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# Do LGUs' non-financial support instruments matter to new firm formation?

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## Abstract

**Motivation:** The topic of policies supporting entrepreneurship implemented by local government units (LGUs) is the subject of many studies. At the same time, despite of many approaches and attempts to clarify this issue, this problem has not been exhausted and presented in a conclusive manner.

**Aim:** The main goal of article is to find out which of the non-financial entrepreneurship support instruments used by local government units (LGUs) in Poland effectively support new firms formation.

**Results:** The research proved that non-financial instruments at the disposal of communes are effective in the processes of stimulating entrepreneurship. The effects of their implementation are conditioned by the generic category of the LGUs, the quality of the institutional environment as well as the involvement of local actors in the process of designing development policies. The research proved that the highest effectiveness of non-financial instruments was noted in relation to cities with powiat rights, which confirms inability to treat individual instruments as universal tools, independent of the specificity of the local government unit applying it.

*Keywords:* entrepreneurship support instruments; local government; development support policies  
*JEL:* H10; H30; L26

## 1. Introduction

The topic of policies supporting entrepreneurship implemented by local government units (LGUs) is the subject of many studies (cf. Acs et al., 2008; Bania & Dahlke, 2014; Binek, 2011; Macháček, 2017). At the same time, despite many approaches and attempts to clarify this issue, this problem has not been exhausted and presented in a conclusive manner (Skica, 2020).

In the analysis of local policies in the field of entrepreneurship support, some authors focus only on income and/or expenditure instruments (see: Danisewicz & Ongena, 2020; Kogut-Jaworska, 2017; Poniatowicz & Wyszowska, 2014). Others analyze only non-financial instruments (cf. Chomiak-Orsa & Flieger, 2012a; Walenia, 2014), while the rest of authors study activities responsible for creating the so-called entrepreneurship climate (Buck et al., 2005; Gnyawali & Fogel, 1994; Roxas et al., 2007). As a result, the set of activities of LGUs stimulating the development of economic activity, go beyond the framework created by the classically understood budget policy (cf. Dodaro, 2021; Kaliszczak, 2012; Konahina & Flieger, 2016; Richert-Kaźmierska, 2010; Saberi & Hamdam, 2019).

The article fills the gap regarding the effectiveness of non-financial instruments supporting entrepreneurship by local government units. The studies carried out so far have focused on financial instruments, depreciating non-financial forms of support for economic activity. At the same time, the adjustment of support instruments to the generic category of communes is insufficiently recognised. This study aims both to assess the effectiveness of other than financial forms of stimulating entrepreneurship by communes, as well as to determine

whether the effectiveness of individual, non-financial support instruments is conditioned by the type of commune.

The research will cover Polish communes, which have the widest (compared to all LGUs in Poland) empowerment (financial and competence) to stimulate the development of local systems in the economic dimension. The implementation of this goal requires a diagnosis of non-financial instruments for supporting entrepreneurship available to communes, and then determining the scope of their application by Polish LGUs. Identification of the scope of application by local governments of non-financial instruments to support entrepreneurship will be carried out at two points in time. This procedure will eliminate the randomness of findings regarding the use of non-financial instruments by local governments, which are a consequence of basing the diagnosis on one measurement point (i.e. one year in which their use was checked).

## 2. Literature review

There is a significant inclination towards financial instruments (Danisewicz & Ongena, 2021; Kostovski & Hristova, 2016; Petrović, 2016). Research dedicated to non-financial support instruments is less frequent (Gnyawali & Fogel, 1994), and due to the fact that they analyze them in a narrow scope, often referring to the institutional environment for business (Leoński, 2022; Williams et al., 2017), their results are cognitively limited. Meanwhile, the more powerful become the topic of public spending efficiency, the rationalization of the budget economy, and the reorientation of local governments fiscal policies, the more important should be non-financial instruments supporting new firm formation (Godlewska & Morawska, 2020). Thus, the discussion on LGUs instruments for supporting entrepreneurship should increasingly focus on forms of support rather than financial ones. Despite the fact that the issue of the effectiveness of non-financial forms of stimulating entrepreneurship is gaining importance, it was not yet sufficiently well explored (Derlukiewicz et al., 2021), which justifies the undertaken research topic.

The preface to the classification of local government entrepreneurship support instruments presented in the introduction proves that their division should include two basic groups: financial and non-financial instruments. The first group can be further divided into income and expenditure instruments (Bruce & Deskins, 2012; Partridge et al., 2019). The second group consists of strategic, organizational (institutional) and promotional instruments as well as other solutions focused on creating the so-called entrepreneurship climate (Andelić et al., 2015; Harasym & Skica, 2017; Katimertzopoulos & Vlados, 2017).

In the income instrument group, three basic instruments can be distinguished. They are made up of fiscal policy instruments including tax incentives (Marples, 2006; Poliak, 2016), followed by instruments related to the sale or commissioning of components of communal property, and finally price instruments regarding prices of communal services (Bończak-Kucharczyk et al.,

1998). The group of expenditure instruments consists of public aid (including subsidies and loans to business entities), recapitalization of enterprises, sureties and guarantees granted by LGUs, and investment expenditure oriented on creation and reconstruction of technical infrastructure necessary to initiate and conduct business activity (Guo & Cheng, 2018). This group is supplemented by expenditure directed to business support institutions, i.e. business incubators, industrial parks, development agencies, training and advisory centers, as well as surety and / or credit funds (Andersson & Henrekson, 2015), as well as expenditure on financing information activities (Kogut-Jaworska, 2008).

Financial instruments differ in the nature of their impact on the local budget. While the effects of the applied fiscal preferences reduce the stream of budget revenues due to the commune (but not yet received), the expenditures result in the depletion of the already possessed (previously obtained) financial resources. Both groups of instruments, however, combine the expected future benefits related to the creation of new companies in a given area, as the effects of the implemented forms of support.

A separate group is constituted by non-financial instruments. These include strategic solutions, such as spatial planning policy oriented towards economic activity e.g. creating local entrepreneurship zones (Fritsch & Wyrwich, 2017), and organizational instruments e.g. fast administrative path for investors and local governance improvements (Ravšelj et al., 2020; Thanh & Hoai, 2020). This group also includes promotional instruments such as promotional strategies, regular expenditure on increasing the competitiveness of the commune, organization of fairs, exhibitions and other economic events (Hofer & Welter, 2011), and temporary patrons over development projects, dissemination of information about the potential of business support (Motoyama et al., 2014). The shaping of the commune's image as conducive to investment (e.g. by actively building and promoting a climate for entrepreneurship) is also important for stimulating economic activity in a given area (Kaliszczak, 2012; Motoyama, 2020).

Non-financial instruments do not burden the budget in the way that financial instruments do. Their use is not associated with a reduction in expected revenues or depletion of funds held in the budget. Stimulation of economic activity takes place through the use of endogenous potential of the municipality, including both human capital (e.g. consulting services provided by specialized units of the office) and physical capital (e.g. management of municipal property, real estate and pro-entrepreneurship planning policy). Given the lack of evidence confirming beyond any doubt the effectiveness of financial instruments, and at the same time being aware of the financial dimension of their burden on the budget, non-financial instruments seem not only to drain the budget to a lesser extent, but also to a greater extent meet the real needs of potential entrepreneurs.

The classification presented above proves that local governments have at their disposal a wide catalogue of diversified instruments that allows them

to stimulate new firm formation (McQuaid, 2002). Forms of these activities in each group of instruments differ both in terms of ease of use and the nature of their impact. This differentiation is an additional argument deciding whether the instruments used by communes in Poland differ depending on the generic category of a commune. Finding out the answer to this question is crucial for several reasons, both empirical and applicable. Appropriately selected support instruments have a chance to translate into greater effectiveness of activities stimulating the creation of new companies in a given area. Secondly, given the limited financial resources of local government units, decisions regarding their direction should be well planned. Incorrectly selected instruments determine sunk costs. Differentiation of the output potential of communes for setting up companies in their area (which is often a function of the generic category of the commune) requires individually tailored support instruments. Since there are no identical conditions for business development in individual types of communes, it cannot be expected that the same instruments will work equally well in all of them. Unfortunately, practical experience confirms that communes do not notice these objective facts, and their entrepreneurship support policies are more like improvised (and/or imitated) activities than tailor-made. Considering the functional differences of particular categories of communes, policies that ignore the differentiation of the forms of entrepreneurship support used by them due to the character of the commune should be considered as incorrect (Churski et al., 2020; Wandl et al., 2014). Particularly problematic in this respect is mimicking of local policies (Dolowitz & Marsh, 1996), by different types of communes (Davies, 2002; Heyndels & Vuchelen, 1998; Sedmíhradská & Bakos, 2016), pending different development effects. Such activities result in a reduced effectiveness of the proposed forms of support by improper spending of the already slim local budgets (Malinowska-Misiąg & Misiąg, 2021), and finally deepening stratification at the level of economic development (Kołodziejczyk, 2014).

Studies combining support instruments with the category of communes are relatively rare (Inglot-Brzęk & Skica, 2017). There is a shortage of studies describing local entrepreneurship support policies in terms of their compliance with the generic category of communes (Vaillant & Lafuente, 2007; Renski, 2008). Literature shows that the instrumentalization of entrepreneurship support in rural communes is undertaken by such authors as Korsgaard et al. (2015), McCullough (2012), Pondel (2017) and Popławski (2013). Szopiński & Grzebyk (2018), who write about instruments supporting new firm entry in urban-rural communes while the instrumentalization of entrepreneurship support in urban communes is presented in works of Adamczyk and Dawidowicz (2017), Jędrzejczak-Gas et al. (2017), as well as Westlund et al. (2014).

The conducted literature review and analyses of the legal regulations in force in Poland suggest that the attempts to identify and classify forms other than financial support for entrepreneurship so far have not been exhaustive. This justifies the deepening and extension of the research conducted so far on non-financial forms of entrepreneurship support. Critical analysis of the results

of previous research dedicated to supporting entrepreneurship by LGUs allowed for the formulation of three research hypotheses:

- H1: The pace of establishing new firms in particular categories of communes vary.
- H2: The strength of the impact of individual instruments varies depending on the category of commune and its individual characteristics. As a result, applying to all communes “one size fits all” policy is ineffective.
- H3: The effectiveness of instruments used by local authorities varies with time.

### 3. Data and methods

The Global Entrepreneurship Monitor (GEM) study was the basis for establishing the research sample of communes both in 2015 and 2019. Based on the GEM sample, 886 local government units were invited to the study in 2015 and 731 measurements were obtained (i.e. responses from 82.5% of municipalities selected for the study). In turn, in 2019 the research sample consisted of 896 local government units from all over the country — the same 731 measurements as in 2015 have been selected to provide comparability. The research was carried out using the CATI (Computer Assisted Telephone Interview) method in the Lime Survey electronic questionnaire system. Nearly 1/3 of the population of communes in Poland took part in both editions of the survey (see: Chart 1).

The paper focuses on two groups of non-financial instruments of entrepreneurship support i.e. 1) strategic instruments; and 2) instruments involving cooperation with entrepreneurs (see: Table 1). The developed and integrated by authors set of instruments presented in Table 1, constitutes a separate added value of the paper. Firstly, presented classification of non-financial entrepreneurship support instruments is comprehensive. Secondly, the literature review shows that research on stimulating entrepreneurship by local public policies is often limited to an analysis focused only on selected financial support instruments (Filip & Pitera, 2019; Wójtowicz, 2013; Wosiek et al., 2021) and does not appreciate non-financial instruments (Chomiak-Orsa & Flieger, 2012b; Zacharko, 2012). The following study breaks the limitations described above and opens a space for research on effectiveness of non-financial forms of entrepreneurship support by LGUs.

The data from the municipalities was supplemented with the secondary data from the Polish Statistical Office regarding the demographic and economic characteristics. These included parameters such as: the number of registered companies, LGUs own revenues, investment expenditures of LGUs, interregional migration and employment. Distance from the capital to the commune was calculated using Google Maps. All of the estimations have been performed in Stata 13.1.

The following variables have been selected for the study. The dependent variable ( $y$ ) is the dynamic of the newly registered companies per capita, ob-

tained by dividing the number of newly registered companies in a given year by the population. The independent variables in the study are the variables *b1* and *c1.1–c8.10* (as discussed in Table 1). The variables are nominal with three response levels: “1” indicating the existence of a given support instrument in the commune; “3” indicating the lack of knowledge on using such an instrument and “2” confirmation of not using that instrument. The percentage of responses for each of the variables are presented in Table 2.

Based on secondary data the following variables were selected as control variables: type of municipality, distance from the capital, employment, total own revenue per capita, EU revenues, investment expenditures per capita, population in the post-production age, interregional migration, unemployment, new companies, partition. The descriptive statistics for the control variables along with the dependent variable are presented in Table 3.

For each of the years we developed a procedure to estimate linear regression models with the abovementioned control variables and independent variables. Initially, all control variables were included, as well as the questionnaire questions *b1–c8.10*. The optimal model for each of the years has been selected in a stepwise procedure, based on the individual significance of the independent variable (Wald test) and the information criteria (BIC). A collinearity check has been performed with the use of the Variance Inflation Factor (VIFs) and heteroskedasticity was verified using a Breusch–Pagan test. Control variables showing a VIF above 10 have been rejected and models were reestimated using robust standard errors (type 1) due to a *p*-value below 0.05 for the heteroskedasticity test. The models have then been reestimated with groups of independent variables and only the models with significant independent variables are presented in the results section.

## 4. Results

Due to the fact that the research was conducted at two points in time (in 2015 and 2019, respectively), two models were developed to explain the effectiveness of non-financial entrepreneurship support instruments used by communes. The model for the year 2015 is presented below (Table 4).

$$\begin{aligned} \hat{y} = & -.0004458b_1 - .0006923b_3 + .0003874c35_2 + .0000652c25_3 - \\ & -.0005756c7_2 - .0001144c7_3 - .0016779lgu_{type_2} - .0014302lgu_{type_3} - \\ & -.0006172lgu_{type_4} + 1.66e - 06tot_{rev_{pc}} - .0001687pop_{post_{prod2014}} + \\ & + .0003387new_{coop2014} + .0107293. \end{aligned} \quad (1)$$

According to the regression results, if a commune does not have a spatial development plan (*b1*), the dynamics of entrepreneurship in this commune are lower compared to communes that have developed a spatial development plan. The obtained result indicates that entrepreneurship goes hand in hand with

an appropriate / properly planned spatial policy. Adequate / well-thought-out spatial management stimulates local economic development, including the development of entrepreneurship (Szopiński & Grzybek, 2018; Wojtyra, 2014). Importantly, the method of developing planning documents and their substantive quality differ in the effectiveness of influencing new firm formation depending on the size of the entity (Hajduk & Baran, 2013). It means that the developed plans should take into account at the stage of their creation what form of business activities (small and simple or advanced) they are to support. At this point, it should be clearly indicated that to explain the dynamics of entrepreneurship, as important as the planning documents themselves is their quality, coherence with other strategic plans, as well as their relationship with the dynamics of socio-economic processes (Wołowiec & Reško, 2012). In many cases, the ineffectiveness of spatial policy in the processes of stimulating entrepreneurship is the result of the lack of detail in spatial development plans, their inconsistency with studies of the conditions and directions of spatial development, as well as the lack of accompanying forecasts or material and financial attachments (Hajduk & Baran, 2013).

Research has shown that the lack of local development agencies operating in the commune (c3.5.) has a positive effect on the dynamics of entrepreneurship. The result obtained is all the more interesting as local development agencies should have a positive impact on the local economy by attracting investors / new entrepreneurs and supporting the creation of new jobs (Dziemianowicz et al., 2017). How to explain this negative relationship? This result should be explained not so much by the presence of business environment institutions in communes, but by the quality of their operations and the lack of adaptation of the offer to the needs of entrepreneurs. The negative relationship of the studied variables may be an expression of institutional weakness (Acemoglu & Robinson, 2012) and still small institutional capital in Poland (Starnawska, 2011). The weakness of business environment institutions in the country is indicated, among others, by Bentkowska (2018) and Wasilczuk (2015). As a result, the lack of ineffective institutions in the local environment may stimulate productive entrepreneurship due to the elimination of conditions conducive to unproductive entrepreneurial behavior promoted by weak institutions (Sauka, 2008).

The obtained results proved that the participation of entrepreneurs from a given commune in the creation of strategic documents (c7), i.e. socialization of the process of building a development strategy (Antkowiak & Kmieciak, 2015; Dziemianowicz & Cybulska, 2019), has a positive effect on the dynamics of entrepreneurship. In communes where such practices took place, the dynamics of entrepreneurship were higher than in communes where entrepreneurs did not participate in the preparation of this type of documentation. This result is understandable. Due to the fact that the documents designing local development take into account entrepreneurs, the participation of the interested parties in their preparation is fully justified (Bal-Woźniak, 2005). At the same time, entrepreneurs contribute to the planning process with a perspective thanks



to which public authorities increase the effectiveness of development activities. The effectiveness of the involvement of local actors in the development planning process depends on the development of their own participation management guidelines, based on unique local conditions (Carra et al., 2018; Martinez, 2011), while the degree of this participation and its effects depend on the degree of civic involvement and its involvement in development (Hrivnák et al., 2021). Undoubtedly, the participation of local actors (including entrepreneurs) in planning processes has a positive effect on the development of towns and local communities (Brody et al., 2003; Galiano et al., 2017; Shiehbeiki et al., 2014).

As expected (see Batóg & Batóg, 2017), the dynamics of entrepreneurship in urban and urban-rural communes was lower than in cities with poviats rights (see: Chart 2).

This situation is explained by the highest level of financial independence among all local governments (Kozera & Standard, 2018), enabling the conduct of pro-entrepreneurial policies (Korolewska, 2014), very high (compared to other LGUs) involvement in the creation of business environment institutions (Grycuk & Russel, 2014), as well as a higher level of entrepreneurship, which is conducive to the implementation of communal budget policies stimulating development of local systems (Kopyściański & Rólczyński, 2013). The obtained results can also be related to the concentration in cities with poviats rights of academic centers deciding on the intellectual capital of key importance for the development of entrepreneurship (Lazear, 2002), the location of start-ups (Beauchamp et al., 2018), as well as the positive return migration balance, which predominantly covers a territories agglomeration (Fihel et al., 2008). Entrepreneurs can choose urban areas / cities for several reasons: the benefits of agglomeration, absorptive sales market, location of industrial sectors requiring higher qualifications, access to suppliers, or diffusion of knowledge related to the presence of innovative companies in cities (Brodzicki & Golejewska, 2019).

The model explaining the formation of new companies in 2019 is provided below. Similarly to the model for 2015, it includes a set of non-financial instruments supporting entrepreneurship used by communes, supplemented with control variables (Table 5).

$$\begin{aligned} \hat{y} = & -.0008048c35_2 - .000472c25_3 - .0007444c81_2 - \\ & -.0011447c81_3 + .0003851c84_2 + .0012682c84_3 - \\ & -.0003348c87_2 - .0009033c87_3 - .0005796lgu_{type_2} - \\ & -.0006173lgu_{type_3} + .0000924lgu_{type_4} + 1.02e - 06tot_{rev_{px}} - \\ & -.0001209pop_{post_{prod2018}} + .0002941new_{coop2018} + .011713. \end{aligned} \quad (2)$$

The model estimation results supported the findings according to which the dynamics of entrepreneurship in urban and urban-rural communes (Type lgu) was lower than in cities with poviats rights. At the same time, contrary to the type of communes, in the case of the remaining variables, the dynamic

analysis showed that the effectiveness of some instruments has changed. While in 2015 the lack of local or regional development agencies operating in the commune (c3.5) had a positive impact on the dynamics of entrepreneurship, in 2019 their lack in the commune had a negative impact on the dynamics of establishing new companies. Although it is commonly believed that the process of institutional changes is a long-term issue (North, 2005; Williamson, 2000), more and more attention in the literature begins to focus on short-term (from year to year) institutional changes (Mickiewicz et al., 2021b). As a result, the obtained result may suggest an improvement in the scope and / or quality of services provided by development agencies compared to 2015. The indicator of their effectiveness is attracting new companies to the commune and, consequently, creating jobs (Dziemianowicz et al., 2017).

Economic development and its structure are to a large extent the result of the activity of local authorities. Generating a strong economic impulse in the municipality is associated with the creation of favorable conditions for the inflow of investments with a high degree of innovation, determining the scale and quality of the economy (Lecluyse et al., 2019). Direct instruments for stimulating non-agricultural economic activity by local government include organizational and technical instruments, among others, broadly supporting innovation infrastructure created by industrial and technology parks, technology and entrepreneurship incubators, industrial clusters etc., (Mażewska, 2021). The results of the estimation proved that the lack of participation of the commune in the creation of credit guarantee funds (c8.1.) Adversely affects the dynamics of entrepreneurship in its area compared to the communes that participated in the establishment of such funds (cf. Ingłot-Brzęk & Skica, 2017). Due to the relatively low involvement of Polish local governments in the creation or co-creation of business environment institutions, those that undertake this type of activity gain an advantage in the processes of stimulating entrepreneurship (Grycuk & Russel, 2014). Their presence in the commune provides significant support in accessing the financing necessary to start a business (Mika, 2012). Cities with powiat status are dominant here. In urban-rural municipalities, there may be a lack of appropriate institutions, or their offer may be less well adapted to the needs of innovative enterprises compared to units covering only cities, which is due to the structure of enterprises located in them and often their headquarters.

In the case of industrial parks, the situation is different. Local government officials of the current term of office were not always able to indicate the role of communes in their creation. In the absence of such knowledge, it can be assumed that LGUs were not involved in the process of their creation, as well as in the policy of informing entrepreneurs about the activities of industrial parks and the scope of services they offer for companies (c8.7). This, in turn, may indicate that we are dealing with a potentially poor flow of information from public authorities towards enterprises, as well as an insufficient level of knowledge among entrepreneurs about the benefits of services offered by parks for

those planning to start a business activity. Lack of knowledge on this subject is relatively common (Domańska, 2013), it has a negative impact on the dynamics of entrepreneurship (Kamińska, 2011). Due to the fact that there are business incubators in parks (Fihel et al., 2008), conclusions about the negative impact of the lack of knowledge about the commune's involvement in the creation of parks may also include the consequences extended to the incubators in which new enterprises are established. The activity of local authorities thereby depends on their competences. The approach of local authorities needs to change. Industrial and science center's expect their active contribution to solving problems on the line of business-science-administration, as well as systemic support and provision of appropriate tools. Services provided by various institutions should be networked (Golejewska, 2017).

## 5. Conclusion

The results of the research made it possible to verify the hypotheses, shedding new light on the current state of knowledge about supporting entrepreneurship by communes with the use of non-financial instruments. The dynamic approach used in the survey (i.e. measurement at two time points: 2015 and 2019) and the models resulting from it strengthen the credibility of the presented conclusions.

The conducted research proves the effectiveness of non-financial instruments (see: Chomiak-Orsa & Flieger, 2012a) and confirms that effective local government policies supporting the creation of new companies are not universal (see: Mickiewicz et al., 2021a). The results of the research indicate that the dynamics of entrepreneurship in particular types of communes is differentiated, so the strength of impact of individual instruments is also differentiated depending on the category of commune and its individual characteristics. It is not possible to recommend one type of support policy that will work in every commune. Individual features, both internal and external, will determine the appropriate set of instruments to support entrepreneurship. These findings verify positively the H2 hypothesis.

As it has been shown, the range of non-financial forms of entrepreneurship support available to communes includes those that have a positive impact on the process of establishing new firms. Their effectiveness, measured by the dynamics of entrepreneurship, is conditioned, inter alia, by the generic category of the commune, the level of affluence of the local community (Mason, 2015) and social capital expressed by the number of established associations (Czemiel-Grzybowska, 2014). A different type of support should be used in rural communes, where probably the biggest problems will be poorly developed infrastructure, long distances to sales markets, limited demand on the internal market, and others in urbanized centres. The diversified pace of setting up new companies in individual categories of communes may result from several factors. Firstly, it may be the result of the base effect, in rural communes the same

or even lower absolute increase in the number of newly established enterprises may translate into higher percentage increases, on the other hand, lower barriers to access to knowledge, infrastructure, sales markets favor an increase in the number of enterprises in urbanized communes. These findings confirm the H1 hypothesis.

Research has also shown that the effectiveness of the instruments varies over time. Instruments that turned out to be ineffective in the base year began to play the role of entrepreneurship stimulators in 2019. The observed fact is the result of the continuity of self-government entrepreneurship support policies and a derivative of institutional development. This result confirms the content of the H3 hypothesis.

The collected findings make it possible to formulate recommendations regarding the instruments that should be used by communes in order to effectively stimulate entrepreneurship. These include the involvement of local government units in the establishment of local development agencies and the creation of credit and guarantee funds (see: Harasym & Skica, 2017). It is also important to conduct informative campaigns about their offer and the scope of services offered by industrial parks operating in the region (Burdecka, 2004; Płoszaj, 2014). For the effectiveness of solutions stimulating entrepreneurship, it is crucial to involve local entrepreneurs in the creation of strategic documents. Building support programs without the addressees of these activities is still a common mistake of policies supporting entrepreneurship (Diochon, 2003). The above-mentioned measures should be implemented in the conditions of ordered communal spatial development plans, taking into account the separated and developed areas for economic activity. When designing solutions supporting the creation of new companies, local governments must also take into account their status (Michna & Męczyńska, 2016). Cities with poviats rights are definitely the most effective of the entrepreneurship support policies based on non-financial instruments (compared to other LGUs). Thus, the status of local government units determines the effectiveness of local government policies to support entrepreneurship through the selection of instruments corresponding to their generic category.

Despite the fact that the conducted research concerns communal self-governments in Poland, the conclusions drawn from them have a much wider practical application. It includes countries with historical experiences similar to Poland, as well as a similar level of economic and institutional development (see: Mets, 2020; Pilková et al., 2020; Rodzinka, 2022). Omitting the needs and expectations of the interested parties (in this case entrepreneurs) in the processes of designing local development policies is a practice observed not only in Poland, but also in other post-socialist countries. Thus, countries with a low level of social capital, low self-organization ability and relatively low trust in power and authority towards entrepreneurs (Bowser, 2017), the level of social participation is still low. This is mainly due to the government's lack of openness to this type of cooperation. Countries with a post-socialist background are

characterized by the weakness of formal institutions (Aidis et al., 2008; Estrin & Mickiewicz, 2011). It includes both the institutions' perception of their role in the processes of stimulating development and the quality of the services they provide. Although, as shown by the results of this research, changes in the operation of institutions are visible over time, they are progressing too slowly to allow for a dynamically changing role of the institutional environment in the processes of establishing new companies in post-socialist countries. These countries are also prone to pursue development policies, the profile of which, and the instruments used to implement them, are not dedicated to the individual characteristics that describe them (Skica & Rodzinka, 2021). This approach not only translates into ineffectiveness of actions encouraging residents of the commune to create new companies (poorly selected instruments will not support entrepreneurship), but also results in it being bypassed by external investors considering location decisions. Given the features common to the post-Soviet countries, the recommendations developed in relation to Polish municipalities can be effectively extended to local governments of other countries. Their importance thus has a significantly wider application, both in geographical and socio-cultural terms.

The results of the conducted research largely confirmed the claims of other authors dealing with similar topics, as shown above. However, they also shed new light on a comprehensive approach to the use of non-financial instruments to support entrepreneurship. In the first place, the effectiveness of using such instruments has been proven, their use increases the level of entrepreneurship. It was shown that the use of individual instruments should depend on the type of commune, because each of them has its own specificity. Higher dynamics of entrepreneurship in more urbanized communes was also indicated, which may mean that areas occupied by urban-rural communes and cities with poviat rights are a kind of reservoir of entrepreneurship, possessed infrastructure, large concentrations of people facilitate the establishment of new companies.

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## Appendix

**Table 1.**  
**Non-financial entrepreneurship support instruments at the disposal of communes**

Strategic instrument	Abbreviation
Possession of a zoning plan by the commune?	bl
Instruments of cooperation with entrepreneurs	Abbreviation
Informing citizens and businesses about the opportunities available for financing their activities:	c
– on the websites of the Commune	c1.1
– by the brochure available at the office by advertisements in the media	c1.2
– by meetings organized for this purpose with stakeholders	c1.3
– by organizing or promoting training on applying for such financing	c1.4
Commune involvement in the organization of training courses preparing to start a business	c2
Location of economic organizations in the commune:	c3
– chambers of commerce, or their branches	c3.1
– chambers of crafts	c3.2
– guild of crafts	c3.3
– employers' organizations	c3.4
– regional or local development agencies	c3.5
– associations or foundations supporting entrepreneurs	c3.6
– industrial parks, technology incubators	c3.7
Possession by the commune its own service points for entrepreneurs offering legal, financial and accounting advice	c4
Provision of communal services by private companies	c5
Implementation of investments by the commune in the form of public-private partnership	c6
Involving entrepreneurs from the commune in the process of creating strategic documents	c7
Participation of the commune in establishing business environment institutions	c8
– credit guarantee fund	c8.1
– business incubator	c8.2
– investor service center	c8.3
– local development agencies	c8.4
– loan fund	c8.5
– entrepreneurship support center	c8.6
– industrial park	c8.7
– technology park	c8.8
– business information center	c8.9
– an association or foundation supporting entrepreneurs	c8.10

Source: Own preparation.

**Table 2.**  
**Frequencies of responses for the independent variables (%)**

Variable	1 (Yes)	2 (No)	3 (I do not know)
bl	81.32	16.21	2.47
c1.1	94.64	3.57	1.79
c1.2	64.15	30.22	5.63
c1.3	58.52	33.38	8.10



Variable	1 (Yes)	2 (No)	3 (I do not know)
c1.4	33.93	53.57	12.50
c2	29.67	62.23	8.10
c3.1	14.56	75.82	9.62
c3.2	11.26	78.71	10.03
c3.3	23.63	68.27	8.10
c3.4	14.56	70.60	14.84
c3.5	15.52	74.31	10.16
c3.6	28.57	58.65	12.77
c3.7	11.95	78.85	9.20
c4	33.79	56.32	9.89
c5	58.52	36.95	4.53
c6	32.28	55.77	11.95
c7	51.92	26.65	21.43
c8.1	4.13	72.35	23.52
c8.2	7.43	73.87	18.71
c8.3	8.25	70.43	21.32
c8.4	6.74	69.60	23.66
c8.5	3.44	71.94	24.62
c8.6	8.25	67.81	23.93
c8.7	5.50	73.31	21.18
c8.8	4.40	73.73	21.87
c8.9	5.36	69.88	24.76
c8.10	13.76	61.21	25.03

Source: Own preparation.

**Table 3.**  
Descriptive statistics for the dependent and control variables

Variable	Mean	Std. dev.	Min	Max
y	.0082195	.0026114	.0024884	.0207101
tot_rev_pc	1998.241	1000.003	652.6828	10172.29
inv_ep_pc	1035.126	678.1867	72.58435	5840.336
lgu_type	2.228022	.7474379	1	4
migr_in	18.57005	476.9785	-1198	10903
dist_capital	72.2078	56.00299	0	1103
Employ	6845.918	40443.99	0	952983
eu_rev	6617335	2.89e+07	0	6.14e+08
new_coop	.1212121	.5243496	0	8
pop_pos	31.17653	6.519763	16.88107	78.25769

Source: Own preparation.



**Table 4.**  
**Regression explaining the effectiveness of non-financial entrepreneurship support instruments in 2015**

Linear regression						
Number of obs=728						
F(12, 715)=21.07						
Prob>F=0.0000						
R-squared=0.3659						
Root MSE=.00236						
y	Coef.	Robust std. err.	t	P>t	95% conf. interval	
b1						
2	-.0004458	.0002262	-1.97	0.049	-.0008898	-1.81e-06
3	-.0006923	.00033	-2.10	0.036	-.0013402	-.0000443
c35						
2	.0003874	.0002234	1.73	0.083	-.0000512	.0008259
3	.0000652	.0002871	0.23	0.820	-.0004984	.0006287
c7						
2	-.0005756	.0002845	-2.02	0.043	-.0011341	-.0000172
3	-.0001144	.0001819	-0.63	0.530	-.0004715	.0002427
lgu_type						
2	-.0016779	.0003293	-5.10	0.000	-.0023243	-.0010315
3	-.0014302	.0003202	-4.47	0.000	-.0020588	-.0008016
4	-.0006172	.0004755	-1.30	0.195	-.0015508	.0003164
tot_rev_pc	1.66e-06	2.55e-07	6.49	0.000	1.15e-06	2.16e-06
pop_post_prod2014	-.0001687	.0000231	-7.30	0.000	-.0002141	-.0001234
new_coop2014	.0003387	.0001102	3.07	0.002	.0001224	.000555
_cons	.0107293	.0009354	11.47	0.000	.0088928	.0125658

Notes:

1 — reference, positive answer in the survey; 2 — negative answer in the survey; 3 — don't know answer in the survey.

lgu\_type: 1 — reference, municipal commune; 2 — rural commune; 3 — urban-rural commune; 4 — city with poviats rights.

Source: Own preparation.



Table 5.  
Regression explaining the formation of new companies in 2019

Linear regress						
	Number of obs=725					
	F(14, 710)=9.93					
	Prob>F=0.0000					
	R-squared=0.2637					
	Root MSE=.00226					
y	Coef.	Robust std. err.	t	P>t	95% conf. interval	
c35						
2	-.0008048	.0003243	-2.48	0.013	-.0014415	-.0001681
3	-.000472	.0003824	-1.23	0.218	-.0012228	.0002788
c81						
2	-.0007444	.0003635	-2.05	0.041	-.0014581	-.0000307
3	-.0011447	.0004325	-2.65	0.008	-.0019938	-.0002955
c84						
2	.0003851	.0003973	0.97	0.333	-.0003948	.0011651
3	.0012682	.0004567	2.78	0.006	.0003715	.0021649
c87						
2	-.0003348	.0003585	-0.93	0.351	-.0010388	.0003691
3	-.0009033	.0004128	-2.19	0.029	-.0017136	-.0000929
lgu_type						
2	-.0005796	.0003245	-1.79	0.074	-.0012167	.0000574
3	-.0006173	.0002879	-2.14	0.032	-.0011826	-.000052
4	.0000924	.0004652	0.20	0.843	-.000821	.0010058
tot_rev_pc	1.02e-06	2.07e-07	4.94	0.000	6.17e-07	1.43e-06
new_coop2018	.0002941	.0001849	1.59	0.112	-.0000688	.0006571
pop_post_prod2018	-.0001209	.0000185	-6.55	0.000	-.0001572	-.0000847
_cons	.011713	.0010018	11.69	0.000	.0097461	.0136798

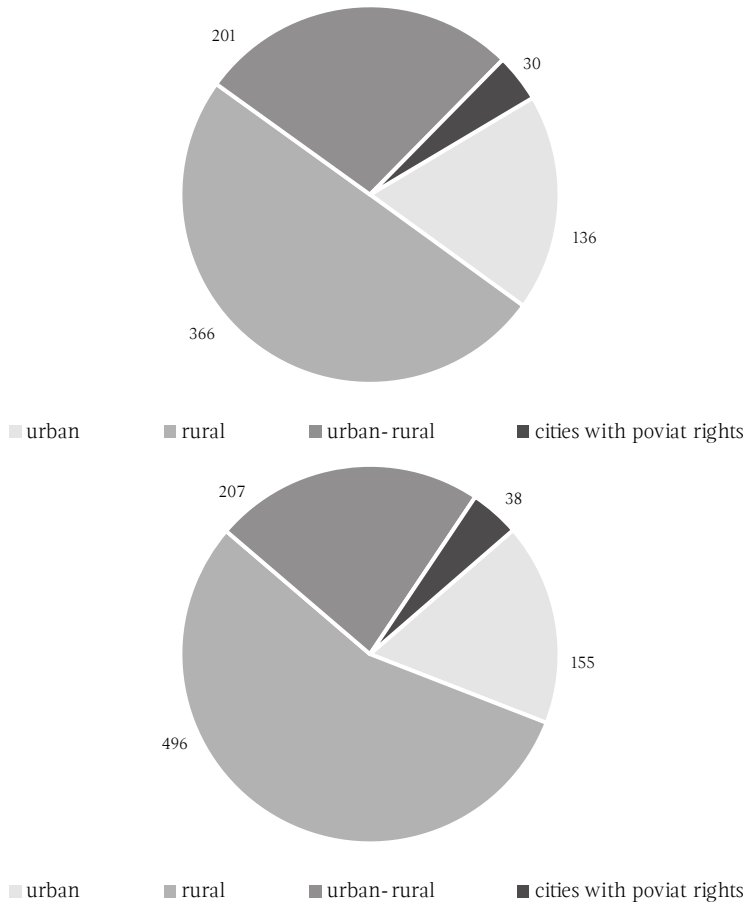
Notes:

1 — reference, positive answer in the survey; 2 — negative answer in the survey; 3 — don't know answer in the survey.

lgu\_type: 1 — reference, municipal commune; 2 — rural commune; 3 — urban-rural commune; 4 — city with poviat rights.

Source: Own preparation.

Chart 1.  
Research sample in 2015 (top) and 2019 (down) (%)



Source: Own preparation.

Chart 2.

New firms registered per 1000 inhabitants (top) and dynamics of new firms registered per 1000 inhabitants (down) between 2010 and 2021 (inclusive) by communes categories



Source: Own preparation based on Local Data Bank.