



Munich Personal RePEc Archive

Glaserian Grounded Theory and Straussian Grounded Theory: Two Standard Qualitative Research Approaches in Social Science

Mohajan, Devajit and Mohajan, Haradhan

Department of Civil Engineering, Chittagong University of
Engineering Technology, Chittagong, Bangladesh, Department of
Mathematics, Premier University, Chittagong, Bangladesh

16 February 2023

Online at <https://mpra.ub.uni-muenchen.de/117017/>
MPRA Paper No. 117017, posted 11 Apr 2023 13:46 UTC

Glaserian Grounded Theory and Straussian Grounded Theory: Two Standard Qualitative Research Approaches in Social Science

Devajit Mohajan

Department of Civil Engineering, Chittagong University of Engineering &
Technology, Chittagong, Bangladesh

Email: devajit1402@gmail.com

Mobile: +8801866207021

Haradhan Kumar Mohajan

Department of Mathematics, Premier University, Chittagong, Bangladesh

Email: haradhan1971@gmail.com

Mobile: +8801716397232

Abstract

Grounded theory (GT) has appeared as a popular research approach in many branches of social science that acts for the well-being of society. It is an inductive methodology and focuses on the discovery of theory from data. Overtimes the original grounded theory of Barney Galland Glaser (1930-2022) and Anselm Leonard Strauss (1916-1996) has evolved, and two grounded theory variants: Glaserian grounded theory and Straussian grounded theory have emerged as qualitative approaches. When a novice qualitative researcher starts data collection on grounded theory; s/he cannot identify the differences between the two approaches. In this paper, some of the key differences and similarities between the two methods are illustrated. So, a confused researcher can easily select the desired grounded theory for his/her research version. In this study, an attempt has been taken to continue the grounded theory research smoothly when novice researchers face uncertainty during the research procedure.

Keywords: Qualitative approach, Glaserian grounded theory, Straussian grounded theory, novice researcher

1. Introduction

In the grounded theory (GT) research zone, the leading authors are Barney Glaser, Anselm Strauss, Juliet Corbin, and Kathy Charmaz; who have addressed critiques, advancements and clarifications towards the utility of the different types of grounded theory [Sebastian, 2019]. Both qualitative and quantitative data are used in a GT study [Tie et al., 2019]. GT is the generation of the theory that stresses human social behavior, which is grounded in data, and systemically collected through social research [Glaser, 1978]. Two US sociologists; Barney Galland Glaser (1930-2022) and Anselm Leonard Strauss (1916-1996) for the first time have developed the grounded theory in 1967 in qualitative social research through the publication of their book *The Discovery of Grounded Theory* [Glaser & Strauss, 1967]. Glaser has defined GT as “*a general methodology of analysis linked with data collection that uses a systematically applied set of methods to generate an inductive theory about a substantive area*” [Glaser, 1992]. GT is a systematic flexible method that emphasizes simultaneous data collection and analysis and finally provides tools for constructing theories [Charmaz, 2011]. It can be used by any theoretical perspective, and should therefore not be appropriated by any perspective [Glaser, 2005]. At present, it is a recognized methodology in many research studies [Mohajan, 2018b; Mohajan & Mohajan, 2023a].

The roots of GT lie in symbolic interactionism and researchers seek a form of meaning on the basis of data collection. A GT researcher spends enough time collecting data for the formulation of the research [Strauss & Corbin, 1990]. Symbolic interactionism is a sociological perspective that relies on the symbolic meaning that people ascribe to the processes of social interaction. It talks about the subjective meaning of people ad places on objects, behaviors, or events based on what they believe is true [Clarke, 2005]. In GT research analysis, Glaserian and Straussian

approaches are different in terms of paradigmatic dimensions, methodological dimensions, choice, and use of literature, research question formation, research analysis procedures, sampling analysis, the procedures for validating the resultant theory, etc. [Devadas et al., 2011].

In the 1990s, two authors Glaser and Strauss have shown methodological disagreements in some matters. Later, their ways of research are parted. Each route of its own “*versions*” of the original methodology is labeled “*Glaserian*” and “*Straussian*” respectively [Thulesius, 2019]. Both of them expose latent forms of human behavior [Tossy, 2015]. Glaser moves lonely to develop Classic Grounded Theory (cGT) [Glaser, 1992]; which is consistent, rigorous, and effective [Mohajan & Mohajan, 2022a]. It is a popular methodology in social sciences, which has explanatory power and is grounded in the reality. It uses theoretical sensitivity, coding, and constant comparative analysis of the data [Glaser, 1978; Charmaz, 2006]. Many authors have considered it a classical approach [Cooney, 2010].

On the other hand, Strauss proceeded with Juliet Corbin, a nurse researcher, to publish a landmark book *Basic of Qualitative Research: Grounded Theory Procedures and Techniques*. Strauss and Corbin are known as the second-generation grounded theorists and finally have developed Straussian grounded theory (SGT) [Strauss & Corbin, 1998; Timmermans & Tavory, 2012]. Glaserian version indicates the “*epistemological assumptions, logic, and systematic approach.*” Straussian variant shows the “*notions of human agency, emergent processes, social and subjective meanings, problem-solving practices, and the open-ended study of action to the grounded theory*” [Charmaz, 2014, 2017].

In this study, we want to discuss Glaserian grounded theory (GGT) or classic grounded theory (cGT) and Straussian grounded theory (SGT) in some detail [Charmaz, 2006; Mohajan, 2018b]. Both tacit and explicit knowledge sharing and transferring about SGT can improve the quality among novice researchers. On the

other hand, knowledge sharing is essential to improve organizational performance [Mohajan, 2016a, b, c, 2017a, b,c].

2. Literature Review

In any research, the literature review section is an introductory unit of research, where the works of previous researchers are highlighted [Polit & Hungler, 2013]. The literature review helps novice researchers to understand the subject, and it serves as an indicator of the subject that has been carried out before [Creswell, 2007]. Kailah Sebastian has shown that the GT methodology has developed into many perspectives, each underpinned by different ontological and epistemological assumptions. She has assured that GT researchers will easily identify and distinguish a chosen approach and its implications within research [Sebastian, 2019]. Nor Syafini Mohd Muhaiyuddin and her coauthors have wanted to show that GT researchers do not build their research on prearranged hypotheses. They have also indicated some groundbreaking and chronological grounded theory researchers, such as Glaser, Strauss, Corbin, Charmaz, and Judith Wuest, have adopted multiple philosophical and methodological settings to develop and evolve GT [Muhaiyuddin et al., 2016].

Kendra L. Rieger has briefly discussed the history and origins, philosophical perspective, role of the researcher, data and data analysis, and strengths and critique of GGT [Rieger, 2019]. Johanna C. van Niekerk and J. Dewald Roode have investigated the differences between the two methods: Glaserian GT and Straussian GT. They have realized that the two methods look very similar and a substantial number of researchers ignore the difference between these two approaches [van Niekerk & Roode, 2009]. Udaya Mohan Devadas and his coauthors have analyzed the similarities and differences between Glaserian GT and Straussian GT approaches in human resource development (HRD) research [Devadas et al., 2011]. Helen Heath and Sarah Cowley have compared the two approaches Glaserian GT and Straussian GT in relation to the roots and divergences, role of induction, deduction and verification, ways in which data are coded and the format of generated theory. They have noticed

that novice qualitative researchers sometimes become uncertain regarding the differences that exist in Glaserian GT and Straussian GT. They have not given priority to any of the two, instead, they have advised that novice researchers need to select the research method that best suits their cognitive style and proceed accordingly [Heath & Cowley, 2004].

Windy Rakhmawati has taken attempted to highlight three approaches in the GT methodology for novice researchers that consist of classic grounded theory, Straussian grounded theory, and constructivist grounded theory. She has tried to introduce different points of view regarding the philosophical position, role of literature review, and coding process in data analysis in nursing research [Rakhmawati, 2019]. Haradhan Kumar Mohajan analyzes the qualitative research methodology that is written for novice researchers. He has tried to describe in brief the core principles of GT. Later, he analyzed the origin and progress of global feminism which is a mass movement commenced by women of all groups to eradicate all forms of feminist oppression by men that are prevailing in a patriarchal society. He has also explored the development of four waves of feminism elaborately that act against women's abuse and oppression [Mohajan, 2018a, 2022a,b].

Devajit Mohajan and Haradhan Kumar Mohajan have observed that grounded theory is one of the most revolutionary and widespread methodologies in qualitative research methodology. They have discussed the classic GT and Strssian GT approaches that aim to generate a theory rather than using a pre-existing one [Mohajan & Mohajan, 2022a, 2023a,b]. They have analyzed the coding techniques that the grounded theory researchers follow when they develop qualitative research. Later, they developed memo-writing techniques within the framework of GT methodology of qualitative research in social sciences [Mohajan & Mohajan, 2022a,b,c]. They have also explored the constructivist grounded theory (CGT) that is developed by American sociologist Kathy Charmaz. They have observed that feminist theory can easily be augmented the GT research and can serve society more than any researcher of other variants of GT [Mohajan & Mohajan, 2022d,e].

3. Research Methodology of the Study

The research design is the plan of the researchers to develop a research area that is underpinned by philosophy, methodology, and method [Tie et al., 2019]. The methodology is the guideline of research work. In any research, it is an organized procedure that follows scientific methods efficiently [Kothari, 2008]. It is the research design that shapes the selection and use of particular data generation and analysis methods [Crotty, 1998]. Research methodology is a strategy for planning, arranging, designing and conducting fruitful research confidently [Legesse, 2014]. It tries to develop logic to generate a theory that is a procedural framework within which the research is conducted [Remenyi et al., 1998]. It helps to identify research areas and projects to perform the research efficiently and successfully [Blessing et al., 1998]. A genuine researcher describes his/her ontological, epistemological and methodological assumptions properly [Hofweber, 2020]. S/he also tries to reflect his/her philosophical beliefs and interpretations of the world before the starting research [Crotty, 1998]. Reliability and validity are the two most important and fundamental features for the evaluation of research [Mohajan & Mohajan, 2022a-j, 2023a-q].

In this study, we have confined ourselves to two versions of grounded theory, such as Glaserian version and Straussian version of GT. Straussian version is developed based on a symbolic interactionist perspective to the methodology, where the reality is constructed through language, symbols, and social interactions [Blumer, 1969]. To prepare this article we have used secondary data sources that are collected from published and unpublished data sources [Mohajan et al., 2012, 2013]. We have used books by famous authors, handbooks, and theses. We have also collected valuable information from websites and the [Islam et al., 2009a,b, 2010, 2011, 2012a,b,c, Mohajan, 2011a,b, 2012a-f, 2013a-g, 2014a-g, 2015a-e, 2016a,b, 2017a-e, 2018a-e, 2020a-e, 2021a-d, 2022a-d, Rahman & Mohajan, 2019, Roy et al., 2009].

4. Objective of the Study

The objective of every research is to advance, refine and expand existing knowledge to reach a new conclusion. The chief objective of this paper is to discuss aspects of Glaserian grounded theory and Straussian grounded theory. Some other specific objectives are;

- to highlight on the foundation of GT,
- to focus on both Glaserian GT and Straussian GT, and
- to compare both versions.

5. Basis of Grounded Theory

Kathy Charmaz defines GT as “*a method of conducting qualitative research that focuses on creating conceptual frameworks or theories through building inductive analysis from the data*” [Charmaz, 2006]. Glaser and Judith Holton have defined GT as “*a set of integrated conceptual hypotheses systematically generated to produce an inductive theory about a substantive area*” [Glaser & Holton, 2004]. Strauss and Corbin define GT as a “*theory that was derived from data, systematically gathered and analyzed through the research process*” [Strauss & Corbin, 1998].

Two US sociologists; Barney Galland Glaser (1930-2022) and Anselm Leonard Strauss (1916-1996) are considered the fathers of the GT. In 1967, they have published the book *The Discovery of Grounded Theory* [Glaser & Strauss, 1967]. Since the inception of GT, both of the authors have constantly tried to improve it till the passing of Strauss in 1996. Glaser was educated by the positivist paradigm, whereas Strauss was with an interpretivism background [Glaser, 1992; Charmaz, 2006]. GT is a multivariate process that happens sequentially, subsequently, simultaneously, serendipitously, and in a scheduled manner [Tossy, 2015]. It is well-known for the detection and explanation of social phenomena about what is happening [Haig, 1995]. It tries to present a simplified procedure to collect rich and unbiased data for developing a theory that is grounded in the research. It takes attempts to

bridge the gap between research and theory [Glaser & Strauss, 1967]. It constructs theory from data, which are systematically obtained and analyzed using comparative analysis and grounded in the research [Tie et al., 2019].

In GT, the researcher is considered a neutral observer and can objectively discover data with an open and impartial mind [Glaser, 2005]. GT has two distinctive aspects, namely constant comparative analysis and theoretical sampling [Glaser & Strauss, 1967]. The roots of the grounded theory lied in symbolic interactionism [Heath & Cowley, 2004]. The term “*symbolic interactionism*” was invented by American sociologist Herbert Blumer (1900-1987) in 1937 [Blumer, 1937]. It guarantees the researcher greater freedom to explore the research area [Bryant, 2002]. It is particularly popular in nursing research, but it soon spreads to other fields, such as in healthcare, education, sociology, physiotherapy, anthropology, psychology, management, information systems, business, management, computer science, and many other such branches [Smith, 2011].

Overtimes distinct assumptions and many complexities arose in GT research area. As a result, for improvement and evolvement, the classification of GT becomes an essential part of this field [Sebastian, 2019]. In the 1990s, Strauss began to work together with his new collaborator Juliet Corbin [Strauss & Corbin, 1998]. However, Glaser remains determined in the original GT [Glaser, 1992]. Glaser believes in a “*true reality*”, on the other hand, Strauss believes in “*constructive reality*” [Glaser, 1992; Corbin & Strauss, 2008].

6. Glaserian Version

The Glaserian grounded theory (GGT) or classic grounded theory (cGT) is a unique inductive straightforward research method, which has remained largely consistent over the years [Bryant, 2009; Thulesius, 2019]. When a GGT researcher discovers a theory, it will be relevant, workable, modifiable, and essential criteria for further grounded theory research [Cooney, 2010]. It tries to create hypotheses and theories

about the experiences of people, rather than testing and validating the existing theories [van Veggel, 2022]. It uses theoretical sensitivity, coding, and constant comparative analysis of the data [Glaser, 1978]. It has a unique language, criteria for rigor, and procedures that are inviolate and cannot be mixed with other iterations of GT [Birks & Mills, 2014]. In GGT, the categories and theory emerge through the analysis and constant comparison of the data [Glaser, 2009].

For validating in GGT, Glaser has focused on four criteria: fit, relevance, work, and modifiability [Glaser, 1992, 1998]. GGT is closer to the postpositivism paradigm that relates to critical realism ontologically, modified objectivist epistemology, and methodologically discovers theory [Annells, 1997; Devadas et al., 2011). Glaser is obstinate that GT should not be changed and theory simply emerges from the actual data [Bryant & Charmaz, 2007]. Glaser has remained true to this commitment, emphasizing induction and theory emergence [Heath & Cowley, 2004]. The researchers who approve of the Glaserian version find the more open method of data analysis for liberating [Boychuk-Duchescher & Morgan, 2004].

7. Straussian Version

In 1987, Strauss has realized that induction, deduction, and verification are “*absolutely essential*” [Strauss & Corbin, 1990]. In the 1990s, Strauss began to work together with Juliet Corbin, where they applied a more interpretivist approach to the methodology. In 1990, they have published a book entitled *Basics of Qualitative Research: Grounded Theory Procedures and Techniques* that split the pathways of future research works between Strauss and Glaser [Corbin & Strauss, 2008]. Both of the authors worked collaboratively until the death of Strauss in 1996. In 1998, Strauss (posthumous) and Corbin have modified their initial approach to data analysis [Strauss & Corbin, 1998]. They have used a variety of techniques, such as validity, reliability, credibility, plausibility and value of the theory, adequacy of the research process, and the empirical grounding of the research process [Corbin & Strauss, 2008].

Strauss stresses the importance of deduction and verification and suggests that the role of induction has been overstated [Byrant & Charmaz, 2007; Heath & Cowley, 2004]. The researchers who follow the Straussian version are generally attracted by the clearer guidelines for data analysis [Heath & Cowley, 2004].

For validating in SGT, Corbin and Strauss have focused on validity, reliability, credibility, plausibility and value of the theory, adequacy of the research process, and the empirical grounding of the research process. They strongly support constructivism. SGT has taken a form of relativist ontologically, and subjectivist epistemologically [Corbin & Strauss, 2008; Devadas et al., 2011].

Straussian GT reflects a shift toward social constructivist ontology and postmodernism that is more compatible with current thinking. It aims to produce a theory that fits the situation, aids understanding and guides action and practice [Corbin & Strauss, 2008; Annells, 1997]. Glaser accuses and claims that the Straussian version is no longer a GT, but “*forced, full conceptual description*”. He stresses that Strauss’s version is no longer remains a GT, but a completely different method [Glaser, 1992].

8. Comparison between Glaserian and Straussian GT

Both GGT and SGT are different in terms of the paradigmatic dimensions, formulation of research questions, analysis procedures used, usage of literature, and sampling procedures [Devadas et al., 2011]. Glaserian grounded theory (GGT) identifies ontologically and modifies objectivist epistemology, and then methodologically discovers theory by verifying it using sequential research. But SGT prefers it to be called “*constructivists*” and shaped it as relativist ontologically, subjectivist epistemologically, has recognized the interactive nature of the inquirer and the participants, and has placed it in a constructivist paradigm of inquiry [Annells, 1997].

In SGT, the researchers should adopt a literature review in the revision of data. But the GGT strongly opposed the use of literature review [Corbin & Strauss, 2008; Devadas, 2011]. In GGT, the theory is grounded in the data, and the researcher is passive, and exhibits disciplined restraint. On the other hand, in SGT, the theory is interpreted by an observer and the researcher is active. GGT is the basis on emerging theory, with neutral questions and SGT is founded on forcing the theory, with structured questions [Jones & Alony, 2011]. In 1998, Glaser observed that research on GGT is complicated for novice researchers [Glaser, 1998].

The GGT stresses the interpretive, contextual and emergent nature of theory development [Glaser, 1992]. Glaser believes that any specific philosophical setting can lessen the wider potential of GT research procedures [Strauss & Corbin, 1990; Charmaz, 1995]. On the other hand, SGT stresses very complex and systematic coding procedures and certifies a preliminary literature study to recognize research problems [Strauss & Corbin, 1998].

Novice researchers often face the dilemma of two approaches; Glaserian GT and Straussian GT, and cannot find differences between them. Sometimes they are unsure of how to analyze their data when they run through GT research [Glaser, 1998; Strauss & Corbin, 1998; Heath & Cowley, 2004]. They must find out “*about the process of researching through learning in the process of carrying out the research*” [Freshwater, 2000]. On the other hand, experienced researchers do not mix the research data, and easily can choose their research area and proceed accordingly [Heath & Cowley, 2004]. SGT can be particularly difficult for novice researchers. But, most of the GT researchers feel that the Straussian variant is more suitable than the Glaserian one [Douglas, 2004]. Novice researchers should not start research with a preconceived theory, rather begins with an area of study and allows the theory to emerge from the data [Strauss & Corbin, 1998]. To some experts, SGT is research bias. Moreover, it seems time-consuming, and laborious process to the SGT researchers [Timonen et al., 2018]. Both of the methods support theoretical sampling, coding, and constant comparison methods [Devadas et al., 2011].

9. Conclusion

In this study, we have observed that Glaserian GT and Straussian GT methods have a few similarities but there are many differences. The similar properties are; both generate theory grounded in the data and both require the researcher to conceptualize. On the other hand, different properties are realized in initial considerations, coding techniques, memo writing, analysis principles, etc. In the 21st century popularity of the Glaserian grounded theory and Straussian grounded theory is increasing day by day and more new researchers with previous researchers are joining worldwide in both of the research fields. Both Glaserian grounded theory and Straussian grounded theory have moved the researchers to be enthusiastic and driven toward finding the right answers to the right questions. They are often uncertain about the analysis of collected data. We have highlighted the Glaser version and Strauss version with the similarities and differences in the versions. We hope the new researchers will be benefited from this article and can develop themselves through the research in any one of the two versions that are interesting to them.

References

- Anells, M. (1997). Grounded Therapy Method, Part 2: Options for Users of the Method. *Nursing Inquiry*, 4(3), 176-180.
- Birks, M., & Mills, J. E. (2014). *Grounded Theory: A Practical Guide* (2nd Ed.). Sage Publications Ltd, London.
- Blumer, H. (1937). Social Psychology. In E.P. Schmidt, (Ed.), *Man and Society*. Prentice-Hall, Englewood Cliffs, NJ.
- Blumer, H. (1969). *Symbolic Interactionism: Perspective and Method*. Berkeley, CA: University of California Press.
- Blessing, L. T. M., Chakrabarti, A., & Wallace, K. M. (1998). An Overview of Descriptive Studies in Relation to a General Design Research Methodology. In E. Frankenberger, P. Badke-Schaub & H. Birkhofer (Eds.), *Designers: The Key to Successful product Development*. Berlin: Springer Verlag.

- Boyчук-Duchscher, J. E., & Morgan, D. (2004). Grounded Theory: Reflections on the Emergence vs. Forcing Debate. *Journal of Advanced Nursing*, 48(6), 605-612.
- Bryant, A. (2002). Re-Grounding Grounded Theory. *Journal of Information Technology Theory and Application*, 4(1), 25-42.
- Bryant, A. (2009). Grounded Theory and Pragmatism: The Curious Case of Anselm Strauss. *Forum: Qualitative Social Research*, 10(3). Art. 2.
- Bryant, A., & Charmaz, K. (2007). Grounded Theory in Historical Perspective: An Epistemological Account. In A. Bryant, & K. Charmaz (Eds.), *The Sage Handbook of Grounded Theory*, pp. 31-57. Thousand Oaks, CA: Sage Publications.
- Charmaz, K. (1995). Between Positivism and Postmodernism: Implications for Methods. *Studies in Symbolic Interaction*, 17, 43-72.
- Charmaz, K. (2006). *Constructing Grounded Theory: A Practical Guide Through Qualitative Analysis*. Los Angeles, CA: SAGE Publications.
- Charmaz, K. (2011). A Constructivist Grounded Theory Analysis of Losing and Regaining a Valued Self. In Wertz, F. J., Charmaz, K., McMullen, L. J., Josselson, R., Anderson, R., and McSpadden, E. (Eds), pp. 165-204. *Five Ways of Doing Qualitative Analysis: Phenomenological Psychology, Grounded Theory, Discourse Analysis, Narrative Research, and Intuitive Inquiry*. Guilford Press, New York.
- Charmaz, K. (2014). *Constructing Grounded Theory* (2nd Ed.). London: SAGE Publications.
- Charmaz, K. (2017). Continuities, Contradictions, and Critical Inquiry in Grounded Theory. *International Journal of Qualitative Methods*, 16, 1-8.
- Clarke, A. (2005). *Situational Analysis: Grounded Theory after the Postmodern Turn*. Thousand Oaks, CA: SAGE.
- Cooney, A. (2010). Choosing between Glaser and Strauss: An Example. *Nurse Researcher*, 17(4), 18-28.
- Corbin, J., & Strauss, A. (2008). *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory* (3rd Ed.). Thousand Oaks, CA: Sage Publications.
- Creswell, J. W. (2007). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. Thousand Oaks, CA: Sage Publications.
- Crotty, M. (1998). *The Foundation of Social Research: Meaning and Perspective in the Research Process*. Thousand Oaks, CA: SAGE.

- Devadas, U. M., Silong, A. D., & Ismail, I. A. (2011). The Relevance of Glaserian and Straussian Grounded Theory Approaches in Researching Human Resource Development. *2011 International Conference on Financial Management and Economics*, Volume 11, pp. 348-352, IACSIT Press, Singapore.
- Douglas, D. (2004). Grounded Theory and the ‘and’ in Entrepreneurship Research. *Electronic Journal of Business Research Methods*, 2(2), 59-68.
- Ferdous, J., & Mohajan, H. K. (2022). Maximum Profit Ensured for Industry Sustainability. *Annals of Spiru Haret University. Economic Series*, 22(3), 317-337.
- Freshwater, D., (2000). Transformatory Learning in Nurse Education: A Reflexive Action Research Study. *PhD Dissertation*, University of Nottingham, Nursing Praxis International, Southsea, Hants.
- Glaser, B. G. (1978). *Theoretical Sensitivity: Advances in the Methodology of Grounded Theory*. Mill Valley, CA: The Sociology Press.
- Glaser, B. G. (1992). *Basics of Grounded Theory Analysis*. Sociology Press, Mill Valley, CA, USA.
- Glaser, B. G. (1998). *Doing Grounded Theory: Issues and Discussions*. Sociology Press, Mill Valley, CA, USA.
- Glaser, B. G. (2005). *The Grounded Theory Perspective III: Theoretical Coding*. Sociology Press Mill Valley, CA, USA.
- Glaser, B. (2009). *Jargonizing Using the Grounded Theory Vocabulary*. Mill Valley, CA: Sociology Press.
- Glaser, B. G., & Strauss, A. L. (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research*. New York: Aldine de Gruyter.
- Glaser, B. G., & Holton, J. (2004). Remodeling Grounded Theory. *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research*, 5, 1-22.
- Haig, B. D. (1995). Grounded Theory as Scientific Method. In A. Neiman (Ed.), *The Philosophy of Education's 1995 Yearbook*. Champaign, IL: Philosophy of Education Society.
- Heath, H., & Cowley, S. (2004). Developing a Grounded Theory Approach: A comparison of Glaser and Strauss. *International Journal of Nursing Studies*, 41(2), 141-150.

Hofweber, T. (2020). *Logic and Ontology*. The Stanford Encyclopedia of Philosophy. Metaphysics Research Lab, Stanford University.

Islam, J. N., Mohajan, H. K., & Moolio, P. (2009a). Preference of Social Choice in Mathematical Economics. *Indus Journal of Management & Social Sciences*, 3(1), 17-38.

Islam, J. N., Mohajan, H. K., & Moolio, P. (2009b). Political Economy and Social Welfare with Voting Procedure. *KASBIT Business Journal*, 2(1), 42-66.

Islam, J. N., Mohajan, H. K., & Moolio, P. (2010). Utility Maximization Subject to Multiple Constraints. *Indus Journal of Management & Social Sciences*, 4(1), 15-29.

Islam, J.N.; Mohajan, H. K., & Moolio, P. (2011), Output Maximization Subject to a Nonlinear Constraint, *KASBIT Business Journal*, 4(2), 104-120.

Islam, J. N., Mohajan, H. K., & Datta, R. (2012a). Aspects of Microfinance System of Grameen Bank of Bangladesh. *International Journal of Economics and Research*, 3(4), 76-96.

Islam, J. N., Mohajan, H. K., & Datta, R. (2012b). Stress Management Policy Analysis: A Preventative Approach. *International Journal of Economics and Research*, 3(6), 1-17.

Islam, J. N., Mohajan, H. K., & Moolio, P. (2012c). Borda Voting is Non-manipulable but Cloning Manipulation is Possible. *International Journal of Development Research and Quantitative Techniques*, 2(1), 28–37.

Jones, M., & Alony, I. (2011). Guiding the Use of Grounded Theory in Doctoral Studies: An Example from the Australian Film Industry. *International Journal of Doctoral Studies*, 6, 95-114.

Kothari, C. R. (2008). *Research Methodology: Methods and Techniques* (2nd Ed.). New Delhi: New Age International (P) Ltd.

Legesse, B. (2014). *Research Methods in Agribusiness and Value Chains*. School of Agricultural Economics and Agribusiness, Haramaya University.

Mohajan, D., & Mohajan, H. K. (2022a). Mathematical Analysis of SEIR Model to Prevent COVID-19 Pandemic. *Journal of Economic Development, Environment and People*, 11(4), 5-30.

Mohajan, D., & Mohajan, H. K. (2022b). Utility Maximization Analysis of an Emerging Firm: A Bordered Hessian Approach. *Annals of Spiru Haret University. Economic Series*, 22(4), 292-308.

Mohajan, D., & Mohajan, H. K. (2022c). Sensitivity Analysis among Commodities and Coupons during Utility Maximization. *Frontiers in Management Science*, 1(3), 13-28.

Mohajan, D., & Mohajan, H. K. (2022d). Importance of Total Coupon in Utility Maximization: A Sensitivity Analysis. *Law and Economy*, 1(5), 65-67.

Mohajan, D., & Mohajan, H. K. (2022e). Development of Grounded Theory in Social Sciences: A Qualitative Approach. *Studies in Social Science & Humanities*, 1(5), 13-24.

Mohajan, D., & Mohajan, H. K. (2022f). Exploration of Coding in Qualitative Data Analysis: Grounded Theory Perspective. *Research and Advances in Education*, 1(6), 50-60.

Mohajan, D., & Mohajan, H. K. (2022g). Memo Writing Procedures in Grounded Theory Research Methodology. *Studies in Social Science & Humanities*, 1(4), 10-18.

Mohajan, D., & Mohajan, H. K. (2022h). Constructivist Grounded Theory: A New Research Approach in Social Science. *Research and Advances in Education*, 1(4), 8-16.

Mohajan, D., & Mohajan, H. K. (2022i). Feminism and Feminist Grounded Theory: A Comprehensive Research Analysis. *Journal of Economic Development, Environment and People*, 11(3), 49-61.

Mohajan, D., & Mohajan, H. K. (2022j). Profit Maximization Strategy in an Industry: A Sustainable Procedure. *Law and Economy*, 1(3), 17-43.

Mohajan, D., & Mohajan, H. K. (2023a). Sensitivity Analysis among Commodities and Prices: Utility Maximization Perceptions. *Law and Economy*, 2(2), 1-16.

Mohajan, D., & Mohajan, H. K. (2023b). Straussian Grounded Theory: An Evolved Variant in Qualitative Research. *Studies in Social Science & Humanities*, 2(2), 33-40.

Mohajan, D., & Mohajan, H. K. (2023c). Sensitivity Analysis between Lagrange Multipliers and Consumer Coupon: Utility Maximization Perspective. *Frontiers in Management Science*, 2(1), 14-25.

Mohajan, D., & Mohajan, H. K. (2023d). Utility Maximization Analysis of an Organization: A Mathematical Economic Procedure. *Law and Economy*, 2(1), 1-15.

Mohajan, D., & Mohajan, H. K. (2023e). Classic Grounded Theory: A Qualitative Research on Human Behavior. *Studies in Social Science & Humanities*, 2(1), 1-7.

Mohajan, D., & Mohajan, H. K. (2023f). Sensitivity Analysis between Commodity and Budget: Utility Maximization Case. *Law and Economy*, 2(3), 10-21.

Mohajan, D., & Mohajan, H. K. (2023g). Sensitivity Analysis for Profit Maximization with Respect to Per Unit Cost of Subsidiary Raw Materials. *Frontiers in Management Science*, 2(2), 13-27.

Mohajan, D., & Mohajan, H. K. (2023h). Families of Grounded Theory: A Theoretical Structure for Novel Researchers. *Studies in Social Science & Humanities*, 2(1), 56-65.

Mohajan, D., & Mohajan, H. K. (2023i). Broca Index: A Simple Tool to Measure Ideal Body Weight. *Innovation in Science and Technology*, 2(2), 21–24.

Mohajan, D., & Mohajan, H. K. (2023j). Obesity and Its Related Diseases: A New Escalating Alarming in Global Health. *Journal of Innovations in Medical Research*, 2(3), 12–23.

Mohajan, D., & Mohajan, H. K. (2023k). Body Mass Index (BMI) is a Popular Anthropometric Tool to Measure Obesity among Adults. Unpublished Manuscript.

Mohajan, D., & Mohajan, H. K. (2023l). A Study on Body Fat Percentage for Physical Fitness and Prevention of Obesity: A Two Compartment Model. Unpublished Manuscript.

Mohajan, D., & Mohajan, H. K. (2023m). Ponderal Index: An Important Anthropometric Indicator for Physical Growth. Unpublished Manuscript.

Mohajan, D., & Mohajan, H. K. (2023n). Long-Term Regular Exercise Increases $\dot{V}O_2\text{max}$ for Cardiorespiratory Fitness. *Innovation in Science and Technology*, 2(2), 38-43.

Mohajan, D., & Mohajan, H. K. (2023o). Sensitivity Analysis between Lagrange Multipliers and Consumer Budget: Utility Maximization Case. *Annals of Spiru Haret University. Economic Series*, 23(1), 167-185.

Mohajan, D., & Mohajan, H. K. (2023p). Sensitivity Analysis for Utility Maximization: A Study on Lagrange Multipliers and Commodity Coupons. *Journal of Economic Development, Environment, and People*, 12(1), 25-40.

Mohajan, D., & Mohajan, H. K. (2023q). Economic Situations of Lagrange Multiplier When Cost of Various Inputs Increases for Nonlinear Budget Constraint. *Studies in Social Science & Humanities*, 2(4), 40-64.

Mohajan, H. K. (2011a). Greenhouse Gas Emissions Increase Global Warming. *International Journal of Economic and Political Integration*, 1(2), 21-34.

Mohajan, H. K. (2011b). The NNP and Sustainability in Open Economy: Highlights on Recent World Economy and on Open Economy of Bangladesh. *KASBIT Business Journal*, 4(2), 32–47.

- Mohajan, H. K. (2012a). Green Marketing is a Sustainable Marketing System in the Twenty First Century. *International Journal of Management and Transformation*, 6(2), 23-39.
- Mohajan, H. K. (2012b). Aspects of Green Marketing: A Prospect for Bangladesh. *International Journal of Economics and Research*, 3(3), 1-11.
- Mohajan, H. K. (2012c). *Importance of Green Marketing at Present and Future*. Lambert Academic Publishing, Germany.
- Mohajan, H. K. (2012d). Greenhouse Gas Emissions of the USA. *Indus Journal of Management & Social Sciences*, 6(2), 132-148.
- Mohajan, H. K. (2012e). Relation between Lease Finance and Purchase. *International Journal of Economics and Research*, 3(3), 146–158.
- Mohajan, H. K. (2012f). Air Pollution Causes Health Effects and Net National Product of a Country Decreases: A Theoretical Framework. *International Journal of Development Research and Quantitative Techniques*, 2(2), 3–10.
- Mohajan, H. K. (2013a). Economic Development of Bangladesh. *Journal of Business Management and Administration*, 1(4), 41-48.
- Mohajan, H. K. (2013b). Ethiopia: A Socio-economic Study. *Journal of Business Management and Administration*, 1(5), 59-74.
- Mohajan, H. K. (2013c). Friedmann, Robertson-Walker (FRW) Models in Cosmology. *Journal of Environmental Treatment Techniques*, 1(3), 158-164.
- Mohajan, H. K. (2013d). *Global Greenhouse Gas Emissions and Climate Change*. Lambert Academic Publishing, Germany.
- Mohajan, H. K. (2013e). Poverty and Economic Development of Kenya. *International Journal of Information Technology and Business Management*, 18(1), 72-82.
- Mohajan, H. K. (2013f). Global Food Price Hike is a Burden to the Poor. *International Journal of Information Technology and Business Management*, 19(1), 1–15.
- Mohajan, H. K. (2013g). Food, Agriculture and Economic Situation of Bangladesh. MPRA Paper No. 54240. <https://mpra.ub.uni-muenchen.de/54240/>
- Mohajan, H. K. (2014a). Greenhouse Gas Emissions of China. *Journal of Environmental Treatment Techniques*, 1(4), 190–202.

- Mohajan, H. K. (2014b). Chinese Sulphur Dioxide Emissions and Local Environment Pollution. *International Journal of Scientific Research in Knowledge*, 2(6), 265-276.
- Mohajan, H. K. (2014c). The Most Fatal 2014 Outbreak of Ebolavirus Disease in Western Africa. *American Journal of Epidemiology and Infectious Disease*, 2(4), 101-108.
- Mohajan, H. K. (2014d). Improvement of Health Sector in Kenya. *American Journal of Public Health Research*, 2(4), 159–169.
- Mohajan, H. K. (2014e). Food and Nutrition of Bangladesh. *Peak Journal of Food Science and Technology*, 2(1), 1-17.
- Mohajan, H. K. (2014f). Gravitational Collapse of a Massive Star and Black Hole Formation. *International Journal of Reciprocal Symmetry & Theoretical Physics*, 1(2), 125–140.
- Mohajan, H. K. (2014g). General Upper Limit of the Age of the Universe. *ARPJ Journal of Science and Technology*, 4(1), 4–12.
- Mohajan, H. K. (2015a). Sustainable Development Policy of Global Economy. *American Journal of Environmental Protection*, 3(1), 12-29.
- Mohajan, H. K. (2015b). Present and Future of Nestlé Bangladesh Limited. *American Journal of Food and Nutrition*, 3(2), 34-43.
- Mohajan, H. K. (2015c). Basic Concepts of Differential Geometry and Fibre Bundles. *ABC Journal of Advanced Research*, 4(1), 57-73.
- Mohajan, H. K. (2015d). Tuberculosis is a Fatal Disease among Some Developing Countries of the World. *American Journal of Infectious Diseases and Microbiology*, 3(1), 18-31.
- Mohajan, H. K. (2015e). Generalization of Euler and Ramanujan's Partition Function. *Asian Journal of Applied Science and Engineering*, 4(3), 167–190.
- Mohajan, H. K. (2016a). An Analysis of Knowledge Management for the Development of Global Health. *American Journal of Social Sciences*, 4(4), 38-57.
- Mohajan, H. K. (2016b). Global Hyperbolicity in Space-time Manifold. *International Journal of Professional Studies*, 1(1), 14–30.
- Mohajan, H. K. (2017a). Roles of Communities of Practice for the Development of the Society. *Journal of Economic Development, Environment and People*, 6(3), 27–46.
- Mohajan, H. K. (2017b). Two Criteria for Good Measurements in Research: Validity and Reliability. *Annals of Spiru Haret University Economic Series*, 17(3), 58-82.

- Mohajan, H. K. (2017c). Optimization Models in Mathematical Economics. *Journal of Scientific Achievements*, 2(5), 30-42.
- Mohajan, H. K. (2017d). A Brief Analysis of de Sitter Universe in Relativistic Cosmology. *Journal of Scientific Achievements*, 2(11), 1–17.
- Mohajan, H. K. (2017e). Development of Einstein’s Static Cosmological Model of the Universe. *Journal of Scientific Achievements*, 2(7), 18-30.
- Mohajan, H. K. (2018a). Qualitative Research Methodology in Social Sciences and Related Subjects. *Journal of Economic Development, Environment and People*, 2(1), 19-46.
- Mohajan, H. K. (2018b). *Aspects of Mathematical Economics, Social Choice and Game Theory*. PhD Dissertation, Jamal Nazrul Islam Research Centre for Mathematical and Physical Sciences (JNIRCMPS), University of Chittagong, Chittagong, Bangladesh.
- Mohajan, H. K. (2018c). The Rohingya Muslims in Myanmar are Victim of Genocide! *ABC Journal of Advanced Research*, 7(1), 59-72.
- Mohajan, H. K. (2018d). Medical Errors Must be Reduced for the Welfare of the Global Health Sector. *International Journal of Public Health and Health Systems*, 3(5), 91-101.
- Mohajan, H. K. (2018e). Analysis of Food Production and Poverty Reduction of Bangladesh. *Annals of Spiru Haret University Economic Series*, 18(1), 191–205.
- Mohajan, H. K. (2020a). Quantitative Research: A Successful Investigation in Natural and Social Sciences. *Journal of Economic Development, Environment and People*, 9(4), 50–79.
- Mohajan, H. K. (2020b). COVID-19–The Most Fatal Pandemic Outbreak: An Analysis of Economic Consequences. *Annals of Spiru Haret University Economic Series*, 20(2), 127-146.
- Mohajan, H. K. (2020c). The COVID-19 in Italy: Remedies to Reduce the Infections and Deaths. *Malaysian Journal of Medical and Biological Research*, 7(2), 59-66.
- Mohajan, H. K. (2020d). Most Fatal Pandemic COVID-19 Outbreak: An Analysis of Economic Consequences. *Annals of Spiru Haret University Economic Series*, 20(2), 127-146.
- Mohajan, H. K. (2020e). Circular Economy can Provide a Sustainable Global Society. *Journal of Economic Development, Environment and People*, 9(3), 38-62.
- Mohajan, H. K. (2021a). *Aspects of Global COVID-19 Pandemic*. Lambert Academic Publishing, Germany.

- Mohajan, H. K. (2021b). Global COVID-19 Pandemic: Prevention and Protection Techniques. *Journal of Economic Development, Environment and People*, 10(1), 51-72.
- Mohajan, H. K. (2021c). Estimation of Cost Minimization of Garments Sector by Cobb-Douglass Production Function: Bangladesh Perspective. *Annals of Spiru Haret University. Economic Series*, 21(2), 267-299.
- Mohajan, H. K. (2021d). Product Maximization Techniques of a Factory of Bangladesh: A Sustainable Procedure. *American Journal of Economics, Finance and Management*, 5(2), 23-44.
- Mohajan, H. K. (2022a). Four Waves of Feminism: A Blessing for Global Humanity. *Studies in Social Science & Humanities*, 1(2), 1-8.
- Mohajan, H. K. (2022b). An Overview on the Feminism and Its Categories. *Research and Advances in Education*, 1(3), 11-26.
- Mohajan, H. K. (2022c). Cost Minimization Analysis of a Running Firm with Economic Policy. *Annals of Spiru Haret University. Economic Series*, 22(3), 317-337.
- Mohajan, H. K. (2022d). Mathematical Analysis of SIR Model for COVID-19 Transmission. *Journal of Innovations in Medical Research*, 1(2), 1-18.
- Mohajan, H. K., Datta, R., & Das, A. K. (2012). Emerging Equity Market and Economic Development: Bangladesh Perspective. *International Journal of Economics and Research*, 3(3), 128-145.
- Mohajan, H. K., Islam, J. N., & Moolio, P. (2013). *Optimization and Social Welfare in Economics*. Lambert Academic Publishing, Germany.
- Moolio, P., Islam, J. N., & Mohajan, H. K. (2009). Output Maximization of an Agency. *Indus Journal of Management and Social Sciences*, 3(1), 39-51.
- Muhaiyuddin, N. S. M., Bakar, H. S. A., & Hussin, H. (2016). The Multiple Approaches of Grounded Theory: Justification for Straussian Version. *International Journal of Science and Technology*, 2(1), 186-196.
- Polit, D. F., & Hungler, B. P. (2013). *Essentials of Nursing Research: Methods, Appraisal, and Utilization* (8th Ed.). Philadelphia: Wolters Kluwer/Lippincott Williams and Wilkins.
- Rahman, M. M., & Mohajan, H. K. (2019). Rohingya-The Stateless Community Becoming the Lost Generation. *Journal of Economic Development, Environment and People*, 8(2), 24-36.

- Rakhmawati, W. (2019). Understanding Classic, Straussian, and Constructivist Grounded Theory Approaches. *Belitung Nursing Journal*, 5(3), 111-115.
- Remenyi, D. S. J., Swartz, E., Money, A., & Williams, B. (1998). *Doing Research in Business and Management: An Introduction to Process and Method*. Sage Publications, London.
- Rieger, K. L. (2019). Discriminating among Grounded Theory Approaches. *Nursing Inquiry*, 26, e12261.
- Roy, L., Molla, R., & Mohajan, H. K. (2021). Cost Minimization is Essential for the Sustainability of an Industry: A Mathematical Economic Model Approach. *Annals of Spiru Haret University Economic Series*, 21(1), 37-69.
- Sebastian, K. (2019). Distinguishing Between the Types of Grounded Theory: Classical, Interpretive and Constructivist. *Journal for Social Thought*, 3(1), 1-9.
- Smith, M. (2011). *Research Methods in Accounting*. London: Sage Publications.
- Strauss, A. L., & Corbin, J. (1990). *Basics of Qualitative Research: Grounded Theory Procedures and Techniques*. Newbury Park, CA: Sage Publications.
- Strauss, A. L., & Corbin, J. (1998). *Basics of qualitative research: Techniques and Procedures for Developing Grounded Theory (2nd Ed.)*. Newbury Park, CA: Sage Publications.
- Thulesius, H. (2019). How Classic Grounded Theorists Teach the Method. *Grounded Theory Review*, 18(1), 13-28.
- Tie, Y. C., Birks, M., & Francis, K. (2019). Grounded Theory Research: A Design Framework for Novice Researchers. *SAGE Open Medicine*, 7, 1-8.
- Timmermans, S., & Tavory, I. (2012). Theory Construction in Qualitative Research: From Grounded Theory to Abductive Analysis. *Sociological Theory*, 30(3), 167-186.
- Timonen, V., Foley, G., & Conlon, C. (2018). Challenges When Using Grounded Theory: A Pragmatic Introduction to Doing GT Research. *International Journal of Qualitative Methods*, 17, 1-10.
- Tossy, T. (2015). Doing Classic Grounded Theory Methodology in Information Systems Research: How to Create and Sustain Transparency? *International Journal of Computing and ICT Research*, 8(2), 22-31.

van Niekerk, J. C., & Roode, J. D. (2009). Glaserian and Straussian Grounded Theory: Similar or Completely Different? *SAICSIT'09*, 96-103. <https://doi.org/10.1145/1632149.1632163>

van Veggel, N. (2022). Using Grounded Theory to Investigate Evidence Use by Course Leaders in Small-Specialist UK HEIs. Pre-print. <https://doi.org/10.35542/osf.io/fyvmb>