Determinants of farmers' trust in government agricultural agencies in Poland

Determinanty důvěry farmářů ve vládní zemědělské agentutry v Polsku

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Abstract: The purpose of this study was to investigate the levels of farmers' trust toward state agricultural agencies in Poland, to identify its determinants and to develop a model illustrating the relationship between trust and the different dimensions of the agencies performance. Specifically this study looks at two agencies: the Agency for Restructuring and Modernisation of Agriculture and the Agricultural Market Agency. Data were obtained from responses to a set of questions asked of the nationwide sample of 200 Polish farmers in December 2006–January 2007. The farmers' evaluations according to a range of statements about the agencies were measured using ten-point Likert scale. Partial Least Squares Path Modelling was employed to estimate the latent (theoretical) variables such as trust, image, performance, satisfaction etc. Additionally, descriptive statistics such as frequencies, percentages and means as well as correlation coefficients were applied. Evidence is presented that the trust of farmers in the institutions of state, represented here by two agricultural agencies, is statistically correlated with the image of the agencies, respondents' expectations and their satisfaction about the way the agencies work as well as with perceived value of the services and programmes provided by the agencies. Farmer's socio-economic characteristics (gender, education, the period of their interaction with the agencies, farm size) did not relate to trust score with the exception of age. Causality analysis showed that trust towards both agencies was significantly impacted by their image with the customers. Trust had significant impact on the overall satisfaction with the ARMA.

Key words: trust, image, satisfaction, perception, government agency, farmers, Poland

Abstrakt: Cílem této studie bylo zkoumat úroveň důvěry farmářů ve státní zemědělské agentury v Polsku, identifikovat jejich determinanty a vyvinout model ilustrující vztah mezi důvěrou a jednotlivými dimenzemi činnosti těchto agentur. Konkrétně se tato studie týká dvou agentur: Agentury pro restrukturalizaci a modernizaci zemědělství a zemědělské tržní agentury. Data byla získána z odpovědí na soubor otázek na základě celonárodního vzorku polských farem v období prosinec 2006–leden 2007. Prohlášení farmářů týkající se agentur byla hodnocena na desetibodové Likertově škále. Metoda parciálních nejmenších čtverců byla použitá k odhadu latentních (teoretických) proměnných, jako je důvěra, image, výkon, spokojenost apod. Dále bylo použité deskriptivní statistické hodnocení četností, procentických podílů a průměrů, jakož i korelačních koeficientů. Byly získány důkazy, že důvěra farmářů ve státní instituce, reprezentovaná zde dvěma zemědělskými agenturami, je ve statistické korelaci s image agentur Na druhé straně není závislá na socioekonomických charakteristikách farmářů (gender, vzdělání, velikost farmy, doba kontaktu s danou agenturou, výjimkou je věk farmářů.

Klíčová slova: důvěra, image, uspokojení, vnímání, vládní agentura, farmáři, Polsko

Over the past two decades of the market economy, there has been a major shift in the agricultural policy in Poland. The critical transition processes from state-directed controls to a free market economy led to a review of the role of the state in agriculture and rural development as well as the role of markets.

The main transition and integration processes occurring in the economic and social context of the Polish agriculture implied transformation of the government at the local and central level as well as establishing an institutional and legal framework. Gradual restructuring of public institutions of the

agri-food and rural sectors involved dissolving the old types of governance institutions and creating new ones.

The governance notion is used in different research fields at different (local, regional, national, European and global) levels. The common denominator of various strands of **the governance research is a focus on the role of the non-state actors in politics** and the assumption that they become influential over policy. Governance is broadly defined as the traditions and institutions that determine how **the authority is exercised in a country** (Kaufmann et al. 2000). Governance is about achieving coordination between actors with divergent interests, ambitions and perceptions. Probably most recent frequently cited governance author, Williamson (1975), identifies three efficient governance structures: via market, via contractual rules or bilateral governance and via hierarchy or hierarchical governance.

The paper has in mind governance by **the government (state)**. This form of governance is connected with the normative goal of "shared responsibility for resource allocation and conflict resolution" where **the public, private and societal actors should be involved**. Both "governance without government" and "governance with government" illustrate a shift from **the** "government" to **the** "governance" titled as "new modes** of governance" or "new governance" (Kleinschmit et al. 2009). Some political science scholars refer to the governance as the system related to horizontally fluid networks (late modernity) instead of vertically organized rigid government (modernity), however there are also authors (ex. Davies 2002) who criticize the concept of governance as networks or "governing without government". It seems that in transition countries (especially after joining the EU), **the** "central government" role is influential in the agricultural policy arena, at least more influential comparing with the regional policy, where networks are more essential.

During the public administration reforms in Poland after 1989, new autonomous entities, called in Polish "agencje" (agencies), for new functions connected with agriculture and the implementation of rural support instruments began to emerge as key elements of a new mode of governance. The most fundamental aspect of this reform involved the separation of service delivery from the traditional government departments (ministries) via the introduction of the separate agency status. Apart from the status change itself, there was a focus on the responsibility of the chief executive for the narrowed tasks fulfilment, for managing budgets and employees as well as for the quality of customer services and client consultation.

Some may ask the question why it is important to focus on the government (state) administrative institutions serving agriculture and the rural community. The answers to this question might be alternative. Firstly, those agencies represent a specific type of (formal) institution being created to protect the public interest. The rationale for the paper is based on the assumption that neglecting the public interest erodes the publics' trust that is essential to good government. What is additionally crucial is that upon the agencies, there depends the success achieved when implementing the national agricultural policy and the Common Agricultural Policy (CAP). Consequently, they are the dominant force in agricultural development in Poland. Thirdly, agricultural agencies are the key contact point in the government's relations with farmers. Moreover, the degree of trust farmers have in governmental institutions may affect the farmers' sense of well-being. The last, but not the least, the agencies in the agricultural sector are the largest and most powerful of all state agencies operating in Poland. With the European integration process, they strengthened their position, gained new tasks (e.g. as payment agencies for the direct EU payments to farmers) and at present, they distribute the major share of the budget allocated to agriculture, so they are worth to be analyzed, as ineffective agencies waste public expenditures or taxpayers' money.

In recent years, a great deal of attention not only from scholars (Crozier et al. 1975; Barnes and Gill 2000; Dalton 2002) but also from the government practitioners, the media, and the general public has been paid to the problem of the declining trust in government. While researchers seek a wide-ranging theoretical explanation of this phenomenon (Bouckaert et al. 2002), governments themselves, in their efforts to regain the citizens' confidence, apply surveys targeted both to clients of a single public agency and to citizens, in order to measure the changes in satisfaction and trust.

The evaluation of state agency performance based on objective measurements does not seem to be complete without investigating its customers' (clients') views and opinions about the agency activity (Osborne and Gaebler 1992; Kelly 2005; Kampen 2007). The collection of subjective data and measuring indicators of the government image and the public sector performance (such as the levels of satisfaction and trust) more and more influence the debate on the reforms of government (Osborne and Gaebler 1992; Bouckaert and Van de Walle 2003; Kampen 2007; Shingler et al. 2008).

In Poland, much has been written about how citizens perceive politicians and public institutions (Sztompka

1996), while less is known on the attitudes towards single public agencies and their servants. This study on trust at the level of the particular government agencies in Poland is hoped to supplement many previous studies on trust at the level of government.

The outline of this paper is structured as follows: After the introduction, a short overview of agricultural policy and its institutional framework in Poland is given. Then, based on review of the relevant literature, we explain why trust is important and present its different definitions and concepts. The next two sections present details of the own empirical investigation (data sources, methods, results and discussion). The concluding section summarises the findings and proposes recommendations.

AGRICULTURAL POLICY AND ITS INSTITUTIONS IN POLAND

Until 1989, food self-sufficiency and urban-rural income parity were listed as the priority targets of the Polish agricultural policy. Agricultural output and input prices were almost entirely controlled and quite heavily supported by the state. Both private individual farms, which were prevailing with respect to farmland and farm employment, and state farms relied on state agencies and the state-controlled cooperative sector for purchases and sales. Foreign trade in agricultural commodities used to be monopolized by the state-owned enterprises. Agricultural land was also subject to a tight state control.

Since 1990, the transition from the former central planning system to a market-type economy has been the first decisive challenge for Polish agriculture and agricultural policy. Over the transition period, Poland gradually eliminated domestic support to agriculture. As a result, between 1986–1988 and 2000–2002, the PSE, being a measure of the benefits to farmers (or costs to the taxpayers and consumers) fell sharply by 70% in the real terms (OECD 2003). At the early stage of transition, the main goals of agricultural policy included the liberalization of prices and market operations as well as the improvement of farm structures, among others through the privatization of the state-owned farms. In spite of the efforts, during the transition period the unviable small-scale farming structure did not change significantly, among others due to the special treatment of family farms. Additionally, some land still remains under the man-

agement or administration contracts from the government's Agricultural Property Agency.

The reorientation towards Western Europe has been the second great challenge faced both by the national policy makers and farmers. The requirements for a closer integration with the EU have increasingly gained importance at the end of the nineties with the beginning of the accession negotiations between the EU and Poland in 1998. While, on one side, Poland was obliged to meet certain adaptive requirements concerning agricultural policy, on the other side, Polish farmers started to benefit from the EU money (for example via the SAPARD measures). The full EU membership of Poland since May 1, 2004 has contributed to an increase in the credibility of agricultural policy. For the first time since the Second World War, Polish farmers recognized that they can benefit from the stability and predictability of agricultural policy in the medium term. According to the results of the public opinion research poll conducted by the Public Opinion Research Center (CBOS) in August 2007, Polish agriculture is the sector that has gained the most from the EU integration. At the same time, the most frequently mentioned negative effect of the EU membership is the growing bureaucracy (CBOS 2008).

Agricultural agencies were established in the first wave of the agencification process[1] taking place in the early nineties, when the Polish first governments of the post-Communist era applied the international role models in order to make the public administration more effective, efficient and accountable. The earliest agricultural agency, the Agricultural Market Agency (AMA) was formed in 1990. Its tasks included mainly interventions in the agricultural commodity markets. In 1991, the Agricultural Property Agency of the State Treasury (APAST) entrusted with the task of shaping the farm territorial structure and privatizing the former state owned farms was created. And finally, in 1994, the Agency for Restructuring and Modernisation of Agriculture (ARMA), whose mission was to support the acceleration of structural changes in agriculture and rural areas, was established.

Under the second wave of agencification, i.e. during the accession process in 2000–2004, the Polish agricultural agencies were adapting the institutional structures required by the EU. With the European integration process, they strengthened their position and gained new tasks. The APAST was transformed in 2003 into the Agricultural Property Agency (APA)

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[1]Agencification is regarded as: (i) delegation and devolution of many functions of the government to public bodies that are not legally and financially incorporated into ministries (ii) the separation of policy formation from its implementation (Shapiro 1997; Pollitt et al. 2001).

and entrusted with the additional task to counteract the excessive concentration of agricultural property (land). In opposition to the first period of transformation, when the state did not intervene into the agricultural land market, since 2003 the APA has the power to do it in order to support family farms and to limit the concentration of farmland on large holdings. The ARMA reformed its internal structures in 2002 by creating local offices operating at the NUTS 4 level (poviats). At present, the agency organization is divided into three levels: the headquarters in Warsaw, 16 regional offices and 314 county offices. In 2002, the ARMA was accredited as the SAPARD payment agency. In May 2005, it was turned out to be the EAGGF payment agency and after having met the requirements concerning the accreditation, it received the full accreditation as the EU payment agency in 2006. The AMA was successful in earning the full accreditation as a payment agency in 2004, and similar to the ARMA, it carries out its activities in compliance with the European legislation. The agency operates within the two-tier structure (Warsaw headquarters and 16 regional branches).

Those three agencies act on behalf of the central authority and perform mostly executive functions and, with exception of the ARMA, market regulatory functions. They are generally supervised by the Minister of Agriculture and Rural Development (MARD). The AMA and the ARMA, explored in this paper, are of the special importance as they carry out of their activities on behalf of the Polish government and the EU and distribute the major share of the budget allocated to the agricultural sector.

Following many contemporary economists, the agencies (organizations) are seen by the author of this paper as institutions (Williamson 1985; Moe 1991) or as an institutional arrangement (Davis and North 1971; Jensen and Meckling 1976) for agriculture and rural development. In fact, some institutional economists make a strong distinction between organization and institutions. North (1990: 4–5), for example, separates the "rules" from the "players". However, scholars often incorporate organizations into their definition of institution (see Huntington 1968: 8–9; Mainwaring and Scully 1995: 4). According to Helmke and Levitsky (2004), formal institution refers to state bodies (courts, legislatures, bureaucracies) and state enforced rules (constitutions, laws, regulations) while informal institution encompasses civic, religious, kinship, and other societal rules and organizations.

New Institutional Economics treats institutions as rules of the game (the level of institutional environment: laws, regulations, traditions etc.), but institutional economics works also at the level of institutions of governance, and those, going after Williamson (1992: 340, 344), are markets, hybrids, hierarchies and bureaus. The institutions of governance are embedded in the institutional environment (rules of the game) (Williamson 1992: 341).

As concerns public governance structures Williamson identifies three models or rule regimes established by legal acts: full privatization (contracting out to a private bureau); regulation (contracting out to a private bureau supervised by a regulatory agency), and public agency (execution of tasks by state organs).

THEORETICAL FOUNDATION OF TRUST

The contemporary studies about trust date at least from the influential work of Morton Deutsch (1958). The scholarly interest in the research on trust and distrust in organizations has grown rapidly since the middle of the nineties of the twentieth century (Kramer 1999).

Trust in general has emerged as the new missing factor that explains a wide range of social, political and economic phenomena (Glaeser et al. 2000), such as, for example, the cross-country and regional differences in economic growth and development (Fukuyama 1995; Dahl 1998; Humphrey and Schmitz 1998; Zak and Knack 2001), and the firms' competitive advantages at an industry level and within organizational settings (Lane and Bachmann 1996; Ciancutti and Steding 2001).

A review of the theoretical writings on trust is well beyond the scope of this paper. It is important to note, however, that in the existing literature, the term "trust" has been variously conceptualized and defined by scholars of different disciplines, such as economics (**Doney and Cannon 1997;** La Porta et al. 1997), **political science (Fukuyama 1995), sociology** (Barber 1983; Granovetter 1985; Giddens 1990) and psychology (Deutsch 1958; Zand 1972; Rousseau et al. 1998). Some of these concepts are summarized in Table 1.

So, what do researchers understand by the notion of trust? How trust is defined?

A widely cited Deutsch describes trust as follows: "An individual may be said to have trust in the occurrence of an event if he expects its occurrence and his expectation lead to a behaviour which he perceives to have greater negative motivational consequences if the expectation is not confirmed than positive motivational consequences if it is confirmed" (Deutsch 1958: 266). Gambetta (1988: 217) maintains that trust is "the probability that one economic actor will make

decisions and take actions that will be beneficial or at least not detrimental to another."

To Burt and Knez (1996: 70) trust is simply "anticipated cooperation". Similarly, La Porta et al. (1997) define trust as a propensity for people to cooperate. Fukuyama says that "trust is the expectation that arises within a community of regular, honest, and co-operative behaviour, based on commonly shared norms, on the part of other members of that community" (Fukuyama 1995: 26). Also Hosmer characterized trust as "the expectation ... of ethically justifiable behaviour – that is, morally correct decisions and actions based upon ethical principles of analysis" (Hosmer 1995: 399).

Table 1. Trust from the different scientific perspectives

Authors	*Perspectives/Description*
Psychological	
Rousseau et al. (1998)	Trust as a psychological: (i) construct that individuals develop in varying degrees, depending on their personal experiences and prior socialization, (ii) state comprising the intention to accept vulnerability based upon positive expectations of the intentions or behaviour of another.
Sociological	
Simmel (1950, 1990)	Trust as: (i) an element of socio-psychological quasi-religious faith based upon confidence in the socio-political organization and order, (ii) a mental process that has three components: expectation (outcome at the end of the process), interpretation, suspension (the experiencing of reality that provides "good reasons").
Barber (1983)	Link of trust with expectations about the future. Expectation: (i) of the persistence and fulfilment of the natural and moral social orders, (ii) of "technically competent role performance" from those we interact with in social relationships and systems, (iii) that partners in interaction will carry out their fiduciary obligations and responsibilities, that is, their duties in certain situations to place others' interests before their own.
Granovetter (1985); Zucker (1986)	Trust as an institutional phenomenon (individuals' trust in institutions or trust between institutions) or socially embedded properties of relationships among people.
Giddens (1990, 1991)	Trust combines good reason with faith; it goes beyond cognitive reasoning, and is a matter of ontological security. The "real" trust is not induction but rather "faceless commitment" to abstract systems upon which modern institutions are based. Relation to risk: unlike trust, risk is political and does not include faith since it is linked to reflexivity, accountability, and responsibility rather than ignorance. Trust as social capital.
Economic and political	
Williamson (1975)	Transactional view of trust based on concepts used to describe the economic behaviour of actors in a firm.
Williamson (1993)	Agency theory. Trust as calculated probability of an event.
Williamson (1996)	The "real" trust is nearly non-calculative, very personal, characterized by: (i) the absence of monitoring, (ii) favourable or forgiving predilections, and (iii) discreteness.
Doney & Cannon (1997)	Reputation builds trust in business-to-business and business-to-consumer relationships
Putnam (1993); La Porta et al. (1997)	Trust as a social norm. It is important because it eases one's concern of being cheated.
Lewicki & Bunker (1995)	Trust is an ongoing, market-oriented, economic calculation.
Fukuyama (1995)	Trust as: (i) a social virtue indispensable in creating prosperity, (ii) a "social capital", (iii) a cultural phenomenon.
Moore & de Bruin (2004); Langfield-Smith & Smith (2003)	Trust is one of the most important elements influencing the transaction cost, trust minimizes transaction costs.
Organizational	
Hosmer (1995)	Social and ethical facets of trust.
Burt & Knez (1996)	Structural approach: the strategic and calculative dimensions of trust in organizational settings. The "issue isn't moral ... It is office politics" (p. 70).
Powell (1996)	Trust is critical to organizational governance.
Morgan & Hunt (1994)	Trust is critical to intra- and inter-organization relationships.

Source: review of the literature

It has been generally agreed among trust researchers that trust refers to the beliefs about the likely behaviour of others who matter to the trustor's decision making (Gambetta 1988; Burt and Knez 1996; Rousseau et al. 1998; Kramer 1999).

Regardless of the great efforts made by researchers, our understanding of trust remains elusive. McKnight and others, who conducted an extensive literature review, found that trust might be described as behaviour, attitude, confidence, expectancy, beliefs and disposition (McKnight et al. 1998: 3).

The notions of "trust" and "confidence" are often used interchangeably in the social science literature. However, Golembiewski and McConkie (1975, cited in Hosmer 1995) argue that trust "implies reliance on, or confidence in, some event, process or person". Confidence can be regarded as a taken-for-granted attitude towards the social reality necessary for carrying out daily life (Berg et al. 2005). It is worth mentioning here that, while there exist two English terms ("confidence" and "trust") being used either interchangeably or specifically (Adams 2005), Polish word "zaufanie" covers both meanings.

As concerns the application of trust concepts into the relationship between farmers and the agencies, trust is here related to the farmers' belief in the honesty, reputation, reliability and competence of the agencies. It is rather not a calculus-based or rational trust which is common in the market-based exchanges, when transactions are commonly short-term, one time. More likely, it is to be the relational or personal trust based on the repeated interactions over time, emotion and greater faith in intentions. However, according to Giddens (1990: 27), personal trust is increasingly being replaced by the trust in the "systems of technical accomplishment or professional expertise that organize large areas of the material and social environments in which we live today". The agencies in the paper represent expert systems.

To refer to trust relationships, they are also important in understanding the logic of public bureaucracy. Breton and Wintrobe (1982), for example, argue that human relationships of a vertical nature within an organization, i.e. between superiors and subordinates, when fortified with trust, lower the transactions costs.

When speaking about the trust, the issue of social capital should be also considered. Social capital as the concept was variously coined by different authors. Sociologist Bourdieu (1986) highlights network aspect but individualistic perspective of social capital, i.e. the opportunities and advantages that accrue to individuals from group membership. Political scientist Putnam presents the aggregate/community perspective: "social capital refers to features of social organization such as networks, norms, and social trust that facilitate coordination and cooperation for mutual benefit" (Putnam 1995: 67). According to the aggregate perspective, social capital is a property of the group or the community or even the nation as a whole. Inglehart (1997), for instance, equates social capital with the "culture of trust and tolerance, in which extensive network of voluntary associations form." For contributors to the subject, social capital generally means the assets of relations and interactions between people which can be used to generate benefits in their activities. Social interactions matter as they create social networks, foster trust and values, sustain norms and culture, create community and influence economic and social outcomes (Quibria 2003).

It is important to recognize that the LEADER approach to rural development emphasizes the partnership developed through networks and social capital considered as the tool to enhance the potential of the collective action existing in the locality (Hudečková and Lošťák 2008). There are also other forms of the rural citizens' participation in the local political process and public life, especially the activities in interest groups, citizen initiatives, various forms of public opinion creation, activities of the local government, etc. (Zawojska 2006; Čmejrek 2008).

Although the research did not ask about the trust of the farmers in other sort of agencies, for example those directly related to organic farming or innovative foods, it is important to emphasize that the trust in this sector of agriculture is crucial. Organic and GMO (genetically modified organisms) farming is based on trust and the related agencies (controlling and certification bodies). It is the state's additional commitment to implement not only food quality and safety policy, but also the policy of gaining social trust. Carolan (2006) argues that the growing legitimacy of sustainable agriculture can be linked to the continually expanding social networks of knowledge and trust.

In situations where consumers cannot adequately assess the product quality or safety, even after experiencing the good, consumers tend to rely on trust in the information provided. Government authorities may need to improve the trustworthiness of their regulatory policy and control measures for the food safety system and environmental regulation, especially of the GM food production (Kim 2009).

In Poland, the Agricultural and Food Quality Inspection responsible to the Minister of Agriculture and Rural Development deals with the protection of consumers and food producers interests, among others

by assuring the access to reliable information about agricultural and food products, including organic and GM products. The Inspection fulfils also the tasks delegated both by the Agricultural Market Agency and the Agency for Restructuring and Modernization of Agriculture (for more see Agricultural and Food ... 2008).

MATERIAL AND METHODS

The purpose of this study was to investigate the levels of the farmers' trust toward state agricultural agencies in Poland, to identify its determinants and to develop a model illustrating the relations between trust and the different dimensions of the agencies performance.

This paper explores the hypothesis that trust in state agencies is related to the socio-demographic variables for the farmers as well as to the theoretical constructs describing the agencies' performance dimensions.

The results in this paper were principally based upon the face-to-face (personal) interview survey performed from December 2006 to January 2007 on a nationwide sample of Polish individual farmers. The number of target respondents (N = 200) was determined by financial constraints. The sample was taken by a two-stage selection process. Firstly, the sample structure was selected using the quota sampling controls based on the known structure of the individual agricultural holdings in Poland (Agricultural Census 2002) according to their farmland size and regional distribution. Secondly, judgmental or purposive sampling (generally used for qualitative studies) was applied in order to target only those managers of the farms who had been customers (service users) of the case agencies and had frequent interactions with them. The two case agencies are the Agency for Restructuring and Modernisation of Agriculture (ARMA) and the Agricultural Market Agency (AMA)[2], which perform the role of the EU payment agencies for agriculture in Poland. As a result, 12–13 respondents in each of 16 geographical locations (provinces or voivodships) were interviewed.

Table 2 presents the socio-economic characteristics of the respondents. The majority of farmers (64%) were aged 40 years and over and were predominantly (70%) male. Almost 45% of the respondents had achieved a high school degree or a higher educational level. Every second respondent reported possessing an

Table 2. Characteristics of farmers from a purposive sample: frequency distribution

Variables	Frequency (N = 200)	Percentage (%)
Gender		
male	140	70.0
female	60	30.0
Age (years)		
18–40	67	33.5
41–64	120	60.0
65 and more	7	3.5
unknown	6	3.0
Educational level		
primary	23	11.5
basic vocational	88	44.0
secondary (middle)	72	36.0
university/higher education	17	8.5
Education majors		
agricultural	101	50.5
non-agricultural	96	48.0
unknown	3	1.5
Farm size (ha UAA)		
up to 3	64	32.0
3.01–5	30	15.0
5.01–10.0	48	24.0
> 10.0	58	29.0
Farming experience (years)		
up to 10	41	20.5
11–20	55	27.5
> 20	104	52.0
Managing of farm (years)		
up to 10	76	38.0
11–20	57	28.5
>20	67	33.5
Purpose of farm production		
solely for own consumption	15	7.5
mainly for own consumption	64	32.0
mainly for the market	121	60.5
Subjective farm situation		
very good	4	2.0
good	59	29.5
regular	103	51.5
bad	32	16.0
very bad	2	1.0

Source: author's own research

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[2]Polish names of the agencies: Agencja Restrukturyzacji i Modernizacji Rolnictwa (Agency for Restructuring and Modernisation of Agriculture); Agencja Rynku Rolnego (Agricultural Market Agency).

educational background in agriculture. Approximately one third of farmers reported that they had been operators (managers) of the agricultural holding for more than 20 years. Half of the respondents had more than 20 years experience in farming. The fact that the considerable proportion of farmers in the sample had more than two decades of experience in agriculture suggests that the most members of this group have started farming before the beginning of the economic transformation and they probably regard farming as a way of life. Consequently, some of them might be expected to possess a significant knowledge about farming conditions and agricultural policy over the whole transformation period. Just under the half of the respondents (47%) farmed less than 5 hectares of the utilisable agricultural area (UAA). Some 60% of the respondents indicated that they ran commercial farms, i.e. produced mainly for the market. The respondents' view of their own farm economic condition was quite optimistic. However, a relatively small proportion (32%) perceived their situation as either good or very good. As concerns the type of schemes the sample farmers applied for and benefited from, the direct area payments (90%) and the Less Favoured Areas Support Scheme (21%) were the most commonly indicated for the ARMA, whereas in the case of the AMA, those included the intervention purchases of cereals by the agency (35%) and the milk quota scheme for individual producers (32%). Only a small percentage of respondents believed that the financial and economic situation of their farms did not depend on the work of the ARMA (5%) and the AMA (11%).

The survey provided soft indicators of the agencies performance, as opposed to the so-called hard indicators such as the budget disbursal, inputs, outputs and outcomes, generally used to monitor the public administration. Primary data were collected through the use of a structured questionnaire, with open-ended and closed-ended questions, elaborated by the author of this paper. This questionnaire was developed to understand the farmers' perception, experience and feelings towards the agricultural agencies and it was divided into several blocks containing, among other, a number of items probing the level of the respondents' satisfaction with the administration of specific programs, facilities, staff etc. and the level of trust placed in these institutions.

The phenomenon of trust does not easily lend itself to the quantitative and statistical analysis (Williamson 2000) and it is an unattractive concept (especially for economists), since it is not measurable (Perelman 1998). However, our survey asked the respondents to rate their trust in each of the two agencies on 10-point Likert-type scale (10 = ceiling value, 1 = floor value), with responses grouped in the study into four categories (a great deal of trust, quite a lot, not very much and no trust at all). Those data were analysed using descriptive statistics (frequencies, percentages, and means).

The trust literature review suggests that measuring trust should also identify the principal antecedents
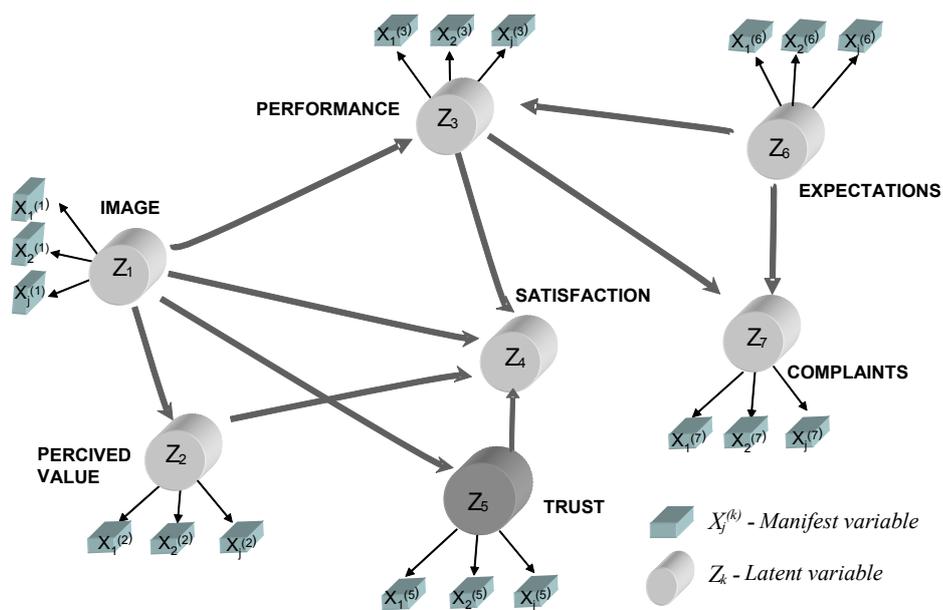

Figure 1. Causality model describing **the causes and consequences of farmers' satisfaction with the agricultural agencies**

Notes: circles = latent variables (theoretical constructs) obtained from the PLS model; squares = measured or manifest variables (Likert scale); arrows = causal relationships among variables

Table 3. Latent and measurement variables for the agencies

Reflective indicators (Latent variables)	Scale items (Observed/measurement variables)
IMAGE (Z_1)	Farmers familiarity and knowledge of the agency
	Agency has professional staff
	Agency has appropriate facilities and equipment
	Agency has competent management team
	Agency manages public money effectively
	Agency is politicized
	Agency protects against misappropriation of funds by farmers
	Agency employees bear all the consequences of their mistakes
	Agency provides high quality services for farmers
	Agency provides reliable and sufficient information about the EU-programs
	Agency is well advertised through various media and at fairs
	Agency conspicuously displays its wealth
	Employees strictly follow rules and regulations
PERCEIVED VALUE (Z_2)	The benefits from services and programmes offered by the agency were worth the farmer's (transaction) costs.
PERFORMANCE (Z_3)	Satisfaction of farmers with:
	ease of contacting appropriate agency staff
	staff knowledge of programmes administrated by the agency
	clarity of verbal information from staff
	clarity of written information
	ease of competing application forms
	delivery of payments
	keeping promises/commitments by the agency
	staff conduct on inspections
SATISFACTION (Z_4)	The agency is the ideal government office
	The agency meets all expectations and requirements from the farmers
	The farmers' overall satisfaction with the agency administration of programmes and schemes they participated in
TRUST (Z_5)	Agency acts in the best public interest
	Agency has positive impact on attitudes towards Polish farmers in the EU
	Agency is important for the development of Polish agriculture
	Agency takes into consideration the expectations of farmers
	Agency is reliable and trustworthy
	Agency is resistant to interest group pressures
	Agency operates under strict supervision and control of the EU
EXPECTATIONS (Z_6)	Did you have any concerns about cooperation with the agency before you did it? (10 = no expected problems)
COMPLAINTS (Z_7)	Satisfaction with the accuracy of claim processing

Notes: A set of manifest (observable) variables is associated with each latent variable. Observable variables were given by the individuals' answers to the questionnaire. All latent variables have a reflective nature. All variables were measured on 1- to 10-point scales (ex. 1 = "completely disagree", 10 = "completely agree"; 1 = "not at all satisfied", 10 = "very satisfied")

Source: author's own research

of trust and the existing interrelations among the various variables of the trust process. Therefore, in the research, there were used the results of the own model of farmers satisfaction with the agencies inspired by the American Customer Satisfaction Index (ACSI) model for Government developed in 1999 to measure the customer satisfaction of the US Federal Government (The American...). In our research, the overall assessment steps that evaluate the agricultural agencies are composed of seven theoretical constructs: Image of the agencies, Perceived value of programs, Performance of the agencies, Farmers' satisfaction, Trust, Farmers' expectations and Complaints. Those seven categories were obtained from the observed numeric values rated on 10-point Likert-type scale with the endpoints labelled "disagree strongly" (1) to "agree strongly" (10) or "extremely dissatisfied" (1) to "extremely satisfied" (10).

To estimate our model, the Partial Least Square (PLS) path model with the reflective attribute specifications has been chosen (Figure 1). The modelling was made using the software Smart PLS. The PLS is an iterative estimation procedure that integrates the principal components analysis with multiple regression (Wold 1985; Fornell and Cha 1994). A PLS path model is described by the measurement or outer model (relating the manifest variables to their latent variable) and the structural or inner model (relating some endogenous latent variables to other latent variables).

We applied the PLS procedure since other widely employed approaches used to estimate relationships among latent variables, for example structural equation models (SEM), make more strict assumptions on the data, mainly regarding normality. The PLS uses the non-parametric inference method and is free of assumptions that observations are independent and follow a multivariate normal distribution. The PLS latent variable scores were computed in such a way that the reliability estimates of the indicators and the R-square of the latent variable regressions were maximized (Fornell and Cha 1994).

In our model, the manifest variables are considered like the reflection of their latent variables (Gustafsson and Johnson 2004, Tenenhaus et al. 2005). In the outer (measurement) model with the reflective procedure, each manifest variable (x_j) is related to its latent variable (z_k) by a simple regression:

$$x_j^{(k)} = \pi_0^{(k)} + \pi_j^{(k)} z_k + e_j^{(k)} \tag{1}$$

where z has mean m and standard deviation equal to 1. Each x_j reflects its z_k. The only hypothesis made on the model (1) is called the predictor specification condition:

$$E(x_j^{(k)}|z_k) = \pi_0^{(k)} + \pi_j^{(k)} z_k \tag{2}$$

and implies that the residual $e_j^{(k)}$ has a zero mean and is uncorrelated with the z_k.

The inner model described in Figure 1 relates **the** endogenous latent variable to other latent variable(s), i.e. shows the latent variable as dependent on each other:

$$z_k = \beta_0^{(k)} + \Sigma\beta_i^{(k)}z_i + v_k \tag{3}$$

Where:
$\beta_0^{(k)}$ = constant term
$\beta_i^{(k)}$ = regression coefficient
v_k = residual term.

A latent variable that did not appear as a dependent variable is an exogenous variable. The set of latent and measurement variables is presented in Table 3.

RESULTS AND DISCUSSION

In this section, we firstly present the results of the correlation analysis used to examine the relationship between the trust scores (obtained from the Likert scale) and the socio-economic and demographic attributes of the respondents (age, level of education, gender, land holding etc.). Secondly, the relations between the latent variable of trust and other latent variables obtained from the PLS inner model are presented.

Demographic and socio-economic determinants of trust

There is a number of hypotheses regarding what may determine trust. Firstly, trust as the moral or cultural attitude should be very strongly influenced by the individual's characteristics such as the level and type of the education received. Secondly, we can expect that trust is based on the past experience; if an individual has been hurt in past interactions with other people or institutions, he/she may trust less. Thirdly, people may trust more others with whom they have had a longer interaction. Trust may be also increased by an expectation of repeated interaction in the future (Alesina and La Ferrara 2000). Fourthly, trust can differ with respect to subjective well-being, income or wealth.

There is a disagreement when it comes to identifying the relationship between trust and some socio-demographic characteristics. For example, Moy and Scheufele (2000) as well as Hudson (2006) found that individuals with higher levels of edu-

cation were more trusting of the government and its institutions, while Brewer and Sigelman (2002) observed that those with more education (in years) were more distrusting. In some empirical studies, age was found to be positively related to trust in the sense that young people tend to be less trusting (Uslaner 2002, Dalton 2005). The effects of gender on trust were either uncertain (Uslaner 2002) or clear, for instance in the case of the results obtained by Küpper and Heitmeyer (2005) which show that women tend to be less trusting than men what appeared to be opposite to the results of Christensen

Table 4. Observed levels (scores) of farmers' trust in the ARMA

Characteristics	The level of trust in the ARMA				Mean scores	SD	SE
	a great deal (10–9)	quite a lot (8–6)	not very much (5–3)	no at all (2–1)			
	frequency (%)						
All respondents	23.5	54.0	22.5	0.0	7.1	1.81	0.13
men	20.7	57.1	22.1	0.0	7.1	1.74	0.15
women	30.0	46.7	23.3	0.0	7.1	1.97	0.25
young (18–40)	16.4	55.2	28.4	0.0	6.5	1.69	0.21
older (41 and more)	24.4	55.1	20.5	0.0	7.3	1.81	0.16
Education							
primary	34.8	39.1	26.1	0.0	7.3	2.01	0.42
basic vocational	20.5	60.2	19.3	0.0	7.1	1.76	0.19
secondary	25.0	51.4	23.6	0.0	7.1	1.83	0.22
higher	17.6	52.9	29.4	0.0	6.8	1.82	0.44
Education							
agricultural	17.8	57.4	24.8	0.0	6.9	1.72	0.17
non-agricultural	29.2	50.0	20.8	0.0	7.2	1.90	0.19
Farming experience							
0–10 years	24.4	48.8	26.8	0.0	6.7	2.04	0.32
11–20 years	25.5	50.9	23.6	0.0	7.0	1.73	0.23
> 20 years	18.5	58.1	23.4	0.0	7.3	1.70	0.15
Managing farms							
0–10 years	22.4	52.6	25.0	0.0	6.8	1.83	0.21
11–20 years	28.1	50.9	21.1	0.0	7.3	1.83	0.24
> 20 years	21.8	58.6	19.5	0.0	7.2	1.73	0.19
Subjective farm situation							
very good	50.0	50.0	0.0	0.0	8.0	1.83	0.91
good	27.1	55.9	16.9	0.0	7.3	1.84	0.24
regular	18.4	57.3	24.3	0.0	6.9	1.74	0.17
bad	31.3	43.8	25.0	0.0	7.3	1.83	0.33
very bad	0.0	0.0	100.0	0.0	4.0	1.41	1.00
Relationship duration							
2 and less years	46.3	37.0	16.7	0.0	7.3	1.79	0.25
3–4 years	48.7	29.2	22.1	0.0	7.1	1.77	0.17
5 and more	36.4	30.3	33.3	0.0	6.6	1.90	0.33

Note: Numbers in the rows may not sum to 100% because of rounding. SD = Standard deviation; SE = standard error

Source: author's own research

and Lćgreid (2002) indicating that trust in government is relatively highest among women.

Our correlation analyses show that neither the gender, the level and background of the respondent's education, the period of their interaction with the agencies nor the farm size was significantly correlated with the Likert scale score for trust in the agencies. There was a weak positive Spearman's rank correlation (rs) between the respondent's age and the trust score (ARMA: $rs = 0.218$, $p = 0.01$; AMA: $rs = 0.142$, $p = 0.05$).

The mean characteristics and distribution of answers for question regarding trust (stated "To what

Table 5. Observed levels of farmers' trust in the AMA

Characteristics	The level of trust in the AMA				Mean scores	SD	SE
	a great deal (10–9)	quite a lot (8–6)	not very much (5–3)	no at all (2–1)			
	Frequency (%)						
All respondents	15.5	53.5	28.0	3.0	6.6	1.92	0.14
men	16.4	49.3	30.7	3.6	6.5	1.99	0.17
women	13.3	63.3	21.7	1.7	6.8	1.75	0.23
Young (18–40)	7.5	62.7	28.4	1.5	6.3	1.77	0.22
older (41 and more)	17.3	49.6	29.1	3.9	6.6	1.95	0.17
education							
primary	13.0	52.2	30.4	4.3	6.7	2.14	0.45
basic vocational	17.0	53.4	29.5	0.0	6.7	1.78	0.19
secondary	13.9	55.6	25.0	5.6	6.5	1.98	0.24
higher	17.6	47.1	29.4	5.9	6.4	2.18	0.53
Education							
agricultural	16.8	50.5	28.7	4.0	6.6	1.90	0.19
non–agricultural	13.5	56.3	28.1	2.1	6.6	1.95	0.20
farming experience							
0–10 years	22.0	43.9	34.1	0.0	6.6	2.04	0.32
11–20 years	10.9	65.5	23.6	0.0	6.8	1.59	0.21
> 20 years	16.9	51.6	26.6	4.8	6.6	2.01	0.18
Managing farms							
0–10 years	13.2	56.6	28.9	1.3	6.5	2.01	0.21
11–20 years	17.5	54.4	22.8	5.3	6.8	1.87	0.25
> 20 years	16.1	50.6	28.7	4.6	6.6	1.87	0.22
Subjective farm situation							
very good	50.0	25.0	25.0	0.0	7.5	1.91	0.96
good	16.9	61.0	18.6	3.4	7.0	1.77	0.23
regular	14.6	47.6	35.9	1.9	6.3	1.93	0.19
bad	12.5	65.6	15.6	6.3	6.8	2.03	0.36
very bad	0.0	0.0	100.0	0.0	4.5	0.71	0.50
Relationship duration							
2 and less years	16.2	50.0	32.4	1.5	6.6	1.95	0.24
3–4 years	18.8	50.6	27.1	3.5	6.6	2.07	0.22
5 and more	8.9	64.4	24.4	2.2	6.6	1.62	0.24

Note: Numbers in the rows may not sum to 100% because of rounding. SD = Standard deviation; SE = standard error

Source: author's own research

extent do you trust...," and followed by the names of the agencies) were presented in Table 4 and Table 5. The answers were one of (9 and 10) = "a great deal of the trust", (8–6) = "quite a lot of trust", (5–3) = "not very much" and (2 and 1) = "not at all of trust".

An overwhelming majority indicated that they had a great or quite a lot of trust in the agencies (ARMA: 77.5%; AMA: 69%). The AMA, being in charge of market measures, in average earned from farmers relatively lower trust scores than the ARMA being responsible, among others, for distributing area payments to the beneficiaries. Assuming that trust is correlated with the levels of satisfaction with the particular agency, and that the latter is guided by the respondent's sympathy with the mission of a public service (Bouckaert and Van de Walle 2003), the higher evaluation of the ARMA, which distributes subsidies, is likely the reflection of its mission. According to Carolan (2005), in order to understand who trusts the state and why some feel that the state does not have their interests at heart, it is essential to see the state as an active participant in this socio-relational process through its ability to foster certain relationships and to hamper the formation of others. Carolan gives an example of direct government payments to Iowa farms that shape not only the production practices but also the farmers perceptions of the state (in terms of trust and encapsulated interests).

Considering the length of experience in farming which can be the proxy of a person's life or work experience as well as his/her commitment to agriculture, it is visible that the percentage of experienced farmers (farming longer than 20 years) who had a great deal of trust was merely 19% (ARMA) and 16% (AMA). Almost 5% of them did not have any confidence in the AMA. Men were in average slightly less trusting of the AMA than women, whereas the mean scores for the ARMA were the same. As 30% of survey females maintained that they had a great deal of trust in the ARMA, for males this proportion was just 21%. Older farmers were more trusting in both agencies than those aged 18 to 40. Numerous reasons might explain why young farmers trust the agencies less. They are better educated, more familiar with the agencies, had more frequent visits to the offices of the agencies as well as a better access to the Internet and the information distributed by the Internet sites of the agencies. A higher educational attainment and the access to the information technologies have made farmers more opinionated and demanding of the agencies. There were also significant differences between the young and older farmers with regard to their assessment of the role performance by the two agricultural agen-

cies. Relatively lower marks were obtained from the young ones (Zawojska 2008).

The respondents, who perceived the economic condition of their own farms as good and better, tended to be more trustful of the agencies than those who viewed it as a very poor.

Relations between trust and the agencies' performance dimensions – the model results

The findings of several research studies show that the citizens who perceive government as performing well tend to trust it more (Glaser and Hildreth 1999; Kampen et al. 2003), suggesting that the decline in trust may be at least partially attributable to the poorly performing public agencies. Obviously, trust in government can be related to the satisfaction with the functioning of public services, but the question arises about the relationship between trust in the government and the quality of public administration. It is believed that an improved quality and performance of government agencies will lead to their satisfied clients, which will in turn increase trust in those agencies (Van De Walle et al. 2002). Goodsell (1994), for example, presents a convincing evidence that citizens are generally satisfied with the performance of their public bureaucracies.

As it was mentioned in the methodological part, the Partial Least Squares path modelling has been used as a method for estimating the latent (theoretical) variable model and for finding the relationships between the trust latent variable and other theoretical variables. The model comprises seven reflective dimensions which together with the related survey questions (attributes) are displayed in Table 3. We first analyzed the correlation coefficients between our inner model variables. The results confirmed that the selected latent variables were significantly associated with the trust latent variable (Table 6).

From the sociological point of view (Barber 1983; Gambetta 1988), trust can be seen as an expectation of the future behaviour of a partner. Expectations of the sample farmers about the actions of the agencies were moderately correlated with the trust latent variable for each agency. The performance of institutions depends largely on the capacity of their staff and equipment. The agencies capabilities (performance variable) assessed by the survey farmers were positively correlated with the trust construct.

The association of satisfaction and trust was very strong ($r = 0.75$) for the ARMA and moderate ($r = 0.51$) for the AMA. The first result provides support of a strong relationship of satisfaction and trust.

Table 6. Pearson correlations between the trust latent variable and other latent variables

Selected dimensions (latent variables)	Trust latent variable	
	ARMA	AMA
Agency image	0.876*	0.820*
Perceived value	0.405*	0.636 *
Performance (functionality of the agency)	0.543*	0.648*
Farmers overall satisfaction with agency	0.747*	0.509*
Farmers' expectations	0.395*	0.469*
Farmers' complaints	0.350*	0.115

*Correlation is significant at the 0.01 level (2-tailed)

Source: author's own research

The results also suggest that there is a positive and direct relationship between the perceived value of the services and programmes offered to farmers and the farmers' trust towards the agencies.

The image of each agency is considered as the result of how the respondents perceive it or in other words, their vision of the agency. Not surprisingly, the correlation between the trust variable and image (impression) variable was high. One can say that in the recent years, the image of Polish government institutions, together with the analyzed agencies, has been damaged due to the over-politisation and a number of the revealed and publicised high profile scandals, including corruption and nepotism. The obtained results could be explained, among others, by the marked correlation between the variables for satisfaction and image (ARMA: $r = 0.75$; AMA: $r = 0.64$; $p = 0.01$). Those results indicate an important role of the image of the government institutions in creating trust; building image can be an essential factor in establishing trust and vice versa.

The Complaints latent variable (referring to the intensity of complaints and the manner in which the agency manages these complaints) was significantly correlated with trust in the ARMA.

When the path models for the two agencies were analyzed, we observed that the farmers' trust (Z_5) towards both agencies was significantly positively affected only by the image (Z_1) of the agencies. In turn, trust had a positive direct impact only on the overall satisfaction (Z_4) and only in the case of the ARMA.

The obtained structural equations (corresponding to Figure 1) are as follows:

$$Trust_{(ARMA)} = 0.885\ Image \qquad R^2 = 0.78 \qquad (4)$$

$$Trust_{(AMA)} = 0.995\ Image \qquad R^2 = 0.86 \qquad (5)$$

$$Satisfaction_{(ARMA)} = 0.296\ Image + 0.242\ Perc.\ Value$$
$$+ 0.211\ Performance + 0.303\ Trust$$
$$R^2 = 0.68 \qquad (6)$$

Finally, we can see that to increase farmers' trust in the agricultural agencies, their managers should concentrate on improving their agencies image and that a greater trust will contribute to a greater satisfaction of customers with the agencies.

SUMMARY AND CONCLUSIONS

Key findings of the present research will likely be comfortable to the government agricultural agencies in Poland, as they are viewed by the surveyed farmers quite positively, what is somewhat surprising in the light of the predominantly negative public opinion about the performance of the key institutions of executive power in Poland.

An overwhelming majority of respondents placed very much and much trust in the Agency for Restructuring and Modernization of Agriculture (77.5%) and the Agricultural Market Agency (69%). The ARMA obtained, in average, a higher trust score (7.1 at 10-point scale) compared to the ARMA (6.6), what could be possibly explained by the respondents' sympathy with the mission of the ARMA, which distributes a bulky part of agricultural subsidies in Poland. On the other hand, we must be cautious not to consider trust as a fixed, stable entity, but rather as a mutable and discursively contest. The farmers' trust in the agencies is never fully realized and can be misplaced. The central challenge for the agencies is to maintain the earned trust. Additionally, in some cases the expressions of trust may be more a condition of the convention or convenience than something truly felt. In other words, sometimes people have no choice but to trust and they are often compelled to act "as

if" they trust experts and institutions since they feel they have no other choice, keeping any significant doubts to themselves (Giddens 1990; Wynne et al. 1993; Wynee 1996).

The farmer's socio-economic background (gender, education, the period of their interaction with the agencies, farm size) was not closely associated with the trust score, with the exception of age which was found to be positively related to trust. It indicates that trust in the agencies is bigger among older farmers and suggests that as an effect of the generation change in farming over time, the older and more trustful farmers will be gradually replaced by the younger and less trustful ones. Farmers who perceived the economic condition of their own farms as good and better tended to be more trustful of the agencies than those who viewed it as a very poor.

The degree of correlation between the latent variables in the PLS model confirm the previous literature findings that a higher (lower) level of trust is associated with a higher (lower) level of satisfaction and suggest that improving the farmers' general satisfaction with the performance of agricultural agencies and their personnel may be an important driver of trust in those agencies. Those results also suggest that citizens do not have a blind faith in institutions – trust is earned rather than given freely. Interestingly, the trust variable was the strongest (positively) associated with the image variable, therefore, the worsening or negative image of the government agencies could be associated with the decline in trust or even the upsurge in mistrust.

Additionally, the trust theoretical variable was positively and statistically significant correlated with such latent variables as the farmers' expectations and the agency's performance (functionality) as well as the perceived value of the services and programmes provided by the agencies. A significant correlation was also found between trust in the ARMA and the farmers' complaints. However, in our models no valid direct causal relationships between trust and the above mentioned variables were found.

The causality path model results reviling that farmers' trust towards both agencies was significantly impacted by the image of the agencies suggest that image is an important driver of trust in the agencies and it could be a key tool for the management of trust in the agricultural policy delivery; governors of the agencies at all levels should concentrate on improving their agencies image through strengthening the transparency of the agricultural policy delivery, ensuring the right information, investments on facilities and staff training etc. On the other hand, the significant influence that trust exerts on the overall satisfaction

(with the ARMA) confirms that a greater trust will contribute to a greater customer satisfaction with the agencies.

Hypothetically, the way the farmers in the sample view the agricultural agencies might have been shaped by the whole state bureaucracy's conduct and by the agricultural policy environment. A further research is recommended to clarify the value of trust in government agencies and its relationship to the key policy domains. We hope that this paper on trust at the level of the particular government agencies in Poland is able to supplement many previous studies on trust at the level of government. The presented information about the trust in the government agricultural agencies can be of use to trust researchers, policymakers and the agencies themselves. It is our belief that although the results of our study presented in this paper are not complete in many respects, they present a view of series of determinants of trust in government agencies and can be used to identify the likely antecedents and consequences of different stakeholders' trust in government institutions.

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