Exploring Trust and Trustworthiness among Cooperative Organizations Members in Greece

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Abstract

Having a feeling of trust between members helps strengthen an organization overall. For a cooperative team to be productive, cohesive and ultimately successful, trust in one another is essential. The aim of this work lies in the empirical and experimental study of the trust and trustworthiness that characterizes or not, the members of cooperative organizations in Greece. The above-mentioned purpose is accomplished by using experimental economics methods and applying the Trust Game, one of the most well-known games of Game Theory. The total number of participants that make up the research sample amounts to 210 members (N=210) distributed into four different cooperative organizations. The analysis of the results and data processing revealed the general belief of trust and trustworthiness among the participating members. At the same time the existence of statistically significant differences in both trustor's and trustee's responses was rejected.
Keywords: Cooperative Organization; Experimental Economics; Trust; Trustworthiness; Trust Game

1. Introduction

International Co-operative Alliance (ICA) states that: *"Cooperatives are people-centered enterprises owned, controlled and run by and for their members to realize their common economic, social, and cultural needs and aspirations"* (ICA, 2021). Therefore, the existence of the cooperative movement plays a key role for both the development and the upgrading of the local society as well as contributes not only to the improvement of the daily socio-economic life of its members, but also to the unemployment rate reduction (Sergaki et al., 2020). The history and tradition of Greece in cooperative organizations, especially in the primary production sector, is long and dates back to the 19th century (Patronis & Mavreas, 2004). The abovementioned were further strengthened during the recent economic crisis when the country's unemployment rate reached more than 55% in youth ages (International

Labour Organization, 2022a) and more than 25% in total (International Labour Organization, 2022b). As a result, cooperatives have been operated as a way for many people, especially young ones, to achieve a job delivering at the same time a critical blow to the unemployment rate (Kontogeorgos and Chatzitheodoridis, 2019). However, one of the major problems all cooperative organizations face is the lack of so-called "social norms" such as trust (Saz-Gil, Bretos and Díaz-Foncea, 2021). Trust constitutes a fundamental element for the existence and the development of a collective entity in which the human factor transacts and interacts (Swärd, 2016). Also, it contributes significantly to the maturation and growth of cooperation among members (James and Sykuta, 2005)**.** Hence, assuming that cooperative organizations are a social engine responsible for the local, regional and even national social development and social capital, then their members can easily be labelled as the "cogs" of this engine, while the dimension of trust as an instrumental lubricant for being properly and efficiently functional. Consequently, the higher degree of trust and trustworthiness implies restriction and, after all, abrogation of transaction costs by allowing the use of incomplete and informal contracts instead of complex ones and their costly enforcement (Ermisch et al., 2009). Nevertheless, there is always some kind of precariousness, between the transacting parties, as to whether or not an agent will be able or willing to satisfy any section of the contract in his favour. Notwithstanding this, it is a prerequisite that the interacting members remove any such concern on either side for the contract to be valid. In other words, each agent involved in a trust relationship holds that any individual loss will bring about cooperative gains that as an individual entity could not achieve (Mikulski, 2013). Fukuyama (1996) denotes that every well-functioning community, such as a cooperative organization, is based on social norms for ensuring that members can rely on each other while noone's behavior discredits the group. For achieving this, reciprocity and trust are required determinants. Pretty (2003) supports the weighting of trust and reciprocity as essential attributes for the smooth cooperation of the members and the reduction of transaction costs which result in cooperative performance and development (van Dijk, Sergaki and Baourakis, 2019). On the other hand, three economic theories signal the process by which human beings must make decisions based on their individual interest. These theories (Classical Economic Theory, Expected Utility Theory and Rational Decision Theory) treat subjects as "cog" of an alternative machine, that is, a perfectly self-regulating and cognitive machine, having the utility-maximizing as an ultimate goal (Shen and Takahashi, 2013), while questioning any social norm, advocating the same time a less emotional behavior, i.e., a more rational process of selecting goals and making decisions by the members as success factors (Rumelt, Schendel and Teece, 1991). Once, according to the last-mentioned, agents are part of an arbitrary system with selfish interests, their ultimate individual goal is to identify the most fruitful relationships from a pool of potential agents (Ramchurn, Huynh and Jennings, 2004). Despite the fact that these models, for several years, were the ambassador of human behavior and action, yet a whole set of both empirical and questionnaire studies indicate a completely different approach than what these theories predict (Fehr and Gächter, 2000; Falk and Fischbacher, 2006). The consequence of this, is the creation of some alternative economic models, known as "unexpected" utility models, to indicate a different aspect of human behavior, highlighting a more emotional point of view (Panas, 2007). In these models, actors with other-regarding preferences and concepts, such as trust, prevail over those with self-regarding preferences, such as opportunism (Charness and

Rabin, 2002; Welter and Alex, 2015; Rosati et al., 2019). The result of this frontal conflict and the disagreement between the researchers about what prevails in the relations of cooperative organizations' members was the rising of the following question which constitutes this manuscript's research objective.

In which way do people prefer to interact & transact as members of a cooperative organization along the trust spectrum? Trust or mistrust, trustworthiness or untrustworthiness?

Therefore, this specific work aims to investigate the existence of trust amongst members' interactions and transactions of agri-food-related Greek cooperative organizations. To be achieved, concepts of experimental economics and a listed game of Game Theory (Trust Game) have been adopted and implemented for cooperative members through a structured questionnaire. This technique has occurred in the past and is known as "Decomposed Game" (Perugini et al., 2003). The reason for choosing this game is the interpretation and the tracing of members' inter-organizational behavior in terms of trust while experimentally tested. The method of Purposive Sampling was selected for the sample collection because there was prior knowledge of the aims and objectives of this project. The total sample numbers 210 participants from various types of agri-food and primary sector cooperatives while for data and statistical analysis the IBM SPSS Statistics v.23 ran. This empirical/experimental study is unique for the Greek data since the concept of trust has been studied in different scientific fields than the specific one. Furthermore, it is the first time that the experimental measurement of trust between members of cooperative organizations has been attempted. Therefore, the results of this manuscript will try to touch on a very sensitive aspect of human behavior and decision-making while enriching the literature with reliable evidence.

2. The Norm of Trust

Trust plays a crucial role in almost every aspect of human relationships. It permeates and penetrates friendships, family, financial relationships and so on. People rely on the support of their friends, children trust their parents and sellers trust their buyers to pay the bill. Thus, a social scientist intuitively has an excellent reason to be interested in "trust" as a concept. Trust also seems particularly important in financial exchanges, as it is evident that a lack of trust between trading partners severely hinders market transactions (Fehr, 2009). Various research that has been carried out, related to organizational and management sciences, has highlighted the valuable role that the concept of trust plays. Maintaining it, contributes mostly to the effectiveness of both inter-personal and inter-organizational relationships (McAllister, 1995). Researchers have concluded that trust strongly influences an organization's management, both in terms of coordination and control over its institutional framework (Shapiro, 1990) as well as at the interpersonal levels of the organization (Granovetter, 2002). Due to the economic operation is located and integrated into social relationships (Larson, 1992), researchers argue that the effectiveness of complex coordinated action systems occurs only when different interdependent factors work together harmoniously. Trust is a factor and perhaps the most determined one (Seabright, Levinthal and Fichman, 1992). However, since the most of social and economic situations are not entered into by some kind of contract (Davis, 1992), in

this way, when behavior is not enforced by certain rules and laws then people tend to rely on the norm of (inter-personal) trust (Rietz et al., 2017). Interpersonal trust, as a determining factor, becomes able to facilitate cooperation between members as well to enable coordinated social interactions (Coleman, 1988). This leads to a reduction of the need for monitoring individuals' behavior and the creation of special contracts (Williams, 2001). Over the last three decades, there has been a significant augmentation in the empirical study of the norm of trust. The progress and evolution of experimental tools for measuring it (Fehr, Kirchsteiger and Riedl, 1993; Berg et al., 1995), its determinants (Bohnet and Zeckhauser, 2004) as well as the considerable body of measurements in international databases greatly facilitated the experimental research (Schechter, 2006). At the same time, interpersonal trust plays also a key-role in the fields of psychology, sociology and economics as well as in those of strategy, negotiation and organizational behavior (Currall and Judge, 1995; Zaheer, McEvily and Perrone, 1998; Polzner et al., 2006). Thus, trust finds fertile ground in a wide range of scientific fields (Bohnet et al., 2008). The effect of trust on every community and society is extremely important. Namely, there is a rapidly growing body of research and evidence in the world literature which indicates that trust between people reduces transaction costs, enhances cooperation and therefore has a significant impact on economic and social development (Fukuyama, 1996; Beugelsdijk et al., 2004; Bohnet et al., 2008). Newton (2007) argued that the continuity of people's economic and social life could only be achieved through the alley of trust and this is because all kinds of interactions that take place daily between subjects are not connected and linked to each other with any form of personal relationship except the norm of trust.

In addition, interpersonal trust has been identified as an integral part of a team effort over the past decade. Researchers even emphasize that it is a dominant ingredient for developing effective teamwork processes and therefore, for the successful performance of a team (Fehrler and Kosfeld, 2013; Czekaj and Stecko, 2016; Neelam et al., 2016; Kappmeier, Guenoun and Fahey, 2021). The research of Hassan et al., (2012) is worth mentioning, which emphasizes and highlights that interpersonal trust is a principal and critical point for developing trust-building practices in an organization. These practices lead to a based-trust model, which is the driving force for the reinforcement of commitment and productivity within the organization.

Finally, although no direct measurement of the trust concept was made in the research of Apriono and his colleagues, the authors nevertheless concluded and showed a positive and, in most cases, significant relationship to concepts related to the performance of volunteers in organizations such as Empowerment, Work Engagement, Organizational Justice and Commitment (Apriono et al., 2021). Moreover, all of the concepts mentioned above are inextricably linked to the concept of trust, that is, the basis of that edifice (Brower et al., 2008; Yang and Mossholder, 2010; the Michael Page team, 2021).

2.1 Trust as Antidote for Inter-organizational Dysfunction· the Principal-Agent Problem

The phenomenon emerges and occurs in a collective organization when there is a conflict of interests among many participants simultaneously (management, members, suppliers, consumers, etc). In essence, the problem is due to the fact that the trustee (e.g., administration) acts on behalf of the trustor (e.g. members) and acts in such a way that it does not serve the interests of his/her trustor (the principal). That is, the trustee (the agent) can act in the interests of the trustor (the principal) but does not do

so, either because he/she evades or because he/she acts in favor of his/her own. In such situations, the trustee usually attempts to restrict these behaviors, which implies a limitation in achieving the group's goals. Therefore, there is an urgent need for two mechanisms where the behavior of the trustor and the trustee are harmonized and function as one. The component that connects them is called trust and can operate as an informal mechanism for contract completion and/or mitigation of the "Principal-Agent Problem" (Sloof et al., 2003; Österberg and Nilsson, 2009).

3. Methodology, Data and Research Area

In what follows, the applied research methodology, the sample data and the way they were collected as well as the research area, i.e., the geographical regions of the country where the participants come from are successively described and analyzed.

3.1 Methodology

As mentioned before, this study aims to empirically assess trust using experimental economics methods. More specifically, a well-known and listed game of Game Theory was adopted, appropriately formulated and applied through a questionnaire to the members of various cooperative organizations. This game is known as the "Investement Game" or "Trust Game" (Berg, Dickhaut and McCabe, 1995). According to the Game Theory, games are designed to be implemented in real life and therefore participants interact with each other in realistic conditions, which in our case do not take place. However, such a variation is not entirely unknown in the world literature and the academic / research community. Forn instance, in 2003 Perugini and his colleagues (*see* Perugini et al., 2003), utilized this strategy by calling the process "Decomposed Game". This formula is characterized by one main drawback. Due to its remote application, direct interaction between the parties is impossible. However, one of its strengths is that the participants are forced to play and act in every role each game has, separately. Through this, the temperament, the thought and the way of reaction of each Player are examined under different roles, conditions and scenarios. Conceptually in this way both trust or not and trustworthiness or not will be examined by each participant/member separately.

3.1.1 The Trust Game

This game is designed to measure and highlight trust and distrust in socio-economic decisions as it is the cornerstone of individuals' economic and social interactions (Witteloostuijn, 2003). Also, in our case, it is going to infer whether the members of the cooperative organizations are possessed by trustworthiness and reciprocity, in which case they will send back amounts, or by untrustworthiness and opportunism, in which case they will prefer to keep the entire amount for themselves.
The Trust Game involves two Players who are anonymous and randomly distributed. Both of them receive a sum of money from the experimenter. Then, the first Player *(sender or trustor)* is asked to send a part of his endowment to the second Player *(receiver or trustee)*, which can be equal to zero. If the amount is equal to zero then the game ends and both end up with their initial cash amount. If the amount is not equal to zero then the money sent by the first Player is tripled by the experimenter and returned to the second Player (the second Player is been informed in advance). The second Player *(trustee)*, after receiving the amount from the experimenter, is asked to return a part of the already tripled money the first Player *(trustor)*. Of course, this amount can be equal to zero, too. From a descriptive point of view, the game is played somewhat like this (*see* figure 1). Both the first Player (P1) and the second Player (P_2)

receive the same sum of money ($C_{i,j}$), with i=P_1 and j=P_2, which is fixed. The first Player (P_1) offers (X) part of his/her money to the second Player (P_2), where $0 \leq X \leq C_i$. If (X=0) then ($P_1=P_2=C_{i,j}$). If ($X \neq 0$) then the experimenter triples the amount given by the first Player (P_1) and returns it to the second Player (P_2) as 3(X). The second Player (P_2) then returns part (Y) of the tripled money he/she received such that $0 \leq Y \leq 3X$ to the first Player (P_1). If (Y=0) then ($P1 = C_i - X$, with $X \neq 0$) and ($P_2 = C_j + 3X$, with $X \neq 0$). If $Y \neq 0$ then [$P1 = (C_i - X) + (Y)$, with $X, Y \neq 0$] and [$P2 = C_j + 3X - (Y)$, with $X, Y \neq 0$].

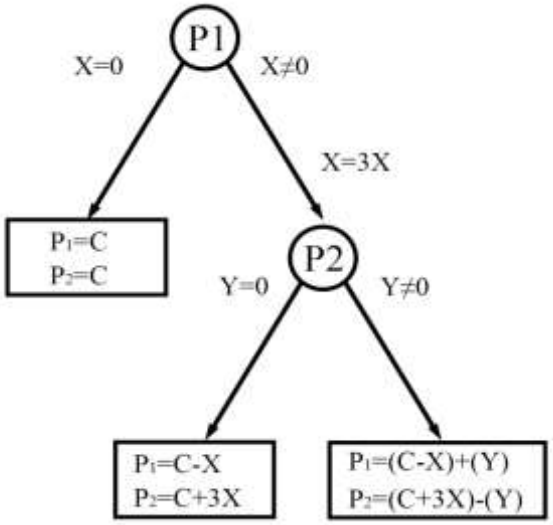

Fig.1. *The tree form of the Trust Game*
Source: Author's Calculation

3.1.1 Nash Equilibrium and Pareto Efficiency

Assuming that Players have purely self-interested preferences and under the usual economic assumptions of rationality in the Trust Game a Nash equilibrium, even with perfect information among the Players, arises (Becchetti, Castriota and Conzo, 2013).

- Player 1 (trustor) will not show trust and therefore will not send any of his original amount of money,
- Player 2 (trustee) will keep the entire amount of money for himself/herself.

Hence, the optimal strategy is:

[mistrust, untrustworthiness] or [do not send, do not respond]

Even though this behavior, according to Rational Decision Theory, is the optimal for both Players, instead, according to Pareto Efficiency (or Pareto Optimality), both Players would increase their economic well-being and would achieve greater economic utility if (Macy and de Rijt, 2007):

- Player 1 (trustor) will send a positive offer,
- Player 2 (trustee) would return a corresponding amount which, however, should in no case be less than the amount he/she received (before tripling).

3.2 Data Collection

First, the survey was designed and ran during the summer of 2020, from June to August. The game was attached to a specially designed document using the Google Forms online platform and distributed via e-mail to cooperatives of various statutory bodies. The contact details of the cooperative organizations were obtained from the official archive of the Hellenic Ministry of Labor and Social Affairs and the Pan-Hellenic Official Support Center for Social and Solidarity Economy. Consequently,

the population numbered 952 cooperatives of different types. A corresponding number of e-mails were released while a total of 210 (N=210) fully completed questionnaires (or 22.10%) were returned. For the data collection, the Purposive Sampling method was chosen, while the statistical software of IBM SPSS Statistics v.23 was selected for the results analysis. Also, for creating diagrams and some calculations the Microsoft Office Excel 2007 was used, while the Math Type software was used for mapping econometric models and equations. Finally, regarding ethics and personal data issues, the e-mail sent was fully harmonized and coordinated with them and the General Data Protection Regulation (GDPR). More specifically, a remark note urged the respondent to complete the questionnaire following his/her willingness while giving him/her every right for ignoring it.

3.2.1 Purposive Sampling Method

In terms of the sample, the rational selection of it must be aligned with any epistemological, axiological and ontological perspective of view while considering the aims and needs of the study (Campbell et al., 2020). So, the way chosen for data collection is known as the Purposive Sampling Method. In more detail, this method is characterized as a non-probability sampling method and that is because the elements selected to be included in the sample are at the discretion of the researcher. Regarding those as mentioned above and according to Black (2016), the researcher is able to derive a representative sample related to the population that has been studied, by saving time and money. One of the main divisions this method is consisted of is known as Homogeneous Sampling. This sub-category focuses on a particular subgroup in which all the sample members are similar, such as a particular occupation (Dudovskiy, 2016). Thus, our sample belonging to this sub-method could be labeled as representative due to the principle held by all the respondents, i.e., being members of cooperative organizations.

3.3 Research Area

The research area coverage can be characterized as satisfactory. The sample comes from 40 different prefectures of the total of 51 that Greece is composed of, i.e., 78.4% of the country's geographical range (see figure 3). The gray-red shaded area means that there are no data from these prefectures (number 3, 4, 6, 9, 12, 24, 26, 28, 29, 30 and 33).

Fig.2. *The Geographic Coverage of the Sample*
Source: Author's Calculation

4. Results

The first part of the specially designed document included demographic questions of the respondents-members such as gender, the type of cooperative organization they belong to, the city where the cooperative is established, etc. To do this, the Trust Game was modified to obey the needs of this particular research. Through, various scenarios and cases, the participants were asked to answer and interact in such a way that each participant played each role the game has (Trust & Trustee).

4.1 Demographic Findings

The survey sample is not equally distributed in respect to gender variable, males (64.3%) and females (35.7%). This is not surprising because the percentage of women working in the primary production sector is only 39.7% (Hellenic Ministry of Interior-General Secretariat for Gender Equality, 2018). Therefore, from this number a smaller piece of cake will be a member of a cooperative, at the end. The typical normal distribution characterizes the sample's age since the age range of 38-47 is 31%. The two previous age categories account for 32.9%, while the next two hold 36.2% of the sample, respectively. Most of the participants are members of Agricultural Cooperatives (63.3%), followed by members of Social Cooperative Enterprises (15.7%) while members of Women's Cooperatives occupy the third place (11.4%). The remaining 9.5% belongs to Producers' Cooperative Organizations. Regarding the number of members, one out of five cooperatives in the sample have more than 100 members (20%). Almost $^{1}/_{4}$ of the sample comprises cooperative organizations with up to 15 members (24.3%), followed by 21% the organizations that apart from 16-30 members. Finally, 16.2% of the participants belong to cooperative organization with more than 50 members.

Tab. 1. *Demographic Characteristics of the Sample*

	Frequency (Count)	*Percentage (%)*
Gender		
Male	135	64.3%
Female	75	35.7%
Age		
18-27	17	8.1%
28-37	52	24.8%
38-47	65	31%
48-57	49	23.3%
58+	27	12.9%
Type of Cooperative Organization		
Agricultural Cooperative	133	63.3%
Women's Cooperative	24	11.4%
Social Cooperative Enterprises	33	15.7%
Producers' Organization	20	9.5%
Member's Number		
≤15	51	24.3%
16-30	44	21%
31-50	16	7.6%
50+	34	16.2%

100+	42	20%
500+	17	8.1%
1000+	6	2.9%

Source: Author's Calculation

4.2 Experimental Findings

As in the ordinary two-counterpart trust game, the level of trust is set as the amount of endowment Player 1 (trustor) sends to an anonymous and unknown Player 2 (trustee). We are defining this transfer as X^{TR}. Likewise, trustworthiness is set as the part of the total tripled amount that Player 2 (trustee) will return to Player 1 (trustor). This transfer is defined as Y^{TE}. Since we have adopted the "Decomposed Game" strategy method, each participant/member is invited to perform both the role of Player1 and Player 2, in other words, they will make allocations *à la* trustor and *à la* trustee, too.

4.2.1 First Round Analysis

In this round Player 1 (trustor) had at his/her disposal initial funding of 50€ (non-real), part of which he/she should offer to the second Player (trustee). This amount is tripled and handed over by the experimenter to the second Player that the first Player was aware of. Depending on the allocations of the Player 1 (trustor), the trust or mistrust of each member/participant will be measured.

Tab. 2. *The First Round of Allocations is based on the Type of Cooperative*

Type of Cooperatives	**Trustor's Allocations**				
	X^{TR}=0€ (Nash Best Move)	0€< X^{TR}<25€ (0<X^{TR}<50%)	X^{TR}=25€ (X^{TR}=50%)	25€< X^{TR}<50€ (50%<X^{TR}<100%)	X^{TR}=50€ (X^{TR}=100%)
Agricultural Cooperative*	9.8%	44.%	12.8%	7.6%	25.4%
Women's Cooperative*	4.2%	37.5%	25%	0%	33.3%
Social Cooperative Enterprise*	18.2%	33.3%	21.3%	3%	24.2%
Producers' Organization*	15%	20%	45%	0%	20%
Total	**11%**	**39.7%**	**18.6%**	**5.3%**	**25.4%**

* *% within Type of Cooperatives,*

Source: Author's Calculation

Various actions and decisions are observed in the first stage of the Trust Game. Starting with the most suspicious participants but also those who acted rationally, according to the Rational Decision Theory, it can be seen from the above table that the members of Social Cooperative Enterprises have the highest rates of mistrust since 18.2% of the first movers decided to keep the entire amount of the available for themselves offering 0€ to the partner member. By following the Nash equilibrium strategy, these members may not have increased their financial well-being (Pareto Efficiency). Still, they did prevent a possible "betrayal" and untrustworthiness of the second mover. On the contrary, the smallest percentage of mistrustful members is found within the Women's Cooperatives and then among the Agricultural Cooperatives.

On the other side, 100% of the available funding decided to send 33.3% of the members of the Women's Cooperatives, thus showing complete confidence in the

anonymous partner member, that he will not be betrayed. They are followed by members of Agricultural Cooperatives with a percentage of 25.4%, while the least ready participants to trust and send the entire amount are those who belong to Producer Groups. Therefore, the above two observed attitudes and behaviours it implies that the members of the Women's Cooperatives and then those of the Agricultural Cooperatives are willing to trust the other member/partner.

However, it is worth mentioning that almost half of the participants coming from Producer Groups (45%) decided to offer half of their available initial capital (i.e. 25€). This reaction also underlies an intention of trust but, simultaneously, an incentive for the second Player to respond, behave reliably and reciprocate with a corresponding share. Summarizing the first round of the trust game, we can denote, that in general, the cooperative members surveyed seem to trust the other cooperative members/partners, as about 9 out of 10 offered a non-zero share. Specifically, only 11% of the sample decided to keep the entire amount, offering 0€, stepping on the Nash Equilibrium Strategy and being characterized by mistrust. Also, this 11% is in full agreement with the general findings that support that less than 20% of participants decide to act completely rationally by offering a zero amount of money (Shen & Qin, 2014: Holt, 2019).

4.2.2 Second Round Analysis

While implementing the second round, participants were asked to return part of the money they received from the first mover (trustor) and after tripling (it can also be equal to 0 or 100% of the piece of cake they received). Essentially, because as stated earlier the Players were playing both roles in the game, they were given five hypothetical offers after tripling (15€, 30€, 60€, 120€ & 150€) that were hypothetically sent by the first Player. That is, Player 1 (trustor) sent 5€, Player 2 (trustee) received 15€, and so on. These virtual allocations cannot equal to zero because if the first mover sends a non-monetary value, the game ends automatically. Below are the members' responses to the hypothetical handouts they received from the Player 1 (trustor) when the first round was run. The trustees' responses are also examined under the variables of type of cooperative organization.

Tab. 3. *The Second Round Responses based on the Type of Cooperative*

Type of Cooperative	**Trustee's Responses (Y^{TE})**					**How much money do you return to the other member/partner from...?**
	X^{TE}=0€	0<X^{TE}<50%	X^{TE}=50%	(50%<X^{TE}<100%)	X^{TE}=100%	
Agricultural Cooperative*	7.5%	19.7%	49.6%	9%	14.2%	15€
Women's Cooperative*	4.3%	30.4%	48%	13%	4.3%	
Social Cooperative Enterprise*	18.2%	33.3%	27.3%	12.1%	9.1%	
Producers' Organization*	20%	15%	35%	20%	10%	
Total:	**10%**	**22.5%**	**44.5%**	**11%**	**12%**	
Agricultural Cooperative*	6%	18%	54.9%	8.3%	12.8%	30€
Women's Cooperative*	0%	34.7%	48%	13%	4.3%	
Social Cooperative Enterprise*	6%	27.2%	48.6 %	12.2%	6%	
Producers' Organization*	15%	20%	50%	10%	5%	
Total:	**6.2%**	**21.6%**	**52.6%**	**9.6%**	**10%**	

Agricultural Cooperative*	5.1%	21.9%	53.4%	6.8%	12.8%	60€
Women's Cooperative*	0%	26.1%	52.2%	13%	8.7%	
Social Cooperative Enterprise*	6.1%	30.2%	51.5%	6.1%	6.1%	
Producers' Organization*	15%	25%	50%	5%	5%	
Total:	**5.7%**	**23.9%**	**52.6%**	**7.3%**	**10.5%**	
Agricultural Cooperative*	5.3%	23.5%	51.9%	6.8%	12.8%	120€
Women's Cooperative*	0%	30.4%	47.8%	17.3%	4.3%	
Social Cooperative Enterprise*	6.1%	30.3%	39.4%	18.3%	6.1%	
Producers' Organization*	15%	25%	50%	5%	5%	
Total:	**5.7%**	**25.5%**	**49.3%**	**9.7%**	**10%**	
Agricultural Cooperative*	5.3%	22.1%	52.6%	7.6%	12.4%	150€
Women's Cooperative*	0%	30.4%	47.8%	17.3%	4.5%	
Social Cooperative Enterprise*	6.1%	30.2%	36.4%	21.2%	6.1%	
Producers' Organization*	15%	25%	50%	5%	5%	
Total:	**5.7%**	**24.5%**	**49.2%**	**10.6%**	**10%**	

* *% within Type of Cooperatives*

Source: Author's Calculation

The table above shows Player's 2 (trustee) responses per hypothetical allocation received from Player 1 (trustor). It is easy to see that, overall, the members who followed what the Nash equilibrium defines, keeping the entire amount for themselves, maximizing their financial well-being but at the same time behaving with mistrust toward member of the cooperative organization, did not exceed 10% of the sample in any scenario (see the first column). On the opposite hand, participants who decided to behave reliably and not only to return a positive amount but, simultaneously, the entire piece to Player 1, i.e., to its previous owner, fluctuated in corresponding percentages. More precisely, the total percentage of participants who acted this way did not exceed 12%. Thus, it is established that extreme behaviours possessed just 20% of the sample. In these cases, even if the participants are characterized by reciprocal behaviour, this is an irrational decision because, from a microeconomic point of view, once people are economic utility-maximizers, any maximization of economic well-being fails. Also, a move of returning the whole amount stands against the Nash Equilibrium Strategy (Player 2 must not respond) as well as the Pareto Efficiency (Player 2 must return a positive, at least equal to the one received before tripling). Worth mentioning is the fact that one out of two participants decided to return half of the money they received. Even more commendable is that this is realized in each of the five scenarios. That is, members, regardless of the amount of money they received returned half of the money in a percentage of about 50% of the total sample. This attitude is characterized by a clear intention of trustworthiness and reciprocity.

4.2.3 Hypothesis Testing

We do presume that the allocations given and returned are conditional on the type of cooperative each member belongs to. Hence, monetary interactions (both directions) will be examined based on the afore-mentioned parameter. Thus, and since we previously defined the trust Player 1 (trustor) provides to Player 2 (trustee) as X^{TR}, now the research hypothesis will be examined through the Analysis of Variance (ANOVA) if the status *(S)* of each participant (i.e., what type of cooperative organization he/she belongs to) affects the amount of the monetary division. Also, we

take for granted that the acronyms that represent the status of each member are labeled by the words that characterize each cooperative organization (e.g., *AC=Agricultural Cooperative, PC=Producers' Organization* and so on). So, the first research hypothesis is the following:

Trustor's Transfer:

H_{0A}: $X^{TR}|S^{AC} = X^{TR}|S^{WC} = X^{TR}|S^{SCO} = X^{TR}|S^{PO}$

H_{1A}: $X^{TR}|S^{AC} \neq X^{TR}|S^{WC} \neq X^{TR}|S^{SCO} \neq X^{TR}|S^{PO}$

Tab. 4. *The Descriptive Analysis and the ANOVA for the Trustor's Allocations*

Descriptive Analysis:	Mean	Std. Deviation	Std Error		
Agricultural Cooperative	24.47	17.15	1.49		
Women's Cooperative	28.96	16.28	3.32		
Social Cooperative Enterprise*	23.97	18.21	3.17		
Producers' Organization	23.65	16.28	3.64		
Total:	**24.83**	**17.09**	**1.18**		
Analysis of Variance (ANOVA):	Sum of Squares	df	Mean Square	F-test	Sig.
Between Groups	478.193	3	159.398	0.542	0.654
Within Groups	60541.639	206	293.891		
Total:	**61019.829**	**209**			

Significance level: 0.05

Source: Author's Calculation

Table 4 initially presents the descriptive analysis of the two variables. It is observed that the highest average offer is made by the members of the Women's Cooperatives (28.96€), while in second place with 24.47€ are the offers of the members of the Agricultural Cooperatives. The other two categories of cooperative organizations are almost equal in terms of the average offer at 23.97€ and 23.65€, respectively. The total offer's mean for the survey sample is nearly 50% of the available funding that the participants had or more precisely, 24.83€. The latter demonstrates that members, generally, seem to trust the other member and are willing to sacrifice personal gain to maintain trust in member relationships. Also, in table 4, the Analysis of Variance is presented to examine the possibility that the differences in the mean of Player 1's (trustor) allocations per cooperative organization are statistically significant. As the results of the F-test admit, there are no statistically significant differences in the mean pecuniary allocations; therefore, the form of the cooperative organization to which the members belong does not play an essential role in the amount of the offer and therefore in the level of trust [F(3,206) = 0.542, p-value = 0.654 > 0.05]. Thus, H_{oA} is not rejected in a 95% confidence interval.

The second research hypothesis concerns Player 2's (trustee) responses for all scenarios by type of cooperative organization. Therefore, we have:

Trustee's back Transfer:

H_{0B}: $Y^{TE}{}_{15€,\ 30€,\ 60€,\ 120€,\ 150€}|S^{AC} = Y^{TE}{}_{15€,\ 30€,\ 60€,\ 120€,\ 150€}|S^{WC} = Y^{TE}{}_{15€,\ 30€,\ 60€,\ 120€,\ 150€}|S^{SCO} = X^{TE}{}_{15€,\ 30€,\ 60€,\ 120€,\ 150€}|S^{PO}$

H_{1A}: $Y^{TE}{}_{15€,\ 30€,\ 60€,\ 120€,\ 150€}|S^{AC} \neq Y^{TE}{}_{15€,\ 30€,\ 60€,\ 120€,\ 150€}|S^{WC} \neq Y^{TE}{}_{15€,\ 30€,\ 60€,\ 120€,\ 150€}|S^{SCO} \neq Y^{TE}{}_{15€,\ 30€,\ 60€,\ 120€,\ 150€}|S^{PO}$

Tab. 5. *The Descriptive for Trustee's Responses*

Descriptive Analysis:	Mean	Std. Deviation	Std. Error	How much money do you return to the other member/partner from...?
Agricultural Cooperative	7,69	3,82	0,33	
Women's Cooperative	7,15	2,75	0,57	
Social Cooperative Enterprise	6,35	4,15	0,72	S_1: 15€
Producers' Organization	6,88	4,43	0,99	
Total:	**7,34**	**3,84**	**0,27**	
Agricultural Cooperative	15,38	7,16	0,62	
Women's Cooperative	14,65	4,68	0,99	
Social Cooperative Enterprise	14,24	6,48	1,13	S_2: 30€
Producers' Organization	13	7,15	1,16	
Total:	**14,89**	**6,82**	**0,47**	
Agricultural Cooperative	30,35	14,32	1,24	
Women's Cooperative	32,17	11,16	2,33	
Social Cooperative Enterprise	27,28	13,18	2,29	S_3: 60€
Producers' Organization	25,5	14,68	3,28	
Total:	**29,6**	**13,9**	**0,96**	
Agricultural Cooperative	61,44	29,89	2,59	
Women's Cooperative	61,52	18,92	3,94	
Social Cooperative Enterprise	56,21	27,53	4,79	S4: 120€
Producers' Organization	50,50	31,03	6,94	
Total:	**59,58**	**28,67**	**1,98**	
Agricultural Cooperative	77,11	36,74	3,19	
Women's Cooperative	77,61	23,69	4,93	
Social Cooperative Enterprise	72,73	35,84	6,24	S_5: 150€
Producers' Organization	62	37,47	8,38	
Total:	**75.02**	**35,53**	**2,46**	

Source: Author's Calculation

Table 5 contains the descriptive analysis for each of the five scenarios separately, to which Player 2 (trustee) was asked to respond. The most critical information that emerges from the data analysis is that in each scenario, the total average back transfer is close to or exceeds half of the hypothetical money the trustees received from the trustors. The former is important evidence of trustworthiness, which acts as a reward for the trust received by the trustees from the trustors during the implementation of the first round of the trust game. Individually, however in this case the members of the women's and agricultural cooperatives seem to value more the good transfers they received and reciprocate with equally high shares, higher even than the members of the other two types of cooperatives. More focused members of women's cooperatives made the best average monetary responses in three of the five scenarios (S_3: 32.17€, S_4: 61.52€, S_5: 77.61€). The best responses, after the previous ones, are made by the members of the Agricultural cooperatives, (S_3: 30.35€, S_4: 61.44€, S_5: 77.11€), which, however, made the best back transfers in the first two scenarios (S_1: 7.69€, S_2:15.38€). Contrastingly, the members of the other two types of cooperatives, Social Cooperatives and Producer's Organizations, seemed more reserved and decided to keep more of the available amount for themselves. It should be noted that the back transfers they made were also positive proving their trustworthiness; however in many cases the average amount returned was quite different from those of the Agricultural and Women's Cooperatives (*see* Table 5).

Tab. 6. *The ANOVA for the Trustee's Responses*

Analysis of Variance (ANOVA):	Sum of Squares	df	Mean Square	F-test	Sig.
Hypothetical Scenario of 15€					
Between Groups	54,031	3	18,010	1,225	0,302
Within Groups	3013,758	205	14,701		
Total:	**3067,789**	**208**			
Hypothetical Scenario of 30€					
Between Groups	117,998	3	39,329	0,844	0,471
Within Groups	9557,981	205	46,624		
Total:	**9678,969**	**208**			
Hypothetical Scenario of 60€					
Between Groups	741,299	3	247,10	1,284	0,281
Within Groups	39446,940	205	192,424		
Total:	**40188,239**	**208**			
Hypothetical Scenario of 120€					
Between Groups	2571,866	3	857,289	1,044	0,374
Within Groups	168379,081	205	821,361		
Total:	**170950,947**	**208**			
Hypothetical Scenario of 150€					
Between Groups	4296,330	3	1432,11	1,136	0,335
Within Groups	258328,550	205	1260,139		
Total:	**262624,88**	**208**			

Significance level: 0.05

Source: Author's Calculation

In the table above, the Analysis of Variation was carried out for each scenario separately. As can be understood from the data in the table, although in the descriptive analysis, differences were found in the average of the responses, however, no statistically significant difference emerged. Notably, in all scenarios ran the p-value is greater than 5%, defined as the confidence interval. Thus, in this case also H_{0B} is accepted (p-value$_{S1, S2, S3, S4, S5}$ > 0.05).

5. Discussion and Study Limitations

This manuscript deals with an economic experiment conducted on members of cooperative organizations to ascertain whether cooperative membership enhances trust and trustworthiness or distrust and untrustworthiness. Primarily through the adoption, adjustment and execution of the Trust Game, we envisage the examination of members' behavior and attitude when they have to interact and transact financially with other members of cooperative organizations. Also, through the execution of this specific game, it was examined whether the members with their choices help or face one of the most important cooperatives' management problems· the Principal-Agent Problem, to which high levels of trust within the group act as an antidote. This present study adds value to both the global and domestic literature by enriching and enhancing the available evidence on the empirical mapping of trust. Notationally, in Greece it is the first time that an experimental measurement of trust in members of cooperative organizational is attempted and we hope that this will be the trigger for further empirical study on the subject of the cooperative ideal. Even if this study represents a step forward in establishing an experimental way of measuring trust and in theory building on trust in cooperative organizations, even so, a body of limitations exists. The foremost limitation is the research funding. As declared, sums of money

refer to hypothetical monetary units and not to tangible ones. Therefore, running the experiment with actual funding might had caused variation in members' behaviors. So, the conclusions should be carefully explicated. Another limitation pertains to the fact that the research was conducted remotely and not face-to-face. This impersonal condition affects the participants' emotional reactions since they received hypothetical scenarios through a screen and not real offers from other members. Cautions in the interpretation of these results are also associated with the limitation that the players could not interact directly with the counterpart.

6. Conclusions

The experiment's findings confirm that the trustors decided to show trust and offer positive and high allocations to the trustees (almost half of his/her available endowment), sacrificing his/her personal monetary benefit and standing against what Classical Economic Theory and Rational Decision Theory define. More specifically, among the members of Women's Cooperatives, the concept of trust is particularly appreciated since they offered the highest allocations. Since, trust is a form of social capital that can produce both physical and human capital (Coleman, 1988) and facilitate coordination and cooperation for mutual benefit (Putman, 1995), only actors who trust each other can cooperate, i.e., exchange information, resources, etc (Titlestad et al., 2019). Here, participants who are part of women's cooperatives follow and identify with the above. Thus, social capital (from the point of view of trust) is increased in this category of a cooperative. On the other hand, members of Social Cooperative Enterprises and Producer Organizations did offer positive allocations, but showing less trust. An explanation that can be given here is the lack of cooperative education regarding the values and ideals of social capital and, by extension, trust. The education of the members of cooperative organizations on concepts of social character and social-preferences is a primary prerequisite to maintain and evolve the institution of the cooperative movement. Therefore cooperative education and training are among the main areas of intervention in countries where cooperative activities exist (Kunhu, 2011). Generally, the success of a cooperative movement depends on the cooperative education and training of members as well as the application of the principles, practice and methods of cooperation. Tchami, (2007) described co-operative education to be a set of practices and means used to make members aware of the co-operative principles and advantages. Therefore, both education and training are therefore essential for the proper development of any cooperative organization (Anania and Rwekaza, 2018). It is very worth noting that only 11% of trustors followed the Nash equilibrium strategy by keeping the entire amount of money without trusting Player 2 (trustee). On the opposite side now, the participants acting as trustees appeared to be possessed of trustworthiness as they returned half of the available, too, in each of the five hypothetical scenarios. With this attitude, they clearly stated that they wish the existence of trust and trustworthiness within the cooperative organizations that are members, which is also the difference maker with the private companies. Despite this fact, there was also a percentage of members (10%, 6.2%, 5.7%, 5.7% & 5.7%, respectively for each scenario) concerned about acting untrustworthy and keeping the entire amount received, returning €0. This set of participants acted in their own economic self-interest, maximizing their economic utility. Finally, a general conclusion drawn from this research is that the participating members did not seem to

want to exploit the other member of the cooperative organization, while showing both trust and trustworthiness.

References

Anania, P. and Rwekaza, G., 2018. Co-Operative Education and Training as A Means to Improve Performance in Co-Operative Societies. *Sumerianz Journal of Social Science*, 1(2), pp.39-50.

Apriono, M., Titisari, P., Handriyono, H., Suroso, I. and Maridelana, V., 2021. The Mediating Role of Work Engagement and Commitment on Empowerment and Organizational Justice in Volunteers' Performance. *The Journal of Behavioral Science*, 16(3), pp.42-58.

Becchetti, L., Castriota, S. and Conzo, P., 2013. Cooperative Membership as a Trust and Trustworthiness Reinforcing Device: Results from a Field Experiment in the Philippines. *Journal of Development Studies*, 49(3), pp.412-425.

Berg, J., Dickhaut, J. and McCabe, K., 1995. Trust, Reciprocity, and Social History. *Games and Economic Behavior*, 10(1), pp.122-142.

Beugelsdijk, S., de Groot, H., Linders, G. and Slangen, A., 2004. Cultural distance, institutional distance and international trade. In: *44th Congress of the European Regional Science Association: "Regions and Fiscal Federalism"*. Porto, Portugal: European Regional Science Association (ERSA).

Black, K., 2016. *Business Statistics: For Contemporary Decision Making*. 9th ed. Hobokenn, NJ: John Wiley & Sons.

Bohnet, I. and Zeckhauser, R., 2004. Trust, risk and betrayal. *Journal of Economic Behavior & Organization*, 55(4), pp.467-484.

Bohnet, I., Greig, F., Herrmann, B. and Zeckhauser, R., 2008. Betrayal Aversion: Evidence from Brazil, China, Oman, Switzerland, Turkey, and the United States. *American Economic Review*, 98(1), pp.294-310.

Brower, H., Lester, S., Korsgaard, M. and Dineen, B., 2008. A Closer Look at Trust Between Managers and Subordinates: Understanding the Effects of Both Trusting and Being Trusted on Subordinate Outcomes. *Journal of Management*, 35(2), pp.327-347.

Campbell, S., Greenwood, M., Prior, S., Shearer, T., Walkem, K., Young, S., Bywaters, D. and Walker, K., 2020. Purposive sampling: complex or simple? Research case examples. *Journal of Research in Nursing*, 25(8), pp.652-661.

Charness, G. and Rabin, M., 2002. Understanding Social Preferences with Simple Tests. *The Quarterly Journal of Economics*, 117(3), pp.817-869.

Coleman, J., 1988. Social Capital in the Creation of Human Capital. *American Journal of Sociology*, 94, pp.S95-S120.

Coleman, J., 1988. Social Capital in the Creation of Human Capital. *American Journal of Sociology*, 94, pp.S95-S120.

Currall, S. and Judge, T., 1995. Measuring Trust between Organizational Boundary Role Persons. *Organizational Behavior and Human Decision Processes*, 64(2), pp.151-170.

Czekaj, F. and Stecko, J., 2016. Importance of Trust and Trust Management by Organizations. *Humanities and Social Sciences quarterly*, XII(23), pp.93-102.

Davis, J., 1992. *Exchange (Concepts Social Thought)*. Minneapolis, Minnesota, US: University of Minnesota Press.

Dudovskiy, J., 2016. *The Ultimate Guide to Writing a Dissertation in Business Studies: A Step-by-Step Assistance.*. 1st ed. research-methodology.net.

Ermisch, J., Gambetta, D., Laurie, H., Siedler, T. and Uhrig, S., 2009. Measuring people's trust. *Journal of Royal Statistical Society*, 172(4), pp.749-769.

Falk, A. and Fischbacher, U., 2006. A theory of reciprocity. *Games and Economic Behavior*, 54(2), pp.293-315.

Fehr, E. and Gächter, S., 2000. Fairness and Retaliation: The Economics of Reciprocity. *Journal of Economic Perspectives*, 14(3), pp.159-182.

Fehr, E., 2009. On the Economics and Biology of Trust. *Journal of the European Economic Association*, 7(2-3), pp.235-266.

Fehr, E., Kirchsteiger, G. and Riedl, A., 1993. Does Fairness Prevent Market Clearing? An Experimental Investigation. *The Quarterly Journal of Economics*, 108(2), pp.437-459.

Fehrler, S. and Kosfeld, M., 2013. Can You Trust the Good Guys? Trust within and between Groups with Different Missions. *Economics Letters*, 121(3), pp.400-404.

Fukuyama, F., 1996. *Trust: The Social Virtues and The Creation of Prosperity*. 1st ed. New York: The Free Press.

Granovetter, M., 2002. Economic Action and Social Structure: the Problem of Embeddedness. *Journal of Economic Sociology*, 3(3), pp.44-58.

Hassan, M., Toylan, N., Semerciöz, F. and Aksel, I., 2012. Interpersonal Trust and Its Role in Organizations. *International Business Research*, 5(8), pp.33-39.

Hellenic Ministry of Interior - General Secretariat for Gender Equality, 2018. *Η Ελληνίδα Αγρότισσα [The Greek Female Farmer]*. [online] Athens: State Printing, pp.18-24. Available at: <https://isotita.gr/wp-content/uploads/2018/02/%CE%97-%CE%95%CE%BB%CE%BB%CE%B7%CE%BD%CE%AF%CE%B4%CE%B1%CE%B1%CE%B3%CF%81%CF%8C%CF%84%CE%B9%CF%83%CF%83%CE%B1.pdf> [Accessed 21 August 2022].

Holt, C., 2019. *Markets, Games, and Strategic Behavior: An Introduction to Experimental Economics*. 2nd ed. Princeton: Princeton University Press.

International Labour Organization, 2022a. *Unemployment, youth total (% of total labor force ages 15-24) (national estimate) - Greece | Data*. [online] Data.worldbank.org. Available at: <https://data.worldbank.org/indicator/SL.UEM.1524.NE.ZS?end=2017&locations=GR&start=1991&view=chart> [Accessed 27 August 2022].

International Labour Organization, 2022b. *Unemployment, total (% of total labor force) (modeled ILO estimate) - Greece | Data*. [online] Data.worldbank.org. Available at: <https://data.worldbank.org/indicator/SL.UEM.TOTL.ZS?end=2021&locations=GR&start=1991&view=chart> [Accessed 27 August 2022].

James, H. and Sykuta, M., 2005. Property Right and Organizational Characteristics of Producer-owned Firms and Organizational Trust. *Annals of Public and Cooperative Economics*, 76(4), pp.545-580.

Kappmeier, M., Guenoun, B. and Fahey, K., 2021. Conceptualizing trust between groups: An empirical validation of the five-dimensional intergroup trust model. *Peace and Conflict: Journal of Peace Psychology*, 27(1), pp.90-95.

Kontogeorgos, A. and Chatzitheodoridis, F., 2019. Workers or Investors? Investigating the Reciprocity Aspects among Greek Social Enterprises Members. *REVESCO. Revista de Estudios Cooperativos*, 132, pp.9-28.

Kumaran, M., 2011. *Co-operative management and administration*. Kerala, India: University Of Calicut.

Larson, A., 1992. Network Dyads in Entrepreneurial Settings: A Study of the Governance of Exchange Relationships. *Administrative Science Quarterly*, 37(1), pp.76-104.

Macy, M. and de Rijt, A., 2007. game theory. In: G. Ritzer, ed., *The Blackwell Encyclopedia of Sociology*. Malden, MA, USA: Blackwell Publishing, pp.1822-1825.

McAllister, D., 1995. Affect- and Cognition-Based Trust as Foundations for Interpersonal Cooperation in Organizations. *Academy of Management Journal*, 38(1), pp.24-59.

Mikulski, D., 2013. Cooperative Trust Games. In: H. Hanappi, ed., *Game Theory Relaunched*. London, UK: IntechOpen, pp.233-250.

Neelam, N., Kunte, M., Gupta, P. and Bhattacharya, S., 2016. Interpersonal Trust & Team Effectiveness in Manufacturing & IT Sectors. *Indian Journal of Industrial Relations*, 52(2), pp.293-306.

Newton,, K., 2007. Social and Political Trust. In: R. Dalton and H. Klingeman, ed., *Oxford Handbook of Political Behaviour*. Oxford, UK: Oxford University Press., pp.342-361.

Österberg, P. and Nilsson, J., 2009. Members' perception of their participation in the governance of cooperatives: the key to trust and commitment in agricultural cooperatives. *Agribusiness*, 25(2), pp.181-197.

Panas,, E., 2007. Experimental Economics: An Empirical Analysis. *SPOUDAI*, 83(2), pp.89-105.

Patronis, V. and Mavreas, K., 2004. Agricultural Cooperative Organizations in Greece throughout the 20th Century: A Critical Overview. *Journal of Rural Cooperation*, 32(1), pp.51-62.

Polzer, J., Crisp, C., Jarvenpaa, S. and Kim, J., 2006. Extending the Faultline Model to Geographically Dispersed Teams: How Colocated Subgroups can Impair Group Functioning. *Academy of Management Journal*, 49(4), pp.679-692.

Pretty, J., 2003. Social Capital and the Collective Management of Resources. *Science*, 302(5652), pp.1912-1914.

Putnam, R., 1995. Bowling Alone: America's Declining Social Capital. *Journal of Democracy*, 6(1), pp.65-78.

Ramchurn, S., Huynh, D. and Jennings, N., 2004. Trust in Multi-Agent Systems. *The Knowledge Engineering Review*, 19(1), pp.1-25.

Richard P., R., Schendel, D. and Teece, D., 1991. Strategic Management and Economics. *Strategic Management Journal*, 12(82), pp.5-29.

Rietz, T., Schniter, E., Sheremeta, R. and Shields, T., 2017. Trust, Reciprocity and Rules. *Economic Inquiry*, 56(3), pp.1526-1542.

Rosati, A., Benjamin, N., Pieloch, K. and Warneken, F., 2019. Economic trust in young children. *Proceedings of the Royal Society B: Biological Sciences*, 286(1907), pp.1-9.

Saz-Gil, I., Bretos, I. and Díaz-Foncea, M., 2021. Cooperatives and Social Capital: A Narrative Literature Review and Directions for Future Research. *Sustainability*, 13(2), p.534.

Schechter, L., 2006. Trust, trustworthiness, and risk in rural Paraguay. *Experimental Economics*, 9(2), pp.173-173.

Seabright, M., Levinthal, D. and Fichman, M., 1992. Role of Individual Attachments in the Dissolution of Interorganizational Relationships. *Academy of Management Journal*, 35(1), pp.122-160.

Sergaki, P., Kontogeorgos, A., Kalogeras, N. and van Dijk, G., 2020. Reciprocity and Cooperative's Performance. The Example of Mandatory Cooperatives. *Ager. Journal of Depopulation and Rural Development Studies*, 1(2), pp.1-32.

Shapiro, S., 1990. Collaring the Crime, not the Criminal: Reconsidering the Concept of White-Collar Crime. *American Sociological Review*, 55(3), pp.346-365.

Shen, J. and Qin, X., 2014. Cooperation, Trust and Economic Development: An Experimental Study in China. *Pacific Economic Review*, 19(4), pp.423-438.

Shen, J. and Takahashi, H., 2013. A cash effect in ultimatum game experiments. *The Journal of Socio-Economics*, 47, pp.94-102.

Sloof, R., Leuven, E., Oosterbeek, H. and Sonnemans, J., 2003. An Experimental Comparison of Reliance Levels under Alternative Breach Remedies. *The RAND Journal of Economics*, 34(2), pp.205-222.

Swärd, A., 2016. Trust, Reciprocity, and Actions: The Development of Trust in Temporary Inter-organizational Relations. *Organization Studies*, 37(12), pp.1841-1860.

Tchami, G., 2007. *Handbook on co-operatives for use of workers' organizations*. Geneva, Switzerland: International Labour Organization.

the Michael Page team, 2021. *The relationship between trust and performance | Michael Page*. [online] Michael Page. Available at: <https://www.michaelpage.com.au/advice/management-advice/staff-development/relationship-between-trust-and-performance> [Accessed 27 August 2022].

Titlestad, K., Snijders, T., Durrheim, K., Quayle, M. and Postmes, T., 2019. The dynamic emergence of cooperative norms in a social dilemma. *Journal of Experimental Social Psychology*, 84, p.103799.

van Dijk, G., Sergaki, P. and Baourakis, G., 2019. *The Cooperative Enterprise: Practical Evidence for a Theory of Cooperative Entrepreneurship*. 1st ed. Cham, Switzerland: Springer International Publishing.

Welter, F. and Alex, N., 2015. Researching trust in different cultures. In: F. Lyon, G. Möllering and M. Saunders, ed., *Handbook of Research Methods on Trust*. Cheltenham, UK: Edward Elgar Publishing Limited., pp.50-60.

Williams, M., 2001. In Whom we Trust: Group Membership as an Affective Context for Trust Development. *Academy of Management Review*, 26(3), pp.377-396.

Witteloostuijn, A., 2003. A Game-Theoretic Framework of Trust. *International Studies of Management & Organization*, 33(3), pp.53-71.

Yang, J. and Mossholder, K., 2010. Examining the effects of trust in leaders: A bases-and-foci approach. *The Leadership Quarterly*, 21(1), pp.50-63.

Zaheer, A., McEvily, B. and Perrone, V., 1998. Does Trust Matter? Exploring the Effects of Interorganizational and Interpersonal Trust on Performance. *Organization Science*, 9(2), pp.141-159.