

DEVELOPMENT OF ENTREPRENEURSHIP IN RURAL AREAS OF NORTH-EASTERN POLAND

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Abstract. Rural areas are characterised by a considerable diversification of their natural, demographic, historical, spatial and socio-economic conditions. These conditions caused disproportions in the density of entities of national economy in the rural areas of North-eastern Poland. The main aim of article is the presentation of both the growth of non-agricultural activity in the rural areas of the Warminsko-Mazurskie and Podlaskie Voivodships in 2014 and the dynamics of changes in relation to 2004. Upon the analyses it was concluded that the density level of entities of national economy and the dynamics of change in entities of national economy featured by large disproportions across rural communes. The biggest changes characterised mainly the rural communes lying near the largest towns in the region: Olsztyn, Elblag and Bialystok. The highest dynamics of increase among the rural communes of North-eastern Poland were mainly recorded in the Warminsko-Mazurskie voivodship; whereas the most noteworthy decrease in the number of entities of national economy was in the rural communes situated along the Eastern border of the Podlaskie voivodship, which is the reflection of their poor economic activity. For a more profound analysis of the spatial distribution of the growth of entrepreneurship, the study results were juxtaposed to the existing demographic potential of the rural areas in North-eastern Poland. The results of the study revealed the following tendency: the higher the demographic potential of rural communes was, the more favourable indicators of growth of entrepreneurship appeared. It proves that demographic potential of workforce has a considerable impact on the development of the rural areas of North-eastern Poland.

Key words: entrepreneurship, rural areas, North-eastern Poland.

JEL code: R11, R12, J10

Introduction

The area of North-eastern Poland comprises the Warminsko-Mazurskie and Podlaskie voivodships and covers 44,360 km² and is inhabited by 2,635,885 people. The investigated area borders Kaliningrad Oblast, Lithuania and Belarus, and it marks the easternmost boundary of the European Union. North-Eastern Poland is characterized by a high degree of naturalness, diverse relief, an abundance of lakes, extensive forests and rich flora and fauna (Bera. M, 2013; Goraj .S, Nowak. M, Gwiazdzinska-Goraj. M, 2014). Unfortunately, the Warminsko-Mazurskie and Podlaskie voivodships also feature a low level of the Human Development Index and a poor growth dynamics. In 2013, this region's share in the Gross National Product (GNP) – the composite index illustrating an economic development of a particular region – amounted to as little as nearly 5.0 %. To a large extent, the rural areas of North-eastern Poland comprise agricultural land and are characterised by a high

ratio of agricultural production and food production. However, the major development trend which is gaining in significance there is tourism. The rural areas which, not such a long time ago – in the 1980s, were mono-functional are now more and more conspicuously becoming multi-functional, with the agricultural function being accompanied by the growth in non-agricultural activities (Goraj. S, Nowak. M, Gwiazdzinska-Goraj. M, 2014). Sustainable development of rural areas calls for reconciliation of three dimensions of development, which take into account the main objectives of rural area development: economic, social and environmental development (Dudzinska. M, Kocur-Bera. K, 2015). One of the most important solutions ensuring a sustainable development of rural areas is the promotion and stimulation of rural entrepreneurship. It has been common knowledge that enterprises are the key to and a driving force for both an economic growth and diversification in Europe (Skubiak. B, 2015).

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The aim of this paper is to analyse the development of entrepreneurship in the rural areas of North-eastern Poland in 2014. The analysis is based on the following indicators: the number of entities of national economy and the number of entities of national economy per 10 thousand inhabitants at working age. In this study, the measure of change dynamics in the number of entities of national economy was expressed by the values for the initial year of the study (2004) represented 100 %, and the values for the final year (2014) were benchmarked relative to 100 %. Simultaneously, for a more comprehensive examination of the spatial differences in the growth of entrepreneurship across rural communes, it deals with the impact of the existing demographic potential, too. The demographic potential was calculated for each rural community on the basis of the following indicators:

- dynamics of changes in population for period 2004-2014 (where 2004 = 100);
- birth rate per 1,000 inhabitants, 2014;
- balance of migration per 1,000 inhabitants, 2014;
- percentage of people at retirement age in the total population, 2014.

Due to the diversified demographic potential, a classification was created according to Perkal's method – one which enables comparison of particular indicators and formulation of a synthetic index. Depending on the result, a commune was qualified to Class I – the most favourable demographic potential, on one end of the scale, or to Class V – the least favourable demographic potential, on the other end of the scale. For a more profound analysis the selected indicators were analyzed to determine the spatial distribution of the rural areas of North-eastern Poland.

The main source of information for this analysis was the data supplied by the Central

Statistical Office in Poland (the Regional Data Bank).

Development of entrepreneurship in rural areas of North-eastern Poland

The year 2014 saw 61,072 entities of national economy in the rural areas of North-eastern Poland, as listed by REGON (National Business Registry), which accounted for approx. 5.5 % of all entities of national economy registered in Poland. When compared to 2004, the number of entities of national economy in the rural areas of North-eastern Poland increased by 29.0 %. The density of entities of national economy can be better depicted by the number of entities of national economy per 10 thousand inhabitants at working age. In 2004, this index equalled 771.1 for the rural areas of North-eastern Poland, while in 2014 it rose to 910.1. However, it should be noted that it was lower than the national average in the same period (Table 1). At the same time, the percentage of entities of national economy in the region under analysis in their total number in Poland in 2004 was only 5.7 % and was decreasing, which may indicate low dynamics of change (in comparison to other regions).

As far as the division of entities of national economy into the public and private sectors is concerned, the rural areas of North-eastern Poland were dominated by the private sector, which comprised 95.5 % of all business entities in 2004 and 96.4 % in 2014. The most common legal form of business activity in the rural areas in the whole Poland and in North-eastern Poland alike was business conducted by a natural person. This is the type of business activity which clearly reflects the economic activity of population – the so-called entrepreneurship. Indeed, in 2014 the share of natural persons' businesses in the total number of businesses registered in rural areas was 80.4 % in Poland and 78.2 % in North-eastern Poland.

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Table 1

Entities of the national economy in rural areas in Poland

Years	The number of entities of national economy	The number of entities of national economy per 10 thousand inhabitants at working age	The number of entities of national economy	The number of entities of national economy per 10 thousand inhabitants at working age	The percentage of entities of national economy in the region under analysis in their total number in Poland
	rural areas in Poland		rural areas of north-eastern Poland		
2004	829270	939.3	47510	771.1	5.7
2005	843138	894.2	48238	731.3	5.7
2006	864703	954.8	49329	784.2	5.7
2007	892469	974.0	50365	793.1	5.6
2008	928480	1002.3	52756	822.3	5.7
2009	935073	999.2	51807	803.9	5.5
2010	997020	1045.4	54320	816.2	5.4
2011	1004048	1047.7	54701	820.4	5.4
2012	1041897	1082.2	57125	853.0	5.5
2013	1081428	1119.6	59439	885.3	5.5
2014	1107515	1146.3	61072	910.1	5.5

Source: authors' calculations based on the official website of the Central Statistical Office www.stat.gov.pl (retrieved on 6 December 2015)

With regard to the size of enterprises, the rural areas of North-eastern Poland were dominated by entities of national economy employing up to nine workers, both in 2004 and 2014, which meant 94.7 % and 95.9 %, respectively. Small enterprises play an important role in the growth of entrepreneurship and, owing to their flexibility, they are more willing to embrace new knowledge and technology. Medium enterprises, hiring between ten to forty-nine employees, accounted for 4.7 % of all business entities in the rural areas of North-eastern Poland in 2004 and for 3.6 % in 2014. The smallest share in the total number of business entities was taken by enterprises with the workforce of fifty or more: 0.6 % in 2004 and 0.5 % in 2014. Entities of national economy, in terms of the type of business activity conducted, may be qualified to the following three main sectors: I - agriculture, forestry, hunting and fishing; II - industry and building; III - services. In 2014, both nation-wide and with regard to the rural areas of North-

eastern Poland, Sector III was the most numerous of all (66.7 % and 64.5 %, respectively), whereas Sector I was the least numerous (4.9% and 9.4%, respectively). Yet, in relation to the total number of business entities, the businesses active in agriculture, forestry, hunting and fishing took a larger share in rural areas of North-eastern Poland than in Poland as a whole, which was due to the characteristics of that region. The number of entities of national economy categorised into Sector II was at the level of 28.3 % in rural areas in Poland and 26.1 % in the rural areas of North-eastern Poland.

Development of entrepreneurship in rural areas of North-eastern Poland - spatial diversification

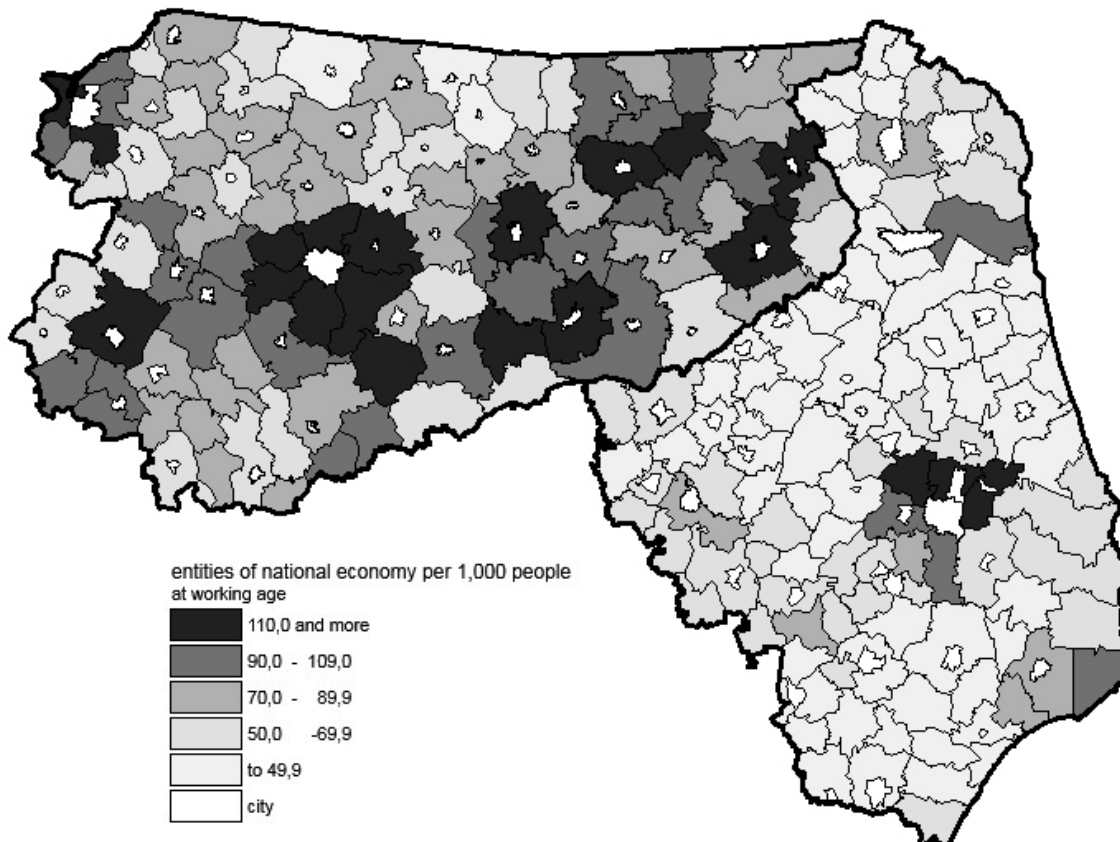
With the possibility of workplace provision to the unemployed or to people withdrawing from agricultural activity, on the one hand, and with an opportunity for family-owned agricultural holdings to gain supplementary incomes, on the

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other hand, the growth of entrepreneurship in the rural areas of North-eastern Poland has become the most desirable method of rural area activation. In the analysis of the density of entities of national economy registered in the rural areas of North-eastern Poland, it can be clearly seen regional differentiation (Figure 1). The ratio of entities of national economy per 1,000 people at working age equalled 91.0 for the rural areas of North-eastern Poland in 2014. The ratio oscillated between 40.0 in the commune of Jedwabne (the Podlaskie voivodship) and 207.1 in the commune of Stawiguda (Warminsko-Mazurskie voivodship). The highest intensity of non-agricultural activity was recorded in the rural communes situated in the vicinity of the largest towns in the region: Białystok, Olsztyn and Elbląg (Goraj S.,

Gwiazdzinska-Goraj M., 2011). Their development led to creation of a range of entities of national economy which were auxiliaries or service-providers to bigger businesses and which were also of service to town inhabitants. Quite a high density of entities of national economy was also a feature of the communes located in the centre of the Warminsko-Mazurskie voivodship; whereas in the Podlaskie voivodship that mostly applied to its Northern parts (lake districts) and Southern parts (areas with advantageous conditions for tourism). Non-agricultural activities were by far the least developed in Northern and Eastern rural communes of Warminsko-Mazurskie voivodship and in the centre of Podlaskie voivodship - thus, in the areas mainly associated with agriculture.



Source: authors' calculations based on the official website of the Central Statistical Office www.stat.gov.pl (retrieved on 6 December 2015)

Fig.1. Entities of the national economy in rural areas of North-eastern Poland in 2014 year

The pace of change dynamics in the number of entities of national economy (according to

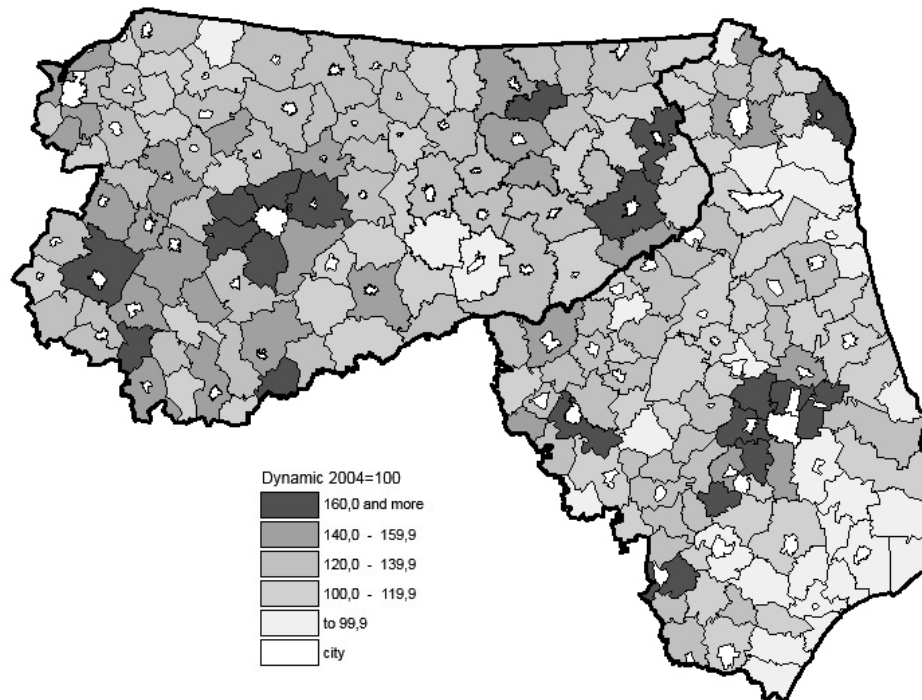
REGON) in the rural areas of North-eastern Poland in the period of 2004-2014 amounted to

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128 percentage points, whereby a bigger increase was noted in Warminsko-Mazurskie voivodship (113 percentage points) than in Podlaskie voivodship (108 percentage points). The indicator value changed in almost all rural communes in the area studied, which should be deemed a positive tendency. The highest change

dynamics among the rural communes was recorded in the rural commune of Stawiguda (Warminsko-Mazurskie voivodship) - 222 percentage points and the lowest change dynamics was in the rural commune of Dubicze Cerkiewne (Podlaskie voivodship) - 63 percentage points.



Source: authors' calculations based on the official website of the Central Statistical Office www.stat.gov.pl (retrieved on 6 December 2015)

Fig.2. The pace of change dynamics in the number of entities of national economy in the rural areas of North-eastern Poland in the period of 2004-2014

The biggest changes characterised mainly the rural communes lying near the largest towns in the region: Olsztyn, Elblag and Bialystok. At this juncture, it should be emphasised that the indicator was subject of a substantial rise in the rural communes of Warminsko-Mazurskie voivodship, which points to their higher economic activity (Figure 2). However, a clearly noticeable decline in the number of entities of national economy featured along the Eastern border of the Podlaskie voivodship (which is also the Eastern-most borderline of the European Union). Naturally, border areas are also peripheral areas – away from the centres of development in a given country. Nevertheless, the location on the national border does not need to be a barrier to

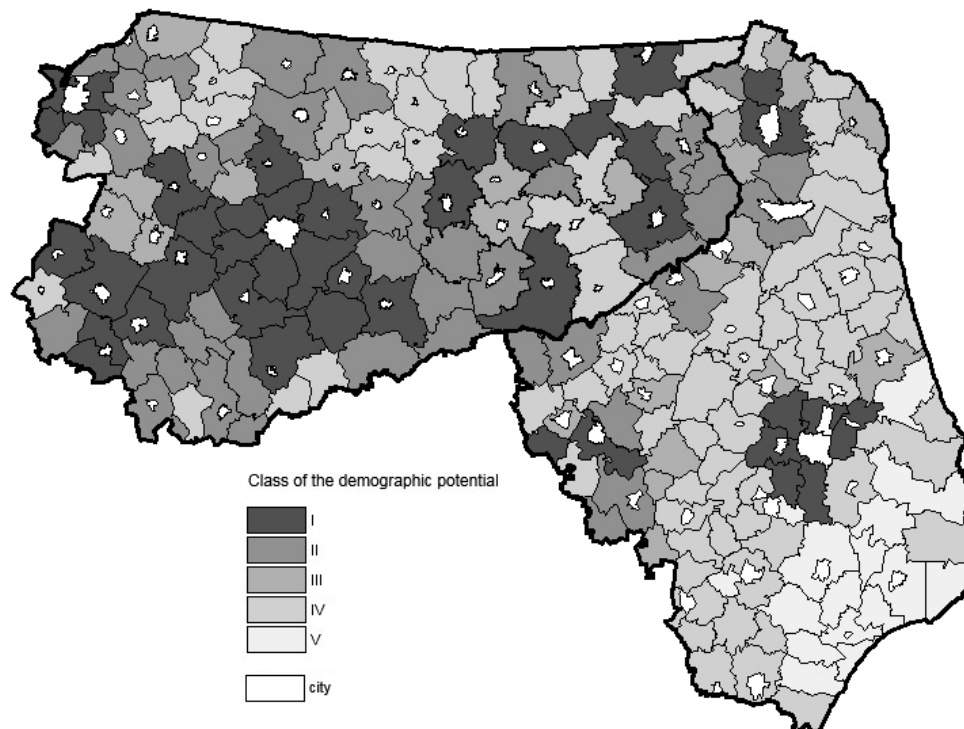
the socio-economic development - it should rather be a stimulant for growth but, still, it depends on how open the borders are (Banski J. et al., 2010). In the rural areas of North-eastern Poland, there was a regularity that the further from the Eastern national border a rural commune was, the higher an increase in the number of entities of national economy there was – the trend which may prove negative for the border communes. In fact, peripheral areas were characterised by a low growth rate and a poor demographic potential. What can act as evidence of advanced negative changes in demographic processes is an excessive outward migration of people and a low birth rate, which leads to an unfavourable age structure of rural population;

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and since the existing demographic potential affects the labour market, it also yields impact on the growth of entrepreneurship. However, a growth of non-agricultural activity – through creation of new workplaces and a consequential improvement of people's incomes – could undoubtedly contribute to deceleration of depopulation. For a more profound analysis of the spatial distribution of the growth of entrepreneurship, the study results were

juxtaposed to the existing demographic potential of the rural areas in North-eastern Poland. The demographic potential was calculated for each rural community on the basis of the four indicators and formulation of a synthetic index. Depending on the result, a commune was qualified to Class I – the most favourable demographic potential, on one end of the scale, or to Class V – the least favourable demographic potential, on the other end of the scale.



Source: authors' calculations based on the official website of the Central Statistical Office www.stat.gov.pl (retrieved on 6 December 2015)

Fig.3. The demographic potential in the rural areas of North-eastern Poland in the period of 2004-2014

Class I included rural communes with the highest demographic potential. These communes enjoyed: high birth rate; high balance of migration; small share of population at retirement age; and high dynamics of changes in population for period 2004-2014; whereas Class V comprised rural communes featuring: large share of population at retirement age; usually low birth rate; balance of migration at a

level below the average for their voivodship; and decrease in population between 2004 and 2014. The analysis of the spatial distribution of the existing demographic potential demonstrated substantial differences. The highest results were in the case of the rural communes situated in the neighbourhood of the largest towns in the region, and the lowest results were recorded in the South-eastern part of the region.

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Table 2

Classification of rural communities by the demographic potential of the North-eastern Poland and indicators of entrepreneurship development

Class	Value of the potential demographic	Rural areas of North-eastern Poland	Rural areas in The Warminsko -Mazurskie voivodship	Rural areas in The Podlaskie voivodship	The number of entities of national economy per 10 thousand inhabitants at working age (average value)	The pace of change dynamics in the number of entities of national economy (2004=100) (average value)
		the number of rural communities				
I	3.67 to 0.50	41	10	31	107	150
II	0.49 to 0.10	43	34	9	76	128
III	0.09 to -0.04	24	10	14	60	126
IV	-0.05 to -0.95	81	25	56	60	121
V	-0.96 to -2.86	16	0	16	52	92

Source: authors' calculations based on the official website of the Central Statistical Office www.stat.gov.pl (retrieved on 6 December 2015)

A would-be co-relation between a demographic potential of the rural communes in North-eastern Poland and the growth of entrepreneurship was examined for the needs of this study by calculating the mean values of the following indicators: number of business entities per 10 thousand inhabitants at working age; and the dynamics of change in the number of entities of national economy in the period of 2004-2014 in the rural communes qualified to Classes from I to V by their demographic potential. The results of the study revealed the following tendency: the higher the demographic potential of rural communes was, the more favourable indicators of growth of entrepreneurship appeared. It proves that demographic potential of workforce has a considerable impact on the development of the rural areas of North-eastern Poland.

Conclusions

Upon the analyses conducted it was concluded that the density of business entities in the rural areas of North-eastern Poland was at the level of 771.1 in 2004 and at 910.1 in 2014. The number of business entities rose by 29.0% between 2004 and 2014. However, both the number of business entities per 10 thousand

inhabitants at working age and the dynamics of increase in that number in the region were lower than the national average in the period studied. The density level of business entities and the dynamics of change in entities of national economy featured by large disproportions across rural communes. The biggest changes characterised mainly the rural communes lying near the largest towns in the region: Olsztyn, Elblag and Bialystok. The number of entities of national economy increased in the majority of the rural communes in the region under examination, which should be considered a positive process. The highest dynamics of increase among the rural communes of North-eastern Poland were mainly recorded in Warminsko-Mazurskie voivodship.

For a more profound analysis of the spatial distribution of the growth of entrepreneurship, the study results were juxtaposed to the existing demographic potential of the rural areas in North-eastern Poland. The results of the study revealed the following tendency: the higher the demographic potential of rural communes was, the more favourable indicators of growth of entrepreneurship appeared. The most noteworthy decrease in the number of entities of national

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economy was noted in the rural communes situated along the Eastern border of Podlaskie voivodship, which is the reflection of their poor economic activity. The distribution of the analysed indicators illustrating the growth of entrepreneurship depends on a great many factors: natural, socio-economic, demographic, historical, and institutional. However, an unambiguous definition of their impact on and significance for the growth of entrepreneurship is a challenging task. The most difficult situation is faced by the rural communes of North-eastern Poland which are on the eastern border of

Podlaskie voivodship, where the low demographic potential combined with the peripheral location was responsible for a poor growth of entrepreneurship. Moreover, a lack of stimulation to non-agricultural activity in the rural areas of this part of the region may result in further accumulation of negative demographic processes.

Therefore, promotion and growth of rural entrepreneurship are together one of the most important solutions leading to a sustainable development of rural areas of North-eastern Poland.

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