Residents' Participation and Spatial Engagement in the Context of Socio-Spatial Planning of Enlarged Communities of the Republic of Armenia

Yengidunyan Vahan V.
Post-Graduate Student of Chair of Theory and History of Sociology, Faculty of Sociology, Yerevan State University (Yerevan, RA)
https://orcid.org/0009-0008-9038-2642,
vahan.engidunyan@ysu.am

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Բնակիչների մասնակցությունն ու տարածական ներգրավվածությունը ՀՀ խոշորացված համայնքների սոցիալ-տարածական պլանավորման համատեքստում

Ենգիդունյան Վահան Վ.
ասպիրանտ, Սոցիոլոգիայի տեսության և պատմության ամբիոն, Սոցիոլոգիայի ֆակուլտետ Երևանի Պետական Համալսարան (Երևան, ՀՀ)

Ամփոփագիր. Խոշորացված համայնքների բնակավայրերում իրականացվող սոցիալ-տարածական պլանավորման արդյունավետությունը, բացի մասնագիտականկարողություններից, կախված է նաև իրականացվող փոփոխությունների նկատմամբ սոցիալական լայն շերտերի դրական դիրքավորումից: Պլանավորման համատեքստում սոցիալական նոր խմբերի մասնակցությունը և տարածական ճանաչողության նոր կառույցների մուտքը գիտելիքի առկա համակարգ ոչ միայն փոխակերպում է այդ համակարգը, այլև հանգեցնում է պլանավորման որոշումներ կայացնելու իշխանության վերաբաշխման: Այս մոտեցումների համատեքստում պլանավորման ներկայացուցչականությունը որոշվում է գործընթացներին մասնակցելու բնակիչների ցանկությամբ, փաստացի մասնակցությամբ և տարածական ներգրավվածությամբ: Հայաստանի Հանրապետությունում վերջերս ավարտվել է համայնքների խոշորացման գործընթացը: Համայնքների խոշորացումը տևել է մոտ 11 տարի, որի ընթացքում այն ենթարկվել է ինչպես ընթացակարգային, այնպես էլ հայեցակարգային փոփոխությունների: Համայնքների խոշորացումը, որպես հարևան բնակավայրերի փոխհարաբերությունների նոր տրամաբանություն, ազդում է սոցիալ-տարածական պլանավորման գործող մեխանիզմների վրա: Տեղի ունեցող փոփոխությունները կարող են ունենալ ինչպես դրական, այնպես էլ բացասական ազդեցություն իրենց բնակավայրերում իրականացվող փոփոխություններին բնակիչների պատրաստակամության և փաստացի մասնակցության վրա՝ հանգեցնելով ընդհուպ բնակչության շրջանում տարածական օտարման մակարդակի աճին: Վերոնշյալ հիմնախնդրի համատեքստում քննարկված ֆենոմենների միջև փոխազդեցությունները ստուգելու նպատակով իրականացվել է հետազոտություն Հայաստանի Հանրապետության խոշորացված համայնքներում: Իրականացված վերլուծությունը ցույց է տվել, որ մասնակցության ցանկության, փաստացի մասնակցության և տարածական ներգրավվածության դեպքում արձանագրված արդյունքները էապես տարբերվել են՝ ըստ խոշորացված համայնքների բնակիչների սեռի: Մասնավորապես, արական սեռի ներկայացուցիչները գրանցել են ավելի բարձր ցուցանիշներ, քան իգական սեռի ներկայացուցիչները: Հաշվի առնելով վերը նշված արդյունքները, ինչպես նաև մասնակցության ցանկության և տարածական ներգրավվածության միջև կապը, իրականացվել է ռեգրեսիոն վերլուծություն, որի շրջանակներում պարզ է դարձել, որ տարածական ներգրավվածության ցուցանիշի 1 միավորով աճը բարձրացնում է բնակչության շրջանում բնակավայրերում իրականացվող փոփոխություններում մասնակցության ցանկության արձանագրման հավանականությունը: Չուգահեռաբար, սեռի վրա հիմնված տարբերակման համատեքստում տղամարդկանց մոտ վերը նշված ցանկության գրանցման հավանականությունն ավելի մեծ էր, քան իգական սեռի ներկայացուցիչների մոտ:
Հանգուցաբառեր և բառակապակցություններ՝ Խոշորացված համայնք, մասնակցության ցանկություն, փաստացի մասնակցություն, տարածական ներգրավվածություն, սոցիալ-տարածական պլանավորում, բնակչություն

Участие и пространственная вовлеченность жителей в контексте социально-пространственного планирования расширенных сообществ Республики Армения

Енгидунян Ваган В.
аспирант, кафедра теории и истории социологии, факультет социологии, Ереванский Государственный Университет (Ереван,РА)

Аннотация: Эффективность социально-пространственного планирования, реализуемого в поселениях расширенных сообществ, помимо профессиональных способностей, зависит и от положительной позиции широких социальных слоев по отношению к реализуемым изменениям. В контексте планирования участие новых социальных групп и вхождение новых структур пространственного познания в существующую систему знаний не только трансформирует эту систему, но и приводит к перераспределению власти по принятию плановых решений. В контексте этих подходов репрезентативность планирования определяется желанием жителей участвовать в процессах, реальным участием и пространственной вовлеченностью. В Республике Армения недавно завершился процесс расширения общин. Расширение общин продолжалось около 11 лет, в течение которой претерпело как процедурные, так и концептуальные изменения. Расширение общин как новая логика отношений между соседними поселениями затрагивает существующие механизмы социально-пространственного планирования. Происходящие изменения могут иметь как положительное, так и отрицательное влияние на желание и фактическое участие жителей в изменениях, реализуемых в их поселениях, приводя к повышению уровня пространственного отчуждения среди всего населения. Для проверки взаимосвязей между явлениями, обсуждаемыми в контексте вышеизложенной проблемы было проведено исследование в расширенных общинах Республики Армения. Как показал анализ, результаты, зафиксированные в случае желания участвовать, фактическое участие и пространственная вовлеченность значительно различались в зависимости от пола жителей расширенных сообществ. Кроме того, у мужчин показатели были выше, чем у женщин. С учетом вышеизложенных результатов, а также связи между желанием участвовать и пространственной вовлеченностью был проведен регрессионный анализ, в рамках которого выяснилось, что увеличение индекса пространственной вовлеченности на 1 балл увеличивает вероятность регистрации желания жителей участвовать в изменениях, происходящих в поселениях. При этом в условиях половой дифференциации вероятность регистрации указанного желания у мужчин была выше, чем у женщин.
Ключевые слова и словосочетания: Расширенное сообщество, желание участвовать, фактическое участие, пространственная вовлеченность, социально-пространственное планирование, население

Theoretical foundations of the interrelationship of residents' desire for participation, actual participation and spatial engagement in socio-spatial planning

The effectiveness of socio-spatial planning implemented in the settlements of enlarged communities, in addition to professional abilities, also depends on the positive positioning of the broad social strata towards the implemented changes. One of the primary factors underlying these positionings is the desire to participate in the implementation of changes and decision-making in their own settlements.The concept of socio-spatial planning, developed by Erdiaw-Kwasie and Basson, is defined as a "…*branch of planning focused on understanding why different groups of people embrace, contest or reject spatial changes, how they take a lead in shaping their own space, and ways to make themactive in spatial transformations*" [**4**, p.3].

In the context of planning, the participation of new social groups and the entry of new structures of spatial cognition into the existing system of knowledge not only transforms that system, but also leads to a redistribution of planning decision-making power.A diversified decision-making balance is created, where each party gets the opportunity to directly influence changes in space. The principle of participation, as a result, conditions the democracy of spatial planning. Due to the increase in participation, socio-spatial planning is turning into participatory planning. According to Horelli, participatory planning of space "…*is a social, ethical, and political practice in which individuals or groups, assisted by a set of tools, take part in varying degrees at the overlapping phases of the planning and decision-making cycle that may bring forth outcomes congruent with theparticipants' needs and interests*" [**7**, p. 611-612]. It is a democratic model of decision-making, thanks to which society turns from a passive consumer of space into an active planner [**9**]. The engagement of social groups is not an end in itself, but a prerequisite for the validation of information about the planned space and the legitimization of decision-making. In this context, Foley's [**5**] observations are worth noting according to which, current approaches to planning need to transition to the field of representative participation, where the concept of communicative planning is formed. The participation of different groups in spatial planning decisions is variative, which means that depending on the situation, the above can be manifested in different degrees.In the context of describing the various manifestations of participation, the eight-level system of participation developed by Arnstein [**3**] deserves attention, which is divided into three main types. They are non-participation, tokenism and citizen (group) power. Non-participation of non-professional groups in planning processes is manifested by difficult access to necessary planning information and false engagement in the decision-making process, in which groups have to make forced choices. At the tokenistic level of engagement, non-professional groups are partially informed about planning processes, participate in consultative discussions, but their influence on the process is symbolic, because these groups do not have the necessary tools to influence decisions.

Finally, at the level of citizen (group) power, groups operating in planned spaces are considered not only as beneficiaries, but also as partners, who can even have a dominant influence on decision-making. The discussed approaches to participation allow us to conclude, that Arnstein's typification of participation can be used as an analytical methodology that adjusts the general evaluation principles of manifestations of different dimensions of participation.

Although the abovementioned approaches refer to the principles of participation of different social groups, the forms of participation determined by the interactions between the space and its consumers remain unexplained. In this context, Chernyavskaya's [**10**] approaches to space-resident interactions deserve attention. According to Chernyavskaya, places as meaningful spaces, apart from their physical features, are also distinguished by the information flows and social subspaces circulating in them.Thus, places reproduce local identities through interactions of physical, informational and social subspaces.It should be noted that these interactions are two-way, which suggests that local identities, in turn, are conditioned by individuals' continued engagement in the physical, informational, and social dimensions of place. Within the research of engagement in physical, informational and social spaces, a number of indicators are derived, thus operationalizing the concept of engagement. Indicators of engagement in physical space relate to the cognition, perception and identification of space. Engagement in the information space is interpreted by a number of variables suchas: the activity of searching for information flows circulating in the space, the interest in the history related to the place. Finally, engagement in the social space is formed, in particular, by membership in local communities, participation in current events. Although this model is related to local identity, consideration of the proposed principles at both conceptual and operational levels makes clear the possibilities of adaptation of engagement, not as an identity, but as a separate concept, in the field of spatial research. Furthermore, by entering the field of spatial processes, the discussed dimensions of engagement are clarified more, because it becomes possible to consider them in a specific context. Thus, the spatial engagement approach is formed.

Taking into account the discussed approaches, it can be concluded that the participation and/or the desire to participate in changes implemented in the settlements are directly related to the spatial engagement. This connection is first of all manifested at the level of the definition of socio-spatial planning, where the vital importance of the participation of residents in the reshaping of space is emphasized. At the same time, the socio-spatial planning due to the variability of participation grows into participatory planning, where each individual gets the right to contribute to the implementation of specific changes. The possibility and/or desire to participate among a number of objective circumstancesis also conditioned, by the engagement of residents in physical, informational and social sub-spaces, which ensure that residents know the planned space in depth, are aware of the processes taking place and have or are ready to contribute to these processes. Thus, the interactions between desire to participate, actual participation and spatial engagement form the social sustainability component of socio-spatial planning, maintaining the effective and continuous operation of residents in planning processes.

Relevance of the research problem, method and sample

The process of community enlargement has recently been completed in the Republic of Armenia. Currently, there are 71 communities in RA, of which 64 are enlarged, 5 are separate communities inhabited by different national minorities and 2 urban units (Yerevan and Gyumri). Community enlargement has lasted approximately 11 years, during which it has undergone both procedural and conceptual changes. Community enlargement, as a new logic of relationship between neighboring settlements, has an impact on the functioning mechanisms of socio-spatial planning. In particular, it implies the entry of new subjects into the field of decision-making and participation in changes in the development plans of settlements. Consequently, settlement-resident interactions are also changing, redefining the existing system of spatial engagement. The changes taking place can have both positive and negative effects on the willingness and actual participation of residents in the changes implemented in their settlements even leading to an increase in the level of spatial alienation among the population. In the context of assessing the impact of community enlargement in RA, there are a number of studies that reveal the changes in the social [**6**], economic [**1**], and political [**2**] life of the society, which however don’t reveal the public perceptions of the changes implemented in the enlarged communities, as well as the socio-spatial practices of territorial management. Considering the importance of the discussed issue from the point of view of the sustainable operation of communities, as well as the knowledge gap regarding this issue, the research was conducted to find out the residents' perceptions of the desire and actual participation in the changes taking place in the enlarged commu-

nities of RA and their individual settlements, as well as to bring out the connections between spatial engagement and desire of participation.

The research sample was mixed random. In the first stage, a proportional stratified sample was constructed and then a cluster sample was formed based on abovementioned sample. Considering the presence of the design effect in the cluster sampling, as well as the knowledge gap about the data distribution of the research variables caused by the lack of previous similar studies, the sample size was calculated by the product of a simple random sample (with a 95% confidence probability and a 5% margin of error) and a design effect score of 1.55 which is in the widely used (1.5-2) range for the construction of similar samples [**8**]. So, the total sample size was 600. The 43 clusters were distinguished and the volume of one cluster was set to 14. The research was carried out in the settlements of about 19 enlarged communities covering all regions of RA, applying the method of quantitative surveys.

Descriptive analysis of willingness to participate, actual participation and spatial engagement in changes occurring in the settlements of enlarged communities of RA

The participants of survey were asked to answer if they want to be involved in the implementation of changes and/or decision-making in their settlements. According to received results 64.3% of them stated that they would like to ("Rather want" and "Want very much" options together), while only 35.7% of the respondents expressed reluctance to participate ("Don't want to at all" and "Rather not want" options together) in these processes. Non-parametric tests were applied to a range of demographic data to identify significant differences between individual demographic groups according to willingness to participate. In particular, the results of the test carried out by gender showed that the desire to participate in the changes among males who participated in the survey (74.5%) was higher than among females (57%) (Chi-square=30.6, df=3, Cramer's V=0.23, $p<0.001$).

Significant differences were recorded, also according to region (henceforth the name "marz" will be used, as it is a concept of administrative territorial division of RA) and enlarged community. In particular, the Kruskal-Wallis test calculated by marz recorded 30.5 result, and the significance value was $p<0.001$. Since the distributions according to the target variable wasn't equal, the average ranks of marzes were calculated, as a result of which it became clear that the highest average rank was observed in Kotayk marz (361.8) and the lowest in Armavir marz (249.9). In the case of enlarged communities, the Hrazdan community was the leader with an average rank of 389.1, and the lowest rank was recorded in the Armavir community (217.4) (Kruskal-Wallis H=46.1, df=18, $p<0.001$).

In addition to the desire for possible participation, an attempt was made to find out the experience of participation of the residents in the implemented changes or in the decision-making processes carried out in enlarged communities. According to the obtained data, only 20.7% of the respondents participated in the changes taking place in their settlements, and the only significant difference was recorded in gender groups, where 29.8% of men and 14.4% of women mentioned the experience of participation (Chi-square=21.0, df=1, Phi=0.19, $p<0.001$). The participants of the survey, who indicated participation in the changes implemented in their settlements, also specified the scope of their activities. In particular, the most common form of participation was participation in meetings and discussions, as well as presenting opinions (40%). This was followed by participation in the works being carried out (28.7%) and any other type of assistance (20.9%). It was also worth noting that participation in the elections (7%) was also considered by the survey participants as a form of participation. In addition, an attempt was made to identify the underlying reasons for not participating in the changes.The obtained results revealed that the most common reason for non-participation among the respondents was lack of time, which accounts for 35.6% of the total reasons, followed by lack of desire and not being informed, with 22.8% and 16.6%, respectively.

In the case of spatial engagement, the physical, informational and social components were observed. Particularly, the physical component of engagement consisted of 5 judgments. They were: *"I know all the places of my settlement", "I feel comfortable in my settlement", "I know the names of almost all the streets in my settlement", "There are places in my settlement (except the apartment) that I can consider private places", "There are places in my settlement where I spend a pleasant time with my acquaintances/friends"*. According to the obtained results, the highest rate of agreement was recorded in the case of the judgment *"I feel comfortable in my settlement"*, with 97.1%. This judgment was followed by *"I know all the places of my settlement"- 86.7%, "There are places in my settlement where I spend a pleasant time with my acquaintances/friends" - 74%, "There are places in my settlement (except apartment) that I can consider private" - 57.5% and "I know the names of almost all the streets in my settlement" - 55%.*The recorded indicators allowed us to conclude that the physical

engagement of the residents in their settlements was mainly formed, not mainly individually, but through social interactions. It was worth noting that there were significant differences in indicators according to the gender of the survey participants. So, for example, in the context of the judgment *"I know all the places of my settlement"*, 95.1% of males agreed with that judgment, while among females, the rate was 80.8% (Chi-square=52.1, df=3, Cramer's V=0.29, p<0.001). Significant differences were also recorded in the case of the judgment *"I know the names of almost all the streets in my settlement"*, where the proportion of agreement among males was 63.2%, compared to 49.3% among females (Chi-square=20.0, df=3, Cramer's V=0.18, p<0.001). Finally, a significant difference by gender was also recorded in the context *"There are places in my settlement where I spend a pleasant time with my acquaintances/friends"*, where the acceptance rates among men and women were 82.4% and 68.2%, respectively. (Chi-square=17.8, df=3, Cramer's V=0.17, p<0.001).

The next component to consider in the context of engagement was informational engagement, which was measured by the following variables:*"It is important for me to be informed about the changes happening in my settlement", "I try to get information about the changes in my settlement through different sources", "If I receive new information about the processes taking place in my settlement, I am ready to share them with other people", "I don't have time to search for information about changes in my settlement", "I feel satisfied when I am informed about the changes taking place in my settlement".*

In that case, the highest rates of agreement were recorded *"I feel satisfied when I am informed about the changes happening in my settlement" - 89.5%, "It is important for me to be informed about the changes taking place in my settlement" - 87% and "If I receive new information about the processes taking place in my settlement, I am ready to share them with other people" - 80.7%.* Analyzes aimed at identifying intergroup differences according to individual variables of the information engagement component reported significant results. In particular, within the framework of the judgment *"I try to get information about the changes taking place in my settlement through various sources"* the percentage of agreement among males (73.5%) was 8.7% higher than the result recorded among females (64.8%) (Chi-square=8.2, df=3, Cramer's V=0.12, p=0.04). It was interesting that in the context of the discussion of intergroup differences, the analytical trend carried out only by gender was violated in the case of the judgment *"I don't have time to look for information about the changes taking place in my settlement"*, where there was a significant difference according to age (Kruskal-Wallis H=11.8, df=5, p=0.04).The highest average rank was recorded in the 65 and over age group (325.6) and the lowest in the 44-54 age group (266.5). According to the obtained results, the residents of the extended communities mostly seek to receive information about the changes taking place in their settlements, and were also ready to share it with other people.

Finally, in the context of the third - social dimension of engagement, the following judgments were distinguished: *"I am interested in the problems in my settlement", "I raise the questions/suggestions regarding my settlement both in contacts with residents and state representatives", "I am a member of various active groups/organizations operating in my settlement (for example, youth associations, NGOs)", "I try to use my opportunities and connections to involve other people in the processes taking place in my settlement", "If possible, I am ready to make a financial investment for the development of my settlement", "I can present some needs/problems of my settlement".* Here, perhaps the highest percentages of agreement were recorded for *"I am interested in the problems in my settlement"- 75.2%, "I can present some needs/problems of my settlement" - 66.9%, "If possible, I am ready to make a financial investment for the development of my settlement" - 62.8%* and *"I raise the questions/suggestions regarding my settlement both in contacts with residents and state representatives" - 57.3%.*

Comparative tables constructed with separate variables of the respondents' engagement in physical, informational and social dimensions of the settlements recorded significant differences by gender and age. For example, in the context of the judgment *"I am interested in the problems in my settlement"* 84.1% of males rather or completely agreed with this judgment, while among females that rate was 69% (Chi-square=18.7, df=3, Cramer's V=0.18, p<0.001). The judgment *"I raise the questions/proposals regarding my settlement both in contacts with residents and state representatives"* also showed such a picture: agreement among males was 68.2% and among females - 49.9% (Chi-square=26.3, df=3, Cramer's V=0.21, p<0.001).Compared to the percentage of agreement among females, the rate among males continued to register higher results in the context of the judgment *"I try to use my opportunities and connections to involve other people in the processes taking place in my settlement"*. In addition, the difference was 15.8% (Chi-square=17.5, df=3, Cramer's V=0.17, p<0.001).The willingness to provide financial support for the development of settlement was also an important factor in identifying the social

engagement of residents of enlarged communities. Readiness for financial support, measured by the judgment *"If possible, I am ready to make a financial contribution for the development of my settlement"*, again documented the higher willingness of males (67.7%) compared to females (59.5%) (Chi-square=8.2, df=3, Cramer's V=0.12, p=0.04): Finally, for the judgment *"I can present some needs/problems of my settlement"*, the agreement of males was 72.7% and that of females was 62.9% (Chi-square=7.9, df=3, Cramer's V=0.16, p=0.04): As mentioned in the previous paragraphs, the variables of the social dimension of engagement showed significant differences, also according to age. Significant differences were recorded, in particular, for judgments *"I am interested in the problems in my settlement"* (Kruskal-Wallis H=11.5, df=5, p=0.04) and *"I am a member of various active groups/organizations operating in my settlement (for example, youth associations, NGOs)"* (Kruskal-Wallis H =13.3, df=5, p=0.02).

Spatial engagement as a factor determining the desire to participate in the changes implemented in settlements

As for the desire of the residents to participate in the changes implemented in the settlements, in this case the possible interaction between the desire to participate and spatial engagement was hypothesized. Thus, the hypothesis was put forward, according to which: *an increase of 1 point in the index of spatial engagement increases the probability of registering the desire among the residents to participate in the changes implemented in the settlements.*

The dependent variable, which in that case was the willingness to participate, is transformed to 3-point ordinal scale where 1 was "Don't want"("Don't want at all" and "Rather not want" options together), 2-Rather want, 3-Want very much. In the case of spatial engagement as the independent variable, we were dealing with a scale, which is constructed through the summation of scores of ordinal scales measuring physical, informational, and social engagements. While carrying out the regression analysis, an attempt was made to find out the possible relations of the desire to participate with demographic data. As a result, the gender of the survey participants was the only demographic variable that could be included in the model being built. The cross analysis of the variables included in the regression revealed, that the average index of spatial engagement increases in each subsequent category of the desire to participate in the changes implemented in the settlements. In particular, among residents who indicated that they do not want to participate in the changes, the average index of spatial engagement was 39, while the average index among residents who indicated "Rather want" or "Want very much" was 42 and 47 respectively. The distribution of the dependent variable by gender showed that if the proportion of those who do not want to participate was 25% for males, for females it was 41%. Parallelly, making the transition from the "Rather want" to "Want very much", it became clear that, unlike females, among which the rates decreased from 34.8% to 24.2%, the proportion of males who wanted to participate in changes increased along with the transition to each subsequent category (30.5% in the case of the option "Rather want" and 44.5% in the case of the option "Want very much").

A number of conditions were tested in the regression analysis. To rule out possible strong relations between independent variables, the correlation analysis was performed using Spearman's correlation coefficient. The obtained results confirm that the relationship between the variables was weak enough to confirm the existence of strong relationship (Rho=-0.24).The hypothesis of parallel lines was also tested, and according to the non-significant result of the calculated Chi-square test ($p>0.05$) the null hypothesis was confirmed, which means that there was parallelism.

Since the dependent variable was measured on an ordinal scale, the ordinal regression analysis method was used. The choice of the ordinal regression model also depended on the descriptive coefficients of the distribution of the dependent variable (skewness=0.026, kurtosis=-1.510), as well as with the Kolmogorov-Smirnov normality test (Test statistic=0.228, df=558, $p<0.001$), according to which the variable wasn't normally distribution. Additionally, looking at the rates of the individual gender categories in the overall distribution, it was revealed that 57.7% of the data received were female, while 42.3% of the respondents were male. Considering the abovementioned results, the logistic function was chosen to construct the association of the variables. Within the framework of the constructed regression model, the significant differences of the latter with both desired and null models were checked. If the difference recorded in the case of the null model was significant, the significance of the difference with the desired model was p=0.32. The results discussed prove that the constructed ordinal regression model was applicable and, therefore, the obtained data could be subjected to further interpretation. According to the Nagelkerke coefficient characterizing the explanatory power of the model, 25.4% of the variation of the dependent variable was predicted by the independent variables included in the model.

The confusion matrix built in the context of model quality assessment showed, that the model correctly predicted the survey participants' belonging to a specific category 50% of the time. In addition, the accuracy of predicting belonging to the group of those who do not want to participate was 54.2%, and the values for correctly predicting belonging to the groups of "Rather want" or "Want very much" were 38% and 55%, respectively. The obtained results proved that the model was 1.67 times more accurate in predicting the belonging to a specific category of the desire to participate than it would be predicted randomly (in that case, the probability of correct prediction by random guessing was equal to 33.3%) (Table 1).

Table 2. *Confusion matrix*

Actual response	Predicted response			Score by category	Overall score
	1	2	3		
1	103	52	36	0.542	0.50
2	66	63	55	0.380	
3	21	51	111	0.550	

The log-likelihood coefficients of the thresholds of the dependent variable, which were calculated by comparison with the highest threshold, distinguished by the ordinal regression analysis. Specifically, among respondents, the log odds of being in the "Don't want" category was 4.796, while the log odds of being in the "Don't want" and "Rather want" categories was 6.477.Generalizing, the following ordinal regression model was constructed.

$$logitP((Y \leq j)) = B_j + \beta_{ENG} * X_{ENG} + \beta_M * X_M + \beta_F * X_F$$

Where B_j was cut-off points' and β_{ENG}, β_M, β_F were the logarithmic coefficients of separate categories of spatial engagement and gender of residents, respectively. The coefficients attributed to all categories of both dependent and independent variables were significant ($p<0.05$), which allowed to state that those coefficients really expressed the numerical results of the change of the dependent variable.

As a result of the exponential transformation of the abovementioned coefficients, the odd ratios were formed. So, moving on to the independent variables, let's look at spatial engagement. As a result of the analysis, it became clear that every 1 point increase in the index of spatial engagement increases the probability of recording the desire of residents to participate in the changes implemented in their settlements by 1.1 times. Regarding gender, according to the obtained results, the probability of registering those who expressed a desire to participate in the changes among males was 1.6 times greater than the probability of registering among females (Table 2).

Table 3. *The results of the ordinal regression*

Variables	Estimate	EXP (Est.)	Std. Error	Wald	df	Sig.
Dependent=1	4.796	-	0.526	83.036	1	0.000
Dependent=2	6.477	-	0.560	133.661	1	0.000
Engagement	0.127	1.135	0.013	101.225	1	0.000
Sex=Male	0.462	1.587	0.170	7.408	1	0.006
Sex=Female	0	-	-	-	-	-

Thus, as a result of the conducted analysis, we can claim that with the increase in the index of spatial engagement of residents, the probability of recording the desire to participate in the changes implemented in their settlements increases. At the same time, the discussed increase was observed, especially among males.

Conclusion

The conducted research revealed that the vast majority of the residents wanted to participate in the changes being carried out in settlements of enlarged communities of RA. At the same time, however, a small number of people had an experience of participating in those processes.The most common form of participation was participation in meetings and discussions, as well as presenting opinions.This was followed by participation in the activities and any other type of assistance. In addition to the main frameworks for participation, survey respondents also indicated underlying reasons for not participating in changes. The obtained results stated that the most common reason for non-participation among the respondents was lack of time, followed by lack of desire and not being informed, respectively. Residents of enlarged communities generally exhibited high spatial engagement, in physical, informational and social sub-spaces. Interestingly, however, the recorded rates differed significantly by gender. In contrast to females, among males, there was a higher proportion of those who had a high spatial engagement, experience of participating in changes in settlements and wanted to participate in similar processes in the future.

Based on the discussed results, the regression analysis once again documented the presence of interactions between the abovementioned variables. In particular, it was revealed that an increase of the index of spatial engagement by 1 point increases the probability of registering the desire to participate in the changes implemented in the settlements. Parallelly, in the context of sex-based differentiation, the probability of registering the abovementioned desire among males was 1.6 times higher than among females.

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