

THE FORMATION OF ORGANIZATIONAL AND ECONOMIC INDICATORS OF THE DEVELOPMENT OF ENTERPRISES IN RURAL AREAS IN THE SYSTEM OF INNOVATIVE MANAGEMENT



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Abstract. The main indicators of the development of enterprises in rural areas in the system of innovative management are substantiated. It was determined that Ukrainian enterprises lag behind leading foreign countries in the implementation of innovative management of the development of enterprises in rural areas.

Keywords: *enterprises, infrastructure, rural areas, sustainable development, innovative management, management*

Introduction

In the statistics of individual territories, mesoeconomic indicators are used (regional domestic product (GDP), regional domestic product / income per capita of the region), which evaluate the development and growth of the economy, ignore the ecological situation, which is unacceptable in the conditions of Ukraine's transition to sustainable development. The growth of these indicators today can be based on technogenic nature-intensive development. This creates the possibility of a sharp deterioration of economic indicators in the future due to the depletion of natural resources and environmental pollution. We emphasize that the development of enterprises in rural areas in the management of business processes involves not only economic growth – improvement of living conditions and increase of incomes of the rural population, which is theoretically possible due to a simple redistribution of resources between different population groups without an increase in production volumes. According to the well-known American economist and environmentalist G. Dali,

while the traditional macro-indicators remain the measure of human well-being, "... there are huge obstacles in the way of changes. The market sees only efficiency, it is not adapted to feel justice or sustainability".

In addition to complex systems of indicators, so-called integral indicators of sustainable development of individual territories are being actively developed in the world, the task of which is to use one indicator to reflect the level of development of a separate business process according to a whole group of indicators. These indicators emphasize certain aspects of development. In global practice, integrated socio-economic assessments of development are more narrowly defined, social dimensions (human development, quality of life) dominate among them, as well as various combinations of indices that assess institutional development. As a rule, these indices bear loud names, clearly positioning the purpose of measurement. The peculiarity of such indices is the widespread distribution of qualitative (expert) assessments.

In the world scientific community, the attitude towards integral indices is ambiguous. Far from all of them have sufficient theoretical elaboration and validity, which causes negative evaluations of the International Society for Quality of Life Research (ISQOLS). Integral measurements cannot be used also due to the fact that disparate socio-economic indicators do not always have a general trend (increase or decrease) or a clear dependence on the level of development of a separate object, therefore the obtained results of aggregation are often difficult to find out, they are difficult to interpret. The difficulty lies in the impossibility of numerical determination of these indicators and in the inevitable fallibility due to the subjectivity of the researcher's or expert's assessment.

A comparison of indicator systems for countries of the transition type, to which Ukraine belongs, allows us to conclude that a diversified approach using special surveys taking into account the specifics of our country is necessary.

Literature review. The analysis of scientific research and publications on the problem of assessing the level of development of enterprises in rural areas in the system of innovative management allows us to distinguish two main methodological approaches to the construction of assessment

indicators:

1. Construction of an integral, aggregated indicator, on the basis of which it is possible to judge the level of socio-economic development.

2. Building a system of indicators, each of which reflects a separate aspect of development. Most often, within the framework of the general system, economic, ecological and social subsystems of indicators are distinguished (Hanushchak-Iefimenko, 2013; Casady, Eriksson, & oth, 2020).

As a result of methodological problems associated with bringing a large number of indicators to comparable attention, a universally recognized integral indicator does not yet exist. The approach based on the construction of a system of indicators is more widespread. International indicator systems consist mainly of non-aggregated indicators for individual areas of development and problems, such as income inequality, unemployment, education, various aspects of health, and availability of medical services. The use of a complex system of indicators is a necessary condition for starting work on the creation of a national system of indicators for the development of enterprises in rural areas in the management of business processes. It should be borne in mind that indicators by themselves do not always provide an answer to the question of stability / instability of the processes taking place. The answer can be obtained only after the correct interpretation of the obtained results.

The analysis of the existing systems of indicators and integrated assessments allows us to highlight their features.

First, there are differences in measurement goals – in global practice, the concept of "socio-economic development" is actually absent in integral assessments, they are aimed at more clearly defined (social, institutional, investment) goals.

Secondly, there are significant differences in the measurement methodology – qualitative and expert assessments are more widely presented in international methods. Their necessity for measuring the level of organization, entrepreneurial climate, investment attractiveness, social well-being is

obvious, but the degree of transparency and reliability of such assessments does not always look convincing.

Thirdly, there is no "main direction", that is, a dominant way of normalization and integration.

Using foreign experience to develop a methodology for monitoring the level of development of enterprises in rural areas in the management of business processes in Ukraine is difficult, since this experience does not provide ready-made solutions. For this reason, it is proposed to carry out a comprehensive assessment of the state and development potential of enterprises in rural areas in the management of business processes, as well as an analysis of the sustainability of their development based on the definition of generalizing (synthetic) indicators and indicators of development.

Research methodology There is a well-known method of rating assessment of the investment attractiveness of the regional economy, which involves determining the current and prospective investment attractiveness of the region. The main group of factors determining investment attractiveness is common to the macro-, meso- and microeconomic levels. The second group is factors specific to specific structural levels of the economy. Carrying out an objective assessment of known methodical approaches and instruments of investment attractiveness requires bringing the criteria to a single assessment base. It is advisable to solve this task in two stages.

The basis of economic parameters are the economic condition of enterprises in rural areas, the condition of the credit and financial system, prospects for the development of the workforce, and the level of taxation.

The scoring approach for assessing the investment attractiveness of enterprises in rural areas is also quite well-known. The application of the point approach to assessing the level of investment attractiveness involves comparing its key indicators and forming an integrated indicator. The methodology makes it possible to make a rating of a separate region according to several positions, each of which is detailed with specific indicators. Each indicator is evaluated according to the established scale and a value is assigned to each one, which makes it possible to calculate

a given criterion for evaluating and comparing regions according to the level of investment attractiveness. The following positions are distinguished - groups of indicators:

1. The political situation characterizes the level of stability of the development of enterprises in rural areas and the influence of external and internal threat factors. This rating position is characterized by the attitude of the authorities to the inflow of foreign direct investments, the degree of support for development by local self-government bodies, resistance to changes, etc.

2. The economic position of enterprises in rural areas is determined by the level of industrial and agrarian development, the structure of production, the profitability/unprofitability of enterprises and organizations, the cost of fixed capital, the amount of capital investment financing, the level of self-sufficiency of the region, the productivity of the agricultural sector, and the level of wages.

3. The financial and credit rating takes into account the level of taxes, the state and balance of the regional budget, the level of inflationary expectations, the level of receivables and payables of organizations in the region, the development and activity of the banking system of enterprises in rural areas.

4. The development of the labor market is determined by the real level of unemployment, the quality of the workforce (educational and age structure), the level of development of the training and retraining system, the share of the working population in the region, the dynamics of wages, etc.

5. The condition of the transport-logistics and information-communication infrastructure is determined by the geographical location, the level of development of transport and engineering networks, the quality of infrastructure services, etc.

6. The demographic state of rural areas can be assessed by the dynamics and factors of population change.

7. The social condition of rural areas is assessed by the level of development of social infrastructure, the quality and standard of living of the population, the human development index, the level of employment of the population of the region, etc.

| Groups of factors for assessing the investment attractiveness of rural areas | | |
|---|--|--|
| <p>A group of socio-political factors:</p> <ul style="list-style-type: none"> - an external threat to the stability of rural areas; - stability of power structures; - opposition to authorities; - social stability; - cooperation between government and business; - the state and forecast of the unemployment rate; - total income: volume and structure; - attitude of authorities to foreign investment; - government intervention in the economy; - state and communal property; - socio-political conflicts. | <p>A group of internal economic factors:</p> <ul style="list-style-type: none"> - economic development forecast - GRP dynamics; - dynamics and forecast of production volumes of rural areas; - dynamics and forecast of capital investments; - state and forecasting of consumer demand; - availability of foreign investments; - quantitative, qualitative and cost indicators of the labor force; - credit and financial system of rural areas; - fiscal and budgetary policy. | <p>A group of foreign economic factors:</p> <ul style="list-style-type: none"> - volume, structure and balance of foreign trade operations; - number of joint ventures; - revenues to the budget of rural areas from foreign economic operations; - state of attracting foreign loans; - engagement opportunities; - funds of foreign investors. |

Figure 1. Groups of investor risk assessment factors for determining the investment attractiveness of rural areas

The investment attractiveness of enterprises in rural areas is evaluated based on the sum of accumulated points for all the listed positions. Based on the results of the assessment, each designated rural area can be assigned to one of the following groups: regions with a favorable, relatively favorable, ambiguous, unfavorable, and dangerous investment situation.

The method of assessment based on the risk indicator for the investor can also be attributed to the point methodical approaches to assessing the investment attractiveness of rural areas. At the same time, three risk groups are defined: socio-political, domestic and foreign economic risks (Fig. 1).

Risk assessment is carried out by experts. To assess all types of risk, it is necessary to use a large number of factors and determine integral assessments for each group. The disadvantages of such methods are that they take into account only the risks, but not the development potential of rural areas.

The following are the key components of the investment attractiveness of rural areas:

- the level of investment risk – the probability of not receiving or losing the investor's income;
- investment potential – the possibility of increasing investment efficiency;
- regulatory and legal support of the investment process.

According to the specified criteria, two indicators can be calculated for rural areas: the level of investment potential and the level of investment risk

Integral indicators of investment risk and potential are formed from indicators determined by an expert survey using significance coefficients. A variant of this approach is a technique that involves establishing a relationship between investment attractiveness and activity. At the same time, the integral indicator is determined by aggregating statistical estimates of partial indicators of investment attractiveness and activity. The final assessment of rural areas can be compared with the all-Ukrainian value. This method is devoid of subjectivity due to the use of statistical indicators and takes into account the relationship between investment activity and the attractiveness of rural areas.

The concentration coefficient is calculated as the ratio of the specific weight of a specific sphere/sector in the regional economy and its specific weight in the national economy. This coefficient characterizes the level of localization of the industry in the specific researched region. A

level of the indicator higher than 1 indicates that this field/sector is a branch of specialization of the

$$\text{region. } K_{\kappa} = \frac{\frac{\Pi B_{pij}}{\Pi B_{pj}}}{\frac{\Pi B_{ni}}{\Pi B_{n}}} \quad (1)$$

where K_{κ} is the concentration coefficient;

i – sphere/sector of business activity of the region;

j – region;

ΠB_{rij} – gross added value of the i -sphere / sector in the j -region, hryvnias;

ΠB_{rj} – gross added value in the economy of the j -region, hryvnias;

ΠB_{ni} – gross added value of the i -sphere / sector of business activity in the national economy, hryvnias;

GDP – the total amount of gross value added in the national economy, hryvnias.

Production coefficient per capita:

$$K_{\rho} = \frac{\frac{\Pi B_{pij}}{\Pi B_{ni}} \cdot \frac{\Psi_j}{\Psi}}{\frac{\Psi_j}{\Psi}} \quad (2)$$

where K_{ρ} is the production coefficient per capita;

Ψ_j – population in the j -region, persons;

Ψ – the number of the country's population, persons.

The upper part of the ratio describes the level of development of this area / sector of business activity in rural areas compared to the country, and the lower part – the share of the population of this area in the population of the country as a whole. The level of the coefficient higher than 1 indicates that the studied sphere / sector of business activity is localized (concentrated) in this region more than the average for the territory of the country. A higher level of the value of this coefficient indicates a higher level of concentration of the sphere / sector in the given territory.

In order to determine the main trends and assess the dynamics of structural changes, it is advisable to analyze and evaluate the indicators characterizing the dynamics of the economic structure, in particular, mass, mass change index, and speed of structural changes.

The mass index of structural shifts can be calculated using the formula:

$$Mc = X_1 - X_0, \quad (3)$$

where X_1 is the value of the structural share in the current period, %;

X_0 is the value of the structural share in the base period, %.

The mass index of structural shifts is estimated as follows:

$$IMM = \frac{X_1 - X_0}{X_0} = \frac{Mc}{X_0}. \quad (4)$$

The dynamics of structural shifts, which characterizes the change in mass per unit of time, is calculated as the ratio of the mass of the structural shift to the time interval during which it occurs and indicates the rate of change of the structural indicator over a certain period of time:

$$Vc = \frac{(X_1 - X_0)}{T} = \frac{Mc}{T}. \quad (5)$$

where T is the time during which the structural shift occurs, years.

The dynamics of changes in the structure of the economy of the Vinnytsia region can also be determined through the structure of foreign economic activity.

Discussion of research result. In the export structure of the economy of the Kyivskyi region, the main position is occupied by products of plant origin (cereals) and fats. The specific weight of high-tech products in exports is small. In the import structure of the Kyivskyi region, machines and equipment, as well as mineral products, prevail. This trend is also confirmed by the structure of capital investment in the

region's economy. The largest share of direct investment was directed to industry, transport and real estate transactions. This strengthens the existing sectoral imbalance in the development of the Kyivskyi region, when investors prefer processing industries, transport and tourism. Thus, the existing structure of the economy of the Kyivskyi region, despite its significant diversification, retains a semi-food agrarian-industrial specialization with a focus on agricultural raw materials.

Research result. Methodical approaches to modeling and assessing the investment attractiveness of rural areas operate, as a rule, with one or several indicators, which increases the risk of erroneous assessment, due to the exclusion of important factors from the calculation algorithm. At the same time, the use of multifactorial models complicates the analysis and evaluation of the influence of factors on the result. The use of rating and scoring expert approaches is associated with subjectivism when choosing a scale and its dimension, weighting coefficients of factor features and functions.

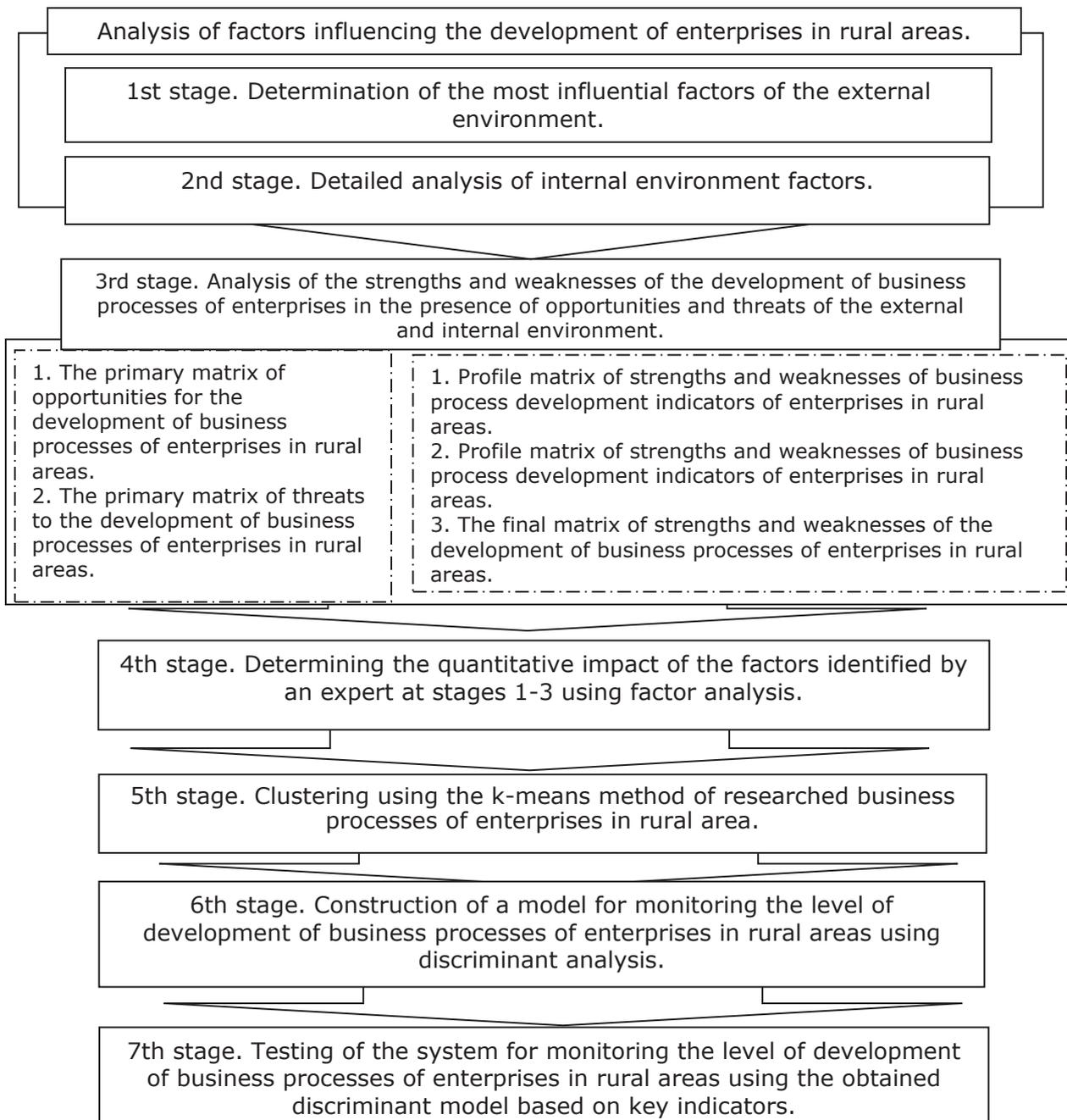


Figure 2. Model for determining key indicators for monitoring the level of development of enterprises in rural areas

We believe that one of the promising approaches to building models of the investment attractiveness of enterprises in rural areas is the use of cluster methods. "Clustering is the identification of naturally formed groups of objects, study in conditions where the number of classification groups and their boundaries are not specified. The number and boundaries of groups are determined by the proximity between the objects under study using multivariate statistical calculations, the aggregate of which is a cluster analysis" (Hanushchak-Iefimenko, 2014; P3DP Public-Private Partnership Development Program).

Based on this, a model for determining key indicators for monitoring the state of socio-economic development of rural areas was proposed. The conceptual model of the formation of a system for monitoring the level of development of business processes of enterprises in rural areas is shown in fig.3

Monitoring is an important tool for information provision of the mechanism of development of business processes of enterprises in the rural area, effective management of this process. The proposed monitoring system consists of observation, analysis, assessment and forecast of risk factors present in the region, with the aim of preparing management decisions and recommendations aimed at improving the socio-economic situation. It is proposed to obtain a socio-economic assessment by analyzing social and economic processes using a system for collecting and processing statistical information, using communication channels; moreover, the information received from the external and internal environment is processed by forming a database, after which analysis is carried out and management decisions are made.

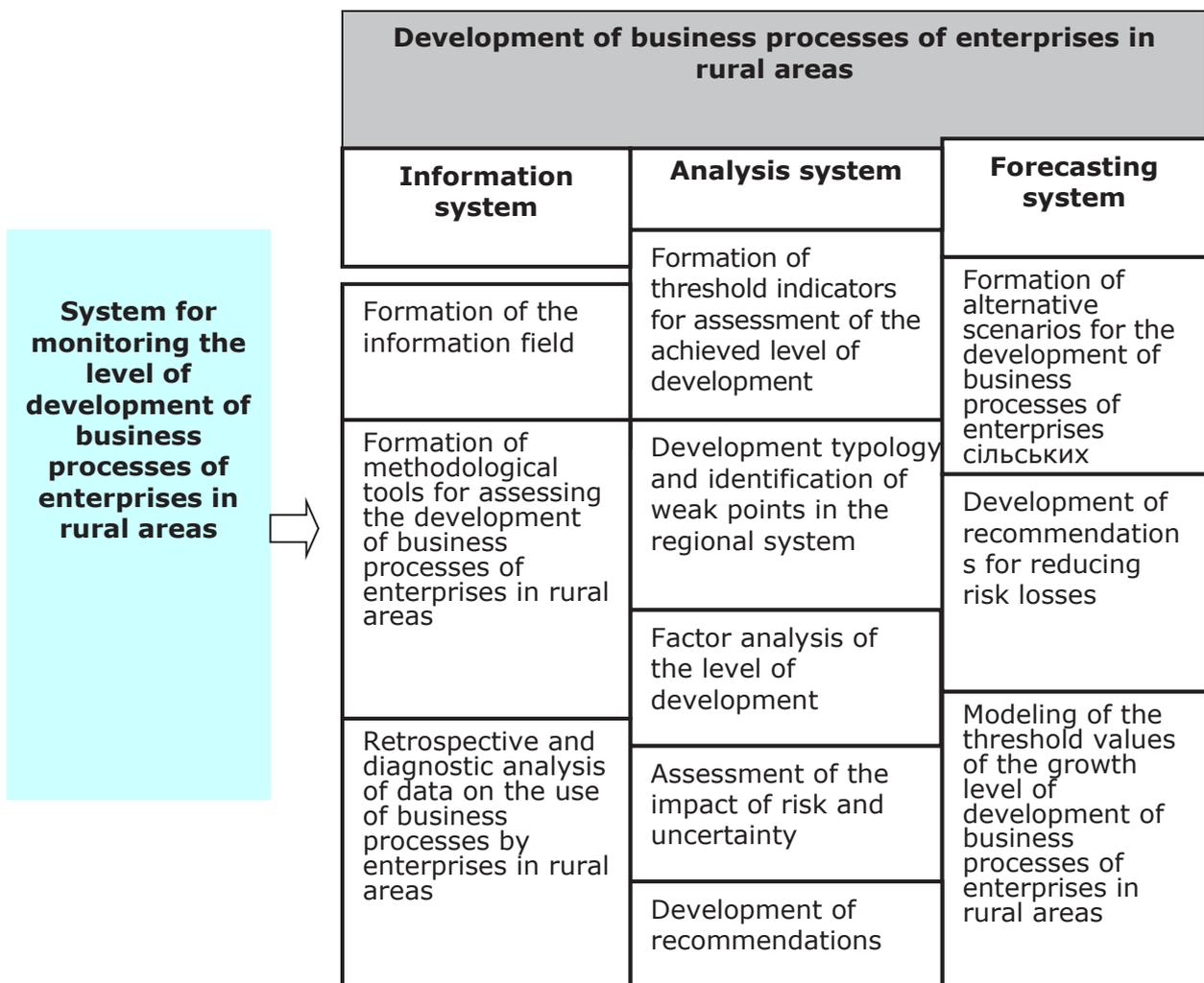


Figure 3. Conceptual model of the formation of a system for monitoring the level of development of enterprises in rural areas

Conclusions

Further analysis made it possible to form the necessary basis for substantiating the socio-economic development of business processes of enterprises in rural areas. This base should simultaneously meet two criteria: be aimed at eliminating the weak sides of development, which make the business processes of enterprises in rural areas vulnerable, hinder their effective activity, and propose measures to transform weak sides into strong ones. The complex of these actions allows you to form a matrix of the profile of strategic advantages, to move to quantitative measurement of the level of socio-economic development in relation to the comparison base

Thus, the proposed model for determining key indicators for monitoring the level of development of business processes in rural areas is based on the consistent use of economic-mathematical and expert methods: SWOT analysis, factor, cluster and discriminant analyses.

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