Social Learning in Disadvantaged Municipalities in Hungary

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Abstract—The aim of the study is to measure the human resource potential of the North-Hungarian region in Hungary by developing and estimating a human development index at the level of municipalities. The results of the calculations will be produced for the last 3 census years (1990, 2001, 2011), showing which municipalities have the strongest human resource potential. In disadvantaged municipalities with low human development, there is an increased need for a social learning process. The existence of social enterprises can further strengthen the population retention capacity of a municipality, especially when targeted improvements and innovations are created. The study describes a successful social enterprise in a deprived municipality.

Keywords—social learning, human potential, rural area, social enterprise

1 Introduction

In this study, the human potential values of one of the most disadvantaged regions of Hungary, the North-Hungarian region, were calculated at the municipal level by developing and applying a methodology that provides reliable results at the municipal level. The HDI (human development index) in the classical sense can only be estimated with strong biases even at the level of the sub-municipality, and the list of initial indicators is also different from the usual ones (such as GDP or GNI, life expectancy at birth and the share of people in education). The estimates made for the determination of human potential at the level of the municipality must be treated with strong reservations, and the study has selected the indicators with the greatest care.

After the results are presented, the process of social innovation and social learning will be discussed. Based on human potential scores, the most underdeveloped regions are in particular need of social innovations. This will be followed by a successful social enterprise, which is both a local employment development good practice and a successful social innovation, where the population has become more cohesive through social learning.

2 Estimating the human potential of municipalities (HPM)

When measuring human capital development at the regional or territorial level, we encounter difficulties, because when calculating the HDI or human potential for smaller territorial units than the national one, the indicators are modified and the indicators available for the corresponding territorial unit are used. For territorial units smaller than regions (counties: NUTS level 3, small regions: LAU level 1), only the modified human development index (MHDI) can be calculated [1, 2, 3, 4, 5, 6].

HDI calculation or estimation at the municipality level is limited in the literature, not many domestic attempts are known. Malatyinszki calculated human development for municipalities in Békés County [7, 8]. The range of indicators used in the calculation is more similar to those used in a cluster analysis than to an estimation of human resource development. More than twenty indicators from eight main groups of indicators were calculated for Békés County only. In the previous research of the author, it was also performed HDI calculations at the regional [9], sub-regional [10], and municipality levels [11]. The HDI calculation at the municipality level and the set of indicators used in 2015 have now been reconsidered. The indicators previously used at different spatial levels were summarized (Table 1).

Table 1. Indicators applied at different territorial levels

Territorial Level	Name of Indicator	Indicator Used	Source of Indicator
country	human development index (HDI)	Average life expectancy at birth (years), Participation of pupils and students at all levels of education and training as a percentage of the total population (%), Illiteracy rate (%), GNI per capita (EUR/person).	Eurostat
region	modified human development index (MHDI)	Average life expectancy at birth (years), Participation of pupils and students at all levels of education and training as a percentage of the total population (%), Illiteracy rate (%), Net disposable household income (EUR/person).	Eurostat
county	modified human development index (MHDI)	Average life expectancy at birth (years), For the age group over 15 years of at least 8th grade of primary school (%), Share of population aged 25+ with tertiary education (%), Income per capita based on personal income tax (HUF/person).	HCSO*
sub-region	sub-regions human development index (HDI)	Average life expectancy at birth (years), For the age group over 15 years of at least 8th grade of primary school (%), Share of population aged 25+ with tertiary education (%), Income per capita based on personal income tax (HUF/person).	HCSO*

(Continued)

Table 1. Indicators applied at different territorial levels *(Continued)*

Territorial Level	Name of Indicator	Indicator Used	Source of Indicator
municipality	human potential of municipalities (HPM)	Number of 0–14-year-olds per 100 inhabitants over 60 years (in %), Average number of classes attended by population aged 7 and over (number of classes), Income per capita based on PAYE (HUF/person).	HCSO*

Note: *HCSO means Hungarian Central Statistical Office.

2.1 Methodology

For the calculations at the municipality level, it was used the last three census data (1990, 2011 and 2011). In Hungary, the census planned for 2021 will be conducted in 2022 due to the COVID-19 pandemic, and only the census collects data at the municipality level. At the municipality level, it was calculated the human resource development by including the following indicators:

– Number of 0–14-year-olds per 100 inhabitants aged 60+, which, like the old-age dependency ratio, is a proxy for the ageing of the municipality, and was used instead of the average life expectancy at birth due to lack of data (it was used a formula (1) to construct the old-age index from this indicator).
– The average number of classes completed by the population aged 7 years and over, which provides information on the level of education of the population in a given municipality (it was used this indicator to calculate the education index).
– Income per capita based on income from personal income tax, which indicates the income level of a municipality (using this indicator it was calculated the income index).

The formula used to construct the sub-indices has not been changed, it is the same as the one used at the national level:

$$I_i = \frac{X_i - X_{\min}}{X_{\max} - X_{\min}} \tag{1}$$

where: X_i = current value of the variable,
$X_{\max}$ = is the variable fixed maximum,
$X_{\min}$ = is the variable fixed minimum.

The minimum and maximum values used are highly debatable, so the author decided to use the current minimum and maximum values of the entire database, so that the sub-indices have values between zero and one. After calculating the values of each sub-index, it was multiplied the final human potential (HPM) values of each sub-index by the third root, following the UNDP methodology, in a similar way to the geometric mean.

$$HPM = \sqrt[3]{I_1 \times I_2 \times I_3} \tag{2}$$

2.2 Results

Municipal human potential values are plotted using the natural class intervals in the three study years (Figure 1). The maximum values of the human development index of municipalities show a decrease in both 2001 and 2011 in the North-Hungarian region compared to 1990.

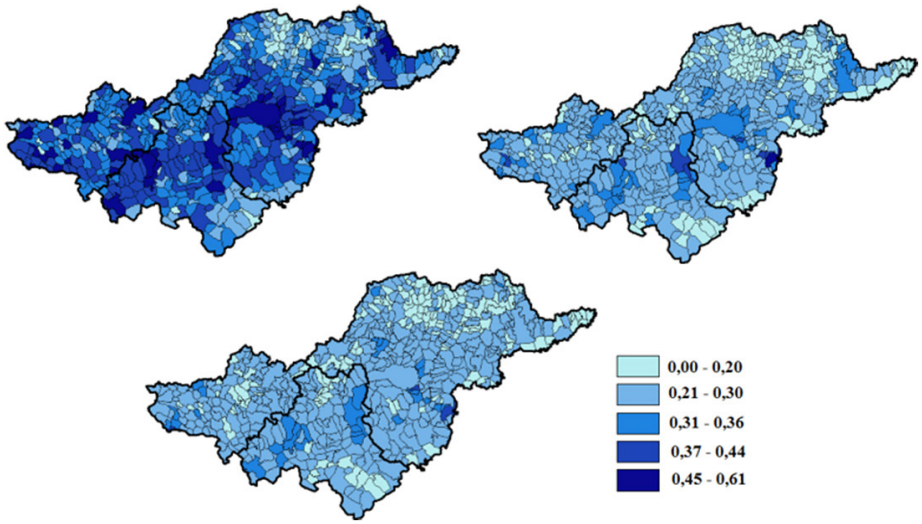

Fig. 1. Human potential values of the municipalities of the North-Hungarian region in 1990, 2001 and 2011

The change in human resource development in the North-Hungary region is very interesting, as it is the opposite of the normal trend, i.e., the index values have also decreased overall by 2011, and this decrease has affected the smallest municipalities the most. The three county capitals of Miskolc, Eger and Salgótarján had the highest index values. Among the reasons for the decline is the significant drop in the proportion of young people in small villages between 1990 and 2011. The spatial structure of Hungary is not a new feature but is in line with the European demographic problems, i.e., a shrinking and ageing population. The situation is made even more difficult because the North-Hungarian region has the highest number of micro-villages among the Hungarian regions, and these municipalities with a population of up to 500 are ageing and have even more limited income levels due to the lack of job opportunities.

3 The social innovation and social learning

The definition of social innovation in the literature is not yet consistent [12, 13, 14, 15, 16, 17], but any novel, innovative idea to tackle existing social problems can be considered a social innovation. Successful social innovations serve as good examples,

which require knowledge of the social learning process for their further application in the field. The wider dissemination of the theory of social learning, which is also closely linked to social innovation, was associated with Albert Bandura in the late 1970s. The concept has undergone significant changes in the decades since then, and several parallel approaches still exist. Social learning is the process of learning rules of behaviour, habits or social behaviours from careful observation of others. It is a specific form of human learning (observational or model-following) that takes place in a social context [18]. However, the social learning theory was developed by Bandura and Walkers, who approached the essence and the most important features of social learning from the perspective of personality development [19]. Albert Bandura's social-cognitive theory explains behaviour in terms of the principle of mutual determination, i.e. human functioning is shaped by the interaction of personal factors, behaviour and environmental factors. We are not only influenced by our environment, but we can also shape our environment, but our cognitive processes determine how we react to environmental events, what events we perceive, how we interpret them and how we respond to them [20]. In Bandura's theory, the acquisition of necessary behavioural patterns is a complex learning process governed by cognitive processes [21].

Social learning, or learning from others, is key to the development of behaviour, traditions and culture. At the level of the individual, social learning helps them to access information and acquire new knowledge, and consequently influences their behaviour. For groups, peer learning enables the transmission of behaviour between individuals and generations [22]. Social learning is often identified with imitative learning [23].

Social learning is the collective experience of local societies as they identify their problems together, and through shared learning, cooperation among citizens is created [24]. Social learning is a process whereby a community becomes capable of some action or activity that it was not capable of before [25]. In disadvantaged municipalities, the conditions for social innovation are often lacking, e.g., lack of ideas, lack of perception of the real problem, lack of knowledge, and lack of resources [26]. Social learning can help to overcome these problems. If a good idea comes from outside and the inhabitants of the municipality can think and act as a community, they can introduce step by step an innovation that will be a real solution to the existing social problem.

The author was developed a theoretical process model for social learning at the municipal level, building on Bandura's theory (Figure 2). Social innovation requires that there is an existing and successful innovation in one area that can be applied elsewhere. Thus, we enter the phase of observation, as we study and investigate successful social innovations through observations. This is followed by memory when we remember a good example. The penultimate phase is production, which can be interpreted as an innovation that is already working, and finally, reinforcement of motivation, which can help and support implementers to work effectively [27].

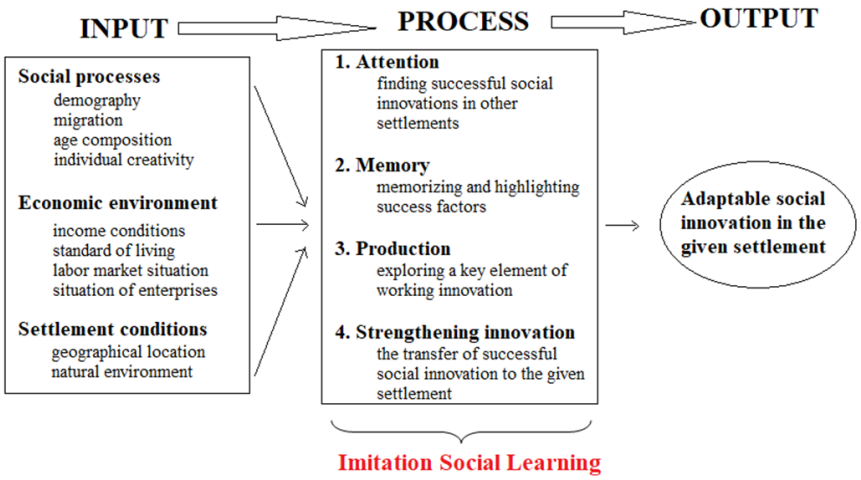

Fig. 2. The social learning process for adapting social innovation

4 How to set up and run a successful social enterprise?

A successful social enterprise in the municipality of Tard, called Matyó Design, will be presented. The social enterprise can be seen as a social innovation. The process of social learning is still a key factor in the social enterprise of Matyó Design. From the idea to the production of the products, the inhabitants of the municipality have invested a lot of work.

The social enterprise in Tard located in the North-Hungarian region, in the county of Borsod-Abaúj-Zemplén. The population of the region is decreasing, and the natural decrease is high, twice the regional and county figures. Out-migration is prevalent, but less decisive in the evolution of the population compared to the natural decrease. Ageing is more marked in the municipality than the regional average, with a natural decrease of more than 20 thousand in the last five years, except in 2013. The municipality has a working-age population of 679 and a registered unemployment rate of 10%.

The number of catering establishments in the area has also increased dramatically in recent years. As in the case of trade, the majority of businesses in the catering sector are sole proprietorships. These businesses have adapted to the beach resort's opening hours and the influx of visitors. Thanks to the renewal of the Zsóry Spa complex, the number of overnight stays exceeds the national and regional figures and is increasing. The district is not one of the most disadvantaged in the country, as shown by the fact that the unemployment rate, although below the national average, is better than the regional and county indicators.

The seat of the social enterprise is Tard, 15 km from Mezőkövesd, with a population of 1206 (Figure 3). The municipality has been inhabited since the time of the conquest, and the inhabitants' livelihood was ensured by agricultural production thanks to the high quality, high humus content of the cast soil (Szabó, 1937). Its embroidery world with its unique motifs and colours is one of the treasures of Hungarian folk art.

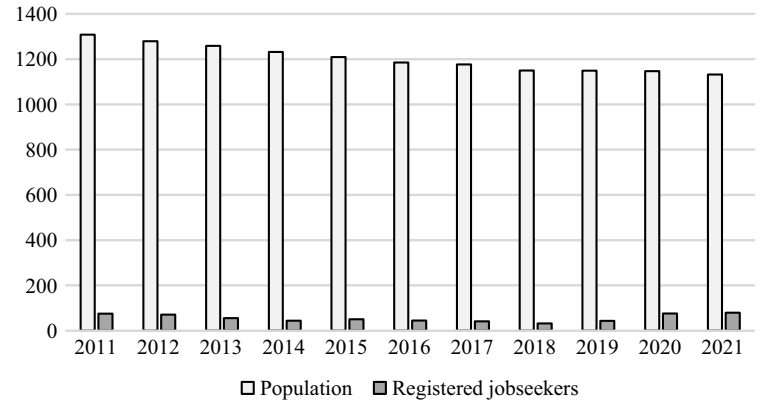

Fig. 3. Population of Tard and number of registered jobseekers (persons)

There are 194 registered enterprises in the municipality, including sole traders, of which 176 are in the agriculture, forestry and fishing sector, in line with the traditional agricultural character of the municipality (Figure 4).

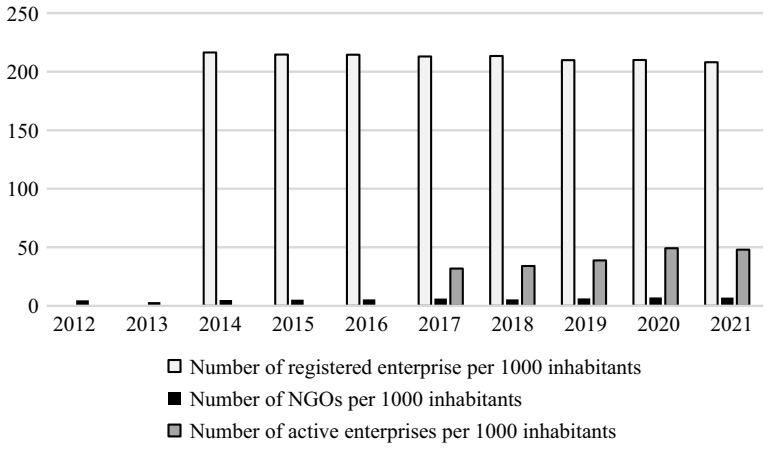

Fig. 4. Entrepreneurial activity in Tard

There is also a primary school, a doctor's surgery and a retirement home. A village hall and a tele-house provide a community centre for the residents. The annual Rooster Festival and the Hurka Festival, which is also a tourist attraction, are held in the village. Visitors to the village should also visit the country house and the Catholic church. There is one guesthouse, but statistics show that the number of nights spent in the village has been zero for years.

The target group for their activities is women who live in Tardo, have a low income or are looking for work and know how to embroider. The primary objective is to provide them with additional income by offering embroidery work at home.

As a for-profit enterprise, the group of people who buy the products and satisfy their needs is at least as important.

The mission of the company: is to preserve the heritage and tradition of the Matyó embroidery motif by producing marketable products, thus providing employment opportunities for as many women as possible in the Tard. They started their activities in 2010, but without a separate legal form. The idea for the product came from a pair of brothers from Tard, one of whom is now the owner of Matyó Design Ltd. They were initially taken on by a company they knew, Pont Ez Holding Ltd., through which they did the sales. Matyó Design Ltd. was founded in 2014 with its headquarters in Tardi, but the management office is located in the owner's residence in Budapest as a registered branch. A significant step forward was the development received from Nesst Enterprise Development Ltd. with the support of the Badur Foundation, which consisted mainly of marketing consultancy aimed at increasing sales volume. As a result, the number of products sold quadrupled.

The business aims to provide employment for women in the Tard who can embroider. To this end, it is important to run the business profitably. It is a business with the sales and marketing skills to enter the market with a developed, marketable product. The business relies on women from the Sardinian region who can produce embroideries of the right quality. The women make premium quality T-shirts, sweaters, bags, ponchos and scarves decorated with handmade mâché embroidery.

The management is made up of three people, one of whom is a paid donor to the Badur Foundation. The commitment of the business owner is an additional resource for sustainability. In Tard, they have a well-established network of 14 women embroiderers and a local coordinator who manages the work. The knowledge of women embroiderers with decades of experience in Matyó embroidery culture is key, and they are joined by modern fashion designers. As the management comes from the entrepreneurial sphere, they are fully aware of the social nature of the enterprise, keeping the mission in mind to the maximum, without compromising sustainability. Their main successes are the professional marketing tools they have created with the help of Nesst Ltd (own brand, webshop). They have built a reseller network, which has become the most important sales platform. They have developed high-quality products with the involvement of professionals, they have a well-organised processing base in Tard. One of their weaknesses is that they have no assets of their own. The company owns neither real estate nor assets. The sewing of the textile products takes place in Budapest, the stitching in Tard, the labelling and packaging in Budapest, which slows down the production and significantly increases the transport costs. The employment status of the workers is unclear.

Their activities are currently making a small contribution to improving the income situation of people living in the Tard. A more significant social benefit is the preservation and revitalisation of Tard embroidery knowledge through its use as decoration on high-quality clothing products. The enterprise has successfully built up a workforce in rural areas, where women embroiderers can work with the help of a main local coordinator, taking into account the folklore traditions. They have identified potential customers, mainly in the capital. The saleable products of the enterprise, its well-established distribution network and the dedicated owner are a guarantee for future sustainability.

The short-term goal is to build up an asset park and establish a plant in Tard, so that all production processes can be carried out in one place.

5 Conclusion

Social enterprises in disadvantaged municipalities are important for the labour market as well as for their social purpose. These enterprises are non-profit or poorly profit-oriented and are not considered large employers, but their role is important in municipalities where public employment provides most of the employment opportunities. Social enterprises need to be supported financially through subsidies. If they can have more capital, the quality of the product they produce can be improved, which can generate more consumption and thus more income or jobs.

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7 References

[1] Husz, I. (2001). Az emberi fejlődés indexe. Szociológiai Szemle, 10(2), pp. 72–83.
[2] Kristóf, T. (2003). Magyarország gazdasági fejlettségének lehetséges forgatókönyvei. Statisztikai Szemle, 81(12), pp. 1090–1104.
[3] Obádovics, Cs. and Kulcsár, L. (2003). A vidéki népesség humánindexének alakulása Magyarországon. Területi Statisztika, 43(4), pp. 303–322.
[4] Csite, A. and Németh, N. (2007). Az életminőség területi differenciái Magyarországon: A kistérségi szintű HDI becslés lehetőségei. Budapesti Munkagazdaságtani Füzetek, MTA-KTI No. 3, p. 67.
[5] Farkas, M. B. (2012). A korrigált humán fejlettségi mutató kistérségek közötti differenciáltsága Magyarországon. Területi Statisztika, 52(3), pp. 230–249.
[6] Szendi, D. (2015). A lokális humán fejlettségi index eloszlása és területi autokorrelációja Németország és Magyarország esetében. Területi Statisztika, 55(6), pp. 556–591.
[7] Malatyinszki, Sz. (2008). Az emberi erőforrás mérése települési szinten Békés megyében. Ph.D. dissertation, Pécs.
[8] Malatyinszki, Sz. (2010). A települések emberi erőforrásának mérése. Földrajzi Közlemények, 134(1), pp. 45–59.
[9] Lipták, K. (2013). A globalizáció hatása a regionális foglalkoztatás fejlődésére – kiegyenlítődés vagy leszakadás? Ph.D. dissertation, Miskolc.
[10] Lipták, K. (2009). Kistérségi szintű HDI becslés az Észak-magyarországi régióban. In: Karajz, S.: Doktoranduszok Fóruma, Miskolci Egyetem Innovációs és Technológia Transzfer Centrum, (2009) pp. 1–7.

[11] Lipták, K. (2015). The changes of the human development on micro-regional and settlement levels. DETUROPE, 7(2), pp. 275–290. https://doi.org/10.32725/det.2015.028
[12] Benedek, J., Kocziszky, Gy. and Veresné Somosi, M. (2015). Új innovációs paradigma? Regionális társadalmi innovációs potenciál javításának lehetősége szakértői rendszer segítségével, lehetőségek és korlátok. In: "Mérleg és Kihívások" IX. Nemzetközi Tudományos Konferencia, Konferencia kiadvány, pp. 52–60.
[13] Benedek, J., Kocziszky, Gy., Veresné Somosi, M. and Balaton. K. (2016). Generating and Measuring Regional Social Innovation, Theory Methodology Practice: Club of Economics in Miskolc 12(special issue), pp. 14–25. https://doi.org/10.18096/TMP.2016.02.02
[14] G. Fekete, É. (2015). Társadalmi innovációk a felzárkóztatás szolgálatában: Dél-Cserehát – Nyitás a jövőre. Miskolc: Miskolci Egyetem Gazdaságtudományi Kar, p. 211.
[15] Kocziszky, Gy., Benedek, J., Veresné Somosi, M. and Balaton, K. (2015). Regionális társadalmi innováció generálása szakértői rendszer segítségével. Észak-magyarországi Stratégiai Füzetek, 12(2), pp. 4–22.
[16] Kocziszky, Gy., Veresné Somosi, M. and Balaton, K. (2017). A társadalmi innováció vizsgálatának tapasztalatai és fejlesztési lehetősége. Vezetéstudomány, 48(6–7), pp. 15–19. https://doi.org/10.14267/VEZTUD.2017.06.02
[17] Varga, K. (2017). A regionális társadalmi innováció kérdései. International Journal of Engineering and Management Sciences, 2(4), pp. 602–616. https://doi.org/10.21791/IJEMS.2017.4.49.
[18] Fodor, L. (2008). A szociális tanulás jelentősége a pedagógiai folyamatban http://rmpsz.ro/uploaded/tiny/files/magiszter/2008/tavasz/03.pdf
[19] Bandura, A. and Walkers, R. H. (1963). Social learning and personality development. New York: Holt, Rinehart and Winston.
[20] Bandura, A. (1999). Social cognitive theory: An agentic perspective. Annual Review of Psychology, 52(1), pp. 1–26. https://doi.org/10.1111/1467-839X.00024
[21] Horváth, Gy. (2004). Pedagógiai pszichológia. Budapest: Nemzeti Tankönyvkiadó.
[22] Lind, J., Ghirlanda, S. and Enquist, M. (2019). Social learning through associative processes: A computational theory. Royal Society Open Science, 6(3), 181777. https://doi.org/10.1098/rsos.181777
[23] Heyes, C. (2012). What's social about social learning? Journal of Comparative Psychology, 126(2), 193–202. https://doi.org/10.1037/a0025180
[24] Bai, X. and Lavin, J. (2014). Understanding Social Learning Behaviors via a Virtual Field Trip. International Journal of Emerging Technologies in Learning (iJET), 9(4), pp. 4–13. https://doi.org/10.3991/ijet.v9i4.1205
[25] Nemes, G. and Varga, Á. (2014). Gondolatok a vidékfejlesztésről – alrendszerek találkozása, társadalmi tanulás és innováció. Educatio, 23(3), pp. 384–393.
[26] Veresné Somosi, M. and Varga, K. (2022). Social Innovations Based on a Value-Driven Training Model. International Journal of Emerging Technologies in Learning (iJET), 17(17), pp. 261–278. https://doi.org/10.3991/ijet.v17i17.31937
[27] Lipták, K. and Szűcsné Markovics, K. (2021). The Role of Social Learning in Rural Development. In: Novat, C. Proceedings of The International Conference on New Trends in Management, Business, and Economics, Vienna, pp. 1–13. https://doi.org/10.33422/icnmbe.2021.06.512

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