Critical ™
RESEARCH

OFFICE OF RAIL AND ROAD

COMPLAINTS HANDLING SURVEY

STATISTICAL ANALYSIS OF THE KEY

DRIVERS OF SATISFACTION

Contents

1. Executive summary

Objectives and survey method

The Office of Rail and Road (ORR) complaints handling survey has been running since 2015. It allows passengers to provide feedback on their experiences of Train Operating Companies' (TOCs) complaints handling processes. For the rail period 2019-2020, the survey received over 54,000 passenger responses.

The objectives of this research are as follows:

- Establish the important elements of complaints handling from a passenger perspective
- Establish the key drivers of complaints handling satisfaction and their potential order of importance to passengers
- Based on the findings, generate recommendations to inform ORR's review of its complaints handling guidance.

Methodology

Responses from the complaints handling survey in the rail period 2019-2020 were reviewed using statistical techniques to identify commonalities and gather evidence for the key drivers of complaints handling satisfaction. Following a data preparation stage, factor analyses were conducted to establish unique components of satisfaction. A regression analysis was then used to isolate the relative importance of these components on driving satisfaction. Lastly a more straightforward linear correlation analysis was used to improve understanding of some of the components individually. More details of the statistical analyses and their outcomes can be found in Appendix 1.

Key findings

Complaints handling is divided into 10 elements in the questionnaire, and analysis suggests this is grouped into 5 distinct themes:

1. The extent to which the outcome of the complaint is considered as satisfactory by the passenger
2. The quality of service the passenger receives when the complaint is acknowledged, processed and ultimately closed by the TOC
3. The timeliness with which the TOC registers the complaint, comes back with any information and reaches a conclusion
4. The ease of making the complaint

5. The politeness with which the TOC handles the complaint

One of the more dominant findings is the link between complaint *outcome* satisfaction and complaint *handling* satisfaction. Despite survey respondents being asked to separate the two as far as possible, the analysis suggests one influences the other. This is seen not only when looking at a simple correlation between the two answers but also when looked at in conjunction with all the other factors of complaints handling together. This leads to the conclusion that outcome and handling are inextricably linked – this is almost certainly because a negative outcome clouds the view of the entire process but may also be that a positive outcome can overwhelm any negative experiences of the handling process.

The aspect of complaints handling most influential on overall satisfaction is a composite measure of various aspects of complaints handling that relate to complaints handling *quality of service*. This is best described as the TOC's apparent attitude and ability to handle the complaint in the expected professional manner, and comprises the extent to which the complaint was fully addressed, the extent to which the TOC seemed keen to reach an agreeable outcome, whether the complaint was taken seriously, and whether the TOC was seen as helpful and clear in its communications.

The second most important aspect of complaints handling relates to *timeliness*, which is not only the speed with which a complaint is resolved, but also ensuring the complainant is kept informed both about the likely timescales for resolution and the progress of the complaint along the way.

To a lesser extent, it is also important to passengers that the complaints process is a relatively straightforward one. Complainants provided lower ratings of satisfaction with the process when they did not find the process of making the complaint *easy*.

Passengers expect any complaints made to be handled with politeness and to be accompanied with suitable information, when requested. These aspects of complaints handling are considered as *hygiene factors* by passengers, meaning complainants expect TOCs to perform well on these and they generally do. This explains why these factors rank lower than the aforementioned measures but can still be said to be moderately influential in contributing to overall satisfaction ratings.

There are some differences by TOC, but for all TOCs the apparent *quality* with which they handle the complaint and *timeliness* of doing so are consistently the most important elements. For some TOCs, in particular those providing outcomes within 20 working days, the importance of timeliness as a factor in complaint handling, is diminished. As a result, the ease with which passengers of these TOCs are able to make a complaint is considered increasingly important.

2.   Introduction

Critical Research has been running the Office of Rail and Road (ORR) complaints handling satisfaction survey since 2015. The survey was introduced by ORR to support its monitoring of Train Operating Companies' (TOCs) complaints handling arrangements from a passenger perspective. ORR commissioned Critical Research to conduct supplementary analysis of the 54,573 survey responses from passengers who had made a complaint to a TOC during the April 2019 to March 2020 fieldwork period.

The aim of this exercise is to investigate the key drivers of passenger satisfaction for complaints handling. The findings will be used to inform ORR's forthcoming review of its complaints handling guidance to licence holders. The exercise provides a better understanding of which aspects of the complaints handling process are more important in driving overall satisfaction with complaints handling.

Further information about the data and types of analyses undertaken is available in Appendix 1.

Complaints handling

Train and station operators are required under their licence to establish and comply with an ORR approved complaints handling procedure. ORR monitors compliance with these complaints handling procedures through its compliance monitoring framework. The data generated by the complaints handling survey is part of this monitoring framework. It allows ORR to assess and benchmark complaints handling performance across the industry whilst simultaneously generating valuable management information for train operators to identify strengths and weaknesses in their complaints handling arrangements.

Survey methodology

After a passenger makes a complaint to a train operator, they are invited to participate in an online survey commissioned by ORR and run by Critical Research, an independent research company. Respondents are asked about their experience of how their complaint was handled. The survey asks questions relating to the complaints process and resulting outcome. The complainant is asked to rank their satisfaction with various aspects of the complaints handling process and subsequent outcome on a five-point scale or, in some instances, to provide a qualitative response via an open text box.

ORR and the individual TOCs receive quarterly output showing performance for individual rail periods as well as a comparison over time. The additional one-off analysis on which this report is based uses the data generated from the main survey in 2019/20 (1 April 2019 to 31 March 2020).

The underlying dataset collected through the survey is published quarterly on the ORR data portal and is also included as part of their Annual Consumer Report.

3. Exploring the data

3.1 Questions from the complaints handling survey

The questionnaire can be found in <u>Appendix 2</u>.

3.2 Data cleansing

A process of data cleansing was undertaken to prepare the data for statistical analysis.

3.2.1 Removal of "Not applicable" responses through allocation to the mean

The table below shows the proportion of respondents who felt unable to answer each question and selected the *Not applicable* code:

Question	% Not applicable
Q4a. The ease with which you were able to make the complaint	1%
Q4b. The time taken to deal with your complaint	1%
Q4c. Your complaint was taken seriously	1%
Q4d. Your complaint was fully addressed by TOC	1%
Q4e. TOC seemed keen to reach an agreeable outcome	3%
Q4f. TOC was polite	3%
Q4g. TOC was helpful/ knowledgeable	4%
Q4h. Being kept informed appropriately about the progress of your complaint	4%
Q4i. The clarity of information provided by TOC about your complaint	2%
Q4j. TOC provided you with any information that they promised to send	31%

Figure 1. Proportion of not applicable response which were allocated to the mean

For statements Q4a to Q4i, the small proportions of "Not applicable" responses were at a level that meant they could be allocated to the mean value of the substantive responses, and thus contribute to the subsequent statistical analyses.

3.2.2 High levels of non-response at Q4j

The higher level of "Not applicable" responses for Q4j necessitated a different approach. Applying a mean score to the 31% missing values ("Not applicable") would have been problematic because the question is simply not relevant to a large proportion of respondents where additional information was not required to resolve the complaint i.e. these respondents did not consider the TOC had promised to send any additional information, thus rendering the question irrelevant.

Instead, a further analysis was conducted just on those cases for which Q4j was answered, i.e. where respondents to the survey felt able to provide a substantive answer, other than "Not applicable". This was considered appropriate because a basic analysis of the two groups (those answering Q4j, and those declining to answer) shows there was no real difference in overall satisfaction levels. That is to say, restricting the analysis to solely the group who answered Q4j was not removing a specific *type* of complainant or TOC customer.

Metric	Q4j	
	Answered	Not answered
Satisfied with complaint handling process	31%	28%
Dissatisfied with complaint handling process	52%	51%
Overall mean score across all 5 answer options	40.1	40.1

Figure 2. Analysis of those answering Q4j vs those stating "not applicable"

3.2.3   Flatliners

It is typically good practice to explore the extent to which flatlining is an issue. The definition of a 'flatline respondent' is one who seeks to reduce the time taken to complete the survey by answering each question item with an identical response with little or no consideration, for example by stating 'strongly agree' to each answer. No significant evidence of such flatlining was detected and so no respondents were excluded on this basis.

3.3   Initial review of passenger ratings for complaints handling

The data for 2019-20 shows the following levels of satisfaction with the different elements of the complaints handling process:
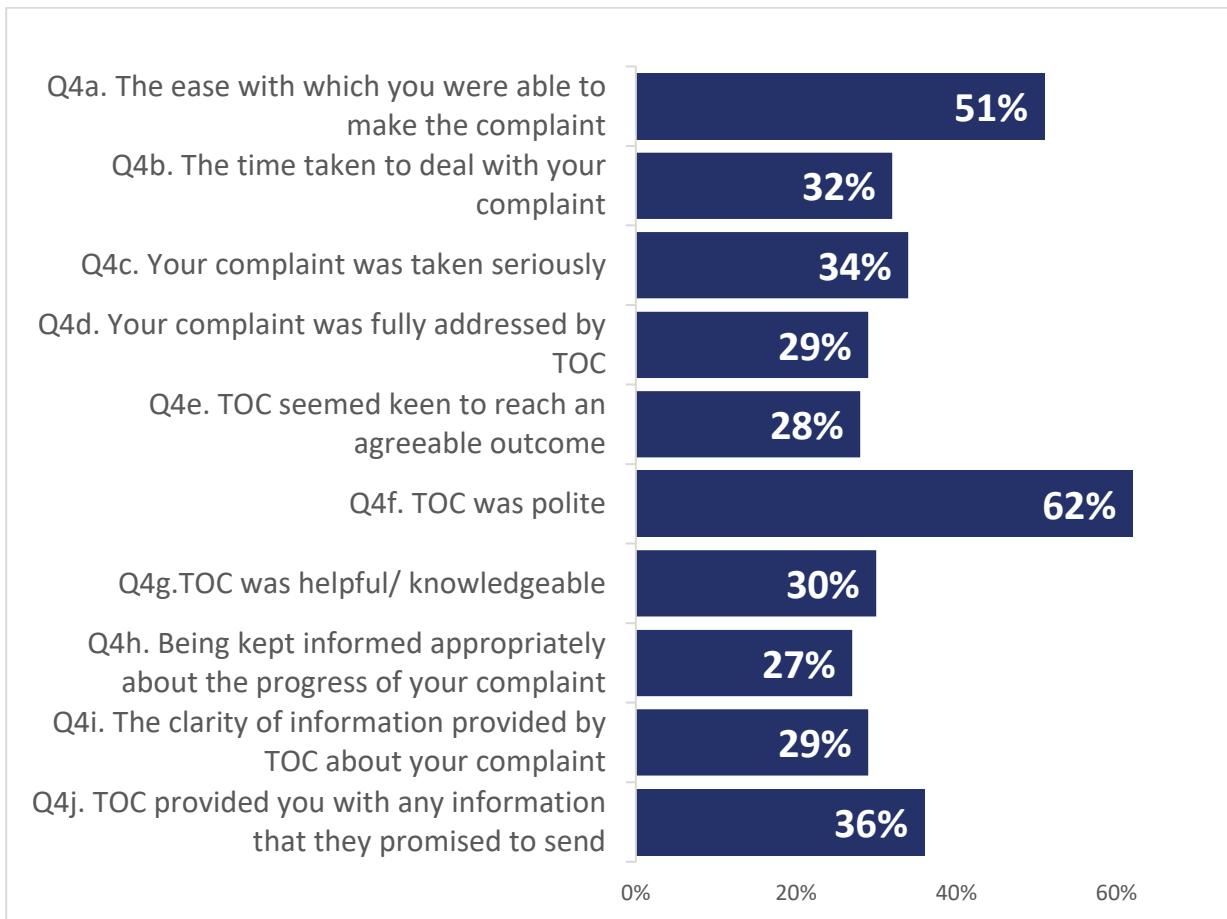
Figure 3. Annual satisfaction scores for the elements of complaint handling (% scoring "Very satisfied" or "Satisfied")

The following questions had the highest satisfaction ratings:

- The levels of politeness shown by the TOC in their interactions (Q4f)
- Ease with which they could make the complaint (Q4a)

3.4 TOCs and Sectors

Twenty-one TOCs participated in the ORR survey during the 2019-20 cycle:

- Avanti West Coast
- c2c
- Caledonian Sleeper
- Chiltern Railways
- CrossCountry
- East Midlands Railway

- Govia Thameslink Railway
- Grand Central
- Great Western Railway
- Greater Anglia
- Heathrow Express
- Hull Trains
- London North Eastern Railway
- Merseyrail
- Northern Trains
- ScotRail
- South Western Railway
- Southeastern
- TransPennine Express
- TfW Rail
- West Midlands Trains

The study explored differences in complainant satisfaction between TOCs and TOC-type. The latter relates to the recognised industry sectors within which each TOC operates and were therefore allocated, based on ORR guidance, to one of the following groups:

- London and South East
- Long distance
- Regional

4. Overview of analysis techniques

The entire complaints handling questionnaire can be considered as being in three parts: satisfaction with complaint outcome (Q1), overall satisfaction with the complaint handling process (Q3), and satisfaction with the individual aspects of complaint handling (Q4).

To explore the relationships between these parts, three techniques were employed:

Factor analysis

A factor analysis data reduction technique was used to establish the extent to which the aspects of service were measuring the same thing (despite using different words). When 2 or more questions highly correlate, it makes sense to treat these as one. This reduction can be beneficial as fewer elements in a statistical model grants greater predictive power, plus it can help understanding by producing a simpler construct of the elements of complaint handling. Factor analysis was able to reduce the components put forward to later analysis stages, where those components were in effect measuring the same underlying aspect of complaint handling.

Regression analysis

Once the relevant factors (the independent variables) were established, the extent to which they influenced the overall measure of satisfaction (the dependent variable) was determined.

Both factor and regression analysis control for high correlations between the independent variables, in order to measure the precise effect of each independent variable on the dependent. The outcome can be considered as the probability that the dependent variable will change when the independent variables change. From this, the analysis is able to reveal to what extent each individual aspect of customer service affects overall satisfaction.

Correlation analysis

In order to provide a final check of the relationships in the data, a simple correlation exercise was conducted to look at the individual relationship between the variable and the overall measure of satisfaction.

The outcome of each stage of the data analysis is described in the sections that follow.

5.   Factor analysis

Factor analysis is a tool which looks to determine correlations between variables (survey questions) in order to group together variables which are similar. This enables composite measures to be created where variables overlap substantially. When a factor is created, the items within that factor can be considered to be measuring a single underlying 'construct' – meaning respondents tend to answer each item within the construct in a similar way, which in turn could indicate a single underlying 'factor'.

An optimal factor solution is one where:

- Each variable has a high factor loading. Loading can be considered as the extent to which the variables overlap and are measuring the same underlying construct. For the purposes of this analysis a threshold of 0.6 has been taken as a substantial loading.
- Factors group variables together in a way that is logical and can be interpreted
- The number of variables is reduced

To establish which variables (questions) to put forward to the analysis, an initial exploration of the data was conducted. This suggested that all questions (statements) correlate well with overall satisfaction with complaints handling, at the total level, across all TOCs. This is unsurprising, as the initial work in questionnaire design ensured the questions were focused on the primary elements of the complaints handling process that were considered most important to complainants.

5.1   5 factor solution

Initially a simplified 2 factor solution helped with understanding of the primary components of satisfaction by showing the complaints handling process could be bifurcated into *quality of service* elements, and then *administrative* elements (see Appendix 1 for further details of rejected solutions).

The preferred 5 factor solution below is the one which best fits the data and provides a more meaningful grouping of statements:

Components	Factors				
	1	2	3	4	5
Q4d. Your complaint was fully addressed by TOC	0.88	0.2	0.19	0.11	0.1
Q4e. TOC seemed keen to reach an agreeable outcome	0.86	0.21	0.17	0.19	0.11
Q4c. Your complaint was taken seriously	0.83	0.27	0.14	0.22	0.14
Q4g. TOC was helpful/ knowledgeable	0.69	0.24	0.22	0.42	0.17
Q4i. The clarity of information provided by TOC about your complaint	0.63	0.35	0.36	0.27	0.17
Q4b. The time taken to deal with your complaint	0.28	0.85	0.08	0.14	0.26
Q4h. Being kept informed appropriately about the progress of your complaint	0.33	0.75	0.36	0.18	0.1
Q4j. TOC provided you with any information that they promised to send	0.31	0.23	0.88	0.17	0.12
Q4f. TOC was polite	0.35	0.19	0.17	0.87	0.15
Q4a. The ease with which you were able to make the complaint	0.19	0.23	0.11	0.14	0.94

Figure 4. Final 5 factor solution with factor loadings

In this solution, there is a clear grouping of those statements which relate to the *quality of service* provided by the TOC when accepting and processing complaints. The administrative aspects are however better revealed by looking at some of the constituent parts: *timeliness* is differentiated from *courtesy*, *ease* and *being kept informed*.

These 5 factors can be summarised in the following groups:

Factor 1: **TOC Quality of service**	Factor 2: **Timeliness**	Factor 3: **Sent info**	Factor 4: **Courtesy**	Factor 5: **Ease**
Complaint addressed (Q4d)	*Time taken to deal with complaint (Q4b)*	*Provide promised information (Q4j)*	*Polite (Q4f)*	*Ease of making complaint (Q4a)*
Keen to reach agreeable outcome (Q4e)	*Kept informed of progress (Q4h)*	-	-	-
Complaint was taken seriously (Q4c)	-	-	-	-
Helpful and knowledgeable (Q4g)	-	-	-	-
Clarity of info (Q4j)	-	-	-	-

5.2   Implications

The degree to which the individual aspects of complaints handling load together in this way is useful in two principal ways. Firstly, it supports the interpretation of the outputs from the subsequent regression analysis which explores the level of contribution these factors make to overall satisfaction. Secondly, it provides some insight into the underlying components that passengers ascribe to complaints handling.

The larger group of elements we have called *TOC quality of service* covers a large part of the complaints process. These are key elements, and because of the linkages between them, it seems that if one of the attitudinal elements is handled well then others tend to be too. For example a passenger who felt their complaint was fully addressed is also likely to say the TOC seemed keen

to reach an agreeable outcome, which would make sense. Similarly, if a passenger considered the TOC to be helpful and knowledgeable, they also feel their complaint was taken seriously and any information provided was clear.

It means that if a TOC is able to convey that the complaint is being taken very seriously, this would appear to be part of the same construct as customers feeling their complaint was fully addressed, with an agreeable outcome being sought. At this stage it is not clear whether a higher rating for the complaint being taken seriously would <u>cause</u> a higher rating for the complaint being fully addressed, but the factor analysis suggests the elements are related in some way.

The analysis also revealed that the *courtesy* ("The TOC was polite") factor does not correspond with the group of attributes we have called *TOC quality of service*. This implies courtesy is a separate element, which is not associated with things like helpfulness and the complaint being taken seriously. It may therefore still be viewed as an important part of the service delivery by rail passengers but considered to be a different aspect of complaints handling, perhaps as an expected *hygiene factor* (see 6.2.1 Hygiene factors).

Aspects of *timeliness* are also unveiled as a distinct factor. It means that whilst a TOC can be seen to take the complaint seriously, overall satisfaction can be undermined by not informing complainants of the complaint's progression, or simply taking too long to respond.

The TOC *fulfilling a promise to provide any information* is a further separate factor. If a TOC fails to deliver promised information, then the complainant's rating of this factor will not be improved by good performance in other measures (factors).

Additionally, the *ease* with which a passenger is able to make a complaint can be considered a separate aspect. Passengers are able to uncouple it from other aspects of the complaints process. The final factor solution explains a great deal of the variance in the data. This supports the current questionnaire as covering many of the important elements (factors) in the complaints process.

6. Regression

Having established the underlying factors, regression analysis can reveal the extent to which these factors influence overall satisfaction with the complaint handling process. This helps reveal from a complainant perspective which factors are important to get right first – without these, complaint handling satisfaction diminishes rapidly. It can also indicate the extent to which the other factors influence satisfaction. For example, it may indicate minor considerations versus fundamental *hygiene* service levels (see 6.2.1 Hygiene factors) that can mean all factors need to be in place in order to give TOC customers the feeling their complaint has been handled effectively.

6.1 Approach

Together the factor analysis and subsequent regression form a Principal Components Regression (PCR), which is an informative test when the independent variables (our factors) are uncorrelated. Appendix 1 shows further information about the tests applied.

6.2   Overall findings

Using our 5 factors, the regression analysis shows the following outcomes.

Predictor of satisfaction	Beta
Factor 1: TOC Quality of service	0.42
Factor 2: TOC Timeliness	0.38
Factor 3: Q4a. The ease with which you were able to make the complaint	0.15
Factor 4: Q4f. TOC was polite	0.02
Factor 5: Q4j. TOC provided you with any information that they promised to send	0.00

Figure 5. PCR regression analysis using the 5 factor solution

Note that the numbers shown in this table are 'beta values' (or 'standardised coefficients') and are measures of the magnitude of the effect. They illustrate the size and direction (they can be negative) that the predictors have on overall satisfaction with complaint handling. The beta values produced by the regression model have predictive power, for example increasing the mean rating of TOC quality of service by one is predicted to increase overall satisfaction by .42.

Note also that the score for Q4j is derived from a separate PCA analysis which only looked at those cases for which Q4j was answered.

The regression analysis shows two factors with the larger beta values in this table, and these can be considered as the ones which influence overall satisfaction the most. They are the *TOC Quality of* complaint handling approach (e.g. *TOC seemed keen to reach an outcome*, *complaint was taken seriously*, etc.), and the *Timeliness* with which the complaint was handled.

Notably, the *ease* with which complainants were able to make the complaint is also a predictor of overall satisfaction with complaint handling, but to a lesser extent.

6.2.1   Hygiene factors

The outputs also indicate that the remaining two factors (*Polite*, s*ent information that was promised*) have relatively little influence on overall satisfaction, compared to the other 3 factors. However, that is not to say these factors are unimportant, and indeed when considered in

isolation there is a correlation with satisfaction but simply to a lesser degree (see 7. Correlation analysis).

Instead these factors can be considered as *hygiene factors*. That is to say complainants expect TOCs to perform well on these and they generally do. Customers expect a certain level of courtesy when dealing with TOCs, and if there is any information the TOC promises to send, this being delivered. If there were failings with these factors, they would have contributed more in the regression model. This is explored further in section 7.

6.2.2   The impact of Q1 on the model

In the survey there are two measures of satisfaction as set out below:

- Q1 - Ignoring for the moment TOC's handling of the issue, how satisfied or dissatisfied were you with the outcome of your particular complaint?
- Q3 - Putting to one side the outcome of your complaint, we would like you to think about the process you went through. So overall, how satisfied or dissatisfied were you with the way your complaint was handled?

In the regression analyses shown in the previous section, the focus has been on Q3 (satisfaction with complaint handling process). There are two primary reasons for this:

- **Modelling similarities.** The factor solutions are almost identical with or without Q1. This is because Q1 and Q3 highly correlate: passengers who rate complaint handling highly also rate complaint outcome highly and vice versa (see section 7. Correlation analysis and Table 2 in Appendix 1).
- **Complaint outcome.** The dependent variable in the regression model is satisfaction with complaint handling, yet Q1 specifically asks the respondent to consider the outcome and <u>not</u> the complaint handling process.

The similarity in the factor models indicates passengers are typically *not* able to dissociate outcome from complaints handling. For establishing the importance of each factor in complaints handling, either Q1 (outcome) or Q3 (handling) could have been used as the dependent variable in the analysis. Q3 was chosen, because the question wording asks the passenger to put complaints handling to one side, and theoretically the ratings provided should be more focused on complaints handling (although it is clear that only occurs to a small extent).

6.3   Differences by TOC

The regression analysis was run for each individual TOC with at least 400 completed surveys across all rail periods 1-13 in 2019 to 2020.
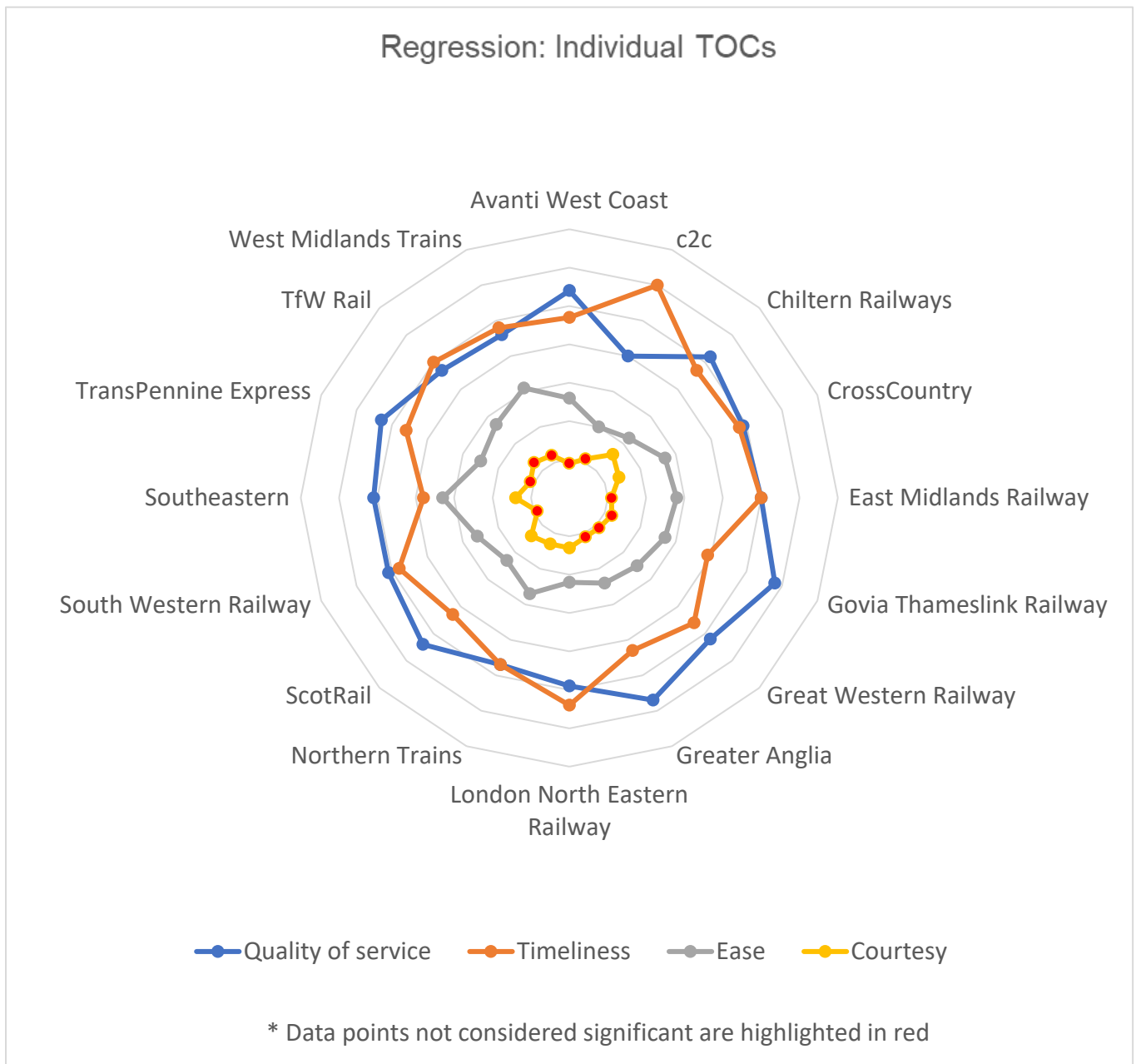
Figure 6. Beta values for the regression components, by TOC

Whilst the factors are of similar importance to the different TOCs, the chart above reveals a number of interesting variations. Whilst *quality of service* is the most important factor in driving overall satisfaction for most *Timeliness* is considered more important by passengers of the following TOCs:

- c2c

- London North Eastern Railway
- TfW Rail
- West Midlands Trains

It is noteworthy therefore that these four TOCs were also the poorest performers in meeting the regulatory requirement to respond to 95% of complaints within 20 working days in 2019/20.

In addition, the TOC specific analysis also shows that for the following TOCs, *Timeliness* is a less important driver than for other TOCs:

- Govia Thameslink Railway
- Southeastern

Govia Thameslink Railway and Southeastern are two of the industry's best performers on complaints handling response times. During the 2019 to 2020 rail cycle, they both consistently met the regulatory requirement to respond to 95% of complaints within 20 working days. See complaints statistics on the ORR website. Timeliness is therefore most likely not seen with the same importance by complainants from these TOCs because the TOC is performing well on this aspect of service. It only becomes important once performance drops.

Southeastern has the greatest variation in terms of the importance of the different factors. For this TOC, the regression analysis shows that the *Ease* of making the complaint is much closer in importance to *Timeliness* than for anyone else.

6.4   Differences by Sector

The influence of a TOC's operating sector was also investigated in a similar way to uncover potential differences in complaint handling satisfaction by the types of passenger journey made.

Figure 7. Beta values for the regression components, by Sector

The regression exercise was repeated with each sector and revealed little difference between the sectors in terms of the relative importance of the factors in driving overall satisfaction with complaint handling.

6.5   Implications

The regression provides a greater understanding of the relative importance of the identified factors to overall satisfaction with complaints handling. It can also be used to ascribe a relative weight to each factor. That does not necessarily equate to causality, however, as there could be a separate factor at play that has not been identified. Nonetheless, the evidence for it is sufficiently strong to support the following findings in order of importance to complainants:

i. TOCs which are able to demonstrate positive passenger engagement about complaints handling by providing a high quality process will have customers with higher overall satisfaction scores

ii. TOCs that handle complaints in a timely manner, and manage passenger expectations about timescales for resolution, will also see higher overall satisfaction scores

iii. Of some importance, but to a lesser extent, if a customer feels it was comparatively easy to make their complaint, they are more likely to provide higher scores on satisfaction with the complaint handling

iv. The politeness of the TOC and sending promised information do not appear to be as influential. That is not to say these aspects are unimportant, but rather it is because they are being delivered to a good standard already and are therefore considered of relatively lesser importance by complainants.

Whilst these principles apply to all TOCs, there is evidence for the following exceptions:

- For some TOCs, timeliness is a greater driver of satisfaction than quality of service. This change in relative importance indicates this aspect is falling short of passengers' expectations, and indeed "The time taken to deal with your complaint" (Q4b) is rated poorly for these TOCs.

- Southeastern is another example of where the service delivery levels differ, and the relative importance of the factors changes as a result. Southeastern customers are typically more satisfied with the complaint handling measures from the survey, and also from other published metrics on complaint handling. For this TOC, *timeliness* is considerably less important in terms of its impact on complaints handling satisfaction because this TOC delivers this aspect of service well. As a result, customers place slightly more importance on the ease of making the complaint. Nonetheless for this and the other TOCs, the analysis shows that *TOC quality of service* remains the primary influencer of satisfaction, even when a TOC handles the complaint in a speedy fashion.

This variation by TOC reveals that when the complaints handling process is working well on the key aspects of *TOC quality of service, Timeliness* and *Ease,* the remaining factors start to take on a greater significance.

7. Correlation analysis

Regression modelling has the advantage of looking at the data more holistically, meaning all variables and their inter-dependencies can be considered and included in the final solution. However, the regression analysis indicates that the importance of two statements is lower than anticipated:

- Q4f. TOC was polite
- Q4j. TOC provided you with any information that they promised to send

Furthermore, the analysis to this point shows a strong link between complaint *handling* satisfaction and complaint *outcome* satisfaction.

To help understand the contribution that these aspects of complaints handling have towards overall complaints handling satisfaction, they can be analysed individually using a Pearson's correlation analysis. Note however, that this technique is less sophisticated than regression because it does not isolate the importance of the factor from the other independent factors.

The chart below shows the correlation of the overall complaint handling satisfaction (Q3) with the individual aspects of complaints handling, and with the complaint outcome satisfaction.
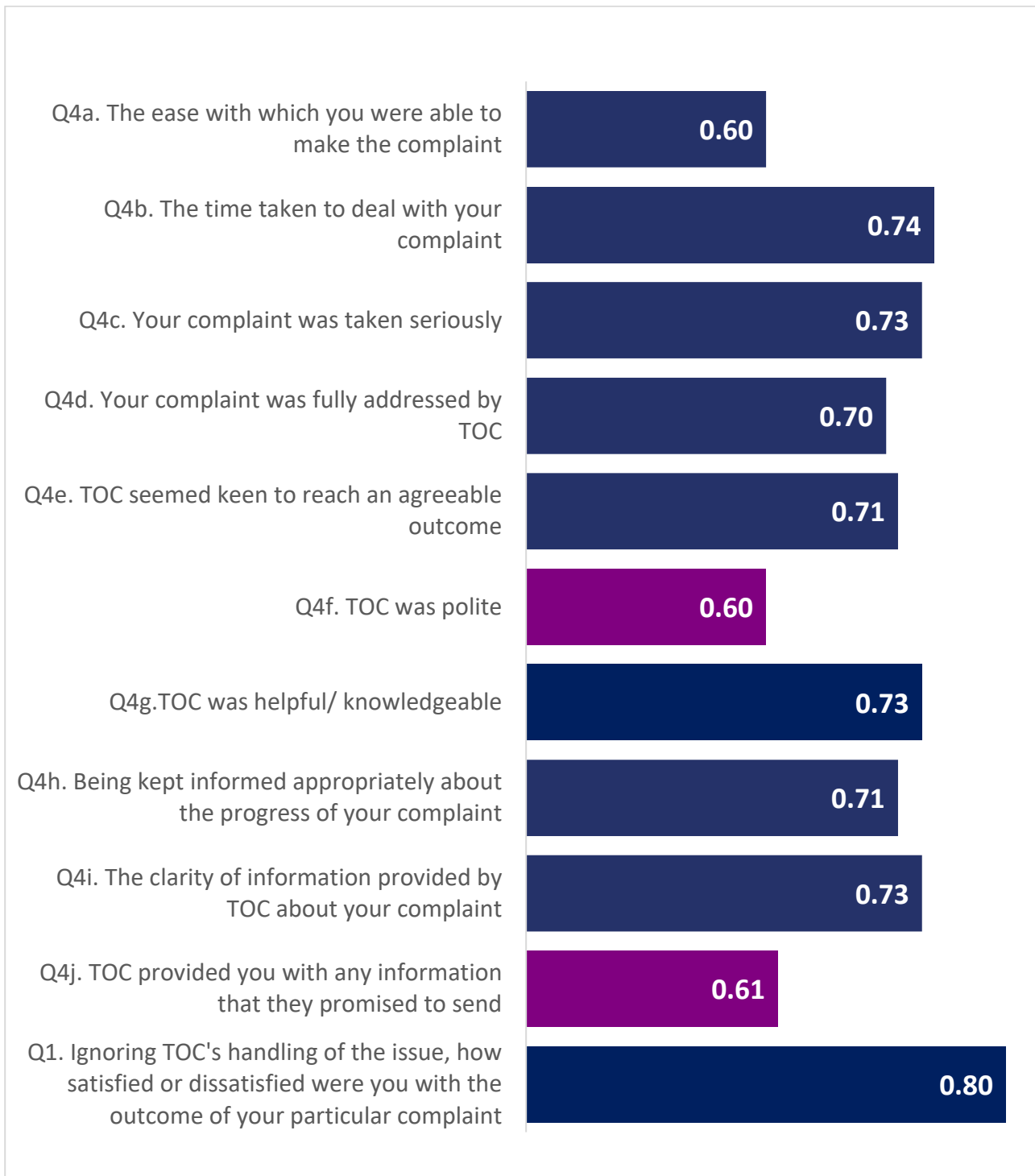
Figure 8. Pearson's correlation coefficients for statements against overall complaint handling satisfaction

The simple correlation analysis confirms that complaint handling satisfaction and complaint outcome satisfaction (Q1) are highly correlated.

Alongside the regression analysis, the simple correlation also shows that whilst they are drivers of overall satisfaction with complaints handling to some degree, *polite* (Q4f) and *provided information* (Q4j) contribute less to satisfaction relative to the other factors.

Given the two factors which are less correlated with overall satisfaction and do not feature in the regression model, are the same two factors which score the highest in overall satisfaction, this provides strong evidence these are *hygiene* factors. TOCs must deliver these to a level commensurate with complainant expectations, which it appears they are doing so (see Figure 3). Or to put it another way, such factors only have a sizeable influence on overall satisfaction when they are being under-delivered.

The correlation analysis also reveals that Q4a (*ease)* also influences overall satisfaction at a lower level. However the more sophisticated regression analysis isolated the importance of this factor, thus elevating its importance overall. It can be concluded therefore that *ease* is more than a hygiene factor, indicating TOCs can improve this aspect and expect to see corresponding improvements in complaints handling ratings.

8. Summary and recommendations

8.1 Summary of findings

There are 5 categories of the complaints handling process that are measured in the survey over which TOCs can exert some influence.

- *TOC quality of service* (comprising "complaint fully addressed", "TOC keen to reach agreeable outcome", "complaint taken seriously", "TOC helpful/ knowledgeable", "Information was clear")
- *Timeliness* (comprising "Time taken to deal with complaint", "Kept informed of progress")
- *Ease of process* (comprising "the ease with which you were able to make a complaint")
- *Courtesy* (comprising "TOC was polite")
- *Information* (comprising "the TOC provided you with information they promised to send")

The analysis provides strong evidence for the following findings:

i.   As well as complaints handling process, *complaint outcome* heavily influences the overall satisfaction with handling the process. Despite being asked to put to one side the complaint outcome when rating complaint handling, the findings show the two aspects of satisfaction are strongly linked.

ii. The underlying *TOC quality of service* is the most important factor which influences complaints handling satisfaction. This is a composite measure of having a professional attitude (taking the complaint seriously, seemed keen to reach an agreeable outcome) and service standards (helpful and knowledgeable, information provided was clear, the complaint was fully addressed).

iii. *Timeliness*-related aspects (both speed of response and being kept informed) is the second most important factor in influencing satisfaction.

iv. The relative importance of *quality* and *timeliness* aspects vary a little by TOC. It is unclear whether this is because these aspects are of different fundamental importance to passengers, or simply a reflection of how well these aspects are currently being delivered by individual TOCs. Comparing TOCs, there is some evidence to suggest that timeliness gains importance for passengers, when this aspect is under-delivered.

v.   The *ease* with which the complaint could be made also influences satisfaction to a small extent.

vi. *Courtesy* and being sent promised *information* are hygiene factors and only influence satisfaction if they are under-delivered. These factors and their relative importance are

very similar across all TOCs and the sectors within which they operate, but some differences exist.

vii. All complaint factors measured in the survey have sizeable predictive power for overall satisfaction. Because a large amount of the variance in the data was explained by the final factor solution, the findings also indicate the questionnaire seems to be covering all important elements and thereby currently offers a reliable measuring system for tracking complaint satisfaction over time.

8.2 Recommendations

Based on the findings from the analysis, the following recommendations are proposed:

1) TOCs can look at complaint outcomes, and the flexibility they have within the complaints handling framework, because despite being asked otherwise, complainants still view the *outcome* as an integral part of the complaint *process* [i].

2) TOCs can consider their customer-facing attitude towards complaints. Whilst this factor comprises several elements, these combine into a single aspect for complainants which is best described as quality of service. Customers expect to have their complaint taken seriously, and that the TOC will work towards a solution. Interactions with customers need to be helpful and clear at all times, demonstrating the complaint is important [ii].

3) A further element of complaints handling TOCs can address is to improve response times and to better inform and manage complainant's expectations about the timescales for complaint resolution. The extent to which this will improve overall complaints handling satisfaction ratings will vary by operator, as it is also influenced by how they perform on other metrics. Regardless, TOCs can initially focus on keeping people informed about the typical time taken to resolve a complaint of a similar nature, in the knowledge that this is likely to improve complaints handling satisfaction overall to some extent [iii, iv].

4) To improve levels of satisfaction or maintain them when they are already high, an important aspect the TOCs can deliver is high levels of politeness, ease of making the complaint, and providing any information promised [v, vi].

5) There are signs that complainants have small concerns about the ease with which the complaint can be made, and TOCs can look to see if this can be improved because it influences complaints handling scores [v].

Appendix 1 – further notes on statistical method

Here we document further the processes used to interrogate the data and detail the rationale for the approach and conclusions drawn in the main document.

Statistical exploration and analyses

Data were collated from the ORR complaints handling survey covering the 2019 to 2020 Rail Cycle. A total of 54,573 survey responses were available for analysis. Askia software was used to explore correlations using cross-tabulations and SPSS statistical analysis software was used to run more involved factor and regression analyses.

Initial considerations and data cleaning

Due to the data collection process, all questions had a response from all respondents, meaning the data cleansing required was minimal. However, some data cleansing was conducted in order to provide the most reliable correlations where questions include a "Not applicable" option.

- "Not applicable" values for each independent variable were less than 10% in all but one case, each being substituted with the mean for that particular item.
- Q4j (*TOC provided you with any information they promised to send*) had 31% missing values ("Not applicable") because this question is not always relevant – on occasions it was not necessary to send information in order to resolve the complaint. It would be misleading to apply the mean to these missing values, as clearly this component could not have been a factor in complaint handling for these cases. These cases are treated as "missing values".

Factor analysis: Initial two factor solution

Factor analysis is a data reduction technique which uses an iterative process to group statements which are similarly aligned. There can be multiple solutions to this process. Typically, a good factor solution should:

a) account for 60%+ cumulative explanation of variance
b) ideally use as few factors as possible, where these factors are meaningful
c) maintain meaningful distinctions between the factors.

Solutions with 2 to 7 factors were tested. The 5 factor solution met the above criteria most appropriately. However, a 2 factor solution was also considered as a useful stepping-stone, as follows.

	Factors	
	1	2
Q4a. The ease with which you were able to make the complaint	0.18	0.83
Q4b. The time taken to deal with your complaint	0.38	0.77
Q4c. Your complaint was taken seriously	0.85	0.35
Q4d. Your complaint was fully addressed by TOC	0.88	0.28
Q4e. TOC seemed keen to reach an agreeable outcome	0.88	0.30
Q4f. TOC was polite	0.56	0.53
Q4g. TOC was helpful/ knowledgeable	0.79	0.43
Q4h. Being kept informed appropriately about the progress of your complaint	0.50	0.69
Q4i. The clarity of information provided by TOC about your complaint	0.74	0.50
Q4j. TOC provided you with any information that they promised to send	0.55	0.57

Table 1. 2 Factor solution

An initial simple factor analysis shows that the statements can be clustered into 2 main groups:

- Factor 1: TOC *quality of service*: how keen the TOC appears to want to reach a resolution
- Factor 2: TOC *administration:* how competently the TOC handled the administrative aspects

Strictly, it accounted for the correct amount of variance using the fewest factors and had high factor loadings (>0.6). However, it did not produce the most meaningful distinctions between factors.

This factor analysis shows that the perceived *quality of service* (Factor 1) of the TOC is viewed by the complainant as a different element of service compared to the more *administrative* aspects (Factor 2).

Factor 1 (*quality of service*) comprised: how seriously the complaint was taken (Q4c), whether it was fully addressed (Q4d) and keenness to reach an agreeable outcome (Q4e). Factor 2 (administration) comprised: the time taken to deal with the complaint (Q4b) and the ease with which the complaint could be made (Q4a).

It should be noted that there are other components which do not seem to load sufficiently well into a single factor, such as whether the TOC was polite (Q4f), and whether additional info (if promised) was sent (Q4j). This is evident from the similar loading scores for these items on factor 1 *and* factor 2.

This round of the factor analysis indicates there are 2 main groups of statements which fit well together, indicated by the blue aspects in the diagram below. There is also the possibility that 2 or

more other factors might exist indicated by the grey aspects below, but the picture is not immediately clear.

Factor analysis: final 5 factor solution

All other solutions with between 3 and 7 factor solutions were considered. The 5 factor solution was a clear stand-out for the reasons detailed in section 5.

Factor analysis: factor solution which includes Q1 (satisfaction with complaint outcome)

To establish the extent to which Q1 influences the model, it was included as part of the 5 factor solution:

Components	Factors				
	1	2	3	4	5
Q4a. The ease with which you were able to make the complaint	0.23	0.26	0.20	0.15	0.90
Q4b. The time taken to deal with your complaint	0.32	0.83	0.17	0.11	0.29
Q4c. Your complaint was taken seriously	0.79	0.31	0.30	0.14	0.17
Q4d. Your complaint was fully addressed by TOC	0.86	0.25	0.18	0.20	0.14
Q4e. TOC seemed keen to reach an agreeable outcome	0.84	0.26	0.24	0.18	0.15
Q4f. TOC was polite	0.33	0.21	0.84	0.21	0.21
Q4g. TOC was helpful/ knowledgeable	0.64	0.31	0.49	0.21	0.18
Q4h. Being kept informed appropriately about the progress of your complaint	0.36	0.73	0.21	0.37	0.14
Q4i. The clarity of information provided by TOC about your complaint	0.60	0.41	0.35	0.34	0.17
Q4j. TOC provided you with any information that they promised to send	0.36	0.27	0.24	0.82	0.18
Q1. Ignoring for the moment TOC's handling of the issue, how satisfied or dissatisfied were you with the outcome of your particular complaint?	0.85	0.20	0.12	0.22	0.16

Table 2. 5 Factor solution

Q1 loads highly onto factor 1 (quality of service) indicating that complaint outcome is considered to be a further part of the service received from the complaints process. Furthermore the factor loadings barely change, meaning the 5 factor solution (either with or without Q1) is a robust solution.

Regression

As a framework for model comparison a hierarchical linear regression was used. This is the process of building several regression models to see which model produces the most significant increase in the proportion of explained variance in the dependent variable (overall satisfaction) by the independent variables (factors).

Three inputs into the models were considered:

1. Flatliners were excluded
2. Flatliners were included, Q1 (*Ignoring for the moment TOC's handling of the issue, how satisfied or dissatisfied were you with the outcome of your particular complaint?*) was included, cases included only when Q4j was answered
3. Flatliners were included, Q1 was excluded, all cases were included (how Q4j was answered was ignored)

Note that flatliners are those respondents answering all questions with the same response. They are typically excluded, because more than likely they were not giving each question sufficient attention and/or the questions and answer scale were not suitably discerning for them/ their experience of the process.

Models	Model and Beta Values		
	1	2	3
Factor 1 Quality of service	0.41	0.43	0.42
Factor 2 Timeliness	0.37	0.38	0.38
Q4a. The ease with which you were able to make your complaint	0.16	0.15	0.15
Q4f. [TOC] was polite	0.03	0.02	0.02
Q4j. [TOC] provided you with any information that they promised to send	0.00	-0.01	0.00

Table 3. Regression models

The figures reported for the model are the *Beta* values: one unit increase in the predictor variable corresponds to an increase in the dependent variable (satisfaction score).

- Beta values, also called standardised coefficients, are a measure of effect size for regression. They illustrate the size and direction (positive values have a positive direction; negative values represent a negative direction) of the independent variable effect on the dependent variable. For example, if mean "Quality of service" is 3 and mean satisfaction is 3, the model predicts that a one unit increase in mean "quality of service" to 4, would equal a mean satisfaction increase of .42 (this being the beta value for "Quality of service" in the adopted model) to 3.42.

Model 3 was adopted for the following reasons:

- Excluding flatliners makes very little difference to the overall solution
- Furthermore, due to the short nature of the questionnaire and assessing the typical experiences of respondents, it is perfectly plausible to have rated all elements at the same point on the scale. Whilst eliminating noise and aberrations it is important to discard valid data in the process, and we were not sufficiently confident in this data cleansing process to retain it.
- Q1 considers the outcome of the complaint. Because complaint outcome loads alongside other statements within Factor 1, the inclusion of Q1 in the regression model makes very little difference to the final best-fit solution. Nonetheless, complaint outcome satisfaction does heavily influence complaint handling satisfaction, but for the purposes of the modelling, including Q1 adds nothing.
- Q4j was answered by 37,756 respondents (69%). Its effect on the solution was established by only including cases in the regression model where an answer was present for Q4j. In this regression solution any correlation with complaint handling satisfaction was surpassed by other factors.

The accuracy or 'performance', of the regressions is established using r-squared values:

- The R squared value represents the proportion of variance explained by the model
- Model 3 explains 72.1% of the variance in satisfaction

    - R squared values of 50% or more when predicting human behaviour is considered a very good model fit

- 27.9% of the variance in satisfaction is not explained by the model

    - It is possible that with questionnaire development the r squared value could be improved, by measuring more factors which could be said to influence satisfaction

    - However, the model does not account for 'random factors' like the respondent's 'mood' when they answered the survey, so much of the unexplained variance is likely owed to such factors, and could never be measured with a questionnaire

Appendix 2 – complaints handling questionnaire

The survey includes the following questions measuring different aspects of satisfaction with TOCs' complaints handling arrangements:

- Q1 – Ignoring for the moment TOC's handling of the issue, how satisfied or dissatisfied were you with the outcome of your particular complaint?
- Q2 – Why do you say that you were dissatisfied with the outcome? [Open question]
- Q3 – Putting to one side the outcome of your complaint, we would like you to think about the process you went through. So overall, how satisfied or dissatisfied were you with the way your complaint was handled?
- Q4 – How satisfied or dissatisfied were you with each of the following aspects of the complaint handling process…
    a. The ease with which you were able to make the complaint
    b. The time taken to deal with your complaint
    c. Your complaint was taken seriously
    d. Your complaint was fully addressed by TOC
    e. TOC seemed keen to reach an agreeable outcome
    f. TOC was polite
    g. TOC was helpful/ knowledgeable
    h. Being kept informed appropriately about the progress of your complaint
    i. The clarity of information provided by TOC about your complaint
    j. TOC provided you with any information that they promised to send
- Q5 – Did the way [TOC] handled your complaint change the way you feel about them?
- Q6 – Is there anything else you would like to say about your experience with this particular complaint? [Open question]

The survey includes a number of open-ended questions which allow respondents to provide further information on their experience, but this exercise used only responses from closed questions.