajevo, Bosnia and Herzegovina, a.mujcinovic@ppf.unsa.ba



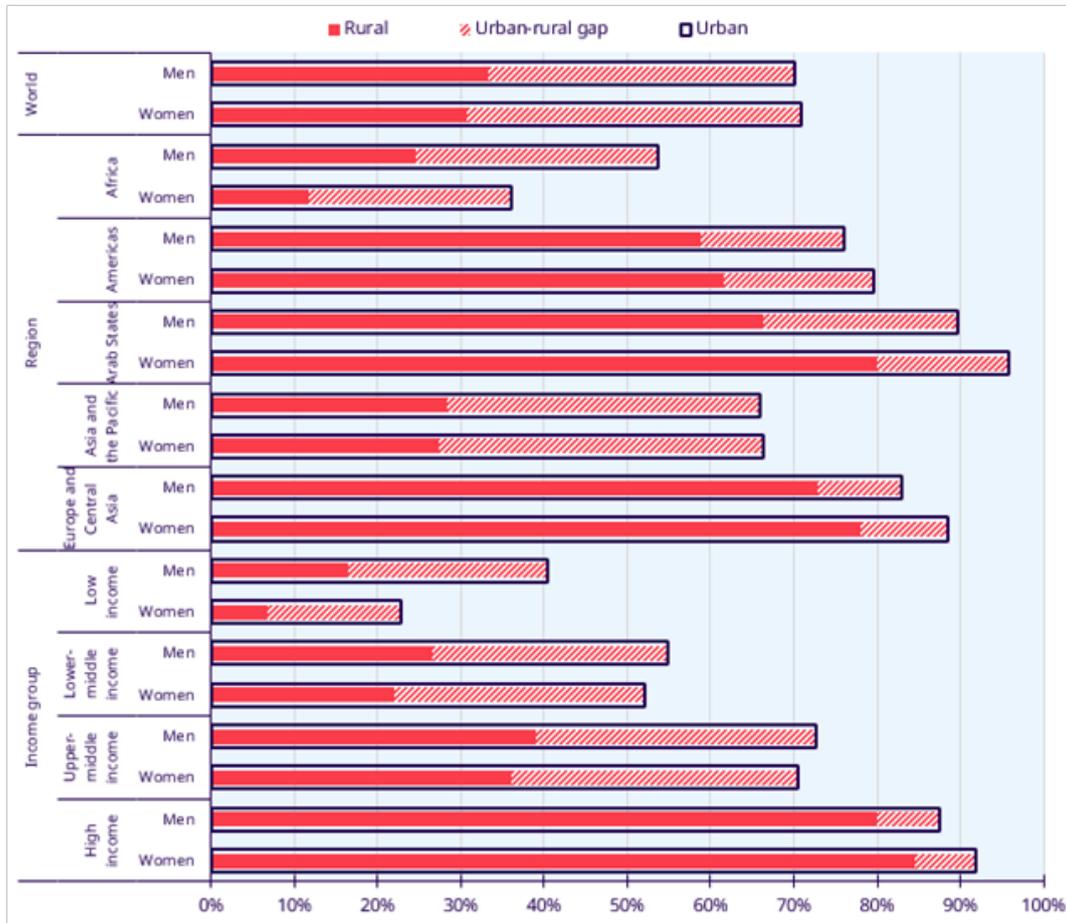
Rural areas are facing numerous challenges. Noteworthy amongst these are challenges associated with a high rate of female members from rural areas that are not in employment, education, or training (36% in rural and 26% in urban areas compared to male members 14% in rural and 14% in urban areas) (Figures 30 and 31).

Figure 30. Global labor underutilisation composition in rural and urban areas by sex (2019) (LEFT) AND Participation of the world's young population in employment, education or training in rural and urban areas by sex (2019) (RIGHT)



Source: ILOSTAT, ILO modelled estimates, November 2019

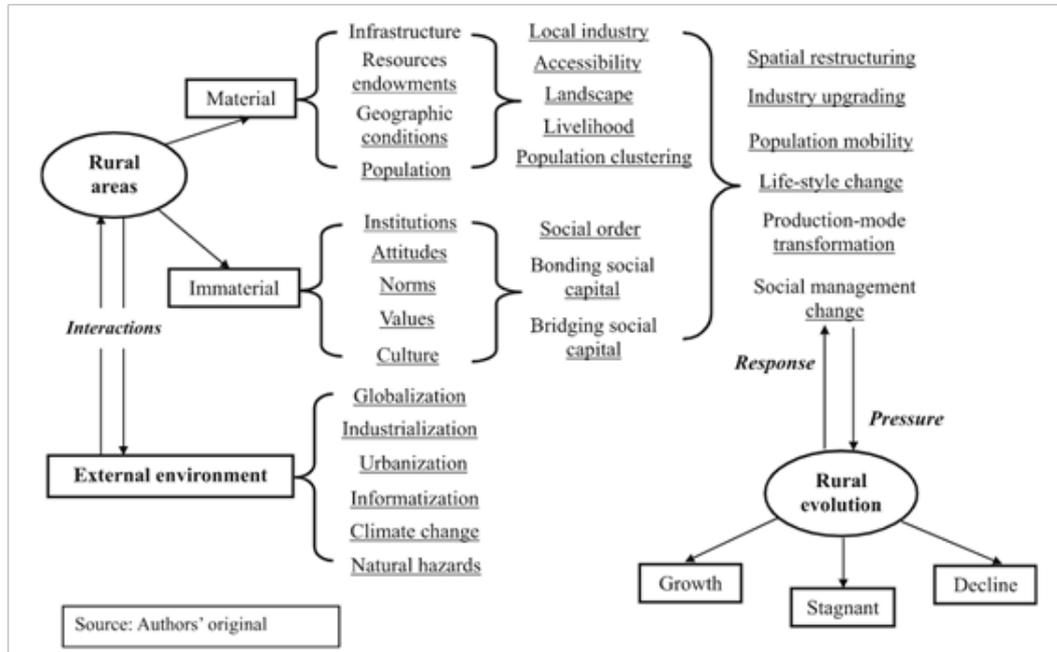
Figure 31. Share of employees in total employment by sex and rural/urban areas (2019)



Source: ILOSTAT, ILO modelled estimates, November 2019

Rural areas are complex units (Figure 32), consisting of many elements with multiple interactions where the robustness of rural communities depends on the sustainability of many facets such as economy, population, social networks, spatial factors, agriculture, culture, land use, ecology and government policy, etc. (Epps, 1995; Troughton, 1995). This indicates the complexity of rural areas and intensifies the assertion that there is no single “model” for sustainable rural development (Bryant et al., 1996).

Figure 32. Complexity of rural areas



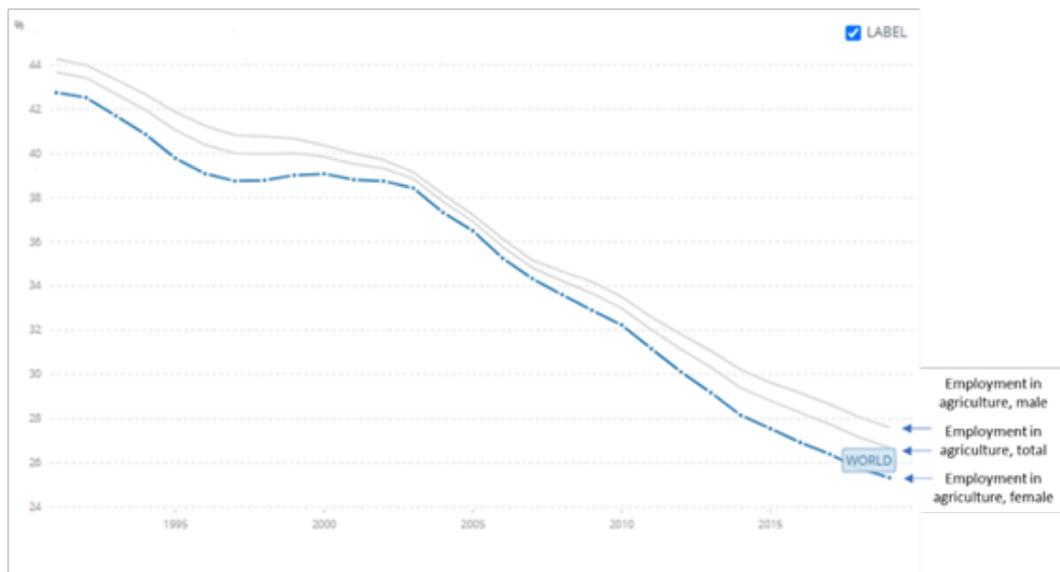
Agriculture has always played an important role in rural development. In developing countries, women make up 45% of the agricultural labour force, ranging from 20% in Latin America to up to 60% in parts of Africa and Asia. But there are some imbalances (inequalities) amongst the female and male workers, i.e., in developing countries in Africa and Asia, and the Pacific. There are also some important findings from more engaged female farmers (FAO, 2016):

- Women typically work 12–13 hours more than men per week;
- Women are less likely than men to own or control land, and their plots often are of poorer quality;
- Less than 20% of the world’s landholders are women but if women farmers had the same access to resources as men, the number of hungry people in the world could be reduced by up to 150 million due to productivity gains;
- Women reinvest up to 90% of their earnings back into their households – that’s money spent on nutrition, food, healthcare, school, and income-generating activities – helping to break the cycle of intergenerational poverty.



However, there are some global concerns, such as the number of farmers worldwide strongly decreasing (Figure 33).

Figure 33. Employment in agriculture, female (% of female employment), male (% of male employment) and total (% of total employment) (modelled ILO estimate)



Source: ILOSTAT, ILO modelled estimates, January 2021

Given the clear decrease in the number of farmers across the world, there is an urgent need to diversify rural livelihoods and decrease overall dependency on agricultural output (Walker & Salt, 2006). Rural livelihood diversification indicates the process by which rural households construct an increasingly diverse portfolio of activities and assets in order to survive and improve upon their standard of living (Ellis, 2000). For individual farmers, diversification means that they diversify their farm activities and that they are not solely dependent on primary agricultural production so that their income would fluctuate less, thereby increasing their economic persistence (Darnhofer, 2010). Agricultural diversification includes multifunctional agricultural activities such as diversified agricultural products, agro-product processing, and agriculture tourism. In developed countries, rural diversification is not only about complementing farmers' activities with new, non-agricultural activities such as agro-tourism; it is also about



creating a new foundation for the local rural economy, in which local agriculture merely is a part of the mix. Some examples are provided below.

Swedish village of Åre and Åre's "smart specialisation" strategy

This is not only Scandinavia's leading ski resort but also an all-year-round destination that offers a mix of sports, outdoor life and entertainment. Åre's "smart specialisation" strategy has meant a focus on innovations related to sports and outdoor activities, and besides being a tourist destination, it has become a hotbed for start-ups and corporate ventures in the sports technology sector. Moreover, the growth of tourism has also meant an increase in demand for locally produced agricultural products. New actors in new industries with new networks have resulted in a comprehensive transformation of the village's social capital, not least regarding the external, bridging links, but also the entrepreneurial attitudes which have been there for generations (Nordin & Westlund, 2009).

Xiaoguan village of Yangyuan county and share-based cooperatives

Xiaoguan village, which used to be challenged by depopulation due to its backward local economy, initiated a share-based cooperative system for mutton breeding and greenhouse vegetable industries. The village committee, impoverished households, ordinary households and wealthy households receive dividends on their shares in terms of the capital, land, labour and other production elements they have contributed with. By way of this system, local peasants benefit from diversified income sources and people become bound to the interests of all the households of Xiaoguan village. Consequently, some migrant workers returned to Xiaoguan and joined the local industries in the period following the initiation of the program. A strong sense of mutual aid and solidarity is observed.

Women entrepreneurs and women's entrepreneurship, in general, are gaining in importance year by year, and have been recognised as a source of new business opportunities, as well as a means to achieving economic growth and development (Acs et al., 2009; Langowitz & Minniti, 2007). In addition to the basic creation of new business opportunities, economic growth and development, women in entrepreneurship also contribute to the diversification of business activities within economic systems (Verheul et al., 2006), and also represent an opportunity for women to express and realise their full potential (Eddleston & Powell, 2008). Numerous factors influencing female



entrepreneurship have been identified in the literature (Figure 34), such as: human capital (education and work experience) (Carter & Williams, 2003; Boden & Nucci, 2002); market conditions and market discrimination (Salmenniemi et al., 2011); cultural problems (Ufuk & Özgen, 2001; Yetim, 2008); a lack of funds (Manolova et al., 2006); and, belonging to different formal and informal networks (Manolova et al., 2007; Yordanova, 2011; Aidis et al., 2007). A detailed overview of why females may have been neglected, and how their approaches to farming may differ, is presented in Schmidt et al. (2021). Some of the factors which influence entrepreneurial potential are:

- The ‘underdog’ theory of entrepreneurship. Miller and Le Breton–Miller (2017) proposed that ‘negative personal circumstances of an economic, sociocultural, cognitive, and physical/emotional nature may have a ... powerful role to play in getting people to become effective entrepreneurs’.
- Many adults are ethnically, emotionally, and socially disadvantaged and so cannot readily find employment (De Clercq & Honig, 2011). Instead, they seek more control over their work through self–employment. In particular, Miller and Le Breton–Miller (2017, 9–10) note that migrants are especially prone to entrepreneurship since they are disadvantaged in the labour markets to which they migrate (Vandor & Franke, 2016).
- Childhood environments shape subsequent cognitive and non–cognitive abilities which, in turn, influence their suitability for employment and entrepreneurship (Heckman et al., 2013; Heckman, 2006). Scholars of adolescent development show that such hardship forces individuals to become more self–reliant, resilient, and resourceful, each of which is a quality that explains and predicts the propensity for entrepreneurship (Baker & Nelson, 2005; Caspi et al., 2003; Cheng et al., 2021).



Environmental concerns of young female farmers: a short literature review¹³

Ilkay Unay-Gailhard¹⁴, Štefan Bojnec¹⁵, Tereza Pilarova¹⁶

Do women farmers involved in farming decision-making exert tendencies towards more agri-environmental farming practices than male farmers? This question has been widely investigated in the past, and has documented mixed results within the literature (Egri, 1999; Burton et al., 2003; Borsotto et al., 2008; Best, 2009; Mala and Maly, 2013; Burton, 2014; Dinis et al., 2015; Franzen et al., 2016; Boyer et al., 2018; Brown et al., 2019; Brown, 2019; Barnes et al., 2022).

Several studies showed that male respondents have more positive ecological attitudes and they have a higher likelihood to adopt sustainable technologies compared to women farmers (Franzen et al., 2016; Brown et al., 2019; Brown, 2019; Barnes et al., 2022), whereas other studies found that women farmers are more prone to adopt sustainable practices (Burton et al., 2003; Hall and Mogyorody, 2007; Davey and Furtan, 2008; Tiffin and Balcombe, 2011; Mala and Maly, 2013; Dinis et al., 2015; Boyer et al., 2018), or revealed no effect of gender on the adoption of sustainable practices (Mzoughi, 2011; Salazar and Rand, 2016; Fernandez, 2017; Pilarova et al., 2018; Salazar et al., 2019).

1. Gender dimension

The recent literature review studies by Glazebrook et al. (2020), Dunne et al. (2020), and Ball (2020) provides solid ground on the question. Overall, these recent review studies conclude that women farmers demonstrate greater sensitivity towards agri-envi-

¹³ This short summary is a part of a published studies "Unay-Gailhard, I. and Bojnec, S., (2021). Gender and the environmental concerns of young farmers: Do young women farmers make a difference on family farms? *Journal of Rural Studies* 88, pp. 71-82.", and "Pilarova, T., Bavorova, M., & Kandakov, A. (2018). Do farmer, household and farm characteristics influence the adoption of sustainable practices? The evidence from the Republic of Moldova. *International Journal of Agricultural Sustainability*, 16(4-5): 367-384."

¹⁴ UNESCO Community, Leadership, and Youth Development, The Pennsylvania State University (PSU), USA and Leibniz Institute of Agricultural Development in Transition Economies (IAMO), Halle (Saale), Germany; unaygailhard@iamo.de

¹⁵ University of Primorska, Faculty of Management, Koper, Slovenia, stefan.bojnec@fm-kp.si or stefan.bojnec@siol.net

¹⁶ Czech University of Life Sciences, Department of Economics and Development, Kamycka 129, 165 00, Praha-Suchdol, Czech Republic, pilarovat@ftz.czu.cz



ronmental farming practices and are more involved with sustainable farming practices, such as organic farming, and alternative agriculture practices relative to male farmers.

Studies from European rural regions reported that in comparison to male farmers, women farmers show a significantly higher intensity towards the adoption of organic horticulture technologies in the UK (Burton et al. 2003); the adoption of intense organic farming practices in Italy and Portugal (Dinis et al. 2015); and, applying for agri-environmental government subsidies in Italy (Chiappini and De Rosa 2011).

2. Age dimension

Beyond the gender dimension of environmental concerns amongst farmers, the age dimension is often documented as another important demographic characteristic.

Previous studies have documented that younger farmers are usually more progressive and flexible in the adoption of new sustainable technologies compared to their older counterparts who tend to be more comfortable with traditional practices (Davey and Furtan, 2008; Alcon et al., 2011, Salazar et al., 2019). Moreover, older farmers are more risk-averse, use fewer sources of information than their younger colleagues, are less willing to experiment, have shorter planning windows, and are more focused on the financial performance of their farms (Tiffin and Balcombe, 2011; Baumgart-Getz et al., 2012; Brown et al., 2019). At the same time, young farmers may be more familiar with new technologies as they have better knowledge to optimally operate information-intensive technologies and, therefore, are more willing to adopt new technology (D'Antoni et al., 2012; Barnes et al., 2019).

3. Young women farmers and agri-environmental farming practices

Within the literature, several studies reported that, relative to young male farm managers, young women farm managers show higher interest in implementing agri-environmental farming practices on their farms (Boon et al. 2010; Laple 2012; Burton 2014; Briz et al. 2019; Chatzitheodoridis and Kontogeorgos 2020; Perez et al. 2020; Unay-Gailhard and Bojnec 2021).



For example, a study from Greece (Chatzitheodoridis and Kontogeorgos, 2020) reported that urban youth (particularly females) who immigrate to rural regions show pro-environmental behaviours by getting involved with organic farming. Another study from Greece found that young women farmers are more concerned about information and education than about precision agriculture (Kountis et al., 2017). In Ireland, Läßle (2012) reported that organic farmers are younger and more likely to be women relative to conventional farmers. In Spain, a study by Pérez et al. (2020) demonstrated that young women tend to incorporate innovative strategies more effectively into their working routines. A study on Danish forest owners notes that young women farmers show more interest in participating in agri-environmental programs (Boon et al., 2010). In Slovenia, a study by Unay-Gailhard and Bojnec (2021) investigated agri-environmental concerns of young farmers vis-à-vis adoption in voluntary participation in agri-environmental measures (e.g., subsidies for organic farming, subsidies for integrated production, and subsidies for the preservation of crop rotation), and found a stronger tendency with young women farmers towards environmentally friendly farming activities. A study from Lithuania revealed that young women farmers are more prone to adopt innovation, and that they have a higher interest in expanding activities beyond the traditional agricultural domain in comparison with men. This has been attributed to their higher education attainment level (Balezentis et al., 2021).

Even though we have still little knowledge about these young women farmers, recent findings give some insights on the switching career identities from being a “farmer’s wife” to a farmer or a farm manager as more and more young women are entering agriculture by choice. Increasing numbers of young women farmers are constructing a modern farming identity, and ideological factors (e.g., pro-environmental attitudes) shape young women’s involvement in sustainable farming (Černič Istenič, 2015; Černič Istenič and Charatsari, 2017; Brandth, 2002; 2021; Adro and Franco, 2020; Perez et al., 2020; Sachs et al., 2016; Carter, 2017; Tsiaousi and Partalidou, 2021).

Policy initiatives under the European Green Deal are the main considerations of the European Commission for 2019–2024, and our short review notes that farms where young women farmers have decision-making power are more likely to respond to environmental policy targets (e.g., involvement in voluntary based agri-environmental programs).



COST Action CA18213
Rural NEET Youth Network:
Modeling the risks underlying rural
NEETs social exclusion



WORKING GROUP 4
Rural NEETs and
Sustainability
COST Action CA18213:
RURAL NEET YOUTH

Rural NEETs and Sustainability - Diverse,
Multisectoral, and Multifunctional
Environments Shaping Rural Areas and
Daily Life

If policies intend to focus both on age and gender aspects to improve the adoption of agri-environmental farming practices, they may likely be faced with less resistance by farms that are managed by young women farmers. Even though European farms managed by women farmers ongoingly display a masculine structure (with high involvement of spouses in farm work), the proposed age and gender-aware agri-environmental policy design for young farmer supports requires further consideration.



EMPLOYMENT OPPORTUNITIES

Role of community forestry in rural development and youth engagement

Yasar Selman Gultekin¹⁷

The ecotourism and entrepreneurship studies are remarkable for the rural society (Okan et al. 2016; Salman et al. 2021; Gültekin, 2022). Community forestry projects have shown promise to reduce rural poverty, improve the position of youth, improve re-forestation, potentially offset carbon emissions, and contribute to rural development. However, many such projects have failed, either partly or completely. Agroforestry has been touted as a sustainable agricultural system over conventional agriculture and forestry, conserving biodiversity, and enhancing ecosystem service provision whilst not compromising productivity (Torralba et al., 2016). Erosion control, biodiversity, and soil fertility are enhanced by agroforestry: indeed, the effect of agroforestry on biomass production is negative, whilst there is no clear effect on provisioning services (Torralba et al., 2016). This report uses rapid assessment to identify the 50 most cited articles in the Web of Science database whilst using the keywords “rural” and “forestry” to identify critical success factors in community forestry. Five factors (Baynes et al., 2015) which affect the success of community forestry are:

- Socio-economic status and gender-based inequality;
- Secure property (tree and land) rights;
- Intra-CFG (community forestry groups) governance;
- Government support to CFGs;
- Material benefits to community members (e.g., timber, or non-timber forest products, employment, or payment for timber rights).

¹⁷ Düzce University, Faculty of Forest, Forest Engineering Department, selmangultekin@duzce.edu.tr



Regardless of the identified problems, community forestry can still be a good practice for tackling the rural NEET problem and engaging them in the labour market and/or additional education, whilst new and innovative business models (or practices) such as eco-farming, World Wide Opportunities on Organic Farms (WWOOF), insect farming etc., can be an attractive employment opportunity for both the youth and the food industry in rural areas. The ecosystem service contribution of trees to food production is important. In particular, non-wood forest products (NWFPs) can be potential real-world entrepreneurship topics i.e., innovative business models. Even though most cited papers understand limiting factors, there are nonetheless very limited innovative business models found in these articles. To that end, a participatory and holistic approach is needed for rural NEETs. The empowerment concept is another issue facing rural NEETs. Much deeper and more rigorous research and focus on rural, forest, and NEET topics is required. Detailed research is required for stakeholder analysis, stakeholder management, and conflict management issues in terms of the rural NEET issue. "Social capital" can be considered as a novel topic in the study of rural NEETs and in particular, leadership and entrepreneurship concepts need to be interconnected. According to contemporary studies, there are strong relations between sustainable forest management and rural development concepts (Okan et al. 2016; Gültekin, 2019; Gültekin, 2022). The ecosystem services concept can be focused on exploring innovative business models such as eco-entrepreneurship within new agribusiness ventures and other related forest business approaches.



The Role of Sustainable and Neo-endogenous Development in Creating the Future Prospects for Vulnerable Rural Youth and rural NEETs

Anita Busljeta Tonkovic¹⁸

It is the responsibility of every society to provide support and resources that will enable and facilitate young people's integration and understanding of their role in the community in which they live and to whose development and progress they contribute. Amongst young people, there are groups that, due to the spatial-geographical and economic conditions of the area in which they live, do not have equal prospects for development and success. These are young people in rural areas, amongst whom there are additionally marginalised groups such as national and ethnic minorities and groups of NEET young people. These groups are threatened with long-term unemployment, and accordingly, they are deprived of other opportunities for personal development and success.

As a result of the impossibility of finding a job, young people from rural areas move to urban zones. Whilst young people from Croatia, for example, similarly to young people from other Eastern and South-eastern European countries, migrate to the more developed countries of the Union, those who remain in rural areas are often part of the aforementioned marginalised groups. Focusing on these young people as social and human capital holders, here we will discuss the role of sustainable (SD) and neo-endogenous development (NED) in creating prospects for these vulnerable rural youth.

Namely, the theory of sustainable development, formulated in the 1980s, in its essence carries the environment as the basis for the establishment of all other development plans. This theory carries two important prerequisites for development planning namely, the capacity of the natural environment and the needs of the poorest (Gale, 2022). However, contemporary development policies, which in most cases refers to the concept of SD – and which utilises this term frequently, both in terms of theoretical constructs and attempts at practical action – are characterised by a strong top-down implementation effort. The EU's rural development policy implementation tool, the LEADER program, works in this way to some extent. However, during the past de-

¹⁸ *Ilvo Pilar Institute of Social Sciences, Regional Center Gospic, Croatia, anita.busljeta.tonkovic@pilar.hr*



cedes, members of the European Union who are not core countries in the sense of the main development actors, are beginning to find ways to adapt these policies, as much as possible, to their own social, cultural and economic circumstances, in order to grow their own social and human and ultimately cultural capital as successfully as possible. This has functioned according to those member states whose overall socioeconomic standards and development policies led to programmes like the LEADER initiative being created. This includes countries like Croatia, Slovenia, the Czech Republic, Slovakia, and especially local communities in rural areas of said countries. Research conducted in Croatia in 2020 highlights that one of the key actors in the implementation of the bottom-up approach is the civil sector, specifically civil society associations which carry out their activities in rural areas (Busljeta Tonkovic & Pudjak, 2021).

On the other hand, the theory of neo-endogenous (rural) development follows in the vein of authors such as Lowe et al. (1995), who believe that in this process of coordinated rural development a hybrid was created which functions somewhere between endogenous and exogenous models. They will say that development (as such) cannot be generated exclusively from the local level, nor imposed by the regional and/or national and international (EU) level. Rather, synergy and meeting of bottom-up and top-down approaches are important. Namely, it is the dynamic interaction of local areas both amongst themselves and their interaction with the wider political, and institutional network, economic opportunities, and the relationship with the natural environment that is especially important. Ray (2001), using Giddens' dictionary, explains that NED essentially carries a positive assumption which claims that rural areas that are currently in a disadvantageous position can, with the help of activating development actors, turn the situation around to their advantage. Historical circumstances, as well as globalisation processes, should not be seen in the sense of givens which lead a certain rural/peripheral area to a permanent state of peripheralisation and decay. The basis of the concept is that the given data and processes should be viewed in terms of ideological constructs that can be translated into advantages for the conceptualisation of specific local development guidelines. NED can also be understood in terms of bottom-up, participatory, or joint development (Ray, 2001:2). This concept, potentially applicable to any sub-national (both rural and urban) geographical area, is shaped through three basic assumptions. Firstly, the concept suggests that development is best stimulated by focusing on the specific needs of a specific rural territory and its communities wherein the focus shifts away from the classical analysis of needs within individual sectors of the economy. Secondly, development and overall economic activities are reorganised



in such a way as to valorise and use local resources, natural and human, in order to retain as many potential benefits as possible within the local area. Thirdly, development is contextualised by focusing on the needs, capacities, and perspectives of the local population. Namely, this development model also assumes a kind of ethical dimension by emphasising the principles and processes of local participation in the design and implementation of a particular action, especially through the adoption of cultural, environmental, and common values as part of a particular development intervention (Ray, 2001: 2-3). Here we see how the theoretical concept strongly supports the possibility of action by local actors. This includes young people (the bottom-up approach), i.e., their needs (in economic, social, and cultural terms) and development visions should meet visions of development and progress of the key local, regional, and state developmental actors (the top-down approach). This is the place where the bottom-up and top-down approaches should meet.

Marango et al. (2021:18-21) have clarified the relationship between the theories of sustainable and neo-endogenous development. The well-known definition of sustainable development (from 1987) speaks of the needs of the present in a way which reflects the needs of future generations. More specifically, it essentially requires long-term planning in order to repeatedly achieve a certain balance between economic growth, social justice and the preservation of natural resources (i.e., the top-down approach). The theory of neo-endogenous development is formed during the process of implementing the rural development program within the context of the European Union. The concept itself represents an approach to local development based on the action of local development actors and local development initiatives (i.e., the bottom-up approach), but also integrated into external networks and processes. This is precisely where the point of contact between the concepts of SD and NED lies. The same authors also highlight that for almost thirty years, these two conceptual ideas of development were integrated into the UN's Global Development Goals. They are also integrated into the European cohesion policy itself (Community-led Local Development - CLLD), as well as into the development policies of the OECD where we speak of rural development being concentrated on meeting the needs of places (place-based rural development). Furthermore, NED is predicated upon the principle that supra-local factors are crucial for rural development, but that concrete, local rural areas should retain their potential since this enables them to shape their future (Ray, 2001; Ray, 2001a; Marango et al., 2021: 118). Specifically, local community resources (either natural or human) i.e., local social, human, cultural, and natural capital within the concept of NED, are oriented



towards development which itself is closely connected to the economic dimensions of SD. However, the benefits of such development remain within the local space and local community and spill over to other SD dimensions. Therefore, NED implies the control of the use of resources by local development actors and the local community: namely, it is development-oriented towards the local community and both initiated and carried out by local individuals (Marango et al., 2021: 118).

Although SD and NED (as outlined above) represent complementary concepts, they were created within different historical contexts. However, since the onset on the 21st century the primary issue has been the need to preserve/protect the environment due to the impacts of climate change versus the need for the survival of local European (i.e., rural) communities. Consequently, one approach is oriented towards global concerns, the other to the local. But is it really so? Authors like Ray (2001, 2001a), Tolon – Becerra et al. (2010), Atterton et al. (2011), Galdeano – Gómez et al. (2011) and Marangoa et al. (2021) agree that NED is based on the idea that local factors of development should be recognised and respected as a starting platform in creating a sustainable future. It is also the starting point where the joint action of the theoretical concepts of NED and SD emerges. The basic premise of the NED is the recognition of the specific rural area and local communities as the main actors in shaping and improving overall socioeconomic conditions. The human, social, cultural, and especially natural capital of a certain community in a specific rural area are considered key components of development. In brief, within the NED, local initiatives represent a segment which can form an ad hoc concept of a specific development project, based firstly on their own experiences and then on the vision and aspirations they want to achieve. A finely shaped and implementable development plan is created at the point where bottom-up and top-down approaches interact (Bušljeta Tonković, 2017). In this sense, these two theoretical concepts are an ideal training ground for the creation of public policies that will focus on the empowerment of marginalised groups in rural areas, and of which young people constitute the fundamental development capital.



Making Rural Areas More Attractive to Youth – Application of Industry 4.0 Tools

Aleksandra Nikolić¹⁹, Alen Mujčinović²⁰

Rural areas across Europe face multifaced and complex challenges: climate change, depopulation (fuelled by steady rural-urban migrations), poor infrastructure, and transformation of the local and global agri-food system are the most prominent. Such a situation shapes the deterioration of rural areas, thereby failing to ensure many prestigious, well-paid jobs which, in turn, limits the possibilities to make a career that is necessary to retain and attract the young population (Vaishar et al., 2020). It means that existing, traditional public/private policy interventions fail to tackle the issue of social capital development/enhancement. However, this is crucial to restoring the vitality and attractiveness of rural areas.

Simultaneously, a new technology called “Industry 4.0” is fuelling transformation and helping to build a new, integrated Cyber-Physical-Social Environment which brings people, markets, and working spaces together into one new cyberspace thus rendering location less important. Therefore, the EU Commission has stressed that ‘digital technologies have the potential to revolutionise agriculture by helping farmers work more precisely, efficiently and sustainably’ (European Commission, 2021) thereby making farming jobs more attractive to younger generations, but also offering young rural populations the opportunity to take more attractive “urban” jobs without leaving rural areas. Thus, the objective of this paper is twofold: (i) to raise awareness about the application of Industry 4.0 tools to create new and attractive business ventures for youth, thus reversing the negative migration trend of migration as well as addressing the aforementioned challenges of agri-food system; and, (ii) to bring attention to opportunities that will be built by new public policy approaches i.e., “smart” specialisation strategies (S3) which combine industrial, educational and innovation policies.

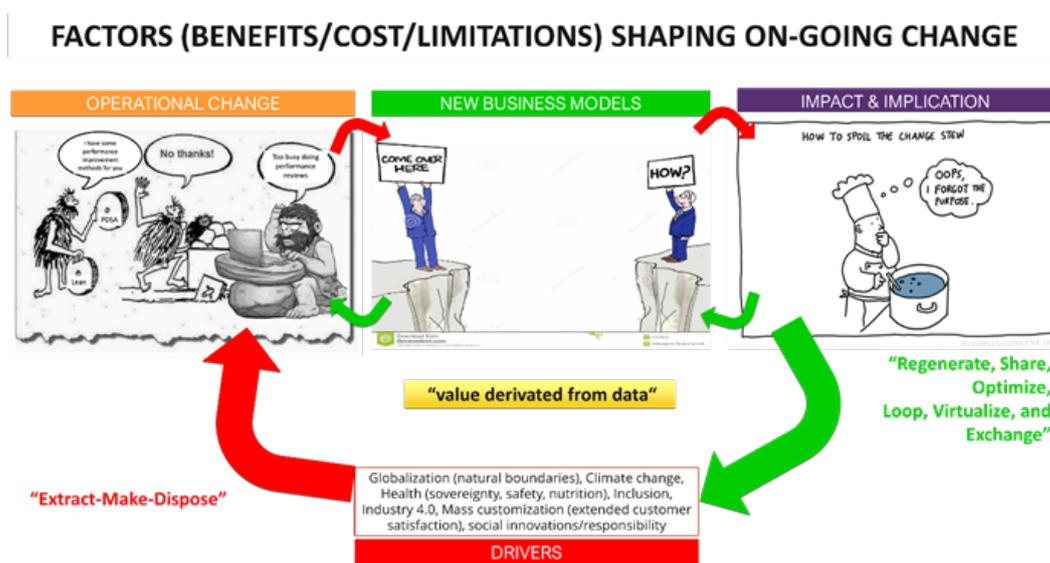
The systematic literature review (SLR) method was used to select the most relevant and high-quality studies from previous literature as it is recommended by Zhaoa et al.

¹⁹ University of Sarajevo, Faculty of Agriculture and Food Sciences, Zmaja od Bosne 6, 71 000 Sarajevo, Bosnia and Herzegovina, a.nikolic@ppf.unsa.ba

²⁰ University of Sarajevo, Faculty of Agriculture and Food Sciences, Zmaja od Bosne 6, 71 000 Sarajevo, Bosnia and Herzegovina, a.mujcinovic@ppf.unsa.ba

(2019). It aims to select factors behind the ongoing radical transformation of the global food chain. This method is used to focus discussion on discovering what emerging technologies “do” by answering the following questions: (i) what are the challenges (induced operational changes); (ii) what are the opportunities (new business models); and, (iii) which impacts and implications does new technology induce?

Figure 35. Technology enriched agrifood system



The new “Technology enriched agri-food system” merges physical, social and digital reality thereby building a digital twin in which a major part of business operations are performed (Figure 35). Such technologically enriched agri-food systems are capable of self-optimisation, self-structuring, and self-nutrition. To that end, they strive to achieve the following outcomes: (i) a high level of sustainability and resilience (driven by policy and legislation pressure); (ii) increased productivity and efficiency whilst optimising externalities (driven by scarcity of resources and changes of customer behaviour patterns); (iii) high levels of inclusiveness (enabling small farmers and SMEs to have partner positions); (iv) high levels of benefits from redistribution across and between all actors. A digital twin of a physical agri-food systems brings people and resources together in one inclusive space thereby making location irrelevant and enabling diversification of economic activities shaped by the ability to offer tailor-made services and products that answer not only customer, but also social needs. In such an inclusive digital space

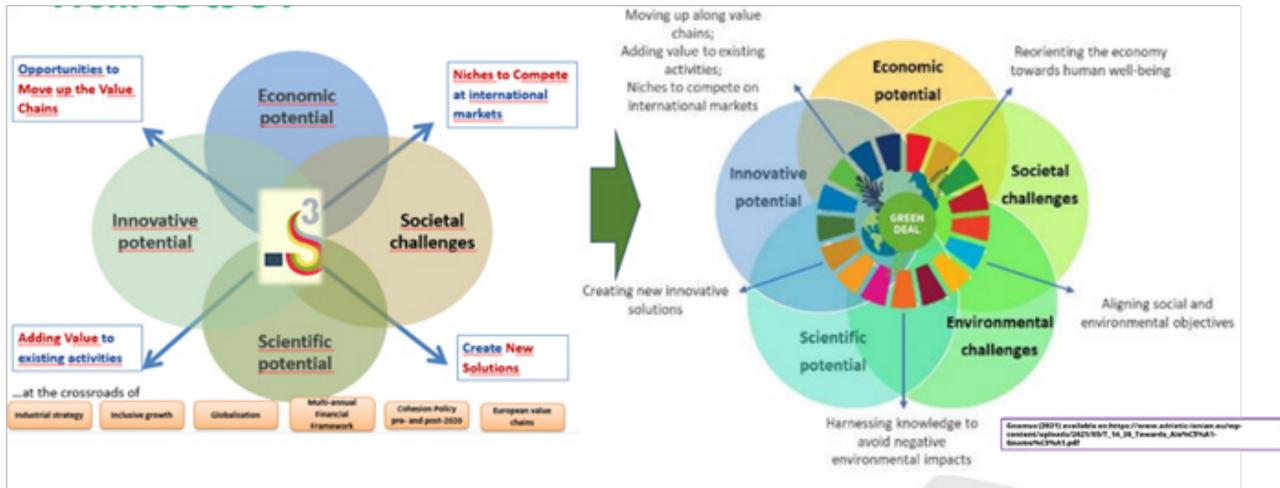


there is no territorial division; rather, only an urban–rural continuum exists. It offers an attractive and exciting working environment for rural/urban workers by addressing one of the most important challenges, the aging population and lack of a skilful working population in rural areas.

To fuel the development of the technology–enriched agri–food system in the Balkan area, it is necessary to use innovative and tailored policies such as the Smart Specialisation Strategy (S3). It is an innovative, modern bottom–up approach aimed at strengthening existing scientific, innovative and technological endowments of the territory. Priority areas related to agriculture and food include: consumer involvement and their extended satisfaction; high–tech farming; traceability; sustainability; big data; and, nutritional ingredients as well as key enabling technologies (Industry 4.0) for agri–food systems. However, it is important to outline those three main factors which can hamper the transformation of agri–food systems and rural areas more generally, namely: (i) poor investment and development of infrastructure (not only digital); (ii) undeveloped and weak social capital in rural areas; and, (iii) lack of consistency of public policies and complex institutional settings. According to the literature, (Martiola, 2012; Li et al., 2013) economic logic, as well as monetary and technological incentives alone cannot provide sufficient incentive for individuals to take action when systems are complex and risk is high. Furthermore, a lack of agency and political activism may prove decisive – especially regarding the disruptive nature of digital platform capitalism, which requires rapid, coordinated action on part of the agroecological/organic community (Hilbeck et al., 2020). Therefore, public policies and interventions have to be consistent and tailor–made to successfully tackle the problem of undeveloped social capital and to connect, engage, and empower young people (Figure 36).



Figure 36. Framework for public policies and interventions in youth development





Roles of eco-farms and social enterprises for rural NEETs

Milojka Domajnko²¹ & Štefan Bojnec²²

Social enterprises have been developed in different economic activities and regions in Slovenia, and these are the focus of this analysis. One of the advantages of social enterprises can be to integrate and employ vulnerable and socially excluded young people who cannot be integrated into the competitive labour market. However, it can also provide opportunities for the development of agriculture and agricultural-related activities in rural areas. We focus on three case studies in Slovenia that are related to eco-farming in a typical agricultural activity and agriculture service cooperative engaged in marketing with farm inputs and farm outputs, as well as the processing of agricultural produce.

1. Cooperative Dobrina

The cooperative Dobrina promotes fair trade for local producers and brings together small farmers who produce organic fresh fruit, vegetables, and traditional local food. The cooperative implemented activities to increase its network of producers and to encourage new customer segments, including public schools, to procure locally produced quality food. Great importance is placed on building and maintaining good relations between customers and producers whilst also operating transparently.

2. Social farm Korenika

The Korenika social farm is recognised as an example of good practice in the field of social entrepreneurship, and employment of the disabled and persons from other vulnerable social groups. They have a system of organic production and processing of food, so they grow crops, herbs, fruits, and vegetables on more than 20 hectares. Korenika's mission is to cultivate dignity, respect, and self-esteem, both amongst employees and other people.

²¹ Development Agency of Slovenske gorice, Lenart v Slovenskih goricah, Slovenia, milojka@rasg.si
or milojka.fekonja@gmail.com

²² University of Primorska, Faculty of Management, Koper, Slovenia, stefan.bojnec@fm-kp.si or
stefan.bojnec@siol.net



3. Wine cooperative Haloze

The cooperative connects winemakers for a joint performance on the market. This allows them to reduce the cost of grape production and processing of wine, which makes it possible to achieve higher market prices. At the same time, there is a perspective for young people in the border areas. They operate according to the principles of social entrepreneurship and connect winemakers in the border areas.

To summarise, we clearly illustrate the important roles of social enterprises in eco-farming, marketing of farm inputs and farm outputs, and processing of agricultural produce for integration of NEETs in the labour market and employment in remote rural areas. These positive experiences can also be transferable to other countries that are facing similar disadvantages in rural areas; however, they also generate opportunities for the development of social enterprises related to eco-innovation in farming, marketing, and the processing of agricultural and food products.



POLICY RESPONSE

Models to analyse and explain general policy response in terms of rural development

Štefan Bojnec²³

Different possibilities for financing via European Union (EU) funds are available for rural areas and rural development. The successful absorption of EU funds can depend on different factors such as the ability to co-finance and receive refunds, human resources required in project preparation, and actual implementation of projects. In new EU member states, this can be also biased to a lack of skills and competencies of project developers to comply with the complexity of procedures, and problems with assuring project co-financing and time lapse in reimbursement.

Agricultural economics literature focuses particularly on instruments and measures of the Common Agricultural Policy (CAP) and its two pillars: Pillar I for direct payments and Pillar II for rural development. This comes in various forms: support for farming in less favoured areas; support for voluntary adoption of agri-environmental farming practices; and, support for farm and restructuring in rural development. For the renewal of farms, labour can be a particularly important support for young farmers. This can be one of the measures fostering farm entrepreneurship with the exiting of elderly farmers and entering younger, often more educated and flexible labour.

Different models have been developed in the literature in order to analyse and explain policy responses in rural development. Sánchez-Zamora et al. (2014) analysed determinants of successful territorial dynamics in rural areas of Andalusia during different stages of economic growth and particularly the 2008 economic crisis. They found that different aspects of economic, human, natural, and social capital can drive successful territorial dynamics given the useful information available for the design of public rural development policies. These include: economic diversification (rural tourism); agriculture (CAP funding, young farmers, and organic production); access to services

²³ University of Primorska, Faculty of Management, Koper, Slovenia, stefan.bojnec@fm-kp.si or stefan.bojnec@siol.net



(infrastructures and facilities); demographics (foreign population); natural resources (Natura 2000); and, governance (rural development funding management). Territories with more stable factors fared better with the consequences of the economic crisis as pre-resilient territories in terms of resources and capacities.

Unay-Gailhard and Bojnec (2019) investigated the potential for CAP agri-environmental measures to create green jobs in the agriculture sector using the green economy experience of Slovenia. They examined the heterogeneous impacts of the green economy measures related to the type of farming and noted significant positive effects of agri-environmental measures on large dairy farms both in family labour and field crop farms vis-à-vis hired labour. Garrone et al. (2019) and Bojnec and Fertő (2022) analysed the impact of different types of CAP measures on agricultural and farm employment. They found that different types of CAP subsidies have different impacts on different segments of farm employment. Pillar I subsidies are likely to be more important than Pillar II subsidies in terms of saving or creating farm employment.

The rural NEETs are not a homogenous group (Bojnec and Petrescu, 2022). They can be divided according to different criteria, for example the level of education, gender, and other socio-economic and demographic criteria. Active employment policy measures and other labour market services can be used to target the most vulnerable and less competitive groups in the labour market. These include the long-term unemployed and first-time job seekers with also higher risk-of-poverty-rates and social exclusion problems.



The EU Youth Guarantee – A Quick Overview

Messaoud Lazreg²⁴

The Youth Employment Initiative is the main EU funding programme for facilitating the roll-out of the Youth Guarantee. It supports particular regions where youth unemployment is higher than 25%.

Currently, the Youth Guarantee is limited to those aged 15–24 only in Belgium, Denmark, Ireland, France, Luxembourg, Hungary, the Netherlands, Austria, Romania, and Sweden. In the other 17 Member States, it is open to the 15–29 cohort. The Youth Employment Initiative was launched in 2014 with a total budget of EUR 6.4 billion, targeted at young people not in employment, education, or training (NEET) across 20 Member States. As a first measure, the EU Commission proposed to increase the Youth Employment Initiative pre-financing to speed up the launch of the Youth Guarantee. In 2015, the Commission proposed a 30% advance payment to the eligible Member States.

The reinforced Youth Guarantee is a commitment by all Member States to ensure that all young people under the age of 30 receive a good quality offer of:

- Employment;
- Continued education;
- Apprenticeship;
- Traineeship (the new pillar of the initiative).

²⁴ Centre de Recherche en Économie Appliquée pour le Développement, Division: Agriculture, Territoire, et Environnement, Chef d'équipe: Dynamique des Systèmes de production agricole "DySPA", messaoud.lazreg@gmail.com



The ongoing actions

- A Bridge to Jobs – Reinforcing the Youth Guarantee is the newest initiative (2020) of the European Commission and It is an important contribution to the ongoing implementation of the European Pillar of Social Rights, working to strengthen the principle of “active support to employment”.

The Youth Guarantee has become a reality across the EU: however, challenges remain. Every year, more than 3.5 million young people receive a Youth Guarantee offer of employment, continued education, apprenticeship, or traineeship. The Youth Employment Initiative 2014–2020 receives almost EUR 9 billion of EU funding, and its aim is to ensure that all young people under 30 receive a good-quality offer of employment, continued education, an apprenticeship, or a traineeship within four months of becoming unemployed or leaving formal education. This ambitious headline target of the Youth Guarantee is maintained whilst the age bracket has been widened to include young people aged 25–29.

This approach acknowledges that school-to-work transitions and sustainable market integration are taking longer because of the changing nature of work and the skills in demand. The proposal also aligns with existing national practices: youth-related measures and programmes are generally available for young people up to 29 years of age, and the majority of Member States already consider young people aged 25–29 as part of the target group. Likewise, it recognises that during the economic downturn due to the COVID-19 pandemic, a sizeable share of 25- to 29-year-olds may fall into unemployment and require support. Other pertinent faces related to the Youth Guarantee are:

- **It includes a distinction between temporary NEETs** (often higher educated, sometimes with work experience, perhaps laid off because of the COVID-19 pandemic, or newly entering the labour market during the crisis after finishing their education) and longer-term NEETs (often from vulnerable groups, with low education attainment, requiring extra efforts). This allows for a more individualised and targeted approach for both groups as the latter is likely to need more support.
- **It reaches out and activates greater numbers of young people**, particularly women, of all backgrounds, making sure that none of them are left behind. This will be



done through improved and more targeted awareness-raising and communication campaigns, including addressing the challenges of rural or more remote areas and the most vulnerable social groups.

- **Strives to support young people in gaining work experience** and developing the right skills for a changing world of work, in particular those relevant to the green and digital transitions and those that correspond to the needs of the job market. It is therefore important to adequately accompany and advise youth on professional prospects and needs in the labour market.

More specifically, given that over 90% of jobs today require digital skills from the get-go, the Commission proposes to assess the digital skills of all NEETs who register by using the European Digital Competence Framework (DigComp) and the available (self-) assessment tools, thereby ensuring that, based on gaps identified, all young people are offered dedicated preparatory training in order to enhance their digital skills. The Youth Guarantee also:

- **Continues to support the employability of young people** in the short-term via several measures, namely: temporary short-time working arrangements; targeted wage subsidies; and, promotion of self-employment. Apprenticeships should also be supported since they train young people for jobs that are in high demand and thereby provide stable labour market integration. Their role during the economic recession needs to be strengthened so that more young people can take up such an offer. Furthermore, since early school leavers and low-skilled young people are at particular risk of becoming longer-term NEET, young people should be encouraged to complete their education and training and those who have left prematurely should be brought back to education or training. Less formal and more flexible forms of education and training can be useful in this case.
- **Safeguards the quality of offers by linking them to the European Pillar of Social Rights** and the European Framework for Quality and Effective Apprenticeships, Quality Framework for Traineeships, both of which have been developed since 2013, assuring, for instance, access to social protection, a reasonable duration of



probation periods, a clear written contract and/or the definition of working and rest periods. This should help make the offers taken up more stable in the long run.

- **Enhances the prevention of unemployment and inactivity of young people** through better tracking and early warning systems, cooperating proactively with, amongst others, the education sector and youth organisations.
- **Improves monitoring and data collection via a stronger focus** upon post-placement support and a call for improving the follow-up of young people after having taken up an offer to ensure their sustainable labour market integration.

The current proposal is structured around four phases (mapping, outreach, preparation, and offer). These are:

- a. In the mapping phase, more profound knowledge of the NEET target group being transposed to the specific geographical context of the service provider. This is done to identify individual NEETs and, crucially, those at risk of becoming NEETs. Through partnerships and early warning systems, young people could be supported before becoming unemployed or inactive, particularly when they are still in formal education and training.
- b. In the outreach phase, contact is made – and trust is built – with individual NEETs. The outreach phase comprises a comprehensive communication strategy to raise awareness amongst NEETs of the available support, and that pays due attention to the gender stereotypes and specific additional barriers face when reaching out to vulnerable groups.
- c. The fourth and final phase is the actual start of an offer of employment, continued education, apprenticeship, or traineeship. This represents an exit from the scheme.



Financial support for the implementation of the Youth Guarantee

The EU supports the implementation of the Youth Guarantee through substantial funding. Consider the following:

- **The European Social Fund Plus (ESF+)**, with a budget of **€99 billion**, will be a key EU financial resource to support the implementation of the Youth Guarantee in the 2021–2027 EU budget.
- All Member States will have to invest an appropriate amount of their ESF+ resources in targeted actions and structural reforms to support youth employment, education and training.
- An additional €47.5 billion is available under the **Recovery Assistance for Cohesion and the Territories of Europe (REACT-EU)** initiative for 2021–2023.
- The **YEI** and **ESF** will have invested at least €12.5 billion in youth employment and labour market integration measures over the 2014–2020 programming period, as well as over €36 billion in education and training measures with young people likely being the main beneficiaries of this funding.

Policy guidance

The EU provides policy support and mutual learning activities so as to help the Member States put in place the correct infrastructure and measures required to reinforce the Youth Guarantee. The network of **national Youth Guarantee coordinators** ensures there is a direct link between the Commission and authorities managing the Youth Guarantee in each Member State. Mutual learning activities enable the Member States to exchange knowledge and learn from each other. The Commission has developed a Youth Guarantee knowledge centre in order to encourage the sharing of knowledge. The Youth Guarantee has also been on the agenda of the European Network of Public Employment Services (PES), contributing to building PES capacities in order to provide services specifically tailored to young people. A study on the role of PES in the implementation of the Youth Guarantee shows success factors as well as key challenges.



The monitoring processes

The Commission follows the development and policy initiatives within Member States via:

- The European Semester .
- The Employment Committee (EMCO). The latest review took place in October 2019 and led to key messages endorsed by the EPSCO Council.
- Indicators developed by the EMCO Indicators Group and the Commission for monitoring at the EU level the implementation and results of the Youth Guarantee.
- **Yearly data collection** exercises which help to monitor the implementation of the Youth Guarantee in the individual Member States.



The Reinforced Youth Guarantee

Daniela Mamucevska²⁵

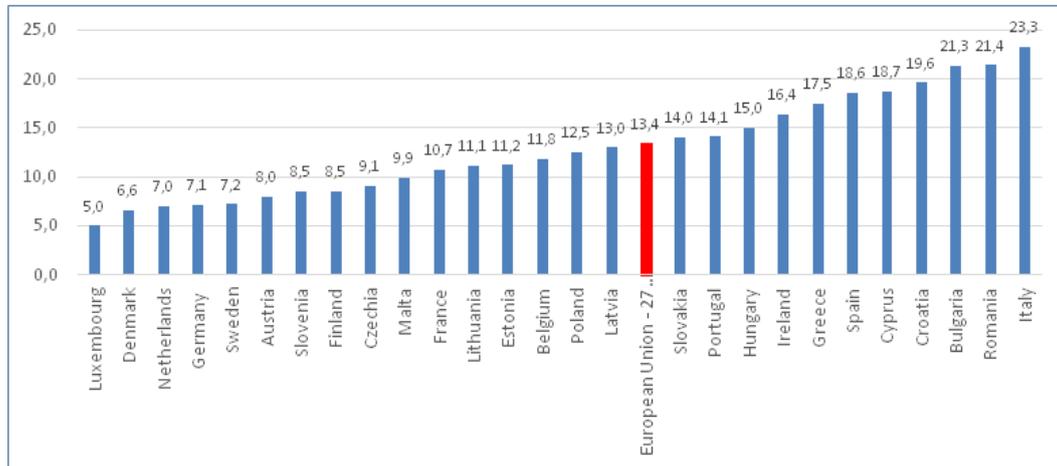
Youth unemployment is an issue which seriously concerns almost all European countries. High youth unemployment and inactivity generate many negative consequences for both young individuals and society as a whole. For young people, long-term unemployment status negatively affects their prospects to find decent jobs; increases social exclusion via loss of their skills and qualifications; and, negatively impacts upon health status. For society the costs of youth unemployment and inactivity include: higher fiscal costs due to unemployment benefits; forgone earnings and thus taxes; increased poverty and income inequality; and, reduced aggregate consumption. The high rates of youth unemployment provoke the migration process of young populations from these countries, which in turn may jeopardise the prospects of these countries' future economic growth.

In this context, the bigger challenge for governments across the EU is solving the problem of high NEET rates. The term 'NEET' does not have a common international definition (Elder 2015). It is associated with a broad range of vulnerabilities amongst young people aged between 15 and 24 or 29 years. These include: issues of unemployment, early school leaving; and, labour market discouragement. The ILO and Eurostat accept a joint definition for measuring the NEET rate, and it is conceptualised as the percentage of the population of a given age group and sex which is not employed nor involved in further education or training (Mascherini et al. 2012).

The NEET rate significantly rose across the European Union as a consequence of the global financial crisis of 2008. Youth populations were the most affected, especially in Southern Europe. By 2013, there were 7.5 million NEETs across the Union, representing 13.4% of young Europeans aged between 15–24. According to the EU Council (2013), 30.1% of unemployed people under the age of 25 years in the EU have been unemployed for more than 12 months.

²⁵ Ss. Cyril and Methodius University in Skopje, Faculty of Economics – Skopje, Skopje, North Macedonia, Daniela.Mamucevska@eccf.ukim.edu.mk

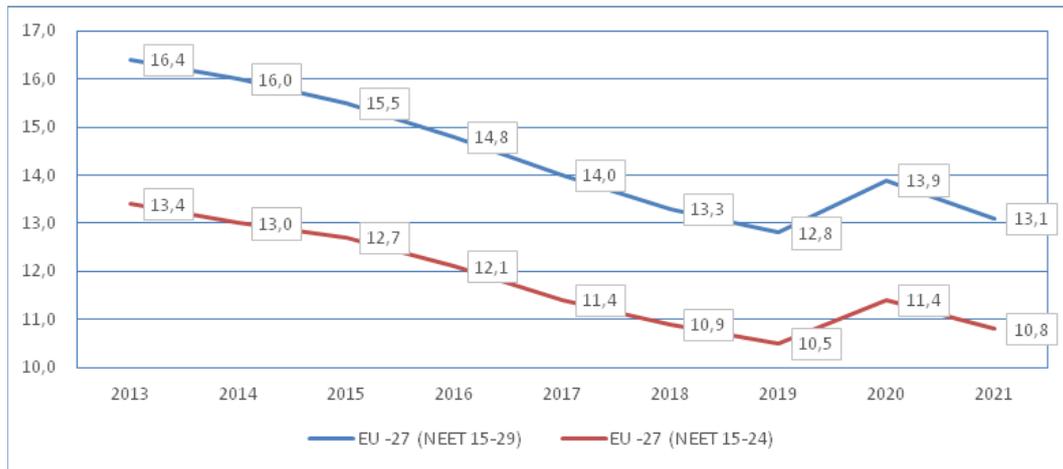
Figure 37. The NEET rates for youth aged 15-24 in 2013, as a percentage of total population (LFSI_NEET_Q)



All Member States were not equally affected by the problem of high NEET rates of youth populations aged 15–24. In 2013, Luxembourg was an economy with the lowest rate of NEETs (5.0%), followed by Denmark (6.6%), the Netherlands (7.0%), and Germany (7.1%). In the worst position were Italy, with the highest rate of 23.3%, then Romania with 21.4%, and Bulgaria with 21.3%. Almost half of the Member States have NEET rates above the average rate for the EU-27 (13.4%) (see Figure 37).

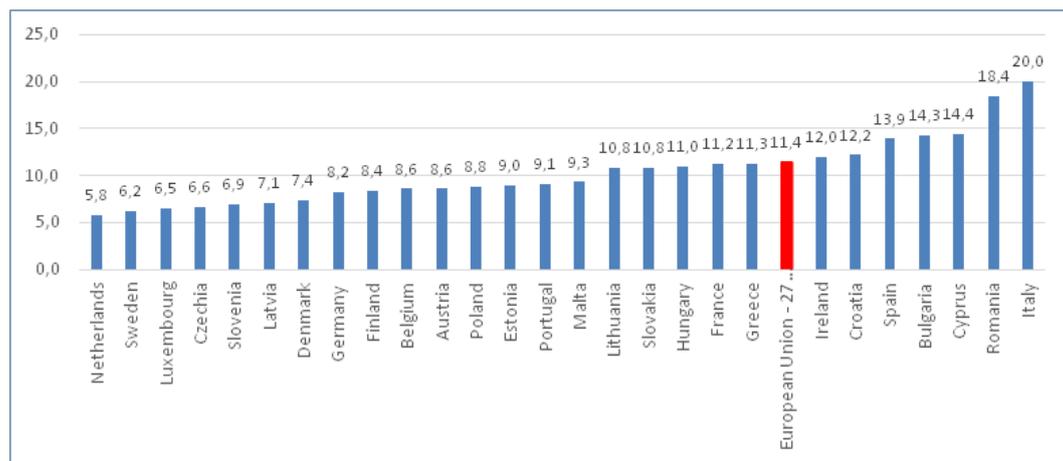
EU member states' reaction to this serious issue was the creation of the Youth Guarantee (YG) in 2013, which became the main European policy addressing the problem with youth unemployment, with special attention paid to the NEET population. The EU Youth Guarantee was established through the Council of Recommendation of 22nd April 2013, and has received strong political support since then. According to its recommendations, all EU member states bear a commitment to give young people aged 15–24 a good quality offer of: (i) employment; (ii) continued education; (iii) an apprenticeship; and, (iv) a traineeship within four months of either leaving formal education and/or becoming unemployed. Furthermore, the YG would contribute to three of the 'Europe 2020' strategy targets, namely that 75% of the age range 20 – 64 would be employed, early school-leaving rates should be below 10%, and that at least 20 million people should be lifted out of poverty and social exclusion (The Council of EU, 2013). The implementation of the YG commenced in 2014.

Figure 38. Annual rates of NEET as a percentage of total population for EU-27 during the period 2013-2021 (yearly data) [LFSI_NEET_Q]



After six years of deployment of YG schemes, there were approximately 1.7 million fewer persons amongst the youth population aged between 15–24 in the NEET category. The rate of youth unemployment fell to the lowest level at 10.5% in 2019 (see Figure 38). More than 24 million young people were registered in the YG schemes, and received an offer of employment, continued education, apprenticeship, or traineeship (EC, 2022). In 2020 and 2021, due to the COVID-19 pandemic crisis, NEET rates began to rise again.

Figure 39. The NEET rates for youth aged 15-24 in 2020, as a percentage of total population [LFSI_NEET_Q]





Positive effects of the implementation of the YG, during the period 2014–2020, were not equally distributed amongst the Member States. Some of the Mediterranean countries (Spain and Italy) and the newest Member States (Bulgaria and Romania) have higher NEET rates than the average for the EU-27 (11.4%) in 2020. Italy, although having reduced the NEET rate by 3.3 percentage points, retains the highest NEET rate of 20%.

The outbreak of the Covid-19 pandemic crisis – and its prolonged duration – has had a negative effect upon youth employability and the NEET category more broadly. In attempting to mitigate the negative consequences of the pandemic, in July 2020 the European Commission launched the reinforced Youth Guarantee which should strengthen and modernise the previously established YG of 2013. The reinforced YG has broadened the target group, including young people aged between 15 to 29. The main aim of the reinforced YG is to alleviate the impact of the COVID-19 crisis and to prevent another youth unemployment crisis. Additionally, with this mechanism the European Commission (2020) seeks to build solid national schemes in which young people can have direct and easy access to work, educational, or training offers.

The deployment of the reinforced YG is based on four phases of policy intervention, and three cross-cutting enablers. The YG schemes are organised in accordance with national, regional, and local conditions, taking into consideration the gender and diversity of the young population. The four phases are:

- 1. Mapping and early intervention.** Considering the characteristics of youth employment policies, the YG should be designed and implemented through partnerships amongst governmental institutions (at central, regional, and local levels), the business sector, education and training institutions, non-governmental organisations, and youth associations.
- 2. Outreach to unregistered NEETs.** Developing programmes for hard-to reach NEETs, identifying the best way to involve partnerships between social services, employment services, NGOs, and community groups in order to reach out to marginalised NEET groups.
- 3. Preparation – developing of new activation measures** directed at tackling early leaving from education and training by disadvantaged young people. Also, stren-



gathering the existing measures and developing new ones of active employment policy for the NEETs with low and medium levels of education.

4. Offer – labour market integration by making quality offers to young people.

Beyond this, the European Commission has developed several cross-cutting enablers, whose effective use is a key condition for successful implementation of the YG schemes and providing quality offers to all youth participants. “Cross-cutting enablers” refers to mobilising partnerships, improving data collection and monitoring, and making full and optimal use of funds (European Commission, 2020). “Mobilising partnerships” refers to strengthening cooperation and partnerships across relevant stakeholders (i.e., government authorities and institutions, employers, providers, education and training institutions, social partners, youth work services and youth organisations). Furthermore, in this context it is very important to promote protocols for cooperation and development of integrated service models (i.e., one-stop-shops). “Improving data collection and monitoring” refers to the challenge of strengthening the systems for monitoring the long-term labour market integration processes, developing the system for sharing of tracking, profiling, and follow-up data between YG partners. “Making full and optimal use of funds” refers to dedication of adequate national resources to the implementation of the YG policy measures, and to optimal utilisation of the current instruments as well as other funding sources of the European Union available to Member states.

Another important challenge is financial support for deployment and implementation of the YG schemes. The main source for financing the reinforced YG is funds from the European Social Fund Plus (ESF+) and by way of national investments. In fact, the overall budget for ESF+ is 99 billion euros for the period 2021-2027, derived from the Multiannual Financial Framework (MFF). This funding is allocated to the Member States for implementation of national projects in the context of social issues (European Commission, 2020). According to the concept of the reinforced YG, European member states are obliged to allocate at least 12.5% of their ESF+ funds to targeted youth employment measures if they have experienced an average NEET rate above the EU average rate throughout the period 2017-2019.



Western Balkan countries are not excluded from this process. In October 2020, the European Commission published the Economic and Investment Plan (EIP) for the Western Balkan countries. It proposes the implementation of the YG schemes in these countries. Under Flagship 10, EIP specifically proposes dealing with the introducing, or extending, the Youth Guarantee in these economies in four phases throughout the 2021–2027 period. The four phases of implementation are:

Phase 1: consists of developing an implementation plan in cooperation with key stakeholders. In this phase, the YG implementation plans should be developed and incorporated into relevant legal frameworks and technical structures, and be supported by relevant human capacity.

Phase 2: features the necessary preparatory work of building commitment and capacity, whilst also ensuring staffing and infrastructure development. This phase covers activities for capacity buildings of authorities and stakeholders, preparation of feasibility and technical studies, and providing financial resources for public employment services (PES).

Phase 3: is a pilot implementation phase. This is the test period, when the planned measures should apply to the NEETs who have been identified through the outreach programmes in a selected group of local authority areas. This pilot phase also covers activities with evidence, i.e., bases monitoring – and evaluation of – the results and further strengthening of the capacities of relevant institutions and stakeholders.

Phase 4: is envisaged as full roll-out of the policy. Based on the results of evaluation of the pilot-phase, modifications to be made to the YG plan as per context will be incorporated, and the YG will be launched with their full implementation.

Western Balkans economies have had continuously high levels of youth unemployment, and despite some small improvements in recent years, the outbreak of the COVID-19 pandemic crisis derailed this. In 2020, the average NEET rate for the region was 22.4% for youth persons aged 15–24, compared with the EU-27 average rate of 11.1%. It was highest in Kosovo (37.7%) and lowest in Serbia (15.9%) (Bartlett et al, 2022). The large



percentage of the youth population categorised as NEET is a serious problem which risks deepening of social exclusion and increasing the inefficient use of human capital in these economies, not to mention the increased potential for radicalisation in relation to far right extremism. Hence, successful developing and implementation of the Youth Guarantee policy instruments will help to mitigate the negative effects of high youth unemployment and reduce the NEET rates in Western Balkan economies. North Macedonia is the first country from this region to have introduced the Youth Guarantee. In 2018, a pilot project covering three biggest cities – Skopje, Strumica and Gostivar – was launched. From the total number of registered young people on the programme, 1,916 have been employed, i.e., a 41% success rate. Consequently, the positive results from the pilot phase demonstrates that the Youth Guarantee can be implemented as a regularised policy instrument to tackle youth unemployment, particularly amongst NEETs. The level of success in the subsequent years reflects the general macroeconomic conditions both in the country and abroad. According to data from the yearly reports of the Employment Services Agency of the Republic of North Macedonia, the rate of success has fluctuated from 35% in 2019, to 34% in 2020 and 41% in 2021. The rest of the Western Balkan countries are in the first stage of implementation, and are looking to design institutional procedures and policy mechanisms in order to begin the process.

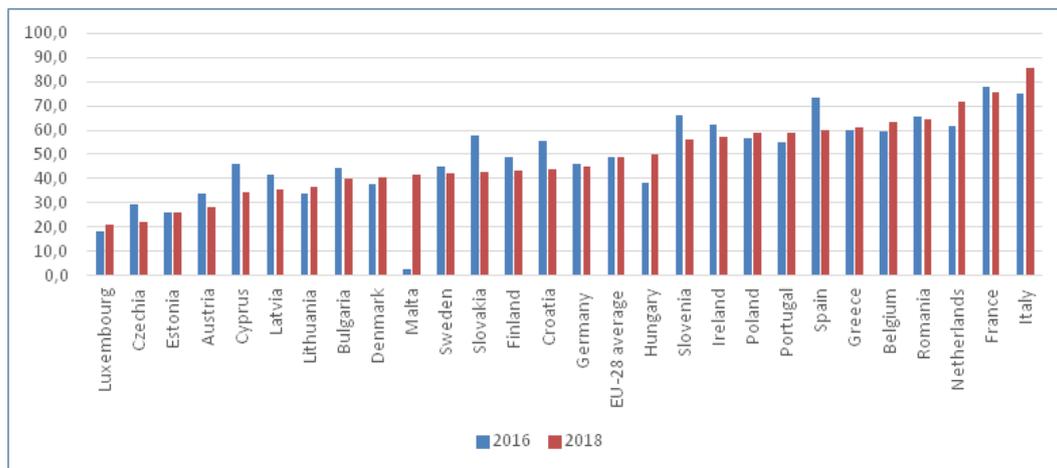
Evaluation of the implementation of Youth Guarantee

This report will utilise descriptive statistics as its primary methodology for describing changes in the main policy indicators as a proxy for the relative level of success of said policy. We used the available data from the published reports of the Youth Guarantee by each Member State for 2016 and 2020 (EC, 2022). The main policy indicators used are: (i) NEET rates (refers to the percentage of young people who are NEETs from the total youth); (ii) The YG beyond the 4-month target (% stock), refers to the percentage of users of the YG who are still waiting for an offer after the deadline of 4 months; (iii) Timely and positive exits (i.e., take-up of an offer within the 4 months (%exits)), refers to the percentage of exits of the users from the programme that were achieved before the 4-month deadline and ended positively; (iv) NEET coverage refers to the NEETs reached by the YG (as % of NEETs); and, (v) Outcome: positive follow up after 6 months of exits, refers to the former users of the YG who, after 6 months from their exit from the programme, were in a positive situation (working/training/studying). The policy established targets for each indicator: 0% of the NEET rate and for the people in the YG programme beyond 4-months, and 100% for the remaining three indicators (Pesquera

et al. 2021). Regarding the first indicator of NEET rates, as presented in Figure 37 and Figure 39, from 2013 to 2020, the percentage of the NEETs population from the total population has been continuously decreasing. In 2020, the number of Member States rates above the EU-27 average has decreased in comparison to 2013. Italy and Romania remain in the worst position.

The second indicator depicts the percentage of users who are still on the programme and waiting for an offer. Lower values of the indicator depict a higher success rate in the implementation of the YG plans. Luxembourg and the Czech Republic have the lowest percentages – 18.3 % and 29.3% (for 2016), and 20.7% and 21.9% (for 2018), respectively. Spain recorded the biggest improvement, where the percentage of users who are waiting an offer for longer than 4 months decreased by 13.2 percentage points in 2018 in comparison with 2016. In Italy, in 2018 the rate increased by 10.7%. The average value for the EU was 49.1% in 2016 and 48.6 % in 2018 (see Figure 40).

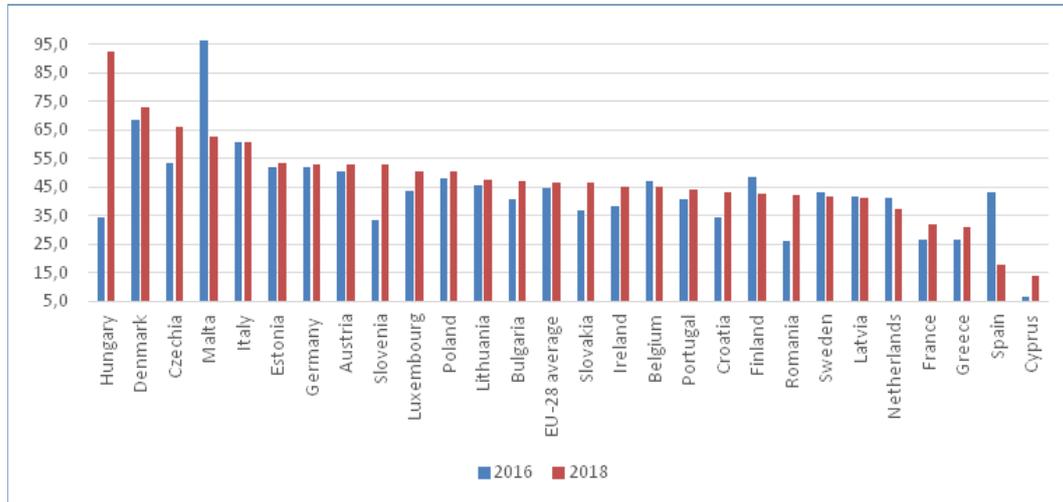
Figure 40. In YG programmes beyond the 4 months target in 2016 and 2018



The higher values for the third indicator (timely and positive exits) refers to higher efficiency in the implementation of the YG programmes. In 2018, Hungary had the highest rate (92.4%) and it is more than double that of 2016. Italy also demonstrates a good result at around 60.5% in 2016 and 2018. The average value for the EU is 44.5% in 2016, and 46.7 % in 2018 (see Figure 41).



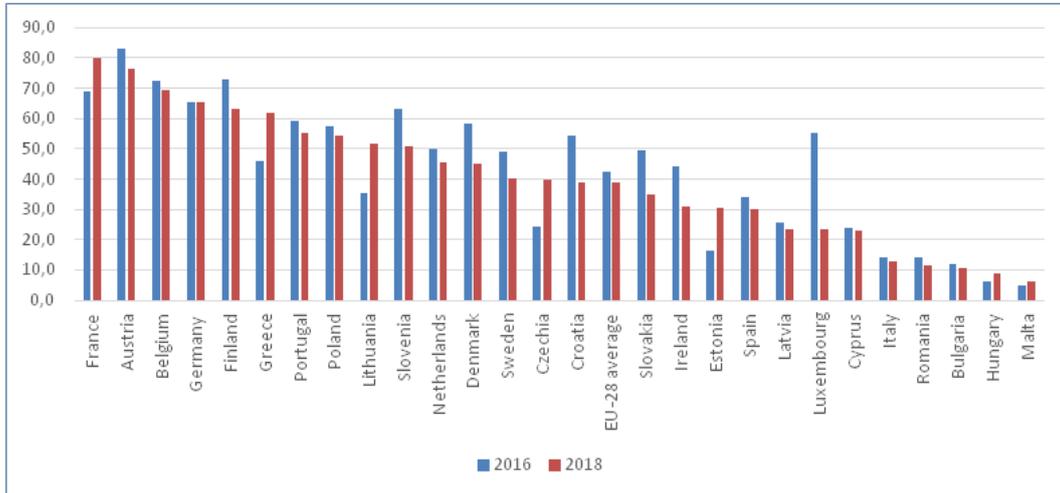
Figure 41. Timely and positive exists of users before 4 months in 2016 and 2018



The fourth indicator depicts the successfulness of the programmes in terms of outreach and all registered NEETs as a percentage of total population within the country (see Figure 42). The higher value of the indicator means better performances regarding the registering and tracking of NEETs. The highest value is 100%, but no a Member State has such perfect result. Austria (76.5%), Finland (63.4%), and France (79.8%), are the countries with the highest rates of coverage in relation to NEETs with the YG in 2018. Austria and Finland are the first European countries to have started implementation of YG schemes. The average value for the EU is 42.5% in 2016, and 38.9% in 2018. Italy, Romania, Bulgaria, Hungary and Malta are the counties with very low rates of coverage (i.e., less than 12% of all NEETs are registered in the YG programmes).

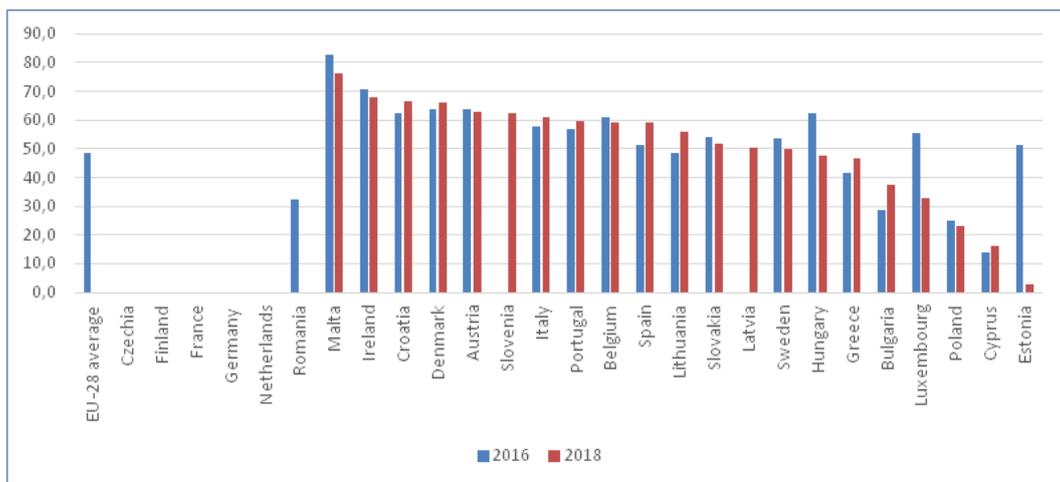


Figure 42. NEETs reached by the YG (% of NEET) in 2016 and 2018



Evaluating the sustainability of the positive results with users who left the programmes after 6 months is very difficult owing to the problem of missing data and a lack of capacity and skills of PES to follow up alumni of the YG programmes. The higher value of the indicator represents better outcomes, namely a higher number of users are following a positive track (i.e., working/training/studying). Malta and Ireland deliver the best results. The follow-up tracking of YG users who are in positive situation is more than 70% (see Figure 43).

Figure 42. NEETs reached by the YG (% of NEET) in 2016 and 2018





Comments and Recommendations

The main focus of the policy-makers is how to increase youth employability and decrease youth unemployment rates. As Andor (2016) has noted, good YG programmes cannot be treated as a substitute for good macroeconomic policy. If macroeconomic policy fails to provide an adequate stimulus at a time of recession or stagnation, the YG cannot achieve outstanding results.

The aim of the YG is to reduce the number of NEETs and to get them back on a positive track (i.e., working/ training/studying). As a direct consequence, in the short-run the YG may increase the rates of unemployment. However, in the long-run the YG should indirectly increase the employability of the youth population. Therefore, it is very important for PES to have an efficient system for gathering evidence and monitoring the registered NEETs, their participation in the YG, and their subsequent results.

As yet, a wide diversity in terms of the implementation of YG programmes exists amongst EU Member States. The differences of both EU average levels and national level results suggests that common European guidelines should be implemented. Such an approach could increase the effectiveness of national YG programmes and lead to a positive convergence of rates amongst Member States.

Pesquera et al. (2021) have noted that financial funds are a crucial determinant for successful implementation of YG programmes. Sometimes national authorities are not very supportive regarding implementation of the YG plans because of a lack of funds. In some quarters, the perception remains that the YG is a European project and should therefore be predominantly financed by European Funds. Menichini (2022) has observed that current system of financing the YG is contingent upon the country's situation vis-a-vis NEET rates therein. According to the current system, additional EU emergency funding exists; it is related to the MFF and a mandatory higher amount of national investments for those countries which have a NEET rate significantly above the EU average. To that end, Menichini (2022) suggests that Member States such as Italy, Greece, Romania, and Bulgaria could benefit from having more funds to commit to tackling this issue and thereby improving youth employment conditions. Andoro (2016) suggests a more balanced approach of financing the national YG by developing a system of joint financing where the national authorities will be more willing to use money in a more effective manner.



4. DISPARITIES/COMMUNALITIES

A wide range of individual case studies were presented in this report, with many similarities identified amongst them. Common findings include:

- Development of the regions is influenced by specific needs of a specific rural territory and communities;
- Age and gender inequality gaps alongside rural unemployment. Dynamic rural values and new opportunities arising from digitalisation and new technologies thereby making rural areas more attractive for remote and/or online work;
- Local communities in rural areas recognise the importance of combining bottom-up, top-down, and mixed approaches in developing/implementing policies, as well as highlighting networking capacities, local capacity-building, and local employment development;
- Rural areas in general are in a disadvantageous position (remoteness translates into difficulties with transport, housing utilities, access to healthcare, demography, education and human capital, labour markets and availability of better-quality jobs, cultural and social life);
- Good-quality offers of employment, life-long learning education, an apprenticeship, and traineeships should be provided in rural areas;
- In order to foster rural development new and innovative business models have to be applied, including economic diversification. More specifically, high-quality, region-specific products, business and social enterprises, natural conservation, landscape management, agritourism, short-supply chain development, and new cooperatives based on fair principles;
- Build an urban-rural continuum with the utilisation of applicable technology named Industry 4.0; at the same time, enhancing digital skills amongst the youth and general population;

In contrast to the complex conceptual nature of “sustainability” and heterogeneity of the factors that influence rural development, there are fewer differences amongst the analysed case studies. Individual case studies focus upon different aspects of rural development and youth engagement (especially NEETs engagement). To that end, they seek to identify as many as possible factors which hinder rural development, whilst also addressing many other factors that may not be examined in a specific individual case study report.



5. IMPLICATIONS AND RECOMMENDATIONS

Recommendations are provided at three levels: (i) European level – policies that can improve practices in the topic area, based on the case studies; (ii) National level – how can policies be improved; and, (iii) Practice level: what should be done to improve a practice, or to disseminate it?

European policy level

- Continue to invest into rural infrastructure thereby improving the quality of life (bridging the gap between urban and rural remoteness, and attractiveness whilst promoting wellbeing for all);
- Continue to invest into digital infrastructure in rural areas whilst at the same time improving digital skills amongst the youth and general population;
- Continue to promote sustainable economic growth and youth employment (assessing the current measures/policies/action plans and align these with youth needs and capabilities in rural areas);
- Foster green and digital transitions (early exposure – primary, secondary and tertiary education, training, employment services, and the business field);
- Reduce the gap between developed and developing countries in terms of digital inequalities, gender gaps, poverty, and social exclusion (and other inequalities);
- Integrate adoption of cultural, environmental, and common values as part of all development interventions;
- Ensure the EU Youth Guarantee, Erasmus+ programme and European Social Funds. Dedicated measures for youth in transition from education to employment and for rural NEETs;
- Include rural areas as a priority under Erasmus+;
- Apply a “youth lens” to Common Agricultural Policy and regional policy provisions in order to ensure that young people in rural areas are identified as key target and



beneficiary groups of both policies. Improve existence of gender disaggregated statistics in order to reveal female participation in rural areas and unveil informal work performed by women;

- Promote and support shared ownership of farms and agricultural enterprises so as to support recognition of female roles as spouses of farmers;

National policy level

- Raising awareness of a mixed approach (bottom-up and top-down) in designing and implementing public policies;
- Analysing, identifying and underlying causal mechanisms of specific youth/population needs within specific regions and create tailor-made policies/solutions (i.e., raising awareness regarding diverse and context-based aspirations, experiences, interests, and capabilities of youth);
- Applying networked rural development models that are locally rooted and emphasise local capacity-building;
- More comprehensive gender-disaggregated data on the participation of women in agricultural and other rural entrepreneurial activities, and on the factors hampering wider participation;
- Enhance educational and work-related environments;
- Facilitate a new form of formal/informal networks (associations, cooperatives, alliances, hubs, innovation centres, etc.) based on sustainable principles;
- Facilitate establishment of agri-environmental farming practices, sustainable farming, and other complementary activities;
- Facilitate development/enhancement of social capital in order to bring vitality and attractiveness in rural areas;
- Facilitate development/enhancement of smart specialisation strategies based on industrial, educational, and innovation policies (national, local, village, etc. – to use best practice examples and reverse negative trends associated with rural areas);



- Youth capacity building in terms of preparing and implementing EU funding mechanisms (aimed at improving the skills and competencies of project developers in order to comply with the complexity of procedures, and to overcome problems with assuring project co-financing and lags in reimbursement);

Practice policy level

- Promotions and diffusion of new, modern, and innovative activities, such as the production of high-quality and region-specific products, product brand development, nature conservation as well as landscape management, agritourism, and the development of short-supply chains.
- Promotions of positive images of rural areas aimed at attracting new technology/practice adopters (newcomers) along the value chain;
- Early exposure to agricultural experiences, but also other complementary activities in rural areas;
- Promote cultural heritage, ethical food, high-quality products and integrate concepts of fairness, sovereignty, etc. into daily business/practices;
- Promote application of Industry 4.0 tools to create new and attractive business ventures for youth; improve sustainability and resilience of the agri-food system; optimising of externalities, and increasing of productivity and efficiency whilst supporting inclusiveness, equality and equity;
- Foster business and social enterprise development, entrepreneurship, and integration of youth (with specific emphasis on NEETs) into the labour market as well as employment in rural areas;
- Increase offers of health care, childcare, and elderly care services to support female participation in farming and other rural businesses;
- Stimulate exchange of good practices and successful case studies between regions within a particular country and consider their potential transferability across national borders.



6. REFERENCES

Rec Acs, Z., Arenius, P., Hay, M. and Minniti, M. (2005). 2004 Global Entrepreneurship Monitor Exclusive Report, London Business School, London and Babson College, Babson Park, MA.

Adro, F. & Franco, M. (2020). Rural and agri-entrepreneurial networks: A qualitative case study. *Land Use Policy*, 99: 105117.

Ahene, R. A. (2009). Measures to improve access to land resources and related benefits in Uganda. In FIG and World Bank Conference on Land Governance in Support of the MGDs: Responding to New Challenges.

Aidis, R., Welter, F., Smallbone, D., & Isakova, N. (2007). Female entrepreneurship in transition economies: the case of Lithuania and Ukraine. *Feminist economics*, 13(2), 157–183.

Aker, J. C. (2019). IFAD RESEARCH SERIES 52–Information and Communication Technologies and Rural Youth. *IFAD Research Series*, 52.

Alcon, F., de Miguel, M. D., & Burton, M. (2011). Duration analysis of adoption of drip irrigation technology in south-eastern Spain. *Technological Forecasting and Social Change*, 78(6): 991–1001.

Amcoff, J., & Westholm, E. (2007). Understanding rural change—demography as a key to the future. *Futures*, 39(4), 363–379.

Anderson, J. R. (2003). Risk in rural development: challenges for managers and policy makers. *Agricultural Systems*, 75(2–3), 161–197.

Anding, T. L., & Gustafson, N. C. (1968). For Rural Revival Regional approach suggested to create system capable of producing „the good life“ for everyone. In *This Is an Address at the National Municipal League’s National Conference on Government in New Orleans in December.* –1968.

Andor, L. (2016). Youth Guarantee Four Years After– EU youth employment initiatives and their evaluation. *European Economic and Social Committee*, available on: https://www.academia.edu/30448774/Youth_Guarantee_Four_Years_After , accessed on 11.11.2022.



Atterton, J., Newbery, R., Bosworth, G., Affleck, A., Alsos, GA. (Ed.), Carter, S. (Ed.), Ljunggren, E. (Ed.), i Welter, F. (Ed.) (2011). Rural enterprise and neo-endogenous development. In GA. Alsos, S. Carter, E. Ljunggren, i F. Welter (Eds.), *The Handbook of Research on Entrepreneurship in Agriculture and Rural Development* (pp. 256 - 280). Edward Elgar Publishing.

Balezentis, T., Morkunas, M., Volkov, A., Ribasauskiene, E., & Streimikiene, D. (2021). Are women neglected in the EU agriculture? Evidence from Lithuanian young farmers. *Land Use Policy*, 101: 105129.

Ball, J.A. (2020). Women farmers in developed countries: a literature review. *Agriculture and Human Values*, 37(2): 147–160.

Barbercheck, M., Brasier, K., Kiernan, N. E., Sachs, C., & Trauger, A. (2014). Use of conservation practices by women farmers in the Northeastern United States. *Renewable Agriculture and Food Systems*, 29(1): 65–82.

Barnes, A. P., Soto, I., Eory, V., Beck, B., Balafoutis, A., Sánchez, B., ... & Gómez-Barbero, M. (2019). Exploring the adoption of precision agricultural technologies: A cross regional study of EU farmers. *Land Use Policy*, 80: 163–174.

Barnes, A. P., Thompson, B., & Toma, L. (2022). Finding the ecological farmer: A farmer typology to understand ecological practice adoption within Europe. *Current Research in Environmental Sustainability*, 4: 100125.

Bartlett, W., Bonomi, M., and Uvalic, M. (2022). *The Economic and Investment plan for the Western Balkans: assessing the possible economic, social and environmental impact of the proposed Flagship projects*, Study prepared for the AFET Committee, Published by the European Parliament

Baumgart-Getz, A., Prokopy, L. S., & Floress, K. (2012). Why farmers adopt best management practice in the United States: A meta-analysis of the adoption literature. *Journal of Environmental Management*, 96(1): 17–25.

Baynes, J., Herbohn, J., Smith, C., Fisher, R., & Bray, D. (2015). Key factors which influence the success of community forestry in developing countries. *Global Environmental Change*, 35, 226–238.



Bertolini P., Montanari M.; Peragine V. (2008), Poverty and Social Exclusion In Rural Areas, European Communities, <https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2019/03/bertolini-Overview-rural-poverty-developed-countries-1.pdf>

Best, H. (2009). Organic farming as a rational choice: empirical investigations in environmental decision making. *Rationality and Society*, 21(2): 197–224.

Birkhofer, K, Diehl, E., Andersson, J., Ekroos, J., Früh-Müller, A., Machnikowski, F., Mader, V. L., Nilsson, L, Sasaki, K., Rundlöf, M., Wolters, V., Smith, H. G. (2015). Ecosystem services—current challenges and opportunities for ecological research. *Front. Ecol. Evol.* 2:87. Doi: 10.3389/fevo.2014.00087.

Biserko, S. (2022). *The Rise of the Right: The Case of Serbia Foreign Fighters, Extremism and Terrorism*, pg41. Helsinki Committee for Human Rights in Serbia, Belgrade, Serbia.

Boden Jr, R. J., & Nucci, A. R. (2000). On the survival prospects of men's and women's new business ventures. *Journal of business venturing*, 15(4), 347–362.

Bojnec, Š., and Fertő, I. (2022). Do different types of Common Agricultural Policy subsidies promote farm employment? *Land Use Policy*, 112, 105823.

Bojnec, Š., and Petrescu, C. (eds.) (2022). *Youth Policy: Application of the Intervention – Best-Practices with Rural NEETs*. COST Action CA18213. <https://rnyobservatory.eu/web/wp-content/uploads/2022/04/book-application-intervention-rural-neets.pdf>.

Boon, T.E., Broch, S.W. & Meilby, H. (2010). How financial compensation changes forest owners' willingness to set aside productive forest areas for nature conservation in Denmark. *Scandinavian Journal of Forest Research*, 25(6): 564–573.

Borsotto, P., Henke, R., Macrì, M.C. & Salvioni, C. (2008). Participation in rural landscape conservation schemes in Italy. *Landscape Research*, 33(3): 347–363.

Boyer, T. A., Tong, B., & Sanders, L. D. (2018). Soil and water conservation method adoption in a highly erosive watershed: the case of Southwest Oklahoma's Fort Cobb watershed. *Journal of Environmental Planning and Management*, 61(10): 1828–1849.

Brandth, B. (2002). Gender Identity in European Family Farming: A Literature Review. *Sociologia Ruralis*, 42(3): 181–200.



Brandth, B. (2021). "Embodied work in agriculture". in Sachs, E.C., Jensen, L., Castellanos, P., Sexsmith, K. (eds.) Routledge Handbook of Gender and Agriculture. p.383-393. Routledge, New York.

Briz, T., von Fragstein und Niemsdorff, P., Radicetti, E., Moschetti, R., Uusitalo, E., Iivonen, S., Mynttinen, R., Moudry Jr, J., Moudry Sr, J., Konvalina, P., Kopecky, M., Srednicka-Tober, D., Kazimierczak, R., Talgre, L., Matt, D., Veromann, E., Mancinelli, R. and Rembalkowska, E. (2019). Knowledge and skills attractive for the employers of the organic sector: A survey across Europe. *Renewable Agriculture and Food Systems*, 35(6): 710-719.

Brown, P. (2019). Gender, educational attainment, and farm outcomes in New Zealand. *Land*, 8(1): 18.

Brown, P., Daigneault, A., & Dawson, J. (2019). Age, values, farming objectives, past management decisions, and future intentions in New Zealand agriculture. *Journal of Environmental Management*, 231: 110-120.

Bryant, C. R., Nellis, M. D., & Bowler, I. (1996). Sustainability of rural systems: an introduction. *Geographical Perspectives on Sustainable Rural Systems*. Tokyo: Kaisei, 1-3.

Bujak Stanko, J. (2022). COMMUNITY CAPACITY AND NEEDS FOR DERADICALIZATION AND REINTEGRATION PROCESSES IN SERBIA. Pg.89. THE RISE OF THE RIGHT: THE CASE OF SERBIA Foreign Fighters, Extremism and Terrorism (2022), pg41. HELSINKI COMMITTEE FOR HUMAN RIGHTS IN SERBIA, Belgrade

Burton, M., Rigby, D., & Young, T. (2003). Modelling the adoption of organic horticultural technology in the UK using duration analysis. *Australian Journal of Agricultural and Resource Economics*, 47(1): 29-54.

Burton, R. J., & Paragahawewa, U. H. (2011). Creating culturally sustainable agri-environmental schemes. *Journal of Rural Studies*, 27(1), 95-104.

Burton, R.J.F. (2014). The influence of farmer demographic characteristics on environmental behaviour: a review. *Journal of Environmental Management*, 135: 19-26.

Bušljeta Tonković, A. (2017). Koncept održivog ruralnog turizma: primjeri dobre prakse u Lici, u: Bušljeta Tonković, Anita, Holjevac, Željko, Brlić, Ivan i Šimunić, Nikola (Ur.). KOGA (P) ODRŽAVA ODRŽIVI RAZVOJ? Prinosi promišljanju održivosti ruralnih područja u Hrvats-



koj. Zagreb: Institut društvenih znanosti Ivo Pilar, (147-167). [The concept of sustainable rural tourism: examples of good practice in Lika. In: Bušljeta Tonković, Anita, Holjevac, Željko, Brlić, Ivan and Šimunić, Nikola (Ed.). WHO DOES SUSTAINABLE DEVELOPMENT SUPPORT? Contributions to thinking about the sustainability of rural areas in Croatia. Zagreb: Institute of Social Sciences Ivo Pilar (pp 147-167).]

Busljeta Tonkovic, A., Pudjak, J. (2021), Organizacije mladih i za mlade u ruralnoj Hrvatskoj: studija slučaja Ličko-senjske i Zadarske županije. Institut društvenih znanosti Ivo Pilar, Hrvatska i Nacionalna asocijacija praktičara/ki omladinskog rada NAPOR, Srbija, Zagreb – Novi Sad. [Youth and youth organizations in rural Croatia: case study of Lika-Senj and Zadar counties. Institute of Social Sciences Ivo Pilar, Croatia and National Association of Practitioners of Youth Work NAPOR, Serbia, Zagreb – Novi Sad]

Carter, A. (2017). Placeholders and Changemakers: Women Farmland Owners Navigating Gendered Expectations. *Rural Sociology*, 82(3): 499-523.

Carter, N. M., & Williams, M. L. (2003). Comparing social feminism and liberal feminism: The case of new firm growth. *New perspectives on women entrepreneurs*, 25-50.

Caspi, A., Harrington, H., Milne, B., Amell, J. W., Theodore, R. F., & Moffitt, T. E. (2003). Children's behavioral styles at age 3 are linked to their adult personality traits at age 26. *Journal of personality*, 71(4), 495-514.

Černič Istenič, M. & Charatsari, C. (2017). Women Farmers and Agricultural Extension/Education in Slovenia and Greece. In B. B. Bock and S. Shortall (Eds.), *Gender and Rural Globalization: International Perspectives on Gender and Rural Development* (pp.129-147). Oxfordshire: CAB International.

Černič Istenič, M. (2015). Do rural development programmes promote gender equality on farms? The case of Slovenia. *Gender, Place & Culture*, 22(5), 670-684.

Chatzitheodoridis, F. & Kontogeorgos, A. (2020). New entrants' policy into agriculture: researching new farmers' satisfaction. *Revista de Economia e Sociologia Rural*, 58(1): 193664.

Cheng, Z., Guo, W., Hayward, M., Smyth, R., & Wang, H. (2021). Childhood adversity and the propensity for entrepreneurship: A quasi-experimental study of the Great Chinese Famine. *Journal of Business Venturing*, 36(1): 106063.



Chiappini, S. and De Rosa, M. (2011). Consuming rural development policies: are there gender differences in Italian agriculture? *Agricultural Economics Review*, Greek Association of Agricultural Economists, 12(1).

Corbett, M. (2009). Rural Schooling in Mobile Modernity: Returning to the Places I've Been. *Journal of Research in Rural Education* 24(7): 1–13.

D'Antoni, J. M., Mishra, A. K., & Joo, H. (2012). Farmers' perception of precision technology: The case of autosteer adoption by cotton farmers. *Computers and Electronics in Agriculture*, 87: 121–128.

Darnhofer, I., Fairweather, J., & Moller, H. (2010). Assessing a farm's sustainability: insights from resilience thinking. *International journal of agricultural sustainability*, 8(3), 186–198.

Daum, T. (2019). Of bulls and bulbs: aspirations, opinions and perceptions of rural adolescents and youth in Zambia. *Development in Practice*, 29(7), 882–897.

Davey, K. A., & Furtan, W. H. (2008). Factors that affect the adoption decision of conservation tillage in the prairie region of Canada. *Canadian Journal of Agricultural Economics/Revue canadienne d'agroeconomie*, 56(3): 257–275.

De Clercq, D., & Honig, B. (2011). Entrepreneurship as an integrating mechanism for disadvantaged persons. *Entrepreneurship & Regional Development*, 23(5–6), 353–372.

De Medeiros, J. F., Ribeiro, J. L. D., & Cortimiglia, M. N. (2014). Success factors for environmentally sustainable product innovation: a systematic literature review. *Journal of cleaner production*, 65, 76–86.

Defrancesco, E., Gatto, P., & Mozzato, D. (2018). To leave or not to leave? Understanding determinants of farmers' choices to remain in or abandon agri-environmental schemes. *Land Use Policy*, 76, 460–470.

Dinis, I., Ortolani, L., Bocci, R., & Brites, C. (2015). Organic agriculture values and practices in Portugal and Italy. *Agricultural Systems*, 136: 39–45.

Djurfeldt, A. A., Kalindi, A., Lindsjö, K., & Wamulume, M. (2019). Yearning to farm—Youth, agricultural intensification and land in Mkushi, Zambia. *J Rural Stud*, 71, 85–93.



Dubbeling M, De Zeeuw H (2007) Multi-stakeholder policy formulation and action planning for sustainable urban agriculture development. RUAF Working Paper No. 1. RUAF Foundation, Leusden, The Netherlands. <https://ruaf.org/document/multi-stakeholder-policy-formulation-andaction-planning-for-sustainable-urban-agriculture-development/>. Accessed 20 May 2020.

Dunne, C., Sietto, C. and Wilson, P. (2020). Identifying the role of women in UK farming through a systematic review of international literature. DOI: 10.22004/ag.econ.303698 (09.02.21).

Egri, C. P. (1999). Attitudes, Backgrounds and Information Preferences of Canadian Organic and Conventional Farmers: Implications for Organic Farming Advocacy and Extension. *Journal of Sustainable Agriculture*, 13(3): 45-72.

EIP-AGRI. (2015). EIP-AGRI Focus Group Precision Farming. Final Report November 2015. Available at: https://ec.europa.eu/eip/agriculture/sites/agri-eip/files/eip-agri_focus_group_on_precision_farming_final_report_2015.pdf

Elder, S. (2015). What Does NEETs Mean and Why is the Concept so Easily Misinterpreted? Technical brief No.1, ILO, https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_343153.pdf

Elkington, J. (2006). Governance for sustainability. *Corporate Governance: An International Review*, 14(6), 522-529.

Ellis, F. (2000). *Rural livelihoods and diversity in developing countries*. Oxford university press.

Epps, R. (1995). The sustainability of Australian agricultural production systems: a realistic objective or simply a desirable aim? *The Australian Geographer*, 26(2), 173-179.

Esmailian, B., Sarkis, J., Lewis, K., Behdad, S.: Blockchain for the future of sustainable supply chain management in Industry 4.0. *Resources, Conservation, and Recycling*, 163, 105064 (2020).

European Commission (2014). *The Territorial Dimension of Poverty and Social Exclusion in Europe (TiPSE)*, European Spatial Planning Observation Network (ESPON) Programme, April.



European Commission, (2021). Communication From the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. 2030 Digital Compass: the European way for the Digital Decade, available at: <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A52021DC0118>

European Commission. (2020). Proposal for a COUNCIL RECOMMENDATION on A Bridge to Jobs – Reinforcing the Youth Guarantee and replacing Council Recommendation of 22 April 2013 on establishing a Youth Guarantee. COM (2020) 277 final EUR-Lex – 52020DC0277 – EN – EUR-Lex (europa.eu).

European Council. (2018). The European Union Youth Strategy 2019–2027. Accessed Jun 20, 2022. [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:42018Y1218\(01\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:42018Y1218(01)&from=EN)

European Network for Rural Development (2018), Smart Villages Revitalising Rural Services, EU Rural Review No 26.

European Union, (2021). EU rural development policy Impact, challenges and outlook, European Parliament, available on: <http://www.europarl.europa.eu/thinktank>

Eurostat. (2022). Database Degree of urbanisation Accessed Jun 20, 2022. <https://ec.europa.eu/eurostat/web/degree-of-urbanisation/data/database>

Eyhorn, F., Muller, A., Reganold, J. P., Frison, E., Herren, H. R., Luttikholt, L., & Smith, P. (2019). Sustainability in global agriculture driven by organic farming. *Nature Sustainability*, 2(4), 253–255. <https://doi.org/10.1038/s41893-019-0266-6>

Falkenmark, M., Finlayson, M., Gordon, L., Bennett, E., et al. (2007). Agriculture, water, and ecosystems: avoiding the costs of going too far. D. Molden (Ed.), *Water for Food, Water for Life. A Comprehensive Assessment of Water Management in Agriculture*. International Water Management Institute (IWMI), Earthscan, London, UK.

FAO (2016). Women hold the key to building a world free from hunger and poverty, Food and Agriculture Organization of the United Nations, available on: <https://www.fao.org/news/story/en/item/460267/icode/>, accessed: 10.11.2022.



Farrugia, D. (2016). The mobility imperative for rural youth: The structural, symbolic and non-representational dimensions rural youth mobilities. *Journal of Youth Studies*, 19(6), 836–851. Kuhmonen,

Fawcet, P. (2009). *Rural Transport – A Guide*. Icen Enterprises Ltd.

Fennell, D. A. (2020). *Ecotourism* (5th ed.). Routledge.
<https://doi.org/10.4324/9780429346293>.

Fernandez, M. A. (2017). Adoption of erosion management practices in New Zealand. *Land Use Policy*, 63: 236–245.

Forcina, A., & Falcone, D. (2021). The role of Industry 4.0 enabling technologies for safety management: A systematic literature review. *Procedia computer science*, 180, 436–445.

Forsell, S., & Lankoski, L. (2015). The sustainability promise of alternative food networks: an examination through “alternative” characteristics. *Agriculture and human values*, 32(1), 63–75.

Franzén, F., Dinnézt, P., & Hammer, M. (2016). Factors affecting farmers’ willingness to participate in eutrophication mitigation—A case study of preferences for wetland creation in Sweden. *Ecological Economics*, 130: 8–15.

Galdeano-Gómez, E., Aznar-Sánchez, J. A., Pérez-Mesa, J. C. (2011). The Complexity of Theories on Rural Development in Europe: An Analysis of the Paradigmatic Case of Almería (South-East Spain). *Sociologia Ruralis*, 51 (1), pp 54 – 78.
<https://doi.org/10.1111/j.1467-9523.2010.00524.x>

Gale, R. (2022). The war against sustainable development theory: Public interest as the ethical order for the 2030 Sustainable Development Goals. *Geographical Research*, pp 1– 11. <https://doi.org/10.1111/1745-5871.12526>

Gale, R. (2022). The war against sustainable development theory: Public interest as the ethical order for the 2030 Sustainable Development Goals. *Geographical Research*, pp 1– 11. <https://doi.org/10.1111/1745-5871.12526>

Gamon, J. A., & Scofield, G. G. (1998). Perceptions of sustainable agriculture: A longitudinal study of young and potential producers. In *Journal of Agricultural Education*.



Ganann, R., Ciliska, D., & Thomas, H. (2010). Expediting systematic reviews: methods and implications of rapid reviews. *Implementation Science*, 5(1), 1-10.

Garrone, M., Emmers, D., Olper, A., and Swinnen, J. (2019). Jobs and agricultural policy: Impact of the common agricultural policy on EU agricultural employment. *Food Policy*, 87 (C), 101744.

Gašparović, S. (2016). Theoretical postulates of transport disadvantage. *Hrvatski geografski glasnik*, 78(1), 73–95. <https://doi.org/10.21861/HGG.2016.78.01.04>

Glazebrook, T., Noll, S. and Opoku, E. (2020). Gender Matters: Climate Change, Gender Bias, and Women’s Farming in the Global South and North. *Agriculture*, 10(7): 267.

Grant, M. J., & Booth, A. (2009). A typology of reviews: an analysis of 14 review types and associated methodologies. *Health Information & Libraries Journal*, 26(2), 91-108.

Gültekin YS (2019) Evaluation of Yiğilca local honey bee within the frames of rural development and eco-entrepreneurship. *Düzce Univ J Sci Technol* 7(1):911–921.

Gültekin, Y.S. (2022) Ecotourism through the perception of forest villagers: understanding via mediator effects using structural equation modeling. *Environmental Science & Pollution Research*. <https://doi.org/10.1007/s11356-022-20882-y>

Hall, A., & Mogyorody, V. (2007). Organic farming, gender, and the labor process. *Rural Sociology*, 72(2), 289–316. Sweden. *Ecological Economics*, 130: 8–15.

Hebinck, A.; G. Villarreal, H. Oostindie; P. Hebinck; T.A. Zwart; J. Vervoort; L. Rutting and A. de Vrieze (2016) Urban Agriculture policy-making: Proeftuin040 – TRANSMANGO scenario workshop report, the Netherlands.

Heckman, J. J. (2006). Skill formation and the economics of investing in disadvantaged children. *Science*, 312(5782), 1900–1902.

Heckman, J., Pinto, R., & Savelyev, P. (2013). Understanding the mechanisms through which an influential early childhood program boosted adult outcomes. *American Economic Review*, 103(6), 2052–86.

Hedlund, M., & Lundholm, E. (2015). Restructuring of rural Sweden—employment transition and out-migration of three cohorts born 1945–1980. *Journal of Rural Studies*, 42, 123–132.



Holden, S. T., & Otsuka, K. (2014). The roles of land tenure reforms and land markets in the context of population growth and land use intensification in Africa. *Food Policy*, 48, 88–97.

Hollman, A.K., Obermier, T.R., & Burger P.R. (2021). Rural Measures: A Quantitative Study of The Rural Digital Divide. *Journal of Information Policy*, 11, 176–201. doi:
<https://doi.org/10.5325/jinfopoli.11.2021.0176>

Hurni, A. (2006). Transport and Social Disadvantage in Western Sydney: A Partnership Research Project. University of Western Sydney and Western Sydney Community Forum.

Hurni, A. (2007). Marginalised groups in Western Sydney: The Experience of Sole Parents and Unemployed Young People. In G. Currie, J. Stanley, & J. Stanley (Eds.), *No Way To Go-Transport and Social Disadvantage in Australian Communities*, (pp. 10.1–10.11). Monash University ePress.

IFAD. (2019). 2019 Rural Development Report: Creating opportunities for Rural Youth.

IPES FOOD. (2018). Towards a Common Food Policy for the EU. EU Food and Farming Forum 2018, Brussels.

IPES FOOD. (2019). TOWARDS A Common Food Policy for the European Union the Policy Reform and Realignment That Is Required to Build Sustainable Food Systems in Europe. Available at: http://www.ipes-food.org/_img/upload/files/CFP_FullReport.pdf.

Irungu, K. R. G., Mbugua, D., & Muia, J. (2015). Information and Communication Technologies (ICTs) attract youth into profitable agriculture in Kenya. *East African Agricultural and Forestry Journal*, 81(1), 24–33.

Jackson-Smith, D. B., Halling, M., de la Hoz, E., McEvoy, J. P., & Horsburgh, J. S. (2010). Measuring conservation program best management practice implementation and maintenance at the watershed scale. *Journal of Soil and Water Conservation*, 65(6), 413–423.

Jean-Philippe, S., Richards, J., Gwinn, K., & Beyl, C. (2017). Urban youth perceptions of agriculture. *Journal of Youth Development*, 12(3), 1–17.

Karali, E., Brunner, B., Doherty, R., Hersperger, A., & Rounsevell, M. (2014). Identifying the factors that influence farmer participation in environmental management practices in Switzerland. *Human Ecology*, 42(6), 951–963.



Knickel, K., & Renting, H. (2000). Methodological and conceptual issues in the study of multifunctionality and rural development. *Sociologia Ruralis*, 40(4), 512–528.

Knowles, R., Shaw, J., & Docherty, I. (2010). *Transport Geographies: Mobilities, Flows and Spaces*. Wiley–Blackwell.

Kountios, G., Ragkos, A., Bournaris, T., Papadavid, G., & Michailidis, A. (2017). Educational needs and perceptions of the sustainability of precision agriculture: survey evidence from Greece. *Precision Agriculture*, 19(3): 537–554.

Kuhmonen, I., & Luoto, L. (2016). How do rural areas profile in the futures dreams by the Finnish youth? *Journal of Rural Studies*, 44, 89–100.

Kuhmonen, T., Ruuska, P., Skrzypczynski, R. (2021). The opening of rural areas to renew rural generations, jobs and farms, RURALIZATION Project, available on: https://ruralization.eu/wp-content/uploads/2021/03/RURALIZATION_D4.3_Dream-inventory_technical-report_v1.0-1.pdf. Accessed: 10.11.2022.

Lai, J., & Widmar, N.O. (2021). Revisiting the Digital Divide in the COVID-19 Era. *Applied Economic Perspectives and Policy*, 43(1), 458–464. <https://doi.org/10.1002/aepp.13104>

Langowitz, N., & Minniti, M. (2007). The entrepreneurial propensity of women. *Entrepreneurship theory and practice*, 31(3), 341–364.

Läpple, D. (2012). Comparing attitudes and characteristics of organic, former organic and conventional farmers: Evidence from Ireland. *Renewable Agriculture and Food Systems*, 28(4): 329–337.

Lay, V. (2007). Sustainable Development and Leadership. *Društvena istraživanja*, 16(6 (92)), 0–0. <https://hrcak.srce.hr/19245>

Leakey, R. R. B. (1996). Definition of agroforestry revisited. *Agroforestry Today*, 8(1): 5–7.

Lemos, M. C., & Agrawal, A. (2006). Environmental Governance. *Annual Review of Environment and Resources*, 31(1): 297–325.

Li, Y., Westlund, H., & Liu, Y. (2019). Why some rural areas decline whilst some others not: An overview of rural evolution in the world. *Journal of Rural Studies*, 68, 135–143.



Lioutas, E. D., & Charatsari, C. (2020). Smart farming and short food supply chains: Are they compatible? *Land Use Policy*, 94, 104541.

Lowe, P, Murdoch, J and Ward, N (1995) Networks in Rural Development: Beyond Exogenous and Endogenous Models, pp. 87–105 in van der Ploeg, J.D. and van Dijk, C. (eds) *Beyond Modernisation*, Van Gorcum, Assen, The Netherlands.

Luck, G. W., Black, R., & Race, D. (2010). Demographic change in rural Australia: Future opportunities and challenges. *Demographic Change in Australia's Rural Landscapes*, 375–384.

Mala, Z., & Maly, M. (2013). The determinants of adopting organic farming practices: a case study in the Czech Republic. *Agricultural Economics*, 59(1): 19–28.

Manolova, T. S., Carter, N. M., Manev, I. M., & Gyoshev, B. S. (2007). The differential effect of men and women entrepreneurs' human capital and networking on growth expectancies in Bulgaria. *Entrepreneurship theory and practice*, 31(3), 407–426.

Manolova, T. S., Manev, I. M., Carter, N. M., & Gyoshev, B. S. (2006). Breaking the family and friends' circle: Predictors of external financing usage among men and women entrepreneurs in a transitional economy. *Venture capital*, 8(02), 109–132.

Marango, S., Bosworth, G. i Curry, N. (2021). Applying Neo-Endogenous Development Theory to Delivering Sustainable Local Nature Conservation. *Sociologia Ruralis*, 61: 116–140. <https://doi.org/10.1111/soru.12315>

Mars, M. M., Lounsbury, M. (2009). Raging Against or With the Private Marketplace? Logic Hybridity and Eco-Entrepreneurship. *Journal of Management Inquiry*, 18(1), 4–13.

Mascherini, M., Salvatore, L., Mejerjord, A., and Jungblut, A.M. (2012). NEETs – Young people not in employment, education or training: Characteristics, costs and policy responses in Europe. Publications Office of the European Union. Eurofund, available at: https://www.eurofound.europa.eu/sites/default/files/ef_publication/field_ef_document/ef1254en.pdf

Menichini, L. (2022). The role of the Reinforced Youth Guarantee in decreasing the NEET across Europe, EST Working Group on Youth Employment, <https://esthinktank.com/2022/02/28/the-role-of-the-reinforced-youth-guarantee-in-decreasing-the-neet-rate-across-europe/>



Meulders, D., Fagan, C., Urwin, P., and Melling, K. 2006. Gender inequalities in the risks of poverty and social exclusion for disadvantaged groups in thirty European countries. Office for Official Publications of the European Communities, Luxembourg.

Meyn, M. (2020). Digitalization and Its Impact on Life in Rural Areas: Exploring the Two Sides of the Atlantic: USA and Germany. In: Patnaik, S., Sen, S., Mahmoud, M. (eds) Smart Village Technology. Modeling and Optimization in Science and Technologies, 17, 99–116, Springer, Cham. https://doi.org/10.1007/978-3-030-37794-6_5

Miller, D., & Le Breton-Miller, I. (2017). Underdog entrepreneurs: A model of challenge-based entrepreneurship. *Entrepreneurship Theory and Practice*, 41(1), 7-17.

Moher, D., Stewart, L., & Shekelle, P. (2015). All in the family: systematic reviews, rapid reviews, scoping reviews, realist reviews, and more. *Systematic Reviews*, 4(1), 1-2.

Morris, J., Morris, W., & Bowen, R. (2022). Implications of the digital divide on rural SME resilience. *Journal of Rural Studies*, 89, 369–377, <https://doi.org/10.1016/j.jrurstud.2022.01.005>

Mujčinović, A. (2020). Impact of public policies on quality of business of medicinal and aromatic plant producers in Bosnia and Herzegovina, Doctoral thesis, University of Sarajevo, Faculty of Agriculture and Food Science, Sarajevo, Bosnia and Herzegovina.

Mujčinović, A., Nikolić, A., Tuna, E., Stamenkovska, I. J., Radović, V., Flynn, P., & McCauley, V. (2021). Is It Possible to Tackle Youth Needs with Agricultural and Rural Development Policies? *Sustainability*, 13(15), 8410.

Murray, A. T., & Davis, R. (2001). Equity in Regional Service Provision. *Journal of Regional Science*, 41(1), 577–600. <https://doi.org/10.1111/OO22-4146.OO233>

Mwaura, G. M. (2017). Just farming? Neoliberal subjectivities and agricultural livelihoods among educated youth in Kenya. *Development and Change*, 48(6), 1310–1335.

Mzoughi, N. (2011). Farmers adoption of integrated crop protection and organic farming: Do moral and social concerns matter? *Ecological Economics*, 70(8) :1536–1545.



Nag, A., Kumar Jha, S., Mohammad, A., Maiti, S., Gupta, J., Gosain, D. K., ... & Mohanty, T. K. (2018). Predictive factors affecting Indian rural farm youths' decisions to stay in or leave agriculture sector. *Journal of Agricultural Science and Technology*, 20(2), 221-234.

Nair, P. K. R. (1989). Agroforestry defined. P. 13-18. In: PKR Nair (ed) *Agroforestry Systems in the tropics*, Dordrecht, Netherlands: Kluwer Academic Publishers.

Nikolić, A., Mujčinović, A., Bošković, D. (2022). Get Ready for Industry 4.0 – Tool to Support Food Value Chain Transformation. In: , et al. *10th Central European Congress on Food. CE-Food 2020*. Springer, Cham. https://doi.org/10.1007/978-3-031-04797-8_39

Nikolić, A., Uzunović, M., Mujčinović, A. (2022). Perspectives and Limitations of Urban Agriculture in Transition Economies: A Case Study in Bosnia and Herzegovina. In: Leal Filho, W., Djekic, I., Smetana, S., Kovaleva, M. (eds) *Handbook of Climate Change Across the Food Supply Chain. Climate Change Management*. Springer, Cham. https://doi.org/10.1007/978-3-030-87934-1_4

Nordin, S., & Westlund, H. (2009). Social capital and the life cycle model: The transformation of the destination of Åre. *Tourism: An International Interdisciplinary Journal*, 57(3), 259-284.

Nunes de Almeida, A., and Simões, F. (2020). Professional development perspectives across gender and age groups of under-qualified rural NEETs. *Journal of community psychology* 48(5):1620-1636. <https://doi.org/10.1002/jcop.22356>.

OECD (2013). *Innovation-driven Growth in Regions: The Role of Smart Specialisation, preliminary version*, Organisation for Economic Co-operation and Development (OECD), Paris, France.

OECD (2016), *A New Rural Development Paradigm for the 21st Century*, Paris <https://publications.parliament.uk/pa/cm201314/cmselect/cmenvfru/602/602we16.htm>

Okan T, Köse N, Arifoğlu E, Köse C (2016) Assessing ecotourism potential of traditional wooden architecture in rural areas: the case of Papart valley. *Sustainability* 8(10):974. <https://doi.org/10.3390/su8100974>

Oliva, J. & Camarero, L. (2019). Mobilities, accessibility and social justice. In M. Scott, N. Gallent, & M. Gkartzios (Eds.), *The Routledge Companion to Rural Planning*, (pp.296-303). Routledge.



Pedzisa, T., Rugube, L., Winter-Nelson, A., Baylis, K., & Mazvimavi, K. (2015). Abandonment of conservation agriculture by smallholder farmers in Zimbabwe. *Journal of sustainable development*, 8(1), 69.

Perez, R. D. G., Sendra, M. J. M., & Lopez-i-Gelats, F. (2020). Strategies and drivers determining the incorporation of young farmers into the livestock sector. *Journal of Rural Studies*, 78: 131-148.

Pesquera, A.C., Munoz S.P, and Iniesta M.A. (2021). Youth Guarantee: Looking for Explanations, *Sustainability*, 13, 5561, <https://doi.org/10.3390/su13105561>

Pilarova, T., Bavorova, M., & Kandakov, A. (2018). Do farmer, household and farm characteristics influence the adoption of sustainable practices? The evidence from the Republic of Moldova. *International Journal of Agricultural Sustainability*, 16(4-5): 367-384.

Powell, G. N., & Eddleston, K. A. (2008). The paradox of the contented female business owner. *Journal of Vocational Behavior*, 73(1), 24-36.

Ray, C. (2001). *Culture economies: a perspective on local rural development in Europe*. Newcastle upon Tyne: Centre for Rural Economy Newcastle University.

Ray, C. (2001a). Transnational Co-operation Between Rural Areas: Elements of a Political Economy of EU Rural Development. *Sociologia Ruralis*, 41(3): 279-295.

Reimer, A., Thompson, A., Prokopy, L. S., Arbuckle, J. G., Genskow, K., Jackson-Smith, D., & Nowak, P. (2014). People, place, behavior, and context: A research agenda for expanding our understanding of what motivates farmers' conservation behaviors. *Journal of Soil and Water Conservation*, 69(2), 57A-61A.

Reisch, L., Eberle, U., & Lorek, S. (2013). Sustainable food consumption: an overview of contemporary issues and policies. *Sustainability: Science, Practice and Policy*, 9(2), 7-25.

Riley, M., (2016). How does longer term participation in agri-environment schemes [re] shape farmers' environmental dispositions and identities? *Land Use Policy* 52, 62-75. <https://doi.org/10.1016/j.landusepol.2015.12.010>

Rogers, E.M. (2003). *Diffusion of innovations* (5th ed.). New York: Free Press.



Ronald, O., Basil, M., & David, P. P. (2018). Determinants of mobile phones usage in sweet potato vine business in Gulu district northern Uganda. *African Journal of Agricultural Research*, 13(21), 1071–1079.

Rosário AT, Raimundo RJ, Cruz, S. P. (2022). Sustainable Entrepreneurship: A Literature Review. *Sustainability*. 14(9):5556. <https://doi.org/10.3390/su14095556>

Rye, J. F. (2006). Rural youths' images of the rural. *Journal of Rural Studies*, 22(4), 409–421.

Sachs, C.E., Barbercheck, M.E., Brasier, K., Kiernan, N.E. & Terman, A.R. (2016). *The rise of women farmers and sustainable agriculture*. Iowa City: University of Iowa Press.

Sáez-Martínez, Francisco Jose, González-Moreno, Angela and Hogan, Teresa (2014). The Role of the university in eco-entrepreneurship: evidence from the Eurobarometer survey on attitudes of European entrepreneurs towards eco-innovation. *Environmental Engineering and Management Journal*, 13(10). p. 2541. ISSN 1582–9596.

Sala, O. E., Yahdjian, L., Havstad, K., Aguiar, M. R. (2017). *Rangeland Ecosystem Services: Nature's Supply and Humans' Demand*. In: Briske, D. (eds) *Rangeland Systems*. Springer Series on Environmental Management. Springer, Cham.
https://doi.org/10.1007/978-3-319-46709-2_14

Salazar, C., & Rand, J. (2016). Production risk and adoption of irrigation technology: evidence from small-scale farmers in Chile. *Latin American Economic Review*, 25(1): 1–37.

Salazar, C., Jaime, M., Pinto, C., & Acuña, A. (2019). Interaction between crop insurance and technology adoption decisions: The case of wheat farmers in Chile. *Australian Journal of Agricultural and Resource Economics*, 63(3): 593–619.

Salman A, Jaafar M, Mohamad D et al (2021) Ecotourism development in Penang Hill: a multi-stakeholder perspective towards achieving environmental sustainability. *Environmental Science & Pollution Research*. <https://doi.org/10.1007/s11356-021-13609-y>

Salmenniemi, S., Karhunen, P., & Kosonen, R. (2011). Between business and byt: Experiences of women entrepreneurs in contemporary Russia. *Europe-Asia Studies*, 63(1), 77–98.

Sanchez, P.A. (1995). Science in agroforestry. In: Sinclair, F.L. (eds) *Agroforestry: Science, Policy and Practice*. Forestry Sciences, vol 47. Springer, Dordrecht.



Sánchez-Zamora, P., Gallardo-Cobos, R., and Ceña-Delgado, F. (2014). Rural areas face the economic crisis: Analyzing the determinants of successful territorial dynamics. *Journal of Rural Studies*, 35, 11–25.

Santini, C. (2017). Ecopreneurship and Ecopreneurs: Limits, Trends and Characteristics. *Sustainability*, 9(4):492. <https://doi.org/10.3390/su9040492>.

Schmidt, C., Goetz, S. J., & Tian, Z. (2021). Female farmers in the United States: Research needs and policy questions. *Food Policy*, 101, 102039.

Scoones, I. (2009). Livelihoods perspectives and rural development. *Journal of Peasant Studies*, 36(1), 171–196.

Scoones, I., Mavedzenge, B., & Murimbarimba, F. (2019). Young people and land in Zimbabwe: livelihood challenges after land reform. *Review of African Political Economy*, 46(159), 117–134.

Sestino, A., Prete, M.I., Piper, L., Guido, G. (2020). Internet of Things and big data as enablers for business digitalization strategies. *Technovation* 98, 102173

Shucksmith, M., and Brown, D. (2006). *Routledge International Handbook of Rural Studies*. London: Routledge.

Šimleša, D. (2010). *Ekološki otisak: kako je razvoj zgazio održivost. [The Ecological Footprint: How Development Trampled Sustainability.]* Zagreb: TIM press i IDZ Ivo Pilar.

Simões, F. (2018). How to involve rural NEET youths in agriculture? Highlights of an untold story. *Community Development*, 49(5), 556–573.

Simões, F., & do Rio, N. B. (2020). How to increase rural NEETs professional involvement in agriculture? The roles of youth representations and vocational training packages improvement. *Journal of Rural Studies*, 75, 9–19.

Simões, F., & Drumonde, R. (2016). Os desafios da reconversão profissional de jovens nas atividades do setor primário: O caso do projeto Terra Nostra (The challenges of youths' professional reskilling in the primary sector: The case of the project Our Land). *Juventude (s): Novas realidades, novos olhares (Youth: New realities, new approaches)*, 103–122.



Sumberg, J., & Hunt, S. (2019). Are African rural youth innovative? Claims, evidence and implications. *Journal of Rural Studies*, 69, 130–136.

Sumberg, J., Anyidoho, N. A., Leavy, J., te Lintelo, D. J., & Wellard, K. (2012). Introduction: The young people and agriculture ‘problem’ in Africa. *IDS Bulletin*, 43(6), 1–8.

Sumberg, J., Yeboah, T., Flynn, J., & Anyidoho, N. A. (2017). Young people’s perspectives on farming in Ghana: a Q study. *Food security*, 9(1), 151–161.

Swetnam, R. D., Mountford, J. O., Manchester, S. J., & Broughton, R. K. (2004). Agri–environmental schemes: their role in reversing floral decline in the Brue floodplain, Somerset, UK. *Journal of environmental management*, 71(1), 79–93.

Tavanti M (2010) The integrated frameworks and pillars of sustainability. <http://sustainabledepaul.blogspot.com/p/sustainability-frameworks.html>. Accessed 15 June 2020

The Council of European Union (2013). Council Recommendation of 22 April 2013 on establishing a Youth Guarantee (213/C/120/01), *Official Journal of the European Union*, C120/1

Thissen, F., Fortuijn, J. D., Strijker, D., & Haartsen, T. (2010). Migration intentions of rural youth in the Westhoek, Flanders, Belgium and the Veenkoloniën, The Netherlands. *Journal of Rural Studies*, 26(4), 428–436.

Tiffin, R., & Balcombe, K. (2011). The determinants of technology adoption by UK farmers using Bayesian model averaging: The cases of organic production and computer usage. *Australian Journal of Agricultural and Resource Economics*, 55(4), 579–598.

Tolon–Becerra, A., Lastra–Bravo, X., i Galdeano–Gomez, E. (2010). Planning and neo–endogenous model for sustainable development in Spanish rural areas. *International Journal of Sustainable Society* 2(2): 156–176. <https://doi.org/10.1504/IJSSOC.2010.033628>

Torralba, M., Fagerholm, N., Burgess, P. J., Moreno, G., & Plieninger, T. (2016). Do European agroforestry systems enhance biodiversity and ecosystem services? A meta–analysis. *Agriculture, ecosystems & environment*, 230, 150–161.

Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence–informed management knowledge by means of systematic review. *British journal of management*, 14(3), 207–222.



Tricco, A. C., Antony, J., Zarin, W., Strifler, L., Ghassemi, M., Ivory, J., & Straus, S. E. (2015). A scoping review of rapid review methods. *BMC Medicine*, 13(1), 1–15.

Troughton, M. J. (1995). Presidential Address: Rural Canada and Canadian rural geography--an appraisal. *Canadian Geographer*, 39(4), 290.

Tsiaousi, A. & Partalidou, M. (2021). Female farmers in Greece: Looking beyond the statistics and into cultural–social characteristics. *Outlook on Agriculture*, 50(1), 55–63.

Ufuk, H., & Özgen, Ö. (2001). The profile of women entrepreneurs: A sample from Turkey. *International journal of consumer studies*, 25(4), 299–308.

UN General Assembly, (2015). Transforming our world: the 2030 Agenda for Sustainable Development, 21 October 2015, A/RES/70/1, available at: <https://documents-dds-ny.un.org/doc/UNDOC/GEN/N15/291/89/PDF/N1529189.pdf?OpenElement>

Unay–Gailhard, I. & Bojnec, S., (2021). Gender and the environmental concerns of young farmers: Do young women farmers make a difference on family farms? *Journal of Rural Studies*, 88: 71–82. UNDP and CESID. (2016). Survey of the drivers of youth radicalism and violent extremism in Serbia. Belgrade, Serbia.

Unay–Gailhard, I. (2016). Job access after leaving education: a comparative analysis of young women and men in rural Germany. *Journal of Youth Studies* 19(10):1355–1381. <https://doi.org/10.1080/13676261.2016.1166189>.

Unay–Gailhard, I., and Bojnec, Š. (2019). The impact of green economy measures on rural employment: green jobs in farms. *Journal of Cleaner Production*, 208, 541–551.

UNCTAD. (2021) 2021 Technology and Innovation Report, Catching technological waves, Innovation with equity, United Nations Conference on Trade and Development, eISBN: 978–92–1–005658–8

United Nations (2015). Transforming our World: The Agenda 2030 for Sustainable Development, Department of Economics and Social Affairs

Vaishar, A., Šťastná, M., Zapletalová, J., & Nováková, E. (2020). Is the European countryside depopulating? Case study Moravia. *Journal of Rural Studies*, 80, 567–577.



Van Der Ploeg, J. D., & Renting, H. (2000). Impact and potential: a comparative review of European rural development practices. *Sociologia Ruralis*, 40(4), 529–543.

Van Eck, N., & Waltman, L. (2010). Software survey: VOSviewer, a computer program for bibliometric mapping. *Scientometrics*, 84(2), 523–538.

Vandor, P., & Franke, N. (2016). See Paris and... found a business? The impact of cross-cultural experience on opportunity recognition capabilities. *Journal of Business Venturing*, 31(4), 388–407.

Veda, G., Donohue, C., Nicholls, R., Cloete, E., Trandafil, H., Wright, M., Williams, A., Delgado, D., Cruse, M., Westhorp, G. (2021) Impact of Community-Led Development on Food Security (InCLuDE): A Rapid Realist Review. The Movement for Community-Led Development & Charles Darwin University.

Verheul, I., Stel, A. V., & Thurik, R. (2006). Explaining female and male entrepreneurship at the country level. *Entrepreneurship and regional development*, 18(2), 151–183.

Walker, B., & Salt, D. (2012). *Resilience thinking: sustaining ecosystems and people in a changing world*. Island press.

Wenham, A. (2020). "Wish you were here"? Geographies of exclusion: young people, coastal towns and marginality. *Journal of Youth Studies* 23(1):44–60.
<https://doi.org/10.1080/13676261.2019.1704408>.

Willer, H., Julia L., and Lukas K. (Eds.) (2013). *The World of Organic Agriculture. Statistics and Emerging Trends 2013*. FiBL–IFOAM Report. Research Institute of Organic Agriculture (FiBL), Frick, and International Federation of Organic Agriculture Movements (IFOAM), Bonn, Switzerland.

Wilson, G. A., & Hart, K. (2001). Farmer participation in agrienvironmental schemes: towards conservation-oriented thinking? *Sociologia ruralis*, 41(2), 254–274.

WTO (2002). *The World Ecotourism Summit – Final Report*. Accessed from:
<https://www.e-unwto.org/doi/book/10.18111/9789284405503>.

Ye, L., & Yang, H. (2020). From Digital Divide to Social Inclusion: A Tale of Mobile Platform Empowerment in Rural Areas. *Sustainability*, 12(6), 2424. <https://doi.org/10.3390/su12062424>



Yetim, N. (2008). Social capital in female entrepreneurship. *International sociology*, 23(6), 864–885.

Yin, X. (2021). *Bilingual Language Socialization in a Translanguaging Space: A Case Study of a Chinese Rural Preschool* (Doctoral dissertation, The University of Arizona).

Yordanova, D. I. (2011). The effects of gender on entrepreneurship in Bulgaria: an empirical study. *International journal of management*, 28(1), 289.

Young, A. (2013). Inequality, the urban–rural gap, and migration. *The Quarterly Journal of Economics*, 128(4), 1727–1785.

Zareiyan, B., Korjani, M.: Blockchain technology for global decentralized manufacturing: challenges and solutions for supply chain in fourth industrial revolution. *International Journal of Advanced Robotics & Automation* 3, 1–10 (2018).

Zhao, G., Liu, S., Lopez, C., Lu, H., Elgueta, S., Chen, H., & Boshkoska, B. M. (2019). Blockchain technology in agri–food value chain management: A synthesis of applications, challenges and future research directions. *Computers in industry*, 109, 83–99.

Zulu, L. C., Djenontin, I. N., & Grabowski, P. (2021). From diagnosis to action: Understanding youth strengths and hurdles and using decision–making tools to foster youth–inclusive sustainable agriculture intensification. *Journal of Rural Studies*, 82, 196–209.

