

Discussion Paper No 02/2003

**Visualizing rural financial market research
in Northern Vietnam through pictures**

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**Forschung zur Entwicklungsökonomie und Politik
Research in Development Economics and Policy**

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Institute of Agricultural Economics and Social Sciences in the Tropics and Subtropics (Ed.),
Forschung zur Entwicklungsökonomie und Politik – Research in Development Economics
and Policy, Discussion Paper 02/2003.

ISSN 1439-4952

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Universität Hohenheim (490), 70593 Stuttgart, Germany
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Printed in Germany.

Druck: F. u. T. Müllerbader GmbH

Forststr. 18, 70794 Filderstadt, Germany

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Discussion papers in this series are intended to stimulate discussion among researchers, practitioners and policy makers. The papers mostly reflect work in progress. They have been reviewed internally by at least two colleagues of the Institute, including the chair of the department. This discussion paper was reviewed by Prof. Dr. Volker Hoffmann, PD Dr. Gertrud Buchenrieder, and Prof. Dr. Dr.h.c. Franz Heidhues, University of Hohenheim.

We gratefully acknowledge contributions from the Father and Son Eiselen-Foundation Ulm towards the printing costs.

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Abstract

One of the many tasks of financial market research is to develop client-oriented financial products. In order to ensure that the financial products reflect the necessities and preferences of the clients, profound participation of the target group throughout the whole research process is important. The use of pictures reduces problems of understanding and makes communication more interesting since everybody is now an insider in the discussion and can thus contribute his or her opinion. The use of pictures in research enhances participation and the research findings will be more target-group oriented. The extent to which the expense associated with using pictures in research – which is not to be underestimated – justifies the gains in terms of the information and data collected is rarely assessed. This article is addressed to researchers who investigate in similar situations and will offer them a basis of experience that they can take advantage of. The authors assume that information about the usefulness of the different techniques applied might be most interesting for other researchers. They conclude that the use of pictures in financial market research revealed some interesting results, albeit sometimes at quite a high cost. Nevertheless, the impact of supportive pictures on the quality of new knowledge is difficult to assess, since we have no way of answering the question of whether it would have been possible to obtain the same information without the support of pictures.

Keywords: Financial Market Research, Participatory Methods, Pictures, Visualization, Vietnam

Visualizing rural financial market research in Northern Vietnam through pictures

Meike Geppert and Tom Dufhues

1 Introduction¹

One of the many tasks of financial market research is to develop client-oriented financial products. In order to ensure that the financial products reflect the necessities and preferences of the clients, profound participation of the target group during the whole research process is important. The level of participation increases if two preconditions are met. First, target groups need to be interested in the research topics. The more interested they are, the better they will participate, and the more they participate, the better the outcome of the research will be. The reason is that then the financial products will reflect clients' requirements. The interest of the target groups in the research topic can be increased, for example, by using unconventional research methods like presenting research subjects or objects in an unfamiliar way. Such an unfamiliar way might be the use of pictures, since they attract attention (Hoffmann 2000; Walker 1979). The second precondition is that everybody understands what is being talked about. This improves the chances of influencing the discussion and thus the research process, results, and outcome. The use of pictures reduces problems of understanding and makes communication more interesting since everybody is now an insider in the discussion and can thus contribute his or her opinion. This kind of intensive communication with the target group ensures a good understanding of the topics under discussion. A good understanding of the discussion is an important precondition for the clients to express their needs and preferences regarding financial products.

In a challenging intercultural context, different languages, different perceptions and illiteracy make it especially necessary to use expedients in order to facilitate common understanding and comprehension of a complex subject like finance. Pictures (i.e., photographs and drawings) can mediate particularly well between the observer and reality and bridge language and cultural differences (Hoffmann 2000). They are intended to serve the function of

¹ The research for this paper was carried out within the framework of the German-Thai-Vietnamese Collaborative Research Program 'Sustainable Land Use and Rural Development in Mountainous Regions of Southeast Asia'. It is based on an interdisciplinary research study between the two subprojects A1 'Participatory research approaches' and F2 'Rural finance and sustainable rural development in Northern Vietnam'. The funding from the Deutsche Forschungsgemeinschaft (DFG) and co-funding from the Ministry of Science, Technology and Environment of Vietnam is gratefully acknowledged. We would like to thank Prof. Dr. Hoffmann, PD Dr. Buchenrieder, and Prof. Dr. Heidhues for their valuable comments on an earlier draft. Still, the analysis and opinions in this discussion paper are ours.

translating culturally based and different ways of expressing reality, because they support the spoken or written word. They give illiterate people the opportunity to visualize their ideas and thus be more precise.²

The role and functions of pictures as a communication tool for research and extension is widely discussed in the literature and scholars mostly agree about the concept's advantages and disadvantages (Hoffmann 2000; Fischer 2002; Narayan 1996; Metallinos 1983; Scheuermeier and Ayuk 1997; Simanowitz 2000). Furthermore, there are studies that explore the level of participation in different institutional contexts (Poudyal and Weber 1993; Rifkin, Muller and Bichmann 1988), or assess the costs and benefits of client participation in development or research projects in the sense of comparing traditional methods with participatory methods (Brett 1996; Magrath *et al.* 1997). However, attention is rarely given to the question of how far the expense associated with using pictures in research – which is not to be underestimated – justifies the gains in terms of the information and data collected.

1.1 Participation, communication and the role of pictures

To overcome the failures of past research and development endeavors in agriculture, participatory concepts have become fashionable since the beginning of the 1980s (Albrecht *et al.* 1987; Chambers 1979). The idea of participation simply calls for activities that start and end with the people concerned. The term participatory research is used for a wide range of research and research-related activities. It is loosely used to describe various types and levels of local involvement in and local control of the research process. There is no explicit statement or implicit assumption about the nature or the level of their involvement (Okali, Sumberg, Farrington 1994). A cross-cutting indicator of 'good practice' in all participatory research approaches is that the outcomes of target group involvement are fed into the project design to influence further activities and strategies. Target groups become agents rather than objects of research and their knowledge, needs, and preferences have weight in each decision throughout the research process.³ Such target group (in the sense of client) involvement in research projects should generate important feedback at all stages of the research process to change the process according to the target groups' inputs. Thus scientific knowledge is developed that forms the basis for appropriate, locally-owned strategies for improving the stakeholders' living conditions (Geppert, Buchenrieder, and Dang 2002).

² Particularly in Vietnam, ethnic minorities have a much higher illiteracy rate than Kinh (ethnic Vietnamese). Over 30% of the adult population is illiterate. The illiteracy rate is even higher for ethnic minority women (UNDP 2001).

³ The importance of listening to clients has already been proven in the concept of today's global economy. This is reflected in the concept of total quality management (TQM), which is applied by cutting-edge enterprises to maintain and/or expand their market share. In enterprises that apply TQM, managers regularly and systematically listen to and obtain feedback from their customers and use this information to improve their products and services (Davis and Whittington 1998).

Generating information is not difficult, but the challenge is to transform information into knowledge that is relevant to everybody engaged in the research process. The success of participatory research thus depends on appropriate communication behavior that helps to bring all people to a mutual understanding. Pictures are powerful stimuli that can be used in structured, semi-structured and relatively unstructured ways. They can serve to elicit information, understand knowledge systems and reveal ways in which people classify concepts, situations and their effects (Narayan 1996). Nevertheless, pictures can never replace spoken words (Hoffmann 2000), since every figurative expression needs explanation and interpretation.

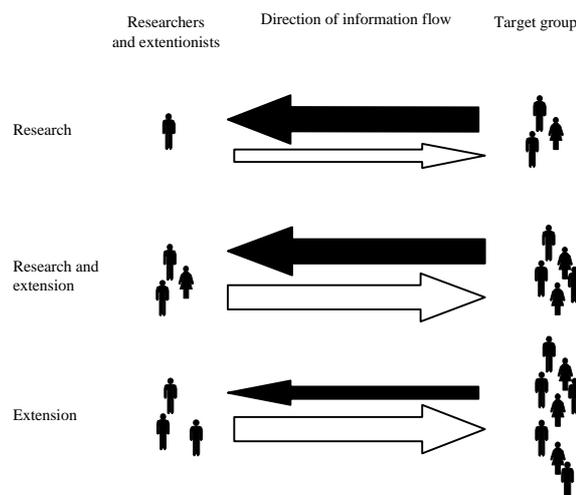
Psychologists have long used pictures in research as more or less structured stimuli. The principle is that individuals reveal how they think or feel about a situation by whatever they perceive or do not perceive in a picture and by how they order the pictures. The more unstructured a picture, the greater the skill needed in interpretation (Narayan 1996). The virtue of using pictures among illiterate villagers is presumably due to their iconic quality, which makes them less abstract than writing (Walker 1979). Bad illustrations often lack a certain degree of similarity to the reality they imitate, and, if symbols were used, agreement on what they represent would require lengthy discussions. Photographs therefore offer a welcome opportunity to illustrate the issue under discussion, causing fewer misunderstandings than result from different understandings of badly drawn pictures (Fussel and Haaland 1978; Jenkins 1978; Walker 1979). However, exactly drawn pictures are more favorable because here the background of the scenery shown on photos does not distract from the objective to be discussed.

1.2 Research objectives

The studies of Fussel and Haaland (1978), Jenkins (1978), and Walker (1979) are based on a teaching situation where either a teacher is supposed to transmit his or her lessons, or agricultural extensionists endeavor to communicate their new techniques. Such a teaching situation means a communication process where the direction of information flow tends to be from the teacher to the local people. Here, the teacher or extensionist is required to express him or herself. In the context of this article, pictures were used in a research situation aimed at gathering information which would then be transferred into scientific knowledge. Thus, the information flow is more in the direction of the researcher, implying that rural people are more challenged to articulate their views (Figure 1).

Pictures become necessary to help the scientists who did not understand to better comprehend the discussion (Scheuermeier and Ayuk 1997). This communication situation intends that rural people must be able to produce pictures by themselves. According to Walker 1979 (see Section 1.1 ‘Participation, communication and the role of pictures’) the advantage of pictures compared to writing is that they are less abstract than letters. This implies that they are limited by the artistic abilities of the rural people. To reduce information losses caused by bad drawings, photos can be applied.

Figure 1 Information flows in research and extension



Thus, even people with no artistic ability can participate in the process of developing financial products. This case study presents experiences with pictures in client-oriented financial research in Vietnam, where pictures were used to support communication in order to enhance target group participation in different phases of the research process. The utility and effectiveness of pictures for the data or information to be collected will be assessed. The basic assumption made is that the quality of knowledge generated through this research depends on the participation of the clients. It is assumed that the livelier the discussions are, the better the level of participation will be, and that the more different people critically engage in the discussion, the better the quality of information gathered will be. The article is addressed to researchers who investigate in similar situations and will offer them a basis of experience that they can take advantage of. The authors assume that information about the usefulness of the different techniques applied might be most interesting for other researchers. The article therefore concludes with statements on the effectiveness of the tools used.

1.3 Methodology

Methodologically, this contribution combines a literature review on visualization techniques and empirical evidence from the field. The data collection took place between March 2001 and March 2002 in Ba Be district, Bac Kan province, and Yen Chau district, Son La province of Northern Vietnam. The research work is based on participatory observation combined with expert interviews. In the framework of financial market research, the use of pictures to support communication was appropriate in three different phases of the research process. In total, four different research tools were applied. These four research tools were observed and assessed concerning the use of pictures as communication tools: 1. wealth rankings; 2. unstructured discussions with farmers about wealth and poverty; 3. a visualization workshop

for creating images; and 4. standardized interviews in a Conjoint Analysis (CA) supported by pictures.

The researchers assessed their subjective impressions of the observed activities using an objective criteria catalog (see Table 1). The benefit-utility-analysis method evaluates the effectiveness of using pictures. The criteria catalog for the assessment of effectiveness was developed via the brainstorming method and adapted during the research process. The individual criteria were classified into four main groups and each criterion was assigned a score of between one and five (one = best; five = worst).

Table 1 Assessment criteria

<i>I) Time requirements</i>
<ul style="list-style-type: none">• Preparation time for researchers• Preparation time for farmers• Time requirements for the realization of the tool
<i>II) Costs</i>
<ul style="list-style-type: none">• Costs of material• Costs of organizing and transporting the material• Staff costs
<i>III) Demands on human capabilities</i>
<ul style="list-style-type: none">• Demands on farmers' capacity for abstract thinking• Demands on farmers' technical/artistic abilities• Demands on staff (translating capabilities)
<i>IV) Importance for results</i>
<ul style="list-style-type: none">• Gaining new knowledge on techniques or general understanding (farmers)• Gaining new results or cross-checking data (researcher)

2 Experiences with pictures in different research tools

First, the use of photographs in wealth rankings is analyzed. This section is followed by an examination of the use of photographs in discussions with farmers about wealth and poverty. Finally, the creation of pictograms and their application in Conjoint Analysis (CA) is evaluated.

2.1 Photograph-supported wealth ranking

In Vietnam, farmers are familiar with the idea of classifying households according to their living standard. An official household classification exists in every village, which divides the households into five groups 'hungry', 'poor', 'average', 'better than average', and 'rich' (for details see Dufhues *et al.* 2002). A familiar tool like wealth ranking served as an entry point for the research process. It enabled researchers to make contact with the key persons in the village. Photos that supported the wealth ranking were used in order to gain the villagers' confidence. They were intended to arouse their interest and gain their confidence in the research activities. In later stages of the research process, the photos offered a welcome opportunity for other researchers to clearly identify all families when necessary for new

surveys. Another purpose of the photos was to test whether the images of the houses on pictures could indicate the wealth situation of a Vietnamese family: is a photo useful as an indication of the living situation in a particular household?

Only leaders of the mass organizations⁴ and special key persons such as village heads were invited for the ranking. Important local authorities could thus be introduced to the research activities and the researchers offered much transparency about their research endeavors.⁵ The wealth ranking was intended to cover four villages. In the first village, the camera was handed over to the village head and he was asked to take a picture of every household in the village. This procedure was intended to give the village head the opportunity to emphasize the most relevant views of the house from his perspective. After some negative experiences, this procedure was changed, and in the remaining three villages the researcher himself took the pictures.⁶ Every villager received one copy of the photo of his or her house. This was intended to serve as an incentive to take part in future research activities.

The village key persons were asked for an appointment to rank the photos according to the socio-economic condition of the households. They were asked to divide the households into five different levels. The results of the ranking are very similar to the official ranking (see Table 2).

⁴ The most important mass organizations in Vietnam are the Women's Union and the Farmers' Union. These two are usually found in every village in Vietnam. The following mass organizations are not to be found in every village due to lack of participants: Youth Union, Elderly Union, and Veterans Union.

⁵ In the communist Vietnamese context, research by foreigners can still be seen as a socially disruptive activity.

⁶ The bad experiences can be summarized as follows: 1. The houses were not shown as a whole and were difficult to assess, as the villagers were in the focus of the picture. 2. It was cost-intensive as the village head used many more pictures than were necessary. 3. It was very time-consuming, as the village head tried to take pictures with as many people as possible in them, and the villagers took some time to prepare themselves for the picture. 4. Only an incomplete picture of the whole village was shown, as approximately 20% of the houses were not photographed (forgotten, too far, personal matters...). It was later ascertained that these households were equally distributed across the different wealth groups. Hence, a bias towards poor households could be excluded.

Table 2 Percentage of households in the official and self-conducted wealth classification

	Pac Nghe 1		Khau Nen		Thom Meo		Khoui Khi	
	Official ¹	Own ²						
Hungry	9%	9%	25%	25%	14%	15%	20%	30%
Poor	10%	11%	17%	17%	19%	25%	42%	28%
Medium	47%	54%	36%	36%	53%	41%	20%	25%
Better-off	8%	26%	22%	22%	14%	19%	18%	17%
Rich	26%	/	/	/	/	/	/	/

Source: ¹The official village wealth ranking list (2001)

² Own data

After the wealth ranking of every household, photographs were picked randomly and the leaders explained why the households had been ranked into their respective groups and what their specific ranking criteria had been. The criteria varied slightly in each village (see Appendix-Table 1 to Appendix-Table 4 for the four wealth categories). Households that had recently changed their wealth classification were discussed separately.⁷

During discussions with farmers, it emerged that the primary reasons for classifying households economically are much more sophisticated, and are determined by many factors other than the exterior of a house. This finding is supported by Simanowitz (2000). Thus, a picture of a house cannot indicate the wealth situation of a Vietnamese family. Second, pictures had little use as a mnemonic aid in the framework of the wealth ranking, since the target groups were literate. Other participatory research tools like matrix scoring or village mapping would have been more effective in identifying wealth indicators. In line with the high educational standard of the key person group, the pictures were not used by them and were seen as a nice curiosity rather than as a discussion tool to improve communication.

The photographs were more important for the researchers than for the farmers, since they enabled them to understand the course of the discussion in local languages better. This reduced translation efforts. It is reasonable to assume that the donation of the pictures after the group work set the basis for friendly relations with the villagers. Even though not all photos showed family members, but only the family's houses, the rural people always demonstrated great interest in looking at the pictures and engaged in animated discussions among themselves. Many of the pictures could later be seen hanging on the walls of households. However, the quality and quantity of the additional information that was gained by using the photographs for a wealth ranking was disproportionate to the input that had to be invested.

⁷ Usually, a household declined in the wealth group due to social evils (drug abuse, gambling), illness (high hospital costs), or to failed relocation and retreat to the original village.

2.2 Photographs used in the expression of abstract issues like wealth and poverty

In order to ascertain the villagers' different perceptions about wealth and poverty, open interviews were carried out with farmers from different socio-economic classes and with different ethnic groups. As the terms 'wealth' and 'poverty' are rather abstract, the discussion was to be stimulated by using photographs, which the target groups were asked to take themselves. Photographs were intended to support the target group's word in order to offer them the chance to express their perceptions more easily.

It was difficult to find villagers who were willing to fulfill the task of illustrating poverty and wealth by using a camera. Many said they did not have any idea of how to express those terms, and many said they were just busy. The rejection of this method by many farmers may be explained by the quite abstract terms, but also by the camera. Cameras are not common in this area and farmers were afraid of using it, because they do not know how it works. Women in particular were shyer and refused to take the pictures more often than the men did. Only one poor woman was willing to take the pictures.⁸ After an introduction on how to work the camera, the camera was handed over to the farmers. The two topics for the pictures, 'poverty' and 'wealth', were discussed in small groups before the farmers set off to take the photos. The farmers were urged to limit their attempts to show wealth or poverty to four pictures each. Furthermore, it was explained to them that no copies of the pictures would be made and that they would not be able to keep the pictures. By doing so it was hoped that the costs could be kept to an acceptable level. All farmers willingly accepted these terms.

After developing the pictures, they were discussed with the farmers, who had to explain why the pictures showed poverty or wealth. The idea of simplifying abstract terms to symbols or signs was supposed to stimulate the discussion and offer the researcher the chance to gain a materialized presentation of the abstract terms.⁹ But only in one case was a real dialogue created between the farmer and the researcher. Difficulties arose concerning the technique for using the camera, because farmers were not familiar with cameras. As a regular camera was used and the research region was remote, the period between the taking of the picture and the discussion on the photographs was too long.¹⁰ The issues were not present in all participants' minds at the time the discussion took place. Farmers had difficulty in remembering exactly their intentions regarding why they had taken the pictures this way or that way. If researchers

⁸ After the camera was handed over to her, her husband took it away and took the pictures himself without even considering her. As he had not received instructions about using the camera, he provided only poor results.

⁹ The photographs for wealth, for instance, showed the interior of households that were full of durable consumer goods, e.g. TV, motor-bike, machinery. The photographs for poverty showed empty houses (no consumer goods) and small, thin animals.

¹⁰ In one case, a flood blocked access to this part of the village for over a week. After this time, the farmer had forgotten why he took some of the pictures. Besides, due to the remoteness of the area, there were no facilities for developing them, not even in the district town. The pictures therefore had to be sent to the provincial capital, which usually took about five days.

had been present during the process of taking the pictures, they would have been able to facilitate the process to a greater extent.

One of the main findings obtained by using photographs taken by the farmers in the discussion was that the four surveyed farmers did not see the housing quality of a dwelling as an important indicator of the wealth status of a household.¹¹ They judge a household's wealth rather by assessing the interior or the equipment (see Simanowitz 2000, and Section 2.1). In most poverty assessments, the condition of a house is usually given greater importance than the durable consumer goods in a household. It might be reasonable for future poverty assessments to take into account the fact that people in Nung and Tay villages rate the interior of a house as more important for representing a family's economic situation.

The use of photographs in this context could be improved dramatically by using an instant-picture or a digital camera instead of a regular one, for the following reasons:

- (1) Misunderstandings of the task can immediately be corrected and there is a direct learning effect as the result is immediately visible.
- (2) The villager will tend to lose their reservations concerning the camera, because it is clearer to them how it works.
- (3) No time lag in explaining the picture. The farmers then have the task and the reasons why they chose this image in their mind while explaining the photo.
- (4) Marginalized groups can be better involved in the research process. Even if the camera is taken away from someone, as happened in one case (e.g., the husband who took it away from his wife), this person can be sent out again immediately to take some pictures.

Considering the constraints of the method above, this method seems a little too advanced for this research environment. But the method itself carries a high potential for improving discussions with illiterate people and for revealing otherwise hidden facts.

2.3 Pictograms as a visualization tool in Conjoint Analysis

A major research tool applied in financial market research is 'Conjoint Analysis' (CA).¹² CA is often used to develop new services or to evaluate existing ones. Typically, a CA is carried

¹¹ It was explained that a big new house with tiles and a very solid structure could also be constructed by using loans, leaving the household indebted, or by the help of many relatives and friends. Besides, only wealthy households possess the necessary cash money to purchase durable consumer goods or machinery.

¹² Green and Srinivasan (1978) define CA as group of methods that estimate the structure of a consumer's preferences, given his or her overall evaluations of a set of alternatives that are pre-specified in terms of different attributes (e.g. credit amount, disbursal time) and levels (e.g. 50 mn or 20 mn, 60 days or 7 days). It is commonly used in commercial marketing studies. For an overview of CA, see Green and Srinivasan (1990 and 1978).

out using hypothetical descriptions of the service, or so-called stimuli.¹³ Three types of stimulus presentation may be used to collect data for CA experiments. A distinction may be made between (1) verbal, (2) paragraph (descriptive cards), and (3) pictorial or in-kind presentation (Green and Srinivasan 1978). The stimuli describe distinct service alternatives (profiles) and will be assessed by the target group (Backhaus *et al.* 1996) (see also Appendix-Figure 1).¹⁴ This CA approach follows the recommendations of Schrieder and Heidhues (1991) for presentation of financial services in developing countries, which constitute a mixture of verbal, paragraph and pictorial designs. CA is an interesting marketing research method that combines quantitative and qualitative aspects and requires involvement of the potential clients at different stages of the research process (Dufhues, Geppert, and Buchenrieder 2003). In contrast to the wealth ranking, the purpose of pictures in the framework of CA is to present complex issues in a simplified manner and thus serve as a mnemonic aid. Thus, much emphasis was given to the visualization of the stimuli, which not only have explanatory role, but also act as a mnemonic aid for the target group during the rankings, particularly for those who are illiterate (Fussel and Haaland 1978; Jenkins 1978). It was decided to use pictograms for the pictorial stimuli presentation as they generally allow a higher level of abstraction. The creation of the stimuli should be based on a participatory decision process together with the target group. Workshops were therefore organized to obtain easily understandable images for the visualization of financial products. In a second step, these images were used to facilitate the CA interviews.

2.3.1 Developing images of different financial products¹⁵

The workshops to create the images were lead by a special moderator.¹⁶ As there are certain locations where the majority of the population comprises ethnic minorities, the resource person made use of a local translator from the common minority language, Tay, into Vietnamese.¹⁷ Farmers, village authorities, and higher-level authorities (a commune Communist Party secretary) took part in the meetings.¹⁸ Farmers were asked to propose appropriate symbols and make drawings to visualize attribute levels.¹⁹ It turned out to be a major challenge for farmers to draw even everyday objects like pigs or buffaloes. Drawing by

¹³ In this context a stimulus is defined as the presentation of the attributes' levels to the respondent.

¹⁴ A profile is a combination of different attributes and levels.

¹⁵ This section draws on Barisch and Dufhues (2001).

¹⁶ The moderator is able to communicate fluently in different languages (English, German, and Vietnamese).

¹⁷ The Tay language is the *lingua franca* for all ethnic minorities in the Bac Kan province (Buchenrieder *et al.* 2003).

¹⁸ An employee of the local bank was invited as well, but he canceled on the morning of the workshop. The Party official very often spoke first and thus hindered other participants from mentioning their ideas, not to say made them silent.

farmers was therefore abandoned and the meetings were limited to discussions on how to visualize certain financial attributes. These discussions bore some fruitful results (see Figure 2).

A research tool like visualization techniques was completely new to the farmers. The farmers did not usually know how to draw, as many of the farmers had not handled drawing materials before. Fussel and Haaland (1978) made similar observations in Nepal. Particular difficulties were the abstract terms that had to be visualized (e.g. credit term, livestock insurance). The farmers understood those terms. But they had enormous difficulty in giving ideas regarding how to visualize these terms. However, they considered any kind of drawing as an activity only for children. This attitude also hampered the process.

Figure 2 Summary of results from the visualization workshops

<p><i>Symbols and abbreviations</i></p> <ul style="list-style-type: none">• Numbers and the percentage symbol ‘%’ are generally known and understood.• The actual currency notes can visualize money. <p><i>Time intervals</i></p> <ul style="list-style-type: none">• Time intervals can be visualized by showing the head of a young and old buffalo with the teeth showing. A young buffalo has only two front teeth and an adult has four. As the time to raise a buffalo bought in as a one-year old to maturity is two years, this image can be used to express the term of a credit.• Time intervals can also be visualized by drawing different stages of pig maturity: small, medium, large. In doing so, the size of the pigs would be different and, in addition, their weight can be expressed by the number of kilograms ‘kg’.• Shorter time intervals (one month) can be visualized by showing different phases of the moon <p><i>Distances</i></p> <ul style="list-style-type: none">• Different distances can be visualized by different administrative levels (village, commune, and district) and their localities. The different appearance of these localities can be visualized by the differences in architecture and environment: e.g. stilt houses and forest = village; one and two-storey buildings with motorbike = district. <p><i>Special credit features</i></p> <ul style="list-style-type: none">• The image used to visualize the group-lending scheme should illustrate the fact that only the credit group leader has contact with the credit officer: a two-person relationship. In it, the credit officer is recognized as the person carrying a briefcase.• A double-sided picture showing sick or starving livestock (buffalo, cattle, pig) on the left, indicating the risk situation, and healthy livestock on the right can visualize credit insurance.

Source: Barisch and Dufhues (2001)

The workshops needed a very long preparation time, with many visits to the local authorities to get all the necessary research permits. Workshops are officially forbidden at the local level, unless they are given by local authorities. Local authorities fear foreign influence on the local population, especially when ethnic minorities are involved. Therefore, the workshops were not called workshops, but ‘PRA-tools’. However, as the case of Khau Nen showed, some local authorities were still not convinced of the harmlessness of the workshop and sent a

¹⁹ Different attributes and levels can describe products or services. For instance, a possible attribute of a savings product is the interest rate, with the possible levels of 10% or 5% interest per year.

representative to monitor the event. This might also explain to a certain degree the reluctance of workshop participants to engage freely in the workshop.

Obviously, such a research tool needs a longer training period to introduce farmers slowly to the new medium, and a half-day workshop is not sufficient to accomplish a goal like this. Besides, not every farmer has the artistic ability to operate such a research tool. Considering the cost and benefits involved, it seems more reasonable, particularly if time is restricted, to use prearranged images by a local painter and to aim at a discussion about the comprehensibility of these images. It could also improve the whole process if the local painter took part in the workshops as he could convert the ideas of the villagers directly into pictures and they could discuss directly whether he had conveyed their ideas or not.

2.3.2 Pictograms used as mnemonic and explanatory support within Conjoint Analysis

The visualization ideas for the individual attributes' levels, which were obtained through the village workshop, were finally discussed with a local painter of the Tay ethnic minority. His comments on the images were taken into account in the drawing of the pictures.²⁰

He converted the ideas, images, and figures into clear pictograms. The pictograms were very detailed and realistic but included only images that were important for understanding, as too many details can distract people. Figure 3, for example, describes in detail a village stilt-house in Northern Vietnam, and Figure 4 describes a credit group but excludes any disturbing background scenery. Research work in Nepal found that the more realistic a picture is, the more effective it is. So-called simple stylized drawings make greater demands on the person trying to interpret them (Fussell and Haaland 1978). However, details in pictures need to be absolutely accurate. There should be no mistakes in realism. Mistakes may simply distract them or lead farmers to misinterpret (Jenkins 1978).

²⁰ For example, he proposed visualizing the time gap between credit application and disbursement using the different shapes of the moon.

Figure 3 Drawing of local village in Northern Vietnam

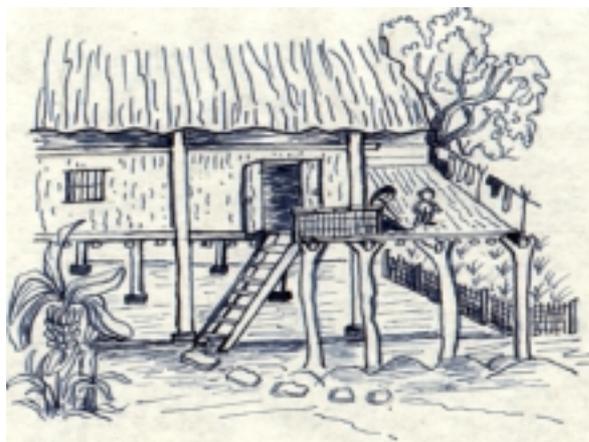


Figure 4 Drawing of a credit group



Altogether, the painter drew 14 different pictures. These pictures were later arranged on DIN A4 cards, in line with the purpose of the CA, and each figure was given an explanatory headline in Vietnamese. Appendix-Figure 2 depicts an example of these cards.

Households were interviewed for the CA ranking of the pictures by the researcher himself and a specially trained female interviewer. To avoid double translation (ethnic-minority-language/ Vietnamese/ English), the interviewer interviewed those households unable to speak Vietnamese together with a local translator. The translator explained to the farmers the set of cards.²¹ After the explanation, the farmers were asked to explain the meaning of the single pictograms or symbols to crosscheck whether they had indeed understood them. In cases of misunderstanding, individual pictures or symbols were again explained until the farmers understood the meaning.²² Then, depending on their cognitive abilities, either all the cards were either set up in front of them or, in the case of those with lower abilities, they had to do a pair-wise ranking until the three best and the three worst cards were selected.

Farmers always understood the pictures, and even illiterate people could handle the interview situation. Certainly, illiterate people needed more explanation and it took them longer to choose. Nevertheless, this good outcome can be at least partly explained by the use of the easy understandable pictograms. Some farmers had problems choosing between very similar cards and it took them a while before they made up their mind. But this is probably related to the Vietnamese socio-cultural context, including the education system and the socialist history, rather than to unclear images. Many farmers perhaps prefer to adopt decisions that are made by others (Dufhues 2000).

²¹ The first set of cards consists of 16 cards with six symbols or pictograms on each card. The second set has nine cards with four symbols or pictograms on each card.

²² One farmer was excluded because his cognitive abilities were too low. His wife did the CA-interview instead.

3 Comparison of the different visualization tools and conclusion

Comparison of visualization tools: The application of pictures facilitated the intercultural communication between researchers and target groups. But they could not reduce the demands on the farmers' ability to abstract. Table 3 explains that the more abstract the picture-supported issue is, the higher the demands it makes on human capabilities. The wealth ranking that was already known by the farmers and was easy to understand scores only three points, while the non-figurative definition of individual attribute levels in the CA interviews scores ten points. Likewise the photo-supported discussion about wealth and poverty, which was not directly linkable to already identified symbols (like the exterior of houses within the wealth ranking), seemed to be very demanding for target groups. Researchers learned that their presence was important when using the camera in order to guide the farmers in a process-oriented manner. Technical feedback and input would have been as necessary as some assistance in offering creative ideas.

Table 3 Assessment criteria for picture-supported research phases

Criteria	Photo-supported wealth ranking	Photo-supported discussion about wealth and poverty	Workshops to develop images of different financial products	Image-supported CA-interview
I) Time requirement				
• Preparation time for researchers	3	2	5	4
• Preparation time for farmers	1	3	1	1
• Time requirements for the realization of the tool	3	1	5	2
	7	6	11	7
II) Costs				
• Costs of material	4	3	3	2
• Costs of organizing and transporting the material	4	4	3	1
• Staff costs	1	1	5	1
	9	8	11	4
III) Demands on human capabilities				
• Demands on farmers' capacity for abstract thinking	1	4	5	4
• Demands on farmers' technical/artistic abilities	1	3	5	1
• Demands on staff (translating capabilities)	1	2	3	4
	3	9	13	9
IV) Importance for results				
• Gaining new knowledge of techniques or general understanding (farmers)	5	4	3	4
• Gaining new results or cross-checking data (researcher)	4	3	2	2
	9	7	5	6
Total	28	30	40	26

Note: To obtain better comparability of the different research tools, the frequency and the number of the meetings where the tools were applied are not considered.

Table 3 reflects the fact that pictures are most favorable when used as mnemonic aids for defining individual attribute levels within the CA as long as already developed and tested images are used. In this research study, farmers were asked to develop the images and, as Table 3 shows, this led to high staff costs and required much time for preparation. This research suggests that the development of images to support research tools is best outsourced to a professional local painter. The images developed by the painter proved very useful in the context of the CA interview to support communication.

Conclusions: This case study presented experiences with pictures in client-oriented financial research in Vietnam. Pictures were used to support communication in order to enhance target group participation in different phases of the research process. The basic assumption made, namely that the quality of knowledge generated through this research increases with the participation of the target group, was verified, although this was not the objective of the investigation in this research study. Nevertheless, using pictures as a tool to facilitate target group participation by enhancing communication among all the people involved in the research process seemed to be a delicate task.

The application of pictures to enhance communication between people with different languages, different experiences and different cultural backgrounds required many skills to improve the quality of knowledge generated. It is very difficult to use pictures without any explanatory texts or speech, particularly if the target groups are illiterate. People who have not learned how to read may also not have learnt how to understand pictures. However, the level of ‘visual illiteracy’ depends on many factors, such as the existence of a literacy environment, the existence of pictures in the village, or the mobility of people (Fussel and Haaland 1978).

Pictures stimulated discussions about wealth and poverty, but the discussion could have resulted in better information (see Table 3). If a researcher had been present during the process of taking pictures to visualize wealth and poverty, s/he would have been able to help the farmers to take simple photos of their symbols for wealth and poverty. Then, a better basis for the discussion on these abstract terms would probably have resulted in improved information. In this context, the researcher’s experience was that the more abstract the issue to be visualized was, the more spoken words were necessary in order to come to a mutual understanding.

In Vietnam, inventive thinking is in its infancy and people are not very used to developing and expressing their own ideas. Some farmers are still afraid of expressing their own opinions and making their own decisions. This attitude could be a consequence of working within a cooperative for decades, despite the fact that most cooperatives were dissolved about ten years ago. It could also be an influence from Vietnamese culture, which does not promote decision-making processes. Meyer-Tran, Mutz, and Wolf (1999: 20) write: “In circumstances of uncertain future expectations, many people are not very eager to make decisions at all.” The lessons learned during the process of photo-supported discussions about wealth and

poverty show the importance of being able to react flexibly to the local situation in order to take advantage of pictures or photos.

Despite some difficulties, pictures were a valuable support for the applied research tools. The use of pictures in financial market research revealed some interesting results, albeit sometimes at quite a high cost. Nevertheless, the impact of supportive pictures for the quality of new knowledge is difficult to assess, since the question of whether it would have been possible to obtain the same information without the support of pictures remains unanswered.

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Appendix

Appendix-Table 1 Criteria for ‘hungry’ households in the research villages

	Pac Nghe 1	Thom Meo	Khoui Khi	Khau Nen
Household equipment		Poor ¹		
Housing condition	Very bad ²			
Illness	X	X		
Lack of cash/capital	X	X	X	
Lack of food	5-6 Month/year	3-5 Month/year	1-2 Month/year	5 Month/year
Lack of knowledge ³	X	X	X	X
Lack of labor				X
Few buffaloes/cattle				0-1 Animal
Little paddy rice area	400-500m ²	0-300m ²	1000-2000m ²	0-1000m ²
Little upland area				500-1000m ²

Source: Own data

Note : An ‘X’ indicates that this topic was mentioned as a decision criteria in the ranking process in the respective villages.

¹ ‘Poor’ household equipment is defined as no furniture and no durable consumer goods. Only basic tools of poor quality are available.

² The criteria for ‘very bad’ housing conditions are e.g. thatched roof, mud floor, unstable walls.

³ Households have little or no education and can therefore hardly benefit from extension services, and they possess little or no knowledge about agricultural techniques

Appendix-Table 2 Criteria for ‘poor’ households in the research villages

	Pac Nghe 1	Thom Meo	Khoui Khi	Khau Nen
Household equipment		Little ¹		
Illness	X			
Lack of capital	X		X	
Lack of food	2-3 Month/year	2-3 Month/year	1 Month/year	3 Month/year
Lack of knowledge ²	X	X	X	
Lack of labor				X
Little paddy rice area	600-700m ²	2000m ²		500-1500m ²
Little upland area				1000-2000m ²
Many children		4-6		4-5

Source: Own data

Note : An ‘X’ indicates that this topic was mentioned as a decision criteria in the ranking process in the respective villages.

¹ ‘Little’ household equipment is defined as some furniture but no durable consumer goods.

² Households have little or no education and can therefore hardly benefit from extension services and they possess little or no knowledge about agricultural techniques

Appendix-Table 3 Criteria for ‘medium’ households in the research villages

	Pac Nghe 1	Thom Meo	Khoui Khi	Khau Nen
Buffaloes/cattle				1-3
Children		3-5		
Hard-working			X	
Household equipment		Little ¹		
Housing condition	Average	Average		
Lack of capital			X	
Lack of labor			X	
Paddy rice area		4000m ²		1000-2000m ²
Production experience			Some	
Sufficient food	X		X	X
Upland area				over 2000m ²

Source: Own data

Note : An ‘X’ indicates that this topic was mentioned as a decision criteria in the ranking process in the respectively villages.

¹ ‘Little’ household equipment is defined as essential furniture and but no durable consumer goods.

Appendix-Table 4 Criteria for ‘better-off’ households in the research villages

	Pac Nghe 1	Thom Meo	Khoui Khi	Khau Nen
Buffaloes/cattle				3-10
Cash to buy inputs		X		
Knowledge	Good ³	Good ³	Good ³	
Hard working			X	
Household equipment		Lots ¹	X	
Housing condition	Good ²	Good ²		Good ²
Motorbike				X
Off-farm activities	X	X		
Paddy rice area	over 4000m ²	6000m ²		3000-5000m ²
Upland area				3000-4000m ²

Source: Own data

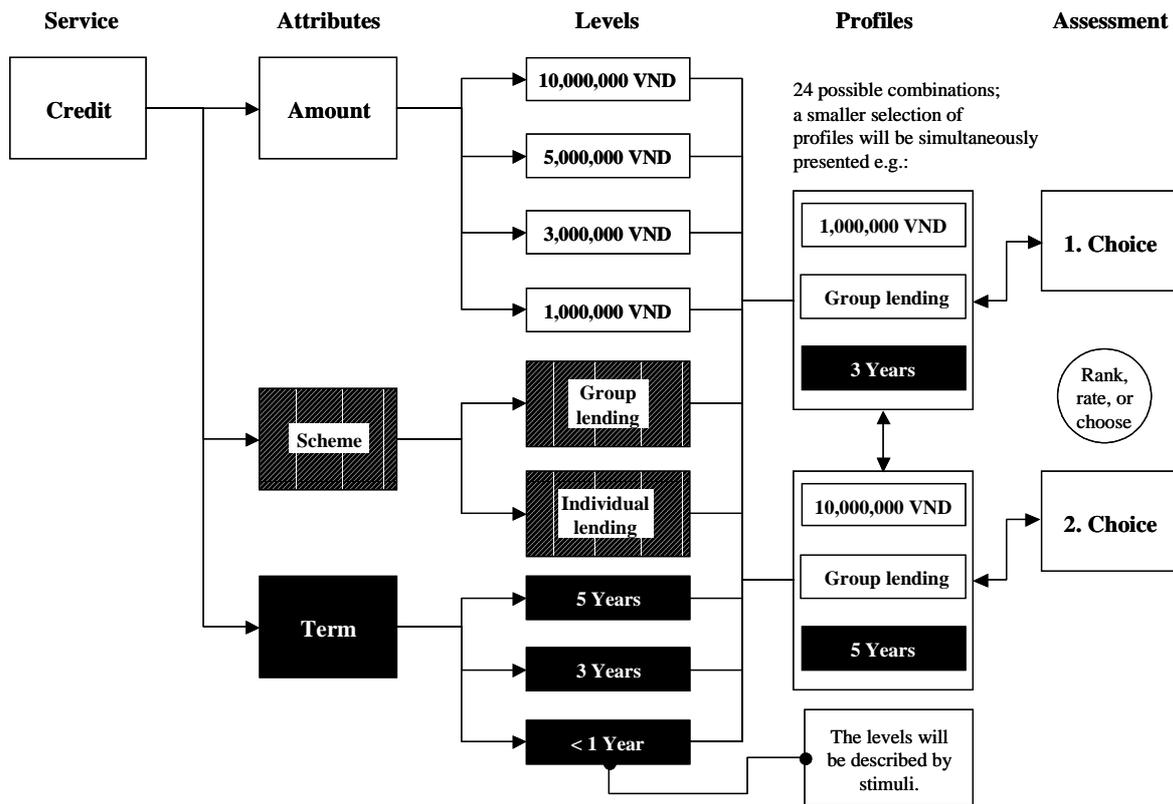
Note : An ‘X’ indicates that this topic was mentioned as a decision criteria in the ranking process in the respectively villages.

¹ Households possess durable consumer goods like TV, HIFI, furniture, etc.

² Solid house, with tiled roof and wooden walls.

³ Households are well educated and possess some knowledge of agricultural techniques.

Appendix-Figure 1 Illustration of the concept of the CA and the basis of credit

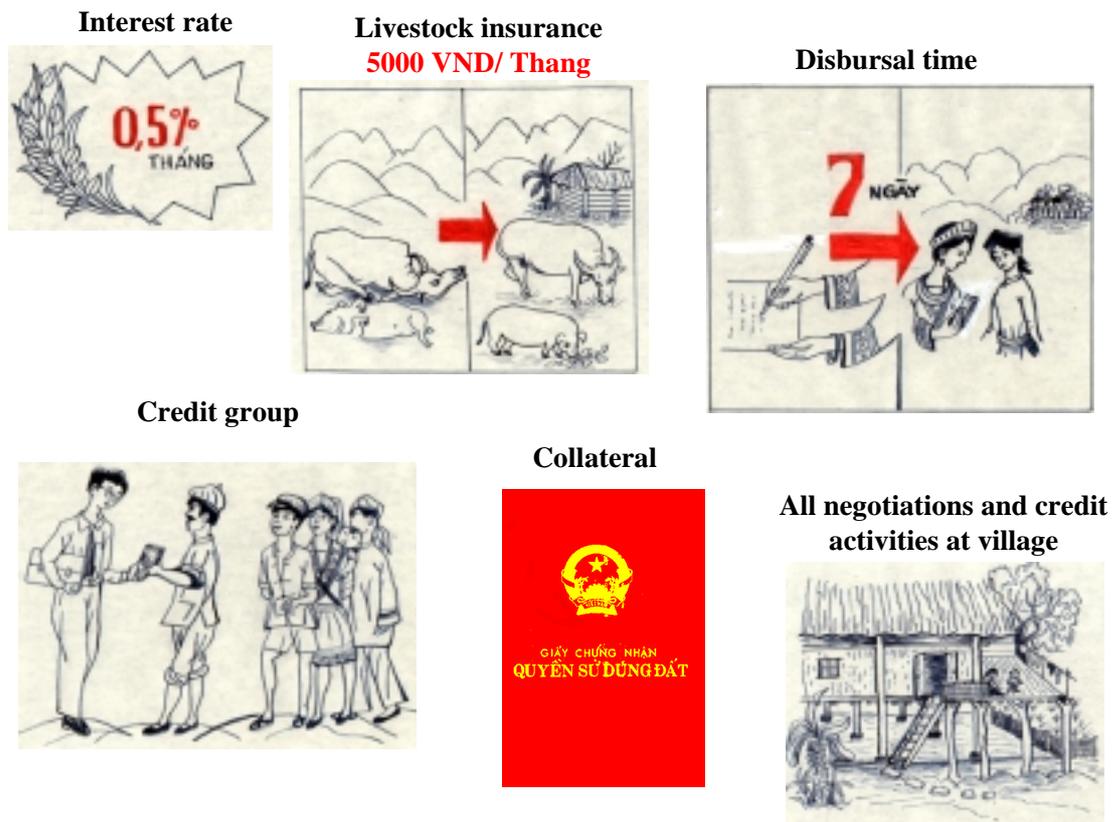


Source: Adapted from Dufhues (2002)

Notes: Consumers make their consumption decisions based on a joint comparison of different attribute levels. The CA assumes that a consumer assigns a utility value to each level of each attribute and makes his or her final decision based on the total utility values across attributes for a given service. The number of combinations and their contents are selected in such a way as to permit the statistical decomposition and quantification of each attribute level's contribution to the consumer's ranking decision.

This research work applies the Choice-Based Conjoint (CBC). The CBC differs from other traditional ranking and ratings-based conjoint analysis in that it simply asks respondents which option they would choose (purchase). This approach is probably more realistic and better reflects what customers actually do when evaluating and buying services in the real world. Another major advantage of the CBC method is the so-called 'none' option. As in the real world, respondents can decline to purchase in a CBC interview by choosing the 'none' option (Orme 1996).

Appendix-Figure 2 Conjoint survey credit card



Note: The headlines of the concepts were in Vietnamese language on the original Conjoint survey cards.

Recent Discussion Papers

- No. 01/1999 Heidhues, F. and G. Schrieder, *Rural Financial Market Development*.
- No. 02/1999 Heidhues, F., C. Karege, B. Schaefer and G. Schrieder, *The Social Dimension of Policy Reforms*.
- No. 03/1999 Heidhues, F., W. Erhardt, A. Gronski and G. Schrieder, *The Social Dimension of Policy Reforms and World Bank Case Studies*.
- No. 04/1999 Erhardt, W., *Credit for Poor and Low-Income Entrepreneurs in Urban and Rural Northern Thailand*.
- No. 05/1999 Senahoun, J., F. Heidhues and D. Deybe, *Structural Adjustment Programs and Soil Erosion: A Bio-Economic Modelling Approach for Northern Benin*.
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- No. 09/2000 Dufhues, T.B., *Economic Appraisal of Sugarcane Production in Peasant Households in the Son La Province, Northern Vietnam*.
- No. 10/2000 Heuft, A. and G. Buchenrieder (née Schrieder), *Decentralisation in Peru's Agricultural Policy: A Critical Review from 1993 to 1998*.
- No. 01/2001 Knüpfer, J., *Landnutzungsentscheidungen ethnischer Minderheiten im Kontext der institutionellen Rahmenbedingungen Nordthailands*.
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- No. 03/2001 Knüpfer, J. and G. Buchenrieder, *Rural Poverty Alleviation Through Non-farm Income in Transition Economies*.
- No. 04/2001 Dufhues, T., P.T.M. Dung, H.T. Hanh, and G. Buchenrieder, *Fuzzy Information Policy of the Vietnam Bank for the Poor in Lending to and Targeting of the Poor in Northern Vietnam*.

- No. 01/2002 Brüntrup, M. and F. Heidhues, *Subsistence Agriculture in Development: Its Role in Processes of Structural Change.*
- No. 02/2002 Alker, D. and F. Heidhues, *Farmers' Rights and Intellectual Property Rights – Reconciling Conflicting Concepts.*
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- No. 01/2003 Dufhues, T., G. Buchenrieder, F. Heidhues, and Pham Thi My Dung, *Towards demand-driven financial services in Northern Vietnam: A participatory analysis of customer preferences*
- No. 02/2003 Geppert, M., and T. Dufhues, *Visualizing rural financial market research in Northern Vietnam through pictures*