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HAVE THE EU PRE-ACCESSION FUNDS ACHIEVED THEIR PURPOSE? BENEFICIARY PERSPECTIVES ON THE EFFECTS OF THE FUNDS ON PRODUCTION QUALITY, RURAL DEVELOPMENT AND SUSTAINABILITY

Gulay OZKAN, İsmail Bulent GURBUZ

Bursa Uludag University, Agricultural Faculty, Department of Agricultural Economics, 16059 Bursa, Turkey, E-mails: bulent@uludag.edu.tr, gulayozkan@uludag.edu.tr

Corresponding author: gulayozkan@uludag.edu.tr

Abstract

Turkey's relations with the European Union (EU) financial assistance, which began in 1963, continue today. The IPARD (Instrument for Pre-Accession Assistance Rural Development) program aims to increase the efficiency of enterprises and achieve Community quality and quality management standards to achieve rural development and sustainability. This research aimed to measure investors' perceptions of the quality (QA), after-sales quality (ASQ), and rural development for IPARD (Instrument for Pre-Accession Assistance Rural Development) funds. Additional points are given for investor and company characteristics in some measures. This research reveals whether additional scores make a significant difference. 97 enterprises that received support from IPARD I and IPARD II in Bursa province, Turkey, were interviewed. Results showed that the participants' overall perception of RDS was higher than QA and ASQ. The quality perceptions were the lowest. 25 years old and younger investors had the highest QA and ASQ perceptions. An increase in educational level has led to a rise in the QA, ASQ, and RDS perceptions. No stable trend was observed between the increase in experience and the increase in QA and ASQ perceptions. The perception of RDS is higher among the investors who claim to follow rural development activities.

Key words**:** *IPARD, EU Funds, grant assessment, rural development, beneficiary assessment*

INTRODUCTION

Various state policies have supported the agricultural sector and its producers from the industrial revolution to the present day. These supports must continue due to the importance of agriculture in human nutrition, the global population growth rate, and food security. With industrialisation, migration from rural areas to cities has increased, and the population in rural areas has decreased and continues to decrease. Rural development projects have become a critical intervention tool to support the agricultural sector, prevent migration, eliminate interregional development differences, increase the incomes of agricultural producers living in rural areas, and increase their welfare levels.

The IPARD (Instrument for Pre-Accession Assistance Rural Development) Program's main objective is to prepare the EU Common Agricultural Policy acquis and achieve sustainable adaptation of the agricultural sector and rural areas in the candidate countries [8]. In this context, priority is given to market efficiency measures, improving quality and health standards, and creating new employment in rural areas.

The IPA budget for 2007-2013 was €11.5 billion. The IPA II budget was €12.8 billion for 2014-2020. Additionally, IPA III (2021-2027) has a budget of €14.162 billion. The program's current beneficiaries are Albania, Bosnia and Herzegovina, Kosovo, Montenegro, North Macedonia, Serbia, and Turkey. A significant part of IPARD support has been allocated to Turkey (Table 1).

Table 1. 2014 Indicative IPARD budget (Million EUR)

	2014	2015	2016	2017	2018	2019	2020	Total
All countries	74	94	112	203	211	227	233	1154
Albania	0	0	13	14	12	16	16	71
Montenegro	0	5	5	6	7	8	8	39
North Macedonia	5	5	5	6	10	14	15	60
Serbia	0	15	20	25	30	40	45	175
Turkey	69	69	69	148	148	149	149	801

Source: Olgun and Sevilmiş [24].

IPARD III period will continue to enable

Turkey to benefit from investments and the Western Balkan countries. To ensure the effectiveness of EU funds, it is essential to determine whether the project investors in Turkey have achieved the program's objectives [12].

In enterprises that will operate in line with the Common Agricultural Policy (CAP) and the World Trade Organization (WTO), it is imperative to use quality inputs, achieve optimum enterprise size and use new technologies for high-quality, competitive and sustainable production. Businesses with low agricultural income cannot provide the necessary inputs and turn to technological innovations. Therefore, it is vital to determine the type, amount, and time of support while carrying out agricultural support policies. However, the fact that support policies are often not implemented effectively, lack of continuity, and insufficient support reduce the effectiveness of these policies. In addition, the prominence of short-term support policies instead of long-term structural policies prevents the fundamental solution to agricultural problems. Eliminating the issues faced during agricultural support policies necessitates addressing and analysing the structural difficulties of local agricultural enterprises and the target audience's socioeconomic and demographic characteristics [14].

Conceptual framework

Business managers have been focusing on product quality prominently. Current research determined an undeniable correlation between quality and operating profitability. Product and service quality, customer satisfaction, and business profitability are highly interconnected. High quality brings high customer satisfaction, and increased customer satisfaction offers the opportunity to sell the product at a high price. Many factors affect consumers' perception of quality. These can be listed as price, technical specifications, brand name, store name, packaging, country of origin, and other related factors. In addition, these factors may not be equally effective in all product groups or cultures.

Perceived quality refers to the level of meeting customers' expectations from their point of view. The product is perceived as high quality if customer expectations are met and exceeded [22]. Companies present documents such as ISO certificates as proof of quality. Taken holistically, certification alone is not sufficient in quality measurement. While certificates check the product's compliance with specific standards, "quality" in the sense we use today, requires exceeding customer expectations by exceeding the standards. Therefore, consumer evaluations are the most crucial determinant of quality. Today's consumer has ceased to be an "economic man" who takes rational decisions, and emotional values have become more critical. This development has brought different dimensions to the quality perceptions of consumers. In addition to the technical quality that addresses the product's technical specifications, the functional quality that addresses other values that the product offers customers gains importance [13].

After-sales services provide customer satisfaction by ensuring the customer's correct and purposeful use of finished products, providing service and spare parts services at the right, fast and affordable price in case of failure or complaint. *Service quality* can be defined as an organisation's ability to meet or exceed customer expectations. The quality perceived by the customer is paramount in services. Therefore, we can say that the quality of service is the level of performance perceived by the customer or the customer's level of satisfaction with the service. Customers think about quality together with the reliability of finished products and the reliability of after-sales services. In many customer surveys, it becomes clear that after-sales services are increasingly emphasised in the selection of products by customers and are an essential factor in the perception and choice of finished products. Customers want to have the help and suggestions of the manufacturer, the prestige and brand image of the business, the supply of spare parts, maintenance and repair, ease of payment and warranty, and physical characteristics when purchasing a product [21].

The development policies of rural societies aim to increase their welfare levels by

improving their economic, social, and cultural opportunities in rural areas. Rural development strategies and policies aim to ensure the development of disadvantaged societies in the agricultural, economic and socio-cultural fields through self-help and external support [16]. Turkey has made some progress in developing rural areas and increasing people's quality of life by implementing policies to minimise developmental disparities [15]. These developments have not reached the desired level yet, and developmental differences have remained [32].

Sustainable development is a development model that deals with ecological balance and economic growth in the long term, ensures effective use of natural resources, and attaches importance to environmental quality. Sustainable development is a process of change. Resources, technological development, and institutional changes should be harmonious in this change. It should enrich the potential of humanity to meet its present and future needs and expectations.

Sustainable rural development can be defined as changing the economic, social, and cultural structures of rural areas, increasing people's living standards, and increasing the quality of the physical environment and the region's welfare while protecting natural resources, the environment, and historical and natural heritage. There are three components of sustainable development and sustainable rural development: ecological, environmental, biological), economic (income, finance), and social (demographic, cultural) components. Sustainable rural development requires orientation in rural areas, coordination between institutions, participation of the public and those concerned, and solution-based on discussion, monitoring, and evaluation. In rural development projects, targets should be set to increase farmers' incomes instead of increasing agricultural products, and alternative income areas should be explored [33]. For this purpose, various grant programs are being implemented to support rural producers and rural development projects using multiple resources [23]. These programs are implemented with national resources, as in the Rural Development Investment Support Program (RDISP), or with funds provided by international organisations, as seen in the IPARD program.

Effect of applicant and firm characteristics

To ensure that the suitable projects benefit from IPARD programs and increase the effectiveness of the aid provided within the scope of IPARD, it is necessary to correctly understand the characteristics of the individuals (natural persons) and the companies (legal entity) applying for the project. Two of the most critical factors affecting the investment decision of entrepreneurs in the IPARD program are the grant ratio and the ranking criteria. The project can support natural and legal entities with specific characteristics by giving additional points to specific ranking criteria in certain calls. Although it was not included in the scope of this research, the applicant's priority of being a woman in the IPARD I program in the ranking criteria was minimal. This shortcoming was compensated in the IPARD II program, and women's applications began to be given priority. There are some advantages of the applicant being under 40 in natural persons or the authorised person to apply in legal entities. Age support leads to an increase in the grant rate of 5% in measure 101. Moreover, it increases the ranking score of Measure 302 by 5-15 points compared to the call periods. Measure 101 of the IPARD program eligibility criteria include a professional competence requirement. This requirement has also been applied for measures 103 and 302 up to the 12th Call periods of the IPARD I. The same applies to the 302 Measure for the IPARD II budget period. An additional 15 points are given if the applicant has a professional certificate, diploma, or three years of working experience in agriculture or other relevant fields. Budget differences between measures in the IPARD program are not very large. However, the number and rates of projects in the dairy and meat processing and fruit and vegetable sectors, which require relatively high investment costs, may remain at lower levels. In the 101 measure, the existing businesses were given 20 points in the ranking criteria

during the IPARD II 1st and 5th call periods. For the 103 Measure, 40 points were given to existing businesses in the 1st, 2nd, and 5th call periods. In the IPARD I period, the existing business applications did not provide any ranking advantage.

IPARD strives to increase the target audience and effectiveness of the program by giving priority to the individual and company characteristics in the rankings in the application requirements. Individual and company characteristics, which are given priority in the rankings in the application conditions for IPARD projects, may also differ in the perceptions of the participants who benefit from the program on product quality, after-sales service quality, and sustainability issues. This research examines whether there is a relationship between applicants' individual and company characteristics and the dimensions created within the research framework. Thus, IPARD policymakers and country-based policy investors will ensure that the programs reach the right target audience and have the opportunity to analyse whether the program's objectives are fulfilled in the eyes of the participants.

The number of studies in the literature regarding EU IPARD funds is scarce [14, 28]. Current research determined the producers' willingness to benefit from agricultural support policies [38]. The factors affecting the use of these funds by the investors have been inspected [1, 2, 10, 36]. The profiles of the entrepreneurs who want to benefit from the IPARD funds have been investigated [18]. The effects of IPARD funds on rural development [13, 42]; and the effectiveness of those funds [17, 20] went under scrutiny, and the specific sector was examined [19, 37, 39, 40] and investors who received and did not receive IPARD support were compared [27]. Several studies have investigated the satisfaction levels of beneficiary investors [35, 41]. Few studies have examined the effects of IPARD funds on rural tourism [26, 43].

This research aimed to determine the perceptions of the project beneficiaries on quality, rural development, and sustainability issues by adding the after-sales service quality dimension, which is now considered an essential complement to product quality. Specific measures have been investigated whether these perceptions change between the application requirements given additional points in the IPARD. Both investor characteristics and firm characteristics have been included.

The research aimed to examine the following hypotheses:

Is there a statistically significant relationship between the applicant characteristics (ages, educational level, and work experience) and the product quality (QA), after-sale service quality (ASQ), and rural development and sustainability (RDS) perceptions of applicants benefiting from the IPARD program?

Is there a statistically significant relationship between the business characteristics (business entity, business status, following rural development activities, and having industrial training) and the product quality (QA), service quality (ASQ), and rural development and sustainability (RDS) perceptions of applicants benefiting from the IPARD program?

Is there a statistically significant relationship between the *business operating sector, business net monthly income,* and *ownership of the firm* and the product quality (QA), service quality (ASQ), and rural development and sustainability (RDS) perceptions of applicants benefiting from the IPARD program?

MATERIALS AND METHODS

Population and sample

Bursa province received accreditation in the second phase of 42 provinces where the IPARD Program was implemented. 185.99 million TL investment was made in Bursa, where 81.47 million TL grant support was provided to 213 projects in total, based on 2012-2016. Bursa is in 13th place among 42 provinces regarding the number of grants paid. As of May 2019, 253 projects were carried out, and 88.3 million TL support was paid to these projects [29].

IPARD I and IPARD II Programs for Bursa were taken together, and 247 projects were included in the sample. In order to determine

the study sample, a homogeneous purposeful sampling method was used. Purposive sampling is a sampling method in which there is no probability effect. It allows for a more detailed examination by selecting vital areas as data. This method is preferred when working with notable cases with specific criteria or qualifications. The purpose of homogeneous sampling is to conduct an in-depth analysis by selecting a small and similar sample [30].

A total of 73 projects and local products received support from measures 101 and 103 under the IPARD I Program in Bursa province, and 16 projects from rural tourism sub-measures were included in the scope of the study. In addition, 8 projects have been selected that have received support from the relevant sectors from the IPARD II Program and whose payment has ended. Due to the small population, a complete count method was applied. Accordingly, the total sample volume was determined to be 97.

Data collection

The first part contained 22 questions about the applicants' demographic characteristics and the enterprises applying for the project. The second part included 33 statements on rural development, product quality, and after-sale service quality.

The survey aimed to measure the participants' quality after-sales quality and rural development sustainability perceptions. The statements were arranged according to a 5-point Likert scale indicating as strongly disagree (1), disagree (2), no opinion (3), agree (4), and strongly agree (5). It was conducted face-to-face for 97 projects included in the sampling between January 2018 and February 2019. The survey was conducted with the grant applier in natural person and the authorised person to sign in legal entity applications. Before the survey was conducted, the participants were informed about the subject and the purpose of the study. It was emphasised that the data obtained would be confidential and used in academic research.

Data Analysis

To analyse the participants' data, reliability analysis, normality test, independent sample t-test, one-way analysis of variance (ANOVA), and crosstabs were used using SPSS package program version 25. The Cronbach's [9] alpha value of the scale was 0.902. Cronbach's alpha being (α)$\geq$0.90 confirms that the survey is "highly reliable." We also performed a Shapiro-Wilk test to test the normality assumption. The analysis showed that (D(97)p=0.877, p>0.05); the data did not show a normal distribution. Therefore, we used curvature and kurtosis values. We found the skewness values of -0.040 (SE= 0.148) and the kurtosis values of -0.173 (SE= 0.342). Tabachnick and Fidell [34] stated that the skewness and kurtosis values of +1.5 and −1.5 met the normality assumption, so we accepted that the data were distributed normally.

RESULTS AND DISCUSSIONS

Demographic results

We examined the demographic characteristics of the participants of the supported enterprises and the general characteristics of the projects in Bursa. The demographic characteristics are shown in Table 2.

The majority of the beneficiaries of the project (78.4%) were male and between the ages of 36-55 (68.1%), and nearly half of them (43.3%) had a university education. Similarly, almost half of the participants (40.2%) had a professional experience of 5 years or less. Although the participants were highly educated, a significant portion of them did not have relevant education related to the sector in which the investment is made (83.5%). Despite this drawback, 76.3% of the participants did not hold vocational training unless the IPARD applications were required.

A significant proportion of IPARD support was received for newly established companies (84.5%). About half of them were legal entities. Mostly meat (36.1%), milk producers (25.8%), and those with monthly net incomes of €10 thousand and more received funds.

Findings on the perception of investors

The survey questionnaire consisted of 3 sub-dimensions. These were classified as product quality perception, rural development and sustainability perception and after-sales service quality perception. Descriptive

statistics for the entire survey and its sub-dimensions are given in Table 3.

The mean score of the survey was $\bar{x}$=3.8. The survey's highest perception was sustainability and rural development ($\bar{x}$= 4.19, SD= 0.53), and the lowest was quality ($\bar{x}$= 3.50; SD= 0.58).

Table 2. Demographic characteristics of the participants and participating businesses

		N	%
Gender	Female	21	21.6
	Male	76	78.4
Marital status	Married	88	90.7
	Single	9	9.3
Age	≤ 25	2	2.1
	26-35	18	18.6
	36-45	31	32.0
	46-55	35	36.1
	56 ≤	11	11.3
Education	Primary sch.	12	12.4
	Secondary sch.	19	19.6
	High school	24	24.7
	Undergraduate	40	41.2
	Graduate	2	2.1
Professional experience (years)	1–5	39	40.2
	5–10	17	17.5
	10–15	16	16.5
	15–20	11	11.3
	20+	14	14.4
Enterprise type	New	82	84.5
	Existing	15	15.5
Business entity	Normal person	47	48.5
	Legal person	50	51.5
Monthly net income (€)	≤ 5,000	5	5.2
	5,001-10,000	19	19.6
	10,001-15,000	23	23.7
	15,001-20,000	19	19.6
	20,001 ≤	31	32.0
Do you have formal education related to the sector?	Yes	16	16.5
	No	81	83.5
Have you attended a vocational course?	Yes	23	23.7
	No	74	76.3
Who is the head of the business?	Myself	69	71.1
	Other	10	10.3
	Family member	18	18.6
Supported sectors	Milk-producing agricultural holdings	25	25.8
	Red meat-producing agricultural holdings	35	36.1
	Processing and marketing of milk and milk products	2	2.1
	Processing and marketing of red meat and meat products	5	5.2
	Crafts and artisanal added value product enterprises	11	11.3
	Rural tourism and recreational activities	7	7.2

Source: Author's calculation.

The survey result shows that investors are not sure about the effectiveness of the IPARD aid in achieving product quality. However, investors seem to have perceived IPARD's goal of rural development. Of course, quality cannot be achieved with financial aid alone. It is a philosophy and requires a companywide commitment to achieve quality. Investors seem to have understood that after-sales service quality is integral to the product image. Attention needs to be paid to offering better after-sales service.

Table 3. Descriptive data of QA, RDS, and ASQ perceptions

	Mean	SD	Min	Max	Skewness	Kurtosis
QA	3.50	0.58	1.88	5.00	-0.07	-0.05
RDS	4.19	0.53	2.43	5.00	-0.79	0.87
ASQ	4.05	0.51	2.67	4.89	-0.76	0.30
Survey	3.85	0.38	2.97	4.85	-0.04	-0.17

QA= Quality RDS= Rural development and sustainability ASQ= After-sale quality
SD= Standard Deviation
Source: Author's calculation.

Findings on the perception of investors on the survey dimensions

The first part examined the difference between the demographic characteristics of the managers participating in the survey on behalf of the agricultural enterprises and the dimensions examined in the research by ANOVA Tests. The demographic characteristics investigated were the participant's age, educational background, and professional experience.

In the second part, the business characteristics and the scale dimensions were compared. Of these, an independent sample T-Test examined the *type of business*, whether the company is *new or existing*, and whether the participant has a *relevant certified education*. ANOVA analysis has been used to determine the statistical relation between the *monthly net income*, the top *management status*, operating *sectors*, and scale dimensions.

Findings on the QA, ASQ, and RDS perceptions according to the demographic characteristics of managers.

One-way ANOVA results confirmed that there was no statistically significant difference between perceptions of quality, rural development and sustainability (RDS) and aftersales service quality (ASQ) and *age* and *work experience*. On the other hand, there was a statistically significant difference between the education levels of the participants and their quality perceptions ($F_{(4-92)}$=2.856, p=0.028, p<0.05) (Table 4). Tukey's post hoc

result confirms a statistically significant difference in quality perceptions between project owners whose education levels were high school ($\bar{x}$=3.29) and associate degree/undergraduate ($\bar{x}$=3.70). In addition, there was a statistically significant difference between the participants' *education levels* and their RDS perceptions ($F_{(4-92)}$=3.050, p=0.021, p<0.05). Tukey post hoc results showed that statistical significance occurred between primary ($\bar{x}$=3.73) and secondary education ($\bar{x}$=4.28), between primary ($\bar{x}$=3.73) and high school ($\bar{x}$=4.29) and between primary ($\bar{x}$=3.73) and associate/undergraduate degree ($\bar{x}$=4.23). RDS perceptions were at the lowest level of primary education and the highest at the high school level (Table 5).

Table 4. ANOVA test between the participants' quality, rural development and sustainability and after-sales service quality perceptions and age, education and professional experience variables.

	Age		Education		Experience	
	F	*p*	*F*	*p*	*F*	*p*
QA	1.477	0.216	2.856	0.028*[1]	1.547	0.195
RDS	0.088	0.986	3.050	0.021*[2]	0.424	0.791
ASQ	0.205	0.935	1.152	0.337	1.646	0.169

* p < 0.05; [1] Difference (Tukey): 4-5 [2] Difference (Tukey): 1-2, 1-3,1-4
[(1) Primary School (2) Secondary School (3) High school (4) Graduate (5) Postgraduate].
Source: Author's calculation.

Table 5. Perceptions of quality, sustainability and rural development by age, work experience and education.

Age	QA	ASQ	RDS	Work Experience (Years)	QA	ASQ	RDS	Education	QA	ASQ	RDS
≤25	4.23	4.13	4.17	1–5	3.80	3.78	3.99	Primary	3.56	3.44	3.63
26-35	3.65	3.71	3.98	5–10	3.61	3.57	3.80	Secondary	3.61	3.76	3.98
36-45	3.77	3.77	4.01	10–15	3.93	3.82	4.00	High Sch.	3.73	3.80	4.03
46-55	3.86	3.81	3.94	15–20	3.61	3.84	4.09	Graduate	3.94	3.84	4.05
56 ≤	3.65	3.64	3.96	21≤	3.88	3.85	4.05	Post Grad.	4.00	3.79	4.00

Source: Author's calculation.

Findings on the QA, ASQ and RDS perceptions according to beneficiary business characteristics

Independent sample T-Test analysis revealed no statistically significant relationship between the survey's sub-dimensions and the project owners' *business statu*s, whether they *follow rural development activities* and whether they have relevant *industrial training* or *vocational education*. However, a statistically significant difference between the enterprise status, whether the enterprise is *a legal or natural person*), and the RDS perception was apparent (p=0.046, p<0.05) (Table 6). Accordingly, investors who are legal entities ($\bar{x}$=4.29) have a higher level of RDS perception than those who are natural persons ($\bar{x}$=4.08).

Scale Comparison with Enterprises Sectors, Top Management, and Net Monthly Income.

ANOVA analysis was conducted to determine whether there was a significant difference between the enterprises' sectors and the status of *top managers*, and the quality RDS perceptions of the participants. No statistically significant results were obtained for any of the sub-dimensions for these two variables. There was no statistically significant difference between the net monthly income of the enterprises participating and their RDS (F(4-92)=2.238, p=0,071, p>0,05) and ASQ (F(4-92)=2.026,p=0,097,p>0,05) perceptions. On the other hand, there was a statistically significant difference between the monthly net income of the enterprises and their quality perceptions (F (4-92) = 2.521, p=0.046, p<0.05) (Table 8).

Table 6. T-Test Analysis of business features and quality, rural development and sustainability and after-sales quality perceptions

			N	**$\bar{X}$**	**SD**	**df**	**t**	**p**
Business Entity	Quality	Natural Entity	47	3.4920	0.60310	95	-0.172	0.864
		Legal Entity	50	3.5125	0.57213			
	RDS	Natural Entity	47	4.0760	0.57672	95	-2.024	0.046*
		Legal Entity	50	4.2914	0.46891			
	ASQ	Natural Entity	47	4.0189	0.48671	95	-0.528	0.599
		Legal Entity	50	4.0733	0.52674			
			N	$\bar{X}$	SD	df	t	p
Business Status	Quality	New	82	3.5168	0.56750	95	0.557	0.579
		Existing	15	3.4250	0.68596			
	RDS	New	82	4.1882	0.51868	95	0.048	0.962
		Existing	15	4.1810	0.62145			
	ASQ	New	82	4.0190	0.51934	95	-1.279	0.204
		Existing	15	4.2000	0.40543			
			N	$\bar{X}$	SD	df	t	p
Follow-Up of Rural Development Activities	Quality	Yes	87	3.5101	0.58853	95	0.370	0.712
		No	10	3.4375	0.57206			
	RDS	Yes	87	4.2102	0.51131	95	1.267	0.208
		No	10	3.9857	0.68826			
	ASQ	Yes	87	4.0715	0.49138	95	1.418	0.160
		No	10	3.8333	0.6462			
			N	$\bar{X}$	SD	df	t	p
Industrial Training/ Certificate	Quality	Yes	23	3.6413	0.43515	95	1.308	0.194
		No	74	3.4595	0.61971			
	RDS	Yes	23	4.2298	0.47133	95	0.439	0.661
		No	74	4.1737	0.55216			
	ASQ	Yes	23	3.9565	0.63718	95	-0.982	0.329
		No	74	4.0751	0.45908			

* $p < 0.05$.
Source: Author's calculation.

Table 7. Perceptions of quality, sustainability and rural development according to sector, top management and monthly net income of enterprises

Who is the head of the business?				Monthly Agricultural Net Income				Operating Sector			
	QA	ASQ	RDS		QA	ASQ	RDS		QA	ASQ	RDS
Myself	3.80	3.79	4.01	≤5,000	3.39	3.32	3.49	MP	3.70	3.73	3.96
Family member	3.70	3.68	3.93	5,001-10,000	3.77	3.85	4.06	RMP	3.64	3.59	3.83
Other	3.74	3.72	3.82	10,001-15,000	3.55	3.60	3.85	MMP	4.05	3.92	4.17
				15,001-20,000	3.87	3.86	4.16	RMMP	4.09	3.93	3.91
				20,001 ≥	3.95	3.84	3.99	F&V	3.82	3.93	4.05
								CAP	4.14	4.13	4.38
								RT	3.80	3.70	3.98

MP=Milk Producers; RMP= Red Meat Producers; MMP= Milk and Milk Prod. Processors; RMMP= Red Meat and Meat Prod Processors; F&V= Fruits and Vegetables CAP= Crafts and Artisanal Products; RT= Rural Tourism
Source: Author's calculation.

Table 8. ANOVA test of the participants' quality, rural development and sustainability and after-sales service quality perceptions and sector, net monthly income and top management

	Sector		Net Monthly Income		Top Management	
	F	*p*	*F*	*p*	*F*	*p*
QA	0.418	0.889	0.046	0.046*[1]	1.644	0.199
RDS	1.549	0.161	2.238	0.071	0.586	0.558
ASQ	1.549	0.161	2.026	0.097	1.191	0.308

* $p < 0.05$; [1] Difference (Tukey): 3-5 [(1) ≤€5000 (2) €5001-10 000 (3) €10 001-15 000 (4)] €150001-20 000 (5) ≥€20 000]
Source: Author's calculation.

According to the Tukey post hoc result, there was a statistically significant difference in quality perceptions of projects with monthly net incomes between €10,000 - 15,000

($\overline{x}$=3.22) and over €20,000($\overline{x}$ =3.67) (Table 7).

Discussions

Examination of the QA, ASQ, and RDS perceptions according to the demographic characteristics of managers.

We expect that there will be an increase in the perception of quality and sustainability along with a rise in the professional experience and industry knowledge of the investors as they age. Alternatively, we predicted that young investors would closely follow the sector developments and have more sensitive environmental awareness. Their perception of rural development and sustainability would be high.

The group with the highest product and after-sales quality perception is 25 years old and younger. Young investors start their careers more enthusiastically, have higher education levels than older investors, and follow sector developments more closely, leading to a higher perception. Product and after-sales quality perceptions increase until age 26-55 and decrease after 55. the perception of RDS is higher at all ages.

Those dealing with the farming profession in Turkey have not yet been fully institutionalised. QA and SAQ were relatively low in age groups, as the producers do not give their products directly to the consumer but to the intermediary. However, investors' high RDS perceptions indicate that the increasing importance of these factors has begun to be perceived in all age groups. However, no statistically significant relationship was found between age and QA, ASQ, and RDS.

In the literature, various studies [2, 41] examining the effectiveness of bovine grants given within the scope of the IPARD program found a negative relationship between the age of the farmer and benefiting from the supports. Olsen and Lund [25] examined the incentives and socioeconomic effects that affect investment behaviour in agriculture. They emphasised that young farmers are more likely to invest than older farmers. The investment tendency is also related to experience. As farmers age, their willingness to benefit from agricultural support policies decreases. Older farmers traditionally use their resources and do not like to depend on or borrow from third parties. However, the age effect in these studies is not statistically significant.

An increase in educational level has led to a rise in the QA, ASQ, and RDS perceptions. The ASQ perception was lowest in primary school graduates. An increase in the education level has not translated into an increase in ASQ perception. Although the QA and ASQ perceptions of participants with undergraduate and graduate degrees increased relatively, this increase was limited. Nevertheless, a statistically significant difference was observed between the educational status of the beneficiaries and their perceptions of QA and ASQ. The noteworthy point is that there were no significant changes in quality perceptions with the increase in education. IPARD beneficiary enterprises seem to be better regarding the owner's education or the project application. However, the formal education system, including universities, has not adequately covered sustainability issues. Berjozkina and Melanthiou [5] through the example of tourism and hospitality education, state that sustainability education in universities remains extremely limited. The literature has fully established the relationship between education and benefiting from IPARD projects. Beşen et al. [6] found a significant difference between the training periods of the producers who received and did not receive drip irrigation support in the province of Antalya (X^2=1.752, p=0.416) and Aydın et al. [4] in Edirne (p=0.716). Yardimci et al. [40] on the other hand, found a significant difference between the beneficiary and non-beneficiary dairy enterprises on the educational level of the owner (X^2= 26.58 p=0.000).

The increased professional experience could create a difference in investors' perceptions of QA and ASQ compared to their less experienced colleagues; their quality perceptions could have increased. We expected investors who had just started their careers to be more sensitive to KKS issues. However, no stable trend was observed between the increase in experience and the increase in QA and ASQ perceptions. QA

perceptions of those with 10-15 years of professional experience and ASQ and RDS perceptions of investors with 20 years or more of professional experience are higher. No statistically significant relationship was found in the perceptions of QA, ASQ, and RDS in professional expertise. Professional experience does not constitute a statistically significant relationship between producers benefiting from and not benefiting from agricultural support within the scope of IPARD aids [3, 7, 10].

Examination of the QA, ASQ and RDS perceptions according to beneficiary business characteristics

Natural person enterprises are commercial or industrial enterprises that a person owns and operates alone. These are generally family-type businesses with relatively low volume incapacity. On the other hand, legal entity enterprises consist of joint-stock, limited liability, unlimited liability, and cooperative enterprises with more corporate, professional management and higher capacities.

The QA, ASQ, and RDS perceptions of legal entity operations are marginally higher than natural persons. Legal entity enterprises are often more institutionalised, produce in higher volume, work more for export, apply more procedures, and are more frequently exposed to audit mechanisms. These factors could have led to higher perceptions of legal entities. There was no statistically significant difference between the legal status of the company and the quality after-sales quality perceptions. However, the perception of RDS was significant at the 5% level. Likewise, since companies with legal entities may have broader environmental damage and be subject to stricter environmental sanctions, there is likely to be a statistical difference between their perceptions of RDS.

Beşen et al. [7] and Doğan et al. [11] found a negative but statistically insignificant relationship between the application rate of the beneficiaries of the young farmer project and agricultural enterprises' being natural persons. Altıntaş et al. [3] have found a statistically significant relationship between the use of young farmer support and ownership of the business.

Theoretically, existing enterprises will have a higher perception of quality due to their operational experience. There will be an already existing customer base, and to retain this audience, they should pay more attention to after-sales quality. New companies have also been expected to show environmental sensitivity when choosing location, machinery, and equipment; at least they would have to follow environmental laws and sanctions and have higher sustainability due to current intensive discourses in business activities. However, there was no statistically significant difference between the oldness of the enterprises receiving support from the IPARD program, whether they were existing or newly set up, and the perceptions of QA, ASQ, and RDS. In other words, their perceptions were not different between the new and existing businesses. A significant majority of the investors participating in the study were new businesses may also have caused this insignificance.

The perceptions of investors who follow rural development activities are slightly higher than those who do not. The perception of RDS is higher among investors who claim to follow rural development activities. The difference between the RDS perceptions of the investors who appear to follow rural development activities is not statistically significant.

Monitoring rural development activities is necessary for every company in every sector operating in the rural area. Companies established in rural areas provide economic prosperity to the region by providing employment and increasing the purchasing power of the people. However, on the other hand, companies may have environmental damage. In addition, companies may also be affected by disasters that may be the result of climate change.

Companies operating in rural areas follow special incentives and legal sanctions related to these regions. Sanctions are even more critical, especially for agricultural companies, which directly affect human health. Therefore, these sanctions will impact the company's operations and subsequent product quality and firm sustainability. However, considering that the vast majority of the participants were high

school and university graduates, not having a statistically significant difference in the perception of AQ, ASQ, and RDS on following the activities of KKS is concerning.

Aydın et al. [4] between reading the agricultural publication and benefiting from drip irrigation grants, Sezgin et al. [31] between willingness to pay for extension services in Erzincan province and follow innovations, have failed to find a statistically significant relationship.

As anticipated, the participating project owners who have attended sector or subject-related training possessed higher QA and RDS perceptions. However, after-sales quality perceptions of investors with no professional certificate were higher. However, this difference was not statistically significant in all survey categories.

Certificates obtained from vocational courses given by adult education centres are predominantly used to fulfil the professional qualification criterion required for measure 302 until IPARD I budget period 12th call. However, training certificates and courses are obtained due to professional qualification criteria and are only necessary for projects belonging to Measure 302. Therefore, it did not create any statistical differences in investors' perceptions of whether they had received a professional certificate or a course. Altıntaş et al. [3] found a statistically significant difference between participation in agricultural production-related education and benefiting from young farmer project support, while Beşen et al. [7] did not.

On a sectoral basis, red meat and dairy producer investors, mainly included in 103 measures, participated in the study (61.9%). Stringent quality and hygiene standards are applied in both sectors. For such enterprises to continue their activities, they must be aware of these standards and use them continuously. These sectors witness high competition. Customer satisfaction is highly fragile, and customer loyalty will be lost at the slightest quality problem. However, the lowest perception of quality is in meat-producing ($\overline{x}$=3.64) and milk-producing ($\overline{x}$=3.70) companies. The quality perceptions of meat ($\overline{x}$=4.09) and milk processing ($\overline{x}$=4.05) companies are not at the desired level.

After-sales quality is vital for processing companies, rural tourism, and local arts and crafts businesses. Rural development and sustainability, too, are crucial for rural tourism businesses. The lowest ASQ was observed in rural tourism. This indicates that locals still did not grasp the importance of repeat visits. The ASQ perception of local product manufacturers is the highest ($\overline{x}$=4.13). RDS perception is highest in local products ($\overline{x}$=4.38) and milk processing companies ($\overline{x}$=4.05). However, there was no statistically significant difference between the sectoral status of the enterprises participating in the study and the perceptions of quality, rural development, sustainability, and after-sales quality. The fact that most companies receiving support from the project are newly launched companies may be why QA, ASQ, and RDS perceptions are not yet fully embedded in these sectors.

Ağır and Akbay [2] did not find a statistically significant relationship between producers' use of fattening cattle support and their business type (combined or solely fattening) (p(0.581) p= 0.295). Sezgin et a. [31] stated that predominantly animal production was not statistically significant in the willingness of farmers to pay for agricultural consulting services (p= 0.358).

Confirming the monthly net income QA, ASQ, and RDS perceptions are below average. As expected, the lowest QA ($\overline{x}$=3.59) was observed in enterprises with the most insufficient operating income. These companies tend to save the day and survive by deducting their expenses; as the active income increases, the perception of quality increases. Expectedly, the lowest QA ($\overline{x}$=3.59) was observed in enterprises with the most insufficient operating income. These companies tend to save the day and survive by deducting their expenses. As the active income increases, the perception of quality increases.

There is a statistically significant difference between the monthly net income and perceptions of the enterprises covered by the study. This difference occurs between

enterprises with monthly incomes of TL 10,001-15,000 and TL 20,000 and above. Investors' perceptions of ASQ and RDS increased with operating income but decreased after operating income of TL 20,000. While businesses are a customer and environment-oriented up to a certain point, they may lose focus after reaching a certain growth point. Because businesses are being more careful about establishing and holding on to the sector and market, service quality and sustainability concerns may remain in the background while diversifying their activities in the future stages. There was no statistically significant difference between the monthly net income of enterprises and their perceptions of RDS and ASQ. Hence, the increase in perception recorded by the rise in the income of enterprises has been minimal. Different results have been reached in the literature between operating income and the subject studied within the scope of the IPARD program.

Yüzbaşıoğlu and Kızılaslan [41] found no statistically significant relationship between the status of the producer benefiting from animal support and income. The authors concluded that the number of animals owned, the knowledge of support, and the benefit of support, rather than income, statistically affected satisfaction. Topçu [38] reported a positive and significant relationship between farmers' willingness to benefit from agricultural support policies and agricultural activity income [p (0.175) = 0.0280]. Sezgin et al [31] found that agriculture's primary source of income does not affect the willingness to not pay for agricultural extension services.

QA, ASQ, and RDS perceptions were the highest in businesses where the business owner was the manager. While the perception of QA and ASQ were higher in businesses with a professional management team, KKS was higher in the business where the manager was a family member. However, only 10% of the companies receiving the IPARD project are managed by professional managers, and family members manage less than 20%.

Quality and after-sales service are paramount for newly established and owner-managed companies to survive and sustain in the competitive market. Companies managed by professionals in Turkey are also practically family-owned companies. In other words, the family has a high level of influence in management, even if the business has a professional management team. Therefore, ownership status has not changed the supported enterprises' QA, ASQ, and RDS perceptions.

Beşen et al. [7] research has found a statistically significant relationship in terms of owning agricultural businesses between enterprises that receive young farmers' investment support and those that do not receive it (p=0.008). Investors who own agricultural enterprises and apply for IPARD support have a higher number (56.9%). In enterprises where the manager is the parent (52.8%), they show reservations about applying to the IPARD project. However, owning an agricultural enterprise does not statistically affect the producers' benefitting young farmers' support (p=0.792).

CONCLUSIONS

The results showed that the participants' overall perception of RDS was higher than QA and ASK. The quality perceptions of the participants were the lowest. Although it is pleasing that the RDS perceptions of the participants are high, it is concerning that the quality perceptions are low. A significant portion of the IPARD project beneficiaries consists of investors operating in other sectors and taking advantage of the incentives given to this sector. It may take time for investors benefiting from incentives to adapt to quality standards in this new industry. On the other hand, after-sales quality is a newly emerging phenomena in the agricultural sector. Manufacturers usually sell to brokerage firms and do not effectively benefit from after-sale consumer feedback. In particular, meat and dairy producers adhere to intermediary companies for quality improvement. Eventually, meat and milk processing enterprises, rural tourism, and local product sectors will understand that after-sales service quality is essential to product quality.

The implementer of the program, ARDSI, has given sustainability training to the beneficiaries for the post-implementation period. Although this training is beneficial, it would be appropriate to increase the knowledge and awareness of the beneficiaries about EU standards on issues such as quality management, food safety, hygiene, product, raw material quality, and after-sales service quality.

Evaluation of the characteristics of the investors and companies applying to the IPARD program showed that QA, ASQ, and RDS revealed no statistically significant results in most researched components.

The level of education of beneficiaries in Bursa province within the scope of the research is higher than in other regions. However, the fact that the training received is not related to the applied grant area affects these investors' quality, SSK, and KKS perceptions. This research includes investors benefiting from IPARD 1 and IPARD2 support in the Bursa Province. The current research findings provide a general framework for the QA, ASQ, and RDS perceptions of IPARD beneficiaries. However, expanding and repeating the research on a regional and country basis will help confirm the findings and determine the effectiveness of IPARD funds. The study can be repeated to evaluate and compare the IPARD and IPARD 2 periods separately. Thus EU policymakers and ARDSI can observe whether there is an improvement in QA, ASQ, and perceptions between IPARD I and IPARD II.

Adopting and implementing a high-quality perception and understanding of after-sales quality will improve the sector's regional and national economies. The additional points system required for specific measures has not shown the desired impact in practice. Specific characteristics such as gender, education, and professional experience were given additional points in specific measures that did not significantly differ in QA, ASQ, and RDS perceptions. Therefore, the control of these desired properties should be carried out more strictly as per measures. In particular, the need for education in the sector should be further expanded and its content enriched.

Improving the agricultural structure and revenues by benefitting from agricultural support necessitates blending users' perceptions with the priorities of the funds. Considering the characteristics of agricultural business practitioners and firms in adopting and implementing local policies will provide significant advantages to policymakers and producers. Effective use of scarce resources needed for production can be best utilised if the support policies are shaped following the target audiences' needs. Thereby the adverse effects of cost pressure on manufacturers can be eliminated. With the increase in the quality standard in enterprises, a more competitive company structure can be achieved, and thus the living standards of farmers can also be increased.

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