

New Approaches to Cross-Cultural research on Education's Outcomes amongst the Poor: Reflections on RECOUP's Methodology.

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Abstract

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The Research Consortium on Educational Outcomes and Poverty (RECOUP), one of the three DFID consortia funded in 2005 to produce policy-relevant research in international education, has as its remit to investigate the outcomes of education for the poor. In this paper, at the mid-point of the research, we reflect on the research design for one of the three themes of RECOUP's work - human and social outcomes - in the light of the assumptions made at the time and subsequent experiences.

We identify the three main ways in which we intend to organise our analysis in order to combine the best of both quantitative and qualitative traditions, which we identify as Q-squared (where economics is the lead discipline); mixed methods (where sociology or education is the lead discipline) and nested case studies (where anthropology is the lead discipline) .

The research, carried out in Ghana, India, Kenya and Pakistan, uses an innovative household survey instrument as well as a series of qualitative studies (including semi-structured interviews, focus groups, life histories) carried out in the same geographical areas and covering in greater depth sub-sets of the topics investigated by the surveys . We review progress towards combining quantitative and qualitative research methods to produce data that will allow us to analyse educational outcomes for the poor in these four countries, to test new research instruments to measure educational outcomes, as well as to generate valid cross-country comparisons.

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Introduction

Just as the notion of ‘development’ has evolved well beyond its early characterisation as ‘increasing levels of national income per capita’, so that of ‘poverty’ is no longer acceptably defined merely in terms of the presence of low levels of income or consumption. The challenges of understanding poverty – and of helping to alleviate it – have to take account of the incommensurable nature of its different manifestations. Those people who are ‘poor’ often have very different characteristics, *inter alia*, as regards class, ethnicity, occupation, age and gender. Attempts to increase their entitlements thus involve very different types of political and technical action, and need to be premised upon analysis and insights from traditions that extend across the whole of the social sciences, rather than from only those which are nested in any particular branch. This formulation owes much to Sen’s capability approach (e.g. Sen (1999)), but it is not a new insight. For example, as early as 1991, the World Bank’s Operational Directive on Poverty Reduction (which, *inter alia*, provided advice and guidance to staff on how poverty issues should be analysed) had stated: ‘The economic framework notwithstanding, poverty reflects the results and complementarities among cultural, sociological and political factors. Analyses of cultural constraints, sociological context and/or political dynamics in which poverty persists contribute to understanding the process of poverty in a particular country and to evaluating the full costs and likely benefits of alternative measures to reduce poverty. (World Bank (1991)

So it is that attempts to gauge the impact of particular types of intervention on the lives and livelihoods of the poor need to be catholic in their analytic approaches, and in the ways in which their questions are addressed. Thus, for example, in asking in what ways education helps or hinders the poor, we cannot limit our answers only to the matter of whether or not it helps, directly or indirectly, to increase their incomes.¹ We must ask whether, and in what ways, it affects their participation in society economically, socially, culturally and politically. In order to do this, it becomes necessary to utilise the approaches and methods of a range of subjects and disciplines.

Cross-disciplinary research can be thought of as work which is based upon analysis and methods from more than one discipline. This might be achieved in a highly integrated way by one or more researchers working together, or as a product of analysts from different disciplines offering their own conclusions and insights. (Kanbur, 2002: 483) and (Harriss, 2002: 494) suggest that the former would characterise ‘interdisciplinary’ research, whilst the latter would better be described as ‘multidisciplinary’ in nature. Clearly there is a spectrum of possibilities along this ‘integration’ continuum, which becomes more methodologically demanding the greater the extent of inter-disciplinarity achieved.

Reaching any place on this spectrum, of course, is not straightforward. Firstly the cognate disciplines themselves have become increasingly specialised over the last 30 years, making it much more difficult for particular individuals to straddle more than one disciplinary tradition. This is perhaps most noticeable in economics, where quantitative modelling and the generation of testable propositions using large data sets has become its major preoccupation, making it less comfortable with tackling questions of deprivation which involve both economic and non-economic characteristics. Qualitative sociological and anthropological approaches may be more attuned to tackling such questions. But their typical methods of case-study, or interpretive analysis based upon interviews of small numbers of respondents, do not readily result in statistically generalizable results.

Thus, attempts at collaboration often bring frustration and disagreement between exponents of particular disciplines, because the methods of one cannot speak easily to the fundamental questions posed by the other. The economist’s preoccupation with data which reveal ‘facts’ – either administratively supplied or generated by questionnaires given to respondents or others to complete on their behalf – is judged naive and overly reductionist by qualitative researchers, who believe that it is the interpretation placed upon such ‘facts’ which is precisely the problem to be investigated. Quantitative researchers, by contrast, judge the samples taken by qualitative researchers as unrepresentative and therefore providing little more than interesting examples which are rooted in a particular context.²

¹ Abstracting from a substantial literature, a useful summary of the ways in which poverty is variously defined and measured is given by Maxwell (1999) .

² For further discussion of these tensions and contrasts see Hulme and Toye (2006) and Brannen (2005)

We argue in this paper that this issue of method is, indeed, at the heart of the cross-disciplinary challenge. Whilst all may agree with the importance of a particular question, it is the different ways in which sociologists, economists, political scientists and anthropologists tackle it that brings discomfort for each, because what counts as valid knowledge presupposes a valid particular way, or ways, of discovering it, and generates different degrees of support in different settings (Engelke, 2008). Furthermore, these issues become increasingly problematic when qualitative and quantitative methods are sought to be used cross-culturally.

Recent years have, nevertheless, seen major new efforts to bridge this methodological divide. We argue that, complementing the spectrum of approaches to cross-disciplinarity, a similar spectrum is mirrored in the ways in which quantitative and qualitative methodologies are combined. Outcomes here are partly determined by the dominant discipline used by the researcher(s) concerned. They tend to be different if economics, on the one hand, or anthropology, on the other, are dominant. The former case typically starts from the quantitative, and uses qualitative approaches to add depth to proffered explanations for statistical associations, whereas the latter starts from the qualitative, and uses quantitative evidence to add context. In between these approaches are those – often from education or from some forms of sociology – that are more eclectic in their orientations, and combine methods on more pragmatic grounds. This paper points to the salient features of three main approaches to combining quantitative and qualitative methods. It discusses the challenges of each, in the particular context of a multi-disciplinary cross-country research programme on education and poverty, with lessons being drawn for future research approaches.

1. The RECOUP Programme

The Research Consortium on Educational Outcomes and Poverty (RECOUP) is a research partnership of seven institutions in the UK, Ghana, Kenya, India and Pakistan, funded by the UK Department for International Development (DFID) over 2005-10. Its research is examining the impact of education on the lives and livelihoods of people in developing countries, particularly those living in poorer areas and from poorer households. Its purpose is to generate new knowledge that will help to improve education and poverty reduction strategies in developing countries, through an enhanced recognition of education's actual and potential role.

A long tradition of scholarship, stretching back over several decades, has shown that schooling – including at the primary level – helps to bring a wide array of development benefits. We know that, in all societies, more schooling is associated with increased earnings. Evidence from many countries shows that productivity in urban and rural self-employment is higher for those with more education; that development goals in the areas of population control, health and nutrition are more rapidly achieved where education is widely available; and that the acquisition of 'social capital' and more democratic governance all rise alongside educational achievements.³

We are less sure, however, of the mechanisms by which some of these statistical relationships hold, and indeed about whether they remain strong under the polarising pressures of globalisation, recession and civil conflict, which have affected our partner countries in varying degrees. Our research programme raises questions under three broad themes:⁴

Social and human development outcomes of education. These typically lie outside the measured economy. Education can transform social relationships (e.g. by reducing gender and class inequalities in capabilities), and diversify the range of people's social links, building better prospects for social harmony. It can change attitudes (e.g. towards human rights or gender equality), add to social and cultural capital (e.g. self-confidence, or disposition to co-operate), and improve individuals' health, nutrition, and fertility behaviour. Much is known about these relationships, but very important gaps

³ For recent overviews of a substantial body of this research on the social and economic outcomes of education see Glewwe (2002) Hanushek and Woessmann (2007) UNESCO (2004).

⁴ Project titles are: Disability, education and poverty; youth, gender & citizenship; health & fertility; skills acquisition and its impact upon lives and livelihoods; aid partnerships and educational outcomes; public-private partnerships in education. Details of each of these projects can be found at: <http://recoup.educ.cam.ac.uk/>.

remain. We need more understanding of *how* education affects health and fertility, especially for the poor; a better picture of *how* educational outcomes impact on civil engagement and empowerment, particularly for women; and a better feel for the local meanings of different kinds of schooling, and how these differ by gender, ethnicity, disability and other dimensions of social exclusion.

Economic and market outcomes of education. Everywhere, those with more schooling and better learning outcomes have wider job-choice and faster earnings growth. Yet, in low-income Africa only a small, and sometimes declining, proportion of school leavers has achieved minimum learning objectives, even as participation in schooling has expanded. Thus, both the allocative and the behavioural effects of schooling probably change as access widens. Our research asks how different types and levels of education, and skill training, acquired both at school and in the workforce, affect the economic opportunities available to different fractions of the poor, and how these outcomes have been changing over time.

Outcomes of education partnerships between households, governments and aid agencies. Recently, new forms of partnership have emerged in the provision of education. Our research evaluates the provision of education by public and private providers, drawing on the concepts of 'voice' and 'exit/entry', to examine individual behaviour within organizations that operate under the rules of the market. Educational partnerships between aid donors and national governments have also been important. Our work examines the ways in which the provision of educational aid has influenced policy and practice in partner states – focussing on both the quantity and quality of the aid process – to try to understand past performance and to identify promising future approaches, for recipients and donors alike.

The research being conducted under each of these three themes uses a mix of quantitative and qualitative methods. A household survey, specially designed for India and Pakistan, will provide panel data for around 1000 households randomly drawn from selected low-income urban and rural environments. More detailed information on the characteristics of household members – as regards their education, training, health, fertility and disability status – has been collected than is usually the case. In Ghana, an establishment-based survey has been refined to provide similar information to the South Asia household enquiries. (New survey work in Kenya was not undertaken, owing to resource constraints and to the availability of earlier household survey material.) These data-bases allow a range of questions about the relationships between education, work, income, gender, health, fertility, disability and poverty to be addressed within a formal econometric framework. The panel nature of the enquiry will allow greater confidence about causation to be attributed in the analysis than is the case with standard once-off enquiries. The design of the data sets is intended to facilitate cross-country comparisons about the nature and strength of different determinants in different environments, although strict comparability will in practice be easier to achieve across the Asian than the African cases.

Qualitative studies are also being conducted in the same geographical areas as the surveys. These enquiries, starting with household censuses at each of the study sites, use semi-structured interview techniques, life histories and focus group approaches to provide insights into how and why education has the outcomes we see. The qualitative studies are intended to throw light on how schooling and training are used by people to their advantage, and on the constraints facing poor individuals and households, which may or may not be helped by the education they receive.

The different aspects of our research under the three themes are being pursued separately, using each of the research methods indicated above, in ways which are expected to reveal new and significant knowledge. But there are three features of our approach which are unusual. First, we have adopted a comparative approach whereby the same (or closely similar) research questions are being tackled simultaneously in each of four separate developing countries. Secondly, each of these questions is being addressed by researchers from a range of social science disciplines – most notably from the perspectives of economics, sociology and anthropology. Our aim is to produce a range of scholarly and policy-oriented papers which marry these analytic traditions to achieve a strong cross-disciplinary perspective (defined as above). Thirdly, quantitative and qualitative research methods are being used to inform each other in ways which, whilst often proposed as being desirable, relatively rarely happen in practice. In the remainder of this paper we provide further discussion of the three main ways of integrating quantitative and qualitative research methods we have identified, illustrating the argument with two case

studies of projects on health and fertility and disability. A final section concludes, and draws some methodological lessons for the future.

2. Alternative Models of Combining Quantitative and Qualitative Research

A contradictory dichotomy between two sets of research methods, expressed in shorthand as ‘quantitative’ and ‘qualitative’, was once seen as self-evident. The dominant position in educational research since the mid-1990s, however, is held by those who see the two approaches as potentially complementary (Carvalho & White, 1997; Johnson & Onwuegbuzie, 2004; Niglas, 2004). Such a position is not without its critics. Some social researchers still maintain that there are fundamental epistemological differences between the two types of research methods, and argue that attempts to combine these approaches leads to logical incoherence, and should not be attempted (Lincoln & Guba, 2000; Maxwell & Delaney, 2004; Schwandt, 2000). Others (such as Hammersley, 1995) have pointed to major differences in philosophical and methodological preferences within both camps, suggesting that each category is heterogeneous and internally inconsistent. A ‘mix and match’ approach to cancel out the respective weaknesses – what has been called ‘a diversity of imperfection’ (Brewer & Hunter, 1989: 16) – ignores the variability within research traditions, and a more considered research strategy might produce more epistemologically coherent solutions (see also Bazeley, 2004; Hammersley, 1995: 7).

Those who see the need to contribute to poverty-reduction policies as their over-riding goal have rarely addressed these issues. National and local-level policy-makers are generally believed to prefer quantitative approaches, since surveys and censuses can provide accounts that are representative of larger populations, while qualitative approaches are judged small-scale and thus not necessarily typical. Nonetheless, some authors have argued that qualitative (or case-study) approaches are also able to produce generalisable conclusions. For example, if a case that is critical to a hypothesis is selected, a falsification through this critical case study can be generalized to a falsification of the general thesis (Flyvbjerg, 2004). There are advocates of the use of qualitative methods for exploratory, descriptive studies, which can set an agenda for more large-scale survey design. Others argue that such approaches should investigate causal links between factors identified by quantitative methods as showing strong correlations. Brannen produces a classification of different possibilities, depending on whether qualitative or quantitative methods are dominant, or equally significant; and then contrasts situations in which the different methods are carried out simultaneously or sequentially (Brannen, 2005: 14).

How to combine the insights of different research traditions is not, then, a straightforward task, and there is a huge and rapidly growing literature on the subject (see, for a recent survey, Creswell et al., 2006). We discuss only three different approaches from the many that have been identified (see Table 1). Each is linked to different disciplinary and epistemological positions, and all three are represented within the RECOUP team. The first of these has emerged mainly from economics, and is sometimes known as Q-squared; the second relates more closely to sociology, and is often called ‘mixed-methods’; and the third draws on ethnographic sociology and anthropology, and is a nested or ‘embedded case study’ method. Significantly, perhaps, discussions of these approaches in the academic literature seem to take place very much within disciplinary boundaries, with very little cross-referencing.

2.1 Q-Squared

The Q2 approach emerged since 2000, reflecting both a belief amongst many development economists in the importance of achieving objectively verifiable and generalisable research results, yet a frustration about the blunt nature of many of the facts which emerge from the analysis of large-scale statistical surveys. It has become increasingly accepted that objectivity is not delivered by statistical analysis alone, and that a combination of qualitative and quantitative analysis can add considerable depth to the interpretation of statistical associations.

In a classic formulation, Ravi Kanbur identified a set of contrasts between the approaches of quantitative and qualitative research to the understanding and reduction of poverty (Kanbur, 2001) (see Table 2). Each of them (reproduced in Table 2) represent the opposite ends of a spectrum rather than dichotomies, and Kanbur’s perspective denies the significance of any basic epistemological differences.

Following a conference in 2001, where the Q-Squared approach was launched, its proponents have created a web-page with more than 50 working papers addressing some of the issues this approach has raised (<http://q-squared.ca>). Many analyses start with standard economic approaches to analysing questions about social phenomena, and proceed to use qualitative methodologies, to add to the depth and complexity of their proffered explanations. Rigour has begun to be improved by more formally integrating sampling methods in quantitative and qualitative enquiries alike (Lawson, Hulme and Muwonge, 2007). However, as RECOUP research has demonstrated, there can be equally compelling reasons for keeping sampled households separate for each type of enquiry, provided that similar socio-economic communities, from the same geographical areas, are included as subjects in all aspects of the empirical work. Although Q2 emerged from a primarily economic tradition, there is an increasing acceptance of the importance of a cross-disciplinary approach to poverty analysis,⁵ with some believing that ‘the next frontier in poverty research is at the intersection of dynamics and cross-disciplinarity’ (Addison et al., 2008: 1).

Despite this relative openness to other methods, some proponents of the Q-squared approach seem to assume that economics (and often, economics of a particular kind) must remain the lead discipline. For example, a recent paper stresses the virtue of Q-Squared approaches in *genuinely* (their emphasis) combining the two approaches. But they describe the strengths of a particular form of qualitative work (life history analysis) in terms of its contribution to ‘the elaboration of processes that underpin correlations, the understandings that poor people have of their poverty and the critical events that have caused deprivation’ and suggest that further insights into poverty dynamics will then come from nationally representative panel data (Lawson et al., 2007: 2). In the terms of Creswell et al., Q2 is usually a sequential explanatory research design, in which quantitative methods are dominant, quantitative data collection and some analysis is followed by qualitative data collection, and integration takes place at the interpretation stage (with the possibility of further quantitative data collection) (Creswell et al., 2006: 266-71).

2.2 ‘Mixed Methods’

Proponents of the ‘Mixed Methods’ approach often draw on pragmatic philosophy to deny any necessary link between research paradigms and methods, asserting that in each project, research methods should be selected from the full available range as appropriate to the research questions to be answered (Brannen, 2005: 8; Tashakkori & Teddlie, 1998: 40). Similarly, Johnson and Onwuegbuzie argue for a pragmatic approach to the selection of a research approach, and suggest that it is up to the researcher ‘to examine the specific contingencies and make the decision about which research approach, or which combination of approaches, should be used in a specific study’ (Johnson & Onwuegbuzie, 2004: 22-3).

The World Bank’s Poverty Assessments have provided some of the more thoroughgoing applications of mixed methods approaches. These have been conducted for most middle- and low-income countries more than once since 1992. An influential early evaluation of these studies found that whilst less than half of them had fully integrated quantitative and qualitative analyses from the outset, all of them had used quantitative and qualitative methods as means of testing and enriching the results of the other (although to varying degrees), and had merged their findings into one set of policy recommendations (Carvalho & White, 1997: 16)

Such an approach does not require any particular combination: ‘the methods may be a mix of qualitative and quantitative methods, a mix of quantitative methods or a mix of qualitative methods’ (Brannen, 2005: 4). Brannen also notes that issues of resources and feasibility may be as important as theoretical presuppositions or prior methodological commitments to the choices actually made in many research projects, and that these choices are often justified *post hoc* in relation to ‘additional’ insights which might be generated at the end of a project without necessarily relating very closely to the research questions posed at the beginning (Brannen, 2005: 8-9).

⁵ For a history and review of such approaches see Hulme and Toye (2006) .

In practice, the issues posed for research design and data collection are, in a mixed methods context, less problematic than the challenge of data analysis. Some authors have pointed to the inappropriateness of ‘triangulation’ as the image of how to bring together data based on very different epistemological grounds. Rather, different kinds of data may be used for:

- (1) Elaboration: the use of one type of data analysis adds to the understanding being gained by another;
- (2) Initiation: one method sparks new hypotheses that can be pursued using a different method;
- (3) Complementarity: results are juxtaposed and generate insights that together create a bigger picture; and
- (4) Contradictions: findings conflict and one might interrogate the methods and discount one method in favour of another (Brannen, 2005: 12).

Since there is no necessity, within a mixed methods approach, for a particular epistemological position to underpin such decisions, the outcomes of research taking this kind of approach may be very varied, and it is hard to distinguish a single unifying thread. In the terms of Creswell et al, such an approach to combining quantitative and qualitative work may be sequential or concurrent, explanatory, exploratory or transformative, and might involve triangulation; either the qualitative or the quantitative can be dominant, in all cases, depending on the research questions (Creswell et al., 2006: 266-71).

2.3 Nested or Embedded Case Studies

Case studies have had a chequered career in the social sciences, with much early work in sociology (for example) being based on such an approach; yet in the 1970s and 1980s case studies almost disappeared from sociology methods textbooks (Ragin, 2000). In other disciplines, such as business studies, case studies have been used both as teaching material and as the basis for explanatory models; and some might include most ethnographic fieldwork in the case study category. In an influential text, Yin distinguished between holistic, or free-standing, and embedded case studies (Yin, 2003).⁶ The latter are carefully contextualised, and may draw upon a variety of other sources of data to achieve this.

A key requirement for an embedded case study approach is to include data collected from different social levels (nation, province, and district, for example). Selected examples (sometimes drawing heavily on qualitative research methods) are ‘embedded’ in a context that can be specified using data collected through different, often (but not always) quantitative approaches. By this means, hypotheses generated by the findings from intensive fieldwork (say, in a village or an urban neighbourhood) can be empirically tested by drawing on analyses of survey data. An alternative approach is to use various sources of data to clarify the specificities of the detailed case study, so that – by showing its similarities and differences from other contexts – the limits of its potential contributions to generalisability can be established.

In the simple nested approach, the methods used can be different at different levels, though qualitative approaches are usually seen to be more relevant at the lower levels (such as the department or section within a firm, compared to a division or a whole company). Here we use ‘nested’ in that sense, for a research design where qualitative data are nested within a variety of other kinds of data (including at least some of which are quantitative) and in which the dominant purpose is interpretive. An example from educational research in India is a project in which the views of teachers and parents in particular places (two villages and the secondary schools that serve them) are contextualized within a more general analysis of schooling in the town, district and State, drawing on school-level quantitative data on admissions, charges etc, as well as State-level data on examination results and policy imperatives (Jeffery et al., 2007). In other words, using the language of Creswell et al, we have a concurrent nested design, with priority to the qualitative purpose at the interpretation and analysis stage (Creswell et al., 2006: 266-71).

⁶ A book entitled *Embedded Case Studies* provides an intensive analysis of an urban planning problem Scholz and Tietje (2002) . Their main aim is to integrate social and natural scientific approaches in a teaching environment, rather than to integrate different kinds of social science methods.

2.4 Overview and implications

In this section we have introduced the three main ways in which we intend to combine quantitative and qualitative research methods in RECOUP. As can be seen from Table 1, the underlying assumptions of different members of the team may provide a challenge to how we find sufficient agreement about the overall purposes of the research, notions of truth and causality, philosophical traditions, and the kinds of outcomes of the research that are appropriate.

Such issues would arise even in bringing together a team to work within one country on topics for which there are well-established norms and procedures. In our work, further issues result from our attempts to extend the research into new areas, and from our attempts to carry out this research cross-culturally, maintaining at the same time both a sensitivity to local contexts and the ability to draw valid comparisons across sites. Collecting contextualising data is crucial here, but, as Brannen notes ‘there is a danger that such contextualising data are collected but do not sufficiently inform the analysis of primary data’ (Brannen, 2005: 6).

We now turn to discuss how we address some of these issues for two of our sub-projects: Disability, Education and Poverty, and Health and Fertility Outcomes.

3: Disability Education and Poverty Project (DEPP)

3.1 Justification for the topic

Lately there has been growing recognition of the relationship between disability and poverty in research articles and reports by international organisations, especially in Poverty Reduction Strategy Papers. A DfID report notes that ‘disability is both a cause and consequence of poverty’ (DFID, 2000), highlighting the cyclical and enduring nature of this relationship. Research suggests that people with disabilities may account for as many as one in five of the world’s poorest (Elwan, 1999). Not only are people living in poverty likely to be at greater risk of impairments, but once disabled they are more likely to face enduring poverty, as the exit routes available to them are limited (Braunholtz, 2007). This is not necessarily due to the nature of their impairment, but more likely due to the absence of opportunities and prevailing societal beliefs which may limit their potential. Moreover, in societies with strong kinship patterns, disability is not an individual issue, but has a cascading impact on the wider family (PRAXIS, 1999), and people with disabilities may well pass on their deprivation, both social and economic, to the next generation. Education is often seen to offer a route out of poverty. Thus, exploring the outcomes of education for young people with disabilities is in line with ensuring the fulfilment of their basic rights.

The usual markers of educational outcomes – knowledge, employability, earnings and citizenship – do not do justice to the complex and marginalised lives of people with disabilities. Therefore, there is a need to explore a more fundamental question. What role does education play or is perceived as being capable of playing, in helping people with disabilities achieve the capabilities that they think will allow them to live the lives that they would like to live? In accordance with this thinking, DEPP argues that there is a need to explore social and human development outcomes of education under four broad dimensions: the self; the learning self; participation; and purposeful activities (Singal, 2007). School attendance rates reported across the four countries indicate the very limited presence of people with disabilities in the formal school system, but suggest the availability of various other educational arrangements for this group. Thus, a more nuanced understanding of the types, nature and outcomes of provisions is required.

3.2 Current research and knowledge in the field

Even though disability issues have found space on various national and international agendas, systematic empirical research in this area remains lacking. Disability literature in Southern countries is largely dominated by studies, similar to those in poverty dynamics, which entail quantitative analysis of panel data sets collected through a survey method. Herein the focus is on calculating prevalence rates and assessing the educational and economic status of people with disabilities (Filmer, 2005). Yet despite

these efforts, as Robert and Evans (2005) note, ‘good data sets do not currently exist. Existing data sets are fragmentary and inconsistent in their definitions of disability. They provide little basis for meaningful international comparisons and, with some exceptions, are of unknown reliability and validity’ (p. 35). Thus, not surprisingly, observations such as those made by the ILO (International Labour Organization, 2002) are common: ‘in Kenya, there are no recent data on the situation of persons with disabilities. Some statistics are available, although it is generally agreed that these do not give an accurate picture of the actual prevalence of disability’ (p. 9).

The value of efforts aimed at generating more reliable estimates of disability cannot be underestimated, especially in health policy, though there is a risk that such efforts reinforce perceptions of disability as being little more than a set of symptoms and diagnoses. In order to move forward, therefore, we need better surveys (using questions that overcome some of the acknowledged weaknesses of previous efforts) as well as a more nuanced understanding of the lives of people with disabilities (Albert et al., 2005). The DEPP project in RECOUP was designed to contribute to both these efforts.

3.3 Challenges facing a cross-national project

The foremost challenge which faces a cross-national project on disability is how to frame a shared definition of ‘disability’. There is growing recognition of the complex and multi-dimensional nature of this construct and the challenges in attempting to develop a single universally accepted, unproblematic definition of disability. Harriss-White notes that ‘disability is a relative term because cultures define differently their norms of being and doing’ (Harriss-White, 2003: 3). Factors such as gender, age, types of impairments and local perceptions play significant roles in defining someone as disabled (Kuruville & Joseph, 1999). Issues of language further complicate these discussions. For instance, in his research on chronic poverty and disability in Uganda, Lwanga-Ntale noted that defining disability was ‘rather problematic’, as the term was commonly used for those with physical impairment, mostly of upper and lower limbs. Hence there was an increased likelihood of ignoring those with other impairments, such as visual impairments, learning difficulties etc He noted that in most dialects, there is no single word that translated into the English word ‘disability’ (Lwanga-Ntale, 2003). Moreover within these contexts, notions of disability are primarily shaped by medical perceptions, further leading to social stigma and exclusion from mainstream society. While marginalisation from various mainstream processes is the dominant and common experience for people with disabilities across the four countries, the larger social, economic and educational milieu in which these play out is different.

<insert Table 3 here>

3.4 The research approach adopted in DEPP

Taking into account the lack of contextual understanding regarding the relationship between disability and poverty, and the role of education, this sub-project set out to develop an understanding of:

- the local meanings and perceptions of disability, and its relationship to poverty
- the present educational arrangements available to and attended by poor people with disabilities
- the role that education and other enabling factors play in the lives of young people with disabilities

In order to explore these issues, it was argued that mixed methods research, with its methodological eclecticism (Johnson & Onwuegbuzie, 2004) would provide meaningful understandings.

Quantitative approach

Our household surveys were primarily designed to generate large-scale quantitative data-sets to facilitate multi-variate analyses of the relationships between schooling and other educational experiences on the one hand, and a variety of human, social and economic outcomes on the other. Although the number of questions focusing on disability was limited, the household surveys have included some questions designed both to generate estimates about disability and to test some existing

claims about, for example, the relationship between the educational level of the person with disabilities and the educational level of her/his parents, household incomes, number and educational level of siblings, and so on.

Another important purpose of the survey was to test the effectiveness of an alternative way of framing disability questions, based on the understanding of disability in our project. So rather than employing the commonly used survey question ('Are you disabled?'), we generated questions based on a review of the recent efforts being undertaken by the UN Statistics Division. Therefore, our survey form had the following questions (see fig. 1).

<FIG. 1 about here>

In thus framing our questions we argue that disability should be understood by focusing on bodily issues and the impact that these have on an individual's activity and participation. Since an individual's functioning and disability occurs in a context, it is useful to regard disability in terms of impairments of body structures and functions, limitations of activities and restrictions of participation, as stated in the International Classification of Functioning, Disability and Health (WHO, 2001). This is likely to have a significant impact on the nature of prevalence rates recorded, while developing a more nuanced understanding of disability and providing a better basis for cross national comparisons.

Qualitative approach

Additionally, we planned in-depth qualitative research across the four countries to focus on not merely the 'what' (a significant focus in the survey), but the 'how' and 'why' of the lives of people with disabilities. We are exploring the richness of people's lives through a series of semi-structured interviews with those with disabilities and their significant others (parents and /or parent-figures). The aim is to report their voices, to understand the nature of multiple identities and how these are shaped (such as by gender, poverty, impairment and other not commonly perceived influences, for example through kinship or employment). We need to know how people with disabilities participate in and negotiate the public (e.g., schooling, labour market) and private (e.g., sexual relationships, status in the household) spheres of their lives, their aspirations and expectations and the role of 'education' in these processes. These studies are an attempt to be 'life full' (Kothari & Hulme, 2003), an exploration of their lives rather than relying on commonly used lenses of charity and victimhood. Therefore our focus is on identifying enabling factors, as such insights are more likely to provide useful ways of moving forward for both policy and practice.

3.5 Furthering our understanding

Data from both the quantitative and qualitative approaches illuminate particular aspects of our understanding. We had envisaged some of these at the outset of our project (such as the household survey providing statistical evidence to illustrate the relationships between household poverty and disability, and that the accounts gathered in qualitative interviews with people with disabilities and other members of the household would provide evidence for why and how these relationships develop overtime). But additional insights are emerging while the research is under way. For example, the results of the household survey in Pakistan indicate that young people with disabilities (15-30 years) who attended secondary education were more likely to have studied in private schools, rather than government schools. This is a surprising finding, which we will seek to examine further in the qualitative approach. If these observations hold true in the qualitative sample then we will aim to uncover the processes that frame such decisions and the factors that motivate a family to invest money in the education of the child with disabilities and its perceived returns to the household.

In Pakistan, the quantitative approach will be followed by the qualitative study, but this was not the case in India (where the two more or less collected data at the same time). However, the qualitative approach followed in India highlighted some very interesting insights related to issues around reporting and the impact of the state and the market on the lives of people with disabilities. In our efforts to identify a sample for the qualitative study we drew on a household census (based in a quantitative approach, which was of a

much smaller scale and focus than the survey) and snowballing techniques. Adopting a qualitative design, we focused on documenting the research process and conducted observations and informal conversations with selected people to understand the factors involved in people reporting themselves or their close ones as disabled. Our findings noted that identification (or self-reporting) of disability is not merely a technical issue, determined by the presence or absence of an impairment. Rather, in a changing surveillance society which is marked by increased benefits, the claim being made is also a political one. These insights are especially useful in light of commonly held assertions that census data or any large-scale data do not deliver reliable results due to issues of under-reporting caused by the effects of stigma (Jeffery & Singal, 2008).

Adopting a mixed methods approach has enabled DEPP to be flexible in its approach to data collection and analysis. This is indeed crucial, especially in a field where there is little research and there continues to be a lack of attention to issues related to disability.

4. Research on relationships between maternal schooling and health and fertility outcomes

4.1 Justification for the topic

Many household surveys have found strong correlations between a woman's education experience (expressed in terms of the number of years she spent in school) and better health outcomes for herself and her children, as well as lower fertility. A common interpretation of these correlations (supported by some, but not all, multi-variate analyses of these data-sets) is that schooling leads to increased autonomy for women when they enter marriages or stable unions, e.g. by providing them with health information, self-confidence, higher social status or better access to health services and information. But several recent studies have thrown doubt on these pathways.

To begin with, the notion of 'women's autonomy' is much more intangible than some studies have assumed (Jeffery & Basu, 1996). Answers to questions such as whether women can shop on their own have been read as valid indicators of more general day-to-day influence. But these simple questions capture neither the reality of women's values (do they *want* to shop on their own?) nor the complexity of decision-making in real-life situations. Furthermore, women who seem to have considerable decision-making influence in some spheres (such as, in Ghana, spending money they have earned themselves) do not always seem able to retain that influence when it comes to fertility decision-making, for example (Ghana Statistical Service et al., 2004: Ch. 3).

Secondly, few studies have distinguished among the possible different ways in which schooling might influence health and fertility behaviour. Is it, for example, the *content* of the schooling, the experience of *going to school* and being away from the home, the *cognitive skills* provided by the schooling or the *kinds of homes* from which educated girls come or into which educated girls are married? There may also be something special about an educated man who marries an educated woman: he may be a man whose upbringing already predisposes him to seek a more companionate marriage, or whose parents (in an arranged marriage system) have clear preferences for what kind of woman they want as a daughter-in-law (Basu, 2002).

Thirdly, several recent studies have suggested that an individual woman's own schooling may not be as influential as a woman's general health knowledge (gathered from non-school sources). Furthermore, higher levels of schooling may change general levels of expectation within a 'community of practice' about things like whether and when to get children immunised, to take children for treatment, or to begin to use modern contraception, so that the average educational level of other women in the area may be more strongly correlated with a woman's contraceptive use than is her own education (Kravdal, 2000; Moursund & Kravdal, 2003). Much of the recent reduction in fertility and the rising use of modern contraceptives in India, for example, has come from changes in the reproductive behaviour of illiterate women, rather than because more women are becoming literate (Bhat, 2002).

More generally, we have only limited understanding of why the number of years of schooling needed before a statistically robust correlation with fertility or health behaviour outcomes can be identified varies as much as it does. Some recent work suggests that even very small amounts of schooling can

have an effect (Basu & Stephenson, 2005). Much other work (e.g. in India by PRATHAM, (Pratham, 2007) has suggested that it may require as much as 8 or 9 years of schooling for literacy skills to be fully established for the median school-goer.

Finally, few studies have focussed on the effects of schooling among poor people, although some studies suggest that schooling is neither a protection against falling into poverty nor always a way of climbing out of poverty (Krishna, 2006; Krishna et al., 2004). Changing aspirations, and the effects of different forms of mass media, are aspects that have not been fully understood (Basu, 2002; Bhat, 2002), which suggests that other social changes may be of at least as much significance as schooling.

4.2 Expected benefits of bringing together research using quantitative (econometric) and qualitative (sociological) methods

We cannot hope to resolve all these issues through our research, but certain features of the household survey and the qualitative interviews may provide new insights. For example, the household survey allows us to distinguish between the level of education attained and the skills held by the woman herself at the time of interview. Furthermore, collecting some basic nutritional data on children allows us to bring health outcomes directly into the analysis. In addition, much of the extant cross-national comparative work has been quantitative and has not engaged with the complex issues of tracing out causal pathways in different cultural and social contexts. By using essentially similar approaches in all four countries, tailored to take account of cultural variations, the material gathered through semi-structured interviews will, when linked to the survey data, allow much more robust interpretations of causal pathways than is available through existing separate data sets.

4.3 The particular challenges of cross-cultural work in this field

This part of the research project is attempting to unpack how schooling might affect the lives of young women as they move into adulthood, especially through establishing themselves in sexual relationships, often in a new home, and becoming a mother (including negotiating access to reproductive health services) (Lloyd, 2006; World Bank, 2006). It is increasingly clear that the contexts within which these transitions take place vary considerably, not just between countries but also within sites (including the effects of religion or ethnic group membership for example). At a more general level, there are key factors that vary substantially between north India and Pakistan, on the one hand, and Sub-Saharan Africa, on the other, which might be expected to have an impact on the causal links between schooling and health and fertility outcomes (See Table 4). A major part of the analysis of the qualitative data will be concerned to find an appropriate language and conceptual framework that will allow us to make comparisons between and within countries while maintaining our focus on understanding the differences that schooling makes.

<Table 4 about here>

4.4 Outline of work in this sub-theme

The surveys in India, Pakistan and Ghana have collected a wide range of information relevant to understanding health and fertility outcomes from randomly selected households. In addition to attitudinal and behavioural questions (on use of health and family planning services, numbers of immunisations for children etc) there are also questions on women's ability to take decisions of different kinds. These data are complemented by direct observations of the nutritional status of children (height and weight by age) and tests of cognitive achievements of the adults and the children to complement the number of years of schooling and levels of schooling achieved. In combination these data allow for more sophisticated understanding of correlations between education and health and fertility outcomes than have previously been available.

The qualitative research in this sub-theme has relied mainly on three research strategies. Firstly, we have collected community-level data (generated by repeated visits to four sites in each country, two urban and two rural). In these selected communities we have built up a picture of the context in which

household members make decisions about health and fertility issues. Secondly, we carried out a household census in all four sites, providing us with a more complete picture of household types and the educational characteristics of young women. Thirdly, we conducted interviews with between 16 and 24 women aged 20-29 with at least one child under the age of 6. This is an appropriate age group for considering health and fertility issues because (i) such women may be actively considering (and possibly acting on) family limitation; (ii) they have young children and relatively fresh memories of child-birth, as well as recent experience of child health problems; and (iii) they are more likely to have had varied educational experiences than older women. In each site the sample was selected to allow us to contrast the experiences of more and less educated women.

The semi-structured interviews have covered issues such as a woman's perceptions of the expectations held by parents of the role of education in affecting their choices of a daughter- and/or son-in law and the extent to which those expectations have been met in practice. We have also explored the woman's perceptions of the costs and benefits of schooling of boys and girls, and reflections by these young women on the extent to which they have consciously used their schooling status to affect how they have been treated by others, and whether they think they are seen differently from, e.g., less or more educated siblings or co-daughters-in-law. We have also asked women to recall decisions with respect to fertility, children's health and women's health over the previous year, and to reflect on decisions with respect to children's schooling.

4.5 Envisaged outcomes and synergies between the quantitative and qualitative research

There are different kinds of synergies between the different methods. Using the distinctions from Section 2 above, we plan to combine quantitative and qualitative methods in all three modes. Following Q-squared approaches, we can take advantage of the possibility of repeat household surveys to revise questionnaire items in the light of qualitative research carried out between the two surveys. One example is from Pakistan, where survey results suggest different pathways of influence in different aspects of child health. Provisional results from the household survey suggest that child immunisation levels seem to be directly influenced by the father's schooling, but children's nutritional status seems to be much more strongly influenced by mother's schooling. Investigating why this might be so, using the qualitative interviews, and providing suggestions for new questions for the second round of the household survey, are the most likely ways in which we expect to develop our understanding of issues such as these. Currently we expect to investigate what health-impacting decisions fathers make within the household, and which decisions mothers make. We hypothesise three categories of types of decisions: (i) once-off decisions (e.g. whether and which immunisations to give and whether to put in clean water or sanitation system); (ii) decisions about nutrition and hygiene (a huge number of very small, daily decisions – what food to buy/cook, hygiene practices etc.); (iii) decisions when a child falls ill, (i.e., unpredictable events). Each of these decisions also has different implications for access to what is – in Pakistan – a largely male public sphere.

An example where a more pragmatic 'mixed methods' approach may be used is in the investigation of causal relationships between schooling and access to public resources. It has often been assumed that better educated mothers and fathers have better access to publicly provided health services or piped water etc. because they understand the benefits involved and attempt to plan their lives. But it is equally possible that providers (within health services, or in local government offices), discriminate against those perceived as less educated, poorer or dirtier – who are less 'entitled' to such benefits. Addressing this issue will require a mix of survey analysis (do better educated mothers and fathers use health services more, after controlling for other factors?); interview material (how do young mothers report their treatment when they attend clinics?) and observation and discussions with community leaders and health centre staff.

We also plan to use the 'nested' research design (data collected at household, village or urban neighbourhood, district and state or province) to contextualise the interpretive interviews carried out with young mothers in all four countries. A major focus of our interviews has been to explore what affects the ability of young mothers to influence key health and fertility issues within their households. As we come to understand the interview material we will check emerging hypotheses against quantitative data (our own and others). But in this case, we expect to produce papers in which the key

concern is to deepen our understanding of how young mothers understand their worlds – analysis driven by the purposes of qualitative researchers.

5: Discussion and Conclusions

Quantitative and qualitative methods, used separately in analysing problems of poverty, have both strengths and weaknesses. The use of quantitative approaches allows us to make dependable statements about the characteristics of a whole population, and to test hypotheses about whether some of their attributes are causally associated with others, in ways which may be able to be influenced by policy. However, the data collected using standard survey techniques are subject to errors of estimation and to reporting errors arising from the use of misleading questions, from poor interview technique, or respondent error. Moreover, such approaches focus mainly upon information that can be quantified, to the cost of neglecting relevant information and insights held by the survey respondents, which remain untapped.

By contrast the use of qualitative methods allows us more accurately to understand the causal relationships between variables of interest, and to investigate characteristics which are not conducive to precise measurement. In order to understand the nature of a process, or to explain the presence of a particular phenomenon, qualitative methods are likely to provide better answers. Equally, they allow latitude to follow up on important ideas which may be revealed during the research process, in ways which quantitative approaches cannot usually embrace.

However, when using qualitative methods, the difficulties of making inferences which extend beyond the surveyed population are well known. Accurate and detailed descriptive accounts of phenomena of interest to the researcher can be provided by the use of such methods, but not their more generalised extent. The reliability of results from qualitative approaches may be more difficult to attest than with quantitative data, and undertaking some form of triangulation may be fundamental to convincing others of the broader implications of the work.

This mix of advantages and disadvantages associated with the use of quantitative and qualitative methods has been centrally relevant to the ways in which they have been integrated in the RECOUP programme. Careful research design can result in some of the main advantages of each being captured, whilst their disadvantages are minimised or countered. As examples, this paper has argued that reports on the prevalence and nature of disability in developing countries are typically flawed by a heavy reliance upon statistical surveys using unreliable definitions. International comparisons are particularly difficult because the cultural norms for what counts as disabled differ across countries. Language conventions also differ, such that not all disability characteristics are recognized by the use of a given term. Thus, achieving reliable comparative statistics remains problematic: official sources, for example, report disability incidence at levels which are more than 5 times as great in Kenya as in India (Table 3), yet there is no obvious reason why this should be so. RECOUP has sought to improve this circumstance by seeking a better representation of disability: questions are posed in our household surveys about the details of particular functionings, in order to generate comparable data across communities, cultures and nations.

Even if this approach provides better data (which we believe it does), the various manifestations of disability, and their significance for people's capabilities, can only be known by using qualitative approaches. Our survey data will tell us about the incidence of disabilities of various kinds, and will facilitate an investigation of their correlates at the levels of households and individuals. But questions of how and why circumstances are as they are – about the ways in which the lives of the disabled are lived and perceived – need to be addressed by using qualitative research. This 'mixed methods' approach allows real flexibility of response as new, potentially important, explanatory factors are revealed.

As regards our work on health and fertility, a key issue concerns the ways in which the 'standard' results, which reveal significant correlations between female education and fertility decline, should be interpreted. Are such effects a consequence of values and attitudes acquired during schooling, of cognitive skills learned, of past or present home background, or of the fertility behaviour and values of people in the surrounding community? Most modelling approaches cannot arbitrate between these

possibilities, and education remains a ‘black box’ which is known to have an effect, for reasons which usually remain ambiguous or unclear.

Again, this circumstance can be improved by designing better surveys. Unusually, our household enquiries include tests of cognitive achievement, and collect data on present and past SES. But these refinements remain insufficient to arbitrate between all of the above possible reasons for education’s effects. The qualitative enquiries – which, *inter alia*, probe the attitudes towards fertility, possible reasons for differences between desired and actual family size, and the pressures on women in different educational and household circumstances – can be expected to reveal much more about the nature of the causal processes involved. This outcome, in turn, can be expected to benefit the future design of quantitative instruments.

Each of the three types of engagement between quantitative and qualitative methods which we have outlined in this paper are represented in RECOUP work. Given the clear limits to the benefits of working only in a qualitative or a quantitative mode, and because of the multi-dimensional ways in which education and poverty interact, some mix of both approaches is desirable to address many of our research questions. This inevitably means that cross-disciplinarity is also required: embedded case-studies, for example, in the context of the village communities in which we are working, require not just the methods of qualitative research, but the skills and the contextual knowledge of the social anthropologist, to properly analyse and weigh their results. Equally, working with our household data sets needs quantitative skills, but more specific disciplinary skills are required for the modelling approaches, and for setting the results of this work in the context of a broader economic tradition. The challenge of producing a synthesis across disciplines, methods and cultures remains strong.⁷ Initial results are promising, but we are still rather closer to the beginning than to the end of that process.

⁷ Success will also be influenced by practical matters lying outside our control, such as delays to the research which were imposed by civil insurgency in two of our partner countries (Pakistan and Kenya) during 2007/8.

Table 1: A comparison of paradigms for relating quantitative and qualitative research

Paradigm	Q-Squared	Mixed methods	Embedded Case Studies
Originating Discipline	Economics	Education, Sociology	Ethnography, Anthropology
General Purpose	To strengthen our understanding of empirically observed phenomena	To enhance reliability and validity by fitting methods to purpose	To improve our understanding of and broaden the significance of qualitative material
Dominant research paradigm	Quantitative	Either	Qualitative
Notions of causality	Statistically verifiable	Either statistical or actor-oriented	Actor-oriented
Notions of ‘truth’	Based on reliability, generalisability and validity	Based on relativist notions of truth for purposes in context	Based on ‘deep plausibility’
Dominant philosophical tradition	Positivist	Pragmatism	Interpretive understanding
Specific purpose or focus	To help explain apparent causal relationships emerging from econometric analysis	Answering any particular set of research questions in the best available way	Assisting in the contextualisation of findings from intensive fieldwork

Table 2: Kanbur’s Five Dimensions of Social Research

Element of Research Design	Quantitative Research	Qualitative Research
Type of Information on Population	Numerical	Non-Numerical
Type of Population Coverage	General	Specific
Type of Population Involvement	Passive	Active
Type of Inference Methodology	Deductive	Inductive
Type of Disciplinary Framework	Neo-Classical Economics	Broad Social Sciences

Source: (Kanbur, 2001: 1)

Table 3: Cross national comparison on issues related to people with disabilities

	Kenya	Ghana	India	Pakistan
Estimated proportion of people with disabilities (to the total population)	5% - 10%	5%- 7%	2.13%- 1.8%	2.5%- 7%
Dominant societal beliefs regarding disability	Witchcraft/ magical, denial, charity, burden, pity	Witchcraft/ magical, denial, charity, burden, pity	Curse (past sins), denial, charity, care, burden, pity	Predominantly charity, curse, care, burden, pity
Percentage of children with disabilities aged 6- 18 years attending formal education	Less than 10%	Less than 4%	Less than 2% - 60% ⁸	Between 2% and 4%
Number of special schools	110 in Nairobi and Central Province, 7.5 million people	N/a	Approx. 2,500 for 1150 million people	Approx. 49 for 175 million people

Note: The figures in this table have been tabulated from a range of different Government and INGO documents.

Figure 1: Questions addressing disability in the household survey (RECOUP)

Seeing				Hearing	Speaking	Walking	Learning	Personal care (Such as, washing oneself, caring for body parts, toileting, dressing, eating, drinking)	
Yes =1 No= 2	Degree 1= mild 2= moderate 3= severe	Since what age?	Does this reduce the amount or kind of activity --- can do						
			At home?	At work or at school?	In other areas, for example, transport or leisure?				
			Yes sometimes Yes, often No	Yes sometimes Yes, often No	The sub-sections in the Seeing column would be repeated in each of the types of disabilities				

⁸ These figures are from different official sources. Such high discrepancies highlight the unreliability of basic data on people with disabilities.

Table 4: Some key comparisons between Sub-Saharan Africa, north India and Pakistan that might have an impact on the causal links between schooling and health and fertility outcomes

Institutional elements	N. India/Pakistan	Kenya/Ghana
Marriage	Polygamy is rare, under 5%	Polygamy may be common, 30% or more
	Marriage is nearly universal by age 30 for women; divorce and remarriage are uncommon	Many women have a series of short-term relationships
	Parental arrangement of marriages is the norm	Most marriages are self-initiated; arranged marriages are uncommon
Lineality	Patrilineality is universal	Some groups are matrilineal
Post-marital residence	Normatively with the parents of the husband	Very variable: neo-local as well as no move on marriage
Sexual relationships	Pre-marital and extra-marital are uncommon	Pre-marital and extra-marital are common
Household heads	Predominantly male	Substantial numbers of female-headed households
Fostering	Uncommon, though adoption between kin happens more than is normally presumed	Can be common, especially in west Africa, starting at different ages: a mother may have little or no say in key decisions concerning fostered-out children
Marriage settlements	Predominantly dowry, with escalating costs seen as problematic	Predominantly bride-price or bilateral payments
Women's work outside the home, paid and unpaid	Rare, especially for women with some education	Common for women with all levels of schooling
Control over women's earnings	Usually with the husband, his mother or father	Usually with the woman worker

References