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Qualitative Research in Agricultural Economics: Paradigm, Purposes, and Evaluation Criteria

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Abstract

The qualitative paradigm is not widely discussed in agricultural economics, although research strategies are applied. The purpose of this contribution is (1) to elaborate on the paradigm of qualitative research; (2) to introduce purposes of qualitative research and provide examples; and (3) to discuss criteria of scientific rigor applicable.

Keywords: agribusiness management, problem solving research, methodology, qualitative research methods, grounded theory, ethnography, case study, quality criteria, evaluation

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Econometric modeling and other quantitative approaches have become the main focus of research and publications in agricultural economics. Debertin and Pagoulatos show an increase in publications using quantitative methods in the “American Journal of Agricultural Economics” from under 5% in 1950 to more than 92% in 1992. The marginal category of “non-quantitative methods” comprises theoretical as well as conceptual contributions, and verbal analyses. Qualitative research as understood in other social sciences is virtually non-existent in the AJAE.

Although not the disciplinary ideal, qualitative research approaches are tacitly thriving in the profession wherever complex problem sets require timely decision support. Researchers involved in problem solving and subject matter research (Johnson) are applying selected methods out of the qualitative umbrella while working on real world problems. “While methodological pronouncement is narrow, practice is wide” (Lindblom, p. 512).

Qualitative research approaches lend themselves to different purposes and questions. Qualitative phases are part of almost any research project. Areas of significant application are:

- description and interpretation of new or not well researched issues;
- theory generation, theory development, theory qualification, and theory correction;
- evaluation, policy advice, and action research;
- research directed at future issues.

The nature of Qualitative Inquiry

Qualitative research can hardly be defined in ways agricultural economists are used to. Most researchers involved in qualitative research are avoiding an explicit definition or even denounce it (Potter). Reasons are the dynamic of the field in conjunction with its diversity, which hinder an analytic definition. The qualitative paradigm is still emerging, and the complexity of the field points to more than one paradigm to be established.

An introductory text would define per opposition, qualitative research versus quantitative research. Strauss and Corbin describe qualitative research as any research that produces results not based on statistical procedures or different kinds of quantification. Simplifying the field in this way can be misleading. The dichotomy of realist epistemology combined with numerical methods and constructivist epistemology in combination with non-numeric methods is no longer valid. Empirical research shows different mixtures of techniques, only loosely coupled with epistemological stances. The most innovative work can hardly be categorized at all.

Van Maanen sees qualitative research as an umbrella comprising an array of interpretative procedures. These techniques aim to describe, decipher, translate, or in different ways manage the meaning, not the frequency, of more or less natural occurrences and interactions in the social and cultural world.

Empirically, the following features characterize most qualitative research approaches of some significance in the field (see Patton; Lincoln and Guba; Glaser and Strauss).

Holistic perspective: Reduction of a complex system to the sum of its parts does not sufficiently model interdependencies. A system has to be analyzed as a whole and cannot be meaningfully portrayed by a few discrete variables and linear cause-and-effect relationships.

Dynamic systems: Process is the focus of qualitative research. Change is constant on every layer of prospective analysis, whether on the individual level or for an entire society.

Naturalistic approach: Unmodified realistic situations as they evolve are the subject of analysis. Controlling manipulations and reactivity are to be avoided. The ideal is openness for whatever presents itself, and avoidance of unnecessary constraints and predetermined results. Exemptions are found in the context of action research.

Emergent design: The research design is not predetermined by decisions before the beginning of the empirical stage. The design evolves with growing understanding of the issue under scrutiny. It responds to changes of the situation and follows new leads to discovery.

Case orientation and purposeful sampling: Each case is unique. Therefore during the first stage of analysis the individual cases are described in detail. The quality of case comparisons depends on the quality of the analysis of the individual cases. The selection of further cases is contingent on the results of these first analyses. The objective of the sampling procedure is to incorporate different perspectives and situations in the research.

Researchers as research instrument: Researchers need direct contact with the researched, the situations under study, and the phenomena. They need to be up close. Experiences and insights of the researchers are a significant part of the research and critical to the understanding of the phenomena. Researchers are regarded as the key instrument of qualitative research (Bogdan and Biklen).

Empathic neutrality: This feature might be the most disputed. Researchers are required to be aware of their own bias, bracket their personal agenda, and not to take sides. Simultaneously, the researcher's personal experience and empathic insights are relevant data for an encompassing understanding of the phenomena. The objective is a neutral non-judgmental attitude whatever contents emerge. On the other hand, conflicts with fundamental ethical principles, e.g., when observing criminal behavior, might develop. Also, critical purposes of research, such as the change agent function in action research, could be jeopardized when adhering to neutrality. Critical theory, standpoint research, or action research are examples of approaches that represent a different attitude.

Qualitative data: Data are gathered or generated in diverse ways: Observations, interviews, archival documents, including books, diaries, letters, historical reports, newspapers and other media, e.g. video tapes, and data quantified for different purposes, such as census data. Research is supposed to go in depth with detailed, encompassing, dense and thick descriptions, direct citations, gaining the perceptions and the perspectives of the researched from the inside. Throughout the research project the original verbatim of the participant's statements will be preserved.

Inductive analysis: Details and characteristics of the data are examined in depth, in search of relevant categories, dimensions and relationships. Non theoretically deduced hypotheses are tested but open-ended questions are explored. The temporary gap between data collection and data analysis is not conducive to this kind of analysis. In an iterative feedback process, the analysis starts as early as possible to direct the further research process. Like a funnel, the analysis is more open and vague in the beginning and becomes focused and specific as the process proceeds.

Context sensitivity: Results are presented in their social, historical, and temporal context. The possibility of time and location independent generalizations is doubted. Each field experiment and even each laboratory experiment possesses qualitative attributes in this sense. In agricultural science, climate data and soil analyses etc. are a required part of the description of the conditions under which certain results have been established. These results are not necessarily valid in different circumstances. What holds in the natural sciences cannot safely be ignored in the social sciences.

Qualitative research strategies

The number of research strategies summarized under the umbrella of qualitative research has increased significantly in the past two decades and is still increasing. Each additional field that works more intensely with these methods gives them a new twist, adds ideas, and develops its own techniques (Denzin and Lincoln). Miles and Huberman, authors of one of the leading reference texts in the field, state that between the first edition in 1984 and the second edition in 1994 the base material has tripled.

In lieu of a comprehensive overview of qualitative research strategies the more relevant ones are enumerated below.

Hermeneutic, phenomenology, and heuristic research: Hermeneutic and phenomenology have been considered as sort of the theoretical basis of most of the qualitative research strategies (Moustakes, Patton). Some sprawls still view them as the ideals of a typical interpretative research strategy. The researcher as an individual is the central focal point for these approaches. Heuristics – in this sense – is the organized and systematic exploration of the human experience (Van Manen).

Naturalistic inquiry: Applied most frequently in the United States, naturalistic inquiry is mainly used in evaluation research. Focus is on the actions, utterances, and perceptions of the actors that are to be captured unobtrusively and unbiased. The aim is staying as close to the original context as possible. On its simplest level, naturalistic inquiry provides dense descriptions of people and their interactions in their natural setting. One of the most important quality criteria for naturalistic inquiry is therefore authenticity (Lincoln and Guba).

Ethnomethodology: Ethnomethodological research focuses on the details of everyday life (Garfinkel). The analysis is not aimed at “what” happens in the certain section of reality, but at “how” it happens: How is a generally accepted definition of what happens agreed upon between different members of a group? An example is employees of a large organization filling out a questionnaire, which would not be taken as factual data

but as an example of how routine behavior (filling out questionnaires) is managed in this specific organization or subgroup.

Grounded theory: Grounded theory has the objective of developing theories that are grounded in systematically gathered and analyzed data. First published in the sixties by Glaser and Strauss, grounded theory can be considered as the best-known and widest spread qualitative research strategy in the social sciences in the United States. However, applications in agricultural economics are rare.

Ethnography: Originally an anthropological approach, ethnographic research has been adopted early in sociology (e.g., Agar; Hammersley and Atkinson). Today ethnographies are common in most of the social sciences, ranging from rural sociology to organizational theory, with the exception of agricultural economics.

Qualitative case study: The case study approach is a classical research approach, which has attracted much discussion during the past 15 years (Stake, Yin). The discussion centers around the use of case study as a research strategy and suitable criteria for the quality of case study research. This discussion has recently begun in the discipline, mainly in the agribusiness research context (Sterns et al., Westgren and Zering).

Participatory action research: Action research aims at planned change of the researched situation during or through the research process. Participative action research includes the stakeholders in the research and decision process. Participative action research has been widely applied in research in developing countries (Whyte). It is also prevailing in consulting projects in organizational and community research.

The next two sections are dedicated to two significant and widespread research strategies, which are rarely applied in agricultural economic research: grounded theory and ethnography. Both strategies have an untapped potential to enrich research in the discipline. The following descriptions and examples are providing evidence for this proposition.

Grounded theory

Grounded theory is the master metaphor of qualitative research. Although it might not be considered appropriate by the founders of the theory, many researchers choose it to justify different research approaches (Lee and Fielding).

Collection and analysis of data are closely related and done in constant alteration. But theory generation is not based on the raw data; it is based on concepts and categories being developed out of the raw data. The selection of the sample depends on the emerging theory, the concepts extracted and their characteristics. Systematic variation of conditions is the leading objective. Data collection continues until theoretical saturation. Theoretical saturation means that with continuing collection and analyses no new concepts are developed and additional data do not require changes in conditions, characteristics or consequences of the existing categories (Strauss and Corbin).

Analysis uses the method of constant comparison. After noting an event it is compared to other events with respect to communalities and differences. Constant comparison helps explain patterns and variations. During the research process hypotheses about the relationships between categories are developed and tested. They are revised and

qualified until they pertain to all the data material. One of the quality control procedures is the search for negative cases and qualifying material (Glaser and Strauss).

The example of a study with a grounded theory approach is from the Minnesota Innovation Research Program (Schroeder et al.). Three administrative innovations and four product innovations were researched, along with hybrid wheat. Several research methods were applied. Historical case studies based on interview material and archival information were supplemented by baseline data for each innovation. The development process of the innovations was observed, including semi-annual surveys of all key persons, research diaries about the participation at regular management committee meetings for each innovation and interviews with all participating researchers.

Results showed six core events to be characteristic of all analyzed innovation processes:

- a dramatic change as the starting event;
- proliferation to a critical mass of innovations;
- inevitable setbacks and unexpected developments, used as learning opportunities;
- linking of established order and innovative change;
- restructuring, such as changes in responsibilities, team work or control systems;
- and top management involvement throughout the innovation process.

A model based on these characteristics describes successful and less successful innovation processes realistically. Differing from the well known sequential stage models of innovation, actual innovation processes were more complex because divergence,

parallel and convergence processes happened at the same time. While some of these processes were interdependent, others were disjunctive and independent. The proposed model based on grounded theory research led to a better understanding of reality and conceptualizing of adequate supporting measures for innovation processes.

Ethnography

Hammersley and Atkinson (p. 2) call ethnography the most basic form of social research. This is not only because it has a long history, but also because of its similarity to the routine way in which people make sense of the world in everyday life. Ethnographic research centers on the concept of culture. Different cultures exist simultaneously; they cannot be evaluated from an outside standpoint but have to be understood in terms of themselves. Prerequisite for this understanding is in-depth, prolonged first-hand-knowledge.

“Ethnography [...] aims, among other things, to describe what one needs to know in order to engage with a society’s members in all their activities in a manner that meets their standards of acceptable performance. Such knowledge is what is technically meant by a people’s ‘culture’. Like a language or a game, a culture is something one has to learn in order to describe it. Ethnography is, therefore, an exercise in the systematic learning and presentation of what people are expected to know. [...] Ethnography is as applicable to what farmers have to know, aeronautical engineers have to know, elementary school educators have to know, or religious specialists have to know to perform acceptably by their respective standards [...]” (Goodenough, p. 40 f.).

Participant observation is the core method of ethnographic research, although complemented by interviews, more or less standardized questionnaires, archival materials etc. Daily activities of the group of people under scrutiny are the focus of ethnography. The researcher establishes a relationship with them, participates in the activities, and observes what is happening.

The next step of analysis is the concentration on events and actions that the researcher does not understand fully. These so-called rich points (Agar) are the peculiar material of ethnography. Rich points show where the momentary understanding is insufficient and assumptions are inadequate. The researcher proceeds by the principle of coherence, that is, a context is procured that allows recognizing the actions as meaningful. Researchers do not assume that the researched are irrational or disorganized but that the knowledge gained is not enough to understand them, yet.

An example of the contributions of this kind of research is a study of the social organization of industrial agriculture in California (Thomas). Three large salad-growing enterprises were examined. Data collection included historic documents, unstructured in-depth interviews with key individuals of the industry (producers, managers, industry agents, union officials, active and retired workers), a structured questionnaire administered to 152 harvest workers on different pay schemes, and participant observation (4 months of field work during salad harvest).

The study was able to contribute to the understanding of the relationship between citizenship and organization of work, and showed how the reservoir of illegal workers

affected organization and remuneration of work in the long run. Particularly significant are the following specific results: Age, general work experience, industry experience and even job experience do not result in any measurable pay differential for the harvest workers. Undocumented aliens, the most vulnerable workers, tend to be doing the most skilled work. Citizens, the best protected workers, tend to do the least skilled, mechanically controlled work. Documented aliens are distributed between the different levels. Managers, workers, and union officials involved suggest that undocumented workers put out more effort than other workers. This corresponds with the workers' own view as is exemplified in the following citation.

“You are damned right we work harder. We have to. We have no protections and no laws to look out for us. If we did and if *la migra* would stop chasing us down, we could make a decent living without having to work so hard. ... The growers know we have no choices so we have to work hard to keep our jobs” (Thomas, p. 127).

Criteria for evaluation of qualitative research

The impressionistic evidence of the preceding examples should have prepared the ground for the conclusion that criteria for the evaluation of qualitative research cannot be easily transferred from quantitative research. Scientific rigor has to be reformulated to deal with qualitative research adequately. In addition, different criteria such as research ethics, responsibility, and consequences of research have to be considered, as the state of the discussion in qualitative research hints at merger of ethical with epistemological criteria (Lincoln).

The diversity of the qualitative research community is reflected in the variety of approaches to criteria for the evaluation of research. For the purpose of this paper only two major threads are discussed, the authenticity criteria as an example of criteria based on a constructivist epistemology and the criteria of trustworthiness being reformulations of the realist epistemology's criteria of rigor.

Authenticity criteria

Authenticity criteria respond to the need of satisfying a different paradigm of research than the traditional realist one. Their field of application lies mainly in evaluation research, naturalistic inquiry, and action research. Focus is on the consequences of the research process and results for the participants and stakeholders, and whether their rights have been respected. Criteria of authenticity stated by Guba and Lincoln are as follows.

Fairness: Have different perspectives been taken into account and are they portrayed in a balanced way? Have all stakeholders been identified and value conflicts been made explicit? Have all participants been fully informed and consented to the process and the results, including conclusions and recommendations?

Ontological authenticity: Did the study contribute to improving the perspectives of the participants? Did the participants gain more information and a more balanced view?

Educative authenticity: Have the participants reached a better understanding of perspectives that differ from their own group? Are they able to recognize different standpoints and accept how these can lead to different solutions?

Catalytic authenticity: Did the researcher(s) communicate the research results and explain possible consequences? Has the research increased the awareness of the participants and stakeholders of possible courses of action?

Tactical authenticity or empowerment: Have all stakeholders been empowered to act through the research process or are benefits limited to clients or sponsors? Catalytic authenticity aims at the willingness to act, whereas tactical authenticity refers to the practical realization of the developed ideas.

Trustworthiness criteria

Criteria of trustworthiness are also called parallel criteria because they mirror the criteria of internal validity, external validity, reliability, and objectivity. Re-conceptualizations of these criteria for a qualitative research context are discussed as credibility, transferability, dependability, and confirmability (Guba and Lincoln).

Credibility: Internal validity refers to the accordance of research results with an objective reality. This so-called correspondence theory of truth has been rejected by the theory of knowledge, independent of the research paradigm. Statements can only be compared to other statements. Truth or proximity to truth are not provable. Therefore in a qualitative research context correspondence with reality is replaced by correspondence of the perspectives of the participants with the description of their perspectives by the researcher. Guba and Lincoln elaborate on several techniques to ensure credibility.

Prolonged engagement: Has the researcher spent enough time on the research site?

Persistent observation: Has the researcher done in-depth study to gain detail?

Peer debriefing: Has the researcher engaging in an on-going discussion with non contractually engaged peers during the research process?

Negative case analysis: Have hypotheses been refined to account for all known cases?

Progressive subjectivity: Have the researcher's conceptions changed during the process?

Member checks: Have data and interpretations been re-checked with the participants?

Transferability: Transferability parallels external validity and generalizability. It refers to the degree to which research results can be applied to a context apart from where they were gained. The similarity between sending and receiving context has to be determined for this purpose. Different from quantitative research techniques the burden of proof shifts from the researcher to the person who wants to apply the research results. The researcher facilitates this process through "thick description" and purposeful sampling. Thick description (Geertz) is not only dense and rich in detail, but an interpretive description, which includes the intentions of the actors. The purposeful sampling procedure ensures that typical as well as untypical cases are included.

Dependability: Matching the concept of reliability, dependability refers to the stability of findings over time. Would the research results be the same, were the study replicated with the same or similar participants in a similar context? As qualitative studies often feature an emergent design, changes in hypotheses, concepts, and even the focus of the research project are a sign of a maturing and successful research process. In a quantitative context changes of methods and techniques would jeopardize reliability. In a qualitative context these changes are expected but have to be kept track of. Detailed and

comprehensive documentation of the research process and every methodological decision ensure the dependability of research findings.

Confirmability: Parallel to objectivity, confirmability deals with the issue of bias and prejudices of the researcher. Data, interpretations, and findings are supposed to be anchored in individuals and contexts apart from the researcher. While objectivity emphasizes value freedom, confirmability relies on the explication of values. In a quantitative research project objectivity is ensured through following methodological rules, although these rules usually leave room for subjective decisions and bias (Gephart). The integrity of qualitative research is based upon the data themselves. Quality assurance of the research process, again, depends on the elaborate documentation of the research process. The audit trail should allow data to be tracked to their sources.

Conclusion

Although differences between the parallel criteria for evaluation of research under the quantitative or the qualitative paradigm are apparent, a number of qualitative researchers would prefer more specific criteria to be applied to their research. Consent on uniform criteria has not been agreed upon. Even within the qualitative paradigm different research traditions might require different criteria. If exchange and cross-fertilization between quantitative and qualitative research is accepted as a valid objective, a common language is needed to further understanding between both. Making qualitative research more accessible for agricultural economists, as introduced and discussed in this paper, contributes to this objective.

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