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**MASTER THESIS**

<b>VEIKSNIŲ ĮTAKA VARTOTOJŲ PASITENKINIMUI VERSLO VERTIM AIS</b>	<b>IMPACT OF ANTECEDENTS ON CUSTOMER SATISFACTION IN BUSINESS TRANSLATIONS</b>
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## LIST OF ABBREVIATIONS

<b>Abbreviation</b>	<b>Expanded form of abbreviation</b>
ACSI	American Customer Satisfaction Index
ECSI	European Customer Satisfaction Index
CSAT	Customer Satisfaction
CSAT-BIZTRANS	Customer Satisfaction – Business Translations
PQ	Perceived Quality
PV	Perceived Value
QST	Quality of Source Text

# INTRODUCTION

## **Relevance of the Study**

The translation industry is burgeoning, with global revenue worth many billions of US dollars - with at least one reputed market research agency estimating the global language services market at 38.25 billion USD in 2020 (Maximize Market Research, 2022), and forecasting it to grow to 45.05 billion USD in 2027. Just to clarify, these numbers include translation, localisation, and interpretation - translation alone can be approximately taken as 30-35% of the entire pie. Whilst the translation industry has been the subject of myriad studies – including a SERVQUAL-based study for translations (Yao & Yang, 2021) – there is a paucity of research on customer satisfaction in the translation industry (in fact, this researcher could not find any studies that have been done till date), hence this is a study that is very relevant.

## **Level of Exploration of the Topic Already Undertaken**

As mentioned above, there has been till date, no research conducted specifically on customer satisfaction in the translation industry, although, as mentioned before, the subject of customer satisfaction has been extensively researched (e.g. Leninkumar, 2019, Choi and Kim, 2013). None of these studies however have been positioned in the industry of business translations. This is where this study seeks to break fresh ground.

## **Research Problem**

There have been hardly been any studies till date on customer satisfaction in the area of business translations, and as such, its antecedents are not clearly identified, and hence, their impact is yet to be studied.

## **Novelty of the Study**

Businesses must necessarily be oriented towards customer satisfaction, and more and more companies accordingly have customer satisfaction as a crucial performance indicator (Cengiz, 2010). Whilst customer satisfaction is an area that been the subject of myriad studies (e.g. Ogiemwonyi et al., 2020), there has hitherto been almost no research on customer satisfaction in business translations. This particular study could thus be said to be a pioneer in that regard.

## **Research Aim**

To find out the impact of key antecedents on customer satisfaction in business translations.

## **Research Objectives**

1. To determine the key antecedents of customer satisfaction in business translations
2. To find out the impact of various groups of antecedents on customer satisfaction in business translations
3. To find out the impact of each individual antecedent on customer satisfaction in business translations

## **Research Methods**

Following are the methods that have been used while working on this study:

- i. Literature Review: the theoretical form of reviewing extant literature has been used in this study.
- ii. Empirical Research: This is a multi-phase mixed method research.
  - a. Phase 1: Qualitative – one to one in-depth semi-structured interviews were conducted with select industry experts, and their inputs analysed using thematic analysis techniques and coding.
  - b. Phase 2: Quantitative – data was collected using questionnaires; the data thus collected was analysed using SPSS and presence of mediation was tested using the PROCESS macro.
  - c. Phase 3: Qualitative – focus group was conducted and the results analysed to yield more information on the results of the analysis of the data collected in Phase 2.

## **Structure of this Thesis Report**

Following will be the structure of this thesis – the sections into which this report is split up are listed below sequentially.

- a. A review of extant literature on customer satisfaction and translation studies



- b. Methodology that will be used to carry out empirical research on customer satisfaction in translation studies, and the limitations of the research
- c. The empirical data will be presented, analysed and results will be reported
- d. Conclusions and recommendations for future research
- e. A listing of the literature and references that have been cited in the thesis report
- f. Annexes



# **1. THEORETICAL RATIONALE FOR CONSIDERING SPECIFIC ANTECEDENTS OF CUSTOMER SATISFACTION FOR BUSINESS TRANSLATIONS**

## **1.1 Customer Satisfaction**

Customer satisfaction is pivotal for businesses, for their overall health, and to ensure that they can gain "competitive advantage" (Cengiz, 2010). Researchers down the years have studied customer satisfaction at length (Gaudenzi et al., 2020; Leninkumar, 2019; Abdullah et al., 2014; Choi and Kim, 2013). Despite that, customer satisfaction is still the holy grail of academic researchers, myriad studies on it being undertaken in the past (a few of which have been cited in the Introduction). However, it may equally be noted that customer satisfaction is not a stand-alone parameter, albeit a crucial one, and it further influences critical constructs like customer loyalty (Albari and Kartikasari, 2019). Businesses booming in today's highly globalised economy recognise the criticality of customer satisfaction and how vital it is to measure it - because only by doing so they can understand the pulse of their customers. Further, it is not just in regular commerce, but in the world of electronic commerce as well, that managing the satisfaction of customers is pivotal (Deyalage and Kulathunga, 2019). Customer complaint handling research however still some way to go (Faed et al., 2013).

Customer satisfaction is highly subjective. It is a construct, extremely personal and impacted a lot by the customer's expectations, and can be considered to be the extent to which an individual customer reckons that a provider of services or goods has been successful in satisfying customer requirements; it may also be noted that customer satisfaction is not intrinsic to a customer or for a service or goods, but rather it is a function of the relation between a customer and the provider of goods or services. Further, customer satisfaction may be deemed to be the end-result of a psychological process. This process itself consists of multiple steps and refers to all the activities, undertaken, all the steps Customer satisfaction thus indicates that there has to be a target that the consumer would like to have, the meeting of this aim can only be assessed by comparing with a norm, and that this assessment of the satisfaction depends on the intercession of two or more catalysts: a result and a norm for reference (Cengiz, 2010).

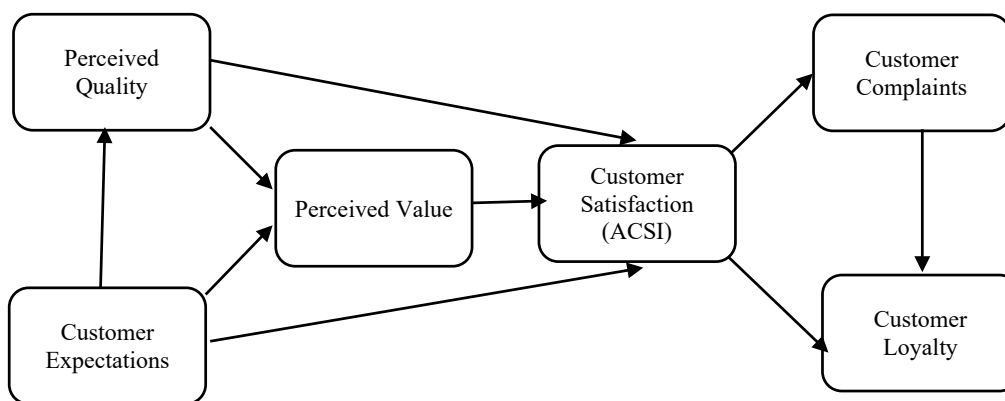
## Prominent Models of Customer Satisfaction

At the outset, couple of prominent models of customer satisfaction currently in use, will be looked at. The two most prominent ones & the ones that will be looked at in the following sections are:

American Customer Satisfaction Index (ACSI)

European Customer Satisfaction Index (ECSI)

Figure 1 American Customer Satisfaction Index (ACSI)



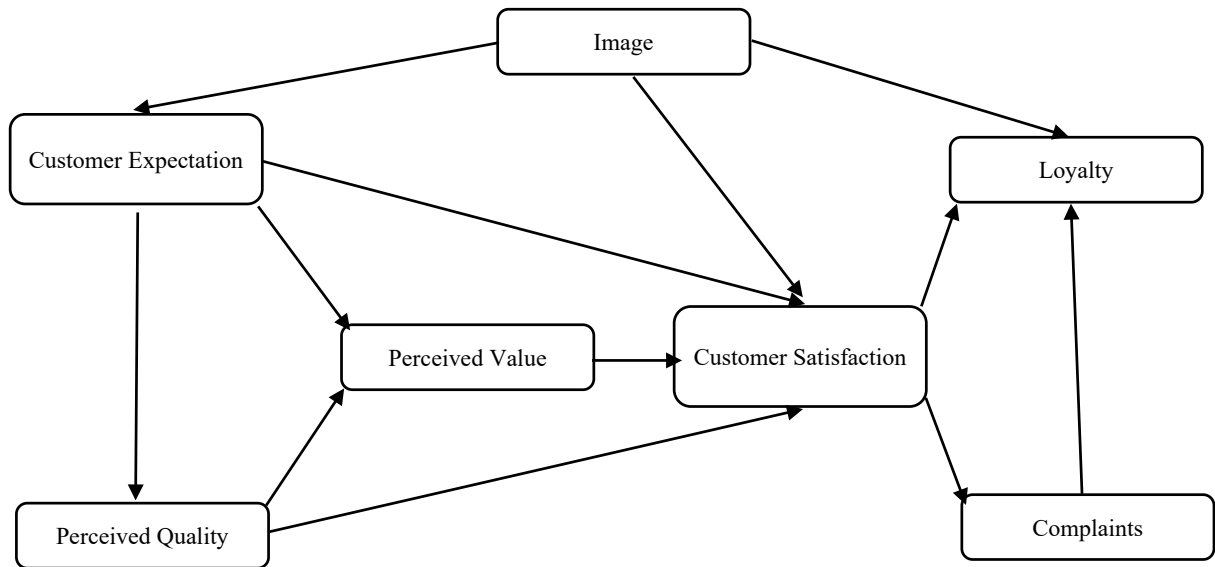
Source: Angelova and Zekiri (2011)

The ACSI model is among the most widely known and widely used customer satisfaction models anywhere in the world, and a large number of nations including India and Australia have adapted the ACSI for their needs. As on date, it uses its "science-based, proprietary methodology" to study customer satisfaction for 10 economic sectors and 47 important industries that cumulatively represent a major part of the U.S. economy. Using as inputs focused interviews with customers and applying a multi-equation econometric model developed at the University of Michigan's Ross School of Business, it provides indices for customer satisfaction, as also its antecedents and consequences (ACSI, 2022).

Among the numerous models adapted from the ACSI, one of the foremost models is the European Customer Satisfaction model, viz., ECSI model. Conceived by the European Organisation for Quality (EOQ), and the European Foundation for Quality Management (EFQM) & developed by them, it is now used across numerous European countries & industries. Many scholars

have subsequently proposed modifications to this original ECSI model, but those will not be discussed here due to time and space constraints.

Figure 2 European Customer Satisfaction Index (ECSI)



Source: Biesok and Wyrod-Wrobel (2018)

Customer Satisfaction has been researched extensively over the last two decades, across multiple industries. Service quality was found to be an antecedent of customer satisfaction (Al Hakim and Maamari, 2017; Bashir et al., 2020). It does not follow however that dimensions of service quality are generalisable across industries or across cultures - to the contrary, they need to be customised or adapted (Al Hakim and Maamari, 2017). This is in line with the generic finding of this researcher who found that the dimensions of service quality and the determinants of customer satisfaction that matter overall, depended on the specific context - context here referring to both culture (or geography) as well as to industry. Quality is always a critical antecedent of customer satisfaction. However, it must also be appreciated that in many cases, the constructs traditionally considered in assessing customer satisfaction, like quality and value, are often quite inadequate to fully explain customer satisfaction (Al-Ali et al., 2015; Rabo and Ang, 2018), and other factors like price (Rana et al., 2014; Limakrisna and Ali, 2015) may be considered. Perceived value, along with perceived quality, has a significant effect on customer satisfaction - the dimensions may change depending on the industry and the geography, but in general, the construct

has a direct impact (Alshibly, 2015). Also, employees are often overlooked in such studies but there is a lot of literature that suggests otherwise - employee satisfaction leads to improved employee performance, which in turn also affects customer satisfaction (Antoney et al., 2016).

Customer satisfaction has no significant relationship with monetary promotions (Hong and Slevitch, 2018). This shows that while money is important, there are other factors more important. Different factors of service quality impact customer satisfaction to different extents - which will depend on the specific case (Singh et al., 2019; Al Hakim and Maamari, 2017; Hung et al., 2014). In the specific context of e-commerce - all the more relevant in today's times - organisations working in this space should look to continually embellish their products & service offerings (Wilson and Christella, 2019); in addition, gender may have a moderating effect on the influence of website knowledge on e-customer satisfaction (Pereira et al., 2016).

Customer satisfaction is also influenced by innovation which is no longer an optional facet of organisations but almost a mandatory aspect, and it also has a moderating role on the influence of value on customer satisfaction. Further, when it is present in service organisations, quality and productivity are positively related, and innovation is antecedent to both of them (Rew et al., 2020) - and even otherwise, quality and productivity are both antecedents of customer satisfaction (Sao et al., 2017). This may sound surprising but is a reality check for many business owners - satisfied customers may not necessarily recommend a product to friends and family (Udofia, 2019). Trust is another key antecedent of customer satisfaction that may be considered, especially when one is talking about an industry like banking (Mahaputra, 2017); another factor which is worth considering is security which has a negative correlation to customer satisfaction in the banking domain (Murugiah and Akgam, 2015). As has been already mentioned earlier, customer satisfaction is highly dependent on their expectations - which is also factored in by the SERVQUAL scale commonly used to measure service quality.

Customer Satisfaction is also directly influenced by the mindset of an organisation. Its DNA - to use a metaphor - can be gauged from its mission statement. The same mission statement, incidentally, has a direct correlation with customer satisfaction as found in an interesting study by Nwachukwu and Zufan (2017) - this particular study was in the telecom sector, future studies in other industries may clear the picture if this inference can be extrapolated to other industries. Emotional responses and reputation are among the additional significant factors that have come up and these could be further studied by other researchers. In some manufacturing sectors, whilst perceived quality and perceived value are both antecedents of customer satisfaction, the latter exerts a stronger influence on customer satisfaction (Samudro et al., 2020)

## 1.2 Perceived Quality and Perceived Value

*Perceived quality* contrasts with objective quality (Susilowati and Sugandini, 2018). Just like quality itself, it lends itself to myriad definitions. Yet, it is necessary to have a cogent and consistent definition, at least an operational one. It has been defined variously by different researchers, but for the purpose of this analysis, the definition that will be considered is one of the earliest ones – it is “how a user assesses a “product’s overall excellence or superiority” [Zeithaml (1988)]. Similarly, for *perceived value* too, one does not find too many operational definitions. A definition that may be referred to defines value as "... the consumer's overall assessment of the utility of a product based on perceptions of what is received and what is given" (Zeithaml, 1988). This definition proffers the postulate that perceived value is a one-dimensional construct, which may be evaluated just by checking with interviewees to assess numerically the value they receive through their purchases.

Both *perceived quality* and *perceived value* are highly subjective parameters, dependent entirely on the perceptions of the customers. At this juncture, it is worthwhile to understand perception itself. Perception may be deemed to be a “process of acquiring and processing of information” (Démuth, 2013). As is evident from this concise explanation, perception, by its very definition, is inherently not objective, depending as it does, on individuals’ unique manners of acquiring and processing information.

From an elementary perusal of the myriad studies on customer satisfaction, it is quite clear that perceived quality and perceived value are critical to customer satisfaction [major frameworks like the American Customer Satisfaction Index (ACSI) and the European Customer Satisfaction Index (ECSI) having acknowledged that through their frameworks], it may be useful to observe what the relation between these two pivotal constructs has been noted as in studies done hitherto. A glance at the ACSI and ECSI models imply that perceived quality influences perceived value. On the contrary, a few researchers found in their study that perceived value was one of the factors that influenced perceived quality (Susilowati and Sugandini, 2018). A few others noted that perceived quality and perceived value are both antecedents of customer satisfaction, without being related to each other (e.g. Ibrahim and Borhan, 2020). This does imply that the relation between these two vital constructs could well depend on the context, or at least on the industry. If the latter holds true, it would be imperative to at least start somewhere (as there has been, as has been mentioned earlier on numerous occasions, little prior research on customer satisfaction in business translations). As a starting point, for the

purpose of this study, the relation indicated in the ACSI and the ECSI would be assumed i.e., *perceived value is directly impacted by perceived quality*.

As has been mentioned earlier, customer satisfaction has been the subject of myriad studies down the years. In a large number of them (e.g., Ibrahim and Borhan (2020)) perceived quality and perceived value have been found to be antecedents of customer satisfaction. In fact, similar conclusions have been arrived at by almost all researchers, whoever worked on and with these constructs. The same can be observed in the ACSI and ECSI models. Hence, for the purpose of this study, as a starting point, it is being considered, that *perceived quality and perceived value directly impact customer satisfaction*.

### **1.3 Business Translations**

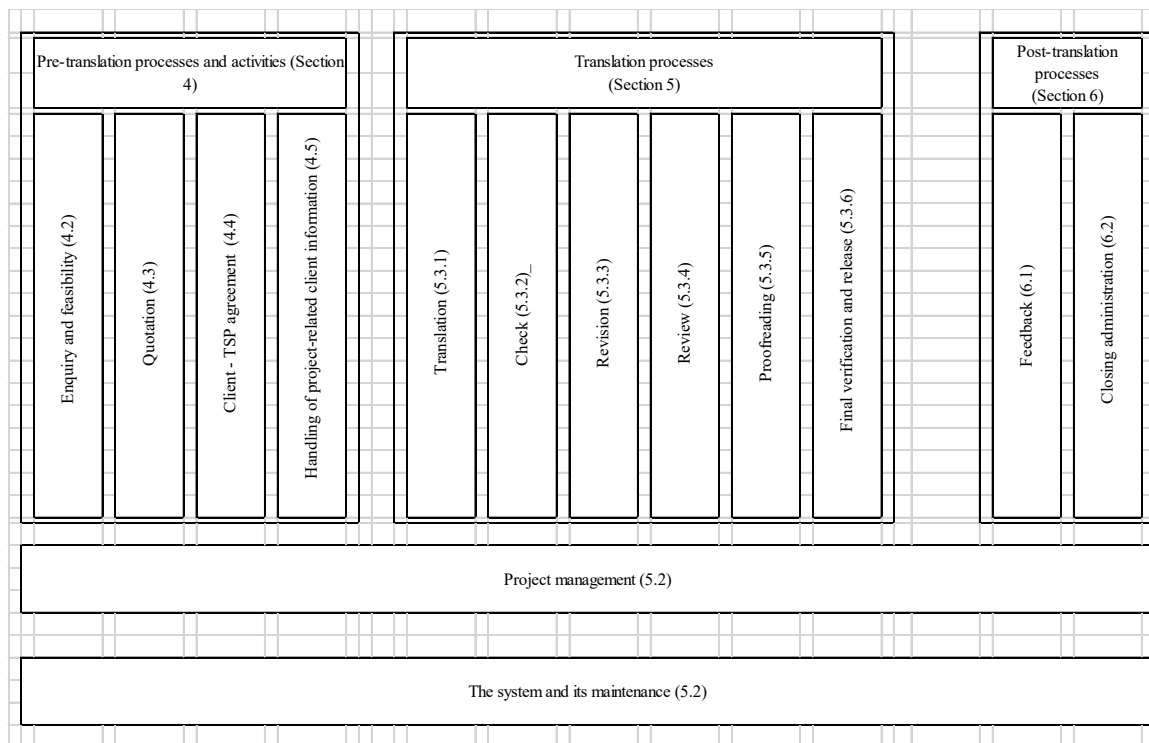
Translation has myriad challenges, the first of which is that it has no unambiguous definition (Sokolovsky, 2010). It may be defined nonetheless, as the process of rendering text written in one language, to text written in another language, such that the meaning and the sense of the original document remain intact. Then there is its multidimensionality – it may be considered either a process or a product (Vilceanu, 2017). The translation itself that is delivered, the target text (the translated text) is the product, and the entire experience that the customer experiences, being the service (different factors that make up the perceived service quality as well as the perceived product quality are clearly called out in later chapters). This uncertainty leads to Translation Service Providers (TSP) each having their own mechanism for managing translation quality. It has also been observed that the quality ratings in many cases are not reproducible or repeatable (Sofyan and Tarigan, 2018). In such a scenario, it is natural for these quality ratings to come under question. If the quality ratings themselves come under question - and it has been seen earlier than quality is one of the key antecedents of customer satisfaction - the extent of the challenges in evaluating the customer satisfaction for business translation clients can well be gauged.

The multidimensionality – and interdisciplinarity – of translation has led to the myriad complexities in the measurement of Translation Quality, and consequently its management. To add to that, a detailed review of the extant literature on Translation Studies and studies in the related discipline of Applied Linguistics conducted by scholars worldwide, and available open-source from databases such as Google Scholar and ScienceDirect revealed, as observed by Drugan (2014), that there have been very few in-depth studies on translation quality in a business context, most studies having been based on translations of individual literary texts; some others have been on specific approaches to translation quality assessment, often set in an educational context. As can be seen in

the above paragraphs, there have been some studies on Translation and Translation Quality. However, as has been elucidated on more than one instance before, Customer Satisfaction in Business Translations is an area that is rather under-researched, which is the gap this study seeks to bridge.

Business translations have a very specific set of activities, and nuances that are distinct from non-business translations. ISO 17100: 2015. [Translation Services-Requirements for Translation Services] outlines the requirements that translation service providers need to follow. The following schematic (Figure 3) provides an overview of the workflow (along with relevant sections of the ISO 17100 standard). Additionally, it may be noted that in contrast to other forms of translation, business translations have not really received the same amount of focus from researchers, though in recent years, the differential has reduced (Gallego-Hernández, 2015).

Figure 3 Translation Project Management as per requirements of ISO 17100:2015



Source: Yamada et al. (2020)

To summarise then, the following broad points can be inferred, from this survey of existing studies on customer satisfaction

- a. Perceived quality and perceived value are in most cases, the primary antecedents for customer satisfaction



- b. Perceived value can play a mediating role on the influence of perceived quality on customer satisfaction - this may be derived from the ACSI and ECSI models
- c. There is no clear-cut, well-accepted definition of perceived value, and no commonly accepted definition of perceived quality (even though multiple definitions of perceived quality exist)
- d. Perceived quality and perceived value are both immensely and intensely subjective - dealing as they do with the process of cognition of an individual customer; that makes analysing these constructs which tend to be somewhat indeterminate at times, rather complicated
- e. There are other important parameters that may be borne in mind for the explanation of customer satisfaction - some important constructs which have come up in different studies are pricing and productivity
- f. Oftentimes, customer satisfaction may be influenced by other factors quite different from quality or value - one such example is employee satisfaction.
- g. Over 65 studies were reviewed - four broad sectors (Services, Banking, Hospitality and Retail) comprised over 90% of these. Seemingly, other sectors need more studies done.
- h. Customer satisfaction as mentioned above has been studied very frequently in many traditional industries. However, as noted above, for business translations, very few studies have been done. This research seeks to bridge this gap.

## 2. METHODOLOGY FOR THIS STUDY ON ANTECEDENTS OF CUSTOMER SATISFACTION IN BUSINESS TRANSLATIONS

### 2.1 Research Question and Initial Research Model

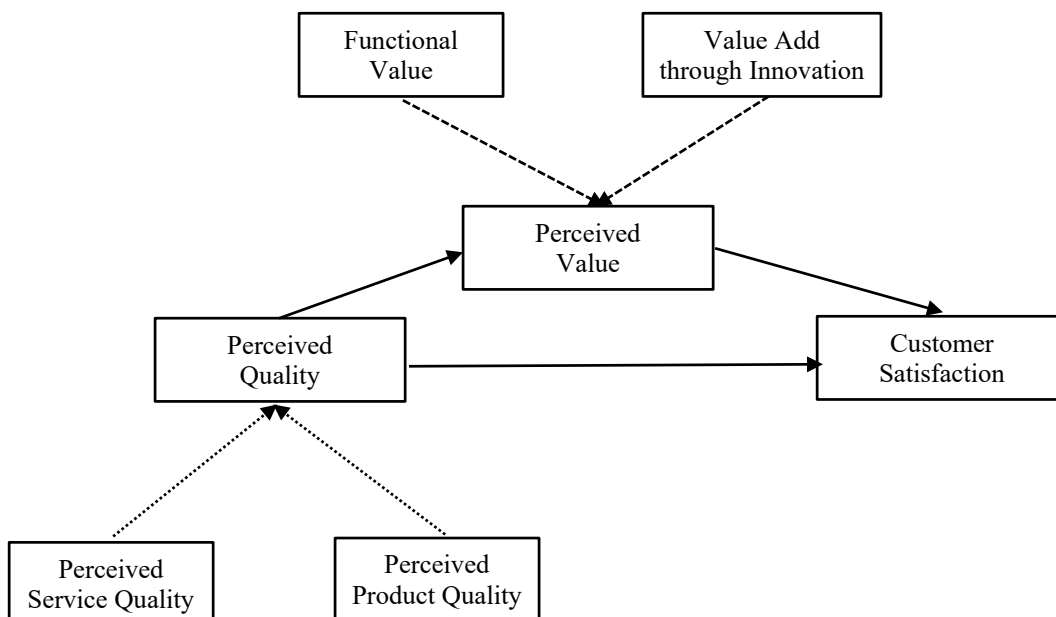
#### Research Question

What is the impact of key antecedents on customer satisfaction in business translations?

#### Initial Research Model

As discussed in earlier sections, in the area of business translations, there is a paucity of research (at least this researcher could not find any prior study that had been conducted, as part of his review of literature) on customer satisfaction. As a starting point, existing studies were reviewed to understand what antecedents have been found for customer satisfaction in other similar studies (from other industries) and in major frameworks of customer satisfaction like the American Customer Satisfaction Index (ACSI) and the European Customer Satisfaction Index (ECSI). These were used as the basis for formulating the Initial Research Model which is depicted below.

Figure 4 Initial Research Model



Source: derived from major customer satisfaction frameworks like ACSI and ECSI

With reference to the diagram (Figure 4), Perceived Quality is the Independent Variable, Perceived Value is the Mediator Variable and Customer Satisfaction: Dependent Variable. Each of these is a second order latent variable.

## 2.2 Methods Deployed in the Research

### Research Design

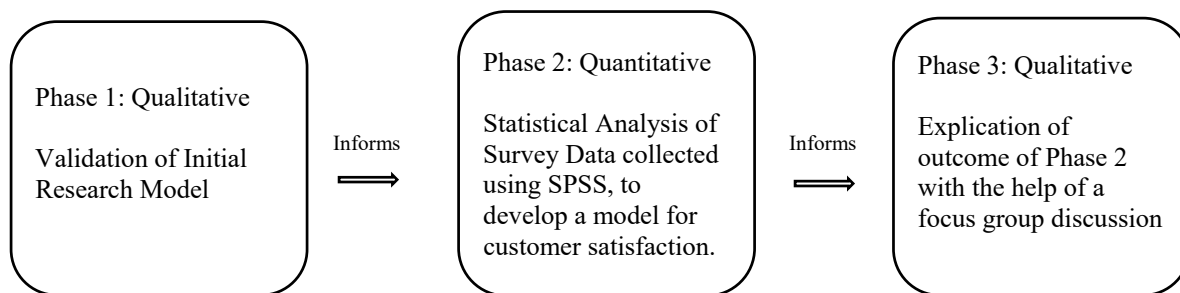
For the purpose of arriving at the Initial Research Model, extant studies on customer satisfaction and contemporary major frameworks, the ACSI and ECSI were relied upon. The Initial Research Model, which is the outcome of the detailed literature review, however

- i. Needed to be validated – for correctness (of the research model) and completeness (whether any other parameter that needed to be considered, was missed in the model) – in the absence of prior studies in this area; and
- ii. Needed to be evaluated statistically, if the relations depicted in the Initial Research Model held, on the basis of quantitative data

Based on the specifics of the study, a Multi-Phase Mixed Method Design was adopted, the rationale for which is provided in detail below.

The research design has been depicted diagrammatically in Figure 4 (please see next page).

Figure 5 Design for this Study



Source: based on Creswell (2014)

The schema shown above (Figure 5) depicts, at a very broad level, the design of this research study. The reason for adopting this particular research design is as follows:

- The Initial Research Model is based on literature review and on major existing frameworks like ACSI and ECSI. This however needed to be validated, as translation being a unique

domain, could have its own nuances and hence the views of experts was essential to validate the model. To do this,

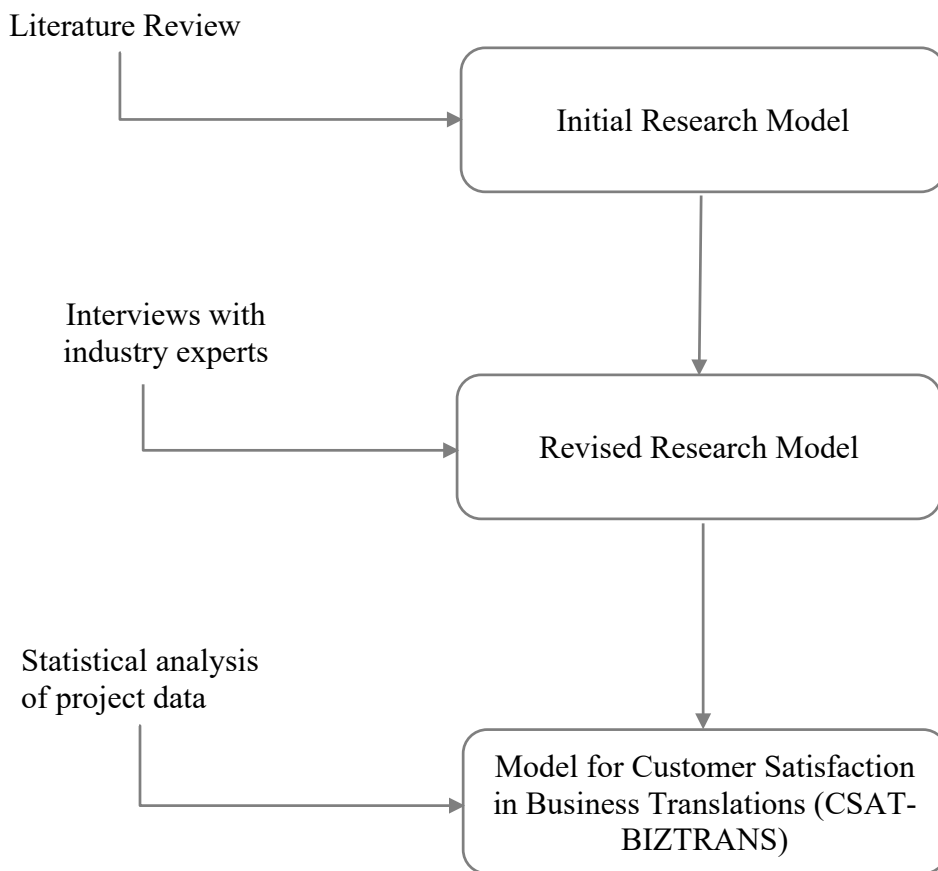
- In-depth, synchronous, one to one semi-structured interviews would be conducted with select industry experts
  - The inputs received in these interviews would be analysed using thematic analysis with techniques like coding.
  - This analysis would enable one to either validate the Initial Research Model, or to suggest required modifications to it.
  - Interviewees would be identified using non-probability, convenience sampling.
- The outcome of Phase 1 of the study would be the Revised Research Model (as shall be seen in the next section, Section 3, the results of the analysis of the inputs received from Phase 1 necessitated an update in the Initial Research Model, resulting in the Revised Research Model). Based on this Revised Research Model
- A questionnaire would be developed to collect data on completed translation projects
  - The questionnaire would be emailed to respondents to fill them up with data from projects that he / she has delivered within the last one year
  - Once the responses are received, they would be statistically analysed using SPSS, and PROCESS macro for SPSS (to evaluate possible mediation)
  - Based on the analysis done (referred to above), the model would be revised if necessary (as shall be seen in Section 3, the model is further adapted to the final Model for Customer Satisfaction in Business Translations)
- The outcome of Phase 2, as explained above, is the final Model for Customer Satisfaction in Business Translations). What then would remain are the following, which would be done in Phase 3:
- The model being a regression-based model, there would be a value of adjusted R-squared, and one question that would remain, would be: what other factors could there be that explain the variation in Customer Satisfaction in Business Translations? (cf.  $1 - \text{adj. R-sq}$ )
  - Further, it would also be interesting to try and understand what could explain the differences between the Revised Research Model and the final Model for Customer Satisfaction in Business Translations

To get insights on these questions, a Focus Group discussion would be planned and conducted. The insights from the same would help understand the outcome of the data analysis from Phase 2

### Evolution of Model through the different phases of research

On the next page, a diagrammatic representation of the evolution of the model, from Initial Research Model, to the final Model for Customer Satisfaction in Business Translations is provided that helps to understand how the model evolved.

Figure 6 Evolution of the Model



Following are the Research Methods that are sought to be adopted, presented in tabular form, for ease of understanding.

Table 1 Research Design and Research Methods

<b>Phase</b>	<b>Type of Research</b>	<b>Methodology of Data Collection</b>	<b>Sampling Method</b>	<b>Sample Size</b>	<b>Methods of Data Analysis</b>
<b>I</b>	Qualitative	Interviews (1-1, in-depth, semi-structured) conducted synchronously	Non-probability (convenience)	10	Thematic analysis, Coding of information
<b>II</b>	Quantitative	Surveys (formal questionnaire), conducted asynchronously	Non-probability (convenience)	90	Regression analysis (including mediation analysis)
<b>III</b>	Qualitative	Focus Group	Non-probability (convenience)	5	Thematic analysis

These three phases are conducted sequentially (as indicated in Figure 5).

## **2.3 Assumptions made over the course of researching the key Antecedents of Customer Satisfaction in Business Translation**

### **Assumptions for Phase 1**

In Phase 1, the research was qualitative, with data collected by means of one-one interviews, and analysed through thematic analysis with the help of coding. Some assumptions naturally had to be made, which are shared below:

- ✓ Absence of bias: This is a big assumption to make but necessary to deal with in qualitative inputs. It is natural for any individual to answer questions based on his / her experience, but yet it is also natural for bias to creep in when one is answering questions. A basic assumption then that has been made in this research, is that the responses provided by the

interviewees are bereft of any major bias. This assumption is necessary to proceed with the analysis of the inputs.

- ✓ Adequacy of codes used: This researcher coded the numerous inputs received based on a common pattern observed and generally understood meaning of words. There could be a few cases where the codes used were marginally inappropriate, the assumption made here is that codes used were all appropriate for the inputs.
- ✓ Adequacy of sample: The sample chosen for interviewing was done through convenience sampling, through connections this researcher had in industry or through LinkedIn. Whilst all of them were at least well experienced (and a few veterans of the translation industry too), the cohort interviewed was admittedly not large (10 experts were interviewed). It is being assumed here that the small size of the sample did not affect the outcome of the results.

### **Assumptions for Phase 2**

- ✓ Adequacy of sample: This is the main assumption in this phase. Whilst the sample size by itself is adequate in terms of sheer numbers, all of these responses (90 responses were received) were received from just one person although the datapoints were from different domains (like digital, legal, and human resources). It is being assumed here that this did not affect the outcome of the results.
- ✓ Equal weight of sub-components within the constructs: Perceived Service Quality and Perceived Product Quality are assumed to equally influence Perceived Quality, and Functional Value and Value Add through Innovation are assumed to equally influence Perceived Value.
- ✓ Assumptions for linear regression:
  - The dependent variable linearly depends on the independent variable(s)
  - The residuals are not dependent
  - Residuals are homoscedastic
  - The residuals are distributed in a way that meets criteria of normality

### **Assumptions for Phase 3**

- ✓ Adequacy of sample: The cohort chosen for the focus group was done through convenience sampling, through connections this researcher had in industry. Whilst all of them were at

least well experienced, the cohort was admittedly small (5 experts were involved). It is being assumed here that the small size of the sample did not affect the outcome of the results.

## **2.4 Limitations of Research**

Following are the chief limitations of this study:

- a. This study focuses on customer satisfaction as perceived by translation service providers, per the information and feedback they get subsequent to the services provided by them: it does not however, take into account the perspective of the customers themselves. Further studies on this can examine the subject from the perspective of the customer, taking their inputs into consideration.
- b. Owing to limitations of time, sample sizes for each phase, especially the qualitative phases, are limited. Subsequent studies of longer duration could look at taking inputs from larger cohorts of respondents
- c. While 90 responses (from 90 projects) were received for the quantitative phase, spanning different domains like human resource, digital and legal documents, they were all received from one respondent alone. In other words, these were all data from one particular organisation. In order for the outcomes to be fully generalizable, further studies are recommended in this regard.



### **3. ANALYSIS OF THE EMPIRICAL DATA ON THE IMPACT OF ANTECEDENTS ON CUSTOMER SATISFACTION IN BUSINESS TRANSLATIONS**

#### **3.1 Validation of Initial Research Model**

Qualitative research was undertaken to validate the initial research model. For this purpose a small cohort of 10 industry experts, selected for their expertise and experience, and identified by means of convenience sampling, was interviewed one-one. Further details are provided below.

#### **Collection of Data to Validate the Initial Research Model**

The Initial Research Model (Figure 4) was developed on the basis of extensive literature review. Nonetheless, as mentioned earlier, since this particular area (Customer Satisfaction in Business Translations) is rather under-researched, it was felt that it would be appropriate to have the initial research model validated by industry experts and get their valuable insights on the model. Accordingly, industry experts were interviewed and their views sought on the model. Zoom was used to schedule and conduct the interviews. Interview transcripts are not being included in this thesis report so that the report may be kept concise and pithy, they are available and can be provided if required.

For this round of interviews, invites were sent to industry experts. 21 experts were invited, from whom, 10 agreed to be interviewed. Figure 7 and Table 2 give a brief idea of their background. No identifiable information is being shared for the sake of privacy.

Figure 7 Interviewees' Count with Experience Level (in years)



Table 2 Phase 1 interviewees

<b>Interviewee No</b>	<b>Roles Played by Interviewee in Industry</b>	<b>Years of Experience in Translation</b>
1	Translator – Freelance	11 – 15
2	Translation Delivery Manager	11 – 15
3	Translation Project Manager, Expert in CAT (Computer Aided Translation) Tools and Translator	16 – 20
4	Translator	16 – 20
5	Translation Project Manager and Translator	11 – 15
6	Translation Industry professional with experience in myriad roles – Global Account Management, Translation Project Manager and Terminologist	16 – 20
7	Translator	6 – 10
8	Translation Industry veteran – vast experience in Translation Project and Quality Management, and Translation	26 – 30
9	Translation Project Manager & Translator	6 – 10
10	Translation Project and Quality Management, and Translation	21 – 25

### Insights received in the one to one interviews

The following tables present the insights – first uncoded, and then coded – gleaned from these interviews. The interview respondents are indicated as R1 – R10, to avoid indicating personally identifiable information.

Table 3 Key Factors that affect Perceived Service Quality as per interviewees, uncoded

Construct	Uncoded Inputs	Interview Respondent
Perceived Service Quality	Promptness of service delivery	R3, R4, R5, R8, R9
	Timeliness of service delivery	R2, R5, R7, R9, R10
	Promptness in response to queries	R2, R4, R9
	Clarity of communication	R5, R6, R8,
	Regularity of communication	R5, R6, R7, R10
	Adequacy of response to queries	R2
	Accuracy of estimation	R2
	Ability to anticipate customer needs	R3, R9
	Ability to understand customer needs	R9
	Ability to sensitise customer to nature and feasibility of work	R3, R10
	Value for money	R5
	Proactivity of translator	R10

Table 4 Key Factors that affect Perceived Product Quality, as per interviewees, uncoded

Construct	Uncoded Inputs	Interview Respondent
Perceived Product Quality	Extent of Translator specialisation for domains	R1, R2
	adherence to a defined process	R1
	Whether translators have appropriate certifications	R1
	Adequacy of use for end-user	R2
	Availability of proper infrastructure	R2
	Motivation levels of translators	R2
	Availability of continuous trainings for translators	R2
	dataset quality	R3
	terminology	R3, R5, R10

	accuracy of translation	R4, R6, R7, R8
	adherence to file format	R4, R6
	adherence to document format	R4, R6, R7
	domain knowledge of translator	R2, R8, R10
	if translator is a native speaker	R8
	availability of time	R9
	having the right tools	R9
	translation memories	R9
	style guides	R9, R10
	whether adequate information is available	R9
	extent of research done by translators	R8
	fluency of language of target text	R6
	whether customer has in-house Language QA (weighted by category)	R9

Table 5 Key Factors that affect Functional Value, as per interviewees, uncoded

Construct	Uncoded Inputs	Interview Respondent
Functional Value	Domain specific expertise of translator	R1, R7, R8
	Affiliation of translator(s)	R1
	Upskilling done by translator	R1
	Experience in translating other documents	R1, R2, R10
	Confidentiality	R2, R9, R10
	Ability to identify requirements	R2, R3, R4
	Ability to assess document specific nuances	R3
	Translating untranslatable sections of files (images etc).	R4
	Providing additional features like glossaries	R4, R6, R10
	Maintaining specific databases for the clients, enabling quicker turnaround.	R4
	Ability to get into detail & understand what the actual client requirements are.	R2, R3
	Usage of CAT tools & their databases	R5
	Quality of deliverables	R2, R5
	Data security	R2, R5, R10
	Prioritisation	R5
	Helping client with savings ... sometimes client may not need an entire doc to be translated	R5
	Consistency in usage of terminology	R6
	Ability to get buy-in from customers	R6

	Ability of translator to differentiate by domain	R7
	Ability of translator to differentiate in target text based on culture & geography.	R7
	Level of accuracy - in terms of proximity to terms in source text	R8
	Formats - not all formats can be done through free translators	R9
	Volume	R9
Functional Value	MT engines can be customised	R9
	can be revised which is not possible by free software	R9
	insufficient database	R10
	cultural aspects only experienced translators can provide	R10
	Clarifications	R10
	How proactive the translator is	R10
	production capacity	R10
	Whether the translator is living in the country whose native language is either source or target language	R1
	Perception of translation agencies of people & cultures (example: Indians are perceived to be very proficient in English)	R1
	Extent of presence on social media	R1
	Context matters (if someone is doing small work like certificates etc their concept of value will be different)	R1

Table 6 Key Factors that affect Value-Add through Innovation, as per interviewees, uncoded

Construct	Uncoded Inputs	Interview Respondent
Value-add through Innovation	Time saved through PE of MT	R1, R2, R4, R5, R6, R8, R10
	Savings with usage of Translation Memory and Terminology Databases	R2, R6
	Training the CAT tool (or MT tool) engine to for specific customers	R3
	Ability to serve expanded time window because of dispersed team	R10

	Machine learning - based on machine translators	R10
	Automating processes that increases productivity	R9

Table 7 Key Factors that affect all the four constructs, as per interviewees, coded

Construct	Codes
Perceived Service Quality	Speed of service delivery
	Response to queries
	Clear and regular communication
	Customer interactions
Perceived Product Quality	Development of translator domain competency and language competency
	Quality of support systems
	Quality of target text
Functional Value	Data control
	Value of technological advances
	Experiential benefits
Value-Add through Innovation	Technological benefits
	Process innovations

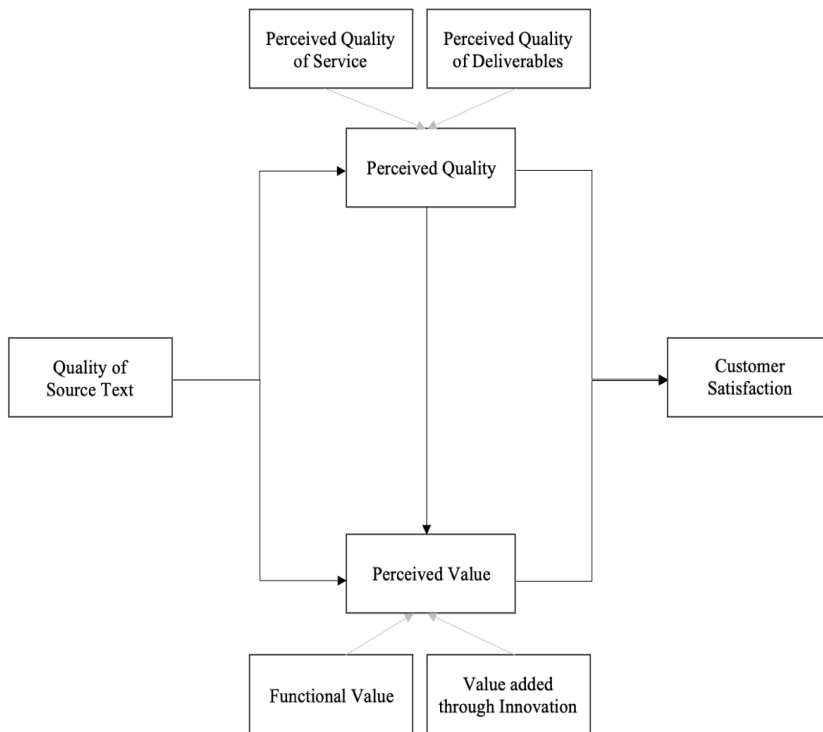
### Analysis of Data leading to the Revised Research Model

With reference to Question 1 (please refer Table 2): During the interviews all the interviewees validated the Initial Research Model as it was, averring that the variables were depicted in a correct manner, as per their experience.

For Question 2, the inputs received from these in-depth one to one interviews were analysed using coding techniques to arrive at a set of factors that affect the key constructs. The key factors that affect the primary constructs as per the Initial Research Model are shared in the Annex.

In terms of Question 3 (please refer Table 2), most interviewees said that there was no other variable that came to mind, but one of the interviewees said that Quality of Source Text was a vital component that was not appearing in the Initial Research Model. When other interviewees were contacted again for their perspective, they agreed that Quality of Source Text was a very important factor that ought to be considered, and it would influence both Perceived Quality and Perceived Value. As a consequence, the Initial Research Model underwent a revision. The Revised Research Model is depicted below.

Figure 8 Revised Research Model



Source: Author (derived from Initial Research Model, with inputs from industry experts)

In Figure 7, we see that the Initial Research Model has been embellished.

As per this model, we have Quality of Source Text as independent variable. Perceived Quality and Perceived Value as mediator variables and Customer Satisfaction as the dependent variable

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### **3.2 Regression Analysis to develop a Model for Customer Satisfaction in Business Translations (CSAT-BIZTRANS)**

#### **Development of Hypotheses**

A look at the Revised Research Framework, and its different paths, reveals the following:

- a. Perceived Quality mediates the influence of Quality of Source Text on Customer Satisfaction
- b. Perceived Value mediates the influence of Quality of Source Text on Customer Satisfaction
- c. Perceived Value mediates the influence of Perceived Quality on Customer Satisfaction

The following hypotheses can then be developed based on these observations:

H<sub>1</sub>: Perceived Quality mediates the influence of Quality of Source Text on Customer Satisfaction

H<sub>2</sub>: Perceived Value mediates the influence of Quality of Source Text on Customer Satisfaction

H<sub>30</sub>: Perceived Value mediates the influence of Perceived Quality on Customer Satisfaction

The following hypotheses would be tested too to check presence of direct impact of each of the three constructs on Customer Satisfaction.

H<sub>4</sub>: Quality of Source Text has a direct influence on Customer Satisfaction

H<sub>5</sub>: Perceived Quality has a direct influence on Customer Satisfaction

H<sub>6</sub>: Perceived Value has a direct influence on Customer Satisfaction

#### **Collection of Data required to develop a Regression-based Model to predict Customer Satisfaction in Business Translations**

In the first instance, an instrument needed to be prepared for collection of data. To this end, a questionnaire was designed to collect the data. Information was sought on each of the constructs Quality of Source Text, Perceived Quality, Perceived Value and Customer Satisfaction (in Business Translations). It may be mentioned here, that a review of literature yielded little by way of insights on components of Quality of Source Text. Experts were reached out to, and from a collation of their inputs, it emerged that the key components of Quality of Source Text were Quality of Language used in Source Text, and Quality of Terminology used in Source Text.

The questionnaire that was developed and sent to translation service delivery managers is shared in Annex 2. There were a couple of translation project managers who had agreed to provide



data for this study. Subsequently, one amongst them expressed her inability to share the data then as she would be unavailable for quite some time. The other lady who was reached out to, said she could provide the data (for which we needed to take consent from her manager – who agreed as I assured her that we would not need nor seek any personally identifiable data). Over the next week, she worked on the questionnaire and eventually provided detailed information on 90 projects that they had worked on over the last 1 year. These included projects from different domains like digital, legal, finance and human resource (among others). This data was then analysed using SPSS software as well as PROCESS macro for SPSS. The details of this analysis are presented in the next sub-chapter

### **Analysis of Data received to develop a Regression-based Model to predict Customer Satisfaction in Business Translations**

Before proceeding to analyse the data received, it was important to test the reliability of the instrument used. To assess the reliability, it was decided to measure Cronbach’s alpha for the instrument, and the values for the constructs, are shared value.

Table 8 Using Cronbach’s Alpha to assess reliability of the scales

Construct	Cronbach's Alpha	Cronbach's Alpha based on Standardized Items	N of items
Quality of Source Text	0.969	0.969	2
Perceived Quality	0.887	0.929	2
Perceived Value	0.659	0.716	2

The reliability of the scales being validated, the quantitative data as received was analysed in SPSS. The overall characteristics of the data are presented in Table 11 (please see next page).

Table 9 Descriptive statistics for the data received on translation projects delivered within the last 1 year

	N	Mean	Std. Deviation
QST	90	8.98	1.16
PQ	90	9.96	0.22
PV	90	9.93	0.21
CSAT	90	9.94	0.23
Valid N (list-wise)	90		

Now, the next step is to test the hypotheses that have been formulated. Mediation analysis is undertaken using PROCESS macro for SPSS, and the SPSS output from the mediation analysis is shared in the Annex. From this it can be seen that:

- a. For the overall outcome variable CSAT, 0 lies in between LLCI and ULCI for both QST and PQ. In addition, p-value is high for both (0.2758 for QST and 0.3188 for PQ); for PV, p-value is 0.0189 (which is acceptable at 95% confidence interval, also, 0 does not lie within the LLCI and ULCI. At this stage it is clear PQ does not mediate the effect of QST on CSAT.
- b. QST does not have any significant effect on either PQ (R-sq: 0.0027, p: 0.62) or PV (R-sq: 0.0394, p: 0.06, 0 in between LLCI and ULCI). In other words, there is no way we can assert statistically, at 95% confidence interval, that QST influences either PQ or PV. Now, the research model here (Revised Research Model, Figure 10) has indirect effect alone, and no direct effect of QST on CSAT.
- c. The third mediation track that was modelled was that, PV mediated the influence of PQ on CSAT. The SPSS output for this mediation analysis is shared below. In this output, it can be seen that while, there is ground for reckoning that PV mediates PQ influence on CSAT (coefficient of indirect effect: 0.2533, 0 does not lie between LLCI and ULCI), there is no statistical basis for averring, at 95% confidence interval, that PQ has a direct effect on PV (p = 0.4483, besides 0 lies in between LLCI and ULCI). Hence mediation is ruled out in this track too.

The three constructs, QST, PQ and PV, are then analysed to assess their effect on Customer Satisfaction (in Business Translations). In the first instance, all the three constructs are taken as

regressors and sought to predict CSAT. It is found that, for QST, the p-value is  $> 0.6$ , and hence there is no statistical basis for accepting that QST contributes to CSAT. The regression is repeated, this time without QST. In this case, R-squared is 0.657, and  $\alpha < .001$ .

The final regression equation (ignoring the constant as for the constant,  $\alpha = .618$ ) is:

$$\text{CSAT} = 0.483 \cdot \text{PQ} + 0.480 \cdot \text{PV}.$$

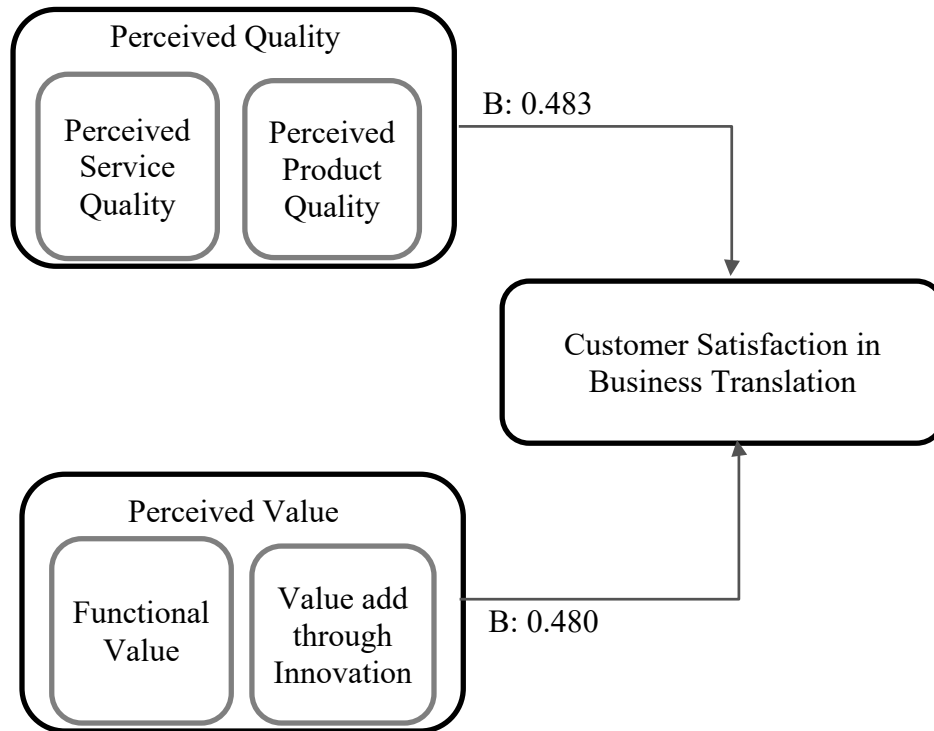
### Results of the Hypothesis Testing

Before the data analysis of Phase 2 commenced, there were 6 hypothesis statements: H<sub>1</sub> to H<sub>6</sub>. The results of the analysis are presented below in tabular

Table 10 Results of Hypothesis Testing

Hypothesis Number	Hypothesis Statement	Rejected	Rationale
H <sub>1</sub>	Perceived Quality mediates the influence of Quality of Source Text on Customer Satisfaction	Yes	R-squared: 0.003
H <sub>2</sub>	Perceived Value mediates the influence of Quality of Source Text on Customer Satisfaction	Yes	R-squared: 0.039
H <sub>3</sub>	Perceived Value mediates the influence of Perceived Quality on Customer Satisfaction	Yes	R-squared: 0.398
H <sub>4</sub>	Quality of Source Text has a direct influence on Customer Satisfaction	Yes	R-squared: 0.021
H <sub>5</sub>	Perceived Quality has a direct positive influence on Customer Satisfaction	No	R-squared: 0.526
H <sub>6</sub>	Perceived Value has a direct positive influence on Customer Satisfaction	No	R-squared: 0.518

Figure 9 Model for Customer Satisfaction in Business Translations [CSAT-BIZTRANS]



### **3.3 Exploration of Possible Factors affecting Customer Satisfaction in Business Translations that are not explained by the Model developed in Phase 2**

#### **Undertaking a Focus Group Discussion to get further insights on factors that could be Antecedent to Customer Satisfaction in Business Translations**

The final Model for Customer Satisfaction in Business Translations [CSAT-BIZTRANS] was derived from the data received in Phase 2. A generic review of the model yields the following:

- ✓ The final model is quite different from the Revised Research Model. Whilst that can happen, it would be useful to understand why the model changed so much.
- ✓ R-squared for the regression equation was 0.657. In other words, 34.3% of the variation in the dependent variable, viz., Customer Satisfaction in Business Translations, is unexplained by the model predictors, Perceived Quality and Perceived Value. It would be interesting if further insights could be gleaned on what other parameters could be contributing to the Customer Satisfaction (in Business Translations)
- ✓ In order to get further insights into the above, a focus group was planned. Few industry experts were reached out to, and 6 senior, experienced professionals responded, and agreed

to join a focus group, which was scheduled (and subsequently, conducted) using Microsoft Teams. On the day, one person unfortunately got tied up, and the focus group was conducted with 5 people attending. The following section provides details of the focus group.

The guiding questions that were used to moderate the focus group discussion are shared in Annex 3.

### **Analysing the information received from the Focus Group Discussion**

The focus group meeting was not recorded, instead, a Minutes of the Meeting was subsequently prepared by this researcher (who also moderated the discussion). The Minutes of the Meeting are shared below.

Table 11 Focus Group Discussion – Minutes of Meeting, endorsed by participants

#### **Minutes of the Meeting**

<b>Date</b>	29-12-2022
<b>Time</b>	1700 – 1730
<b>Attendees (5)</b>	4 Senior Translators 1 Senior Translator (freelance)
<b>Topic of Discussion</b>	Analysis of outcomes of the research on Antecedents of Customer Satisfaction in Business Translation
<b>Context</b>	Master's Thesis of the moderator, Aumlan Guha. His topic for research was "Antecedents of Customer Satisfaction in Business Translations". This particular focus group was to elicit expert views & also seek perspectives on other factors which could be influencing customer satisfaction in business translations (adjusted R squared = 0.65).

<b>Discussion Item #</b>	<b>Discussion Item Description</b>	<b>Contributor</b>
1	Background: Quality of Source Text had come up as a key variable influencing Perceived Quality and Perceived Value. Subsequent to the statistical analysis of data carried out in Phase 2, however it was found that as per data, Quality of Source Text cannot be said to have any influence on either Perceived Quality or Perceived Value.	Moderator
2	Panelists were asked if in their perspective, Quality of Source Text did have an influence or not... or why did they reckon the data showed that Quality of Source Text was not a factor in influencing Perceived Quality and Perceived Value, and eventually Customer Satisfaction.	Moderator
3	Quality of Source Text is definitely a critical factor in determining the ultimate customer satisfaction	Panelists

4	<p>What generally happens is that when a source text that is received is found to be of poor quality, the translators revert to the client, requesting a document with better quality. At times, the client provides the better quality source text. On other occasions, the client doesn't, especially if they do not have a better quality source text. In case of the latter, they are aware of the drawback (poor quality of source text) and avoid penalising the translating team for the same. Hence the Quality of Source Text does not determine customer satisfaction levels even though it is a critical determinant of the final quality of translation.</p>	Panelists
5	<p>Based on the data received in Phase 2, statistical analysis was done to develop a regression model. Adjusted R square for this model was 0.649 - in other words, the predictors that appear in this model account for around 65% of the variation in customer satisfaction. Panelists were asked what other factors could be there that could explain the variation in customer satisfaction.</p>	Moderator
6	<p>Following came up as other possible factors:</p> <ol style="list-style-type: none"> <li>1. Adherence to timelines (3 participants)</li> <li>2. Service experienced (1 participant)</li> </ol>	Panelists

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Action Item #	Action Item	Date Due	Status
1	Moderator to circulate minutes of meeting	29-12-2022	Completed
2	Moderator to share a summary of the final results of the research with participants	14-01-2023	Pending

These results indicate that the quality of source text has no significant impact on customer satisfaction as the customer appreciates that issues arising from it are not a fault of the service provider.

### 3.4 Additional Results

The regression carried out in Phase 2, was performed with CSAT as the dependent variable, and the constructs, Perceived Quality and Perceived Value as the independent variables. However, if this same, regression analysis is carried out using the same data, but this time, with the individual components of these constructs (Perceived Service Quality, Perceived Product Quality, Functional Value and Value Add through Innovation) as the regressors, then the outcome is quite different. Following is the summary of the model with the regressors the individual components of the constructs:

R: 0.859; R-sq: 0.737, adj R-sq: 0.718

Sig. < 0.05 for these 3 alone : Perceived Product Quality (<.001), Functional Value (<.001), Value Add Through Innovation (.015).

The final model too in this case would be:

CSAT-BIZTRANS: Customer Satisfaction = 0.941\*(Perceived Product Quality) + 0.386\*(Functional Value) - 0.278\*(Value Add through Innovation).

[Perceived Service Quality is not as a factor as per this data neither does Quality of Language of the Source Text nor does Quality of Terminology of the Source Text.].

Note: As this was not how the model was conceived, not recasting the results overall, but reported here as additional results.



### 3.5 Discussion on the Results Obtained

It would be useful to analyse the results and to check how the results obtained in this research stack up against research undertaken by other researchers. For ease of discussion, the key results obtained are listed sequentially, and discussed – first the results of Phase 1 would be discussed, followed by the results of Phase 2 and at the end those of Phase 3.

i. Phase 1: Validation of Initial Research Model:

- ❖ The inter-relations between the constructs as featured in the Initial Research Model, were validated by the interviewees. This is in line with existing major frameworks (American Customer Satisfaction Index and European Customer Satisfaction).
- ❖ An interesting outcome of this phase of the research was the proposition that owing to the specific nuances of the translation process itself, Quality of Source Text emerged as the independent variable in the Revised Research Model, as experts who were interviewed contended that it would affect the Perceived Quality and Perceived Value. As mentioned earlier on myriad occasions, there has not been much research on business translations (compared to literary and other non-business translations) and hence it is not possible to compare this particular outcome.

ii. Phase 2: Development of the Model for Customer Satisfaction in Business Translations (CSAT-BIZTRANS)

- ❖ Perceived Quality does not mediate the influence of Quality of Source Text on Customer Satisfaction
- ❖ Perceived Value does not mediate the influence of Quality of Source Text on Customer Satisfaction

For these two results, as mentioned earlier, Quality of Source Text is a variable that is very specific to the translation industry, and as there has been no prior research in this area, it is not possible to compare this finding with the outcome of any earlier study.

- ❖ Perceived Value does not mediate the influence of Perceived Quality on Customer Satisfaction
- ❖ Quality of Source Text does not have a direct influence on Customer Satisfaction
- ❖ Perceived Quality has a direct influence on Customer Satisfaction
- ❖ Perceived Value has a direct influence on Customer Satisfaction

Quality of Source Text does not affect Customer Satisfaction – and Phase 3 will explain, why, despite it being an important parameter, it does not. The other three are in line with

findings by a number of other researchers (Othman et al., 2017; Ibrahim and Borhan, 2020)

iii. Phase 3: Analysis of the outcome of Phase 2

The primary explanation received from the focus group discussion was why the independent variable from the Revised Research Model was not appearing in the final model (CSAT-BIZTRANS). This was because whilst the Quality of Source Text was indeed a critical factor in the Product Quality (Quality of Target Text), delivery teams working on translations always revert to customers if they receive source texts of poor quality, and so, since the customer is aware of the source of the issue, delivery teams are not penalised if there is any quality issue as a result of poor source texts.

### **3.6 Relevance of Results Obtained**

#### **Practical Implications**

- a. Delivery managers responsible for delivery of translation projects will be able to estimate upstream, the potential Customer Satisfaction for their projects, and accordingly make interventions that will enable them to achieve their desired Customer Satisfaction levels.
- b. With the help of Customer Satisfaction data from completed projects, translation delivery managers can compute Perceived Quality and Perceived Value for their projects, thus helping them better engage with their customers.
- c. As has been mentioned in the Introduction and the chapter on Literature Review, there have been myriad studies on Translation Studies, including on Translation Quality, however very few till date on customer satisfaction and this will hopefully encourage further researches by the translation industry into the business side of translation studies, including, but not restricted to customer satisfaction

#### **Scientific Implications**

As has been explained before in the Introduction and other chapters, hitherto, there has been very little research work that has been conducted on customer satisfaction for business translations. From that perspective, this study is pioneering.

- a. As has been mentioned in the Introduction and the chapter on Literature Review, there have been myriad studies on Translation Studies, including on Translation Quality, however none till date on customer satisfaction. This particular study meets that lacuna. This is however, admittedly, just a starting point and a lot more needs to be done in this area.
- b. This study has been carried out in Translation Studies, an area in which very little prior work had been done. Similarly, there could be other areas where very little work has been done, this could be a starting point for further studies in other under-researched areas too.

## **CONCLUSIONS AND RECOMMENDATIONS**

### **Conclusions**

1. Based on the research undertaken, it may be concluded that Business Translation, as an industry is unique (because of its multidimensionality and interdisciplinarity) and hence results that are observed in other industries (service or manufacturing), are not generalizable here.
2. Based on the responses from the panelists in the focus group, it is clear that while Quality of Source Text unquestionably affected Quality of Delivered Translation, it was not a material factor in the perception of the client for either Perceived Quality (Service or Product) or even Perceived Value (as they realised that issues pursuant to poor Quality of Source Text, were not the fault of the translators) – and hence it did not affect the Customer Satisfaction levels.
3. Based on the inputs from the focus group panelists, timeliness and service experience are potential factors which could explain additional variation in customer satisfaction. However, these inputs are not valid under the current research model, as these factors are covered under Perceived Service Quality codes. Now, the conclusion this leaves one with is that perhaps more focus needs to be given to validating the perceived service quality (and by extrapolation, the perceived product quality constructs).

### **Recommendations**

Based on the inputs that were received during the one to one, semi-structured and synchronous interviews that were conducted during Phase 1, a larger, more in-depth research study could be planned and conducted, and sponsored by industry for whom these insights could be valuable.

1. The questionnaire used in Phase 2 of this study, addressed only the second-level parameters (Perceived Service Quality, Perceived Product Quality, Functional Value, Value Added through Innovation). Based on these, a subsequent study over a longer

- period of time, and with more resources could seek data from respondents on all of the factors which have been coded.
2. Whilst the Focus Group discussion was very useful in understanding why Quality of Source Text was not a predictor in the final CSAT-BIZTRANS model, the other question viz., additional potential parameters which could explain the balance 34.3% not explained by the regression equation ( $1 - R\text{-squared}$ ) remained unanswered as the panelists spoke of timeliness and service experience, both of which are actually also covered under Perceived Service Quality. This question could be looked at in a subsequent study.
  3. Additional Results: As was seen when the components of the constructs were used as individual regressors, then the regression equation itself changed drastically – Perceived Service Quality was not found to be a significant predictor of Customer Satisfaction, and the primary predictors were Perceived Product Quality and Functional Value, and Value Add through Innovation had a negative impact on Customer Satisfaction. These results ought to be a starting point for further research, with more resources (time, effort and funds) to better understand the right approach to developing a model for Customer Satisfaction.

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# **IMPACT OF ANTECEDENTS ON CUSTOMER SATISFACTION IN BUSINESS TRANSLATIONS**

**Aumlan GUHA**

**Master Thesis**

**Quality Management Master Programme**

Faculty of Economics and Business Administration, Vilnius University

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## **SUMMARY**

63 pages, 19 tables, 9 figures, 60 references.

The primary aim of this Master Thesis is to find out the impact of antecedents on customer satisfaction in business translations.

This thesis consists of three main parts, a review of existing literature, empirical research and its outcomes, and conclusions and recommendations.

Literature review presents theories on customer satisfaction and what different researchers have found to be the key antecedents thereof, as well as the inter-relations between them. Additionally, this section also covers a brief overview of translation and explains its nuances.

Subsequent to the literature review, the author undertook research on the key antecedents of customer satisfaction in business translations and their impact on it. He carried out a multi-phase mixed method research. His initial phase was exploratory, wherein he interviewed 10 industry experts. In the course of his interviews, he sought the views of the experts on his Initial Research Model. They validated it, and provided insights on factors affecting each of the constructs, viz. perceived quality and perceived value. The initial research model was revised, and based on the revised research model, a questionnaire was developed and data collected using it. These responses were then statistically analysed by the researcher to establish the relation between the antecedents and assess their impact on customer satisfaction. This was done using SPSS software. Initially, the reliability for the scales was tested using Cronbach's alpha which was found to be  $> 0.6$  in all three cases (0.969 for Quality of Source Text questions, 0.887 for Perceived Quality questions and 0.659 for Perceived Value questions). In accordance with the revised research model which had three

mediation paths, mediation analysis was performed using PROCESS macro. The researcher found that even though the revised research model indicated that there were three mediation paths, none of the mediations actually held from the data. Linear regression analysis indicated that perceived quality and perceived value were antecedents of customer satisfaction. As a result of the analysis, he developed the final Model for Customer Satisfaction in Business Translations [CSAT-BIZTRANS]. Finally, a focus group was conducted to understand why quality of source text, which was the independent variable as per the revised research model, did not appear in the final CSAT-BIZTRANS model, and also, what other possible factors there could be. The panelists contended that whilst source text quality was critical to the final quality of translations, customers did not hold it against vendors if the quality of the delivered translation was affected as a result of poor quality of source text. Factors mentioned by them which could be a cause of the unexplained variation, were timeliness and service experienced by customer – which unfortunately was elsewhere covered in the model and hence not considered by the author as possible factors.

The chapter on Conclusions and Recommendations summarises the main findings of the literature review and the research conducted and also the recommendations, including applicability of the results and pointers for further research.



# VEIKSNIŲ ĮTAKA VARTOTOJŲ PASITENKINIMUI VERSLO VERTIMAIS

Aumlan GUHA

Magistro disertacija

Kokybės valdymo pagrindinė programa

Vilniaus universiteto ekonomikos ir verslo administravimo fakultetas

Prižiūrėtojo prist. prof. D. Ruželė

## SUVESTINĖ

63 puslapių, 19 lentelių, 9 iliustracijos, 60 nuorodų.

Pagrindinis šios magistro disertacijos tikslas - išsiaiškinti, kokį poveikį verslo vertimuose daro praeities įvykiai klientų pasitenkinimui.

Šią tezę sudaro trys pagrindinės dalys: esamos literatūros apžvalga, empiriniai tyrimai ir jų rezultatai, išvados ir rekomendacijos.

Literatūros apžvalgoje pateikiamos teorijos apie klientų pasitenkinimą ir apie tai, ką įvairūs mokslininkai laikė svarbiausiais jų protėviais, taip pat apie jų tarpusavio ryšius. Be to, šiame skyriuje pateikiama trumpa vertimo apžvalga ir paaiškinami jo niuansai.

Po literatūros peržiūros autorius atliko pagrindinių klientų pasitenkinimo verslo vertimais ir jų poveikio jiems pirmtakų tyrimą. Jis atliko daugiafazį mišrių metodų tyrimą. Jo pradinis etapas buvo tiriamasis, kuriame jis apklausė 10 pramonės ekspertų. Per pokalbius jis kreipėsi į ekspertus dėl savo pradinio mokslinių tyrimų modelio. Jie jį patvirtino ir pateikė įžvalgų apie veiksnius, turinčius įtakos kiekvienai konstrukcijai, t. y. suvokiamą kokybę ir suvokiamą vertę. Pirminis mokslinių tyrimų modelis buvo peržiūrėtas ir, remiantis peržiūrėtu mokslinių tyrimų modeliu, buvo parengtas klausimynas ir juo remiantis surinkti duomenys. Tada tyrėjas statistiškai išanalizavo šiuos atsakymus, kad nustatytų ryšį tarp pirmtakų ir įvertintų jų poveikį klientų pasitenkinimui. Tai atlikta naudojant SPSS programinę įrangą. Iš pradžių svarstyklių patikimumas buvo patikrintas naudojant Cronbach alfa, kuri visais trimis atvejais buvo  $> 0,6$  (0,969 – pirminio teksto klausimų kokybei, 0,887 – suprastraiems kokybės klausimams ir 0,659 – suprastraiems reikšmės klausimams). Pagal peržiūrėtą mokslinių tyrimų modelį, kurį sudarė trys tarpininkavimo keliai, tarpininkavimo analizė

buvo atlikta naudojant PROCESO makrokomandą. Tyrinėtojas nustatė, kad nors iš peržiūrėto mokslinių tyrimų modelio matyti, jog yra trys tarpininkavimo keliai, nė vienas iš jų iš tikrųjų neturėjo duomenų. Linijinės regresijos analizė parodė, kad suvokiama kokybė ir suvokiama vertė yra pirmtakai klientų pasitenkinimo dėl analizės, jis sukūrė galutinį klientų pasitenkinimo verslo vertimuose modelį [CSAT-BIZTRANS].

Galiausiai buvo sudaryta tikslinė grupė siekiant suprasti, kodėl galutiniame CSAT-BIZTRANS modelyje nėra šaltinio teksto kokybės, kuri buvo nepriklausomas kintamasis pagal peržiūrėtą mokslinių tyrimų modelį, ir kokie kiti galimi veiksniai galėtų būti. Kolegijos nariai tvirtino, kad nors pirminio teksto kokybė buvo labai svarbi galutinei vertimo kokybei, klientai nelaikė jos tiekėjų atžvilgiu, jei pristatyto vertimo kokybė nukentėjo dėl prastos pirminio teksto kokybės. Jų paminėti veiksniai, kurie galėjo sukelti nepaaiškinamą kaitą, buvo savalaikiškumas ir klientų aptarnavimas, kurie, deja, buvo įtraukti į modelį kitur, todėl autorius jų nelaikė galimais veiksniais.

Skyriuje apie išvadas ir rekomendacijas apibendrinamos pagrindinės literatūros peržiūros ir atliktų mokslinių tyrimų išvados, taip pat rekomendacijos, įskaitant rezultatų ir nuorodų taikymą tolesniems moksliniams tyrimams.



## ANNEX 1: DATA COLLECTION AND ANALYSIS FOR PHASE 1

The following table details the questions that were asked during the one-one interviews with select industry experts in Phase 1.

Table 12 Questions asked in one to one interviews

Question No	Question	Remarks
1	Please take a look at this figure. The inter-relations that this diagram depicts – as per your experience, is this correct?	Initial Research Model shared with interviewee, and constructs (Perceived Quality, Perceived Value) explained in case interviewee wanted clarification.
2	As per your experience, what are the key factors that determine Perceived Quality and Perceived Value?	
3	From your experience, can you please say if there is any other key parameter that affects Customer Satisfaction in Business Translations? If so, could you please specify what it is?	

## ANNEX 2: DATA COLLECTION AND ANALYSIS FOR PHASE 2

The questionnaire used to collect quantitative data:

---

Antecedents of Customer Satisfaction in Business Translations

**\*Required**

Dear respondent,

This is a short survey to collect data on antecedents (i.e., factors which determine) customer satisfaction in the translation industry from the perspective of the service provider. It has been kept short by design, and should not take more than 5-10 minutes of your time, per form. Please fill up the form separately for each translation project. This study seeks to enable translation delivery managers achieve their desired customer satisfaction levels through necessary upstream interventions. Your privacy is assured, no name or any other personally identifiable information will be disclosed.

I thank you for your support, it is truly appreciated. I commit to sending you the final results of my research work.

Regards,

Aumlan Guha

E-mail: [aumlan.guha@evaf.stud.vu.lt](mailto:aumlan.guha@evaf.stud.vu.lt)

Mobile (WA): +91 XXXXXXXXX33

1. What is the size of this translation project (no. of words that had to be translated)? \*

\_\_\_\_\_

2. What was the duration of this translation project? \* \_\_\_\_\_

3. What is the complexity level of this translation project? \* \_\_\_\_\_

4. Quality of Language of Source Text\*

Note: the factors to be considered would include clarity, consistency, presence (or absence) of errors, usage of (or absence of) culture-specific idioms and expressions, etc.

Poorest Quality 1 2 3 4 5 6 7 8 9 10 Best Quality

5. Quality of Terminology used in Source Text\*

Note: this refers to the following parameters – appropriateness, consistency, adequacy (right terms used for the right domain), etc,

Poorest Quality 1 2 3 4 5 6 7 8 9 10 Best Quality

6. Quality of Service as perceived by customer\*

Poorest Quality 1 2 3 4 5 6 7 8 9 10 Best Quality

7. Quality of Delivered Translation as perceived by customer\*

Poorest Quality 1 2 3 4 5 6 7 8 9 10 Best Quality

8. Functional Value as perceived by customer\*

Note: functional value is the utility as perceived by the customer that is derived from the target text, as a result of the work delivered.

Minimum Value 1 2 3 4 5 6 7 8 9 10 Maximum Value

9. Value added through innovation as perceived by customer\*

Note: innovation can refer to innovative practices used to manage the project, to innovation done in the translation process itself, any automation done that has benefited the customer etc.)

Minimum Value 1 2 3 4 5 6 7 8 9 10 Maximum Value

10. Level of Customer Satisfaction achieved\*

Lowest 1 2 3 4 5 6 7 8 9 10 Highest

---

Thank you so much for taking the time and effort to fill up this questionnaire. I truly appreciate it.



The output of the mediation analysis undertaken using PROCESS macro for SPSS is presented below.

---

Run MATRIX procedure:

\*\*\*\*\* PROCESS Procedure for SPSS Version 4.2 beta  
\*\*\*\*\*

Written by Andrew F. Hayes, Ph.D. [www.afhayes.com](http://www.afhayes.com)  
Documentation available in Hayes (2022).  
[www.guilford.com/p/hayes3](http://www.guilford.com/p/hayes3)

\*\*\*\*\*  
\*\*\*\*\*

Model : 4  
Y : CSAT  
X : QST  
M1 : PQ  
M2 : PV

Sample  
Size: 90

\*\*\*\*\*  
\*\*\*\*\*

OUTCOME VARIABLE:  
PQ

Model Summary	R	R-sq	MSE	F	df1	df2
p	.0520	.0027	.0490	.2388	1.0000	88.0000
.6263						

Model	coeff	se	t	p	LLCI
ULCI					
constant	9.8668	.1832	53.8587	.0000	9.5027
10.2308					
QST	.0099	.0202	.4886	.6263	-.0303
.0501					

\*\*\*\*\*  
\*\*\*\*\*

OUTCOME VARIABLE:  
PV

Model Summary

	R	R-sq	MSE	F	df1	df2
p	.1986	.0394	.0448	3.6132	1.0000	88.0000
	.0606					

Model

	coeff	se	t	p	LLCI
ULCI					
constant	9.6032	.1751	54.8412	.0000	9.2552
					9.9512
QST	.0368	.0193	1.9008	.0606	-.0017
					.0752

\*\*\*\*\*

\*\*\*\*\*

OUTCOME VARIABLE:

CSAT

Coding of binary Y for logistic regression analysis:

CSAT	Analysis
9.00	.00
10.00	1.00

Model Summary

	-2LL	ModelLL	df	p	McFadden	CoxSnell
Nagelkrk						
	11.9313	26.6894	3.0000	.0000	.6911	.2566
	.7355					

Model

	coeff	se	z	p	LLCI
ULCI					
constant	-101.2796	52.5938	-1.9257	.0541	-204.3616
					1.8023
QST	.5785	.5308	1.0899	.2758	-.4618
					1.6188
PQ	4.6537	4.6678	.9970	.3188	-4.4950
					13.8024
PV	5.4901	2.3380	2.3482	.0189	.9078
					10.0724

These results are expressed in a log-odds metric.

\*\*\*\*\* DIRECT AND INDIRECT EFFECTS OF X ON Y

\*\*\*\*\*

Direct effect of X on Y

Effect	se	Z	p	LLCI	ULCI
.5785	.5308	1.0899	.2758	-.4618	1.6188

Indirect effect(s) of X on Y:

	Effect	BootSE	BootLLCI	BootULCI
TOTAL	.2478	2.1238	-.0401	7.8271
PQ	.0460	.5263	-.1899	1.5074
PV	.2018	1.8981	.0000	6.8220

\*\*\*\*\* ANALYSIS NOTES AND ERRORS \*\*\*\*\*

Level of confidence for all confidence intervals in output:  
95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:  
5000

NOTE: Direct and indirect effects of X on Y are on a log-odds metric.

NOTE: Due to estimation problems, some bootstrap samples had to be replaced.

The number of times this happened was:  
122

----- END MATRIX -----

---

### ANNEX 3: DATA COLLECTION AND ANALYSIS FOR PHASE 3

Table 13 Guiding questions used to lead the focus group discussion

#	Question
1	<p>From the regression-based prediction model derived in Phase 2 of this study, Perceived Quality and Perceived Value are the key antecedents of Customer Satisfaction in Business Translations. The value of adjusted R-square for this model is 0.649 – in other words, around 35% of the variation in Customer Satisfaction is due to factors that are not appearing in this model.</p> <p>What other factors do you reckon could be influencing the Customer Satisfaction?</p>
2	<p>What do you think of the Quality of Source Text? Do you reckon it would have an important influence (the data analysed in Phase 2 indicated that the influence it has on Customer Satisfaction is minimal)?</p>

---