



Thematic Analysis of Interview Data in the Context of Management Controls Research

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Student Guide

Introduction

Erm ... finished transcribing my interviews, how can I analyze my data?

This is the most probable question a researcher asks him/herself once transcribing the interviews is completed. This exemplar illustrates how thematic analysis can be used to analyze interview data in relation to the research question/s developed in the study.

The development of this exemplar is based on the study titled “Design and implementation of management controls in an apparel organization: A case Study.” The selected case is a leading private apparel company in Sri Lanka. The study aims to explore how the design and implementation of management controls in an organization take shape amidst external organizational influences and internal dynamics. Its objective is twofold: to elaborate on how management controls of the selected case organization are influenced by the pressures of the organizational environment and how internal dynamics such as the culture and values of key actors of the organization influence the management controls.

Management controls (for example, budgeting, performance management systems, operational controls, etc.) are approaches and mechanisms that aim to regulate the behavior of members of an organization (Chenhall, 2003). They ensure that an organization obtains the required resources and uses them

effectively and efficiently in the accomplishment of its objectives. According to one stream of past management control literature (for example, Anthony & Govindarajan, 1998; Brignall & Modell, 2000; Collier, 2001; Uddin & Tsamenyi, 2005), management controls in an organization are designed and implemented according to the influence of external organizational pressures such as competitor action, government rules and regulations, and the guidance of professional bodies, etc. and in contrast, another stream (for example, Cowton & Dopson, 2002; Cruz, Major, & Scapens, 2009) suggests that management controls are designed and implemented according to the influence of organizational attributes such as key leaders' interests and organizational culture, etc.

However, the present study argues that management controls in an organization are simultaneously influenced by both of these internal and external facets and at the design and implementation stages of management controls of an organization. The single embedded case study approach (Yin, 2014) was used and evidence drawn from an apparel group company in Sri Lanka. It is a non-listed, privately owned entity that manufactures intimate apparel, sportswear, performance wear, and swimwear and provides specialized information technology solutions to the apparel and footwear industry worldwide. Its major customers are the United Kingdom and the United States. It was established in the 1980s and currently employs around 12,000 employees. Forty-two interviews with key members of the selected apparel group were conducted for the study.

Thematic Analysis

Thematic analysis was first developed by Gerald Holton in 1970s and has recently been accepted as a “distinctive method with a clearly outlined set of procedures in social science” (Braun & Clarke, 2013, p. 178). According to these authors, thematic analysis is a data analysis method that helps a researcher to identify themes and patterns of meanings across a dataset in relation to a particular

research question(s). They further state that this method can be used to analyze almost any kind of qualitative data such as interviews, focus groups, and qualitative surveys, using larger or smaller datasets. By employing this data analysis method, a researcher can capture complex, messy, and contradictory relationships that prevail in the real world. However, it is exciting and enriching as well as challenging (Attride-Stirling, 2001; Braun & Clarke, 2013;) because qualitative research can identify relationships and patterns emerging from the data and by doing so, the researcher can contribute to a particular domain of knowledge by locating the study findings within existing knowledge and if possible, by challenging them.

This data analysis method enables the researcher to identify commonly recognized patterns and relationships to meaningfully answer the research questions of the study. According to Braun and Clarke (2013), this method involves seven steps: transcription, reading and familiarization, coding, searching for themes, reviewing themes, defining and naming themes, and finalizing the analysis. The next sections of the example provide hands-on experience on how a researcher could engage in those steps in the thematic analysis.

Initial Steps: Transcribing, Reading, and Familiarization

Before proceeding to the analysis of qualitative data, the researcher has to be ready with the transcriptions. This refers to translating recorded data into written documents, and remember, this is a demanding process. However, there are transcription software featuring options to speed up and slow down the pace of the playback. To transcribe interview data, play the recording for a few seconds, type what you hear, and rewind it to avoid missing any data. Likewise, the researcher has to proceed very slowly and must remember it is not a quick and straightforward process. The transcription can be used as hard copy or soft copy depending on the researcher's interest and how he/she plans to do the analysis. If

it is to be done manually, it is better to take a hard copy to read it. If data analysis software such as NVivo is used, it is better to keep soft copies and read them.

Before stating the coding and identifying themes, the researcher has to be familiar with the data. This familiarization happens in the process of transcribing because listening, typing, and correcting familiarize the researcher with what the interviewees say. However, it is necessary to be very familiar with the data in order to notice things of interest. Therefore, a careful reading must be done keeping the theoretical lenses at the back of the mind, so the researcher can identify how these are echoed in the data. Braun and Clarke (2013) identify this as “analytical sensibility,” which refers to the skill of reading and interpreting data through the chosen theoretical lenses. Therefore, reading, rereading, and keeping records on noticeable aspects (for example, in interview data, there can be certain quotes that directly represent concepts in the theory; or else, there can be quotes that you never expected, showing emerging patterns) of the data must be done in the data itself (as a note below or above the quote or as a footnote) or in a separate document. At the end of this stage, the researcher gets an idea about the patterns and relationships of the data. Once the researcher is familiar with the data, he/she can move on to the coding, which is the next key step in thematic analysis.

Next: Move on to Coding

Coding refers to identifying all relevant pieces of data within the entire dataset to answer the research questions. According to Braun and Clarke (2013), “a code is a word or brief phrase that captures the essence of why you think a particular bit of data may be useful” (p. 207). Coding can be done manually or using software such as NVivo. These codes can be data-derived or researcher-derived codes. While data-derived codes provide a “succinct summary of the explicit content of the data” (Braun & Clarke, 2013, p. 207) and are labeled as *semantic* codes, the researcher-derived codes go beyond this, invoking conceptual and theoretical

frameworks to identify implicit meanings within the data, which are labeled *latent* codes. In other words, if the researcher expects to present participants' experience in a more realist and descriptive way, semantic codes are likely to be better. Otherwise, if the researcher expects to present the data underpinning the theoretical lenses, latent codes are more appropriate and they consist of more theoretical terms (Brauns, Clarke, & Terry, 2014). The researcher can select one of these coding techniques. In this research, a set of latent codes were developed based on the theoretical lens of the study. However, the researcher welcomed the data-driven codes (semantic codes) too. The list of codes used by the researcher are given in [Table 1](#). A researcher can start coding the transcripts with the latent codes, and in the process of coding, semantic codes can be identified. These semantic codes are the emerging data (unexpected interview quotes identified in the previous stage) and can be labeled with a name that is derived from the data itself. When such codes are identified, it is necessary to include them in the list of codes. Likewise, the list of codes can be expanded with emerging data-driven (semantic) codes. By welcoming these semantic codes, new theoretical relationships can be brought to the study because the initially taken theoretical lens alone would not explain new (emerging) patterns shown by these codes.

Table 1: List of Codes: Semantic Codes (Data-Driven) and Latent Codes (Researcher Driven).

Latent codes (researcher driven)	Semantic codes (data-driven)
1. Customer regulatory demands	1. Facing changes in the local industry
2. Customer quality and flexibility demands	2. Influence of community perception
3. Customer sensitivity to product price	3. Addressing lack of skills and less responsibility
4. Changing customer requirements	4. Influence of organized labor
5. Changing competitor conditions	

6. Influence of changing market conditions	
7. Global statutory rules	
8. Changing global rules and regulations	
9. Other industry influences	
10. Pulling-in professional support	
11. Influence of local rival companies	
12. Influence of local regulations	
13. Influence of local organized bodies	

As mentioned in the introduction, this dataset is based on the first part of the research aim: to elaborate on how management controls of the selected case organization are influenced by the pressures of the organizational environment. For the purpose of this exercise, this question is stated in very broad and straightforward terms:

- What are the pressures in the organizational environment and how do those pressures influence design and implementation of management controls in the selected case organization?

This research question captures both “*what influence*” from the organizational environment and “*how they influence*” on the design and implementation of management controls in the selected case. The first five (5) questions asked by the moderator in the interview guide were developed to capture this research question. Those questions and the answers to them given by a finance director and a production manager of the selected apparel group (see interview transcripts) and how coding was done is presented in the tables in [Figures 1 and 2](#).

Figure 1: Early Stage Coding in Thematic Analysis: Worked Example 1.

Data	Codes
(Q1) Moderator: What do you think about the apparel industry in Sri Lanka? Who are the customers, competitors, suppliers and influential parties and <i>what</i> is their influence on the business and management controls of the business? Finance Director: Global competition and GSP plus [Generalized System of Preferences] and the Trans-Pacific Trade Partnership have a direct impact on our operations, and on management controls. More than 60% of Sri Lankan apparel exports are to the United States and other Western countries. Our operations and controls have to focus on their demands in order to survive in the market. In the meantime, competition in the industry is increasing from emerging countries like Laos, Cambodia and Vietnam. So, our controls have always to focus on reducing costs and producing products at competitive prices. The economic environment of our country too is not supportive of the apparel industry because other industries such as tourism and hospitality are growing. Thus finding labour for the apparel industry will be difficult in about another five years because they expect simple and understandable controls on the workflow. When designing controls, we have to think about how to simplify them. So, if we don't go for proper management and controlling strategies and innovation we can't sustain the industry. We have to definitely rely on high end customers. The other influential parties in the apparel sector who influence implementation of controls would be trade unions and the work force because, if any controls are complex and impact on their workloads, they tend to reject or respond to them negatively by reducing production. Pressure groups and organizations concerned with the apparel trade such as the Wages Board of Sri Lanka, Chamber of Commerce, Sri Lanka Institute of Nano Technology, Sri Lanka Apparel Exporters Association, Sri Lanka Standards and Central Environmental Authority also come into play. For example, as a company operating under the Wages Board, we have to limit our work hours per week. Any control has to be designed and implemented considering this factor too.	Global statutory rules Customer regulatory demands Influence of changing market conditions Facing changes in the local industry Influence of community perception Facing changes in the local industry Influence of community perception Influence of organized labour Influence of local organized regulations Influence of local regulations
(Q2) Moderator: As you understand it, <i>how are</i> pressures from customers, global institutions and other pressurizing parties in the industry taken into account in designing and implementing control mechanisms within the organization? Finance Director: Customers are interested in compliance standards and impact our long term planning, and thus the budget, which is our main control mechanism. Customers have their own specifications in regard to the factory and it is very tough because a third party is involved in annual audits. In this industry it is the name of the game. Our controls are mainly designed according to our customers' quality and flexibility demands. The budget is our main controlling device. We start in October every year. Before we prepare the budget we do a SWOT [Strengths, Weaknesses, Opportunities and Threats] analysis through which we see the impact of customer trends, competitor actions and other parties' influence on the business and controls. The long range plan is also revisited at that time. Then, the budget and the long range planning are cascaded down to the workflow and the work floor level employees see these controls as Key Performance Indicators. But, at this stage controls have to be not controls but targets which appear easy to achieve and benefit the employee.	Customer regulatory demands Customers' quality and flexibility demands Changing customer requirements Changing competitor conditions Influence of community perception
(Q3) Moderator: What is the involvement of the consultants in designing and	

Figure 2: Early Stage Coding in Thematic Analysis: Worked Example 2.

Data	Codes
(Q1) Moderator: What do you think about the apparel industry of Sri Lanka? Who are the customers, competitors, suppliers and influential parties and <i>what</i> is their impact on the business and its management controls? Production Manager: The apparel industry in Sri Lanka has good potential as well as threats. As for opportunities, we can see some global customers are being attracted to the country, but the competition is increasing due to low cost production countries. That is why we try to differentiate the business. We do a Strengths, Weaknesses, Opportunities and Threats analysis and try to differentiate the business. Apparel market conditions have been changing, and the current trend is high technological, complex products. Therefore, we are re-directing the business and our control mechanisms help to do so. For example, the basic ... [product of the company] any one can do. But, complex technological [Product of the company] only very few can do. We actually have converted our production plant to a high tech, complex unit and have implemented related controls to maintain those requirements to face global competition and trends. By doing so we have brought the company out of the competition equation. Now we don't compete with those basic products. Thus, we have competition with high tech products. Another key issue of the apparel business in Sri Lanka is the dearth of labour due to the reluctance of people to join the garment industry because of the attractiveness of other fields. Therefore, the cost of labour becomes higher than the cost of machinery. So, in order to face that challenge, our organization is following different strategies with the help of our innovation team. In the meantime, a very critical issue about labour in the apparelsindustry is that they do not attempt to improve their skills. It has impacted on the control mechanisms of the company too. So, while trying to train them with different machines, the company focus is on implementing control mechanisms in a way that we can depend on machinesrather than on people.	Influence of changing market conditions Influence of changing market conditions Changing competitor conditions Addressing the lack of skills and responsibility
(Q2) Moderator: As you understand it, <i>how are</i> pressures from customers, global institutions and other pressurizing parties in the industry taken into account in designing and implementing control mechanisms within the organization? Production Manager: We do strategy formulation, budgeting and set other controls such as key performance indicators according to the pressures that you mentioned. As the production manager, I have my long-term vision. So I do a lot of market research on a regular basis. I identify the best 10 customers contributing to this market and I identify my customers. For example,... [one of their customers] is at the top of the list and he is one of my customers and I try to delight him and support him. The controls support me to do this. Thus, it is necessary to understand the market. We have emerging markets and developed markets. I develop this and I communicate it to other senior members. Without doing this we can't set strategies and controls. We have to know our customers' sensitivity to products prices, to decide on our revenue and cost streams in budgeting. Then, if you are in this industry we need to understand what the next level of technology is because we can't compete by producing the same product with the same technology in the face of rivalry. Then those things we strategize including the budget and other controls, and implement them. For example, when the market is volatile, we change our long-range plan and budgets in keeping with such volatility.	Customer sensitivity to product price Influence of changing market condition
(Q3) Moderator: What is the role of the consultants in designing and implementing best	Research

Next: Identifying Patterns: Codes to Themes (Sub-Themes and Themes)

Once the coding is completed in the entire dataset, it is time to look for patterns appearing within the data. In this regard, Braun and Clarke (2013) state that a pattern-based analysis allows the researcher to identify salient features of the data, which are meaningful in answering the research questions. In identifying which patterns are the most relevant for answering a particular research question, the frequency of appearance of a certain code is important. Nevertheless, there would be some codes that do not frequently appear but are meaningful for answering the research question. Therefore, the frequency as well as how important a certain code is to answer the research question has also to be considered at the stage of identifying patterns in the data. In this exemplar, the right-hand sides of [Figures 1](#) and [2](#) present the use of codes, and interview excerpts related to those codes are highlighted with the same color in the left columns of the tables. It shows that some codes frequently reappear and some do not. However, at the end of the coding, the frequency of code appearance might be changed. At the end of this stage, the researcher has to look at them carefully without considering frequency because certain codes that do not appear often may support the answer to the research question.

Next: Searching, Reviewing, and Finalizing Themes

The next step is to identify the broader patterns of the data that can be used to answer the research question. Themes and sub-themes can be identified by following the patterns of the data. According to Braun and Clarke (2006), a theme “captures something important about the data in relation to the research question, and represents some level of patterned responses or meaning within the data set” (p. 82). These patterns are broader than the codes because they contain many facets. These authors further state that a theme is a “central

organizing concept” (Braun & Clarke, 2013, p. 224), which is a collection of codes and is thus a collection of ideas or aspects that can be recorded under a specific theme. For example, in the dataset, the global customers of the selected apparel organization put direct pressures on company operations and thus on the design and implementation of management controls. Therefore, all customer-related influences on management controls are categorized under the sub-theme of *“Influence of global customers on design and implementation of management controls.”* A further example from the data shows that pressures from rival companies in the world also have an impact on company operations and thus on management controls. Therefore, a sub-theme titled *“Influence of global competition on design and implementation of management controls”* was identified. [Table 2](#) depicts how the collection of codes represents sub-themes and how such sub-themes can be categorized under main themes.

Table 2: Themes and Sub-Themes With Their Associated Codes.

Interview excerpts	Code	Sub-themes	Themes
Interview excerpts can be copied to this column. For example finance Director of Company A said “...”	Customer regulatory demands	Influence of global customers on design and implementation of Management Controls (MC)	Pressure of global environment on design and implementation of management controls in the company
	Customer quality and flexibility demands		
	Customer sensitivity to product price		
	Changing customer requirements		
	Changing competitor	Influence of the global competition on design and	

	conditions	implementation of MC	
	Influence of changing market conditions		
	Global statutory rules	Influence of global rules and regulations on design and implementation of MC	
	Changing global rules and regulations		
	Other industry influences	Influence of foreign experts on design and implementation of MC	
	Pulling-in professional support		
	Influence of local rival companies	Influence of local competition on design and implementation of MC	Pressure of local environment in design and implementation of management controls of the company
	Facing changes in the local industry	Influence of local community on design and implementation of MC	
	Influence of community perception		
	Addressing lack of skills and less responsibility		
	Influence of organized labor		
	Influence of	Influence of local rules and	

	local regulations	regulation on design and implementation of MC	
	Influence of local organized bodies		

The data can reveal some surprising relationships that had not been expected by the researcher at the level of developing codes. For example, in this study, the influence of the Sri Lankan working community on the management controls was not initially expected. However, the data revealed that the perception of the Sri Lankan community of jobs in the apparel sector has a direct impact on management controls in the selected case. Therefore, such data were coded with data-driven codes (Table 1) and finally identified under the particular sub-theme of *“Influence of local community on design and implementation of management controls”* (see Table 2).

A careful reading of those sub-themes and related data represented by codes revealed that those sub-themes can be categorized under two broader themes: *“Pressure of **global** environment on design and implementation of management controls”* and *“Pressure of **local** environment on design and implementation of management controls.”* Likewise, at this stage, a researcher must attempt to identify patterns of the data under sub-themes and themes.

Braun and Clarke (2013) state that there are a few points to be noted by the researcher at this stage. Firstly, the themes identified at this point might be provisional and subject to change under a supervisor’s advice or the researcher him/herself may recognize that the identified themes do not match the research questions. Therefore, Braun and Clarke (2013) encourage revising identified themes, if required. Secondly, themes do not have to cover everything in the data but instead have to be selective because qualitative research presents a story about the data in a way that addresses the research questions. Finally, a

qualitative researcher must understand that there can be analytical differences according to the different perspectives and theoretical influences of different people. A supervisor or a co-researcher may see those patterns in different ways. Remember, there is no right answer to the research questions in a qualitative study, but instead you have to always look for the best fit of the analysis to answer the research question/s.

Finally: Developing the Analysis

You have been spending a lot of time already in the analysis of data. Each provisional theme and related data collected through codes have now to be presented to tell the story of the data in relation to the research questions. From my experience, this story can be presented in two ways: either in a separate chapter, combined with relevant literature and the theories of the study in a later chapter; or else, the story/findings can be presented directly by integrating it with theory and past literature. This stage not only consumes considerable time but also requires being thorough with the theoretical lenses of the study and past scholarly literature because at this level, you locate your study in relation to the existing knowledge, and if possible challenge it, and contribute to the existing knowledge (Braun & Clarke, 2013; Clarke & Braun, 2013). In other words, the identified sub-themes and themes to be presented in the light of previous literature on the empirical issue concerned (in this case, “What are the external pressures in the organizational environment and how do those pressures influence design and implementation of management controls in the selected case?”). However, this presentation has to be done in light of the theoretical lens of the study, and there can be some themes that cannot be presented with the prevailing constructs of the theory or the identified themes may contradict the constructs in the theory. Therefore, some other theories could be integrated with the key theoretical lens of the study in order to elaborate the identified themes. By doing so, a new theoretical relationship could be explained (theoretical development), and this is a

contribution to existing knowledge (Bendassolli, 2013).

In relation to the worked example, at this final stage, the research question—"What are the external pressures in the organizational environment and how do those pressures influence design and implementation of management controls in the selected case?"—can be answered with the developed sub-themes and themes. It is evident that the management controls of the selected case are pressurized by several global factors (customers, competition, rules and regulations, and foreign experts) and a few local factors (rules and regulations, perceptions of the local working community and local competition). These pressures demand that the management controls of the selected case be of quality, innovative, flexible, and cost effective as well as simple and convenient. In the meantime, management controls have to be designed and implemented to meet those demands within the boundary of local and foreign rules and regulations.

Summary

This dataset exemplar is designed for studying the thematic analysis of interview data. Thematic analysis has been recognized as a distinctive method with a clearly outlined set of procedures in social science, which can be used to analyze almost any kind of qualitative data such as interviews, focus groups, and qualitative surveys, etc. and more importantly, with larger or smaller datasets. This method involves seven steps: transcription, reading and familiarization, coding, searching for themes, reviewing themes, defining and naming themes, and finalizing the analysis. This exemplar provides guidelines and hands-on experience for a qualitative researcher to engage in thematic analysis.

Reflective Questions

1. Taking the worked example as the guide, code provided interview transcripts (extra datasets 1 and 2). What are the possible data-driven codes (semantic codes) that can be identified?
 2. Considering all the provided data, what are the possible themes you can see emerging from the data?
 3. Considering the theoretical lenses of your own study, what are the possible codes that can be derived?
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Further Readings

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