

NEW ARCHITECTURE OF RELATIONAL QUALITY MANAGEMENT: THE INTEGRATED BEHAVIORAL MODEL (IRSQ)

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Purpose: The property insurance sector, classified in organization theory as a domain of "credence goods", is characterized by high levels of information and perceptual asymmetry. Traditional quality management concepts derived from the TQM paradigm exhibit significant limitations when confronted with the behavioral aspects of consumer decision-making. The objective of this study is to address this research gap by developing and validating an original model of Integrated Relational Service Quality (IRSQ), which enables the measurable identification and mitigation of quality gaps within financial market entities.

Methodology: The research analysis is based on the author's methodological evolution: from the adaptation of the SERVQUAL model and the construction of the original Customer Service Quality Index (WJOK) to the target IRSQ model. The empirical component comprises a cross-sectional study conducted in 2023 on a sample of 658 property insurance clients in Poland and the USA. The research process utilizes advanced statistical measures to quantify quality gaps.

Findings: The research demonstrated that personnel professionalism, information reliability, and the timeliness of claims processing are the primary determinants of quality. The IRSQ model, representing the culmination of the author's methodological evolution, effectively integrates rigorous management procedures with behavioral feedback loops. By shifting the paradigm from static assessment to relational management, the model provides a pioneering framework for mitigating information asymmetry. The findings indicate that trust is a dynamic structural resource, and its systematic management via the IRSQ model constitutes a fundamental pillar of competitive advantage in the public trust service sector.

Research context: The study focuses on the property insurance market, necessitating caution when generalizing conclusions to other financial market segments. A further challenge is the dynamic volatility of client expectations, driven by psychological mechanisms such as information framing.

Social implications: The insurance sector acts as a guarantor of financial security. High service quality, as measured by the IRSQ model, directly translates into the reduction of psychological tension (fear of risk) and the strengthening of social trust in financial institutions.

Practical implications: Quality management should be based on feedback loops (PDCA logic), where customer satisfaction is not the end of the process but rather input data for the redefinition of service standards. It is recommended to implement IRSQ diagnostic sheets to continuously optimize service and eliminate perceptual asymmetry.

Originality/value: The study introduces a pioneering architectural framework for relational quality management. By conceptualizing the IRSQ model as a strategic bridge between behavioral consumer insights and organizational decision-making, this work transcends traditional static models. The proposed Integrated Behavioral Model redefines the service delivery process, synthesizing SERVQUAL and WJOK methodologies into a robust diagnostic instrument to institutionalize trust-based management.

Keywords: service quality, IRSQ, property insurance, perceptual asymmetry, customer trust.

Article category: Research paper.

JEL classification: G22, M10, D80, L84.

1. Introduction

In current times, amidst steadily increasing competition, the primary objective of every insurance company is to meet and even exceed client expectations, which enables the creation of strong relationships between the insurer and their client (cf. Alhuwitat, Abujarad, Salem, 2017), thereby ensuring customer loyalty. This constitutes the main goal of Customer Relationship Management (CRM) (cf. Asgarpourza, Hamid, Mousavido, Jamshidiz, 2013).

The products and services of a given insurance company should be of the highest possible quality, and quality ought to constitute a constant system of monitoring, control, and improvement. In the property insurance services industry, high quality is an immanent service feature that determines the retention of old clients (recipients) and the acquisition of new ones (cf. Meidute-Kavaliauskiene, Aranskis, Litvinenko, 2014). Property insurance services are a specific sector that requires the highest quality of service.

Insurance company employees must possess highly specific and above-standard competencies that significantly exceed the highest quality requirements for insurance services in the insurance industry (cf. Wiluk, 2016). In the case of the insurance sector, every stage of the service delivery process is extremely important for the financial security of both the service provider and the service recipient, and requires systematic and continuous monitoring by management (cf. Júnior, Souki, Filho, 2008). Any error by an insurance company employee, as well as by persons (insurance agents and brokers) cooperating with a given company, may lead to a loss of trust and financial resources, and the client may lose confidence or even fail to obtain the expected benefit and/or compensation for the damage incurred under the insurance contract. Services provided by insurance intermediaries must be of the highest quality, timely, i.e., adapted to the individual, specific needs of the clients of property insurance companies (cf. Otsetova, Enimanev, 2014). Clients continuously exert pressure for high quality of services provided by insurance intermediaries. According to Imai's (1986) concept of quality, which defines it as "everything that can be improved", service providers must constantly undertake actions to improve quality.

One of the methods for assessing and improving service quality is the adoption of a proprietary method for service quality improvement aimed at assessing quality from the client's point of view, because listening to the voice of the customer is a way to analyze and improve quality. An important aspect of the research is to determine which factors have a decisive influence on the level of property insurance service quality improvement, and subsequently to assess customer satisfaction in relation to the level of realization of these factors. This study aims to evaluate and compare the quality of services provided by insurance companies in Poland and the United States of America (USA) conducting insurance activities in Division II (miscellaneous personal and property insurance), utilizing a proprietary method of service quality improvement. The insurance sector under study makes every effort to constantly raise the level of customer service quality in order to meet high customer requirements, because in the currently globalizing financial market, including the insurance market, managers realize that the level of service quality is a significant factor influencing the financial situation of an insurance company – which became the cause for undertaking this type of research.

Building upon this premise, the present study introduces a significant contribution to management theory through a unique synthesis of established SERVQUAL and WJOK methodologies within the proprietary Integrated Relational Service Quality (IRSQ) model. This architecture for quality operationalization represents a departure from classical measurement frameworks, facilitating a transition from the static paradigm of "quality assessment" toward a dynamic concept of "relational trust management". By integrating these methodologies, the model addresses the identified research gap, proposing a closed information loop in which behavioral customer experiences are directly translated into strategic management decisions. Consequently, the originality of this approach lies in its capacity to transform passive quality monitoring into an active system for reducing information asymmetry, thereby providing a robust framework for building competitive advantage in the property insurance sector.

2. Literature Review

Contemporary theory in insurance service management indicates the necessity of moving from static quality assessment models to dynamic systems that are adequate for the specific nature of "credence goods". The development of research on service quality in the insurance sector (Divisions I and II) gained momentum at the turn of the 20th and 21st centuries, becoming a key element of competitive strategies for insurance companies (Arasli et al., 2005; Zhou, 2004; Chi Cui et al., 2003; Othman, Owen, 2001). Currently, as indicated by Krasnikov et al. (2021) and Bhatia et al. (2023), digital transformation is radically modifying the

perception of quality – the determinant of success is no longer solely the timeliness of the service, but the assurance of a "seamless experience" and the speed of digital claims processing.

Fundamental to the analysis of this sector are the works of Joseph E. Stiglitz, who demonstrates that financial markets are not transparent, but are dominated by the phenomenon of information asymmetry (Stiglitz, 2013). In property insurance, this asymmetry leads to limited consumer rationality, which, combined with the institutional complexity of contracts, hinders their ability to assess the real quality of the protection purchased (Stiglitz, 2017). The information barrier constitutes the main source of uncertainty with which relational quality management must contend. In this view, the IRSQ model becomes an institutional mechanism serving to mitigate the effects of this asymmetry through the transparency of the claims handling process and the standardization of information flow. Furthermore, Akerlof (1970) argues that under conditions of asymmetry, low-quality services may drive out high-quality ones, necessitating systemic management of service standards. Additionally, according to Kahneman's (2011) theses on cognitive biases, clients often succumb to heuristics in risk assessment, which the IRSQ model corrects through the objectification of the claims handling process.

The theoretical foundation remains the SERVQUAL method (Table 1), which, despite critical remarks regarding its measurement reliability, serves as the starting point for most analyses in the financial sector (Ladhari et al., 2011; Njau et al., 2019; Gaur, Agrawal, 2006; Salemet et al., 2016). The adaptation of the SERVQUAL method to the realities of the insurance market, however, requires modifications that take into account the relational dimension of interaction (Lewis, Soureli, 2006).

A comprehensive literature review regarding the evolution and criticism of this model over three decades was provided by Mauri et al. (2013), who indicated the methodological limitations of the original approach while maintaining its status as the most frequently used instrument in marketing literature. In accordance with the concept established in the theory by Parasuraman et al. (1985), customer satisfaction is the result of comparing their perception of quality with initial expectations. In this context, the evolution of the author's research methodology – from the classic SERVQUAL method, through the proprietary Customer Service Quality Index (WJOK) – constituted a necessary step toward the construction of the Integrated Relational Service Quality (IRSQ) model.

While SERVQUAL allows for the assessment of gaps in technical dimensions, WJOK enables more precise quantification of satisfaction. In this context, the key theoretical dispute regarding the superiority of a performance-based approach over the expectations model was resolved by Cronin and Taylor (1994), whose argument for the SERVPERF model constitutes an important reference point for contemporary research on service quality in the financial sector (see also: Wells, Stafford, 1997; Przybytniowski, 2019, 2020, 2022, 2023).

In the Polish context, Kozioł-Nadolna et al. (2023) note that process innovation in property insurance is becoming an operational requirement. These authors, similar to Czerwiński (2021), emphasize that relational quality is evolving toward the personalization of offers based on data analysis. It is also worth referring to the works of Janssen et al. (2020), who point out that the subjective perception of quality is increasingly shaped by "social proof" (opinions in social media). Conversely, Chai et al. (2024) demonstrate that empathetic engagement plays a key role in long-term relationships, which directly corresponds to the assumptions of the IRSQ model regarding the reduction of a client's psychological tension.

The strategies of insurers have evolved from an aggressive approach toward a defensive one, based on customer retention. Researchers such as Lombardi (2005) and Ladhari et al. (2011) point out that the cost of acquiring a new client exceeds the cost of retaining an existing one, which makes service quality a determinant of profitability (Diacon, O'Brien, 2002; Moore, Santomero, 1999). In Poland, Kaczala (2018) points to a specific barrier: the client is often guided only by the amount of the premium, exhibiting low legal awareness regarding the general terms and conditions of insurance. Meanwhile, international literature (Wang et al., 2003; Shayestehfar, Yazdani, 2019; Alnaser et al., 2018) proves that customer loyalty is a moderator of the relationship between service quality and the insurer's economic results. Trust is built based on the conviction of the adequacy of the compensation and the transparency of procedures.

The key conclusion from the literature analysis is that the claims handling process constitutes the "moment of truth" (Zeithaml et al., 1988; Pointek, 1992). The shortage of integrated models prompted the development of the IRSQ model, in which quality is not a set of static indicators, but a dynamic cycle of feedback loops (PDCA). In this model, satisfaction is not the end of the process, but input data for subsequent interactions. This approach serves as a response to the postulate of Lewis and Soureli (2006), indicating the necessity of taking into account cultural differences in the perception of financial services, which is confirmed by studies by Farah (2017). Summarizing, the identification of the research gap – resulting from the lack of comprehensive studies on quality measurement in Polish property insurance using modern relational tools – justifies the need to apply the IRSQ model. It is a tool that translates subjective customer experiences into operational management priorities, enabling the mitigation of perceptual asymmetry and the construction of a lasting competitive advantage based on authentic institutional trust.

3. Methods

The study¹ was conducted on a sample of N = 658 respondents (Poland: N = 341, USA: N = 317) collected in 2023. A diagnostic survey method was employed using the computer-assisted web-based interviewing (CAWI) technique. The choice of the CAWI technique was dictated by its utility in reaching diverse age groups while maintaining high standards of objectivity and anonymity – factors critical for the reliability of measuring consumer attitudes (Frankfort-Nachmias et al., 2015; Houghton et al., 2017).

A non-random purposive sampling procedure was adopted, as the research objective necessitated the selection of individuals with specific experience in property insurance. This approach ensures that the sample structure is representative of key generational cohorts in both cultural contexts, as detailed in Table 1.

Table 1.
Structure of the research sample

Age group	Generation	Poland		USA	
		Sample size (n)	Share (%)	Sample size (n)	Share (%)
18-28	Generation Z	83	24.34	74	23.34
29-44	Millennials (Generation Y)	93	27.28	83	26.18
45-60	Generation X	87	25.51	81	25.56
60+	Baby Boomers	78	22.87	79	24.92
Total		341	100.00	317	100.00

Source: Own elaboration based on empirical research (2023).

In contrast to traditional psychometric designs, the classic five-point Likert scale was replaced by an even, six-point ordinal forced-choice scale (Przybytniowski, 2019, 2022). This methodological choice was intended to mitigate central tendency bias – the tendency to select neutral options – which often obscures intergenerational differences (Garland, 1991). Scale values of 1-3 were interpreted as skepticism or lack of acceptance, while values of 4-6 indicated acceptance and trust.

This approach facilitates a clear polarization of opinions, enabling a precise verification of hypotheses regarding service quality gaps. The criteria for assessing financial services are presented in Table 2.

¹ The study was conducted in 2023 in strict accordance with the ethical principles of the Declaration of Helsinki. No sensitive personal data were collected, and the non-invasive nature of the procedure ensured compliance with academic regulations, exempting the project from formal bioethics committee approval. All participants were informed of the study's purpose; completing the questionnaire constituted informed consent.

Table 2.*Criteria for the process of assessing the quality of financial services offered*

No.	Value	Assessment
1	1.00-1.82	Total dissatisfaction with the service offered (definitely not)
2	1.83-2.66	Insufficient satisfaction with the service offered (no)
3	2.67-3.51	Average satisfaction with the service offered (rather not)
4	3.52-4.36	Satisfactory (rather yes)
5	4.37-5.21	Satisfaction with the service offered (yes)
6	5.22-6.00	Full satisfaction with the service offered (definitely yes)

Note: The interval widths were calculated to ensure uniform distribution across the six-point scale, allowing for an equitable classification of consumer responses into distinct satisfaction levels within the IRSQ architecture.

Source: Own elaboration based on empirical research (2023).

The proposed scoring framework (Table 2) is a core component of the IRSQ model, developed to ensure high sensitivity in detecting gaps between perceived service delivery and behavioral expectations. The intervals were mathematically calibrated to provide granular diagnostic capabilities.

To assess how generational affiliation and market context (Poland vs. the US) differentiate the acceptance of financial services, statistical analyses were performed using pqStat (v. 1.8.0.476). Demographic characteristics were analyzed via descriptive statistics, while hypotheses were tested using nonparametric Pearson chi-square tests and Kruskal-Wallis H tests, chosen due to the ordinal nature of the scale and to ensure robustness against non-normality.

The internal consistency of the measurement scale was verified using Cronbach's alpha ($\alpha = 0.81$), which exceeds the commonly accepted threshold of 0.70, confirming the high reliability of the research tool (Nunnally, Bernstein, 1994). Although the non-random purposive nature of the sample indicates that the results are contextually specific, the adopted approach effectively captured universal generational patterns across cultural settings. The research tool was based on three key dimensions (Table 3).

Table 3.*Researched areas and exemplary elements for assessing the quality of property insurance services*

Area	Elements of assessment
Reliability	timeliness of claim payouts, speed of service requests, effectiveness of claims settlement
Integrity	compliance of activities with contract terms, truthfulness of information
Assurance	employee competence, building trust
Empathy	individual treatment of the client
Infrastructure	accessibility of branches and communication channels

Source: Own elaboration based on empirical research (2023).

4. Research results. Verification of the proprietary service quality improvement model

Only complete questionnaires meeting the study criteria were qualified for the dependency analysis (Poland $n = 341$, USA $n = 317$).

4.1. General assessment of service quality

Initial assessments of property insurance services are presented in Table 4. Positive evaluations were recorded by 31.3% of respondents in Poland and 29.4% in the USA. The difference between the two markets amounts to 1.9 percentage points.

Table 4.
Average level of positive evaluations of property insurance services in 2023

Country	Average of positive evaluations (%)
Poland	31.3
USA	29.4

Source: Own elaboration based on conducted research.

4.2. Indicators of service quality (IRSQ model)

The quality of property insurance services was analyzed using the WJOK index across five dimensions: infrastructure, integrity, reliability, assurance, and empathy. The obtained index values (S_n) and weighted quality indicators (S_w) for both countries are presented in Tables 5 and 6.

Table 5.
Indicators of property insurance service quality in Poland in 2023 ($N = 341$)

Area	S_n	S_w
Infrastructure	-2.78	-0.25
Integrity	-14.05	-0.64
Reliability	-17.65	-0.62
Assurance	-11.02	-0.53
Empathy	-2.86	-0.24
General Average	-11.174	-0.503

Source: Own elaboration based on conducted research.

Table 6.
Indicators of property insurance service quality in the USA in 2023 ($N = 317$)

Area	S_n	S_w
Infrastructure	-2.58	-0.29
Integrity	-13.98	-0.64
Reliability	-17.09	-0.68
Assurance	-13.66	-0.57
Empathy	-3.68	-0.35
General Average	-11.129	-0.510

Source: Own elaboration based on conducted research.

In Poland, the lowest Sn index value was recorded for reliability (-17.65), followed by integrity (-14.05) and assurance (-11.02). Infrastructure and empathy reached -2.78 and -2.86, respectively. In the USA, the lowest Sn index values were also observed for reliability (-17.09), integrity (-13.98), and assurance (-13.66), while infrastructure and empathy reached -2.58 and -3.68, respectively. The aggregate Sn values for Poland (-11.174) and the USA (-11.129) indicate a comparable magnitude of service quality gaps in both markets.

4.3. Statistical dependencies between quality factors and consumer decisions

The relationship between insurance intermediary performance (professionalism, assistance in claims handling, and speed/timeliness of payouts) and the decision to conclude or re-conclude a contract was verified using Pearson's chi-square test. In all analyzed cases, the significance level (p) was lower than 0.05.

The results for the Polish market (Tables 7-9) demonstrate statistically significant links between the analyzed factors and client decisions. The specific results are as follows:

1. Intermediary professionalism: $\chi^2 = 42.565$, $p < 0.001$.
2. Assistance in claims handling: $\chi^2 = 7.804$, $p = 0.005$.
3. Speed/timeliness of payouts: $\chi^2 = 7.817$, $p = 0.005$.

Table 7.

Professionalism of the insurance intermediary as a factor determining the re-conclusion of a property insurance contract in Poland in 2023 (N = 341)

Statistical measure	Value
Pearson's Chi-square	42.565
df	1
p	0.000
Number of observations	341

Source: Own elaboration based on conducted research.

Table 8.

Relationship between the insurance intermediary and assistance in claims handling as a factor determining the conclusion of a property insurance contract in Poland in 2023 (N = 341)

Statistical measure	Value
Pearson's Chi-square	7.804
df	1
p	0.005
Number of observations	341

Source: Own elaboration based on conducted research.

Table 9.

Relationship between the insurance intermediary and the speed and timeliness of benefit or compensation payouts as a factor determining the conclusion of a property insurance contract in Poland in 2023 (N = 341)

Statistical measure	Value
Pearson's Chi-square	7.817
df	1
p	0.005
Number of observations	341

Source: Own elaboration based on conducted research.

A comparative analysis conducted for the United States market (Tables 10-12) reveals a nearly identical pattern of dependencies. The influence of intermediary professionalism on contract renewal remains the most prominent ($\chi^2 = 42.562$, $p < 0.001$), while the impact of assistance in claims handling and the timeliness of benefit payouts is also statistically significant. The specific results for the American market are as follows:

1. Intermediary professionalism: $\chi^2 = 42.562$, $p < 0.001$.
2. Assistance in claims handling: $\chi^2 = 7.803$, $p = 0.005$.
3. Speed/timeliness of payouts: $\chi^2 = 7.818$, $p = 0.005$.

These results confirm that these factors are critical determinants of customer decisions in the American insurance sector as well.

Table 10.

Professionalism of the insurance intermediary as a factor determining the re-conclusion of a property insurance contract in the USA in 2023 (N = 317)

Statistical measure	Value
Pearson's Chi-square	42.562
df	1
p	0.000
Number of observations	317

Source: Own elaboration based on conducted research.

Table 11.

Relationship between the insurance intermediary and assistance in claims handling as a factor determining the conclusion of a property insurance contract in the USA in 2023 (N = 317)

Statistical measure	Value
Pearson's Chi-square	7.803
df	1
p	0.005
Number of observations	317

Source: Own elaboration based on conducted research.

Table 12.

Relationship between the insurance intermediary and the speed and timeliness of benefit or compensation payouts as a factor determining the conclusion of a property insurance contract in the USA in 2023 (N = 317)

Statistical measure	Value
Pearson's Chi-square	7.818
df	1
p	0.005
Number of observations	317

Source: Own elaboration based on conducted research.

Statistical analysis (Tables 7-12) confirms the existence of significant dependencies between service quality assessments and clients' contractual decisions in both analyzed markets. The highest statistical dependence, indicated by the highest χ^2 values, was identified for the professionalism of insurance intermediaries in both examined markets, demonstrating the universal nature of these determinants in shaping clients' decisions regarding the continuation of cooperation with an insurer.

5. Discussion

The obtained research results and the proposed theoretical-methodological models fit into the broader evolution of the approach to quality management, in which classic perspectives based on measurable technical parameters are giving way to a systemic, relational, and behavioral perspective. In this context, particular importance is attached to moving away from treating quality as an additive category towards its interpretation as an emergent phenomenon, shaped in the process of dynamic interactions between the organization and the client. Such an approach remains consistent with the perspective of W. Edwards Deming (1986), who emphasized the importance of continuous improvement and feedback loops within the PDCA cycle, as well as with the concept of Joseph M. Juran (1988), who perceived quality in economic and process categories, pointing to the necessity of balancing the costs of quality with its impact on customer satisfaction and loyalty.

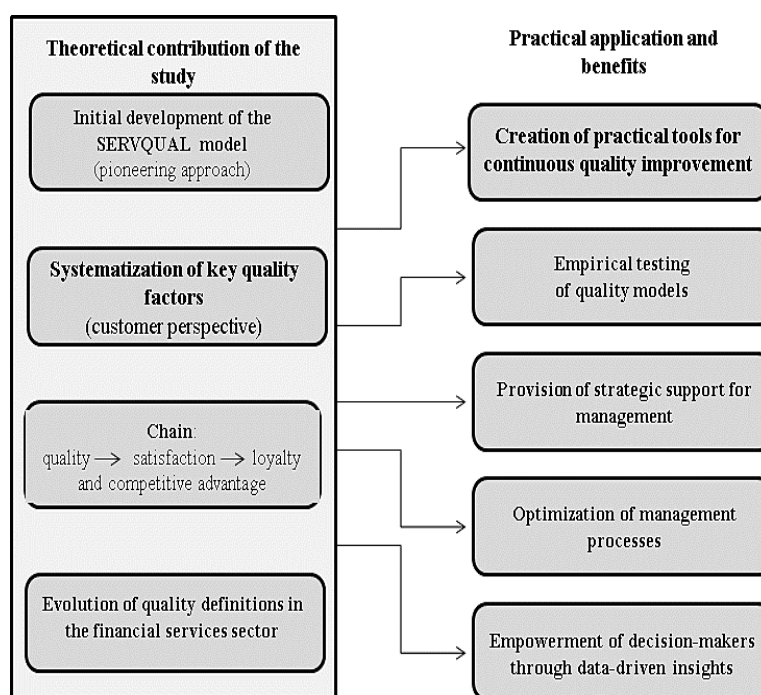


Figure 1. Conceptual evolution of the approach to quality management.

Source: Own elaboration.

Figure 1 serves as a starting point for the discussion, mapping the evolution of the theoretical foundations of quality and their direct translation into management practice. It illustrates the process of transitioning from classic SERVQUAL models towards integrated solutions that support management in decision-making based on precise data.

In light of the conducted research, the shift of focus from the formal conformity of a service with technical requirements towards a holistically understood customer experience proves particularly significant. In the insurance services sector, quality is not reducible to the provisions of general insurance conditions or procedural parameters, but encompasses the entirety of the interaction, including the method of communication, the level of empathy,

the transparency of information, and the organization's ability to reduce uncertainty and psychological tension during critical moments, such as the claims handling process. The results of empirical research unequivocally indicate the dominance of relational, personal, and competency factors over technical-material components in shaping customer satisfaction and loyalty.

Furthermore, this model illustrates (Figure 2) the mechanism of shaping quality as an emergent phenomenon that arises during the dynamic interaction between the client and the organization. It pays particular attention to the role of psychological mechanisms, such as anchoring or uncertainty reduction, which determine final customer satisfaction and loyalty.

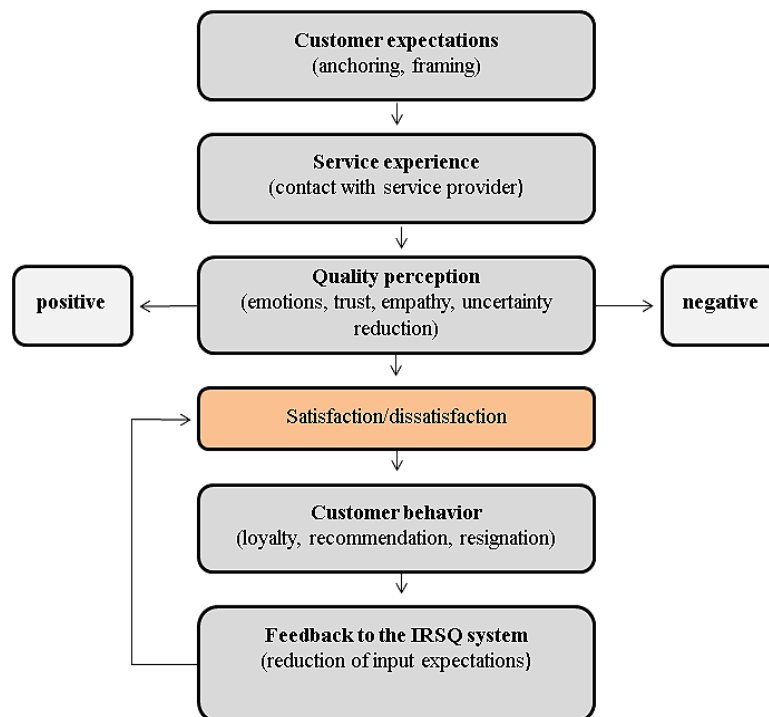


Figure 2. Service experience and assessment process (holistic relational approach).

Source: Own elaboration.

Against this background, the proposed Customer Service Quality Index (WJOK) takes on particular significance, constituting an attempt to operationalize the complex and multidimensional phenomenon of quality in a more objectified manner than in classic survey tools. The elimination of subjective weights assigned by respondents and the application of an algorithmic aggregation approach allow for reducing the arbitrariness of the measurement and increasing the comparability of results. At the same time, the implementation of a six-point rating scale eliminates the neutral category of response, which – consistent with research results – limits the phenomenon of apparent neutrality and strengthens the diagnostic nature of the obtained empirical data.

Classic SERVQUAL model (diagnosis)		Author's modification (WJOK) (measurement/gap identification)
Likert scale (odd, 5-point)	Scale	Even 6-point scale (forced respondent declaration)
Option to choose ("no opinion")	Neutral responses	Rejection of neutral questionnaires (elimination of distortions)
Subjective respondent weights (arbitrariness)	Aggregation	WJOK weight algorithm (aggregated and objectified)
General measurement of quality dimension	Result	Precise identification of quality gaps and causes

Figure 3. Operationalization of measurement: SERVQUAL vs. WJOK.

Source: Own elaboration.

To move on to methodological issues, Figure 3 juxtaposes classic measurement tools with the proposed Customer Service Quality Index (WJOK). It illustrates how the elimination of neutral responses and the replacement of subjective weights with an aggregation algorithm allow for a significant increase in diagnostic precision and the objectification of the study of quality gaps. However, WJOK does not function as an autonomous tool but constitutes an element of a broader research-management architecture, in which the modified SERVQUAL method serves as a starting point for diagnosis, WJOK as the operational layer for measuring quality gaps, and the concept of Integrated Relational Service Quality (IRSQ) as the interpretative-strategic level. Such a structure reflects a hierarchical-developmental model of quality information processing, in which empirical data are subject to gradual aggregation up to the level of management decisions.

The next stage is the visualization of the synergy of these tools within the framework of an extended Deming cycle, where quality becomes the result of continuous, systemic organizational learning. The synthesis of the proposed solutions, covering conceptual evolution, operationalization of measurement, and integration of the model within the improvement cycle, is presented in Figure 4. This figure demonstrates how SERVQUAL, WJOK, and IRSQ cooperate within the planning, measurement, analysis, and strategic action phases, creating a closed system of feedback loops.

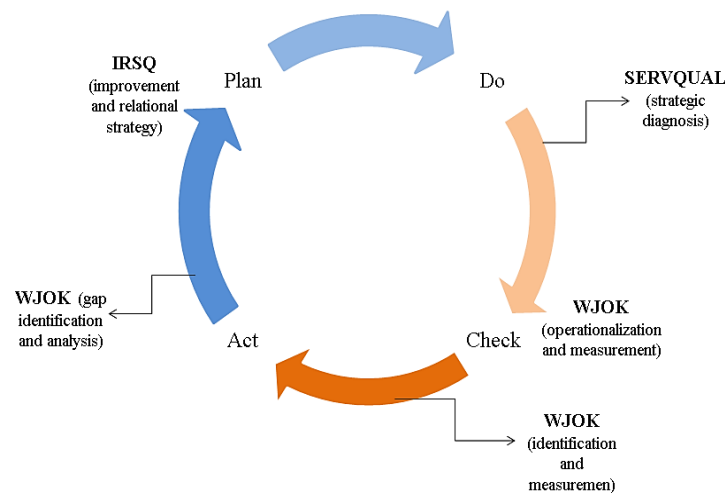


Figure 4. Integrated quality improvement cycle in the PDCA model.

Source: Own elaboration.

Complementing the hierarchical-developmental perspective and the operationalization of the PDCA loop is a dynamic model presenting the relationships between the SERVQUAL structure, the WJOK index, and the IRSQ concept. This construction constitutes an expansion of classic quality management concepts, in particular the process approach and the improvement cycle formulated by W. Edwards Deming (1986), in which quality is the result of continuous organizational learning under conditions of feedback from the environment. At the same time, the model remains consistent with Juran's approach, especially in the scope of the triad: quality planning, quality control, and quality improvement, transferred to the level of an integrated relational system.

In the operational perspective, the SERVQUAL model acts as a diagnostic tool (Plan), WJOK is responsible for measurement and identification of quality gaps (Do and Check), while IRSQ determines the interpretative framework and strategic corrective actions (Act). In this way, the classic PDCA cycle is extended by a relational and behavioral dimension, taking into account the specificity of public trust services.

The results of empirical research confirm that quality assessment in the insurance sector is holistic and non-decomposable – clients do not separate technical components from relational ones but perform a synthetic assessment of the entire service experience. In this sense, quality takes the form of an emergent phenomenon, in accordance with the assumptions of the IRSQ model, in which the integration of three dimensions plays a key role: technical, functional, and relational quality.

A particularly significant result of the research remains the identification of cognitive dissonance between the level of costs incurred (insurance premium) and the subjectively felt level of financial security. This phenomenon indicates that customer satisfaction is shaped not only by service parameters but also by psychological and economic-behavioral mechanisms, such as the anchoring effect, framing, or loss aversion. Thus, the process of quality assessment goes beyond rational economic calculation and also includes an emotional and cognitive component.

In the behavioral phase of the model, a significant relationship was confirmed between satisfaction and loyalty behaviors, including both the propensity to recommend and decisions regarding the continuation of cooperation. At the same time, a key element of the structure remains the feedback loop, within which client behaviors redefine future expectations, leading to a dynamic reconstruction of the entire quality assessment system. This mechanism constitutes an empirical reflection of the PDCA logic and the concept of continuous quality improvement according to Deming (1986).

The research results also indicate that under conditions of increasing complexity of financial products, the organization's ability to reduce information asymmetry and build trust through transparent communication becomes a primary source of competitive advantage. This implies the necessity of simplifying the message, eliminating hermetic industry jargon, and consistently managing the customer experience throughout the entire service life cycle.

The summary of the discussion is the presentation of the IRSQ model (Figure 5), which integrates the theoretical dimension with the practical one in order to build a lasting competitive advantage. This figure emphasizes that the key to success in the modern services sector is transparent communication and the reduction of cognitive dissonance, which directly translates into customer trust and the stability of business relationships. In this perspective, the proposed SERVQUAL – WJOK – IRSQ model constitutes a coherent, multi-level analytical-decision structure, in which quality measurement, its operationalization, and strategic interpretation form a closed feedback loop system. SERVQUAL serves as the starting point for diagnosis, WJOK constitutes a tool for the quantification and aggregation of quality gaps, while IRSQ integrates the obtained results into a framework of systemic management of relational service quality.

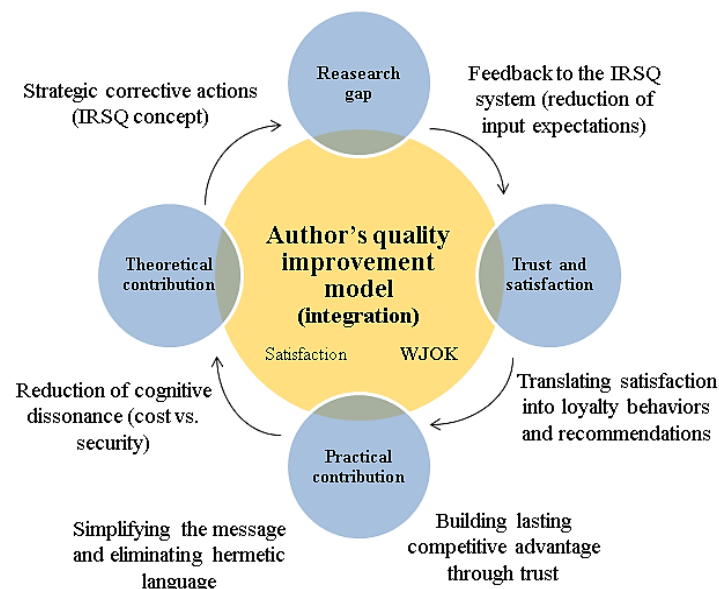


Figure 5. Systemic view of the IRSQ model as a tool for competitive advantage.

Source: Own elaboration.

Furthermore, the systemic nature of the proposed IRSQ model, validated here in the property insurance sector, is currently being adapted to the banking and life insurance segments, suggesting its potential as a universal framework for customer experience management in public trust services.

From a management practice perspective, the key challenge for the full operationalization of the IRSQ model remains its integration with CRM-class information systems and Claims Management Systems. In order to transform IRSQ into a dynamic real-time feedback tool, organizations should strive to automate the process of collecting behavioral data at every stage of the customer journey – from the claim notification to the final settlement. The implementation of analytical algorithms that correlate operational metrics (such as the claims processing time) with declarative satisfaction ratings in real time would enable managers to make immediate corrective decisions. Such a data-driven architectural approach would allow not only for continuous monitoring of quality gaps but also for predictive trust management, eliminating information asymmetry at the moment of its emergence, rather than only after the service cycle is completed. Consequently, the presented approach not only organizes the relationships between measurement and quality management but also extends the classic models of Deming (1986) and Juran (1998) with a behavioral and relational dimension characteristic of modern public trust services (cf. Opolski, Modzelewski, 2024; Grönroos, 2011; Parasuraman, Zeithaml, Berry, 1985). This enables a fuller understanding of the mechanisms of shaping customer satisfaction and their practical use in building a lasting competitive advantage of the organization.

6. Conclusions and recommendations

The empirical research and theoretical analysis conducted allow for the formulation of conclusions of both a cognitive and an applicative nature. The main result of the work undertaken is the development and validation of the Integrated Relational Service Quality (IRSQ) model, which constitutes a significant extension of classical quality management paradigms. The following key conclusions have been formulated based on the synthesis of research findings:

1. Reorientation of the quality paradigm (theoretical dimension) – it was demonstrated that in the sector of credence goods, the classic approach to quality, based on Juran's trilogy and the Deming concept, has exhausted its diagnostic potential when confronted with customer perceptual asymmetry. The research proved that satisfaction in insurance is not a derivative of conformity with a technical standard, but an effect of reducing psychological tension caused by service uncertainty. Thus, the proprietary IRSQ concept fills a gap in the subject literature, shifting the weight of analysis from "quality as a process result" to "quality as a relationship management process".

2. Operationalization of subjectivism (methodological dimension) – the application of the proprietary WJOK index in combination with a forced-choice scale allowed for the elimination of the central tendency error, which constitutes a significant methodological correction to the commonly used SERVQUAL model. The results confirm that the quantification of relational quality is possible only through the application of tools that, in the measurement process, force the client to hierarchize experiences, rather than merely evaluate them on a point scale. It was also confirmed that the visualization of the model is an indispensable element of scientific discourse, serving as a process map for implementing IRSQ assumptions in corporate structures.
3. Strategic and applicative implications (synthesis of findings) – the empirical research validates the hypothesis that service quality in the property insurance sector is a multidimensional construct where relational and competency-based factors are primary drivers of client decisions. Key conclusions include:
 - a) universal nature of quality gaps – despite different institutional environments, both the Polish and American insurance markets exhibit significant service quality gaps. The negative values of the Sn and Sw indices confirm that current service delivery fails to meet client expectations across all analyzed areas (infrastructure, integrity, reliability, assurance, and empathy);
 - b) dominance of the "Intermediary Effect" – the high statistical significance of the relationship between intermediary professionalism and contract renewal decisions underscores that the insurance intermediary is not merely a sales agent, but a crucial gatekeeper of service quality. Client satisfaction is inextricably linked to the personal support and guidance provided during the claims handling process;
 - c) shift from technical to relational paradigms – the results suggest that efficiency in claims processing (speed and timeliness) is a necessary, but insufficient, condition for building long-term loyalty. Clients prioritize "relational quality" – trust-building communication and empathetic support – over purely procedural accuracy;
 - d) strategic necessity for insurance organizations – to mitigate the identified quality gaps, insurers must transition from a reactive, process-oriented approach to a proactive, integrated relational strategy. Improving the professionalism of intermediaries and enhancing the transparency of information are the most potent instruments for reducing the perceived gap between expected and received service quality. The IRSQ model, therefore, constitutes a ready-to-use diagnostic tool that allows management to systematically level gaps in areas most critical to customer loyalty, integrating PDCA phases with direct behavioral feedback;
4. Comparative dimension (Poland vs. USA) – the empirical analysis revealed a surprising convergence of results across both studied markets, which challenges the thesis of strong cultural determination in the perception of insurance service quality. Despite systemic differences, the Sn and Sw scores for Poland (mean -11.174; -0.503)

and the USA (mean -11.129; -0.510) indicate an almost identical level of quality gap. This confirms the universal nature of the "intermediary effect" and the deficits in information transparency common to both markets. These findings suggest that the contemporary client in the *credence goods* sector exhibits a unified pattern of behavior, in which expectations regarding relational quality are independent of the degree of a market's institutional development. Consequently, quality improvement strategies based on the IRSQ model are transboundary in nature and can serve as a foundation for standardizing customer experience management on an international scale.

5. Research limitations and future directions – the conducted study, despite its cognitive and applicative value, is not free of limitations. First, the study focused on property insurance, which may restrict the immediate generalization of the IRSQ model to other segments, such as life or health insurance. Second, the reliance on self-reported consumer data, while mitigated by the forced-choice scale, carries a risk of subjective perception bias. Third, the cross-sectional nature of the study provides a static snapshot of the quality gap, which may not fully capture the dynamic impact of sudden market or regulatory shifts.

However, the universal nature of the IRSQ model necessitates further validation. While the model is currently being adapted for the banking sector and life insurance, future research will focus on longitudinal applications across these diverse financial service segments to confirm the stability of the WJOK index and its predictive power regarding long-term customer loyalty. Furthermore, as the model is increasingly tested in digital-first financial environments, upcoming studies will investigate how the "intermediary effect" evolves when human interaction is augmented or replaced by automated advisory systems.

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