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**AUDIT QUALITY INTERPRETATION
AND ONE OF THE POSSIBLE MEASUREMENT MODELS**
**INTERPRETACJA JAKOŚCI AUDYTU
I JEDEN Z MOŻLIWYCH MODELI POMIARU**

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Summary: As a key issue, we deal with the relationship between audit quality and business. The economic crisis and the increased audit threshold have reduced the scope of firms obligated to audit. From the available data, it can be seen that although the number of firms fall under statutory audit decreased, the number of audit companies declined only marginally, resulting in a strong price competition, which led to the issue of audit quality coming to the fore. Based on the results of the systematic research carried out, an audit quality interpretation and measurement model can be established. The model examines the audit quality in five themes and three dimensions, which provides a full measure of quality. The five themes allow us to interpret six types of service quality gap. Using this model we can identify areas in need of improvement, helping to provide a more efficient and effective audit and, consequently, a higher customer satisfaction.

Keywords: audit, quality measurement.

Streszczenie: Autorki artykułu zbadały relację między jakością audytu a działalnością gospodarczą. Kryzys ekonomiczny i zwiększenie ustawowych progów odnośnie do konieczności dokonywania audytu wpłynęły na zmniejszenie liczby firm zobowiązanych do jego przeprowadzania. Z dostępnych danych wynika, że chociaż liczba podmiotów objętych badaniem ustawowym zredukowała się, to liczba firm audytorskich zmniejszyła się jedynie nieznacznie, powodując silną konkurencję cenową pomiędzy audytorami oraz presję na zwiększenie jakości audytu. Na podstawie wyników przeprowadzonych badań ustalono model interpretacji i pomiaru jakości audytu. Model ten bada jakość audytu w pięciu obszarach tematycznych i w trzech wymiarach. Obszary tematyczne pozwoliły na zinterpretowanie sześciu rodzajów luk jakości usług. Opracowany model pozwala na identyfikację obszarów wymagających ulepszeń oraz przyczynia się do zapewnienia bardziej wydajnego i skutecznego audytu, a w konsekwencji do zwiększenia satysfakcji klienta.

Słowa kluczowe: audyt, jakość pomiaru.

1. Introduction

In Hungary, the situation of audit has changed considerably in recent years, which can be traced back for several reasons. Because of audit firms' scandals and company overtures the trust in audit could have been shaken. A few years ago the global financial crisis and the increased audit threshold from 1 January 2014 significantly reduced the number of those obliged to audit. According to current legislation, in Hungary auditing is obligatory if the net income of the enterprise in the average of the previous two business years exceeds HUF 300 million and the average number of employees over the last two years exceeds 50. The aim was to reduce the administrative costs resulting from over-regulating state regulations by imposing in many cases complicated, lengthy and costly procedures. Reducing the administrative costs of businesses has resulted in a number of state measures, both in terms of digitization and simplified processes; this is how the regulatory side explains the increase of the audit threshold. Changes in the threshold result in the tightening of the audit market, but the general perception of auditors can move in a favorable direction after the changes, since besides trust has been shattered, the importance of the audit activity seems to be intensifying. However, it is necessary to continue the activity with proper regulation. All of these factors induce that the quality of audit should be measured and evaluated objectively. One of our aims is to develop such an objective measurement system after the outline of the regulatory situation.

In our study, we also address the obstacles to defining and measuring quality. The quality of the audit is basically based on the auditor's task which is to provide the auditor with sufficient and adequate evidence to support the auditor's opinion. It is difficult to measure the quality of the audit since the only indicator is the published report that is prepared according to standards. However, it is possible for the auditor to retrospectively evaluate his work along various factors. The audit profession plays a very important role in curbing the black market, reduce tax avoidance, in addition to ensuring the supply of essential therefore to ensure audit quality as well.

2. Literature overview

Based on the research of N. Seth et al. [2005] we describe the categorization of service quality models and their applicability in the research of audit quality. The article examines 19 service quality models from Grönroos's model of 1984 [Grönroos 1984] to Santos's model of 2003 [Santos 2003]. From the research work covering a 20-year time span, models based on the assumptions of the GAP model are relevant to us when examining consumer and customer perceptions [Réthi et al. 2014].

As a result of our investigation, it can be concluded that the service quality models have undergone significant development in the last twenty years. Another conclusion is that we live the period of a transition from the product-based logic described by

S.L. Vargo and R.F. Lusch [2004a, b]) to the service-based logic, which is reflected both in service models and in the interpretation of service quality. Linearity can be observed by examining the development of models, as newer models are the organic sequences of the former ones taking their findings and suggestions into account. C. Grönroos [1984] was the first person to identify and model the word-of-mouth (WOM) theory as a more effective means of influencing the potential customers and consumers than the traditional customary marketing tools. His work is a significant milestone in the service quality review [Kang, James 2004]. Later, A. Parasuraman and his colleagues [1985] introduced WOM into the well-known GAP model as one of the key factors for the expected service quality [Parasuraman et al. 1985]. The SERVQUAL, a tool for measuring service quality, was established by the development and revision of WOM. After that, the GAP model and SERVQUAL were the basis for the internal service quality model of Frost and Kumar [Frost, Kumar 2000]. But it can be seen as well that the model of service quality developed by A.A. Brogowicz et al. [1990] was developed from the synthesis of the Grönroos model [Grönroos 1984] and the GAP model [Parasuraman et al. 1985].

The method of measuring service quality through the GAP model and the SERVQUAL model was sharply criticized by Cronin and Taylor (1992) and Teas (1993), suggesting the use of the SERVPERF model and evaluated performance (EP). The SERVPERF model is a service quality tool that only measures perceptions. Haywood-Farmer (1988) and Philip and Hazlett (1997) recommend using the attribute service quality model.

In addition, information technology development which started in the mid-1990s, and even more intensified at the turn of the millennium had a significant impact on the judgement of service quality and composition. Information technology tools became more and more integrated into the service companies' operations, thus providing higher quality and more convincing services, providing more services to their service packages, and enable them to collect information about service performance for the management more efficiently [Friedman 2008; Furey 1991]. This development significantly influenced the service perception and understanding from the consumer side, which was reflected in later models [Berkley, Gupta 1994; Brady, Cronin 2001; Broderick, Vachirapornpuk 2002; Dabholkar 1996; Martínez Caro and Martínez García 2008; Santos 2003]. At the turn of the millennium, as a consequence of the above mentioned, a Data Envelopment Analysis (DEA) based model was created, which took the information requirements of the practitioners into account [Soteriou, Stavrinides 2000]. DEA is a benchmarking technique for measuring performance that can be used to assess the relative effectiveness of decision-making units in organizations, but it is also applicable for measuring service quality and for benchmarking [Kim et al. 2014].

The review shows that there is no fully accepted concept for service quality, or how it can be effectively measured. Most models try to measure service quality by comparing the expected and experienced service quality parameters.

The majority of the models spring from the GAP model and SERVQUAL, despite the criticism these have the greatest support in the literature. However, there are models based on assumptions other than the mentioned models [Seth et al. 2005].

In order to be able to handle the above expectations in our research, and to measure and quantify the quality of audit objectively, I developed a service quality measurement model based partly on the methodology of GAP and SERVQUAL models that have been tested many times. The model measures the quality of the audit process (AUQUAL) in six categories (6P), of which a total of six GAPs can be defined.

3. The AUQUAL-6P model and its analytical dimensions

The research model is holistic in the sense that (1) it covers the entire audit process and (2) the full range of market participants and stakeholders. This will ensure the validity of the model and the generalization of their conclusions.

The model is based on the measurement of the six quality parameters. These are the following:

- Q_m *market quality*: shows the auditor's market/professional judgment,
- Q_p *process quality*: what is the quality of the audit process like, to what extent can it be characterized by professionalism, how standard the processes are?
- Q_r *result quality*: evaluation of audit results. What is the direct benefit of the audit?
- Q_d *quality perceived*: the direct result of the audit process, it refers to the results that become visible in operational level.
- Q_i *mediated quality*: the highest level, long-term, indirect results of the audit that may be incorporated even into the strategic level.

Based on the measured quality parameters, we can interpret six service quality GAPs (Figure 1):

1. PICTURE = $Q_p - Q_m$: the image being created. The gap between process quality judgment and market perception. It refers to what kind of image emerges in partners' minds about the auditor in relation to the audit process compared to the judgment.

2. PROFICIENCY = $Q_r - Q_p$: refers to the professionalism of the audit. It measures the gap between the results and the quality of the process.

3. PLANTING = $Q_d - Q_r$: measures the gap between the direct effects of the audit [short-term, direct effects] and the results. It refers to the extent to which the audit processes are of direct benefit to the auditee. That is, it measures the occurrence of directly perceptible results.

4. PROMISE = $Q_i - Q_m$: measures the gap between market promise and actual, long-term [indirect] effects. How typical is that the partner gets what the auditor promises to him on the market? Obviously, both the market and the legal requirements must be taken into account in this case.

5. PROFIT = $Q_i - Q_r$: how the company can make use of the results of the audit in the long run?

6. PERFORMANCE = $Q_i - Q_d$: measures the difference between direct and indirect results/effects.

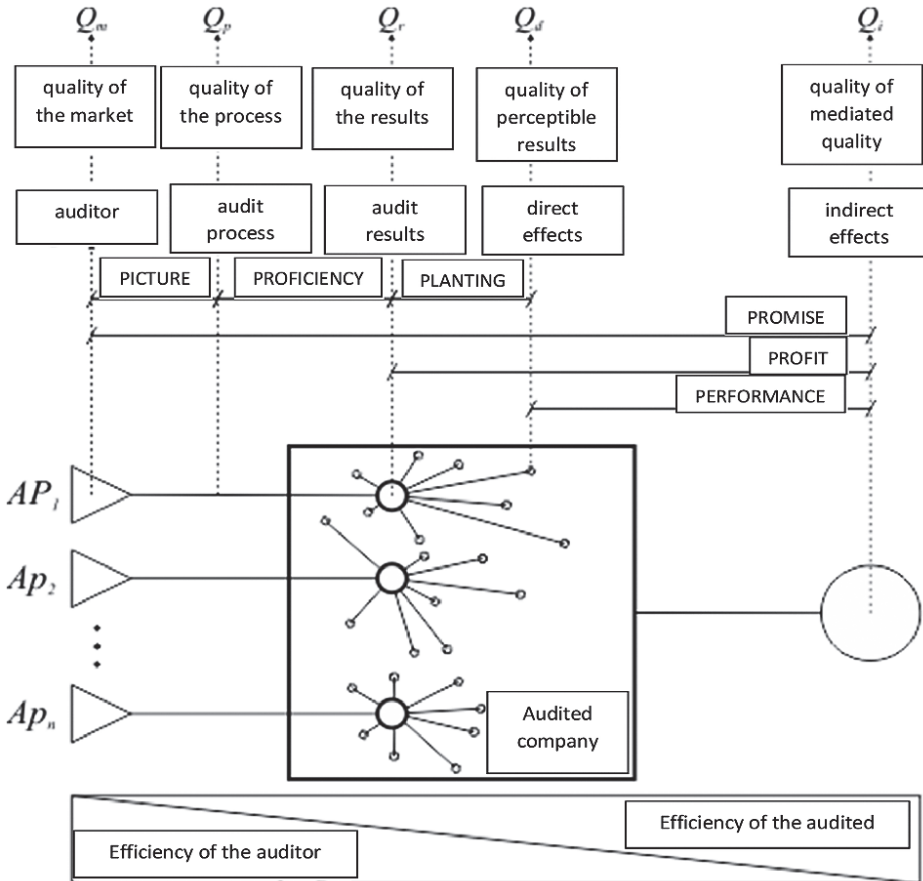


Figure 1. AUQUAL-6P model

Source: own elaboration.

The model examines the quality at two levels, from the auditor’s point of view and from the perspective of the audited company. The presence of these in the model is illustrated by the lower rectangle. Thus, the role of auditor in the process of quality is decreasing, while the role of the auditee is increasing.

The questionnaire based on the model examines audit quality in the following dimensions:

1. Evaluation from the auditor’s point of view.

2. Evaluation from the auditee's (partner's) point of view.
3. Evaluation of the expected quality.
4. Evaluation of the detected quality.

Based on the four dimensions, the model gives the opportunity to analyze the quality in 180 (or 360) degrees, or – if we have the right sources for empirical research – we can also look at complete “supply chains”.

4. Questionnaire research

The questionnaire research based on the AUQUAL-6P model examines the quality of the audit from the aspect of both the auditor and the audited partner along the expected and perceived quality. Questionnaires sent to auditors and audited companies examine along quality parameters the extent to which each of the factors is characteristic and in parallel how much each parameter should be characteristic during the audit process. While compiling the questionnaire, we tried to make sure to provide both the auditor and the auditee with the same questionnaire in terms of content variables. The purpose of the first phase of our questionnaire research, in which the questionnaire for audited companies were sent out, was to get an overview of how the management of a given enterprise comprehend the work of the auditor, how they evaluate it, and how the quality of the auditor can be judged.

We deal with the auditor and audit judgment, the attributes of the quality of their work, the factors playing role in the auditor's selection, and how companies evaluate the audit process. It is important to highlight the direct, the perceived and the indirect quality of audit results. The assessment of the work of auditors, including how companies consider auditors, how they describe the auditors' tasks, and what benefits are expected as a result of the audit process are present an interesting topic. The issue of audit rotation also raises a number of questions. Is the auditor need to be replaced in order to provide new approaches to the areas to be developed and the risks? Or does the hired auditor know the business, its risks and processes so he can reliably and quickly perform its tasks? A number of international studies dealt with the need for auditor rotation in recent years, but no research has been carried out in our country to investigate the relationship between auditor rotation and key input factors (quality, business success, etc.). In our research, we also try to find out how much the rotation of auditors affects the success of the business and the quality of the audit. An essential requirement of this is the interpretation and definition of the quality of the audit and the development of a related measurement and rating system. Our goal is to get answers to emerging questions from auditors, companies and, last but not least, from the regulatory side.

5. Conclusions

The role and status of auditors has come to the fore in recent years. Trust in auditors has been broken, but audit activity and its importance seem to get stronger. As a backlighting, it is essential that the quality of the audit work can be measured along specified parameters. Based on the results of the systematic research carried out, an audit quality interpretation and measurement model can be established. The model examines the audit quality in five themes and three dimensions, which provides a full measure of quality. The five themes allow us to interpret six types of service quality gap. Using this model we can identify areas of audit in need of improvement, helping to provide a more effective audit and, consequently, a higher customer satisfaction.

We plan to measure the quality of audit service and its differences among audit firms and auditors operating in Hungary in four dimensions, based on internationally recommended and applied audit quality indicators. Our approach is considered to be novel, as most of the publications on this subject were not based on the model of service quality differentiation we have put forward, but mostly dealt with the results of the empirical examination of the various key factors and came to conclusions through the correlation analysis of these results.

With our research, we aim to point out how auditors are aware of the factors determining the quality of their work, and how they estimate these factors in respect of themselves and of the audited companies. In the light of all these, we strive to draw conclusions that can serve as a guide to improve the quality of the audit work. Using this model, we intend to identify areas of audit in need of improvement, promoting a more efficient and effective audit and, consequently, higher customer satisfaction.

References

- Berkley B.J., Gupta A., 1994, *Improving service quality with information technology*, International Journal of Information Management, vol. 14, no. 2, pp. 109–121.
- Brady M.K., Cronin J.J., 2001, *Some new thoughts on conceptualizing perceived service quality: A hierarchical approach*, Journal of Marketing, vol. 65, no. 3, pp. 34–49.
- Broderick A.J., Vachirapornpuk S., 2002, *Service quality in Internet banking: the importance of customer role*, Marketing Intelligence & Planning, vol. 20, no. 6, pp. 327–335.
- Brogowicz A.A., Delene L.M., Lyth D.M., 1990, *A synthesized service quality model with managerial implications*, International Journal of Service Industry Management, vol. 1, no. 1, pp. 27–44.
- Cronin J.J., Taylor S.A., 1992, *Measuring Service Quality: A Reexamination and Extension*, Journal of Marketing, vol. 56, no. 3, pp. 55–68.
- Friedman T.L., 2008, *És mégis lapos a Föld... – A XXI. század rövid története*, HVG Kiadói Zrt, Budapest.
- Frost F.A., Kumar M., 2000, *INTSERVQUAL – an internal adaptation of the GAP model in a large service organization*, Journal of Services Marketing, vol. 14, no. 5, pp. 358–377.
- Furey T.R., 1991, *How information power can improve service quality*, Planning Review, vol. 19, no. 3, pp. 24–26.

- Grönroos C., 1984, *A service quality model and its marketing implications*, European Journal of Marketing, vol. 18, no. 4, pp. 36–44.
- Haywood-Farmer J., 1988, *A Conceptual Model of Service Quality*, International Journal of Operations & Production Management, vol. 8, no. 6, pp. 19–29.
- Kang G., James J., 2004, *Service quality dimensions: An examination of Grönroos's service quality model*, Managing Service Quality: An International Journal, vol. 14, no. 4, pp. 266–277.
- Kim J.-B., Lee, J.J., Park J.C., 2014, *Audit quality and the market value of cash holdings: The case of office-level auditor industry specialization*, AUDITING: A Journal of Practice & Theory, vol. 34, no. 2, pp. 27–57. doi:10.2308/ajpt-50903.
- Martínez Caro L., Martínez J., 2008, *Developing a multidimensional and hierarchical service quality model for the travel agency industry*, Tourism Management, vol. 29, no. 4, pp. 706–720.
- Parasuraman A., Zeithaml V.A., Berry L.L., 1985, *A conceptual model of service quality and its implications for future research*, Journal of Marketing, vol. 49, no. 4, pp. 41–50.
- Philip G., Hazlett S., 1997, *The measurement of service quality: a new P-C-P attributes model*, International Journal of Quality & Reliability Management, vol. 14, no. 3, pp. 260–286.
- Réthi G., Kása R., Molnár L., 2014, *A szolgáltatásminőség értelmezésének különbségei – percepcióvezérelt szolgáltatások minőségmodellje kialakításának első lépései*, Prosperitas, 2, pp. 26–42.
- Santos J., 2003, *E-service quality: A model of virtual service quality dimensions*, Managing Service Quality, vol. 13, no. 3, pp. 233–246.
- Seth N., Deshmukh S.G., Vrat P., 2005, *Service quality models: A review*, International Journal of Quality Reliability Management, vol. 22, no. 9, pp. 913–949.
- Soteriou A.C., Stavrinides Y., 1997, *An internal customer service quality data envelopment analysis model for bank branches*, International Journal of Operations & Production Management, vol. 1, no. 8, pp. 780–789.
- Vargo S.L., Lusch R.F., 2004a, *Evolving to a new dominant logic for marketing*, Journal of Marketing, vol. 68, no. 1, pp. 1–17.
- Vargo S.L., Lusch R.F., 2004b, *The four service marketing myths: Remnants of a goods-based manufacturing model*, Journal of Service Research, vol. 6, no. 4, pp. 324–335.