Rozwój Regionalny i Polityka Regionalna 73: 103–124 | 2025
https://doi.org/10.14746/rrpr.2025.73.07
ISSN 2353-1428 (print) | ISSN 2957-1618 (online)

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# Concentration of business activity in the member cities of the Polish National Cittaslow Network

**Abstract:** The Polish National Cittaslow Network associates small cities which, in line with the slow city concept, strive towards sustainable development and ensurance of proper relations between economic development, care of the natural environment and improved quality of life of the city residents. The development of Polish slow cities should rely on the local, endogenous potential. Thus, an opportunity for every slow city to develop is through the support to local producers and development of local production, and in particular the support of the dominant branches that could allow the city to achieve some specialisation.
The aim of this study has been to analyse the concentration of business activity in the member cities of the Polish National Cittaslow Network, and to identify potential areas for specialisation of each city. The study covered 36 cities which belong to the Polish National Cittaslow Network. To evaluate the degree of concentration of the PKD sections (Polish Classification of Business Activities) in this cities, Florence's location quotient was applied. The value of this index in year 2022 and the dynamics of its change in years 2018–2022 were calculated. The classification of the PKD sections in every city was also performed, thereby distinguishing four clusters.
Based on the study, it has been demonstrated which PKD sections corresponded to the highest degree of the concentration of business activities. The sections which can be referred to as the "engines of the local economy" have been identified. Other clusters of the PKD sections have been also distinguished, which have been named as: developing sections, sections losing importance, sections of the marginal importance for the local economy. The study results have a practical dimension as they point to potential directions in the specialisation of the Polish slow cities.

**Key words:** slow cities, structure of the economy, specialisation of cities, Florence's location quotient

**JEL Classification:** O11, O18, R11

## Introduction

The increasing number of business enterprises and their economic potential are an important source of economic growth on all levels: national, regional and local ones. The development of entrepreneurship can help to solve some local problems, for example decrease the unemployment rate, increase the society's wealth and use endogenous resources in a given area more efficiently. It can also contribute to attaining some specialisation in those areas where the concentration of economic activities will be the highest.

Taking advantage of the endogenous development potential and benefits obtained from the concentration of economic activities and their specialisation is particularly important in the development of small urban centres (Harfst et al. 2020, Mayer, Motoyama 2020, Karagiannis 2023). Small towns are a significant element in the country's settlement network and act as local poles of development (Mainet 2015, Szarek-Iwaniuk 2019, Wagner 2024). Functioning as local centres, small towns organize the space and affect the quality of life of both their residents and inhabitants of the surrounding rural areas (Gashu 2014, Heffner 2016, Manescu et al. 2019). Many of such small towns are currently struggling with numerous economic, social and spatial problems, which forces them to search for an optimal development model (Colombo 2021, Tregua et al. 2021, Farelnik 2023). In response to this challenge, the Polish National Cittaslow Network was established, to associate small cities which wish to develop in line with the slow city model. This model highlights such aims as the improvement of the quality of life in a town and its sustainable development on the basis of local, endogenous resources. However, each of the cities in the Polish Cittaslow network has a different, unique potential (Konecka-Szydłowska 2017, Senetra, Szarek-Iwaniuk 2020, Wierzbicka 2020). In consequence, every town has a different development opportunities. Thus, it appears important to recognise the degree of concentration of business activities in different PKD sectors in these cities. Moreover, it is extremely important to identify the sections which are the pillar of their development, and in which they could specialise.

In light of the above, the aim of the research has been to analyse the concentration of business activities in the member cities of the Polish National Cittaslow Network, and to identify potential areas for specialisation of each city. An attempt was made to answer the research question: Is it possible to identify in the Polish Cittaslow Network member cities the PKD sections which are "the engines of their local economy"?

The Florence's location quotient was used to evaluate the degree of business activity concentration in the analysed towns. Based on the value of this indicator for particular PKD sections and dynamics of its change, it was demonstrated which sections were characterised by the above-average concentration in each city. PKD sections were also grouped into 4 classes with different characteristics. The study included all member cities of the Polish National Cittaslow Network. The analysis was based on data from 2018 and 2022.

## Literature review

Concentration of business activities is most often understood as a process of concentrating business entities in sectors or according to the geographical location (Li et al. 2021, Panzera et al. 2022). It is of a relative nature because when determining the degree of concentration, the sector structure of a town or region is compared to the sector structure of a reference area (Allonso-Villar, Del Rio 2011, Kopczewska et al. 2016, Adamczyk 2018). Concentration of business activities enables the businesses localised in a given area to obtain many positive effects. It allows them to increase production and efficiency of production factors, reduces costs and increases profitability (Cecaj, Mamei 2019, Arauzo-Carod 2021, Sikorski, Brezdeń 2021, Tabassum et al. 2022). Concentration of economic activities also generates agglomeration benefits arising from labour market pooling, input sharing and knowledge spillovers (de Falco 2021, Davis, Maré 2021). The benefits from the spatial concentration of entities arise from the following mechanisms (Duranton, Puga 2004, Giuliano et al. 2019, Bolter, Robey 2020):

- sharing mechanism – sharing inputs, sharing indivisible facilities and sharing risks,
- matching mechanism – better quantitative and qualitative matching between companies and employees,
- learning mechanism – generation, diffusion and accumulation of knowledge.

Concentration of economic activities, and hence the spatial proximity of business entities operating in the same sections of economy, can be an important source of competitiveness for both the entities themselves and the region or town in which they are located (Majewska, Truskolaski 2017, Harris et al. 2019, Sikorski, Brezdeń 2021, Arauzo-Carod 2021). A particular level of sector concentration can also lead to specialisation (Su, Zhao 2011, Kopczewska et al. 2016, Hongjian 2018). Determination of the degree of concentration of economic activities and economic advantages in a given territorial unit, e.g. a city, may therefore be of key importance in the implementation of this unit's development goals (Aghamohammadi et al. 2021).

Interestingly, despite the many years of studies on specialisation and diversification in the development of cities, we still lack an unambiguous answer to the question which is more important in their development: specialisation and resulting Marshall-Arrow-Romer type external benefits, or diversification and external benefits as identified by Jacobs (see Duranton, Puga 2000, Stachowiak, Stryjakiewicz 2016, Content et al. 2019). On the one hand, it is indicated that towns with a diversified economic structure have better development prospects because the are more flexible and resistant to economic flucutations and crises. A diversified and modern economic structure creates better opportunities for stimulating the growth of entrepreneurship, innovation and creativity both among the city dwellers and the businesses operating in a given town (see van Oort et al. 2015, Bronisz 2018, Balland et al. 2019, Bogdański 2019, Miszczak 2021). It is underlined that having an economic base composed of many sectors with sound

development prospects proves that the town is competitive (Klasik 2001). Moreover, according to Jacob's theory, diversification of economic activity can enable a given unit to achieve a competitive advantage, in addition to which diversified urban agglomerations support innovations (Audretsch et al. 2011, Dzemydaitė 2021).

On the other hand, the dominance of a certain economic function of a town, that is its local specialisation, may also lead to the town's securing a competitive advantage (see de Groot et al. 2009, Bronisz 2018, Tabassum et al. 2022). Specialisation enables an optimal use of the development potential of a given area through the best possible adjustment of this potential to the economic, social or natural resources owned by this locality (Duranton, Puga 2004, Dzemydaitė 2021, Sikorski, Brezdeń 2021). It determines the economic 'identity' of a given area and becomes its distinguishing feature. It also defines its role in the environment by exposing the dominant function, e.g. industries, services, tourism, etc. (Gryszel 2016, Ma et al. 2023). Special importance is attributed to the so-called smart specialisations, whose aim is to enhance innovativeness and competitiveness of cities and regions, drawing from their endogenous potential and the economic branches that already operate in a given site (see Foray 2014, Asheim 2018, Balland et al. 2019). They may include specialisations in one sector as well as inter-sector enterprises, which enable a town or region to secure a competitive advantage. Such activities make it possible to create a scale effect and to develop original and outstanding areas of specialisation (Gryszel 2016, Bosch, Vonortas 2019). Importantly, specialisation of a city often follows from the dominant role of some kind of economic activity, which is a source of income for most of the city's residents. It may have arisen from some uniqueness of a certain type of economic activity, whose level of concentration in a given city is low. Specialisation depends on the scale of benefits obtained by a town owing to the uniqueness of some economic activities pursued rather than from the degree of concentration of businesses (Kopczewska et al. 2016).

The scale of the city's potential determines the choice of its economic development profile, which can rely on specialisation (supporting the development of a few, interconnected economic activities which are best at using the limits resources of a town) or diversification (supporting the development of many economic activities, which will facilitate the use of the town's diverse resources) (Duranton, Puga 2000, Wrana 2013, Bakarić et al. 2019). In the light of the above, it was deemed to be an important challenge to recognize the degree of concentration of economic activities in the cities which are members of the Polish National Cittaslow Network. These cities, in line with the slow city concept, should develop their economic activity on the basis of their own endogenous potential while striving to establish distinguishing features of their identity (see Radstrom 2011, Hatipoglu 2015, Perano et al. 2019). They should develop in a direction corresponding to the possesed resources and should shape their individual local specialisation.

The Polish National Cittaslow Network was set up on 13 April 2007. The founding cities were four localities situated in the warmińsko-mazurskie prov-

ince: Biskupiec, Bisztynek, Lidzbark Warmiński and Reszel. As of September 2023, the Polish network associated 36 towns, of which 27 were in warmińsko-mazurskie province (Fig. 1).

The area highlighted in lighter color is the territory of the warmińsko-mazurskie province.

The Polish network operates as part of the Cittaslow International Network, which brings together 291 cities from 33 countries. There are 20 national networks operating within the international network. The largest national network is the Italian network (associating 88 cities), the second largest is the Polish network (36 cities), the third is German (24 cities), the fourth is Turkish (22 cities) (as of September 2023).


Fig. 1. Location of member cities of the Polish National Cittaslow Network
Source: own calculations based on (Cittaslow List 2023).

According to the classification functioning in Poland, as many as 33 cities of the Polish Cittaslow network are small cities with a population of up to 20 thousand people. Only 3 cities of the Polish network are medium-sized cities. The largest city of the Polish network is Szczytno – an urban municipality with a population of 22,081 people. The smallest city is Sępopol – a city in an urban-rural municipality with 1,887 inhabitants. The average size of a city belonging to the Polish Cittaslow network is 9.7 thousand people. As many as 24 cities of the Polish Cittaslow network are cities in an urban-rural municipality, 11 cities are urban municipality, and one centre (Wydminy) is a rural municipality. The average population density of cities is 1,061 people/km$^2$. The city with the highest population density, amounting to 2,214 people/km$^2$ is Szczytno. The centre with the lowest population density, amounting to only 25 people/km$^2$ is Wydminy – a rural municipality located in the warmińsko-mazurskie province. It is the largest municipality in terms of area of all the centres studied, in which about 20% of the area is forest land.

The goal of the Polish National Cittaslow Network is to promote and disseminate the idea of 'good life' through the implementation of appropriate solutions in the environmental policy, infrastructural policy, urban space, hospitality, social cohesion and partnership in slow cities (Regulations of the Polish… 2007). The development of Cittaslow member cities should proceed in line with the slow city notion, which is an alternative concept of urban development, promoting the culture of a good and slow life (Mayer, Knox 2006, Perano et al. 2019); it is a concept that highlights local differences in times of homogeneity (Baldemir et al. 2013). The development of slow cities should take place in such a way as to avoid any collision between the slow rate of life and constant, well-designed development

(Wierzbicka 2021). The cities which belong to the Cittaslow network should be creative and open to innovations. In their development processes, they should use smart solutions, innovative ways of organizing the city and contemporary forms of management (Tocci 2018). They should also support the development of local production and create suitable conditions for conducting business activity.

The Cittaslow network can be joined by a town with the population of no more than 50,000. Successful applicants are first admitted to the international network, and then, when the required minimum number of slow cities has been reached in a given country, a national network is established (Farelnik 2022a, Cittaslow International Charter 2023). Cities which wish to join the Cittaslow network must satisfy numerous formal requirements and pass successfully through the process of certification, which means they must fulfil over 50% of the criteria gathered in 7 macroareas (Ball 2022, Wierzbicka 2022). Significantly, after joining the Cittaslow network, cities are expected to undertake such activities that will enable them to maintain or improve the extent to which they satisfy the certification criteria. This is verified during the so-called recertification process, which is performed every 5 years since a city joined the network.

The Cittaslow network membership and adoption of the slow city model are perceived by slow cities as an opportunity for their development and better quality of life for their inhabitants. It creates an opportunity for a more rapid, durable and sustainable development, improved competitiveness and resilience to crises (Farelnik et al. 2020, Sept 2021, Özcan Alp 2024). Cities count on benefits in the following areas (see Presenza et al. 2015, Erdogan 2016, Zawadzka 2017, Çiçek et al. 2019, Wierzbicka 2021, Farelnik et al. 2021):

- economic – development of local entrepreneurship, activation of the labour market,
- social – improved quality of life in the city, preventing the outflow of population to other cities,
- image-related – improved image of the city, more effective promotion,
- spatial – a better aesthetic value of public space, revitalisation,
- environmental – better condition of the natural environment, higher ecological awareness of the town's residents,
- organisational – benefits from cooperation between towns within the network, higher quality of public services, etc.

The member cities of the Polish National Cittaslow Network are highly diverse. Their unique potential is created by their local resources, such as attractive geographical location, natural landscapes, historical and cultural heritage, local traditions and customs, local products, handicrafts and crafts, high quality services, active local community, location, good quality of communication and technical infrastructure, or spatial attractiveness (Zadęcka 2018, Jaszczak, Kristianova 2019, Özcan Alp 2024). The slow city development model should therefore be adjusted in each case to the development capabilities of each town, and promote the best possible use of a city's endogenous potential while helping to preserve the diversity and uniqueness of all these localities (Farelnik et al. 2020). Such adjustment of a development model to every city is possible because the slow

city approach is adaptable as a certain concept, a way of thinking about resources and development, about building quality in all areas in which a city operates, and about the quality of life of the city's inhabitants (Farelnik 2022b).

## Research methodology

The analysis of the concentration of business activities according to the Polish Classification of Business Activities (PKD) was conducted for all 36 cities that belong to the Polish National Cittaslow Network, i.e. on a representative sample.

The Florence's location quotient (LQ) was employed to determine the degree of business activity concentration in the cities submitted to the analysis. LQ is an indicator used very often to evaluate the degree of concentration of different sections of sectors of economy in countries and regions (see Majewska 2014, Piórkowska 2016, Zuzańska-Żyśko, Dyszy 2021), and to analyse the functional structure of cities and the extent of their local specialisation (see Chądzyńska 2013, Clerici 2020, Carneiro, Silva 2020, Davis, Maré 2021). This location quotient is also broadly used for identification of territorial specialisations because it displays concentration regardless of the size of a territorial unit investigated. Moreover, it is distinguished by its simplicity, transparency and low data requirements (Carneiro, Silva 2020).

The location quotient (LQ), or else the indicator of territorial specialisation, is the ratio of the value of the indicator of a given economic activity in a given spatial unit (e.g. a city or a region) to the value of this indicator in the higher-order unit (e.g. the region or the country) (Czyż 2016, Gomez, Stair 2017). Significantly, territorial specialisation is most often determined on the basis of the branch structure of registered economic entities or the structure of employment in economy (Gwosdz et al. 2019). In this study, the analysis of the degree of concentration of economic activities in the Cittaslow cities involved the structure of registered entities in the individual PKD sections relative to the reference area, that is the province. The value of the location quotient was derived from the following formula (Bal-Domańska et al. 2020):

$$LQ = \frac{\left(\frac{X_{ij}}{X_{i0}}\right)}{\left(\frac{X_{0j}}{X_{00}}\right)} \quad i = 1, 2, ..., 36, j = 1, 2, ..., n$$

where:

- $X_{ij}$ – value for j-th PKD section in i-th city,
- $X_{i0}$ – value for all PKD sections in i-th city,
- $X_{0j}$ – value for j-th PKD section in the reference area, i.e. the province,
- $X_{00}$ – value for all PKD sections in the province.

The LQ calculated as shown above reflects the relative degree of concentration of the number of business entities in a given section in the analysed town,

related to the degree of concentration of this section in the province. The value of the LQ indicator = 1 means that the share of a given PKD section in the city in question is the same as in the province. An LQ value below one means 'a deficit' of business entities in a given section in the analysed town. A value of LQ above one indicates the above-average concentration of business entities in the given section compared to the average for the province and can therefore be interpreted as specialisation in a given branch. It is assumed that the higher the LQ value, the greater the concentration and strength of local specialisation (Majewska 2014, Bal-Domańska et al. 2020, Davis, Maré 2021). A high value of LQ indicates the dominance of one function and lesser diversification of the structure of local economy. It may also prove that many other functions have less of a chance to develop (see Chądzyńska 2013, Bronisz 2018). Typically, the LQ>1.2 is assumed to be the evidence in favour of specialisation (see Capello 2015, Klimczak et al. 2018). However, some authors assume that the threshold value of LQ suggesting the presence of specialisation should be higher, e.g. 1.25, 1.30 or even 1.5 (see Piórkowska 2016, Kudełko et al. 2022). In this study, it has been assumed that LQ higher than 1.3 corresponds to specialisation.

Values of the location quotient computed for each of the Cittaslow network member cities were also analysed over time, i.e. determining the dynamics of LQ changes in years 2018–2022. Based on the LQ value in 2022 and the dynamics of its change, PKD sections in the analysed cities were divided into four groups (clusters) (compare Piórkowska 2016, Bronisz 2018):

1. Group I – sections which are "engines of the local economy" – the group consists of the sections which were characterised by a high location quotient in year 2022 (LQ>1.3) and positive dynamics of change in 2018–2020 (ΔLQ>100);
2. Group II – developing sections – they are the sections characterised by a low location quotient in 2022 (LQ≤1.3) but positive dynamics of change in the analysed time period (ΔLQ>100), indicating that these sections can become "engines of the local economy";
3. Group III – sections losing importance – they are the sections which were characterised by a high location quotient in year 2022 (LQ>1.3), but showed unfavourable dynamics of change in the whole time period (ΔLQ≤100);
4. Group IV – sections of marginal importance for the local economy – they are the sections which were characterized by a low location quotient in 2022 (LQ≤1.3) and unfavourable dynamics of change in this time period (ΔLQ≤100).

The study employed data acquired from the GUS Local Data Bank from years 2018 to 2022.

## Results

The cities which belong to the Polish Cittaslow Network proved to be significantly differentiated in terms of the degree of concentration of business entities in the PKD sections. This is evidenced, inter alia, by the minimum and maximum val-

ues of the Florence's location quotient calculated for the particular PKD sections as well as the variance coefficient value (Table 1). This indicator reached the highest value of nearly 157% for section B (Mining and quarrying), which means that the towns differed largely in this area. In 2022, only 5 out of 36 Polish slow cities (Nidzica, Nowy Dwór Gdański, Olsztynek, Sianów, Sierpc, Wydminy) were characterised by the above-average concentration of business entities in this section relative to the average for the whole province. The least differentiation among the cities as regards the degree of concentration of economic activities appeared in section S and T (Other service activities and Households hiring employees). Only 4 cities (Dobre Miasto, Kisielice, Sierpc, Wydminy) were characterised by the above-average albeit not very high concentration of business activities in this section. The other cities presented the level of concentration similar to the one determined for the provinces in which they are situated. This may suggest the lack of tendency towards polarisation among the business activities classified in this section.

The section in which as many as 17 out of 36 analysed Cittaslow cities presented the above-average concentration of economic entities was section L (Activity connected with real estate market). The highest degree of concentration in this section was determined for Górowo Iławackie, Bisztynek and Orneta. The location quotient in these towns reached 3.29, 2.99 and 2.70, respectively, which attests to their high potential in this area. Another section in which nearly 1/3 of the towns (11 towns) recorded an above-average degree of concentration of economic entities is section E (Water supply, sewage and waste management, and activity related to reclamation). Rejowiec Fabryczny stood out with its very high location quotient in this section, reaching 7.97, which may suggest the city's specialisation in this scope. A high LQ value was also determined for Bisztynek and Pasym (4.06 in both towns). Two other sections in which the group of Polish slow cities recorded an above-average concentration of economic activities are sections O (Public administration and national protection) and R (Activity related to culture, entertainment, and recreation). Ten towns can be said to demonstrate specialisation in section O, of which the following show the highest concentration in this regard: Sępopol (LQ = 2.19), Nowy Dwór Gdański (LQ = 2.13), Kisielice (LQ = 1.91) and Sierpc (LQ = 1.88). Specialisation in section R was displayed by 9 Cittaslow network towns: Barczewo, Jeziorany, Kisielice, Lubawa, Pasym, Rejowiec Fabryczny, Reszel, Ryn and Sianów. The sections which did not score above the average in terms of the concentration of business entities in any of the Cittaslow cities were sections J (Information and communication) and M (Professional, scientific and technical activities), which is a distinguishing feature of the economic structure of small towns.

While analysing the degree of concentration of economic activities in particular cities and the number of sections which can be claimed to represent local specialisation, the following regularities were observed. Most of the Polish slow cities are characterised by a medium and low degree of concentration of economic activities, which proves a rather varied structure of their local economies. Fifteen Cittaslow network member cities in Poland were identified to have 3 to 4 local

Table 1. Degree of concentration of the PKD sections in cities belonging to the Polish National Cittaslow Network

| Cities | Florence's location quotient for individual PKD sections (LQ) | | | | | | | | | | | | | | | | | | | Number of sections with LQ>1.3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S i T | |
| Bartszyce | 0.35 | 0.49 | 0.91 | 0.28 | 0.91 | 0.81 | 1.24 | 1.22 | 0.73 | 0.49 | 1.80 | 1.08 | 0.79 | 0.47 | 1.01 | 1.03 | 1.38 | 0.70 | 1.18 | 2 |
| Barczewo | 0.09 | 0.00 | 1.22 | 1.24 | 1.36 | 0.95 | 1.04 | 1.11 | 0.41 | 0.90 | 1.19 | 1.51 | 0.99 | 1.01 | 0.89 | 0.63 | 0.61 | 1.36 | 1.10 | 3 |
| Biskupiec | 0.45 | 0.00 | 0.95 | 0.54 | 1.18 | 0.96 | 1.00 | 0.81 | 0.53 | 0.59 | 1.33 | 1.58 | 0.85 | 0.74 | 0.46 | 1.01 | 1.44 | 0.97 | 1.00 | 3 |
| Bisztynek | 1.10 | 0.00 | 1.03 | 0.00 | 4.06 | 0.95 | 1.04 | 0.72 | 0.24 | 0.60 | 0.34 | 2.99 | 0.30 | 0.92 | 1.59 | 0.55 | 0.40 | 0.81 | 0.95 | 3 |
| Braniewo | 0.54 | 0.61 | 0.68 | 0.52 | 0.95 | 0.88 | 0.87 | 0.76 | 0.95 | 0.57 | 1.14 | 2.36 | 0.73 | 0.81 | 1.04 | 1.11 | 1.06 | 0.80 | 1.05 | 1 |
| Dobre Miasto | 0.40 | 0.00 | 1.06 | 0.33 | 0.72 | 0.98 | 0.96 | 0.74 | 0.77 | 0.99 | 0.81 | 1.61 | 0.69 | 0.83 | 0.42 | 0.87 | 1.10 | 0.96 | 1.38 | 2 |
| Działdowo | 0.22 | 1.09 | 0.83 | 0.62 | 0.68 | 0.97 | 1.11 | 1.03 | 0.55 | 1.16 | 1.10 | 1.01 | 1.02 | 1.12 | 0.93 | 1.11 | 1.45 | 1.24 | 0.82 | 1 |
| Głubczyce | 0.73 | 0.91 | 0.74 | 1.34 | 0.70 | 0.76 | 0.97 | 0.55 | 0.54 | 0.64 | 1.18 | 2.59 | 0.83 | 0.68 | 0.80 | 1.10 | 1.12 | 0.70 | 0.99 | 2 |
| Gołdap | 0.44 | 0.00 | 1.13 | 1.87 | 1.37 | 1.10 | 1.01 | 0.87 | 0.86 | 0.76 | 0.86 | 1.29 | 0.85 | 0.86 | 0.72 | 1.11 | 0.91 | 1.09 | 1.05 | 2 |
| Górowo Iławeckie | 0.56 | 0.00 | 0.96 | 0.72 | 0.79 | 0.85 | 0.69 | 0.92 | 0.35 | 0.44 | 0.50 | 3.29 | 0.50 | 0.84 | 1.55 | 1.03 | 0.50 | 1.19 | 1.17 | 2 |
| Jeziorany | 0.42 | 0.00 | 0.83 | 0.00 | 1.38 | 1.26 | 1.44 | 0.51 | 0.49 | 0.61 | 1.38 | 1.00 | 0.56 | 0.80 | 1.62 | 1.23 | 0.40 | 1.65 | 1.21 | 5 |
| Kalety | 2.11 | 1.07 | 1.37 | 0.62 | 0.34 | 1.40 | 0.84 | 1.09 | 0.54 | 0.80 | 0.65 | 0.83 | 1.04 | 0.74 | 1.02 | 1.19 | 0.71 | 0.95 | 0.99 | 3 |
| Kisielice | 0.82 | 0.00 | 0.80 | 2.97 | 0.00 | 0.79 | 1.53 | 1.21 | 0.15 | 0.36 | 0.00 | 0.48 | 0.72 | 0.47 | 1.91 | 1.98 | 0.89 | 2.44 | 1.48 | 6 |
| Lidzbark | 0.64 | 0.00 | 0.76 | 0.00 | 0.53 | 1.37 | 1.37 | 0.90 | 0.85 | 0.94 | 0.93 | 0.98 | 0.69 | 0.72 | 0.62 | 0.86 | 0.78 | 1.11 | 0.78 | 2 |
| Lidzbark Warmiński | 0.24 | 0.60 | 0.89 | 0.85 | 0.93 | 0.85 | 1.04 | 1.20 | 0.81 | 0.84 | 1.07 | 1.75 | 0.78 | 1.02 | 1.09 | 1.02 | 0.88 | 0.86 | 1.06 | 1 |
| Lubawa | 0.93 | 1.06 | 1.38 | 0.30 | 1.32 | 0.95 | 1.30 | 1.07 | 0.47 | 0.88 | 0.78 | 1.08 | 0.94 | 0.74 | 0.39 | 0.80 | 0.68 | 1.33 | 0.85 | 4 |
| Morąg | 0.48 | 0.77 | 1.08 | 0.43 | 0.72 | 0.92 | 1.14 | 0.52 | 0.53 | 0.66 | 0.95 | 1.84 | 0.91 | 0.81 | 0.37 | 1.02 | 0.95 | 0.61 | 1.07 | 1 |
| Murowana Goślina | 0.24 | 0.63 | 1.36 | 0.22 | 0.79 | 1.27 | 0.98 | 0.86 | 0.96 | 0.81 | 1.20 | 0.40 | 1.00 | 1.12 | 0.32 | 0.93 | 0.93 | 0.86 | 0.99 | 1 |
| Nidzica | 0.57 | 1.59 | 1.19 | 0.45 | 0.25 | 1.01 | 1.19 | 1.11 | 0.62 | 0.79 | 1.17 | 0.98 | 0.81 | 0.79 | 1.06 | 1.24 | 0.85 | 0.63 | 1.07 | 1 |
| Nowe Miasto Lubawskie | 0.69 | 0.00 | 1.16 | 0.27 | 2.09 | 0.94 | 1.08 | 1.25 | 0.53 | 0.40 | 1.01 | 0.70 | 0.84 | 1.07 | 1.40 | 0.97 | 1.60 | 1.03 | 0.99 | 3 |
| Nowy Dwór Gdański | 0.33 | 2.74 | 1.32 | 0.61 | 1.82 | 1.23 | 1.21 | 0.93 | 0.83 | 0.46 | 1.06 | 0.74 | 0.61 | 0.71 | 2.13 | 0.90 | 1.11 | 1.13 | 1.19 | 4 |
| Olecko | 0.45 | 0.00 | 0.84 | 0.62 | 1.02 | 1.12 | 1.15 | 0.95 | 0.96 | 0.98 | 1.21 | 1.13 | 0.98 | 0.91 | 0.73 | 1.04 | 0.74 | 0.99 | 1.00 | 0 |

| Cities | Florence's location quotient for individual PKD sections (LQ) | | | | | | | | | | | | | | | | | | | Number of sections with LQ>1.3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | D | E | F | G | H | I | J | K | L | M | N | O | P | Q | R | S i T | |
| Olsztynek | 0.36 | 1.41 | 0.97 | 0.00 | 1.32 | 0.78 | 1.17 | 1.14 | 0.82 | 1.26 | 0.88 | 1.78 | 0.93 | 0.51 | 0.52 | 0.57 | 0.77 | 1.12 | 1.03 | 3 |
| Orneta | 0.53 | 0.00 | 0.81 | 0.57 | 1.24 | 1.05 | 1.12 | 0.66 | 0.66 | 0.58 | 0.93 | 2.70 | 0.51 | 0.81 | 0.36 | 0.53 | 0.70 | 0.70 | 0.86 | 1 |
| Pasym | 0.82 | 0.00 | 0.92 | 0.00 | 4.06 | 1.58 | 1.02 | 1.00 | 1.09 | 0.60 | 1.02 | 0.40 | 0.70 | 0.66 | 1.59 | 0.66 | 0.91 | 2.03 | 1.09 | 4 |
| Prudnik | 0.56 | 0.00 | 0.85 | 0.44 | 0.58 | 0.68 | 1.13 | 0.57 | 0.98 | 0.89 | 0.83 | 1.98 | 0.87 | 0.79 | 0.66 | 1.20 | 1.12 | 1.02 | 1.08 | 1 |
| Rejowiec Fabryczny | 0.34 | 0.00 | 0.91 | 1.34 | 7.97 | 1.35 | 0.86 | 0.68 | 0.23 | 0.78 | 0.38 | 1.93 | 0.77 | 1.26 | 1.06 | 0.75 | 1.13 | 1.47 | 1.13 | 5 |
| Reszel | 0.48 | 0.00 | 0.75 | 0.72 | 0.79 | 0.75 | 1.22 | 0.67 | 1.27 | 0.70 | 1.78 | 1.88 | 0.38 | 0.69 | 0.93 | 0.96 | 1.10 | 1.54 | 1.00 | 3 |
| Ryn | 0.63 | 0.00 | 0.91 | 0.00 | 1.04 | 1.23 | 0.62 | 0.77 | 3.34 | 0.69 | 0.13 | 2.05 | 0.42 | 1.81 | 1.22 | 0.42 | 0.44 | 1.40 | 0.87 | 4 |
| Rzgów | 1.48 | 0.00 | 1.39 | 0.58 | 1.97 | 0.59 | 1.78 | 0.59 | 1.24 | 0.40 | 0.37 | 1.19 | 0.66 | 0.78 | 0.44 | 0.48 | 0.59 | 1.07 | 0.55 | 4 |
| Sępopol | 1.32 | 0.00 | 0.63 | 1.70 | 0.00 | 1.44 | 0.89 | 0.69 | 0.66 | 0.62 | 0.70 | 2.33 | 0.21 | 0.18 | 2.19 | 1.06 | 0.55 | 1.11 | 1.11 | 5 |
| Sianów | 1.12 | 2.59 | 1.16 | 0.33 | 0.43 | 1.15 | 1.06 | 1.43 | 0.46 | 0.53 | 0.99 | 1.24 | 0.71 | 0.85 | 0.78 | 0.65 | 0.79 | 1.45 | 1.02 | 3 |
| Sierpc | 1.96 | 1.97 | 1.06 | 0.74 | 0.76 | 1.24 | 1.33 | 0.64 | 0.93 | 0.36 | 1.06 | 0.99 | 0.48 | 0.70 | 1.88 | 1.17 | 1.58 | 1.27 | 1.36 | 6 |
| Szczytno | 0.61 | 0.46 | 0.75 | 0.90 | 0.42 | 0.83 | 1.18 | 1.04 | 0.92 | 1.09 | 1.15 | 1.27 | 1.03 | 0.89 | 0.83 | 1.18 | 0.93 | 0.99 | 1.01 | 0 |
| Węgorzewo | 0.74 | 0.00 | 0.80 | 0.80 | 0.59 | 0.64 | 0.92 | 0.70 | 1.31 | 0.94 | 0.95 | 1.44 | 0.93 | 1.39 | 1.38 | 1.19 | 1.19 | 1.18 | 1.28 | 4 |
| Wydminy | 2.85 | 4.33 | 0.76 | 3.68 | 0.67 | 1.20 | 0.83 | 0.71 | 1.26 | 0.52 | 0.50 | 0.97 | 0.62 | 0.78 | 0.79 | 1.03 | 0.70 | 1.00 | 1.48 | 4 |
| Coefficient of variation (in %) | 76.9 | 156.7 | 21.7 | 105.3 | 112.0 | 23.5 | 20.5 | 26.9 | 65.0 | 32.0 | 41.9 | 47.8 | 28.5 | 32.6 | 50.2 | 30.0 | 34.3 | 32.8 | 17.5 | – |
| Number of cities with LQ>1.3 | 5 | 6 | 5 | 6 | 11 | 5 | 6 | 1 | 2 | 0 | 4 | 17 | 0 | 2 | 10 | 1 | 5 | 9 | 4 | – |

Section names: A – Agriculture, forestry, hunting and fishery; B – Mining and quarrying; C – Manufacturing; D – Production and supply of electricity, gas, water vapor, hot water and air for air-conditioning systems; E – Water supply, sewage and waste management, and activity related to reclamation; F – Construction; G – Wholesale and retail trade; repair of motor vehicles, including motorcycles; H – Transport and warehouse management; I – Accommodation and food service activities; J – Information and communication; K – Financial and insurance activities; L – Activity related to the real estate market; M – Professional, scientific and technical activities; N – Administration services activities; O – Public administration and national protection, obligatory social insurance; P – Education; Q – Health and social work; R – Activity related to culture, entertainment, and recreation; S i T – Other service activities and Households hiring employees; households producing goods and providing services for their own needs.

Source: own calculations based on date from Local Data Bank (2023).

specialisations, while fourteen other towns had 1 or 2 specialisations. Interestingly, only two cities in the Polish Cittaslow network were found to present as many as 6 sections with an above-average concentration of business entities. They were Kisielice, where local specialisation was determined in sections D, G, O, P, R (i.e.: Production and supply of electricity, gas, water vapor, hot water and air for air-conditioning systems; Wholesale and retail trade, repair of motor vehicles; Public administration and national protection, obligatory social insurance; Education; Activity related to culture, entertainment, and recreation), as well as S and T (Other service activities and Households hiring employees; households producing goods and providing services for their own needs), and Sierpc, in which local specialisation was detected in sections A, B, G, O, Q (i.e.: Agriculture, forestry, hunting and fishery; Mining and quarrying; Wholesale and retail trade, repair of motor vehicles; Public administration and national protection, obligatory social insurance; Health and social work), as well as S and T. High values of the location quotient in these activities prove the dominance of these several functions in the economic structure of these towns. Noteworthy is also the fact that two members of the Polish Cittaslow network, that is Olecko and Szczytno, were not detected to present an above-average concentration of economic entities in any of the sections considered. Thus, the economic structure in these towns is highly varied.

The analysis of the value of the Florence's location quotient in year 2022 and the dynamics of its change in the period from 2018 to 2022 substantiated the division of the PKD sections into four groups (Table 2). In most citiess, it was possible to identify the activities which were the so-called "engines of their local economy". Twelve cities had only one section, and in another ten cities – there were two such sections. Among the sections which were classified as driving wheels of local economy in the highest number of cities were: section E – Water supply, sewage and waste management, and activity related to reclamation (in 8 towns), R – Activity related to culture, entertainment, and recreation (in 7 towns), O – Public administration and national protection, obligatory social insurance (in 7 towns). It was only in one city, namely Jeziorany, that as many as 5 sections (E, G, K, O, R, i.e.: Water supply, sewage and waste management, and activity related to reclamation; Wholesale and retail trade, repair of motor vehicles; Financial and insurance activities; Public administration and national protection, obligatory social insurance; Activity related to culture, entertainment, and recreation) could be called the engines of its economy. In two cities, Kisielice and Sierpc, 4 sections could be regarded as playing such a role.

Unfortunately, there were six towns (Dobre Miasto, Głubczyce, Olecko, Orneta, Prudnik, Szczytno) lacking any section with an above-average concentration of economic activities or favourable dynamics of change in this scope.

Interestingly, in each of the analysed slow cities in Poland, several developing sections were identified (5–6 sections). It is also important to underline that there were sections with marginal importance for local economy in every slow city in Poland. There were as many as 8–9 sections in most of these towns, although Barczewo had 13 sections and Dobre Miasto and Sępopol showed 11 sections with little importance for local economy.

Table 2. Classification of the PKD sections in Polish slow cities

| Cities | Engines of the local economy | Developing sections | Sections losing importance | Sections of the marginal importance |
|---|---|---|---|---|
| | LQ>1.3 ΔLQ>100 | LQ≤1.3 ΔLQ>100 | LQ>1.3 ΔLQ≤100 | LQ≤1.3 ΔLQ≤100 |
| Bartszyce | K, Q | B, C, D, E, L, O, P, S i T | – | A, F, G, H, I, J, M, N, R |
| Barczewo | R | H, I, N | E, L | A, B, C, D, F, G, J, K, M, O, P, Q, S i T |
| Biskupiec | K, L | F, G, H, J, N, O, P | Q | A, B, C, D, E, I, M, R, S i T |
| Bisztynek | E | A, C, G, M, P, R, S i T | L, O | B, D, F, I, J, K, N, Q |
| Braniewo | L | B, E, H, K, M, O, Q | – | A, C, D, F, G, I, J, N, P, R, S i T |
| Dobre Miasto | – | E, F, H, N, O, Q | L, S i T | A, B, C, D, G, I, J, K, M, P, R |
| Działdowo | Q | C, H, I, J, K, L, N, O, P | – | A, B, D, E, F, G, M, R, S i T |
| Głubczyce | – | A, C, F, H, J, K, N, O, S i T | D, L | B, E, G, I, M, P, Q, R |
| Gołdap | D, E | F, G, I, K, L, O, P, S i T | – | A, B, C, H, J, M, N, Q, R |
| Górowo Iławeckie | O | C, E, F, H, J, M, P, Q, R | L | A, B, D, G, I, K, N, S i T |
| Jeziorany | E, G, K, O, R | A, F, H, I, N, Q | – | B, C, D, J, L, M, P, S i T |
| Kalety | F | H, K, M, P, Q | A, C | B, D, E, I, J, L, N, O, R, S i T |
| Kisielice | G, O, P, R | C, H, L, M | D, S i T | A, B, E, F, I, J, K, N, Q |
| Lidzbark | F, G | A, E, I, J, K, L, O, R | – | B, C, D, H, M, N, P, Q, S i T |
| Lidzbark Warmiński | L | A, B, E, H, K, M, N, O, Q | – | C, D, F, G, I, J, P, R, S i T |
| Lubawa | C, E | A, B, I, J, K, L, N, Q | G, R | D, F, H, M, O, P, S i T |
| Morąg | L | A, C, D, F, H, K, N, O, P | – | B, E, G, I, J, M, Q, R, S i T |
| Murowana Goślina | C | B, E, G, H, L, M, N, O, R | – | A, D, F, I, J, K, P, Q, S i T |
| Nidzica | B | A, C, E, H, J, K, L, M, O, R, S i T | – | D, F, G, I, N, P, Q |
| Nowe Miasto Lubawskie | O | C, G, H, J, L, N | E, Q | A, B, D, F, I, K, M, P, R, S i T |
| Nowy Dwór Gdański | B, C, E, | A, D, F, H, M, N | O | G, I, J, K, L, P, Q, R, S i T |
| Olecko | – | A, G, H, J, L, O, R, S i T | – | B, C, D, E, F, I, K, M, N, P, Q |

| Cities | Engines of the local economy | Developing sections | Sections losing importance | Sections of the marginal importance |
|---|---|---|---|---|
| | LQ>1.3 ΔLQ>100 | LQ≤1.3 ΔLQ>100 | LQ>1.3 ΔLQ≤100 | LQ≤1.3 ΔLQ≤100 |
| Olsztynek | B, E | C, G, J, N, O, R, S i T | – | A, D, F, H, I, K, L, M, P, Q |
| Orneta | – | A, E, F, G, J, K, M, O, R, S i T | L | B, C, D, H, I, N, P, Q |
| Pasym | R | C, G, J, M, P, Q | E, F, O | A, B, D, H, I, K, L, N, S i T |
| Prudnik | – | A, C, E, F, H, J, K, N, O, S i T | L | B, D, G, I, M, P, Q, R |
| Rejowiec Fabryczny | E, F, R | A, G, H, J, M, P | D, L | B, C, I, K, N, O, Q, S i T |
| Reszel | K, L, R | A, E, F, G, O, P | – | B, C, D, H, I, J, M, N, Q, S i T |
| Ryn | I, N | A, E, F, H, J, M, O | L, R | B, C, D, G, K, P, Q, S i T |
| Rzgów | E, G | F, H, I, L, M, R | A, C | B, D, J, K, N, O, P, Q, S i T |
| Sępopol | F, O | H, K, Q | A, D, L | B, C, E, G, I, J, M, N, P, R, S i T |
| Sianów | B, R | A, C, G, I, K, M, N | H | D, E, F, J, L, O, P, Q, S i T |
| Sierpc | A, B, G, O | C, E, F, I, J, K, L, M, N | Q, S i T | D, H, P, R |
| Szczytno | – | A, B, D, E, K, L, M, N, O, Q, R | – | C, F, G, H, I, J, P, S i T |
| Węgorzewo | I, L, O | A, D, F, M, P, R | N | B, C, E, G, H, J, K, Q, S i T |
| Wydminy | B, S i T | E, H, I, K, N, O, P, R | A | C, D, F, J, L, M, Q |

Source: own calculations based on date from Local Data Bank (2023).

## Discussions

There are many studies in the literature that analyze the degree of concentration of economic activity, divided into sectors and sections of economy. Analyses concern economies of different countries, and are conducted on regional and local levels, frequently relating to specific territorial units, e.g. cities (see Majewska 2014, Bakarić et al. 2019, Balland et al. 2019, Clerici 2020, Aghamohammadi et al. 2021, de Falco 2021, Dzemydaitė 2021, Sikorski, Brezdeń 2021, Panzera et al. 2022). In Poland, analyses of the degree of concentration of economic entities together with the identification of dominant sections or even leading companies are carried out on the level of provinces (see Klimczak et al. 2018, Dąbrowska et al. 2019, Kudełko et al. 2022) or individual cities (Gwosdz 2012, Konecka-Szydłowska, Maćkowiak 2016, Bronisz 2018). However, up to date, no research of

this type has been conducted dealing with small cities which belong to the Polish National Cittaslow Network, an association started in Poland relatively recently but since its onset developing very rapidly.

Nevertheless, some results of studies dealing with entrepreneuship in Polish Cittaslow cities have been gathered in the course of the project entitled "Cities of good life 2030" (Dziemianowicz et al. 2021). However, these results are derived only from the Cittaslow member cities situated in the warmińsko-mazurskie province, and relate to only some of the PKD sections, namely the ones which have been classified as so-called smart specialisations of the region. It is worth underlining that the results of this study indicate that the Cittaslow member cities situated in the warmińsko-mazurskie province are characterised by a variety of structures of their local economies (Dziemianowicz et al. 2021). Hence, those results are consistent with the study presented in this article. It has been shown that most of the Polish slow cities are distinguished by an average or low level of concentration of economic activities in the particular PKD sections. This indicates the diversified structure of their local economies.

Interestingly, many studies on the concentration of economic activities in cities suggest that the type of exogenous functions performed by a city depends on its size (Duranton, Puga 2000, Gervais et al. 2021, Ma et al. 2023, Wagner 2024). As the population of a city increases, specialisations in sections with the agricultural sector and then in the industrial sector are being replaced by specialisations in sections associated with the services sector (Konecka-Szydłowska, Maćkowiak 2016). Studies have also implicated that specialisation is negatively correlated with the size of a city, that is specialisation weakens with the growing size of an urban centre (see Duranton, Puga 2000, Bronisz 2018, Bakarić et al. 2019, Jiangjiang et al. 2020, Gervais et al. 2021). This type of a relationship has not been a subject of the current study.

Numerous studies also emphasise that the economic specialisation of small and medium-sized cities depends on their relative distance to the nearest metropolitan centre (Hamdouch et al. 2017, Kaufmann, Meili 2019). Localities close to a bigger city may be better suited to 'borrow' economic specialisation from the core city. However, the opposite can also happen, and smaller cities must cope with 'the agglomeration shadow', meaning that their proximity to the core city results in having fewer functions than a town would normally have (Meijers, Burger 2015, Kaufmann, Meili 2019).

The literature concerning the concentration of economic activities in cities emphasises that small and medium-sized towns should raise their level of specialisation in order to achieve higher productivity and level of income. They should deploy their competitive advantages arising from their resources or geographical location, identify leading branches, and promote their specialisation accordingly (Hongjian 2018). Similar conclusions regarding the cities which belong to the Polish National Cittaslow Network can be derived from the study presented in this paper.

## Conclusions

As the reported study has revealed, most of the Polish Cittaslow cities are characterized by a moderate or low level of concentration of economic entities in the particular PKD sections, which proves the diversified structure of their local economies. In 15 out of 36 network cities, there were 3 or 4 local specialisations identified in the course of the analysis, while only 1 or 2 specialisations were determined in another 14 towns. A relatively high level of local specialisation was noted in just five cities of the Cittaslow network in Poland. Two cities: Kisielice and Sierpc, were characterised by the above-average concentration of economic entities in 6 sections. Three towns: Jeziorany, Rejowiec Fabryczny and Sępopol, showed local specialisation in 5 sections. In two Polish slow cities, Olecko and Szczytno, no local specialisation was identified. The lack of a dominant function of a city may result from certain problems with the proper recognition of its potential and identification of factors constituting its economic base, and the lack of appropriate measures implemented with a view of shaping a local specialisation. Importantly, this may also follow from a certain uniqueness of economic activity in a given town. Specialisation does not always depend on the degree of concentration but may also be a consequence of the uniqueness of the economic activity conducted in that town. However, the study presented in this paper did not deal with this question.

In most of the Polish Cittaslow member cities, it was possible to identify sections which were the so-called "engines of the local economy", and they were most often sections E – Water supply, sewage and waste management, and activity related to reclamation (in 8 cities), R – Activity related to culture, entertainment, and recreation (in 7 cities), O – Public administration and national protection, obligatory social insurance (in 7 cities). In 6 cities of the Polish Cittaslow network (Dobre Miasto, Głubczyce, Olecko, Orneta, Prudnik, Szczytno), there is no section at present that would have an above-average concentration of economic activities and a positive dynamics of change in this scope, which means that these cities lack sections which could stimulate their local economies.

Interestingly, a high value of the quotient of concentration of economic entities in section R (Activity related to culture, entertainment, and recreation) may implicate that, in line with the concept of a slow city, these cities focus on raising the quality of life of their residents and pursue activities in the area associated with culture and leisure time, as this sphere is extremely important for development concordant with slow philosophy. It is also worth mentioning that the next area whose development is important in Cittaslow network member cities is tourism and catering, that is the business activity classified to section I (Accommodation and food service activities). Unfortunately, an above-average concentration of businesses in this section, that is specialisation, can be detected in just two slow cities: Ryn and Węgorzewo. Both are popular tourist destinations, situated in the Land of Great Masurian Lakes, and possess great potential in this scope. Most of the other Polish slow cities are deficient in business entities active in this area. Both their offer for tourists and hospitality facilities are far

from being adequate. The potential of their natural resources, however, creates an opportunity to develop tourism in many forms. The Cittaslow network cities should make efforts to seize this opportunity. The development of the tourism sector, especially in the form of slow tourism or the slow cities network tourism product, may be a development opportunity for them.

Importantly, in each of the analysed slow cities in Poland, there are sections of marginal importance for the local economy (in most cities, there were as many as 8–9 such sections), as well as a few developing sections (5–6 sections). In most towns, there were also sections losing importance (1–3 section). Thus, the authorities of cities should make an analysis the reasons of low and decreasing concentration of economic activities in sections of marginal importance for the local economy and undertake appropriate measures to improve the situation. Supporting the sectors which are permanently classified as representing this group tends to be ineffective. It is also necessary to properly recognize developing sections and sections that are losing importance. As regards the latter type of sections, it is necessary to identify the causes of their decreasing importance and to develop appropriate support tools, so that the potential contained in the dominant sections is used adequately rather than lost.

The research conducted in this article fills the research gap in the area of concentration of economic activity in small towns developing in accordance with the slow city concept. It offers a complex analysis of the degree of concentration of economic entities in particular PKD sections in all Cittaslow network member cities in Poland. This study is also an attempt at identifying these PKD sections which are "engines" of the development of individual slow cities. The results of this study are a valuable source of information about the economic potential possessed by each town which is a member of the Polish Cittaslow network, and about areas of their local specialisations. These results can therefore be used by city authorities to prepare development strategies for individual cities and the entire Polish network.

A follow-up to this study should comprise an analysis of the degree of concentration of economic activities in the Polish slow cities based on the structure of employment in the individual PKD sections. Such an analysis could help to supplement and verify the results of the current study. In future research on the above subject, it might be possible to use other measures of the concentration of economic activities; another option is to check whether the degree of specialisation found in the Cittaslow member cities correlates with their size.

## Conflict of interest

The author declares no conflicts of interest and assures that the work is the result of her own creation.

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## Koncentracja działalności gospodarczej w miastach należących do Polskiej Krajowej Sieci Miast Cittaslow

**Zarys treści:** Polska Krajowa Sieć Miast Cittaslow zrzesza małe miasta, które zgodnie z założeniami koncepcji *slow city* dążą do zrównoważonego rozwoju i zapewnienia odpowiednich relacji między wzrostem gospodarczym, dbałością o środowisko i poprawą jakości życia mieszkańców. Rozwój polskich slow cities powinien odbywać się w oparciu o lokalny, endogeniczny potencjał. Szansą poszczególnych miast w tym zakresie jest więc wspieranie producentów lokalnych i rozwój lokalnej wytwórczości, a w szczególności wspieranie branż dominujących, w których miasta mogłyby osiągnąć specjalizację.
Celem badań była analiza koncentracji działalności gospodarczej w miastach należących do polskiej sieci Cittaslow oraz identyfikacja obszarów specjalizacji poszczególnych miast. Badaniami objęto 36 miast należących do sieci. Do oceny stopnia koncentracji sekcji PKD w tych miastach wykorzystano iloraz lokalizacji Florence'a. Obliczono wartość tego wskaźnika dla roku 2022, jak również jego dynamikę zmian w okresie 2018–2022. Przeprowadzono też klasyfikację sekcji PKD w poszczególnych miastach, wyróżniając cztery skupienia.
Na podstawie badań wykazano, w których sekcjach PKD występuje w miastach największy stopień koncentracji działalności gospodarczej. Zidentyfikowano sekcje, które w danych miastach można nazwać „kołami napędowymi" ich lokalnej gospodarki. Zidentyfikowano także pozostałe skupienia sekcji PKD: sekcje rozwojowe, sekcje tracące na znaczeniu, sekcje o marginalnym znaczeniu dla lokalnej gospodarki. Wyniki badań mają wymiar praktyczny, wskazują bowiem kierunki specjalizacji lokalnej badanych slow cities.

**Słowa kluczowe:** slow cities, struktura gospodarki, iloraz lokalizacji Florence'a, specjalizacja miast