

## THE INFLUENCE OF THE IMAGE AND TRADITIONS OF POLISH COOPERATIVES ON THE FUNCTIONING OF MODERN FOOD COOPERATIVES

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**Abstract:** The purpose of the article became to verify the influence of the pre-World War II cooperative image and tradition developed over the years on the functioning of contemporary food cooperatives in Poland. Based on the estimation of an ordered logit model, the factors that exert a statistically significant influence on the perception of the context of Polish cooperative traditions in relation to the current functioning of the studied cooperatives were determined. Empirical material was collected by conducting a survey. General conclusions were made based on the interpretation of the results of the quantitative analysis. The main findings of the presented study indicate that the image and traditions formed before the Second World War have a significant impact on respondents' perception of contemporary food cooperatives. The average age of the organization's members and the fact that they have higher education have a positive impact on the evaluation of the tradition of Polish cooperatives as a factor conducive to the contemporary activities of the surveyed cooperatives.

**Keywords:** food cooperative, cooperative movement, coop, social organization, ecology, management, Rochdale principles, ordered logit model, marketing

**JEL classification:** L31, D26, O35, Q13, P13, P32

### INTRODUCTION

The beginnings of Polish cooperative activity can be traced back to the 18th century, when so-called "collegia" were formed, among others, a cooperative of Andrychów peasants [Cioch 2009]. This happened long before the changes that took

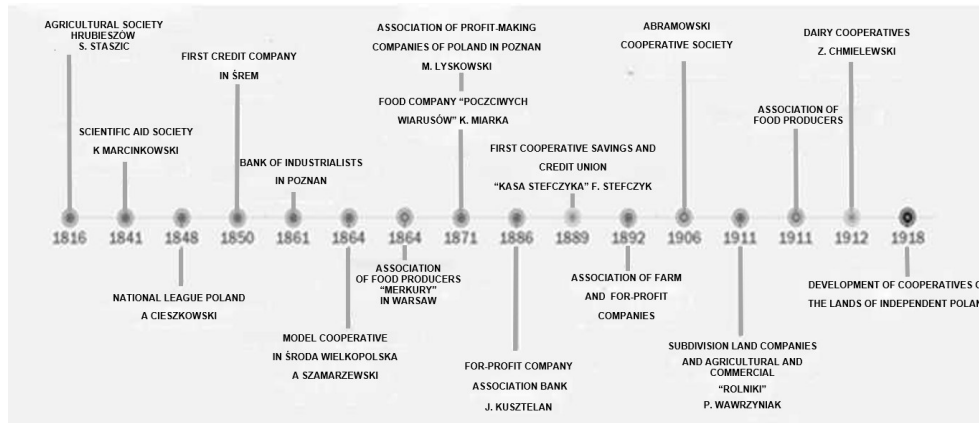
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place in Rochdale, England in 1844, a date that is considered the beginning of cooperatives worldwide. On a larger scale, cooperative movements in Poland began to develop in the 19th century. In 1812, on the initiative of Stanisław Staszic, a society with cooperative characteristics was established, i.e. "Hrubieszowskie Towarzystwo Rolnicze dla Ratowania się Wspólnie w Nieszczęściach" (Hrubieszów Agricultural Society for Saving Yourself Together in Misfortunes), which is considered a symbolic beginning of both the history and tradition of cooperatives in Poland [Mroczek 2012]. The word "cooperative" (in Polish, "spółdzielnia") itself was not yet known in the Polish language. Initiated by Stanisław Staszic, the venture was then called a "Society", (in Polish, "towarzystwo") which had many of the characteristics of today's well-known cooperatives, such as the coexistence of social and economic activities, involvement in welfare and educational activities, solidarity of the associated people, self-help and self-governing structures. This was accompanied by profound socio-economic changes that were associated with technological and industrial progress. During the aforementioned period, the size of the poorest class increased significantly and social stratification intensified. This was a particularly favorable time for the development of the cooperative movement, which was based on the principles of self-help, solidarity and cooperation mentioned earlier. Hence, Polish cooperatives have a long history and rich tradition [Piechowski 2013].

## LITERATURE REVIEW

"A cooperative is an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly-owned and democratically-controlled enterprise" (International Cooperative Alliance, 1999). In Poland the development of cooperative movements over the 19th and 20th centuries was very uneven. During the successive stages of statehood, cooperative initiatives were suppressed by the ruling authorities, only to be later revived on a small scale. Democracy and the autonomous nature of cooperatives were curtailed, and after a few years attempts were made to restore them [Brzozowska 2007; Florek-Paszkowska 2016]. Figure 1 shows selected major moments in the early development of cooperatives in the Polish lands.

Figure 1. Selected major events from the period of development of Polish cooperatives



Source: own elaboration

Mutual aid associations were formed in the Polish lands that were partitioned (1772-1918), just as in the New World and Western European countries. The associations were mainly aimed at assisting the lowest strata, opposing the negative effects of capitalism. In addition, they sought to raise the economic living standards of their members. Cooperative movements under the Prussian partition can be considered particularly interesting [Rolski 2017]. The functioning of Polish cooperatives was largely derived from the socio-economic structure of these lands. In these areas, German policies of national oppression clashed with the penetration of German cooperative patterns (e.g., Herman Schulz of Delitzsch). Observation of German cooperatives allowed Poles to develop their own patterns of association to protect a weaker society from an economically strong invader. Polish cooperatives made it possible to improve a lot of workers and many other social groups, and contributed to strengthening the sense of unity and national consciousness [Inglot 1971]. At the time, an element of opposing the Prussian invaders was the struggle for the deposits of the population, which in time began to view the placement of money in Polish people's banks in terms of a national obligation [Wojciechowski 1923]. The Polish nation also formed so-called "parceling companies" that fought Prussian colonization by acquiring landed estates exposed to German colonization [Stefczyk 1925]. In addition, agribusiness companies called "Rolniki" were established, which played an important role in defending the public against dishonesty in the trading of grain and agricultural products [Wawrzyniak 1908].

The beginnings of cooperative movements in the Russian partition appeared relatively early. The grocers' association "Merkury" was the first to be established in Warsaw in 1864. The invader recognized early on the danger to the state in these initiatives. Hence, the establishment of new associations was time-consuming and had to be preceded by approval in St. Petersburg [Zerkovsky 1964]. A more vigorous development of the cooperative idea came after the failed revolution of 1905. The

suppression of the revolution by the tsarist regime opened up opportunities to establish associations of a cultural and educational nature. Immediately after the revolution, the nation's earlier socio-political slogans related to organic labor, that is, cultural, educational and economic. This was reflected in attempts to support Polish industrial production, agriculture, handicrafts and scientific progress. An important role in organizing the cooperative movement was played in the Russian partition by the Cooperative Society, which was founded in 1906 on the initiative of Edward Abramowski (1868-1918), and which preached the slogans and principles of cooperation [Chyra-Rolicz 1989]. Abramowski focused on the idea of the brotherhood of man, criticized capitalism and spread slogans of social education, cooperation, mutual aid and self-improvement [Krzczkowski 1933]. The cooperative activity of grocers in the Russian partition began to develop with vigor, thanks to the involvement of the progressive workers' community. The food movement referred to the idea of national and social liberation.

In the Austrian partition, cooperatives appeared in the second half of the 19th century. Examples of the success of the cooperative movement in neighboring countries raised the hopes of Poles living in the partition. Ubiquitous usury in many areas of economic life ruined small-scale artisan workshops, farms and small merchants. It affected both urban and rural populations, with a total lack of support from the partitioned government for the operation of industry, crafts and agriculture. Under these conditions, the need for self-defense and cooperation naturally arose in society [Wojciechowski 1930]. In the Austrian partition, one could find social enterprises such as various types of credit unions and agricultural circles, labor and food cooperatives. However, Stefczyk's credit unions, whose founder was Franciszek Stefczyk [Stefczyk 1925], have gone down in history as the most famous. At the end of 1889, in Czernichów near Kraków, he opened a Raiffeisen credit union, pioneering for its time, based on the model of Viennese cooperatives. He also established cooperatives with an agricultural and commercial focus. Their primary domain of operation was the procurement and sale of agricultural goods [Najdus 1971]. It is worth mentioning in a broader context that the political situation in the Austrian partition created favorable conditions for the development and spread of the idea of cooperatives.

The regained independence of the Polish state in 1918 revealed many difficulties that resulted from the need to merge areas divided by the partitioners. Each partition was inhabited by people operating under different legal and economic conditions and subject to different educational systems. The sharply revealed long list of social disparities went hand in hand with the low and uneven economic potential of the reborn country. Thus, cooperatives in reborn Poland had to face many problems. In 1918, work was initiated on a unified law on cooperatives. The Law on Cooperatives was enacted in October 1920 [Boczar 1986]. The Polish law was modeled on German legal solutions, but also differed from them by introducing many regulations of a more democratic nature. This law allowed state supervision of cooperatives by introducing the institution of a "State Cooperative Council"

(Państwowa Rada Spółdzielcza) [Janczyk 1987]. In reality, however, state privileges were not enjoyed, and cooperative movements were able to thrive. "The period of Young Poland" before the outbreak of World War II was characterized by the development of cooperatives of various types, especially agricultural and commercial cooperatives, food cooperatives and housing cooperatives. It was also a time of booming credit activity within the savings and loan cooperatives. One could also find health cooperatives, publishing and cottage industry cooperatives, as well as manufacturing, labor and craft cooperatives. These years also saw the establishment of cooperative people's houses, the Stage Artists' Labor Cooperative, the Journalists' Cooperative and the "Gromada" Tourist and Holiday Cooperative [Boczar 1986].

The issues shown regarding the formation of the Polish cooperative tradition at the turn of the century can serve as inspiration for the resurgent Polish cooperative movement. The emerging groupings called the new cooperatism [Vieta 2010], although they refer to postulates and assumptions drawn from the cooperative movement of the 19th century, including the cooperative principles preached by the Cooperative Society, present a completely new, unprecedented dimension of cooperation [Florek-Paszkowska 2016]. There has been a noticeable change in the goals behind the formation of the first food cooperatives, from a desire to survive crop failures and economic crises to improving lifestyles and healthy eating. In addition, bearing in mind the progressive economic globalization with a number of negative consequences resulting from it, organizations operating on a cooperative basis are undoubtedly a counterbalance, a positive synergy to the processes taking place. They contribute to the maintenance of national, regional and local traditions and the culture of the country in which they occur. They care about stimulating sustainable development and preserving the environment, as the element necessary to sustain these systems is social cohesion. In addition, they shape the deepening of social ties, by solving problems common to producers, food processors and consumers, so that the family nature of agriculture is preserved, and relations between these communities become closer. And most importantly, through their presence, they induce changes in consumption behavior, implying the transformation or even reduction of the phenomenon of industrial food production [Józewicz 2014].

The considerations carried out on the peculiarities of the functioning of cooperative entities are aimed at determining the main objective of this publication, i.e. verifying the influence of the image and cooperative tradition developed over the years from the pre-World War II period on the functioning of contemporary food cooperatives in Poland. The links between Polish cooperatives and the global cooperative movement can be found in other papers by the author, including [Zbyrowska 2022].

## QUANTITATIVE ANALYSIS TOOLS USED AND DESCRIPTION OF DATA

Within the empirical study, the dependent variable takes on ordered values, but the foundations of the research method derive from the binary choice model. Binomial regression (binary choice) occurs when the dependent variable takes two values, i.e. 1 or 0 [Gruszczynski 2012]. This kind of dichotomous variable can actually reflect a certain situation or decision [Zbyrowski 2018]. The relationship between such an endogenous variable and the explanatory variables can be described by estimating a probability model that quantifies the probability  $p_i$  of the dependent variable  $y_i$  taking the value of 1 for the  $i$ -th object based on a function of  $k$  exogenous variables:

$$p_i = F(x_i' \beta), \quad (1)$$

$$x_i' \beta = (1 \ X_{1i} \ X_{2i} \ \dots \ X_{ki}) (\beta_0 \ \beta_1 \ \beta_2 \ \dots \ \beta_k)'$$

where:

$X_{ki}$  – explanatory variable with the number  $k$  for observation  $i$ ;

$\beta_k$  – parameter at the explanatory variable numbered  $k$ .

In the study conducted, the dependent variable can take on ordered values, hence the analysis used polynomial qualitative variable models. The modeling methodology here stems from the specifics of the data collected from the survey. Responses were given by respondents on a range scale.

Objective analysis of the data becomes possible in the present case through the application of an ordered logit model [McFadden 1981]. This model is a generalization of the binomial logit model, taking into account a larger number of thresholds [Gruszczynski 2012].

Within the logit model, an F-function is used, which corresponds to the distribution of the logistic distribution:

$$p_i = F(x_i' \beta) = \frac{\exp Z_i}{(1 + \exp Z_i)^2} \quad (2)$$

The values of  $p_i$  probabilities are in the range of (0,1). The inverse function of  $F$  in this case is described by the formula:

$$F^{-1}(p_i) = \ln \frac{p_i}{1 - p_i} \quad (3)$$

The given function contains an expression called "logit" written as:

$$\ln \frac{p_i}{1-p_i} \quad (4)$$

The "logit" mentioned is understood as the logarithm: the ratio of the probabilities for accepting to not accepting unity by the endogenous variable.

Meanwhile, for an ordered logit model, the value  $p_{ij}$  expresses the probability of an event when the observable variable  $y$  for the  $i$ -th object takes on the value  $j$  (i.e.  $k_j$  quantifies the extremity of the  $j$  interval):

$$p_{ij} = \frac{\exp(k_j - x_i' \beta)}{1 + \exp(k_j - x_i' \beta)} - \frac{\exp(k_{j-1} - x_i' \beta)}{1 + \exp(k_{j-1} - x_i' \beta)} \quad (5)$$

The estimation of the model not only boils down to the estimation of the vector of parameters  $\beta$ , but, in addition, requires the estimation of the thresholds "k" (thresholds) forming the corresponding vector. In a logit model of the type in question, typical measures of fit such as the adjusted coefficient of determination have no direct interpretive value although, when subjected to transformations, they can be used to compare several models. In econometric practice, the evaluation of this class of models is based on the likelihood ratio test (LR), which evaluates the corresponding null hypothesis. The null hypothesis being tested assumes that all model parameters are zero except for the constant value.

The econometric model was estimated based on a set of primary data obtained through a survey conducted from August 1 to September 30, 2021. Survey questionnaires were addressed to members of 48 food cooperatives. In addition, the prelude to the survey conducted was a short pilot study to verify the validity of the prepared questions. The final questionnaire of the actual survey was filled out by 115 members belonging to 37 Polish food cooperatives. It should be mentioned that at the survey stage it was found that 11 of the 48 food cooperatives are no longer actively operating, so it was impossible to contact them.

The respondents were mainly individuals actively involved in cooperative activities, who enthusiastically answered the questionnaire. Assuming that the set of responses was based on the opinions expressed by active representatives of all Polish food cooperatives then the empirical survey conducted can be described as a full survey (i.e. the survey refers to all 37 Polish food cooperatives).

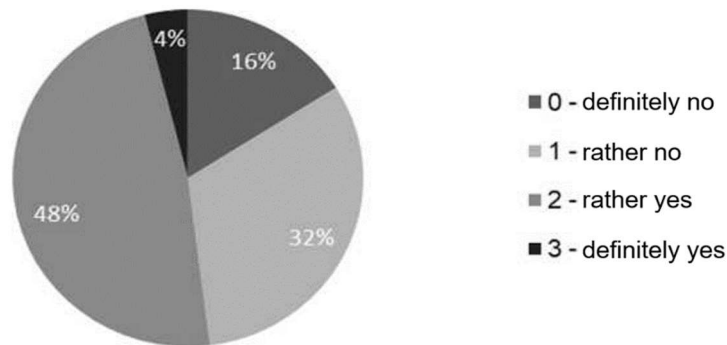
## ANALYSIS OF FACTORS DETERMINING THE POSITIVE EVALUATION OF THE INFLUENCE OF THE TRADITION OF POLISH COOPERATIVES FROM THE PERIOD BEFORE WORLD WAR II

The contemporary activities of food cooperatives viewed from the perspective of the influence of the tradition of Polish cooperatives before World War II is an important aspect of understanding the specifics of the functioning of these organizations. The consistency of respondents' answers with the statements listed in

the survey questionnaire was measured on a rank scale adopting the following designations: 0 - strongly disagree, 1 - rather disagree, 2 - rather agree, 3 - strongly agree. The response scale provided was intended to correspond to the respondent's degree of agreement with the statement. In addition, by adopting the given classification of responses (from 0 to 3), neutral responses were avoided and, at the same time, the excessive number of evaluation options was reduced.

Table No. 1 presents estimates of the model's parameters allowing to assess which of the examined factors statistically significantly condition the evaluation of the influence of the pre-World War II Polish cooperative tradition on the activities of current food cooperatives.

Figure 2. Distribution of respondents' answers to the question on the evaluation of the influence of the Polish cooperative tradition before World War II on the current activities of food cooperatives



Source: own elaboration based on the results of the survey conducted

The results of the survey show that the opinion of members of food cooperatives on the positive impact of the pre-World War II tradition of Polish cooperatives on their current activities is sharply divided (Figure 2). A similar percentage of respondents represent a completely different opinion in this regard (i.e., a total of 52% chose the affirmative answer and 48% the completely opposite answer).

Table 1. Estimation output of the model for assessing the positive impact of the pre-World War II tradition of Polish cooperatives on the activities of current food cooperatives

Exogenous variables	Parameter estimation	Standard error	Statistics t	Probability
Average age of members	0.21	0.072	2.92	0.0043
Higher education	0.14	0.055	2.55	0.0122
Villages	- 0.19	0.073	- 2.60	0.0105
Number of cases of 'correct prediction' = 59 (51.3%)				

Source: own development in STATA program



In the presented version of the model, there are only those parameters that are statistically significantly different from zero (Table 1). Thus, it can be concluded that the average age of the organization's members and the fact that they have higher education have a positive impact on the evaluation of the tradition of Polish cooperatives as a factor conducive to the contemporary activities of the surveyed cooperatives. The average age of members in the survey questionnaire was distinguished within ranges, and then their means were included in the modeling. Changing the age bracket to a higher one, on average, increases the odds ratio of a positive perception of the statement under investigation (i.e., "The pre-World War II tradition of Polish cooperatives is conducive to cooperative activity") by 23% under the *Ceteris Paribus* (C.P.) assumption. On the other hand, the fact of having a higher education increases the mentioned odds ratio by 15%, assuming C.P. Moreover, locating the organization in a rural area reduces the odds ratio of perceiving a positive influence of the pre-war Polish cooperative tradition on current activities by 17% under the C.P. assumption. Due to the limited volume of this study, a detailed description of the analyzed features is not included. For example, the average age of cooperative members had been recorded in the survey in age groups. Higher education corresponds to the rank scale, villages corresponds to the binary scale. In the given model, the prediction accuracy rate was 51.3%. The logit model is not directly evaluated from the perspective of the  $R^2$  coefficient of determination value. In this case, a likelihood ratio test (LR) is usually performed, which verifies the validity of all model parameters. The STATA program indicated in this case a value of empirical significance level 0.0000 confirming the validity of the estimated model.

## DISCUSSION AND SUMMARY

The new social movements are accompanied by the legacy of Polish cooperatives from before World War II. From this perspective, many customers do not perceive co-ops as entities that have yet to earn their image, i.e., they are not brand new places that represent undefined quality and require many years to earn trust. In this case, the broad customer base relies on the positive overtones of the continuation of a good brand, principles and quality derived from the historical context. The situation indicated can be related, in a way, to the franchise model, in which, although the service provider itself is unknown, the brand under which it operates says a lot about the level of quality offered. The results of the survey indicated the richness of the occurrence of many positive features of modern food cooperatives, which can be considered through their historical context. Cooperatives must therefore strive relentlessly to revive such socially important, but currently unconscious by the younger generation, values of integration, participation and cooperation, which derive their source from the Rochdelian principles (which the author writes more extensively about in the article [Zbyrowska 2022] "Rochdale

principles in the current activities of Polish food cooperatives") and derived from the ideas propounded by the Co-operative Society.

The main findings of the presented study indicate that tradition and historical context have a significant impact on respondents' perception of contemporary food cooperatives. The ordered logit model estimated in the empirical part (Table 1), moreover, objectively addresses socio-demographic factors related to education, the age of the members of the studied cooperatives and the organization's location in a rural area. Therefore, referring to the main objective of this publication, it should be emphasized that modern food cooperatives are to an important extent perceived through the prism of the image and traditions formed before World War II, which can be a valuable source of competitive advantage for these organizations. From this point of view, food cooperatives by trying to operate on the basis of principles formulated and developed by earlier generations acquire, in a sense, a good "brand." Currently in Poland there is a visible trend towards a resurgence of the "classic" cooperative movement, of which food cooperatives are just one example [Bilewicz, Potkańska 2013], as well as RWS community-supported agriculture [Skrzypczyński, Onyszkiewicz 2020]. Still, research of such entities remains quite niche in Poland. In the case of the study included in this publication, the collection of research material took place during the turbulent time associated with the COVID-19 pandemic. The pandemic period may have affected the number of responses obtained and the perception of the issues raised.

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