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Tax legislation and its impact on the development of the formal operations of aquaculture companies

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Abstract: Peru is a country open to the world economy and to national and foreign investments; therefore, economic activities of an industrial, commercial and service nature in general are developed. It also has a wide variety of natural resources, which is why the state has chosen to apply differentiated treatment in the tax field to certain types of business activities by granting certain “benefits” and “incentives”. However, due to a lack of knowledge about tax legislation, they are not used adequately. In this context, the objective was to analyze the level of knowledge of the legislation, tax and its impact on the development of their operations in formal business aquaculture in the ring circumlacustrine of the region in 2021. It was developed under a descriptive correlational design with a sample of 80 circumlacustrine ring aquaculture companies. The results indicated that there is a low level of knowledge about tax legislation on the part of the owners of aquaculture companies, which negatively affects the development of their formal operations in the circumlacustrine ring of the Puno region. As a consequence, it has a negative impact on the formalization of companies since they do not know about the benefits and tax incentives and even less about the tax regimes to which they are subject as taxpayers; therefore, aquaculture companies are in the informality category in a high percentage.

Keywords: aquaculture; business; tax legislation; formal operations

1. Introduction

Aquaculture is a growing industry both globally and in Peru, and its expansion must focus on sustainability, efficiency and competitiveness (Berger, 2020). To achieve this, strategies such as smaller-scale aquaculture, the promotion of native species, the production of algae and primary consumer organisms are considered. When environmental and economic conditions allow, aquaculture diversifies towards intensive, integrated and polyculture systems, including expansion into the open sea (Berger, 2020).

Peru holds the leading position in the production and export of fishmeal, which is an important source of protein for animal feeding and fish breeding (Talledo, 2010). Furthermore, the country has vast untapped water resources, the use of which in aquaculture could generate employment and income for local communities, while improving the diet of the population, especially those with low economic resources or who are underemployed (Arroyo and Kleeberg, 2013).

In recent decades, the aquaculture industry in Peru has experienced notable growth. This is reflected in the significant increase in production, since in 1993, 4753 tons were harvested, while in 2013 this figure shot up to 105,158 tons, with an impressive increase of 22%. Furthermore, exports of aquaculture products went from US\$21,223 to US\$278,796,775 in the same period (Martín et al., 2015).

On the other hand, the constant conflict between mining companies and communities over access to water is a challenge that the country must address (Saade, 2013). However, this could also become a business opportunity if aquaculture projects are implemented, taking as an example nation such as Spain, Brazil, Chile and Colombia, which are already making significant investments to promote the development of aquaculture (Arroyo and Kleeberg, 2013).

In Peru, aquaculture development is mainly focused on the production of aquatic species (Ruiz, 2012). Aquaculture activity in Peru is distributed throughout the country, with greater emphasis on specific areas. According to production volumes, shrimp farming is predominant on the coast, particularly in the region of Tumbes (93.4%) and Piura (6.6%), and scallops, mainly in Ancash (79.12%) and lime (19.13%); with a production of 7311.51 tons, on the other hand, trout farming predominates in the mountains, with a production of 2,808.27 tons in 2003, concentrated in the regions of Junín (40.93%) and Puno (45%). Finally, in the jungle area, the cultivation of Amazonian fish (cachama or gamitana, pacu and entangled prochilod or boquichico) occurs with a production of 126.16 tons during 2003, mainly in the Ucayali regions (42.39%) (Cárdenas, 2022).

In this regard, aquaculture activity is regulated by tax legislation that applies to the formal operations of 73 aquaculture companies. In this regard, the Law for the Promotion and Development of Aquaculture (LPDA) and its regulations is the main regulation for the sector, with the objective of guiding the regulation and promotion of the activity (PRODUCE, 2011). There are also other regulations such as the inspection and sanctioning procedure regulations, as well as the sanitary regulations. In addition, there is the Law for the Promotion of the Ammonia Region and the Law on Protected Natural Areas (Cárdenas, 2022). However, the National Aquaculture System (SINACUI) regulates the mechanisms of integration, coordination and cross-sectoral interaction between the different actors; in addition to promoting aquaculture practices that contribute to the conservation and sustainable use of the environment where it is developed (El Peruano, 2016; FAO, 2016).

There are productive categories, which are:

- Aquaculture of Limited Resources (AREL): It is the activity developed exclusively or complementary by natural persons, included within this category are the aquaculture activities developed by basic education centers, without commercial purposes, where the annual production does not exceed the 3.5 gross tons (Quiroz and Urbina, 2020).
- Micro and Small Business Aquaculture: activity for commercial purposes by legal or natural persons, annual production is greater than 3.5 tons and does not exceed 150 gross tons.
- Aquaculture for medium and large companies: activity for commercial purposes by legal or natural persons, annual production is greater than 150 tons.

In Peru, there are tax regimes such as the New Simplified Single Regime (RUS),

the Special Income Regime (RER) and the General Regime (RG). On the other hand, tax benefits are incentives whose objective is to fully or partially waive the tax obligation, with a motivation involved; these benefits are reflected in tax regulations (Baldeón, 2019). Tax benefits are regulatory treatments that imply by the State a total or partial reduction in the amount of the tax obligation or the postponement of the enforceability of said obligation (Baldeón, 2018).

There are different types of tax benefits, among which tax incentives, exemption, unaffectedness and immunity stand out (Ponce de Leon, 2014). Tax incentives are reductions to the tax base of the tax, granted with the purpose of encouraging certain economic sectors or activities, and even those subsidies granted by the State to certain subjects. For their part, exemptions are tax relief techniques that seek to avoid the emergence of the tax obligation, which is characterized by its temporality (Villanueva, 2011).

In this sense, and in order to promote aquaculture activity, there are tax benefits such as: i) Reduced rate of Income Tax included in Law No. 27460, they will be subject to the rate of fifteen percent (15%) on income; ii) Early recovery of VAT and iii) Exemption from the General Sales Tax (El Peruano, 2016).

The Puno Region has a vast potential for water resources, which include 354 lagoons, 316 rivers and 7 dams, with Lake Titicaca being the most notable in terms of its relevance for the development of aquaculture, according to the Regional Production Directorate (DIREPRO) report in 2009. Furthermore, the water quality in many of these water resources in the region is ideal for carrying out aquaculture activities, such as raising rainbow trout (*Oncorhynchus mykiss*) in floating cages, which is widely disseminated and accepted (Chura and Mollocondo, 2009).

The development of this trout farming activity in Puno is currently a profitable business, without the need for large investments in fish farming infrastructure, in addition to mentioning the current situation characterized by the boom in exports for which companies in this sector necessarily need to be informed with the conditions of the formal framework in which it must operate, conditions in the way it operates in the current scenario are totally negative for its sustainable development (National Aquaculture Information Network, 2022).

In that sense, in tax matters, companies involved in this economic sector are governed by the general rules of the Tax Code, the Income Tax Law and the General Sales Tax and Selective Consumption Tax Law, among other Laws. in relation to contributions by Social Laws; Likewise, through these same regulations or through others of equal hierarchy, the State has chosen to apply differentiated treatment in the tax field to certain types of business activities, granting certain “benefits” and “incentives”, which are little or nothing taken advantage of by these companies as a product of their ignorance of tax legislation (SUNAT, 2022).

The lack of knowledge of the obligations and tax rights of the economic sector to which this research work is directed towards the Peruvian treasury has an impact on the limited formal development of its activities (Cabrera et al., 2021), which is why it is very necessary to evaluation of knowledge conditions, consequently the incorporation of these small and micro informal entrepreneurs into formality raises the need to analyze the state in which they are currently operating, their characteristics in this activity and their behavior in the formal scenario, so that information channels can

be established that affect the visible consequences leading to its formality that allow them to overcome the current context of their activities and consequently enter the scenario of the conditions offered by formality (International Labor Organization , 2015).

2. Materials and methods

The study was conducted in the department of Puno. The target population was represented by 362 organizations and/or companies in the Puno region that are in activity, and that are duly registered with the Ministry of Production (PRODUCE), to which this government entity granted concessions and authorizations by means of a Directorial Resolution (**Table 1**).

The sample was determined using the probabilistic formula sample for finite populations:

$$n = \frac{362x(1.96)^2x(0.9)(0.1)}{(362 - 1)(0.05)^2 + (1.96)^2(0.9)(0.1)}$$

$N = 80$ aquaculture companies

The sample obtained is from 80 aquaculture companies that are located in the Circunlacustrine ring of the Puno Region, taking as reference mainly those found in the province of Chucuito.

The inductive-deductive, descriptive and synthesis method was used (Sampieri, 2006). The research design applied is non-experimental, descriptive correlational with two study variables (Charaja, 2004), because the existing relationship between Tax legislation and its impact on the development of formal operations of aquaculture companies. The type of research is basic, determined based on surveys, direct observation and documentary compilation of current legal regulations on tax matters (Charaja, 2004).

The technique used was the survey, the instrument was the questionnaire on knowledge of tax legislation in aquaculture companies and its benefits that are contemplated in it (Ramos et al., 2021). For the analysis of the data obtained, descriptive and inferential statistics were applied, where the collected data were processed in the SPSS 15v statistical software. Likewise, the Chi-Square test was used to test hypotheses “There is a low level of knowledge that has a negative impact on the formalization of aquaculture businesses”.

where:

O_{ij} = observed frequency;

e_{ij} = expected frequency;

H_0 = Null hypothesis;

H_1 = Alternate hypothesis

The expected frequency (e_{ij}) has been calculated with the formula:

$$e_{ij} = \frac{(ni)(nj)}{n}$$

Table 1. Companies and/or organizations dedicated to aquaculture.

No.	Company name or name	Legal representative	Personality	Start date	Place	Dist	Prov	Area
1	Lake Titicaca Binational Special Project–PELT	-	P.J.	10/06/1997	Boat Dock	Chucuito	Fist	0.8329
5	“SAN PEDRO DE HUALLATANI” SR Ltda.	-	P.J.	04/05/1999	Iru Pampa Huallatani	Acora	Fist	
10	Fishing “FAQUIPAR” SR Ltda	-	P.J.	11/21/2000	San Pedro Pier	Vilquechico	Huancane	
14	EP Paucar Hermanos SRL	-	P.J.	04/01/2002	Lajachi	Vilquechico	Huancane	1.00
16	Emp. Agro Industries Virgen de las Nieves SRL	-	P.J.	04/04/2002	Huertacuyo	Vilquechico	Huancane	1.00
19	EPJM Brothers.	-	P.J.	04/10/2002	Illapua Lacquer	SR of Mazocruz	The Collao	
20	Humajalso fish farm Chichillapi	-	P.J.	07/23/2002	Humajalso	SR of Mazocruz	The Collao	
22	Andres Quispe Camacho	-	P.N.	10/22/2002	Cajon Fund	Silversmith’s	Fist	0.05
30	Nemia Hillacutipa Duran	-	P.N.	12/13/2002	Boat Sector	Chucuito	Fist	0.25
33	Juan Lopez Ventura	-	P.N.	07/11/2003	Janco Hitani	Pichacani	Fist	
34	EP Artesanal SY SPORT SRL	-	P.J.	07/11/2003	Checche circa	Chucuito	Fist	
35	Santiago Mandamiento Chambilla	-	P.J.	07/11/2003	Patjata Quinsacollo	SR of Mazocruz	The Collao	
36	Pez Nada Commercial Society	Edgar Mamani Palomino	P.J.	11/20/2003	Leycoma	Chucuito	Fist	0.25
54	Fishing Emp “Sol Andino” SRL	Julio Cesar Coaquira Condori	P.J.	02/23/2004	Laka	SR of Mazocruz	The Collao	4.00
57	Emp.Pesq.Sagittarius SRL	Wiylian Fredy Gomez Quijo	P.J.	02/23/2004	Taaman	Capachica	Fist	1.00
59	Fishing Emp. Asuncion SRL	Urbano Yujra Mamani	P.J.	02/24/2004	Kaurasillo	Chucuito	Fist	1.50
69	Emp.fishing. “Squid” EIRL	Gloria Clash Sayritupa	P.J.	03/04/2004	Stripe	Chucuito	Fist	1.00
89	Probervios Artesanal Fisheries SCRL	Efrain Ticona Sairitupa	P.J.	06/04/2004	Chicamaya-Ichu	Fist	Fist	1.00
93	Atoja Artesanal Fishing SCRL	Olegario Ramiro Yucra Mamani	P.J.	07/09/2004	Cusipata	Chucuito	Fist	1.00
96	Piscifactorias De Los Andes SA	-	P.J.	09/10/2004	Ponds	Silversmith’s	Fist	5.00
97	Edgar Mamani Palomino	Edgar Mamani	P.N.	11/15/2004	Cusipata	Chucuito	Fist	0.50
101	Julian Isaac Barra Catacora	Julian Barra Catacora	P.N.	11/22/2004	Yacanani Island Sector	Silversmith’s	Fist	1.15
102	Asoc de Prod Industry of Footwear, Fishing, Tourism, Agriculture-Ichu	Elsa Alejandra Acero Curasi	P.J.	11/22/2004	Ichu	Fist	Fist	2.00
108	MISKI CHALLHUA SRL	Walter Arizaca Santos	P.J.	12/20/2004	Huallatani	Acora	Fist	1.00
122	Luz Fani Apaza Ticona	-	P.N.	03/21/2005	Karana	Chucuito	Fist	0.50
148	EP Virgen del Rosario SRL	-	P.J.	04/12/2005	Road	Manazo	Fist	0.25

Table 1. (Continued).

No.	Company name or name	Legal representative	Personality	Start date	Place	Dist	Prov	Area
153	Agroindustrial, livestock, fishing and Multiple Services of the South (AGROPES DEL SUR)	-	P.J.	05/31/2005	cuyvina sector	SR of Mazocruz	The Collao	2.00
154	Betzabe Torres Cruz	-	P.N.	05/31/2005	Boat Dock	Chucuito	Fist	1.00
157	FLORICRUZ EIRL Fishing Company	-	P.J.	06/30/2005	Cusipata Sector	Chucuito	Fist	1.00
158	Leonardo Torres Palomino	-	P.N.	07/07/2005	Cusipata Sector	Chucuito	Fist	1.00
161	Oquendo Fishing Company SRL	Emilio Oquendo Oquendo	P.J.	08/16/2005	Socca Sector Huallatani	Acora	Fist	1.00
168	Artisanal Fishing MARLIN SRL	-	P.J.	09/20/2005	Cusipata Sector	Chucuito	Fist	1.00
169	Adrian Roberto Aruquipa Mendoza	-	P.N.	09/07/2005	Cusipata Sector	Chucuito	Fist	1.00
174	Rogelio Quenta Chata	-	P.N.	09/20/2005	Asquicha	Pilcuyo	The Collao	1.00
175	EP Luis Miguel SCRL	Luis Gonzaga Espezuza Gallegos	P.J.	09/28/2005	Cusipata	Chucuito	Fist	27.42
176	Company Corporacion Brisas del Lago SAC	Bruce H. Echenique Carpio	P.J.	09/28/2005	Huencalle	Silversmith's	Fist	1.00
184	Llanque EIRL Fishing Microenterprise	Hugo Wilber Llanque Mamani	P.J.	10/13/2005	-	Pilcuyo	The Collao	1.50
188	Assoc. Trout Breeders of the Tijeria Sector Capachica	Teodoro Salvador Coila Knew	P.J.	10/17/2005	-	Capachica	Fist	1.50
194	Alejandro Llanque Quenta	-	P.N.	11/17/2005	Kajje	Pilcuyo	The Collao	1.00
195	Jorge Rossello Suca	-	P.N.	11/22/2005	Asquicha	Pichacani	Fist	9.91
196	Isidora Yujra de Santuyo	-	P.N.	11/22/2005	-	Chucuito	Fist	0.50
198	Pesquera Hermanos Mamani SCRL	-	P.J.	01/12/2005	Kita Kantutani Tojena	Chucuito	Fist	1.00
202	Industrial Pesquera G and ASCRL	Felix Alejandro Gutierrez Gallegos	P.J.	12/14/2005	-	Chucuito	Fist	1.00
203	EP la Sirena SRL	Fidel Ladislao Chaiñaq Clash	P.J.	12/14/2005	Stripe	Capachica	Fist	1.00
204	Solomon Asuncion Escobedo Pacheco	-	P.N.	12/15/2005	Taaman	Pichacani-Laraqueri	Fist	1.00
205	Edgar Mamani Palomino	-	P.N.	12/22/2005	Laycoma Tonccophuo	Chucuito	Fist	0.00
214	Maria Rosa Apaza Quispe	-	P.N.	12/22/2005	-	Acora	Fist	1.00
215	Remigio Cutipa Tintaya	-	P.N.	12/22/2005	Huallatani	Acora	Fist	1.00
220	EP Anace SCRLtda.	Alfredo Alave Curasi	P.J.	01/20/2006	Boat Sector	Fist	Fist	1.00
221	Edgar Cutimango titalo	-	P.N.	01/20/2006	Inchupalla	Chucuito	Fist	0.06
225	Emigdio Sindolfo Jacinto Maron	-	P.N.	02/20/2006	Santa Maria	key	The Collao	0.23
226	Pesquera Quiapa Individual Responsibility Company. Ltd.	Julia Maruja Quispe Phala	P.J.	02/20/2006	Suopatja Pampa	Acora	Fist	1.00
228	Genaro Huayta Morales	-	P.N.	02/20/2006	Miajachi	Vilquechico	Huancane	1.00

Table 1. (Continued).

No.	Company name or name	Legal representative	Personality	Start date	Place	Dist	Prov	Area
261	Timothy Chambilla Chambilla		P.N.	03/27/2006	Chayllipiña Fund Partiality	SR of Mazocruz	The Collao	0.05
263	Titicaca Trout Special Project	Puno Regional Government	P.J.	03/31/2006	Incuyllaya Occopampa	Chucuito	Fist	0.02
266	Adolfo Florentino Arizaca Pilco	-	P.N.	03/31/2006	-	Acora	Fist	0.25
270	Edgar Yujra Ticona	-	P.N.	04/17/2006	Pucara	Pilcuyo	The Collao	1.00
274	Pesquera Santos EIRL.	Norma Arizaca Santos	P.J.	04/28/2006	Huallatani	Acora	Fist	1.00
278	Artisanal Fishing Don Vilca SCRLtda.	Ledis Quispe Limachi Vilca	P.J.	05/05/2006	Ship	Chucuito	Fist	0.50
279	Armando Mamani Jilaja	-	P.N.	05/05/2006	Equiccota Quispe	Pilcuyo	The Collao	1.00
280	Aristides Tintaya Quispe	-	P.N.	06/08/2006	Huallatani	Acora	Fist	1.00
283	Industrial Pesquera G and ASCRL	Felix Gutierrez Gallegos	P.J.	06/08/2006	Cajon Fund Paracotana	Silversmith's	Fist	1.00
292	Luis Armando Ccopati Quispe	-	P.N.	07/10/2006	Villa Socca	Acora	Fist	0.25
293	Maruja Mamani Santos	-	P.N.	07/10/2006	Villa Socca	Acora	Fist	1.00
296	Fishing Company Waves of Lake Titicaca Jonsani SCRLtda.	Mr. Sabino Parisucca	P.J.	07/18/2006	Jonsani	Huancane	Huancane	1.00
297	Association of Trout Producers San Pedro Barco- Chucuito	Claudio Quispe Choque	P.J.	08/28/2006	Ship	Chucuito	Fist	1.00
298	Fishing Company Cuno SRL	Mr. Simon Pedro Cuno Coila	P.J.	09/04/2006	Alley	Fist	Fist	1.00
306	Altiplano Fishing Association	Mr. Teofilo Honorato Duran Ortega	P.J.	09/27/2006	Incuyllaya Occopampa	Chucuito	Fist	1.00
307	Jaliri Fishing Company SCRLtda.	-	P.J.	06/10/2006	Chichillapi	SR of Mazocruz	The Collao	1.00
309	Aquaculture Sea lake SCRLtda.	Mr. Severino Santuyo Mamani	P.J.	06/10/2006	Cusipata	Chucuito	Fist	1.00
311	Hnos. Contreras Fishing Company EIRL	Mr. Paulino Contreras Huacca	P.N.	12/29/2006	Kaurasillo Pampa	Chucuito	Fist	1.00
313	Fishing Company El Sol de las Cajas Reales SRL	Mr. Bernardo Ramos Mamani	P.J.	12/29/2006	Ship	Chucuito	Fist	1.00
317	CEDEPES SRL Fisheries Development Center	Mr. Herberth Yhoel Iturry Quiñonez	P.J.	12/29/2006	Villa Socca	Acora	Fist	1.00
318	Ms. Sofia Mamani Phala	-	P.N.	12/29/2006	Villa Socca	Acora	Fist	1.00
319	Mr. Edgar Mamani Palomino	-	P.N.	12/29/2006	Cusipata	Chucuito	Fist	1.00
333	Ccausillone Lago Verde Pichuañi Fishing Company SCRL	Mr. Gregorio Mamani Ramos	P.J.	04/10/2007	Jatucachi	Pichacani	Fist	2.60
336	Mr. Alberto Cruz Coila	Mr. Alberto Cruz Coila	P.N.	04/20/2007	Chucuito Boat	Chucuito	Fist	1.00
343	Artesan Fishing. Marcelino Tintaya Marce EIRL	Marcelino Tintaya Marce	P.J.	07/06/2007	Chaulluta-Villa Socca	Acora	Fist	1.00
345	Eusebia Roque Mamani	-	P.N.	07/06/2007	Titilaca	Silversmith's	Fist	1.00

Table 1. (Continued).

No.	Company name or name	Legal representative	Personality	Start date	Place	Dist	Prov	Area
346	Marcos Miguel Copacati Copacat	-	P.N.	07/06/2007	Challuta-Villa Socca	Acora	Fist	1.00
351	San Marino Aquaculture SCRL	Edgar Enrique Perez Choque	P.J.	08/13/2007	Chucuito	Chucuito	Fist	1.00
353	Sacred Lake Artisanal Fishing Company SCRL	Benjamin Cruz Chambilla	P.J.	08/13/2007	Cusipata	Chucuito	Fist	1.00
354	Nicolas Phala Quispe	-	P.N.	08/13/2007	Challuta-Villa Socca	Acora	Fist	1.00
355	Teodoro Dueñas Garambel	-	P.N.	08/15/2007	Titilaca	Silversmith's	Fist	1.00
356	Javier Jaime Velasquez Coila	-	P.N.	08/15/2007	Taman	Capachica	Fist	1.00
359	Tito Ruben Apaza Quispe	-	P.N.	08/20/2007	Villa Socca	Acora	Fist	1.00
360	Emp . Pescadora Ccausillone Lago Verde Pichuañi SCRL	-	P.J.	08/22/2007	Jatucachi	Pichacani	Fist	2.60

Source: (Data from (PRODUCE, 2019).

3. Results and discussions

The aquaculture companies of the circumlacustrine ring of the Puno Region, according to the survey applied, are registered in the Superintendencia Nacional de Administración Tributaria (SUNAT) Registries, that is, if they have a Single Taxpayer Registry (RUC) number.

Table 2. Registration status of organizations in SUNAT.

Alternative	Frequency	
	F	%
Yes	15	18.75
In progress	34	42.50
No	31	38.75
Total	80	100.00

Source: Survey applied to the owners of aquaculture companies in the circumlacustrine ring of the Puno Region—2021.

The results indicate that 42.50% are in the process of registering with the SUNAT, 38.75% indicate that they are not registered or do not have a RUC and only 18.75% of owners are in the Single Taxpayer Registry (**Table 2**).

From this it is inferred that the majority of companies are not registered in the SUNAT, in accordance with the provisions of Title IV, article 87, numeral 1 of the TUO of the current Tax Code DS 135-99-EF, consistent with the Registration Law Sole Taxpayers D. Leg. 943 and RS 210-2004/SUNAT; That is to say, they are informal, so they are unaware of the benefits of being legally constituted as a company. In turn, it can be deduced that this group of companies functions as small producers, with their market being the cities of Puno and Juliaca, unable to sell their production to other cities because they do not have proof of payment, reducing their income and limiting their production.

Table 3. Tax regimes that are applicable to aquaculture companies.

Alternative	Frequency	
	F	%
RUSSIA	14	17.50
RER	1	1.25
General Regimen	0	0.00
None	65	81.25
Total	80	100.00

Source: Survey applied to the owners of aquaculture companies in the circumlacustrine ring of the Puno Region—2021.

From the results it is deduced that most of the companies are not in any tax regime and those that are registered are mostly in the RUS, where they contribute only 20 new soles per month as a tax, the Legal application of which corresponds to the D. Leg. 937 modified by the D. Leg. 967 in the Case of Nuevo RUS and the TUO of the Income Tax Law DS 179-2004-EF in the case of Special Regime and General Regime (**Table 3**).

Table 4. Information you will see provided to SUNAT.

Alternative	Frequency	
	F	%
Yes	8	10.00
Sometimes	25	31.25
No	47	58.75
Total	80	100.00

Source: Survey applied to owners of aquaculture companies, Puno—2021.

The results show that the companies are oblivious to the provisions established in the TUO of the current Tax Code DS 135-99-EF and other regulations related to tax issues, such as formalizing companies and that they contribute to the payment of taxes to the State, since they are unaware of the advantages that exist when issuing payment vouchers as they are formalized (**Table 4**).

Table 5. Compliance with the issuance of payment receipts required by the National Tax Regime.

Alternative	Frequency	
	F	%
Yes	14	17.50
Sometimes	5	6.25
No	61	76.25
Total	80	100.00

Source: Survey applied to owners of aquaculture companies, Puno—2021.

Inferring from these results, it appears that most companies do not issue payment receipts in accordance with the provisions of section 3. Article 87 of Title IV of the

TUO of the current Tax Code DS 135-99-EF, consistent with its application. with the Regulation of Proof of Payment RS 007-99/SUNAT, since the sale of trout in the markets or squares of the cities of Puno and Juliaca do not require proof of payment, since these products are sold to final consumers, as such, the issuance requirement on the part of the acquiring clients is not of interest either (**Table 5**).

Table 6. Knowledge about existing tax benefits in the Tax Legislation regarding aquaculture activities.

Alternative	Frequency	
	F	%
Yes	17	21.25
Sometimes	21	26.25
No	42	52.50
Total	80	100.00

Source: Survey applied to owners of aquaculture companies, Puno—2021.

The results show that the majority of businessmen dedicated to trout farming do not have knowledge about the tax benefits with which the State protects and encourages aquaculture companies, in accordance with the provisions of article 26 of the Promotion Law. and Development of Aquaculture, Law 27460, refers for its application to the standards contained in Law 27360, therefore causing non-taxation by producers and, above all, not benefiting from tax benefits (**Table 6**).

Table 7. Willingness of the businesswoman to formalize her company.

Alternative	Frequency	
	F	%
Yeah	49	61.25
Partly	21	26.25
No	10	12.50
Total	80	100.00

Source: Survey applied to the owners of aquaculture companies in the circumlacustrine ring of the Puno Region—2021.

The data obtained indicates that the largest number of companies dedicated to the production and marketing of trout, if they are willing to formalize their operations, if they become aware of the tax benefits, on the other hand, they request that SUNAT, train and make these benefits known, so that producers can participate in these benefits and in turn formalize their operations (**Table 7**).

On the other hand, trout producing and marketing companies are unaware of the validity of the tax benefits, as determined by article 3 of Law 27360. a situation that puts at risk that businessmen do not decide to formalize their operations and therefore the loss of opportunities to enjoy the aforementioned benefits.

Also, a large part of the companies does not know about the exemption from the General Sales Tax (IGV) for companies in the aquaculture sector, which allows businessmen not to pay this tax, since in strict application of article 5 of the TUO of the VAT Law, Appendix I, the sale of these exploited products of aquaculture origin

are within the scope of tax exemption.

Table 8. Hypothesis testing.

Tributary legislation	Low		Half		High		Total
	obs	Esp	obs	Esp	obs	Esp	
Formal development of its operations							
Yes	01	1.01	04	4.21	08	8.61	13
Sometimes	06	6.25	06	6.14	03	3.08	15
No	45	45.62	06	6.14	01	1.17	52
Total	52		16		12		80

(Obs): Observations made;

(Eng): Expected results.

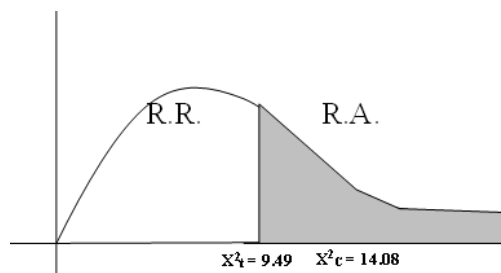


Figure 1. Decision rule for hypothesis testing.

In contrast to the hypothesis test, it is evident that there is a low level of knowledge about tax legislation on the part of the owners of aquaculture companies, which negatively affects the formal development of operations (**Table 8**). We adopt that it is greater $X_c^2 = 14.08$ than $X_t^2 = 9.49$ aquaculture farms of the Circumlacustrine ring of the Puno Region (**Figure 1**).

4. Conclusions

There is evidence of a significant deficit in the knowledge of tax legislation among the owners of the aquaculture companies operating in the circumlacustrine ring of the Puno region. This deficiency has palpable negative consequences on the formalization process of aquaculture enterprises, as statistically supported by a hypothesis test in which a value that considerably exceeds the required threshold was obtained.

Likewise, among the taxes applicable to aquaculture companies dedicated to the raising and commercialization of trout in the aforementioned circumlacustrine ring, the annual income tax stands out at 15%, compared to other companies that pay an annual rate of 30%.

Regarding the tax regimes that apply to these companies in the Puno region, the Single Simplified Regime represents 17.50%, followed by the Special Regime, which includes 1.25% of the aquaculture companies. On the other hand, none of the companies are registered under the General Regime, which leads to the conclusion that 81.25% of the companies are not registered with the National Superintendency of Customs and Tax Administration (SUNAT).

Therefore, it is important to highlight that the tax legislation offers specific benefits for aquaculture activities, such as income tax reduction, the option of early

depreciation for the acquisition of assets and the possibility of obtaining early income tax recovery. However, the acceptance of the benefits is subject to the entrepreneur's level of knowledge of tax legislation.

For future research, the study proposes to develop applied research that seeks to introduce training or capacity-building programs for the employees of the water entrepreneurs in order to close the informality gap, which is a multi-causal problem in Peru. In this way, the impact of such an intervention will be measured and could be proposed as public policy.

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