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Rand, Graham K

The Department of Management Science
Lancaster University Management School
Lancaster LA1 4YX
UK

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Diagnosis and Improvement of Service Quality in the Insurance Industries of Greece and Kenya

(mr)Evangelos Tsoukatos^{a,b}, Simmy Marwa^a, Graham K. Rand^a

^a *Department of Management Science, Lancaster University Management School, Lancaster LA1 4YX, UK.*

^b *School of Management and Economy, TEI of Crete, Estavromenos, P.O. Box 1939, 71004, Heraklion, Crete, Greece.*

Abstract

There is widespread customer dissatisfaction in the insurance industry, stemming from insurers' failure to satisfy customers' needs. Therefore, further research to improve the industry's understanding of service quality is required. Using data from the Greek and Kenyan insurance industries, service quality is measured using the SERVQUAL methodology to identify quality determinants and existing quality gaps in the industries. Quality improvement strategies are recommended in each case. Some observations are made on the efficacy of the SERVQUAL diagnostic in assessing service quality in the insurance industry.

1. Introduction

Previous studies, notably those of Wells & Stafford (1995), the Quality Insurance Congress (QIC) and the Risk and Insurance Management Society (RIMS) (Friedman, 2001a, 2001b), and the Chartered Property Casualty Underwriters (CPCU) longitudinal studies (Cooper & Frank, 2001), have confirmed widespread customer dissatisfaction in the insurance industry, stemming from poor service design and delivery. Ignorance of customers' insurance needs (the inability to match customers' perceptions with expectations), and inferior quality of services largely account for this. The American Customer Satisfaction Index shows that, between 1994 and 2002, the average customer satisfaction had gone down by 2.5% for life insurance and 6.1% for personal property insurance respectively (www.theacsi.org). In Greece, for example, 48% of consumers consider that the industry as a whole is characterized by lack of professionalism. Furthermore, 34% believe that insurers find various pretexts to avoid promised compensations (www.icap.gr). This is a legacy the industry has cultivated, sparking a host of controversies, denials and counter denials which unfortunately have not helped to

bolster its image worldwide. Several causes of poor service quality have been suggested: some with general application in the service industry and some specific to the insurance industry.

It is therefore not surprising that measurement of service quality has generated, and continues to generate, a lot of interest in the industry (Wells & Stafford, 1995). Several metrics have been used to gauge service quality. In the United States, for example, the industry and state regulators have used "complaint ratios" in this respect (www.ins.state.ny.us). The "Quality Score Card", developed by QIC and RIMS, has also been used. However, both the complaints ratios and the quality scorecards have been found to be deficient in measuring service quality and so a more robust metric is needed.

Therefore, further research to improve the industry's understanding of service quality is imperative. Using data from the Greek and Kenyan insurance industries, diagnostics have been constructed and service quality measured with a view to identifying quality determinants and existing quality gaps in the industries. Quality improvement strategies are recommended in each case.

In the rest of this introductory section, background to the insurance industries of Greece and Kenya is given. In the second section the SERVQUAL metric is introduced. The following two sections describe how SERVQUAL has been applied to data from Greece and Kenya, before a comparison is made in Section 5. A final section draws some conclusions on the efficacy of the SERVQUAL diagnostic in assessing service quality in the insurance industry.

1.1 Greece

The origin of insurance in modern Greece is closely associated with commercial naval activities. Migrant Greek businessmen were involved in naval insurance activities from the closing decades of the 18th Century (Simitsek, 1997), relocating their activities to national soil immediately after liberation from the Turks. The Greek government tried to establish industry supervision guidelines as early as 1909 though the rules for the operation of insurance enterprises were, for the first time, introduced in 1917 after law 1023/1917 on "private insurance enterprises" was passed by Parliament (see <http://www.gge.gr/4/organ.asp?209>, in Greek). The delay in the industrialisation of the country, the distorted model of growth of Greek capitalism, bureaucracy and the stifling embrace of every enterprising effort by the state, forced

Greek insurers to remain, for a number of years, inactive and under funded (Simitsek, 1997). Until the beginning of the 1970s, business was mostly restricted to the transport and general property sectors.

The country is now fully participating in the EMU and its economy is open, with no artificial restrictions. A total of 102 private insurers are active in the market, 20 of which exclusively transact life assurances, 69 non life insurances and 13 composite (Association of Insurance Companies - Greece, 2002). 74 of these companies are registered in Greece, while 28 are foreign subsidiaries, of which 28 are subsidiaries of EU companies and 6 non-EU companies. In the life sector the 5 largest companies write roughly 70% of total premium while in non-life insurance the 5 largest write 47% of premium (www.eaee.gr).

According to a recent study by ICAP (www.icap.gr), the total volume of the private Greek Insurance market is approximately €2.9 billions annually (2002) although its potential is estimated at €15-16.5 billions. In the life sector, significant market extension through the Professional Insurance Funds, the Pension Funds and the private insurance programs is expected. In non-life insurance, the incorporation of EU laws into the Greek legal system, and the application of obligatory civil liability insurance to more professions, is expected to stimulate growth in the market (Tsoukatos, 2003).

1.2 Kenya

The concept of insurance and particularly the "social insurance programme" dealing with socio-economic problems has been around Africa for a long time (Kenyatta, 1962). Members of a community pooled together resources to create a "social insurance fund". The "premiums" ranged from material to moral support or other payments in kind. From the fund, "drawings were made out" to support the few unfortunate members exposed to perils (Azevedo, 1993). However, the history of the development of commercial insurance in Kenya is closely related to the historical emancipation of Kenya as a nation (Throup, 1988).

With the conquest of Kenya as a British colony complete, settlers initiated various economic activities, particularly farming, and extraction of agricultural products (Huxley, 1990). These substantial investments needed some form of protection against various risk exposures. British insurers saw an opportunity in this, and established agency offices to service the colony's

insurance needs. Prosperity in the colony soon justified expansion of these agencies to branch networks with more autonomy, and expertise to service the growing insurance needs. By independence in 1963, most branches had been transformed to fully-fledged insurance companies (Maxon, 1993).

In the forty years since independence, Kenya's insurance industry has flourished, and by 2002 had 41 registered insurers, 15 transacting general insurance business, 2 transacting life business, while 24 were composite insurers - transacting both life and general insurances. Kenya's insurance industry leads within the East Africa Community (a trading block of Kenya, Uganda and Tanzania), and is a key player in the COMESA region, (Common Market for Eastern and Southern Africa). The industry employs over 10,000 people, underwrites well over €300m premiums, and pays over €120m per annum in claims. The largest 10 insurers handle over 70% of the motor business with a similar number handling well over 90% of the property business in the market.

1.3 Comparison of the two industries

The main characteristics of the two industries are summarized in Table 1.

Greece	Kenya
<ul style="list-style-type: none"> • EU member • Participates in EMU and Euro Zone • Open Economy 	<ul style="list-style-type: none"> • Leading economy within East Africa Community (EAC) • Key player in the Common Market for Eastern and Southern Africa (COMESA) • Open economy
Characteristics of Insurance Industry:	
Greece	Kenya
<ul style="list-style-type: none"> • 9,500 people employed • Underwrites € 2.9 billion per annum • 102 Insurers • Leading 5 insurers handle 70% of life business. In non-life insurance leading 5 handle 47% of business 	<ul style="list-style-type: none"> • 10,000 people employed • Underwrites €300 million per annum • 41 Established Insurers • Leading 10 insurers handle 70% of the motor business and over 90% of the property business

Table 1: Comparison between the Greek and Kenyan Private Insurance Industries

2. Quality Measurement - The SERVQUAL metric

Various alternative instruments have been used to assess service quality, notable among these being the SERVQUAL diagnostic presented in 1988 and refined in 1991 by Parasuraman, Zeithaml and Berry, abbreviated as PZB. They conceptualized service quality (Q) as the difference between customers' perceptions (P) of services of a specific firm and their expectations (E) of services in this particular industry. The negative P-E difference was characterized as a "gap" or quality flaw. The following dimensions were used to construct the 22-item SERVQUAL scale (Zeithaml et al., 1990).

- **Tangibles** - The appearance of physical facilities, equipment, personnel and communication materials.
- **Reliability** - The ability to perform the promised service dependably and accurately.
- **Responsiveness** - The willingness to help customers and provide prompt service.
- **Assurance** - The knowledge, competence, and courtesy of service employees and their ability to convey trust and confidence.
- **Empathy** - The caring individualized attention provided to customers.

The SERVQUAL metric has been adapted to measure service quality in a variety of settings: numerous health care applications (Babakus and Mangold, 1992; Bowers et al., 1994), acute care hospital (Carman, 1990), independent dental offices (McAlexander et al., 1994), AIDS service agencies (Fusilier and Simpson, 1995), with physicians (Brown and Swartz, 1989; Walbridge and Delene, 1993), in large retail chains (Teas, 1993), and in banking and fast food restaurants (Cronin & Taylor, 1992). In addition, there have been several studies involving the insurance industry (Stafford et al., 1998; Leste and Wanderley (1997); Westbrook and Peterson (1998); Mehta et al. (2002)).

Most of these studies brought about disagreements on two major issues: the dimensions of service quality, and the linkage between satisfaction and quality. Disagreement concerning the proposed linkage between quality and satisfaction has led to a division over causality, with one group supporting the proposition that quality leads to satisfaction (Woodside et al., 1989) and another supporting the proposition that satisfaction leads to quality (Bitner and Hubbert, 1994). Others suggest that quality and satisfaction are determined by the same attributes (Bowers et al., 1994).

Joseph et al. (1999) report that the Gaps/Disconfirmation model of SERVQUAL has been the object of some major criticisms, including ambiguity in the definition of expectations and its applicability to a variety of industries (Teas, 1993, 1994; Cronin & Taylor, 1992). The satisfaction approach to measuring quality runs into difficulty when complex services are evaluated as customers may not know what to expect, even after the service is delivered, as they may not know with certainty how good the service was (Lovell, 1999). Furthermore, the model may be appropriate for large service organizations, but represents inaccurately service quality in small firms (Haksever et al., 2000). Another criticism is that for the model to function correctly expectations must remain constant, though Carman (1990) maintains that expectations change with familiarity to the service.

Despite these limitations, the Gaps model provides valuable insight into understanding challenges of delivering quality service and sheds light into the various quality gaps (Zeithaml, 1988). Parasuraman et al. (1993), in response to a critique by Brown et al. (1993) of SERVQUAL'S difference score conceptualization, argue that the expectations component of SERVQUAL is a general measure and pertains to customers' normative standards (i.e. the service level customers believe excellent companies should deliver). This serves as a yardstick against the services of a particular service provider (that the customers have experienced); so as to ascertain the latter's service quality. As such, there is no conceptual reason for customers' general evaluation standards to be correlated with their assessment for a specific company. PZB further argue that the SERVQUAL metric represents the core evaluation criteria that transcend specific companies and industries. Its items are the basic "skeleton" underlying service quality and can be supplemented with context-specific items when necessary.

The research studies presented here extend previous research by utilizing past findings to develop customized SERVQUAL metrics which are then used to diagnose service quality in the insurance industries of Greece and Kenya. The paper also examines the suitability of SERVQUAL'S application in the insurance industry.

3. Applying SERVQUAL to the Greek Insurance Industry.

3.1 Adapting the SERVQUAL Instrument

GIQUAL, the SERVQUAL type instrument developed for the measurement of service quality in the Greek Insurance

Industry, initially included 26 items, 22 from the revised SERVQUAL scale (Parasuraman et al., 1991) and 4 from extensive consultation with a group of 10 Area and Branch Managers of three leading Greek Insurers.

The group concluded that although the five quality dimensions can indeed accommodate the various aspects of insurance quality in Greece, four additional items should be added to the SERVQUAL scale to evaluate the effect of price, product quality, ambiguity of insurance contracts terms and delays in claims settlement, on customers' perceptions of service quality in the Greek insurance industry. Price was considered as a tangible item and product quality, ambiguity of terms and settlement delays as reliability items.

The group further suggested that GIQUAL would better be used in the context of personal interviews. This was confirmed in the instrument's pretesting phase, with a group of 50 experienced insurance customers, as in many cases extensive explanations on the meaning of certain items were necessary.

GIQUAL was initially applied to a sample of 168 insurance consumers over 25 years old, having some contact with their insurance company in the last three months. For each consumer the difference scores $Q_i = P_i - E_i$ for the 26 items were computed and the Cronbach's α reliability coefficients were calculated for each of the 5 quality dimensions. The removal or redeployment of items between dimensions was based on the "increase of α if item deleted" criterion (Pallant, 2001). During this process only one item (Q7 - price) had to be removed, leaving GIQUAL with the following 25 items¹.

- **Tangibles** (four items) - modern equipment and technology (Q1), visually appealing physical facilities (Q2), neat appearing employees and agents (Q3), visually appealing materials associated with service (Q4)
- **Reliability** (eight items) - keeping promises when promise to do something by a certain time (Q5), offering products and services of utmost quality (Q6), issuing contracts with clear, transparent and non ambiguous terms (Q8), settling customers' claims with no unnecessary delays (Q9), showing sincere interest in solving customers' problems (Q10), offering services right the first time without unnecessarily discomfoting customers (Q11), providing services within the specified contract time

¹ α values varied from .78 to .93 between dimensions.

limits (Q12), issuing error free bills, statements, receipts, contracts, claims and other documents (Q13).

- **Responsiveness** (four items) - telling customers exactly when the services will be performed (Q14), doing their best to give prompt service to customers (Q15), always willing to help customers (Q16), never being too busy to respond to customers' requests (Q17).
- **Assurance** (four items) - customers feeling safe in their transactions (Q18), behaviour instilling confidence in customers (Q19), being consistently courteous with customers (Q20), having employees and agents with the necessary knowledge to give professional services to customers (Q21)
- **Empathy** (five items) - giving customers individual services (Q22), operating hours convenient to all customers (Q23), giving customers personal attention (Q24), having the customers' best interests at heart (Q25), understanding the specific needs of customers (Q26).

The difference scores for the instrument's 25 items, the Qs, were factor analyzed to examine the dimensionality of the scale. Before the analysis the data set was screened for errors of omission, tested for normality, outliers, sampling adequacy, factorability of the correlation matrix (R) and, because the determinant of R was very close to 0 (5.88E-10), examined for singularity and multicollinearity. The results of all these tests revealed no problem for the analysis (Belsley et al., 1980; Comrey and Lee, 1992; Tabachnick and Fidell, 1996; Hutcheson and Sofroniou, 1999; Pallant, 2001).

Although the Kaiser criterion (Eigenvalues>1) suggested a 4-factor solution and the Screeplot criterion (retention of factors above the elbow) suggested a 2-factor solution, in an attempt to verify the 5 quality dimensions of SERVQUAL, the analysis was initially constrained a-priori to 5 factors, using the Principal Axis Factoring procedure as suggested by Parasuraman et al. (1988). Setting the "criterion of meaningful factor loading" to 0.35, the unrotated solution was degraded to a 4 factor one as the loadings of the 5th factor were all less than 0.35. To allow for factor intercorrelations the initial solution was subjected to oblique rotation, using the SPSS oblmin procedure. After deleting items Q5, Q18, and Q24, as loading on several factors, a 22 items rotated solution resulted.

The Tangibles and Reliability dimensions were still there but the Responsiveness and Assurance items merged into a single factor together with 2 Empathy items while the 2 remaining Empathy items formed a fourth factor. The importance of factors with respect to extracted variance was: factor 3 (Responsiveness, Assurance and Empathy items), factor 2 (Reliability), factor 4 (Remaining empathy items) and factor 1 (Tangibles). Although α values were high (with the exception of factor 4 with $\alpha = 0.68$), factors 2, 3 and 4 were highly or relatively highly correlated. This suggested that they could possibly form a single factor in a 2-dimensional solution, in line with the Screeplot criterion.

A 2-factor solution was next investigated, using once again the principal axis factoring procedure and maintaining 0.35 as the criterion of meaningful factor loading. After subjecting the initial solution to orthogonal rotation, using the SPSS Varimax procedure, a full 25 items clear-cut solution resulted (Table 2).

Both factors were reliable (having high α values), internally consistent and well defined by the variables, as the Square Multiple Correlations for factors from variables were 0.96 and 0.80 for Non-Tangibles and Tangibles respectively (Tabachnick & Fidell, 1996).

Dimension	Reliability Coefficient (α)	Items (Factor Loadings)						
1. Non - Tangibles	0.96	Q5 (0.59)	Q6 (0.61)	Q8 (0.64)	Q9 (0.8)	Q1 (0.87)	Q11 (0.82)	Q12 (0.79)
		Q13 (0.65)	Q14 (0.82)	Q15 (0.81)	Q16 (0.77)	Q17 (0.72)	Q18 (0.89)	Q19 (0.83)
		Q2 (0.66)	Q21 (0.76)	Q22 (0.56)	Q23 (0.48)	Q24 (0.57)	Q25 (0.79)	Q26 (0.81)
2. Tangibles	0.78	Q1 (0.60)	Q2 (0.76)	Q3 (0.73)	Q4 (0.61)			

Loadings of items on dimensions to which they don't belong are all <0.35
55.73 % of variance explained.

Table 2. Two-Factor Solution

3.2 Data Collection

The 25-item GIQUAL was then applied to three independent samples of 87, 87 and 81 customers of insurers A, B and C respectively, in 3 major Greek cities. The reliabilities across all three samples were consistently high for both

Tangibles and Non-Tangibles, more so for the latter (Table 3).

	Reliability Coefficients (α)		
	Insurer A	Insurer B	Insurer C
Tangibles	0.84	0.90	0.88
Non-Tangibles	0.97	0.97	0.97

Table 3. Internal Consistencies of the Two-Factor Solution

The psychometric properties of the scale appeared to be quite stable. Factor loading distributions were very similar in all three samples. With very few exceptions, items presented high loadings only in the dimension to which they belong.

3.3 Data Analysis

To further assess the scale's content validity (i.e. its ability to measure what it is supposed to), for each sample the scores of the answers of customers when asked to evaluate, on a 1 to 10 scale, the overall quality of services offered by their insurance company, were regressed on the average scores of each dimension.

The regression coefficients for Tangibles (Table 4) in all three samples were not significant. This implies that this particular factor does not considerably contribute to the assessment of customers for overall service quality. Such a result was not unexpected as the Greek Insurance Industry is heavily dependent on the Agency System, either Captive or Independent (Tsoukatos, 2003). Customers contact their insurers almost exclusively through agents and very rarely contact their employees, visit their offices or use their facilities. Thus, the assessment of the overall service quality in the Greek Insurance Market on Non-Tangibles alone is absolutely reasonable and expected.

	Insurer A	Insurer B	Insurer C
Tangibles	0.03	-0.06	-0.12
Non- Tangibles	0.77*	0.77*	0.90*
Adjusted R ²	0.60*	0.53*	0.69*

* Significant at 1% level

Table 4. Standardized Coefficients

3.4 Conclusions from the Greek industry

Although the two-factor solution is statistically sound, it was judged that the 5 quality dimensions could better identify areas for which quality improvement is necessary and they were used on data from the independent samples of insurers A, B and C, in this respect. For all three samples each dimension's average perceptions (P), expectations (E) and the resulting gaps (Q=P-E) scores were calculated. As expected (Parasuraman et al. 1985, 1988), the Q scores were consistently negative, indicating that customers' expectations were in excess of their perceptions. Insurers have the opportunity to take the appropriate actions to improve the quality of their services, giving priority to dimensions with the largest negative Q scores. On these grounds insurers should deal with Empathy and Reliability, in that order, since these were the dimensions with the most negative Q scores in all three samples (Table 5).

Dimension	Insurer A			Insurer B			Insurer C		
	(P)	(E)	(Q)	(P)	(E)	(Q)	(P)	(E)	(Q)
Tangibles	5.65	6.47	-0.82 ^a	5.41	6.36	-0.95 ^a	5.20	6.40	-1.20 ^a
Reliability	5.62	6.87	-1.25^b	5.23	6.72	-1.49^b	4.98	6.84	-1.86^b
Responsiveness	5.82	6.82	-1.00 ^a	5.41	6.72	-1.31 ^c	5.08	6.79	-1.70 ^c
Assurance	5.90	6.86	-0.95 ^a	5.41	6.73	-1.32 ^c	5.13	6.78	-1.64 ^c
Empathy	5.50	6.80	-1.29^b	5.00	6.57	-1.57^b	4.80	6.67	-1.87^b

Gaps in each sample marked with different letters are statistically different at the 5% level

Table 5. Gap Analysis (Greece)

The following conclusions can be drawn from observing the figures in Table 5.

- Greek insurers should deal with Empathy and Reliability as a priority as these were the most deficient dimensions.
- A sound quality improvement strategy for individual companies should focus on fixing quality flaws in the order: empathy, reliability, responsiveness, assurance and tangibles. As Tangibles does not contribute to the assessment of overall service quality, insurers should concentrate primarily on the non-tangibles dimensions.
- The causes and extent of quality flaws depended on each company's structure.

4. Kenya

4.1. Adapting the SERVQUAL diagnostic

Prior to its application, the SERVQUAL scale (Parasuraman et al., 1991) was pre-tested and 3 of its 22 items discarded (on account of limited relevancy in the insurance context), which resulted in retention of only 19 items. To

these, 24 additional items from the literature were added to constitute a 43-item questionnaire that was then used in data collection. The insurers' questionnaires comprised 43 statements relating to expectations of excellent insurers only, while the insureds' questionnaires had 86 attributes in total (43 relating to expectations of excellent insurers and the other 43 relating to perceptions of respective insurers). All statements were carefully crafted and realigned to suit the insurance environment. The items sourced from the SERVQUAL metric were:

- **Tangibles** (*four items*: modern equipments (coded as EQUIPTE), appealing physical facilities (PHYSFA), user friendly facilities (FACILIT), and use of appealing promotional materials (PROMO)).
- **Reliability** (*four items*: will promise to do something by a certain time and do so (coded as DOSOM), sincere interest in solving complaints (INTESOL), perform services right first time (FIRSTIM), and issue error free records and communications (ERROFR)).
- **Responsiveness** (*four items*: tell customers when services will be performed (coded as TELCUS), are conscious of time and coordinate well service activities (TIMELY), will always be willing to help (WILLNG), and will never be too busy to respond (TOBUSY)).
- **Assurance** (*four items*: behaviour of employees instils confidence (coded as BEHAV), customers feel safe in transactions (CUSAFE), employees are consistently courteous (COUTES), and employees have knowledge to answer customers (KNWLG)).
- **Empathy** (*three items*: employees give customers individual attention (coded as INDVAT), have operating hours convenient to all (CONVHR), and companies have customers' best interest at heart (CUSINT)).

Those sourced from the literature were:

- **Tangibles** (*three items*: convenient location (coded as LOCATE), ample parking space (PARK), and attractive furniture and interiors (FURNTE)).
- **Reliability** (*six items*: are financially stable (coded as FINANC), transact products and services of the highest quality (PRODTS), have consistent customer-focused easy to understand underwriting policies (UNDPOL), price competitively their products and services (PRICE), effectively use the internet to transact business (INTERNT), and provide indemnity without hassles (INDEMN)).
- **Responsiveness** (*five items*: constantly communicate with customers (coded as COCOM), adapt methods of communication to suit customers needs (ADAPTIV), identify customers needs and provide products and

services to meet these needs (CRETIV), and facilitate seamless/unhindered flow of customers (SEFLW)).

- **Assurance** (*five items*: claimants are assured of best possible attention (coded as CLASS), customers are engaged in post-service communication (POSTSV), employees give accurate representation of products and services (ACCREP), employees have knowledge and skills to competently perform (KNWSKL), and customers are assured of highest product/service quality through provision of appropriate guarantees (GUANTS)).
- **Empathy** (*five items*: employees demonstrate integrity and trustworthiness (coded as INTEGRIT), welcome complaints and criticisms (WELCP), are committed to ethics and promote ethical behaviour (ETHICAL), use reliable knowledgeable and efficient distribution outlets (DISTCH), and differentiate adequately their products and services (DIFFRNT)).

4.2. Data collection

The sample comprised two groups of respondents: 84 insurers (employees of participating insurers) and 126 insureds (customers of participating insurers) from four insurance companies: A, B, C, and D, two of which, A and D, had just merged. Questionnaires were completed by insurers at their workplace, as were the insureds. Each participating company provided a database of its clients from which a sample of 50 insureds was systematically picked. Selection of customers was based on: complete contact address (both phone and physical contact), product/service category (general versus life insurances), direct buying from insurers versus through intermediaries, individual versus corporate clients, and volume of business (premium ranges between highest and lowest). In sum, 210 questionnaires (84 - insurers) and (126 insureds) were received back.

4.3. Data Analysis

Sample data (from the two broad samples - insureds and insurers) was screened for errors of omission, and tested for normality and outliers. The test results confirmed that the data sets were suitable for factor analysis (Hutcheson and Sofroniou, 1999; Pallant, 2001). These data sets were then further split into four subsets: insurers' expectations', insureds' expectations, combined expectations (combining insurers and insureds), and insureds' perceptions. The four subsets were then tested for sample adequacy using the factorability method (Pallant, 2001), the Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) and Bartlett's test of Sphericity (Tabachnick and Fidell, 1996) and found to be adequate. In three of the subsets the KMO tests were well above 0.900, while the Bartlett tests were all significant at 0.000.

Two methods were then employed to decide on the number of factors to extract for further rotation: the Kaiser criterion and the Screeplot criterion.

a) Kaiser Criterion

In the insurers' expectations subset, a ten-factor matrix was generated, eight in insureds' expectations subset, eight in combined expectations subset, and only five in insureds' perceptions subset. Clearly, these results were inconsistent, thus rendering it difficult to decide on the number of factors to retain for further analysis. The fact that in some matrices a number of "residual factors" hardly had more than two items loading on them, further cast suspicion on a decision based on these results. Given these inconsistencies and difficulties, the Kaiser Criterion could not be relied on exclusively, thus warranting consideration of the Screeplots.

b) Screeplots

In the insurers' expectations data Screeplot there was evidence of an elbow from the third factor and the plot tended horizontally towards the fifth factor. In the insureds' expectations data Screeplot an elbow emerged after the second factor and the plot tended horizontally from the fourth factor or thereabouts. In the combined expectations data Screeplot an elbow emerged at the third factor and the plot levelled from the fifth factor, while in the insureds' perceptions data Screeplot the elbow emerged in the third factor and the plot levelled in the fifth factor. The Screeplots results were thus more consistent and credible than those of the Kaiser Criterion, and consequently influenced the decision to extract only five factors for further analysis.

An orthogonal Varimax rotation was then applied to all four subsets. The rotated component matrices showed some redistribution of items on all the five factors (in each matrix) unlike in the initial results. In all matrices, more items were loading on the principal factors than hitherto, implying that the selection of the five principal components was plausible. The cumulative eigenvalue loadings of the five principal factors in all four data subsets were well above 60%, giving credence and justification for their retention. Specifically, the results were: 60% (insurers' expectations variance table), 69% (insureds' expectations variance table), 61% (combined expectations variance table), and 72% (insureds' perceptions rotated variance table), of the total explained variances.

Customized SERVQUAL Diagnostic

Examination of the items loading on the principal factors (in each matrix), revealed a cluster of statements in each. There was need therefore to ascertain whether these cluster items were related or not, and if related, whether or not they could be pieced together to form descriptive representation of any of the dimension's quality as postulated in the SERVQUAL framework. Individual items in the clusters were therefore isolated, extracted and assigned to dimensions they describe so as to build clusters of related statements which describe a particular dimension based on the SERVQUAL framework. In sum, none of the matrices had all the five dimensions of service quality loading as may be seen in table 6.

Factor	Insurers Expectations	Insureds Expectations	Combined Expectations	Insureds Perceptions
1	Empathy	Responsiveness	Empathy	Reliability
2	Assurance	Assurance	Responsiveness	Empathy
3	Reliability	Tangibles	Reliability	Tangibles
4	Reliability	Responsiveness	Tangibles	Empathy
5	Tangibles	Empathy	NIL	Tangibles

Table 6. Summary results of the Rotated Components Matrices

Items were further picked on the basis of their weights/loadings on dimensions from all the four matrices as provided in table 6, with a view to constituting a plausible and robust scale to gauge service quality in Kenya's insurance industry. Where items with higher weights/loadings were considered inconsistent by reason of their variance with others within the cluster, they were omitted, and the next relevant ones considered either from the same or other matrices. A 22-item customised SERVQUAL metric was thus built (in line with the SERVQUAL design), and applied to diagnose service quality in the industry. The constituent attributes of this diagnostic were: four (tangibles items), five (reliability items), four (responsiveness items), four (assurance items) and five (empathy items). These items/attributes which in essence were determinants of service quality in Kenya's insurance industry were:

- **Tangibles** (*four items*): visually appealing physical facilities (PHYSFA), convenient location (LOCATE), attractive furniture and interiors (FURNTE) and, ample parking space to customers (PARK).
- **Reliability** (*five items*): provide indemnity without hassles (INDEMN), financially stable (FINANC), show

sincere interest in solving customers' concerns (INTESOL), transacts products and services of highest quality (PRODTS) and, will promise to do something by a certain time and do so (DOSOM).

- **Responsiveness** (*four items*): will never be too busy to respond to customers requests (TOBUSY), tell customers exactly when services will be performed (TELCUS), will always be willing to help customers (WILLNG) and, are accessible, listen to and provide prompt honest responses to customers' inquiries (ACCESS).
- **Assurance** (*four items*): employees have requisite knowledge (KNWLG), employees have the skills to competently perform their duties (SKLLS), employees are consistently courteous with customers (COUTES) and, employees give accurate representation of products and services in marketing advertising and sales effort (ACCREP).
- **Empathy** (*five items*): have customers' best interest at heart (CUSINT), use reliable knowledgeable and efficient distribution outlets - brokers, agents, and other intermediaries (DISTCH), employees give customers individual attention (INDVAT), employees demonstrate integrity and trustworthiness in dealing with customers (INTEGRT) and, are committed to ethics and promote ethical behaviour in the work place (ETHICAL).

Testing SERVQUAL'S reliability and validity

The customised SERVQUAL was subjected to tests of reliability and validity. Cronbach's alpha coefficient (Cronbach, 1951) was used to test the metric's reliability. The α coefficients for perceptions and expectations were consistently high, 0.960 and 0.920 respectively, implying that the customized SERVQUAL metric was indeed reliable, stable, consistent, dependable and accurate in measuring service quality in Kenya's insurance industry. In both reliability test outputs, all the 22 items had α value above 0.900, which further affirmed the instrument's reliability and internal consistency.

The construct validity was qualitatively determined as suggested by Flynn et al., (1990) and Emory and Cooper (1991). Emory and Cooper have argued that, "in attempting to evaluate construct validity we must consider both the theory of which the construct is part and the measurement instrument being used". This "principle" was thus applied on the customized SERVQUAL diagnostic and all the constituent attributes of the metric found credible given their sourcing. Moreover, the internal consistency of the α coefficients in both perceptions and expectations items

further rendered credence to the diagnostic's construct validity.

4.4. Conclusions from Kenya's industry

Quality gaps/deficiencies

Perception scores and expectation scores (for each respective dimension's attributes) were analysed to ascertain potential differences between the two concepts. The computations confirmed a mismatch between perceptions and expectations. Customers' perceptions (of insurance service) were short of their expectations, suggesting that quality gaps existed amongst the companies.

Quality improvement opportunities

Opportunities for quality improvement were noted in dimensions with severe deficiencies, namely: Company A (reliability and responsiveness), B (responsiveness and reliability), C (responsiveness and empathy), and D (reliability and responsiveness). Table 7 further amplifies these results.

Dimension	Company A			Company B			Company C			Company D		
	(P)	(E)	(Q)									
Tangibles	4.09	5.10	-1.01	5.50	5.91	-0.41	5.46	5.62	-0.16	4.10	5.64	-1.54
Reliability	4.61	6.31	-1.70	5.17	6.36	-1.19	5.23	6.48	-1.25	4.39	6.40	-2.02
Responsiveness	4.72	6.37	-1.65	5.15	6.46	-1.31	5.06	6.59	-1.53	4.54	6.45	-1.91
Assurance	4.92	6.37	-1.45	5.50	6.37	-0.87	5.33	6.55	-1.23	4.58	6.37	-1.80
Empathy	4.97	6.39	-1.42	5.39	6.25	-0.87	5.02	6.49	-1.48	4.75	6.37	-1.63

Table 7. Two-Dimension Gap Analysis (Kenya)

Observations

- Reliability and responsiveness were the dimensions with severest quality deficiencies/gaps (save for company C, where empathy was a serious concern),
- There was need to fix the quality flaws/leakages in reliability and responsiveness to cure the flaws. The two dimensions have the potential to positively impact overall service quality within the companies. Prioritized deployment of resources to these dimensions was necessary to accomplish the desired results,
- Apparently company history/legacy somewhat influenced the nature and extent of quality flaws within the companies.

Validation of the Design

The study findings were then presented to the respective companies and feedback from the participating companies' management overwhelmingly supported them. Glaring evidences of deficiencies in service quality were found in all operations: underwriting, claims, marketing, finance, front office, administration, products design, sales, delivery systems, etc. The findings did also surprise managers: particularly the revelation of deficiencies in activities/processes hitherto thought to be pointers of excellence within these establishments.

5. Comparative analysis between Greece and Kenya

Research Design

The two research designs, though in principal using the SERVQUAL metric in investigating service quality in the respective industries, were however, distinctively different in terms of design and operationalization. In Greece, four items were added to the SERVQUAL's 22-item scale to make a 26-item scale, which was then pre-tested and used to gather data. In Kenya the SERVQUAL's 22-item scale was filtered through a pretest to yield 19 items. To this were added 24 items from the literature review to yield a 43-item scale. In sum, therefore, there were noticeable differences in both: (a) manner of construction of metrics, and (b) number of items in the metrics. The different designs, though partly due to individual researchers' orientations, were largely aimed at customizing the SERVQUAL metric to meet the diverse cultural, economic, and technological differences between the two countries of Greece and Kenya.

Factor Analysis

Principally, there were no differences in the process between the two studies, for, in both cases, all the data sets were subjected to PCA to determine the number of principal components that determine service quality. However, the only difference was one of "when the process was performed rather than what was performed". In the case of Greece, the 26-item scale was subjected to factor analysis to yield a 25-item scale (used in data collection) whose attributes were broadly classified as tangibles and non-tangibles. In Kenya on the other hand the 43-item scale was used to collect data initially. The scale was then subjected to factor analysis, to yield a 22-item metric than was then employed in gauging service quality in Kenya. In both cases the customized SERVQUAL metrics were further subjected to tests of reliability and validity and found to be statistically reliable, consistent and valid.

Constituent attributes of the two SERVQUAL metrics

Similarities and differences were noticeable in the constituent elements of the two diagnostics. With regard to tangibles, only one attribute "PHYSFA" tallied between the two industries (signalling applicability across the industry), the other three were diverse (implying limited or no application beyond respective industries), hence only served to customize the diagnostics. In reliability, "DOSOM, INDEMN, PRODTS, and INTESOL" were common (signalling their uniformity across the industry); the rest were not (further implying limited use beyond their respective industries). For responsiveness, "TELCUS, TOBUSY and WILLNG" had universal application; the rest did not, and were necessarily used to customize the diagnostics. In assurance two items cut across the two industries "COUTES and KNWLG", all the others had localized relevance. For empathy, "INDVAT and CUSINT" had universal application, the rest didn't. It follows, therefore, that only 12 of the 25-item scale and 22-item scale used in Greece and Kenya respectively had common (universal) application, the rest (almost another half) didn't, putting into question the consistency and universality of the constituent attributes of the SERVQUAL diagnostic, whether applied with or without any modifications.

Quality diagnosis and improvement in the two industries

In both Greece and Kenya reliability had the severest deficiency of all dimensions in the two industries, which is consistent with the relevant literature. Any sound quality intervention strategy should thus prioritize closing the gaps between expectations and perceptions in the dimensions beginning with empathy/reliability, responsiveness, assurance and tangibles respectively. However, due consideration should be placed on the amount of resources required to fix deficiencies in each of the five dimensions. Ordinarily, dimensions that require fewer resources (in fixing gaps) should be given priority. Such an action may not occasion serious resource strain on companies, yet the resultant impact, however minimal, would be instantly appreciated by clients and the companies will be seen by clients as responsive and progressive, rather than delaying action on account of resource inadequacies.

6. Conclusions

From the foregoing, the following conclusions were drawn:

- The SERVQUAL metric requires substantial modification (customization) prior to its application. Considering that only 55% of items within the two scales used had

universal application within the two industries is reason enough to be wary when applying SERVQUAL. Researchers ought to be cautious when applying the diagnostic; SERVQUAL is not a ready to use tool-kit: although robust, the metric calls for customization.

- Quality gaps that obtained in the insurance industries of Greece and Kenya were largely similar. The dimensions reliability and empathy were the most deficient, and any genuine quality intervention strategy should prioritize their improvement.
- Apparently the dimension tangibles least impacts service quality, yet insurers tend to associate it with quality. Insurers worldwide have invested colossal sums of money in capital projects in the form of magnificent structures at the expense of other needy dimensions, believing that doing so fortifies their service quality. There is need therefore for insurers to rethink their quality strategies.
- Further research is necessary to investigate the consistency and universality of the constituent attributes of the SERVQUAL diagnostic (whether applied with or without any modifications) as applied in various set-ups, and particularly, the impact such changes may have on its efficacy and versatility.
- Despite these limitations, the SERVQUAL diagnostic is suitable and versatile enough in diagnosis and improvement of service quality in the insurance industry.

References

- Anon, 2002. Private Insurance in Greece in 2001: Annual Statistical Report. Association of Insurance Companies, Athens.
- Azevedo, M.J., 1993. Kenya: The Land, the People and the Nation. Carolina Academic Press, Durham, NC.
- Babakus, E., Mangold, W.G., 1992. Adapting the SERVQUAL scale to hospital services: an empirical investigation. Health Services Research 26, 767-780.
- Belsley, D.A., Kuh, E., Welsch, R.E., 1980. Regression Diagnostics: Identifying Influential Data and Sources of Collinearity. Wiley, New York.
- Bitner M.J., Hubbert A. R., 1994. Encounter Satisfaction Versus Overall Satisfaction Versus Service Quality: The Consumer's Voice. In: Rust, R.T., Oliver R.L., (eds.).

- Service Quality: New directions in theory and Practice. Sage Publications, Thousand Oaks, California, pp.72-94.
- Bowers, M.R., Swan, J.E., Koehler, W.F., 1994. What attributes determine quality and satisfaction with health care delivery? *Health Care Management Review* 19(4), 49-55.
- Brown, S.W., Swartz, T.A., 1989. A Gap Analysis in Professional Service Quality. *Journal of Marketing* 53 (April), 92-98.
- Brown, T.J., Churchill Jnr., G.A., Peter, J.P., 1993. Improving the measurement of service quality. *Journal of Retailing* 69 (Spring), 127-139.
- Carman, J.M., 1990. Consumer perceptions of service quality: an assessment of the SERVQUAL dimensions. *Journal of Retailing* 66 (Spring), 33-55.
- Comrey, A.L., Lee, H.B., 1992. *A first course in Factor Analysis* (2nd ed.). Lawrence Erlbaum, Hillsade. NJ.
- Cooper, R.W., Frank G.L., 2001. Key ethical issues facing the property and casualty insurance: has a decade made a difference? *CPCU Journal* 54(2), 99-111.
- Cronbach, L.J., 1951. Coefficient alpha and the internal structure of tests. *Psychometrika* 16(October), 297-334.
- Cronin Jnr., J.J., Taylor, S.A., 1992. Measuring service quality: a reexamination and extension. *Journal of Marketing* 56(July), 55-68.
- Emory, C.W., Cooper, D.R., 1991. *Business Research Methods*. Irwin, Homewood, IL.
- Flynn, B.B., Sakakibara, S., Schroeder, R.G., Bates, K.A., Flynn, E.J., 1990. Empirical research methods in operations management. *Journal of Operations Management* 9, 250-284.
- Friedman, S., 2001a. RIMS plans to have third quality scorecard published in 2002. *National Underwriter* 105(18), 3,22.
- Friedman S., 2001b. RIMS launches quality process. *National Underwriter* 105(19), 3,29.
- Fusilier, M.R., Simpson, P.M., 1995. AIDS patients' perception of nursing care quality. *Journal of Health Care Marketing* 15(1), 49-53.
- Haksever C., Render B., Russell R., Murdick R., 2000. *Service Management Operations* (2nd edition). Prentice-Hall, New Jersey.
- Hutcheson, G., Sofroniou, N., 1999. *The Multivariate Social Scientist: Introductory Statistics Using Generalized Linear Models*. Sage Publications, London.
- Huxley E., 1990. *Settlers of Kenya*. Greenwood Publishing Group, Oxford.
- Joseph, M., McClure C., Joseph B., 1999. Service quality in the banking sector: the impact of technology on service delivery. *International Journal of Bank Marketing* 17, 182-193.

- Kenyatta, J., 1962. Facing Mount Kenya. Random House, New York.
- Leste, M.R., Vittorio, W., 1997. The interactive approach to service quality and management. Deuxième Congrès International Franco-Quebecois de Génie Industriel, ALBI.
- Lovelock, C.H., Wright L., 1999. Principles of Service Marketing and Management. Prentice-Hall, New Jersey.
- Maxon R. M., 1993. Struggle for Kenya: The Loss and Reassertion of Imperial Initiative, 1912-1923. Fairleigh Dickinson University Press. Madison, NJ.
- McAlexander, J.H., Kaldenberg, D.O., Koenig, H.F., 1994. Service quality measurement. Journal of Health Care Marketing 14 (Fall), 34-39.
- Mehta, S.C., Lobo, A., Khong, H.S., 2002. MSS, MSA and zone of tolerance as measures of service quality: A study in the life insurance industry. Second International Services Marketing Conference. University of Queensland, July 4-5.
- Pallant, J., 2001. SPSS Survival Manual: A Step by Step Guide to Data Analysis Using SPSS for Windows (Version 10). Open University Press, Buckingham.
- Parasuraman, A., Zeithaml, V.A., Berry, L.L., 1985. A conceptual model of service quality and its implications for future research. Journal of Marketing 49(Fall), 41-50.
- Parasuraman, A., Zeithaml, V.A., Berry, L.L., 1988. SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. Journal of Retailing 64(1), 12- 40.
- Parasuraman, A., Berry, L.L., Zeithaml, V.A., 1991. Refinement and reassessment of the SERVQUAL scale. Journal of Retailing 67, 420-450.
- Parasuraman A., Berry L.L., Zeithaml V.A., 1993. More on improving service quality measurement. Journal of Retailing. 69, 140-147.
- Stafford, M.R., Stafford, T.F., Wells, B.P., 1998. Determinants of service quality and satisfaction in the auto casualty claims process. Journal of Services Marketing 12, 426-440.
- Simitsek, P, 1997. What is Insurance? Kaktos Publications, Athens. (In Greek).
- Tabachnick, G.B., Fidell, S.L., 1996. Using Multivariate Statistics (3rd Edition). HarperCollins, New York.
- Teas, R.K., 1993. Expectations, performance evaluation, and consumers' perceptions of quality. Journal of Marketing 57(4), 18-35.
- Teas, R.K., 1994. Expectations as a comparison standard in measuring service quality: An assessment of a reassessment. Journal of Marketing 58(1), 132-140.
- Throup W.D., 1988. Economic and Social Origins of Mau Mau 1945-1953. Ohio University Press, Columbus, OH.

- Tsoukatos, E., 2003. The private insurance industry in Greece. *Archives of Economic History* XV(2), 105-122.
- Walbridge, S.W., Delene, L.M., 1993. Measuring physician attitudes of service quality. *Journal of Health Care Marketing* 13(1), 6-15.
- Wells, B.P., Stafford, M.R., 1995. Service quality in the insurance industry: Consumer perceptions versus regulatory perceptions. *Journal of Insurance Regulation* 13, 462-477.
- Westbrook, K.W., Peterson, R.M., 1998. Business-to-business selling determinants of quality. *Industrial Marketing Management* 27, 51-62.
- Woodside, A.G., Frey L.L., Daly, R.T., 1989. Linking service quality, customer satisfaction and behavioural intention. *Journal of Health Care Marketing* 9(4), 5-17.
- Zeithaml, V.A., 1988. Consumer perceptions of price, quality and value: a conceptual model and synthesis of evidence. *Journal of Marketing* 52(2), 2-22.
- Zeithaml, V.A., Parasuraman, A., Berry, L.L., 1990. *Delivering Quality Service: Balancing Customer Perceptions and Expectations*. The Free Press, New York.