

Methodologies for practical relevance and transmission: Case Studies

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Abstract

This article summarizes relevant references that are useful when conducting case study research. The reader will find in this article a first approach to understand what a case study is, what type of research is best constructed with case studies, and how to efficiently build case studies.

This essay includes a definition of case study and the main considerations a researcher should manage in his interaction with the field of research. Concerning case studies construction, we include sections on data gathering, data treatment and analysis and data validity. Cross-case analysis is also addressed for the purpose of possible multi-case study research projects.

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Case Studies: Some initial considerations

Case Studies: What are we talking about?

According to Leonard-Barton (1990), «A case study is a history of past or current phenomenon, drawn from multiple sources of evidence. It can include data from direct observation and systematic interviewing as well as from public and private archives. In fact, any fact relevant to the stream of events describing the phenomenon is a potential datum in a case study, since context is important».¹ Yin (1994) adds that a case study is a complete research strategy which allows questions such as ‘how’ and ‘why’ to be studied. This strategy is moreover applicable to processes or to phenomena which have not yet been studied in depth. The following table, contributed by Yin (1994), allows us to see which research strategies are the most adequate depending on the situations studied and the type of questions asked in relation to these situations.

Table 1
Relevant situations for different research strategies (Yin, 1994)²

Research strategy	Form of research questions	Requires control over behavioural events?	Focuses on contemporary events?
Experiment	How, why	Yes	Yes
Survey	Who, what, where, how many, how much	No	Yes
Archival analysis	Who, what, where, how many, how much	No	Yes / No
History	How, why	No	No
Case study	How, why	No	Yes

¹ Leonard-Barton (1990), p. 249.

² Yin (1994), p. 6.

In relation to the **design and the carrying out of case studies**, an initial distinction made by Yin (1994) concerns the single case option versus the multiple case option. A second distinction can be found between the cases which only have one unit of analysis and those which have multiple units of analysis. Yin (1999) also offers a series of basic characteristics which should be taken into account for the design of case studies:³

- A definition based on the design of the study (unit of analysis, context levels, etc.) rather than on any data collection system
- Generalizations through theoretical replication rather than through statistical samples
- A definition of the unit of analysis. According to Peterson (1998), «such a unit is needed to answer the question of what is that social actors separate from context, objectify, jointly interpret, and seek to learn from».⁴
- An operational vision (logical model – ‘patterns’ of hypothetical cause-effects) of the case study, which helps to identify the priority points to be monitored
- A flexible state of mind open to continuous discovery
- The use of rival explanations as a key strategy
- Data collection originating from multiple sources and leading to triangulations
- A distinction between the evidence (the facts) and the interpretations, which entails the creation of a database.

Pettigrew (1997) lists the **main failings** which can appear in relation to the carrying out of case studies:

- Simply descriptive case studies, ignoring theoretical references

³ Yin, R. K. (1999) “Enhancing the Quality of Case Studies in Health Services Research.” *Health Services Research*, 34(5) (part II, December): 1209-1224.

⁴ Peterson, M. F. (1998) “Embedded Organizational Events: The Units of Process in Organization Science.” *Organization Science*, 9(1): 16-33. In: Yin (1999).

- Lack of links to the existing conceptual frameworks
- Lack of comparison with similar empirical results
- Lack of specification of the object and of the research question
- Limited explanation of the data sources
- Omission of an explanation of the specificities of the data analysis
- Absence of a positioning of the results of the case or of the conceptual frameworks in the debates of the scientific field
- Lack of explanation concerning the scientific or social contributions.

Pettigrew (1997) also stresses that the result of a case study can be formalized according to the following **four forms of presentation**: an analytical chronology, a diagnostic case, a theoretical or interpretative case, and a meta-analysis or a study through several cases. According to Wacheux (1996), case reports “present evidence of situations observed. They contain at least the presentation of the situation, the chronology of the events and the contribution to an understanding of the research questions ... The presentation of cases restores the set of elements necessary for an understanding and proposes an initial theoretical explanation. For the actors on the ground, the case study achieves their objectives if they appropriate the representations and the explanations in their practice”.⁵ The contributions have a real added value if the case study studies the theoretical ruptures and proposes new concepts. The case study, according to Wacheux (1996), is one of the rare occasions when the multiple accumulated partial organizational theories can be brought into competition. This allows for paradoxical comparisons of different theoretical traditions. It is important to remember that the researcher should try to find a complete explanation for each case study.

⁵ Wacheux. (1996), p. 98.

The interaction with the field

In practical terms, Pettigrew (1997) indicates that the **preparation of access to the field**, specially under a medium- or long-term perspective, requires the management and the discussion of the following points: contractual and ethical elements, research objectives, research subjects and questions, units of analysis, contextualization levels, time and types of data.

Glick et al. (1990) stress that the **research strategy** also depends on the initial conditions of the study. For example, longitudinal studies depend greatly on the funding prospects for the planned period of study. In any case, what is important is to understand how these choices affect the research. In any case, it is impossible to aim for a theory that would be at the same time “simultaneously precise, general and simple”.⁶ A first choice can thus be found in the degree of depth or of generality which ensues from the research strategy. According to Pettigrew et al. (2001), large samples allow us to link the ‘what’ of the change to the performance of the organizations. On the other hand, a set of comparative case studies with a choice of organizations with good and bad performance «allows to answer the questions concerning the process, the context and the content of change that help to build and sustain a superior performance ... The more difficult questions, and the ones least studied by researchers, are temporal and situational: ... receptivity, customization, sequence, pace and episodic versus continuous change».⁷

The access and **the interaction between the field and the researcher** are complex processes which often show different specificities in each field. According to Girin (1990), three levels of interaction can be distinguished:

- Research as management “situated-in-action”

⁶ Weick (1979), pp. 35-42. In: Glick et al. (1990).

⁷ Pettigrew et al. (2001), p.704.

- The game of interests and opportunities in the field
- The interactive rationality between researcher and field.

If it is obvious that the first of the levels is taken into account, the other two are still important and must be managed. For the third one, Girin (1990) proposes the creation of a piloting authority which would bring together the researchers and the representatives from the ground. This authority is a key aspect in research-action approaches and we also believe that carrying out a longitudinal case study requires the setting up of such an authority, because unforeseen circumstances often appear and must be dealt with jointly by both parties. A general research approach is completed, according to Girin (1990), with a control authority located in the research institution and a report on the data of the study. In all, such a research apparatus should make it possible to specify and manage the three levels of interaction, facilitate an understanding of the contexts of significance and action, explain the elements of interaction and reinforce the logic of knowledge.

The preparation of a case study deserves the preceding precautions to be taken into account.

Case Studies: The construction process

Data collection

Girin (1990) shows that potential contexts of interaction with the ground are considerably affected by the **observation choices** made, which thus affects the **type of questions and of answers** that can be representative: “frameworks allow meaning to be given to an event, an act or a message, and an appropriate answer to be given ... It is essential to access a sufficient level of apprehension of these contexts ... For their most explicit and formalized part, this can be done by studying documents. At intermediate levels of structuring, the interviews constitute the main means of access. The most implicit and

the least formalized part of the contexts can, on the contrary, only be apprehended by a genuine long-term socialization on the ground”.⁸

Yin (1994) distinguishes six main sources of data. The following table proposed by Yin (1994) shows the strong points and the weak points of these six sources of data.

⁸ Girin (1990), p.166.

Table 2
Six sources of Evidence: Strengths and Weaknesses (Yin, 1994)⁹

Sources of Evidence	Strengths	Weaknesses
Documentation	<ul style="list-style-type: none"> - Stable: can be reviewed repeatedly - Unobtrusive: not created as a result of the case study - Exact: contains the exact names, references and the details of an event - Broad coverage: long span of time, many events, and many settings 	<ul style="list-style-type: none"> - Retrievability: can be slow - Biased selectivity, if collection is incomplete - Reporter bias: reflects (unknown) bias of author - Access: may be deliberately blocked
Archival records	<ul style="list-style-type: none"> - (Same strong points as for the documentation) - Precise and quantitative 	<ul style="list-style-type: none"> - (Same weak points as for the documentation) - Accessibility due to privacy reasons
Interviews	<ul style="list-style-type: none"> - Targeted: focuses directly on case study topic - Insightful: provides perceived causal inferences 	<ul style="list-style-type: none"> - Bias due to poorly constructed questions - Response bias - Inaccuracies due to poor recall - Reflexivity: interviewee gives what interviewer wants to hear
Direct observations	<ul style="list-style-type: none"> - Reality: covers events in real time - Contextual: covers context of event 	<ul style="list-style-type: none"> - Time consuming - Selectivity: unless broad coverage - Reflexivity: event may proceed differently because it is being observed - Cost: hours needed by human observers
Participant observation	<ul style="list-style-type: none"> - (Same strong points as for the direct observations) - Insightful into interpersonal behavior and motives 	<ul style="list-style-type: none"> - (Same weak points as for the direct observations) - Bias due to investigator's manipulation of events
Physical artifacts	<ul style="list-style-type: none"> - Insightful into cultural features - Insightful into technical operations 	<ul style="list-style-type: none"> - Selectivity - Availability

⁹ Yin (1994), p. 80.

According to Wacheux (1996), the methods of observation should not be too systematic, specially because the operating framework is prepared as the observations take place. The final explanations, on the other hand, should be linked to the theories. This does not prevent the data collection process, once the observation choices have been made, from being very systematic.

According to Hendry (1996), the typical elements of a community of practice can be found where a regular group activity takes place. In such a situation is where the researcher will normally place his focus when building theory. For instance, Hendry (1996) also points out that when studying change processes three levels of study are critical:

- The development of strategies
- Significant product and process innovations (learning, discovery and implementation processes)
- Continuous improvement groups.

Being able to study the three phenomena in the same organization would allow to enrich the overall understanding of the change process.¹⁰

A **combination of approaches**, i.e. participant observation of the regular activity of several groups at several levels, semi-directive interviews and other documents collected, allows the researcher to carry out an in-depth analysis of the key micro-questions of his research. In particular, such a combination may be an opportunity to experience some details regarding how and why collective learning of actors concerning the phenomena studied occurs in real time in a given studied context.

Concerning interviews, the researcher will probably undergo a process of continuous improvement. An initial level of improvement corresponds to small details on the composition and the order of the

¹⁰ Hendry (1996), p. 637.

questions due to the reactions of the interviewees after carrying out each of the interviews. A second, less frequent, level comes from the refinement of the questions, concepts and hypotheses emerging from the intermediate analyses carried out. As regards the **choice of interviewees**, a minimum number of five interviewees per company, assuming the company is the main level of analysis, is normally recommended in order to ensure an acceptable saturation level of data. The interviewees are chosen in each of the companies because of their representativeness in relation to the phenomenon studied either because they decide on that matter or because, for any other reason, they have first-hand experience concerning the studied phenomenon. This process is followed from time to time by the preparation of **intermediate reports** which are made available to the interviewees for complementary discussions and, eventually, the progressive refinement of the research.

Wacheux (1996) offers some advice concerning the **systematization of the data collection** procedure:

- “Each piece of information is codified and contributes to the formation of the dictionary of themes;
- Each event is noted in the research journal to allow the chronological chain of the research to be reconstructed;
- Any observation ... must give rise to a micro-analysis: links to the theoretical propositions, to other facts, triangulation;
- Intermediate reports must be periodically submitted to the actors”.¹¹

Yin (1994) indicates that the creation of a **database** separate from the report of the case study is not yet an institutionalized practice. Such a database is appropriate because it shows the evidence that a critical reader needs in order to make the journey toward the final conclusions of the study. Thus, a database increases the reliability of the study. Besides, according to Yin (1994), the researcher also benefits from the

¹¹ Wacheux (1996), p. 97.

ability to be able to go back over the evidence easily. In any case, what is important is the existence of an understandable, complete and accessible data organization for whoever may need to find or add new data.

With the aim of aiding to understand, we propose a very simple database that we have used in one of our research projects. The main important aspect is to figure the main fields, or columns, to be taken into account. In every one of the columns the reader will find the description of the type of information that was used and recorded in our example.

The **purpose of the database** is to **organize in the best way all types of data**. This database included only data coming from a set of interviews realized in several different companies. If different data sources are used, it would be important to add another column to specify the data source. This is very helpful when it comes to data analysis and triangulation.

Table 3
Database for semi-directive interviews: An example

EN	ST	IE	T2	T1	CO
Identification of the company. The number also allows the interviewee to be identified if the IE column has to be hidden	Status of the interviewee. The specificities of each company may mean that the list changes in accordance with each company	Name of the interviewee. This column was in this case hidden in order to preserve the identity of the interviewees	Number identifying other themes or ‘constructs’ which could be linked to the basic datum in question	Number identifying the main themes or ‘constructs’ , existing or emerging, which are linked to the datum, and have a direct connection with the research	Basic datum (series of words with a meaning concerning the research) = (qualitative data)

The experience acquired after carrying out the first stages of research normally entails an improvement in the contents, in the fields, and in the use of the databases. Therefore, the researcher should be ready to update the databases if necessary.

Finally, it is recommendable that the researcher fills also a **research diary**. In this diary the researcher may record any ideas, thoughts, surprises, intermediate conclusions or details that arise during the whole research process. It is also essential to contextualize all comments in the research diary; that is to say, indicate date, place, and other relevant factors associated to every comment.

Once the database is built, it will be very useful for data treatment and analysis. At least one expects the researcher to regroup all data (CO) by the different themes (T1 or T2). It is very helpful that when regrouping data, we make sure that every piece of information is accompanied by the information related to the other fields of the database such as “name of the company”, (EN), status of the interviewee (ST), etc. In the following section we will describe a possible approach for data treatment and analysis.

Data analysis

According to Yin (1994), the use of **multiple sources of evidence** in a case study makes the conclusions much more convincing and precise. It is a question of developing convergent lines of research. The triangulation also makes it possible to improve the question of construct validity, because the different sources contribute additional measurements of the phenomenon. The following figure, proposed by Yin (1994), shows the difference between a **true triangulation** (A) and the superimposition of analyses coming from different sources of evidence (B).

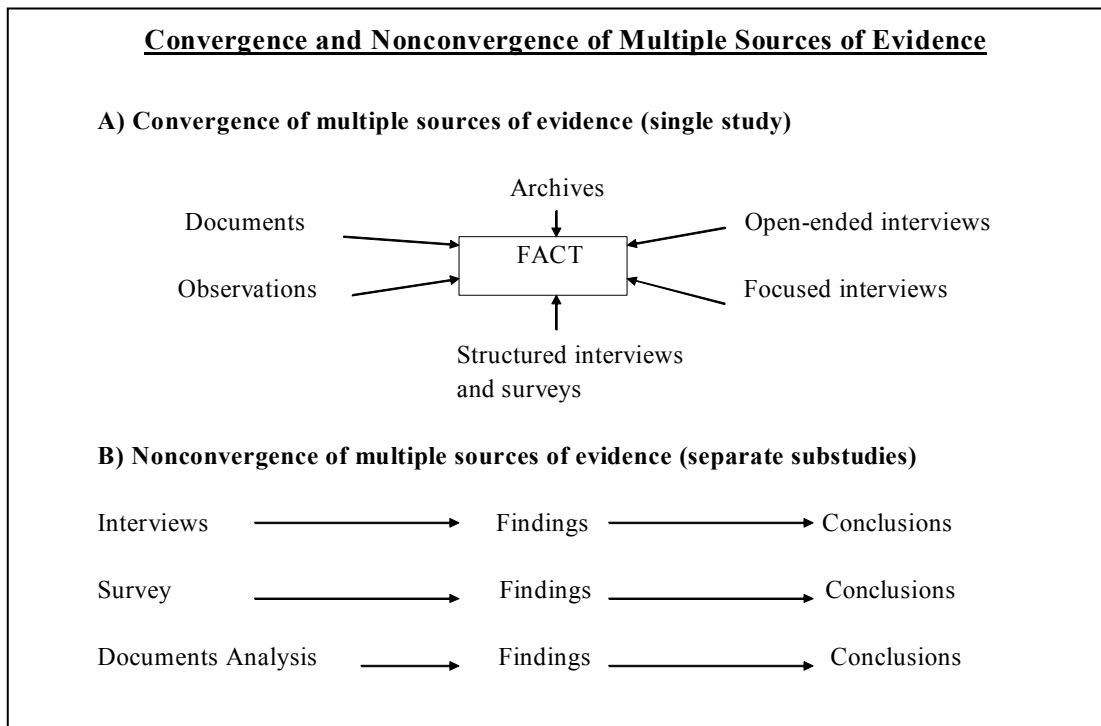


Figure 1. Convergence and Nonconvergence of Multiple Sources of Evidence according to Yin (1994)¹²

Each time that complementary data is added, it is necessary to go back over the initial facts, as indicated by Yin (1994). This is not a problem if the databases of the interviews are well organized and allow us to go back over the basic evidence.

According to Yin (1994), the **analysis** stage should start off by defining a **general strategy**. The first, and the best, of the strategies would consist of **following the theoretical propositions** which are at the origin of the study. A second general strategy consists of developing a descriptive framework with the aim of organizing the case study. This strategy would be less desirable than the use of theoretical propositions, but it would be useful as an alternative if the theoretical propositions are absent.

¹² Yin (1994), p. 93.

The **main method of data analysis** may consist of grouping the different facts, or empirical observations, together, in the existing or emerging themes, starting from the new data. This stage is normally clearly registered in the databases. Different codes may be used for different emerging themes in the study. The key ideas are then defined starting from a fact or from a series of facts, which provide significance in relation to the themes and, possibly, to the essential questions and frameworks of the research. Sometimes, a series of key ideas can possibly be grouped together in what is known as force ideas. In most of the cases the purpose is not to test linear cause/effect explanations; on the contrary, the objective is to define, **at an initial level of analysis**, certain constellations of elements, groups of key ideas or patterns, which appear to explain the phenomenon studied under a given theoretical framework. It is indeed with this objective that the choice of case studies and, in particular, the theoretical replication plays an essential role. Besides, the definition of the result, whether negative or positive, of the studied phenomenon is one of the key elements which can possibly permit us to design the patterns which answer our research questions. If we have a multiple case study, all the case studies are important sources for the recognition of these patterns. **At a second level of analysis**, and in an attempt to answer the how and why questions, it is important to focus on the details. These details are normally more visible when we have developed a longitudinal case study. What is described in a linear fashion is an iterative process, which actually presupposes going back and forward between different case studies and between the two levels of analysis that we have proposed: a recognition of patterns and an understanding of the functioning of the essential relations within these patterns.

This double-level method recalls partially what Yin (1994) designates “construction of an explanation” starting from a case study. Besides, the recognition of patterns part, or first level of analysis, which we include in our analysis, is called by Yin (1994) for the “comparison of patterns” method, in which he presupposes that a pattern would have

been predicted, before carrying out any analysis, and then verified starting from such an analysis.

Finally, Yin (1994) adds that «The gradual building of an explanation is similar to the process of refining a set of ideas, in which an important aspect is again to entertain other plausible or rival explanations. As before, the objective is to show how these explanations cannot be built, given the actual set of case study events. If this approach is applied to multiple-case studies, the result of the explanation-building process is also the creation of a cross-case analysis, not simply an analysis of each individual case».¹³

Data validity

The **validation criteria** of the qualitative research are applicable to different stages of the fulfilment of case studies. It is a question of internal acceptance, completeness, saturation, internal coherence and external confirmation (Mucchielli, 1991).

Yin (1994) mentions that all empirical research is traditionally validated by means of four tests: construct, internal and external validity and reliability. The following table is an adaptation carried out by Yin (1994) of these four traditional tests, applicable to case studies.

¹³ Yin (1994), p. 111.

Table 4
Case Study Tactics for Four Design Tests (Yin, 1994)¹⁴

Tests	Case study tactic	Phase of research in which tactic occurs
Construct validity	<ul style="list-style-type: none"> - Use multiple sources of evidence - Establish a chain of evidence - Have key informants review draft case study report 	<ul style="list-style-type: none"> - Data collection - Data collection - Performance
Internal validity	<ul style="list-style-type: none"> - Do pattern-matching - Do explanation-building - Do time-series analysis 	<ul style="list-style-type: none"> - Data analysis - Data analysis - Data analysis
External validity	<ul style="list-style-type: none"> - Use replication logic in multiple-case studies 	<ul style="list-style-type: none"> - Research design
Reliability	<ul style="list-style-type: none"> - Use case study protocol - Develop case study database 	<ul style="list-style-type: none"> - Data collection - Data collection

Case Studies: Multiple case studies

Retrospective and longitudinal case studies

Yin (1994) shows that the **multiplication of case studies** is comparable with a multiplication of experiments, but the selection of case studies must be based on the principles of ‘literal replication’ and of ‘theoretical replication’. The former involves the selection of cases with apparently similar conditions and results. The latter requires cases which produce different results for more or less explicable reasons. The replication is based on theory and not on statistical

¹⁴ Yin (1994), p. 33.

principles of samples (Leonard-Barton, 1990). Still as regards the general research strategy, Yin (1999) insists that the need to concentrate on 'rival' case studies must be completed by taking into account rival explanations from the literature, and from the multiple data from case studies. These measures can help to reduce the degree of bias that the researcher is probably undergoing.

It is important to position the different case studies on a relative scale of success, and probably, taking into account different levels of success. Sometimes it is not possible to fully take into account the success measurement elements which are put forward because of their non-existence or their inaccessibility. The researcher should not forget either the perceptions of the participants, interviewees, concerning the different levels of results. Thus, the positioning of different cases that the researcher may end up presenting would be a global image of success or failure constructed by taking into account numerous measures and perceptions.

Pettigrew (1990) indicates that the **most intensive case studies** can be used to study processes and contexts, how and why changes take place, and the content or the 'what' of the change. **Less intensive case studies** are above all useful in order to study the content of the change.

This last assertion would appear to contradict the advice given by Yin (1994), who shows that case studies are appropriated to reply just to the why and how type questions. Indeed, Yin (1994) refers to theorization questions while Pettigrew (1990) refers to the "what", "why" and "how" of the change. The "what" of the change only implies the establishment of the content, that is to say the definition of what changes. The "what", as the theorization of Yin (1994), presupposes an ability to make generalizations, which is obviously limited when research is only based on case studies. Leonard-Barton (1990) shows the consequences of research based on retrospective and longitudinal case studies. If the multiplication of case studies helps to

increase the external validity, the degree of generality, longitudinal studies can help to increase the internal validity, the details of the causes and effects. In any case, according to Leonard-Barton (1990), the methodology described is better adapted to exploratory or hypothesis-generation studies than to the testing of hypotheses. There would be opportunities for the testing of hypotheses if we are working with different cases, but the general methodological design is more compatible with the construction of the theory. Thus, respecting the criteria of comparability, the multiplication of case studies, such as we present it, allows for some generalization.

According to Miller and Friesen (1982), **longitudinal research** allows for a better understanding of organizations, a better position to establish causal relationships, the possibility to distinguish the most important variables and the opportunity to avoid non valid generalizations arising from mixing organizations that are actually different. Miller and Friesen (1982) add that «A prime strength of longitudinal case studies performed upon individual organizations is that they provide a basis for real insights into how organizations make decisions, adapt to their environments, enact new environments, and restructure themselves [...] but there are also weaknesses because it is hard to generalize».¹⁵

The **combination of retrospective and longitudinal case studies** permits, according to Leonard-Barton (1990), **synergies** which go beyond the simple potential improvement of the level of generalization of the research. **As regards data collection**, the application of both approaches allows the weaknesses of each of them when applied alone to be reduced:

- «The longitudinal study is deep rather than quick (efficient) [...] The retrospective studies are highly efficient concerning data collection.

¹⁵ Miller, D.; Friesen, P. H. (1982) "The Longitudinal Analysis of Organizations: A Methodological Perspective." *Management Science*, 28(9): 1013-1034.

- In a real-time longitudinal study, the researcher is in danger of losing objectivity. The retrospective studies help the researcher to discover his own bias. Concerning retrospective studies, the danger is not so much that one may surrender to one's own biases as that one may unconsciously accept those of the informant.
- The macro perspective of the retrospective studies allows identifying some patterns or processes of interest and then examining it in the longitudinal studies with a microscope either to dissect it further into component parts or to understand the forces that drove it. These details allow to go back to the retrospective case studies in order to put up further detailed questions». ¹⁶

The validity of the study is also improved by means of the following three dimensions:

- «Multiple case studies on a given topic clearly have more external validity than does a single case.
- Multiple sources of evidence, if they yield similar results, are evidence of construct's convergent validity. If the construct as measured can be differentiated from other constructs, it also possesses divergent validity. The longitudinal study aids in precise definition, and the retrospective study demonstrates the consistency of predicted patterns of relationship between the construct and other variables.
- Internal validity (cause and effect). One of the greatest advantages of the dual methodologies derived from the ability to move back and forth between the two, formulating theory in one setting and then immediately placing the embryonic ideas in the context of the other kind of study for potential disconfirmation». ¹⁷

¹⁶ Leonard-Barton (1990), pp. 255-256.

¹⁷ Leonard-Barton (1990), pp. 258-259.

Jarvenpaa and Stoddard (1998) applied a **strategy similar** to that proposed by Leonard-Barton (1990) in some of the stages of a piece of research on **the study of reengineering experiences**. We synthesize their approach as it can illustrate, by way of example, some of the elements developed in this section. Their basic research question regards the specificities of revolutionary changes in relation to evolutionary changes. The basic unit of analysis of this study is a reengineering project.¹⁸ The following table shows the multiple phases followed by Jarvenpaa and Stoddard (1998).

Table 5
Research programme by Jarvenpaa and Stoddard (1998)

Phase I	Retrospective analyses of three reengineering projects in three different organizations
Phase II	Survey carried out in 35 organizations concerning the characteristics of their reengineering projects
Phase III	Ten longitudinal case studies and five retrospective case studies

As we can see this example shows a possible way to organize a research strategy in different phases and using different approaches.

According to Van de Ven and Poole (1990), on carrying out a longitudinal study each hour of work on the ground requires one complementary hour of work. This complementary hour would represent the less visible but the most complex and most creative part of the longitudinal research.

Cross-case analysis

Yin (1999) indicates that the initial design and the data collection methods foreseen can be confronted or tested with a pilot case study. Likewise, a discovery in any case study could be tested with the results from other case studies. However, a discovery of the type, in a

¹⁸ Jarvenpaa and Stoddard (1998).

case study, should impose a calling into question of the initial assumptions of the rest of the case studies in order to take into account this discovery, and then test it consequentially. Wacheux (1996) adds that the comparative method results from a problem of confrontation between several contexts in order to explain differences.

According to Yin (1999), the subject of the **comparability** between case studies is a **question of definition and of design** rather than a question of sample construction and sample characteristics. The idea of the theoretical sample is equivalent, in the opinion of Eisenhard (1989), to making a choice between the case studies which fulfil the conceptual categories of a piece of research.¹⁹ Apart from this theoretical sampling, Wacheux (1996) adds that it would be necessary to demonstrate the possibility of accessing the context, and the similarity between the collection procedures, in order to minimize the bias. All these elements have been discussed in depth in the preceding chapters or sections.

Once these initial conditions have been established, Wacheux (1996) stresses that the researcher should construct a framework of analysis with the aim of defining the similarities and the differences concerning the concepts of the problem. In this process, the ability to recognize patterns in an inductive manner, according to Pettigrew (1997), is important, and certain elements can help with this process:

- A framework of intervention such as that used by the researchers of the University of Warwick (Context – Content–Process) is especially important in comparative studies.
- The reviewing of historical documents with the aim of identifying the main chronological landmarks.
- The identification of the key individuals.
- The localization of the key points of transition in the process studied.

¹⁹ Eisenhardt, K. M. (1989) “Building Theories from Case Study Research.” *Academy of Management Review*, 14(4):532-550.

The plan of representation of the context and of the management situation, like the definition of success relating to innovation or change projects,²⁰ are the frameworks of reference starting from which we develop the case studies, and which may allow us to identify similarities and differences. When the results can be used as a dependant variable in the comparison of cases, Ascari et al. (1995) indicate that it is also important to see what the starting point of each organization is, so that the degree of relative improvement is taken into account.

Wacheux (1996) continues by recalling that, in an **initial stage**, researchers should prepare an **acceptable explanation of each of the contexts** which implies that they should “demonstrate the saturation, the acceptance and the completeness of each situation studied”. From this initial analysis, the researcher identifies the axes and the dimensions of the comparison. In a second stage, “the researcher distances himself from his field in order to perform meta-analyses through comparison ... This work does not lead to a coming together of the facts, but rather of the systems of interpretation ... It is thus between systems of explanation that the comparison is established, because the differences are never given, but rather built ... The analysis thus focuses on theoretical comparisons, term by term, of the phenomena in different empirical contexts”.²¹

Finally, McPhee (1990) presents a table where we can easily define the different possibilities of comparison to which we can be led depending on the different characteristics emerging from different case studies.

²⁰ See Section 1.4.

²¹ Wacheux (1996), 104.

		The three approaches to integrating longitudinal case studies	
		Independent variables or explanatory concepts	
		Same	Different
Dependent variables or core concepts	Same	<p>Different Data-points: The case studies can all be subsumed under the same theoretical model</p>	<p>Different explanations: The case studies portray different causal or developmental paths to the same basic type of phenomenon</p>
	Different	<p>(Incoherent approach)</p>	<p>Different images: The case studies involve different, incommensurable but comparable types of phenomena</p>

Figure 2. The three approaches to integrating longitudinal case studies (McPhee, 1990)²²

McPhee (1990) stresses the characteristics for each of the three significant possibilities:

- «Cases are **different data-points** when they are described well by a single set of variables [...] Differences among cases are explained as the results of the same kinds of determining conditions and events, which differ in degree.
- **Different explanations** require different independent variables, different explanatory accounts for cases which still appear to be essentially the same [...] This approach assumes that there is still no deep conceptual problem involved in comparison or integration across such cases [...] To integrate them we produce an explanatory typology – a single map containing alternate

²² MCPhee (1990), p. 394.

paths to the terminal event. The key challenge of this approach involves distinguishing between ‘minor’ case differences and differences reflecting different models, and determining the exact relations that hold among different models.

- Cases which fit **different images** are essentially different and may require different dependent variables to capture the type differences [...]. The cases are seen to differ, not just in degree or in explanatory account required, but in kind [...]. All variables or concepts involved in describing and explaining the case outcomes may be incommensurable from case to case. A telling sign of different images is that the main dependent variables themselves differ from case to case». ²³

Conclusion

We have described in this essay some basic foundations for case study research. Still, it is recommended that the reader goes to the original sources used in this article, and other relevant ones, if he is to develop a deep understanding of case study research. Additionally, only having first-hand experience and conducting several cases studies will give the reader full understanding of the complexity and richness of this methodology.

²³ McPhee (1990), p. 394-395.

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