Partner relationship assessment methodology

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Abstract. The mechanism of marketing activity of an enterprise that implements a specific policy of interaction with partners takes into account the specifics of the organization of such interaction, defined by the regulatory field of the relevant market. This approach is defined by the functioning of a set of structural elements as the organization of a single mechanism. But, in turn, corresponds to the goal orientation of the economic mechanism of the enterprise, that is, the structure and internal processes that occur in the system of marketing relationships of the enterprise, and the enterprise as a whole must be mutually consistent. In the conditions of high level of instability and uncertainty of the market it is necessary to constantly develop and improve the mechanisms for enhancing stability, effective management of enterprises, forming new relationships. Increasing the potential for interaction in today's socio-economic environment requires the expansion of a methodological apparatus and tools to study the relationship between counterparties. The theory and methodology of marketing activity is built around the measurement of the effectiveness of the interaction of actors, because marketing is increasingly seen as a process of interaction. This approach describes and defines the laws under which the mechanism of interaction of market entities operates, the nature of which determines the level of viability and competitiveness of the company, and relations at different levels of interaction are far from homogeneous. The organizational mechanism for conducting the research of the system of relations with the counterparties has been developed and the universal method of estimating the satisfaction of the counterparties and the system of interaction with them has been improved. To increase the degree of

involvement of all divisions of the enterprise in the achievement of the common goal - to strengthen the relationship with counterparties and the corresponding increase of profit in the results of business agreements with them, it is proposed to bring the results of the study to the management of all services of the enterprise and to use as planned indicators in the further work of the services.

Keywords: partner relationship system, Harrington's desirability function, dynamic model.

Introduction. Modern demands of the competitive environment require enterprises to form an interaction system with their partners on the principles of flexibility, transparency and adaptability. "There is only one legitimate justification for the purpose of business: creating a satisfied customer" [1, c. 198]. It is the study of consumers' needs, satisfaction and guessing of their expectations faster than competitors [2, p. 145] that serve as an innovative basis for business development in the conditions of hypercompetition.

Enterprises are forced to quickly and effectively respond to a client's needs using all possible communication channels. Thus, more attention has recently been paid to the creation of mutually beneficial, long-term relations between market players, where consumers and manufacturers work together for creating and providing consumer value: the transition from the classical client-oriented concept to the partnership concept has begun.

Theory of the matter. The formation of "partnership" or network approach in marketing was started by an international scientists group from Europe (IMP Industrial Marketing and Purchasing), including scientists from France, Germany, Italy, Sweden and UK. The group emerged in the late 70s and early 80s as a result of a research program based on the hypothesis that marketing theory is incomplete and not suitable for understanding important aspects of industrial marketing in practice. The research basis in the field of industrial work and networking has been laid by Hugg and Johansson (1982), Hammarquist (1982), Mattson (1985), Ford (1986), Turnbull and Valla (1986), Torelli (1986), Hakansson (1982, 1987, 1989).

The transition of enterprises to the B2B type of relationship requires the development of a model of partner relationship management system (PRM-system) that would connect the whole complex of relationships with different subjects of interaction. It should be noted that a limited number of research works deals with the formation of a common system of relationships between companies and different groups of partners. Analysing the authors' work it becomes evident that there is no consensus on the partner relationship (PR) formation. One group of authors [3],[4],[5],[6] focus on the relationship with only one group of subjects' interaction and Ph. Kotler [7], G. Morgan and S. Hunt [8], J. Egan [9] and others include in the relationship system different groups of partners as participants in the relationship, they consider customers (consumers), distributors, suppliers, employees and other partners relationship.

Detailed presentation of the methodology of the study, characterisation of materials and methods of analysis, statistical processing of results. It should be emphasised that there are a large number of classification features regarding the types of enterprise-to-customer cooperation. For example, D. Ford and E. Jones [10] divide business-to-consumer relationships into: symmetrical, where the two parties benefit from mutual learning and sharing of knowledge and technology, and customers in a symmetrical relationship hope to gain from the seller the support beyond the contract; asymmetric, where the supplier (seller) is dominating, and customers rely on the unique capabilities of one or more suppliers; and asymmetric, buyer-dominated relationships, and the supplier's technological, financial and resource capabilities are limited by emphasis on cost reduction and streamlining, interaction is managed by the customer, suppliers depend on one or more customers in the network. Ph. Kotler and G. Armstrong [11] propose to differentiate the enterprise-to-customer relationship by the levels of trust and strength of these relations, depending on the type of customers they are divided into: those who keep a close eye on the enterprise; potential customers; one-time customers; customers who have re-purchased products; customers in general; lawyers; members; partners. The first two groups are not in contact with the organisation. Consumers, who keep a close eye on a company or product, require more spending. Lawyers, members and partners cover resources spent by the value brought, in other words, they spread a positive opinion about the company and attract new customers at no charge.

Going along with A. Bolotnaya [12], it should be noted that the relationship system is based on building relationship not only with customers, but also with all enterprise's partners. The basis of CR and PR building is taking into account their expectations and needs as well as the principles of mutual respect. Bilateral or multilateral communication is possible in the relationship system (Fig. 1).

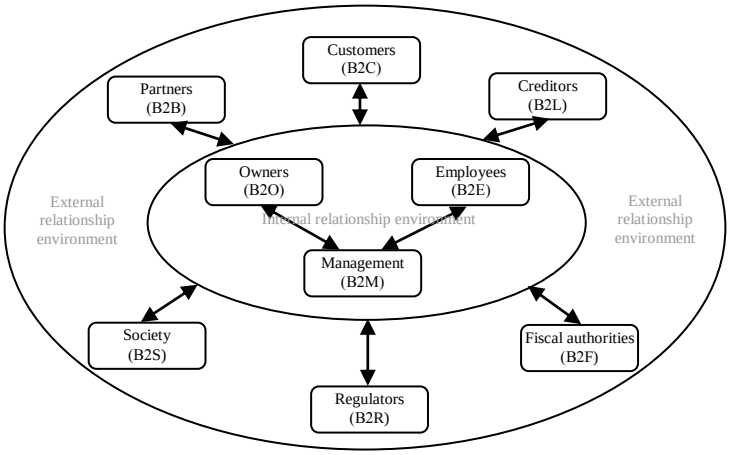

Fig. 1. Partner relationship system environment

The system is called integral if its structure includes all the necessary elements and connections; each of the elements performs certain functions, as does the system;

according to the W.-R. Ashby [13], principle of emergence, the characteristics of the system are different from the totality of the elements and relationship characteristics. The peculiarities of how the system functions as a holistic formation are determined by the elements and connections nature, that is, the structure, and the system itself influences the elements, causing changes in their properties and qualities.

The system of partner interaction refers to the subsystem of the company governance (management), which brings the processes of the internal relationship environment in accordance with the company's target plans or programs in relation to the external relationship environment. Regulation is based on the analysis of partners' reactions, with great attention being paid to innovative approaches. The process of the relationship system implementation means creation, adjustment and maintenance of the mechanism in the company's management system, which ensures not only the implementation of the company's strategic and tactical goals, but also creates conditions for their achievement. The first stage of this process is to build a system that implements customer service in accordance with common corporate standards. The next step is to incorporate all other business technologies, including marketing technologies, into the system. The ultimate goal of the project is to increase the flow of new customers. Related results are marketing costs optimisation, improvement of customer order flow management, marketing efficiency overall improvement.

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Taking into account A. O. Ustenko's [14] approach regarding the structural components of the enterprise management system, we consider it expedient to clarify the directions of interaction between them, since the target subsystem is initial for both the controlling and the controlled ones, at the same time, given the author's approach, the controlling subsystem has no influence on the controlled one. In addition, the author misses the feedbacks. The system of partner-to-enterprise relations is compositionally a complex holistic system that includes many elements and links, the processes in the system are probable, the system has a large number of parameters and characteristics, some of them are criteria that take extreme values in the process of functioning with regard to restrictions (Fig.2). By the evaluation indicator of the PR subsystems we mean an integral indicator (multiplier), which quantitatively determines the qualitative characteristics of a process, plan. Indicators are defined as the parameters of the boundaries in which the system, including organisational mechanisms, technological links, monetary financial flows, can steadily function and develop [15].

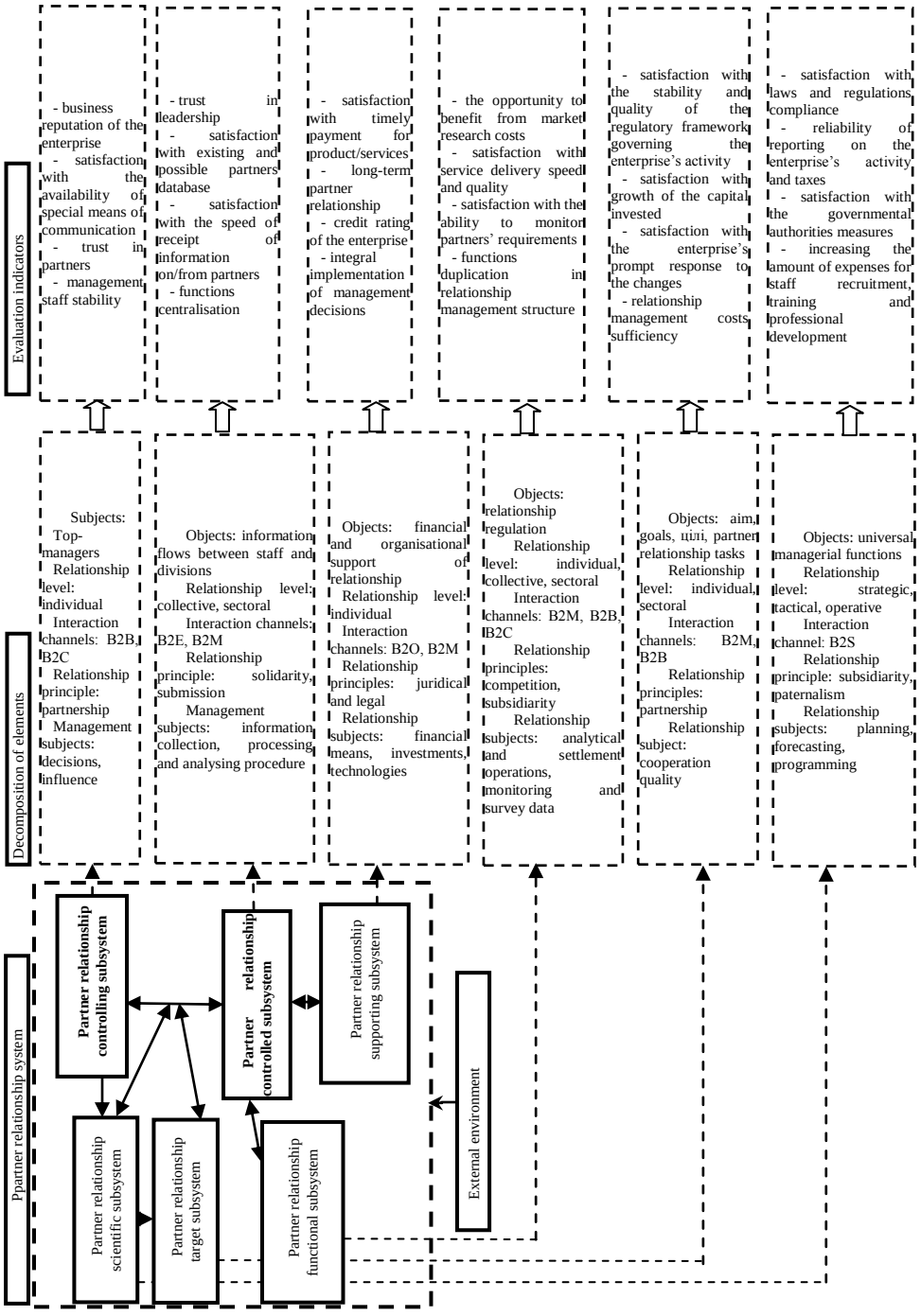

Fig. 2. Partner relationship system

Scientists offer various stages, methods and scales of assessments, but limited number of research works is devoted to the development of PR evaluation system, which can simplify work with consumers and partners as well as help to identify the enterprise's strengths and weaknesses that require improvement to increase loyalty and further marketing development.

In most methodological approaches respondents are asked to evaluate a company's products, services and performance against a set of criteria. These criteria can be considered as characteristics of the PR quality category. Thus, in 1995 R. Carter offered a list of generalised characteristics that are taken into account in complex assessments of companies' compliance with the partners' specifics and needs. This list is called "Ten C" [16]:competence – the supplier's competence to solve the tasks; capacity – the supplier's capacity to meet the buyer's needs; commitment – the supplier's commitment to the consumer regarding quality, price and service; control system – inventory, costs, budgets, personnel and information control systems; cash resources and financial stability – cash resources and financial stability, attesting to the supplier's financial health and its ability to continue business in the foreseeable future; cost – price in accordance with the quality and level of service; consistency – supply stability, product improvement and services quality; culture – the supplier and consumer have a compatible culture and common values; clean – suppliers and their products meet legislative and environmental safety requirements; communication – the ability to communicate with the supplier using modern information technologies.

One of the most well-known approaches is N. Kano's (1980) model of three levels of satisfaction, according to which customer's satisfaction is proportional to the level and type of product quality [17]. Expected product quality characterises what may or may not prompt the purchase. Desired product quality means that if the product is improved, then satisfaction increases. Attractive or exciting product quality is an unexpected level of service. In such cases, consumers are pleasantly surprised, delighted and even shocked. At the same time, such exciting quality soon turns into the expected.

A description of the general procedure for assessing the level of partners' satisfaction or dissatisfaction is provided by J.-J. Lamben [18, p. 165]. It is based on the concept of a multi-attribution model and includes three steps: first, it evaluates the average value of overall satisfaction with the product or supplier; second, it calculates mean value of satisfaction and importance for each characteristic; in the conclusion, it assesses the intentions to make a repeat purchase or to make a deal. The analysis evaluates satisfaction/importance ratio to determine satisfaction with the most important characteristics, which has a decisive influence on the counterpart choice.

The Gap model developed in 1985-1991 by American researchers A. Parasuraman, V. A. Zeithaml, L. L. Berry suggests to measure partners' satisfaction with service by analysing the gaps between expectations and actually provided level of service. Gap means exceeding the consumers' expectations over the evaluation of the service received in reality [19], [20]. The Gap model makes it possible to see the process of service provision as a whole, to identify a possible source of its unsatisfactory quality.

G. Likert scale, proposed in 1932, is a method of multivariate estimation in which respondents evaluate specified judgments using the answers from one critical position through neutral and to another critical position, e.g. "completely satisfied", "somewhat satisfied", etc. The rating scale is assigned to each criterion [21]. This is a

simple but not very reliable approach as it does not take into account the relative importance for partners of the criteria by which the company is evaluated that complicates the identification of aspects requiring priority improvements from the customer's point of view.

As shown by B. Mittal and W. M. Lassar study [22], dissatisfaction guarantees disloyalty, whereas satisfaction does not guarantee loyalty, and only maximum satisfaction ensures it. Therefore, full partners' satisfaction is a significant factor in creating loyalty, which requires regular research to track the dynamics of customers' satisfaction.

In the scientific literature, the practical application of the above models is more often reflected independently, which significantly limits the comprehensive understanding of the PR system. In addition, in most methodologies, work on customer satisfaction assessment is limited to assessing the products or services quality. This is not enough to obtain a qualitative assessment of partners' satisfaction and conduct a detailed analysis of the customers' opinion about the company. Combining different strategies allows a more detailed approach to the analysis.

The authors' methodology is based on theoretical approaches of J.-J. Lamben, A. Parasuraman, V. A. Zeithaml and L. L. Berry. The modified 10-point Staple scale is used as analysis tools in the methodology.

The organisational mechanism for conducting research of the PR system involves several stages.

Stage 1. Setting the survey purpose: it can be identifying of critical indicators that have led to products demand decrease; determining buyers' expectations to maintain a leading position in the market; segmenting customers by specific indicators and more.

Stage 2. Developing a list of indicators, which are important for both the company and partners and allows to answer the set research goal, by all the company's services.

Stage 3. Preparing a database of respondent companies.

Stage 4. Developing the survey questionnaire: formulating questions, selecting an evaluation scale.

Stage 5. Personal questionnaires are sent by fax or e-mail to the respondent companies. Their routing is clearly tracked.

Stage 6. Carrying out the analysis on the basis of the questionnaire data collected and evaluating each PR subsystem.

The author's method of PR system assessment is presented in Table. 1.

To increase the degree of involvement of all divisions in achieving the common goal of strengthening PR and making a profit, it is proposed to bring the study results to the attention of the management of all the company's units and use in the further units' work. In order to increase the respondents' motivation to fill in questionnaires and establish feedback with counterparts, it was proposed to send written notifications on the results of each questionnaire on the measures that were developed and taken on the basis of the questionnaires received.

Despite the considerable amount of research on partner interaction analysis, it remains to be seen that, in order to maximise customer satisfaction, increasing attention should be paid to examining their needs and expectations. In this case, the partners' satisfaction becomes one of the most effective marketing and management tools, which allows to evaluate the company's effectiveness and to predict how the

company's market share may change depending on the current state of its customers and partners' satisfaction.

Table 1. Methods of evaluation of subsystems of the partner relationship system

Indicator name	Indicator symbol	Stage content: formula
Average value of all indicators significance $P_1,\ldots,P_k$ for one respondent C_j. Calculated for each respondent	$I_{C_j}^k$	$I_{C_j}^k = \frac{C_j^{P_1}+\ldots+C_j^{P_k}}{k}$, (1) where C_j ($j=1,\ldots,m$) – respondent; $P_1,\ldots,P_k$ –indicators analysed; $C_m^{P_1},\ldots,C_m^{P_1}$ – respondents' assessment C_m of indicators $P_1,\ldots,P_k$; k – number of indicators analysed; m –number of respondents
Average value of one indicator significance P_i for all respondents $C_1,\ldots,C_m$. Calculated for all indicators.	$I_{P_i}^m$	$I_{P_i}^m = \frac{P_i^{C_1}+\ldots+P_i^{C_m}}{m}$, (2) where P_k –indicators analysed; $C_1,\ldots,C_m$ – respondent; $P_i^{C_1},\ldots,P_i^{C_m}$ – respondents' assessments $C_1,\ldots,C_m$ of indicator P_i ($i=1,\ldots,k$); k – number of the parameters analysed; m – number of respondents
Overall average value of all indicators significance $P_1,\ldots,P_k$ for all respondents $C_1,\ldots,C_m$	I_{PM}	$I_{PM} = \frac{\sum_{j=1}^{m} I_{C_j}^k}{m} = \frac{\sum_{i=1}^{k} I_{P_i}^m}{k}$, (3) where $I_{C_j}^k$ – average value of all indicators significance $P_1,\ldots,P_k$ for one respondent C_j ($j=1,\ldots,m$); $I_{P_i}^m$ – average value of one indicator significance P_i ($i=1,\ldots,k$) for all respondents $C_1,\ldots,C_m$; k – number of indicators analysed; m – number of respondents

For the overall assessment of the PR system we propose to use Harrington's desirability function [23], which allows us to model the process of concerted behaviour of individual subsystems of the whole, to consider the relationship and the impact between them.

The basis for constructing and prioritising this generalised function is the transformation of the natural values of the partial parameters of different physical entities and dimensions into a single dimensionless scale of desirability (preference). The purpose of the scale is to establish the correspondence between the physical and psychological parameters of optimisation.

The desirability function can be used as an accessory function because d [0,1]. It emerged from the observations of the respondents' real decisions and has such useful properties as continuity, monotony and smoothness. In addition, this curve conveys well the fact that in the dimensions, preferably close to 0 and 1, its "sensitivity" is

significantly lower than in the middle zone (Fig. 3). Actually it is a logistic (S-shaped) system efficiency curve.

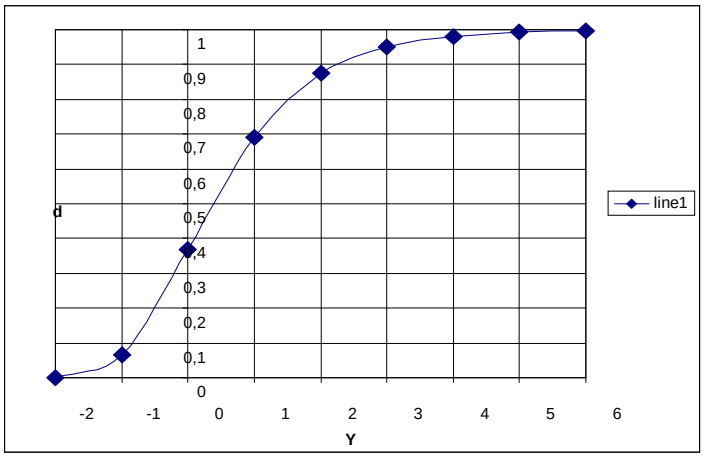

Fig. 3. Harrington's desirability function graph with one-way constraint

The value of the partial variable translated into a dimensionless desirability scale, is denoted by di (i = 1, 2, ..., n) and is called partial desirability. The desirability scale has an interval from zero to one. The value of di = 0 corresponds to an absolutely unacceptable level of the property, and the value of di = 1 corresponds to the best value of the property. From a mathematical point of view, the author of the approach recommends assigning a desirability value of d at point of 0.37 to the normative values of the indicators. The number 0.37 is an approximate result of dividing 1 by the number e, where e is the basis of the natural logarithm. The second such point is the desirability value of 0.63, which is the result of the difference (1-1/e). The generalised desirability index is calculated by the formula:

$$D=\sqrt[6]{d(1)d(2).....d(6)}\ , \qquad (4)$$

where 6 is the number of subsystems of the counterparts relations system. The root of the 6th degree "smoothes" the arising deviations, and the received result allows to estimate systems (with a certain degree of accuracy, so to speak, "mathematically".

In turn, the desirability index d for each individual given characteristic and Y for a group of indicators with a unilateral restriction is determined by the formula:

$$d = e^{-(e^{-Y'})}, \qquad (5)$$

where e is the logarithmic constant, which is approximately equal to 2,71828…;

Y is the result of linear transformation of Y relationship subsystem estimation.

This formula represents a special case of the Gomperz growth function, which is shown in Figure 1.

In order to further transform this metric into a dimensionless form, Harrington E. recommends first introduce two pairs of values (Y_{d1}, $_{d1}$) and (Y_{d2}, $_{d2}$). After that, the indicators Y_{d1}, Y_{d2} are standardised by the following formula:

$$Y' = -\left[\ln(-\ln d)\right] \qquad (6)$$

Using a pair of reduced values Y we can calculate two constants b0 and b1, which are necessary for the standardisation of other indicators with a one-way constraint. These constants are found from the linear equation:

$$Y' = b_0 + b_1 Y \tag{7}$$

After translating all the values into dimensionless form, a generalised desirability index is calculated as the geometric mean of all partial desirability indicators. The logic behind using the geometric mean is that if at least one of the parameters is zero, in other words, is undesirable, then the state of the entire object of assessment is undesirable.

Discussion of results. As can be seen from the above procedure for calculating a generalised index using the desirability function, standardisation of indicators requires determining their normative values, determining a pair of numbers (Y_{d0}, $_{d0}$) to calculate the parameter n, as well as two more pairs of values (Y_{d1}, $_{d1}$) and (Y_{d2}, $_{d2}$) to standardise unilateral indicators. It is these stages that give rise to the biggest disadvantage of Harrington's approach – subjectivism. Therefore, to reduce the impact of subjective evaluation, you should involve a team of experts to determine these pairs of numbers.

The interpretation of the estimate obtained is a dynamic model of the levels of the PR system (Fig. 4), the zones of which are correlated with Harrington's "desirability scale" (Table 2).

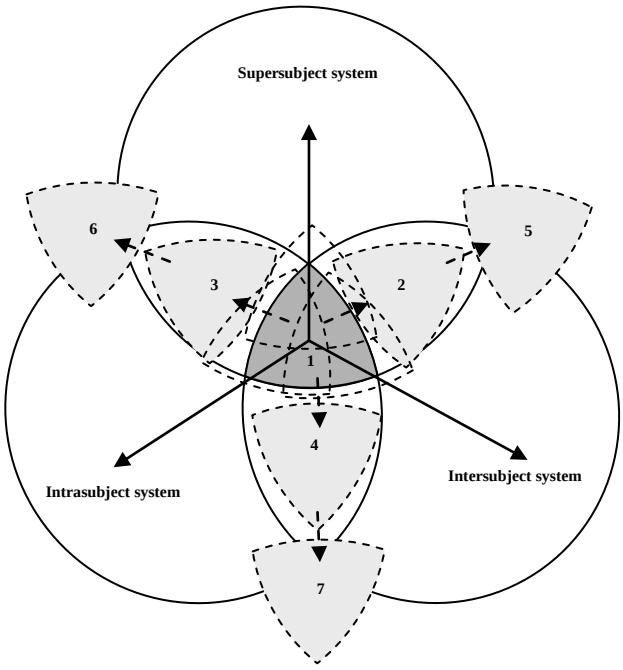

Fig. 4. Dynamic model partner relationship system levels

Table 2. Harrington's "Desirability Scale"

Desirability	Zone	Qualitative mark on the desirability scale "d"	Qualitative characteristic of the scale "d"
Absolute	1	1,00	Displays the extreme level of PR excellent level that is meaningless to improve
Very good	2, 3	1,00-0,80	Acceptable at the "excellent" level. Displays an unusually good level of PR system
Good	4	0,80-0,63	Acceptable at the "good" level. Displays a level that exceeds the best level that corresponds to d = 0.63
Satisfactory	5	0,63-0,37	Acceptable at "satisfactory" level. The PR system is acceptable to the maximum permissible level but needs improvement.
Bad	6	0,37-0,20	Limit level. If standard specifications exist, individual products will fall outside of these specifications. (If the characteristic accurately corresponds to the set minimum or maximum, then the value of "d" should be equal to 0.36788 = 1 / e)
Very bad	7	0,20-0,00	Unacceptable level

Intrasubjective level of the PR system implies the enterprise's passive behaviour towards its partners and vice versa. Autonomous or intrasubjective quasi-communication (the subject is both the addresser and the addressee (internal dialogue), in other words, is the object to himself or herself directly) and pseudo-communication (cooperation with inanimate objects, etc.) is present.

The intersubjective level of the PR system is aimed at changing the overall atmosphere of the relationship. Intersubjective is a question of all three subjects "what I need from them", "what they expect from me", "how can I help the situation to turn it on the right track" and so on. The answers they give to these questions shape the dynamics of intersubjective space. Intersubjectivity posits that we need to understand others in order to understand ourselves.

The supersubjective level of the PR system characterises the development of social-communication forms and lifestyles of society and aims to provide stable networks of social interactions (institutions).

Thus, Zone 1 provides a balance of interests and benefits of all participants in the PR system (enterprise - partners - society).

Zones 2, 3, 4 take into account specific multiple participants' wishes and requirements (partners - society, enterprise - society and enterprise - partners, respectively).

Zones 5, 6, 7 in the elements beyond the boundaries of Euler circles take into account the uncertainty index, where it is not possible to neatly form and evaluate the relationship system.

Conclusion. Thus, the PR system should be considered as a complex phenomenon in which all components are interdependent and interacting. The main components of this system are: subjects, which are responsible persons at different levels (e.g., the Head of customer service, Marketing Director, CEO); objects (processes of customer service and interaction between staff to solve the problems of this service); goals and tasks (e.g., achieving a high level of coordination of customer service processes and their effectiveness); methodology (methods of administrative, organisational,

disciplinary, and other impacts on system objects to qualitatively complete the task); tools of influence (technical, technological, organisational and regulatory means of monitoring, planning, organising, motivating, and adjustments, due to which the system is operating); resources (material, monetary, intellectual, informational and other tools that are used in the system); parameters (qualitative and quantitative measurements of the system functioning).

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