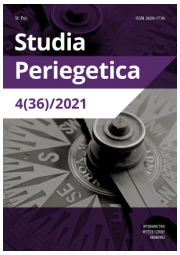
Studia Periegetica
WYŻSZA SZKOŁA BANKOWA w Poznaniu

ISSN 2658-1736, www.studia-periegetica.com
nr 4(36)/2021, s. 107-130, DOI: 10.5604/01.3001.0015.8321



Marina Valenćiková*

The food system and its impact on rural development: the case of the Slovakian regions of Košice and Nitra

Abstract. At the moment, demographic trends indicate that rural populations are migrating to cities; as a result, rural areas are undergoing depopulation. To halt this downward trend, it is critical to create good prospects for the rural environment and population; one option is to focus on rural tourism and agritourism. However, the absence of an intervention strategy in the agricultural sector creates uncertainty and even existential problems for many farmers. The article focuses on the Nitra (NR) and Košice (KE) regions of Slovakia (SR), which are characterised by highly fertile land enabling the development of agriculture, especially the production of organic food, regional tourism, and agritourism. The author proposes connecting agricultural production with rural tourism. Both regions are well-known for their winemaking and grape cultivation. Unfortunately, their fertile land is being destroyed to build industrial parks. As a result, their natural resources are not being utilised for the intended purpose. The study described in the article is based on a comparison of economic indicators, such as GDP and the unemployment rate in agriculture. The two regions supply a significant percentage of products manufactured in Slovakia. Additionally, the development of rural tourism and agritourism could support agriculture and forestry, protect the environment and create and retain jobs in the Slovak countryside.

Keywords: Slovakia, Košice region, Nitra region, food system, indicators

JEL Codes: HOO, Q18

Suggested citation: Valenćiková, M. (2021). The food system and its impact on rural development: the case of the Slovakian regions of Košice and Nitra. *Studia Periegetica*, *4*(36), 107-130, https://doi.org/10.5604/01.3001.0015.8321

* Slovak University of Agriculture in Nitra (Slovak Republic), Faculty of European Studies and Regional Development, Institute of Law, email: xvalencikova@uniag.sk, orcid.org/0000-0003-4484-8954

1. Introduction

Food systems are ubiquitous – every person on Earth is a part of at least one type of food system. Since the end of World War II, global food and agricultural production has increased significantly. The world has seen an overall increase in food demand as a result of population growth, wealth accumulation, urbanization and a shift in dietary preferences toward more resource-intensive foods (Loring & Sanyal, 2021). "Agriculture now occupies roughly half of the plant-habitable surface of the planet, uses 69% of extracted fresh water and, together with the rest of the food system, is responsible for 25 – 30% of greenhouse gas emissions". Through its direct and intermediate impacts, the food system is the largest contributor to the depletion of biodiversity. We currently produce more than enough food for the global population, yet over 795 million people remain undernourished" (Gladek at al., 2017, p. 4). Maxton (2019) asserts that more damage has been done to the environment in the last 50 years than at any other point in human history. That is why the European Union (EU) has adopted the European Green Deal, which aims to create an inclusive, circular economy and a sustainable food system; however, in order to accomplish this, it is necessary to invest in environmentally friendly technologies. (European Commission, 2019) Slovakia has adopted the Strategy of the Environmental Policy until 2030 called Greener Slovakia, which aims to promote, among other things "sustainable use and effective protection of natural resources" including "effective protection of nature and landscape", and the circular economy (Greener Slovakia, 2019). "However, simply ensuring a sufficient level of food production will not address the more entrenched impacts and humanitarian imbalances within the food system" (Gladek at al., 2017, p. 4). In the following part of the article component of the food system, analyse the food system as a whole, and comparison of national statistics with their corresponding values for the Nitra and Košice regions has been described.

2. Literature review

2.1. Characteristics of food systems

The food system is not a novel idea. Although it has been discussed since the late 1950s, it was not commonly used until the late 1990s and early 2000s. (Hai Vu & The Anh, 2021).

According to von Braun et al. (2021, p. 30), "food systems embrace the entire range of actors and their interlinked value-adding activities involved in the pro-

duction, aggregation, processing, distribution, consumption, and disposal (loss or waste) of food products that originate from agriculture (incl. livestock), forestry, fisheries, and food industries, and the broader economic, societal, and natural environments in which they are embedded".

According to OECD (2021), "the term 'food systems' refers to all the elements and activities related to producing and consuming food, and their effects, including economic, health, and environmental outcomes. Around the world, food systems are facing a triple challenge: ensuring food security and nutrition for a growing population, supporting the livelihoods of millions of farmers and others in the food chain, and doing so in an environmentally sustainable way," as can be seen in Figure 1.

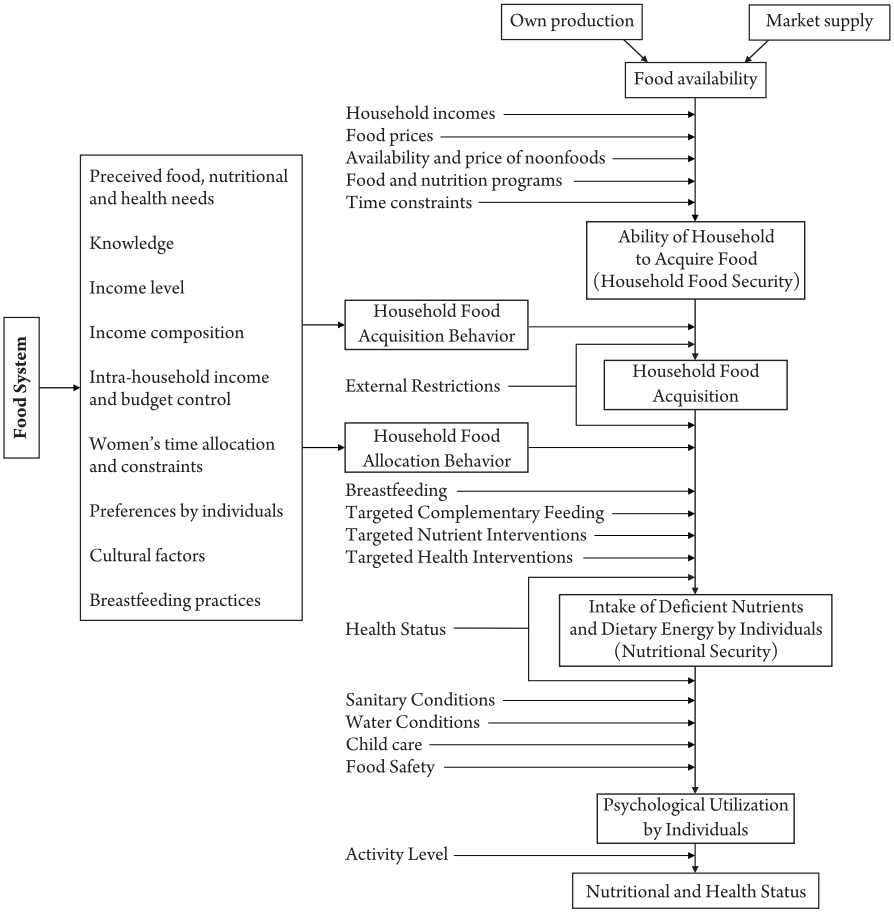


Fig. 1. "A generic household level pathway for nutrition-enhancing food and agricultural systems"

Source: Pinstrup-Andersen, & Watson (2012).

Slovakian agriculture can currently cover only 40% of its inhabitants' food consumption. Despite years of declared political efforts to promote food self-sufficiency, Slovakia is becoming increasingly reliant on food imports from abroad. The present government, which describes boosting food self-sufficiency as a state strategic goal, aims to change this situation. Slovakia is no longer self-sufficient as regards fundamental agri-food commodities, despite favourable natural conditions. Imports of foreign food products are increasing year after year. Traditionally, opposing political parties have promised to enhance the proportion of homegrown food on Slovak consumers' tables. It is also one of the top priorities of the new leadership of the Ministry of Agriculture and Rural Development (EURACTIV, 2020).

Sobal, Khan & Bisogni (1998) define the food and nutrition system as "the set of operations and processes involved in transforming raw materials into foods and transforming nutrients into health outcomes, all of which functions as a system within biophysical and sociocultural contexts" (p. 853). According to the International Food Policy Research Institute (2021), food systems are the total

Table 1. A comparison of some features of "traditional" and "modern" food systems

Food system feature	Traditional food systems	Modern food systems
Principal employment in food sector	In food production	In food processing, packaging and retail
Supply chain	Short, local	Long with many food miles and nodes
Food production system	Diverse, varied productivity	Few crops predominate; intensive, high inputs
Typical farm	Family-based, small to moderate	Industrial, large
Typical food consumed	Basic staples	Processed food with a brand name; more animal products
Purchased food bought from	Small, local shop or market	Large supermarket chain
Nutritional concern	Under-nutrition	Chronic dietary diseases
Main source of national food shocks	Poor rains; production shocks	International price and trade problems
Main source of household food shocks	Poor rains; production shocks	Income shocks leading to food poverty
Major environmental concerns	Soil degradation, land clearing	Nutrient loading, chemical runoff, water demand, greenhouse gas emissions
Influential scale	Local to national	National to global

Source: Maxwell & Slater (2003).

of the actors and interactions that occur along the food value chain, from input supply and crop production to transportation, processing, retailing, wholesaling, and food preparation to consumption and disposal. Table 1 shows a comparison between traditional and modern food systems.

According to The UNEP International Resource Panel (2016), current food systems can be divided into modern food systems in industrialized and emerging regions and more traditional food systems found in developing countries.

2.2. The role of food systems in the development of society

In addition to the points made in previous section, Leach at al. (2020, p. 2) state "food has become a pivotal topic in development, capturing high level attention in international policy debates, and amongst global, national and local actors". According to Tansey & Worsley (2014), food encompasses economic, social, cultural, and identity issues. Around the world, an intensive food policy is evolving, albeit in distinct ways. "Food security (is) a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life" (Food and Agriculture Organization of the United Nations, 2003, p. 28). Access to food is a persistent issue in sustainable development, the environment, and trade (European Commission, 2020a).

The Social Gastronomy Movement (2021) argues that food can be used to foster greater social inclusion. Food has an impact on every aspect of human life, including the environment, agriculture, economics, health, and even social interactions. Social gastronomy aims to address social inequalities such as hunger, malnutrition, and unemployment. At the same time, food can help build community and empathy through the organization of various events and educational programs, such as those on reducing food waste, a serious problem in the food system. Food can improve global systems in this way by stimulating change at the local level. However, the world has changed dramatically over the last 50 years as a result of massive and relentless social migration from rural to urban areas. In 2018, 55% of the world's population lived in urban areas, a proportion that is expected to increase to 68% by 2050 (UN, 2018).

"Neoliberal globalization being promoted by the World Trade Organization (WTO), the influence of food sovereignty has grown in large part because it offers a different way of thinking about how the world food system could be organized; it offers an alternative to the corporate food regime and its manifest failings" (Akram-Lodhi, 2013, p. 2).

The state's role may also vary according to whether a country's food system is predominantly traditional, modernized, or industrialized (as rural food produc-

ers themselves respond to such a transformation). How modern states developed stable food systems capable of extracting and selling agricultural surpluses to feed state employees and a growing non-agricultural population was critical to their development (Gupta & Pouw, 2017).

According to Béné et al. (2019), the majority of the world's food insecure people live in countries that have not yet made the necessary structural changes to their economies. As demonstrated by food institutions' approaches, and political factors that contribute to social exclusion or inclusive inclusion can limit opportunities and keep poor people impoverished and vulnerable.

3. Rural areas in Slovakia

There is no clear definition of what comprises rural areas, and the definitions that do exist are dependent on definitions of urban areas. Rural regions, as a dynamic geographical category, continue to be relevant for analysing the effects of climate change and the opportunities for adaptation. (Dasgupta et al., 2014; Hawley et al., 2016) Eurostat (2018) defines rural area as "an area where more than 50 % of its population lives in rural grid cells, as used in the degree of urbanisation."

According to Czapiewski (2006) "rural areas are a complex phenomenon, so their development has to range simultaneously many aspects: economic, social, natural, cultural and infrastructure one. When this condition is met, we can consider such a unit as an area of success. A balance of all spheres of civilization development is assumed for units like thi" (p. 78).

As stated by Bleha et al. (2020), the definition of a municipality is based on the method of classification used by the Statistical Office of the Slovak Republic. Every year, it publishes demographic data for 10 size categories of municipalities: municipalities with fewer than 200 inhabitants, 200-499, 500-999, 1000-1999, 2000-4999, 5000-9999, 10 000-19 999, 20 000-49 999, 50 000-99 999, 100 000 and more inhabitants.

In 2021, Slovakia was inhabited by more than 5 million people (5 449 270) (Sčítanie obyvateľov, domov a bytov, 2021). As can be seen in Table 2, rural municipalities with between 1000 and 4999 inhabitants accounted for nearly a third of the Slovakian population (30.87%).

Rural municipalities include all those that do not have the status of a town. A municipality is an administrative-statistical unit and can consist of one or more settlements (Nestorová-Dická, Gessert, & Sninčák, 2019).

Based on Zákon č. 369/1990 Zb. slovenskej národnej rady o obecnom zriadení (1990) in part 4, § 22:

(1) As of 1 January, the National Council of the Slovak Republic may establish a municipality which:

a) is an economic, administrative and cultural centre or a centre of tourism, or a spa,

b) provides services for inhabitants of surrounding municipalities,

c) has secured transport connections with surrounding municipalities,

d) at least a part of its territory is classified as urban development,

e) has a population of at least 5000.

(2) A municipality can be declared a town even if it does not have the required number of inhabitants, if it meets other conditions referred to in paragraph 1.

(3) A proposal for the establishment of a municipality as a town shall be submitted by the Government to the National Council of the Slovak Republic following a request from the municipality.

The Slovak Republic is a relatively small state; at 31.12.2020 there were 2890 municipalities (Statistical Office of the Slovak Republic, 2022a). However, nearly 92% of them have a population of fewer than 3000 people, which has a negative impact of the efficiency of public services (Ministerstvo financií SR, 2020).

Table 2. Municipalities of Slovakia according to the number of inhabitants in 2020

Type	Municipality category by the number of inhabitants	Number of municipalities	Combined population for the category	Percentage of total population
Rural	up to 199	409	50 328	0.92
	200-499	705	243 769	4.45
	500-999	760	539 616	9.84
	1 000-1 999	577	811 563	14.80
	2 000-4 999	301	876 514	15.98
Urban	5 000-9 999	67	450 869	8.22
	10 000-19 999	33	467 306	8.52
	200 000-49 999	28	793 799	14.48
	50 000-99 999	8	546 931	9.97
	100 000 and more	2	679 086	12.38

Source: based on data published by the Statistical Office of the Slovak Republic (2021a).

As can be seen in Fig. 2, between 2015 and 2019 the number of people living in urban areas in Slovakia increased up to 53.11%.

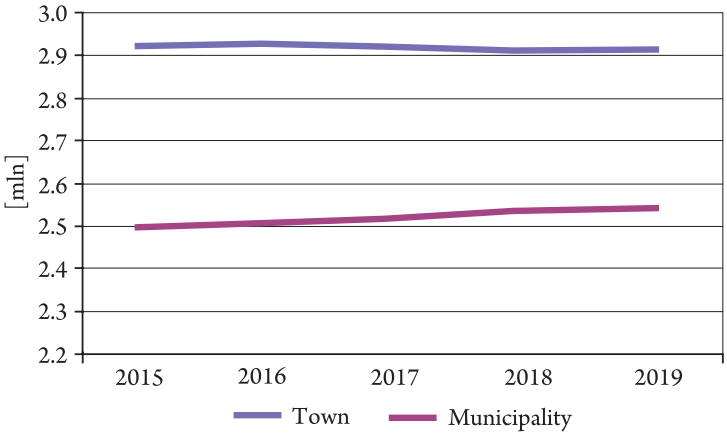


Fig. 2. Urban and rural population in Slovakia

Source: based on data published by the Statistical Office of the Slovak Republic (2021a).

4. The study

The aim of this article is to evaluate the situation of the food system and its impact on the rural development of the Nitra and Košice regions (Fig. 3). The study is mainly based on online data from secondary sources, such as reports on agriculture and food production in the Slovak Republic in the period 2015-2019, with emphasis on plant and animal production, as well as data published by Eurostat and the Slovak Statistical Office.

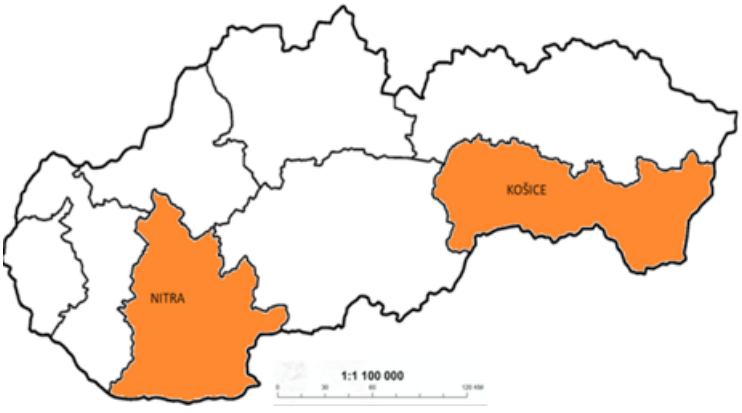


Fig. 3. Location of the Nitra and Košice regions

Source: own processing using ArcGis (2022).

The potential for the growth of tourism-related activities in Slovakia's rural areas varies as well. Rural development is an essential policy concern in European Union member states (Lietava & Fáziková, 2017; Pichler, 2018). The countryside has an enormous potential not just in agricultural output, but also with regard to tourism, entrepreneurship, and economic activity of the population. Development in this area should be based on respecting tourists' expectations and real-world possibilities for offering services in rural areas (Mura & Šulterová, 2012). However, the COVID-19 pandemic has disrupted agricultural value chains and markets, posing a serious threat to rural livelihoods as stated by European Commission (2020b). Farmers and agribusinesses were frequently unable to process their fresh produce and enter markets due to movement restrictions. This was particularly true in the case of small businesses. Reduced demand and lower prices result in increased food waste and income loss. Table 3 shows declining employment in agriculture in the EU-27 and SR. As can be seen, the percentage of people in Slovakia who are employed in agriculture is half of the average in the EU-27.

Table 3. Employment in agriculture in Slovakia and in the EU-27 (% of total employment)

Year	EU-27	SR
2015	5.06	3.18
2016	4.79	2.89
2017	4.67	2.71
2018	4.52	2.29
2019	4.35	2.79

Source: World Bank (2021a).

Before analysing and interpreting economic indicators, let us concentrate on the two regions. According to Zákon 336/2015 Zb. on the support of the least developed districts and amendments to certain laws, published in 2021, the Košice region includes Sobrance, Michalovce, Stropkov, Trebišov, Košice-okolie, and Rožňava (Prohuman, 2020). It was selected because of a high concentration of least developed districts, while the Nitra region was chosen because none of its district was identified as least developed. Regional indicators for these two regions are compared with the national average.

The first indicator considered in the analysis is the population. As can be seen in Table 4, the Slovak population kept increasing in the reference period, as did the population of the Košice region, in contrast to in the Nitra region, which experienced a slight decline.

Table 4. Population in Slovakia and in the KE and NR regions

Unit/year	2015	2016	2017	2018	2019
Slovakia	5,423,800.5	5,430,797.5	5,439,231.5	5,446,770.5	5,454,147
Nitra	684,922	682,527	680,779	678,692	676,672
Košice	795,565	796,650	798,103	799,217	800,414

Source: based on data from the Statistical Office of the Slovak Republic (2021a).

As regards the level of unemployment, shown in Table 5, both the country as a whole and the two regions saw considerable decreases over the 5-year period, although the unemployment rate in the Nitra region significantly lower.

Table 5. Unemployment rate (%) in Slovakia and in the KE and NR regions

Unit/year	2015	2016	2017	2018	2019
Slovakia	10.63	8.76	5.94	5.04	4.92
Nitra	9.71	6.96	4.05	3.12	2.93
Košice	14.39	12.76	9.94	8.17	7.57

Source: based on data from the Central Office of Labour, Social Affairs and Family (2021).

As can be seen in Table 6, GDP at both the national and regional levels increased during the reference period. Similar growing trends can be observed with respect to the average monthly wage (Table 7).

Table 6. GDP in Slovakia and in the KE and NR regions (million EUR)

Unit/year	2015	2016	2017	2018	2019
Slovakia	79,888.15	81,014.25	84,442.86	89,430.03	94,048.03
Nitra	8,319.41	8,539.73	8,949.64	9,070.43	9,959.39
Košice	9,441.60	9,307.45	10,289.35	10,639.98	11,016.67

Source: based on data from the Statistical Office of the Slovak Republic (2021b).

Table 7. Average gross salary in Slovakia and in the KE and NR regions (in EUR)

Unit/year	2015	2016	2017	2018	2019
Slovakia	997	1044	1101	1175	1262
Nitra	860	915	955	1031	1122
Košice	947	986	1039	1110	1168

Source: based on data from the Statistical Office of the Slovak Republic (2022b).

The next part of the analysis concerns the production and consumption of selected agricultural products to determine which food products should be grown in bigger quantities in order to ensure self-sufficiency.

Tables 8 and 9 show data for agricultural and animal production.

Table 8. Production of selected agricultural products in Slovakia (thous. tonnes)

Product/year	2015	2016	2017	2018	2019
Cereals	4708	4848	3484	4037.8	4104.1
Potatoes	179	177	150	170	182.4
Legumes	14	26	26	20.5	20.6
Fruit:	67	34	50	51.6	41.8
Apples	46.3	20.7	32.5	43.9	35.2
Plums	2.2	0.5	1.0	2.2	1.8
Vegetables:	326	339	313	105.6	125.8
Tomatoes	19.5	18.9	22	22.3	2.9
Cabbage	15.8	16.8	18.2	15	13.7
Onion	16.9	29.9	13.6	27.3	17.1
Carrot	10.1	6.4	5.7	8.9	13.6
Wine	347	370	340	340	340
Must grapes	49.7	37.4	45.1	51.0	42.7

Source: Ministerstvo pôdohospodárstva a rozvoja vidieka Slovenskej republiky (2021).

Figures 4 and 5 provide information about domestic production and consumption of selected animal products in 2015-2019.

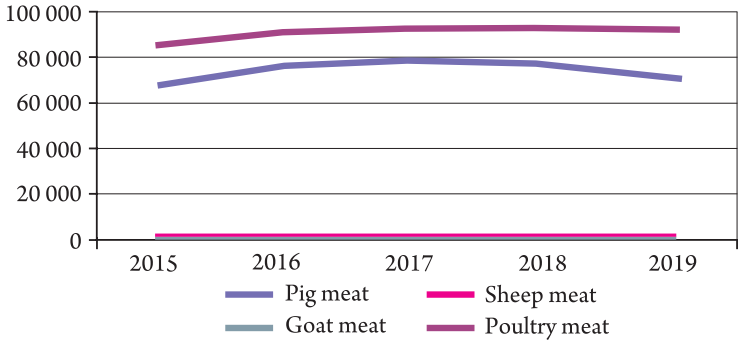


Fig. 4. Domestic production of selected animal products (t. carcass weight)

Source: Ministerstvo pôdohospodárstva a rozvoja vidieka Slovenskej republiky (2021).

Table 9. Household expenditure on goods and services in 2019 (in EUR)

Category	SR	Region	
		NR	KE
Total expenditure on food and soft drinks	947.51	982.39	935.76
of which			
Food	867.10	892.32	853.61
of which			
Bread and cereals	155.73	159.75	159.37
Meat	239.34	254.29	232.01
Fish and seafood	25.19	30.49	22.67
Milk, cheese and eggs	162.16	164.82	152.84
Oils and fats	42.00	42.00	46.62
Fruit	62.49	56.91	58.18
Vegetables, incl. potatoes	81.36	76.60	83.82
and other tubers and products	62.47	68.07	59.74
of tubers	36.36	39.38	38.34
Sugar, jam, honey, chocolate	80.42	90.07	82.15
of which			
Coffee, tea and cocoa	33.23	33.41	32.70
Mineral waters, non-alcoholic beverages	47.19	56.66	49.45

Source: data published by Ministerstvo pôdohospodárstva a rozvoja vidieka Slovenskej republiky (2020).

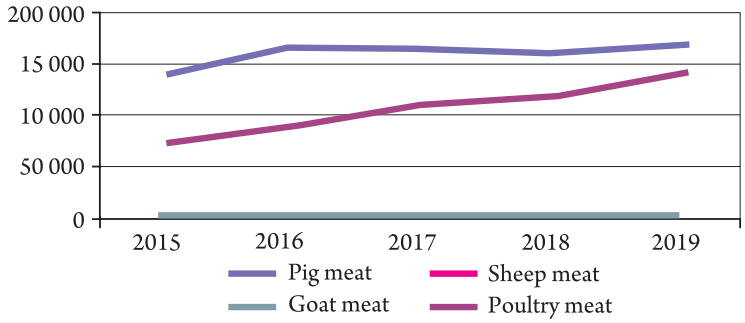


Fig. 5. Domestic consumption of selected animal products (t. carcass weight)

Source: Ministerstvo pôdohospodárstva a rozvoja vidieka Slovenskej republiky (2021).

Figures 6 and 7 show domestic production and consumption of cow's milk and hens' eggs between 2015-2019.

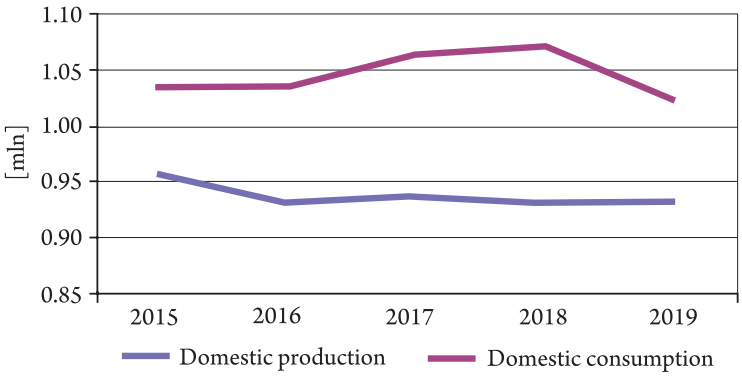


Fig. 6. Domestic production and consumption of cow's milk (t)

Source: Ministerstvo pôdohospodárstva a rozvoja vidieka Slovenskej republiky (2021).

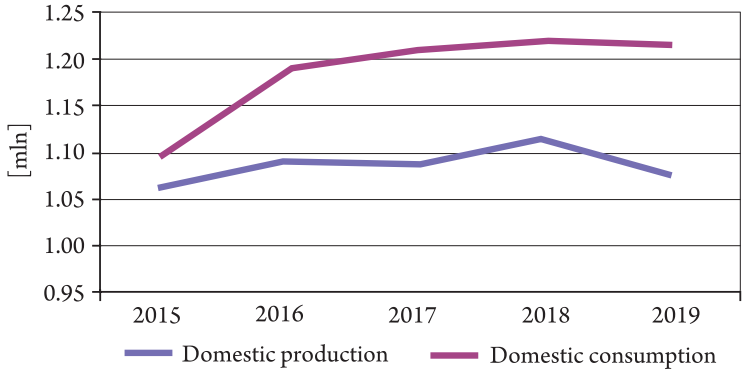


Fig. 7. Domestic production and consumption of hens' eggs (thousand. pieces)

Source: Ministerstvo pôdohospodárstva a rozvoja vidieka Slovenskej republiky (2021).

Due to rising input prices in 2021, the Slovak Agriculture and Food Chamber reported a 10 to 20% increase in product prices, suggesting that price increases could be mitigated if retail chains narrow their margins and a better subsidy policy was implemented (The Slovak Spectator, 2021). The rise in food prices was primarily due to an increase in the cost of unprocessed foods (vegetables and meat). The impact of foreign demand and the risks associated with the African swine fever were reflected in the development of meat prices (NBS, 2019).

Tables 9 and 10 provide data about household expenditure on food and non-alcoholic beverages.

Table 10. Overview of household expenditures in 2019 (in EUR)

Indicator	SR	NR	KE
Total cash expenditure	5608.35	5485.92	4911.86
of which			
Total consumption expenditure	4090.97	4061.76	3673.92
of which			
Food and non-alcoholic beverages	947.51	982.39	935.76
Alcoholic beverages and tobacco	123.46	114.48	118.14

Source: data published by Ministerstvo pôdohospodárstva a rozvoja vidieka Slovenskej republiky (2020).

5. Local food systems

According to the definition adopted by the US Congress in the Food, Conservation and Energy Act of 2008, "the total distance that a product can be transported and still be considered a 'locally or regionally produced agricultural food product' is less than 400 miles from its origin, or within the State in which it is produced. However, the common definition used by the general population considers food 'local' if it was grown within 100 miles or within the state." As claimed by Martinez et al. (2010): "definitions based on market agreements, including direct consumer agreements such as regional farmers' markets, or direct retail / catering agreements such as farm sales to schools, are well known categories and are used in this report to provide statistics on market developments local foods."

As far as local food products are concerned, the Nitra region is known for the production of liquid chilli extract, honey products (honey with vanilla, honey with ginger, honey with nuts and cranberries) (Nitrianska organizácia cestovného ruchu, 2022). The Košice region is known for a variety of organic food (Palšová et al., 2014).

A good example of assistance offered to small local stores is the project launched by METRO Cash & Carry Slovakia (The network of the My Store alliance belongs to METRO Cash & Carry Slovakia l.l.c.) (Metro, 2021). My Store (Môj Obchod) is a strong franchise that brings together independent retailers of food and general merchandise throughout Slovakia. The first My Store was opened in 2012. Since then, the brand has expanded and there are currently more than 570 branches in Slovakia. My Store combines the benefits of shopping in smaller neighbourhood grocery stores with high standards, freshness and quality in hypermarkets. The primary benefit for stores is the support package and the opportunity to operate under the concept of a well-known brand in Slovakia. There are 107 stores in the Nitra region and 51 stores in the Košice region (MôjObchod.sk, 2021).

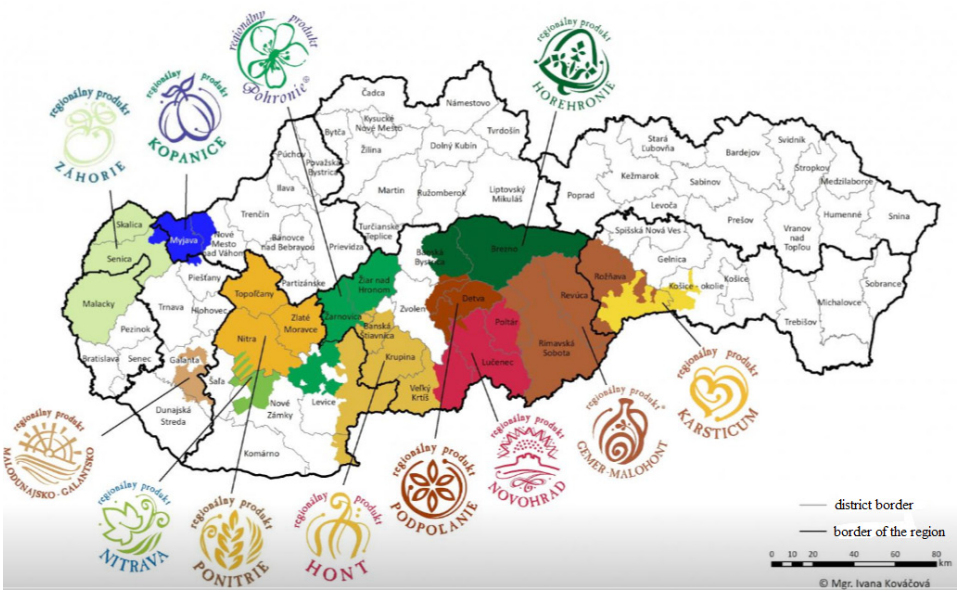


Fig. 8. Regional brands in Slovakia

Source: Národná sieť miestnych akčných skupín (2020).

Figure 8 shows the location of 12 certified regional products in Slovakia, including those from the Nitra region (the Ponitrie[1] and Nitrava brands) and from the Košice region (the Karsticum and Gemer-Malohont brand). The Nitra region is a traditionally agricultural region with vineyards and cooperates with the regional government, which provides financial support.

The Ponitrie regional product brand is used for agricultural and food goods, handcraft and other consumer products, lodging and catering services as well as other tourism activities provided by organizations participating in the regional marking system (Topoľčany, Nitra, and Zlaté Moravce districts). The brand enables consumers to recognise and distinguish distinct regional products and services from other goods and services. Local products and services that symbolise traditions and cultural and natural heritage contribute to the tourist experience and strengthen visitors' interest in the region. The brand's icon emphasises the area's relationship with agriculture (Nitrianska organizácia cestovného ruchu, 2022). Table 11 shows 6 regional products offered in the Topoľčany district, 15 in the Nitra district and 7 in the Zlaté Moravce district. The products are created by self-employed farmers (SEF), agricultural cooperatives or limited liability companies (l.l.c.).

[1] The basin of the Nitra River.

Table 11. Ponitrie regional products

Districts in the Nitra Region	Ponitrie regional products
Topoľčany district	Agricultural cooperative "Radošinka" – viticulture
	Ing. Viliam Uhlár SEF – winery
	Jaroslav Božík – bakery (potato and wheat bread)
	Sladké dobroty l.l.c. – Solčanský skladaník
	VšehoMiera – hemp seeds
	Beekeeping Geraldína, l.l.c. – bee honey, honey with pollen, propolis, royal jelly, beeswax candles
Nitra district	Ing. Miloš Kožák – pasty flower honey, agate honey, bee pollen
	Jozef Bojda – bee honey and pollen
	Ing. František Horník – bee honey
	Ing. Ľubomír Rybárik ALCEDO – honey
	Terra Wylak l.l.c. – winery
	Ing. Juraj Bíro – winery J. Bíro
	Ing. Erika Mesárošová – cow's milk
	Kozárová Marta – pumpkin seeds
	Alena Bernadičová – TEKVIČKA cold pressed oils
	Miroslav Skovajsa – liquid and dried chillies
	Pán Včielka – honey products
	Včielkovo – other than honey they produce soaps, balms, creams, candles, propolis tincture and decoupage on the theme of bees or sewing
	Ing. Peter Šedík – honey
	Chateau Malanta – family winery
	Alžbetina záhrada – cayenne chilli and *Ziziphus jujuba* products
Zlaté Moravce	BERAMED l.l.c. – mead
	Ing. Barbora Kováčová – goat's milk
	CERA MEL l.l.c. – honey and honey pastry
	Medárna – production of homemade honey
	Kooswinery – family winery
	VinumVino – 21 different types of wine
	Tajna l.l.c. – winery

Source: based on information from the Nitrianska organizácia cestovného ruchu (2022).

Producers, service providers, and event organizers in the Váh and Žitava river basins are eligible for the label (they should be unique, come from the region, and should be rooted in local traditions). Table 12 shows producers and products that use the Nitrava regional product brand.

Table 12. Products with the Nitrava regional brand

Producer	Product
PhDr. Romana Píteková Dipl. mt. I –	gingerbread
PODPECOU l.l.c.	bread dough patty topped with bacon, onion and sheep cheese (*podpecník*)
Dana Meszárošová D – exkluzív	French pastry
Ing. Pavol Lehot'ák	agate honey
Fiero Wine	winery
Ing. Peter Belan	winery

Source: based on information from Regionálny produkt Nitrava (2022) and and Miestna akčná skupina (2019).

When it comes to the Košice region, the Gemer-Malohont regional product brand can be found on fruit juices, goat's milk, ceramics, woven products, meat and meat products, home-made horseradish, honey, cosmetics, wire and wood products and hand embroidered picture (Table 13).

A cultural centre in Slovakia uses funding from the European Agricultural Fund for Rural Development (EAFRD) to create and market regional brands in order to increase sales of local artisanal products. The Karsticum brand has helped to increase sales of regional handcrafted goods (ENRD, 2016). Karsticum regional products include jams, marmalades, honey, pasta, bread, and cakes (Regionálny produkt Karsticum, 2021).

The most convenient locations for stores selling regional products are centres of regions' major cities, which are visited by many tourists. They are unique not only as regards their range of products but also in terms of the customer experience. They can organize special events, such as demonstrations of old methods of manufacturing local foods and beverages which visitors can participate in. Visitors can learn about local producers, raw materials and even assist in the production of these products (Bobáková & Jarabková, 2020).

Table 13. Products with the Gemer-Malohont regional brand

Producer	Product
Ing. Ádám Gyuricky	fattening and cleaned poultry
Oskár Tóth	honey
Marek Dianiška	bee farm
Pádar l.l.c.	blackcurrant wine
Marek Blažej	blueberries fruit
Horticulture ANTAL	strawberries
Agrofarm Dianiška	sheep's milk products
Ladislav Hosszúretí SEF	vegetables
Viktor Vlčko	bee products
Milan Krokavec	honey and bee pollen
GemerProdukt Valice	fruits, vegetables, grapes, wines and fruit juices
Farming company joint-stock company in Bottovo	cereal seeds
Municipality Muráň	Muráň buns
Böhmermed l.l.c.	honey
GemerProdukt Valice	fruits, fruit juices, wine
Tatiana Longaureová	roundcakes, sandwiches
Štefan Tankó, Gazdovský Dvor – Gazda udvar	meat and meat products
Stanislav Kišák	vegetables
MEDveď	honey enriched with mountain flavors of wild cherry, blackberry, raspberry, linden or honeydew
Farming company joint-stock company in Bottovo	raw cow's milk
PYRRHA, l.l.c.	garlic
MAJA beekeeping farm	flower agate, spring, rapeseed, forest honey
Jaroslav Kyzek	honey and propolis

Source: based on information Regionálny produkt Gemer-Malohont (2022).

6. Conclusion

The data presented in the article reveal several interconnected factors in the development of rural areas in the regions of Nitra and Košice. The main challenge identified in the analysis is the lack of interest in agriculture on the part of young

people, which means that the number of people employed in agriculture in the Slovak Republic is declining. Currently, one can observe a continuing migration of the rural population to urban areas, as a result of which the countryside is undergoing depopulation. The lack of an intervention strategy from the Ministry of Agriculture and Rural Development of the Slovak Republic or the situation around the Agricultural Paying Agency, which is facing a threat of its EU accreditation being withdrawn, cause a lot of uncertainty and even existential problems for many farmers. On the other hand, Nitra region has a lot of very well cultivated land, which is ideal for the development of agriculture, regional tourism and agritourism, with a focus on organic food and relaxation. It is also a well-known vine growing region. Similarly, the Košice region is known for its wine production. One major problem is that the fertile land in the Košice region is being destroyed and used for other purposes. Also, most people are employed in the industry sector. In the event of a decline in this sector, many people are likely lose their jobs and unemployment in the region will rise rapidly. While agricultural production is developing, further support is required to achieve a higher level of agricultural activity by making better use of the region's potential. Both regions, but especially the Nitra region, supply a large part of the country with locally grown products, which has a positive effect on the economy of the whole country. The most important regional traditions include viticulture and winemaking, beekeeping, and fruit distillation. Because potential customers tend to favour and seek out regional brands, regional branding guarantees that products purchased by visitors come from the region and were made using local ingredients.

Acknowledgment

This work was supported by the Slovak Research and Development Agency under the Contract no. APVV-20-0076.

References

Akram-Lodhi, A. H. (2013). *How to build Food Sovereignty.* https://www.iss.nl/sites/corporate/files/15_AkramLodi_2013-1.pdf

Arcgis. (2022). *Map*. https://www.arcgis.com/index.html

Béné, C., Oosterveer, P., Lamotte, L., Brouwer. I. D., de Haan, S., Prager, S. D. …, Khoury, C. K. (2019). When food systems meet sustainability – Current narratives and implications for actions. *World Development, 113,* 116-130. https://doi.org/10.1016/j.worlddev.2018.08.011

Bleha, B., Mészáros, J., Pilinská, V., Šprocha, B., & Vaňo, B. (2020). *Analýza demografického vývoja oblastí a obcí podľa štatútu a veľkosti v Slovenskej republike.* http://www.infostat.sk/vdc/pdf/Analyza_oblasti_obce_Slovensko.pdf

Bobáková, N., & Jarábková, J. (2020). Vplyv regionálnej značky Gemer-Malohont na producentov a spotrebiteľov produktov a služieb. *Mladá veda, 8*(1), 128-138. http://www.mladaveda.sk/casopisy/2020/01/01_2020_13.pdf

Central Office of Labour, Social Affairs and Family. (2021, November 22). *Nezamestnanosť – mesačné štatistiky.* https://www.upsvr.gov.sk/statistiky/nezamestnanost-mesacne-statistiky.html?page_id=1254

Czapiewski, K. Ł. (2006). Rural Areas Of Success – In Search Of Definitions And Measures. *Europa, 21*(15), 77-86. https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.1020.3315&rep=rep1&type=pdf#page=77

Dasgupta, P., Morton, J., Dodman, D., Karapinar, B., Meza, F., Rivera-Ferre, M.G., Toure S., A., & Vincent, K.E. (2014), *Rural areas.* In: C. Field & V. Barros (eds.), *Climate Change: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects* (pp. 613-657). Cambridge University Press

ENRD. (2016, October 13). *Awarding the Regional Quality Brand 'KARSTICUM'*. https://enrd.ec.europa.eu/projects-practice/awarding-regional-quality-brand-%E2%80%98karsticum%E2%80%99_en

European Commission (2019, December 11). *The European Green Deal sets out how to make Europe the first climate-neutral continent by 2050, boosting the economy, improving people's health and quality of life, caring for nature, and leaving no one behind.* https://ec.europa.eu/commission/presscorner/detail/en/ip_19_6691

European Commission. (2020a). *Food Safety.* https://ec.europa.eu/food/overview_en

European Commission (2020b). *Employment and Social Developments in Europe 2020.* Luxembourg: Publications Office of the European Union. https://op.europa.eu/en/publication-detail/-/publication/fab17311-2ae6-11eb-9d7e-01aa75ed71a1/language-en

EURACTIV. (2020). *Slovenské poľnohospodárstvo a potravinárstvo po koronakríze.* https://sk.euractiv.eu/wp-content/uploads/sites/8/special-report/EA-SPECIAL-072020-Slovenske%CC%81-pol%CC%8Cnohospoda%CC%81rstvo-a-potravina%CC%81rstvo-po-koronakri%CC%81ze.pdf

Eurostat. (2018). *Glossary: Rural area.* https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Glossary:Rural_area

Food and Agriculture Organization of the United Nations. (2003). *Trade Reforms and Food Security: Conceptualizing the Linkages; Food and Agriculture Organization of the United Nations,* Rome, Italy. https://www.fao.org/3/y4671e/y4671e.pdf

Gladek, E., Roemers, G., Muños, O. S., Kennedy, E., Fraser, M., & Hirsh, P. (2017). *The Global Food System: An Analysis.* https://www.metabolic.nl/publication/global-food-system-an-analysis/

Greener Slovakia (2019). *Greener Slovakia – Strategy of the Environmental Policy of the Slovak Republic until 2030.* https://www.minzp.sk/files/iep/greener_slovakia-strategy_of_the_environmental_policy_of_the_slovak_republic_until_2030.pdf

Gupta, J., & Pouw, N. (2017). Towards a trans-disciplinary conceptualization of inclusive development. *Current Opinion in Environmental Sustainability, 24*, 96-103. https://doi.org/10.1016/j.cosust.2017.03.004

Hai Vu, P., & The Ann, D. (2021). *The Food System – Concept, Aims and Application Potential in Vietnam.* https://ap.fftc.org.tw/article/2751

Hawley, L. R., Koziol, N. A., Bovaird, J. A., McCormick, C. M., Welch, G. W., Arthur, A. M., & Bash, K. (2016). Defining and describing rural: Implications for rural special education research and policy. *Rural Special Education Quarterly*, *35*(3), 3-11. https://doi.org/10.1177/875687051603500302

International Food Policy Research Institute (IFPRI). 2021. *2021 Global food policy report: Transforming food systems after COVID-19*. IFPRI. https://doi.org/10.2499/9780896293991

Leach, M., Nisbett, N., Cabral, L., Harris, J., Hossain, N., & Thompson, J. (2020). Food politics and development. *World Development, 134,* 105024. https://doi.org/10.1016/j.worlddev.2020.105024

Lietava, M., & Fáziková, M. (2017). Selection of EU financed projects and the territorial cohesion. *Acta Oeconomica Universitatis Selye*, *6*(1), 71-82

Loring, P. A., & Sanyal, P. (2021). Indicators of Complexity and Over-complexification in Global Food Systems. *Frontiers in Sustainable Food Systems*, 431. https://doi.org/10.3389/fsufs.2021.683100

Martinez, S., Hand, M., Da Pra, M., Pollack, S., Ralston, K., Smith, T., Vogel, S., Clark, S., Lohr, L., Low, S., & Newman, C. (2010). *Local Food Systems – Concepts, Impacts, and Issues.* ERR 97, U.S. Department of Agriculture, Economic Research Service

Maxwell, S., & Slater, R. (2003). Food policy old and new. *Development Policy Review*, *21*(5-6), 531-553. https://doi.org/10.1111/j.1467-8659.2003.00222.x

Maxton, G.P. (2019). *Change! Warum wir eine radikale Wende brauchen.* Komplett-Media Verlag

Metro. (2021, November 25). *Metro Cash & Carry.* https://www.metro.sk/co-je-metro/o-metro-cash-carry-sr

Miestna akčná skupina. (2019, April 4). ZNAČKA "Regionálny produkt NITRAVA." https://www.cedronnitrava.sk/regionalny-produkt-nitrava.html

Ministerstvo financií SR. (2020). Moderné a úspešné Slovensko. *Národný integrovaný reformný plán*. https://www.mfsr.sk/sk/media/tlacove-spravy/predstavujeme-dokument-moderne-uspesne-slovensko.html

Ministerstvo pôdohospodárstva a rozvoja vidieka Slovenskej republiky. (2020). *Zelená správa.* https://www.mpsr.sk/zelena-sprava-2020/122---16206/

Ministerstvo pôdohospodárstva a rozvoja vidieka Slovenskej republiky. (2021). *Správa o poľnohospodárstve a potravinárstve v Slovenskej republike za roky 2015-2019*. https://www.mpsr.sk/polnohospodarstvo-a-potravinarstvo/122

MôjObchod.sk. (2021, November 29). https://www.mojobchod.sk/

Mura, L., & Šulterová, S. (2012). *Manažment rozvoja vidieckeho turizmu a agroturizmu v regiónoch Slovenska a ich perspektívy*. Bučovice: Martin Stříž

Národná sieť miestnych akčných skupín. (2020, May 4). *Regionálna značka a propagácia*. https://www.sietmas.sk/regionalna-znacka-a-propagacia.html

NBS. (2019, September). *Správa o ekonomike SR*. https://www.nbs.sk/_img/Documents/_Publikacie/SESR/2019/protected/SESR_0919sk.pdf

Nestorová-Dická, I., Gessert, A., & Sninčák, I. (2019). Rural and non-rural municipalities in the Slovak Republic. *Journal of Maps*, *15*(1), 84-93. https://doi.org/10.1080/17445647.2019.1615010

Nitrianska organizácia cestovného ruchu. (2022, April 1). *Produkty z nášho regiónu Ponitrie*. https://visitni- tra.eu/sk/regionalny-produkt-ponitrie/

OECD. (2021). *Making Better Policies for Food Systems*. https://www.oecd.org/food-systems/understanding/triple-challenge/

Palšová, L., Schwarczová, L., Schwarcz, P., & Bandlerová, A. (2014). The support of implementation of organic farming in the Slovak Republic in the context of sustainable development. *Procedia-Social and Behavioral Sciences, 110*, 520-529. https://doi.org/10.1016/j.sbspro.2013.12.896

Pichler, J. H. (2018). In quest of SME-conducive policy formulation. *Entrepreneurial Business and Economics Review, 6*(1), 105-113. https://doi.org/10.15678/EBER.2018.060106

Pinstrup-Andersen, P., & D. D. Watson, II. (2012). Food policy for developing countries: The role of government in global, national, and local food systems. *Population and Development Review, 38*(2), 380-381. https://doi.org/10.1111/j.1728-4457.2012.00504.x

Prohuman. (2020, September 7). *Druhošancové vzdelávanie v akčných plánoch menej rozvinutých okresov Slovenska*. https://www.prohuman.sk/pedagogika/druhosancove-vzdelavanie-v-akcnych-planoch-menej-rozvinutych-okresov-slovenska

Regionálny produkt Karsticum. (2021, November 26). *Regionálny produkt.* http://www.karsticum.sk/Page/Znacka

Regionálny produkt Nitrava. (2022, April 1). *Produkty so značkou Regionálny produkt NITRAVA*. https://produktnitrava.sk/

Regionálny produkt Gemer-Malohont. (2022, April 1). *Potraviny a poľnohosp. výrobky.* https://gemer-malohont.sk/katalog-produktov/potraviny/

Sčítanie obyvateľov, domov a bytov (2021, January 1). *Number of population by sex in the Slovak Republic at 1.01.2021.* https://www.scitanie.sk/en/population/basic-results/number-of-population/SR/SK0/SR

Sobal, J., Khan, L. K., & Bisogni, C. (1998). A conceptual model of the food and nutrition system. *Social science & medicine, 47*(7), 853-863. https://doi.org/10.1016/S0277-9536(98)00104-X

Social Gastronomy Movement. (2021, November 25). *What if change started with food?* https://www.socialgastronomy.org/

Správa o poľnohospodárstve a potravinárstve v Slovenskej republike za roky 2015-2019. https://www.mpsr.sk/polnohospodarstvo-a-potravinarstvo/122

Statistical Office of the Slovak Republic. (2021a, November 18). *Stav obyvateľstva.* http://datacube.statistics.sk/#!/view/sk/VBD_SLOVSTAT/om2019rs/v_om2019rs_00_00_00_sk

Statistical Office of the Slovak Republic. (2021b, November 19). *Regionálny hrubý domáci produkt (v bežných cenách).* http://datacube.statistics.sk/#!/view/sk/VBD_SK_WIN/nu3001rr/v_nu3001rr_00_00_00_sk

Statistical Office of the Slovak Republic. (2022a, March 29). *Počet obcí a miest.* http://datacube.statistics.sk/#!/view/sk/VBD_SK_WIN/om3002rr/v_om3002rr_00_00_00_sk

Statistical Office of the Slovak Republic. (2022b, March 29). *Hrubá mzda podľa zamestnania.* http://datacube.statistics.sk/#!/view/sk/VBD_SK_WIN/np3106rr/v_np3106rr_00_00_00_sk

Tansey, G., & Worsley, A. (2014). *The Food System*. Routledge. https://doi.org/10.4324/9780203380932

The Slovak Spectator (2021, November 10). *Groceries will be 10 to 20 percent more expensive, food producers announce.* https://spectator.sme.sk/c/22780953/groceries-will-be-10-to-20-percent-more-expensive-food-producers-announce.html

UN. (2018, May 16). *68% of the world population projected to live in urban areas by 2050, says UN.* https://www.un.org/development/desa/en/news/population/2018-revision-of-world-urbanization-prospects.html

UNEP. (2016). *Food Systems and Natural Resources. A Report of the Working Group on Food Systems of the International Resource Panel*. https://www.resourcepanel.org/sites/default/files/documents/document/media/food_systems_summary_report_english.pdf

von Braun, J., Afsana, K., Fresco, L. O., Hassan, M. & Torero, M. (2021). Food Systems – Definition, Concept and Application for the UN Food Systems Summit. In: J. von Braun, K. Afsana, L. O. Fresco, M. Hassan (Eds.), Science and Innovations for Food Systems Transformation and Summit Actions. Papers by the Scientific Group and its partners in support of the UN Food Systems Summit (pp. 27-39). https://agroavances.com/img/publicacion_documentos/ScGroup_Reader_UNFSS2021_compressed.pdf#page=40

World Bank. (2021a). *Employment in agriculture (% of total employment) (modeled ILO estimate) – Slovak Republic.* International Labour Organization, ILOSTAT database. Data retrieved on January 29, 2021. https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS?locations=SK

World Bank. (2021b). *Employment in agriculture (% of total employment) (modeled ILO estimate) – European Union.* International Labour Organization, ILOSTAT database. Data retrieved on January 29, 2021. https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS?locations=EU

Zákon č. 369/1990 Zb. Zákon Slovenskej národnej rady o obecnom zriadení. https://www.zakonypreludi.sk/zz/1990-369

Zákon 336/2015 Zb. o podpore najmenej rozvinutých okresov a o zmene a doplnení niektorých zákonov. https://www.slov-lex.sk/pravne-predpisy/SK/ZZ/2015/336/

System żywnościowy i jego wpływ na rozwój obszarów wiejskich na przykładzie kraju koszyckiego i nitrzańskiego w Słowacji

Streszczenie. Obecne trendy demograficzne wiążą się z migracją ludności wiejskiej do miast; w rezultacie obszary wiejskie ulegają wyludnieniu. Powstrzymać tę spadkową tendencję może rozwój turystyki wiejskiej i agroturystki. Jednak brak strategii interwencyjnej w sektorze rolnym jest przyczyną niepewności, a nawet zagrożenia bytu wielu rolników. W artykule skupiono się

na dwóch krajach w Słowacji – nitrzańskim i koszyckim, które charakteryzują się bardzo żyzną glebą, umożliwiającą rozwój rolnictwa (zwłaszcza produkcji żywności ekologicznej), turystyki regionalnej i agroturystyki. Autorka proponuje powiązanie produkcji rolniczej z turystyką wiejską. Oba regiony słyną z produkcji wina i uprawy winorośli. Niestety tamtejsze żyzne grunty ulegają zniszczeniu wskutek budowy obiektów przemysłowych. Tym samym ich zasoby naturalne nie są wykorzystywane zgodnie z przeznaczeniem. Opisane w artykule badanie zawiera porównanie wskaźników ekonomicznych, takich jak PKB i stopa bezrobocia w rolnictwie w obu regionach i w całym kraju, które wskazuje na ich istotną rolę w produkcji rolnej na Słowacji. Zdaniem autorki rozwój turystyki wiejskiej i agroturystyki mógłby stanowić wsparcie dla rolnictwa i leśnictwa, ochrony środowiska oraz tworzenia i utrzymywania miejsc pracy na słowackiej wsi.

Słowa kluczowe: Słowacja, kraj koszycki, kraj nitrzański, system żywnościowy, wskaźniki