

## Women's empowerment and economic collaboration in rural Pakistan

Spriggs J<sup>1\*</sup>, Chambers B<sup>1</sup>, Heaney-Mustafa S<sup>1</sup>, Roy S<sup>1</sup>, Akmal N<sup>2</sup>, Taj S<sup>2</sup>, Khan IA<sup>3</sup> and Mangan T<sup>4</sup>

<sup>1</sup>University of Canberra, Australia

<sup>2</sup>National Agricultural Research Centre, Pakistan

<sup>3</sup>University of Agriculture Faisalabad, Pakistan

<sup>4</sup>Sindh Agricultural University, Pakistan

\*Corresponding author: [jspriggs1@gmail.com](mailto:jspriggs1@gmail.com)

### Abstract

Collaborating among smallholder farm households, such as through marketing groups, is a well-established strategy for improving livelihoods. While the potential benefits are well known, so too are the potential challenges. One particular challenge is farm households in strongly familist, patriarchal societies such as rural Pakistan being unwilling or unable to collaborate with other households outside the family. In such societies, women may be more amenable to such collaborations than men. This paper uses data from a household survey in rural Pakistan to test the potential for collaboration among households in rural Pakistan and concludes that in households where women are empowered in household decision-making, the potential for collaboration with other households is significantly enhanced.

### Keywords

Gender, collaboration, Pakistan, rural

### Introduction

Collaborating among households (i.e. bridging) is a well-established strategy for improving livelihoods of smallholder farm families in developing countries. Smallholder bridging initiatives such as marketing associations, input purchasing groups and community building projects (e.g. a community storage facility) can realize significant benefits due to such benefits as asset pooling and improved market opportunities. Despite the potential benefits of collaboration, the difficulties are many and include the challenge of free riding (Olson, 1965), principal-agent problems (Cook, 1995), governance issues (Holmstrom, 1999) and high transaction costs (Harte, 1997). To this list might be added the socio-cultural constraints that may exist in traditional familist societies in which family bonds are very strong while dealings with those outside the family are distrusted (Fukuyama, 2002). Such societies are also often strongly patriarchal as is the case in rural Pakistan. Given this situation, the question arises: how might we overcome the formidable challenges to bridging and reap its benefits? One way, we propose is to empower women in household decision-making.

Attempts by development agencies to encourage bridging activities among smallholder farmers primarily involve men since they tend to play the dominant role in decision-making concerning the farm business. (Bello-Bravo *et al.*, 2011 and Elbehri and Lee, 2011). However, Agarwal (2000) and Molinas (1998) have also shown that men tend to have a poorer attitude to informal collaboration with those outside the family than women, while Westermann, Ashby and Pretty (2005) showed that involving women in decision-making increased the capacity for collective

action. Hence, empowering women in the household and enabling them to utilise their collaborative skills may provide the necessary catalyst to increase the likelihood of the household engaging in bridging activities.

This paper reports on a test of this idea, using data collected in a survey of 750 households in rural Pakistan. Rural Pakistan is a good example of a familist, patriarchal society in which the male head of household traditionally has a dominant role in household decision-making. In this paper, we first discuss the literature on familism and the negative impact familism is thought to have on the likelihood of successful bridging. We then briefly touch on the literature on women's empowerment and collaboration. For many economic, social and ethical reasons it is important to empower women in developing countries. Our brief discussion of the literature focuses on the link between women's empowerment, their involvement in household decision-making and bridging.

### ***Familyism and the radius of trust***

Recent literature focuses on two types of collaboration: on the one hand is the focus on horizontal collaboration involving collective action by smallholders, Markelova *et al.*, (2009) while on the other is a focus on both horizontal and vertical collaboration, where the latter involves relationship building between smallholders, market agents and policy makers, Horton *et al.*, (2009). One of the determinants of success of both types of collaborative activity is the existence of *social capital* which, according to Fukuyama (2002, p. 27) is the “shared norms and values that promote social cooperation, instantiated in actual social relationships.” The quantity of social capital in a society is notoriously difficult to measure because it is characterized by, among other things, “extensive positive and negative externalities”, Fukuyama, ((2002, p. 30). Thus, simply adding up the number of collaborative groups in a society may be a poor indicator of social capital. Fukuyama (2002), argues that many traditional societies are familist in that there are strong economic bonds within the extended family but economic relations with those outside the family are characterised as absent or opportunistic. As Fukuyama (2002, p. 28) argues, familism constitutes a liability since the groups involved are “too insular or resistant to change.” As a result, familyism places limits on economic growth and business transparency. Rural Pakistan is a good example of a familist society. As Qadeer (2006, p. 256) has argued, over the 50-year history of Pakistan the “sense of community and social trust have been eroded while pursuit of self and family interests have gained momentum.”

The realization that not all social capital is good has led to a multi-faceted description of social capital along the lines of bonding, bridging and linking, (Granovetter, 1973; Gittel and Vidal, 1998; Woolcock, 2000). Considering a typical village in rural Pakistan, we may think of *bonding* social capital as that existing within the extended family, *bridging* social capital as the weak ties that might exist with other families in the village and *linking* social capital as vertical alliances that might be forged between the households of the village and sympathetic individuals in positions of power. According to Fukuyama (2002), what is needed is an expansion of the radius of trust which comes from more bridging and linking. This paper focuses on expanding the radius of trust through bridging. The challenge is how to do this. Rural Pakistan is characterised by a strong classical patriarchy in which the (male) head is dominant in household decision-making and where females face cultural constraints in socialising outside the household.

This paper will explore the possibility of expanding the radius of trust through the empowerment of women in household decision-making.

### ***Women's empowerment, collaboration and bridging***

Hausmann, Tyson and Zahidi (2012), have ranked Pakistan 134th out of 135 countries in the Gender Gap Index, hence confirming the status of this country as one with a strong tradition of patriarchy. This observation is supported by Bari and Pal (2000), who argue that, in Pakistan, there are significant socio-cultural constraints restricting females in their mobility, participation in public life (including involvement in social decision-making), involvement in household decision-making and access to economic assets.

Women's empowerment is the process by which women obtain the freedom of choice and action. It has been a powerful force in rural development activities in recent years. The main justifications have been the development potential unleashed by giving greater decision-making power and control of assets to women as well as the enhancement of the fundamental human values of equality and equity. It is now the case that many international agricultural research and development agencies require the projects they fund to have a significant gender component in what is referred to as gender mainstreaming. In development projects, this may include such activities as training women entrepreneurs, building women's self-help groups and education for women and girls. In research projects, this may include such activities as analysing the gender effects of development interventions. The focus on women's empowerment in development projects has been assisted by the increasing focus on metrics such as the women's empowerment in agriculture index (WEAI). In addition to all these activities and advantages of gender mainstreaming – we would like to suggest another. That women's empowerment in the household may enhance the prospects of bridging with other households to achieve joint outcomes.

Literature on the gender differences in social decision-making is extensive and has considered the possible influences of both nature and nurture, (Babcock and Laschever 2003, Wright *et al.*, 2012, Chodorow 1978, Frank *et al.*, 1993, Folbre 1994). In a developing country context, Agarwal (1984) found that most of the agricultural work done by women involves group tasks (transplanting, weeding and harvesting) done manually and requiring peak labour inputs while the men handle tasks that need fewer persons or are increasingly mechanised. Agarwal (2000), writing about rural India found that men were more engaged in formal networks, while women were more engaged in informal networks. Formal networks included project groups and community councils that provided access to economic resources and decision-making power. She describes an informal process in rural villages known as *palta*, which involves women contributing labour on a regular basis to an informal group known as a *sangathan*. She goes on to argue that while men may have greater access to formal networks, the greater interdependency of women and their everyday experiences of collaboration, mean they are better able to overcome social division and conflicts.

In a similar vein, Molinas (1998), working in one of the most impoverished and peasant regions of Paraguay, found that women, especially those in poorer households, tend to have a greater need to build social capital through local networks. This is because of a restricted access to

economic resources, restricted physical mobility; fewer exit options and lesser intra-household bargaining power. Since formal power structures are typically not available to them, they turn to informal processes of cooperation (i.e. kinship and ritual ties) to deal with problems as they arise. As a result, he found that women's effective participation in a *peasant committee* enhances the committee's performance score. He found that the imperative for women to collaborate increased after marriage because they tended to face isolation from their own families. The higher propensity for women to collaborate and manage conflict is also borne out by Westermann, Ashby and Pretty (2005). Their study of men's, women's and mixed groups in rural programs in 20 countries of Latin America, Africa, and Asia found that the capacity for self-sustaining collective action increased with women's presence and was significantly higher in the women's groups. Overall, their conclusions were that collaboration, solidarity, conflict resolution and norms of reciprocity are more likely to operate in women's groups and mixed groups than in men's groups. Finally, in an interesting experiment, Gneezy, Leonard and List (2009), confirmed that women from a patriarchal society tended to be less competitive than men, but they found the opposite to be the case in a society characterized as matriarchal.

### ***The research questions***

The balance of this paper will be concerned with using our household survey data taken in rural Pakistan to address four research questions:

1. Do (male) heads of household on smallholder farms have a dominant role in household decision-making in rural Pakistan?
2. Do (male) heads of smallholder households in rural Pakistan have a relatively poor attitude to bridging while their (female) spouses have a relatively positive attitude to bridging?
3. When the spouse is involved in household decision-making, is the head of household likely to have a more positive attitude to bridging?
4. What are the most significant factors leading to (female) spousal involvement in household decision-making?

Research question 1 examines how well our survey sample is representative of what we know to be a strongly patriarchal society in rural Pakistan. Research question 2 has two parts. The first part examines the attitude of (male) heads of household to bridging. Given the earlier discussion about how rural Pakistan is such a strongly familist society, we would expect their attitude to be relatively poor. The second part of the research question examines the attitude of (female) spouses. Given the earlier discussion on women's empowerment, collaboration and bridging we would expect their attitude to bridging to be relatively good. If these expectations for research question 2 are borne out by the survey results, there would be a message for development agencies. If they want to develop successful bridging initiatives, perhaps they need to work more closely with the women than the men. However, one problem with such an approach is that in a strongly familist, patriarchal society like rural Pakistan there can be strong socio-cultural constraints on women interacting with other households. In such situations, an alternative approach might be to try improving the attitude of the (male) heads of household towards bridging. One possible way to do this might be to work on improving collaboration within the home (between the head of household and his spouse) as a way to improving collaboration outside the home (i.e. bridging).

This leads to the research question 3. Even though rural Pakistan is largely male-dominated there are some households in which women do play a role in household decision-making, generally a collaborative role with their husbands. Westermann, Ashby and Pretty (2005) suggest that the involvement of women in decision-making committees can increase the likelihood of collective action. We would like to see if this same finding might occur in a household setting. The fourth and final research question follows on from research questions 2 and 3. Both of these research questions suggest that the way to enhance bridging initiatives is through increasing women's involvement in household decision-making, either directly (research question 2) or indirectly (research question 3) Research question 4 explores the factors that lead to improvement in spousal involvement in household decision-making.

### **Methodology**

The analysis is based on a personal interview survey conducted as part of Australia's rural assistance program for Pakistan known as the Agriculture Sector Linkages Program (ASLP). ASLP ran for 10 years from 2005 to 2015 and operated primarily in the provinces of Kyber Pahtunkwha (KPK), Punjab and Sindh. It consisted of two phases known as ASLP1 and ASLP2. ASLP1 consisted of four commodity-based technical projects (dealing respectively with mango production, mango value chain, citrus production and dairy extension) and ran from 2005 to 2010. At the conclusion of ASLP1, it was decided to add a fifth project called the Social Research Project (SRP) with the principal aim of working with the four commodity-based projects to encourage and facilitate a stronger focus on poor and marginalized groups (especially women). At the start of ASLP2, the SRP undertook a household survey in those districts where the commodity-based projects of ASLP operated and the data for this paper came from that household survey. A total of 751 households were surveyed including 125 households in KPK, 446 households in Punjab and 180 households in Sindh. The survey of each household included separate personal interviews with the (male) head of household and his (female) spouse.

The households were selected at random subject to:

- Being in the districts where ASLP2 was operating;
- Obtaining some household income from the production of commodities (citrus, mango and dairy) which were included in the ASLP2 program; and
- Having less than 12.5 acres of land.

While the survey was taken in districts where ASLP1 operated, the respondents were not expected to have a particularly high level of awareness of the program either because the villages selected were not necessarily the focus of the commodity-based projects or because those projects did not focus on the poor and marginalized groups in the districts where they operated. Preliminary analysis of the survey results showed there was a modest level of awareness of ASLP. The respondents were asked: "Have you heard about the ASLP program?" A total of 700 out of 751 heads of household responded to this question. Of these, 598 said they were not aware of ASLP (85 percent) while 102 (15 percent) said they were.

### **Results**

In this section, each of the four research questions will be dealt with in turn.

***Research Question 1: Do (male) heads of households have a dominant role in household decision-making in rural Pakistan?***

In Pakistan, the literature suggests that household decision-making is primarily the domain of the male head. Hakim and Aziz (1998) argue that this is due to a host of traditional cultural, political and economic institutions. However, they also point out that decision-making is nuanced and there are areas in which women have varying degrees of control. On the other hand, Xiaohui (2011) points out that the situation for women is changing in Pakistan. She argues (p. 2) “With economic growth and efforts to empower women in Pakistan in recent years, women’s roles have improved both within and outside households. More women are getting education and are more involved in their employment decisions.” Xiaohui (2011) goes on to say, when women have more decision-making power, household preferences become broader. They shift from a simple focus on food and transportation to a more complex focus on education, medical care, footwear and clothing, and fuel and lighting. In addition, spending on food for the family tends to be more varied with greater spending on fruits and vegetables and less on grains. Further, the share of household income spent on education and children’s school enrolment is significantly higher, particularly for girls.

While change may be improving the overall situation for women in Pakistan, it appears to be least apparent for low-income rural households where traditional socio-cultural constraints are strongest, where women have little or no education and where opportunities to contribute to family income are limited. This perception in low-income rural households is confirmed by the results of the household survey. However, the extent of domination is greater for some types of household decisions than others. The relevant results from our survey for this question are summarized in Table 1.

**Table 1: Household decision-making as perceived by head and spouse**

Type of economic decision	Decision perceived to be made by: →	Head of Household (Male)	Spouse (Female)	Joint (Head and Spouse Together)	Other (Someone else)	Number of Households
	According to: ↓					
1. Everyday	Head	67%	3%	23%	7%	633
	Spouse	51%	6%	34%	9%	
2. Livestock	Head	77%	1%	17%	5%	576
	Spouse	67%	1%	24%	8%	
3. Dowry	Head	56%	3%	36%	5%	387
	Spouse	46%	4%	44%	6%	

In the survey, respondents (both the household head and the spouse separately) were asked their perceptions on who made the money decisions in three different areas: everyday expenses (e.g. purchases of food), livestock sales and purchases (a large occasional expense thought to be largely in the male domain of decision-making) and dowry (a large occasional expense thought to be more in the female domain of decision-making). For each question, the respondent was asked: "Who makes the decision about ...?" They were given four options: 1 = the (male) head of household; 2 = the (female) spouse; 3 = joint (head and spouse together); and 4 = other (i.e. someone else.) The responses are summarized in Table 1, columns 3 to 6. Thus, for example 67 percent of heads perceive that they make the decisions on Everyday purchases while a further 23 percent saw it as a joint decision. By comparison, a relatively smaller but still a majority of 51 percent of (female) spouses perceive that the heads make the decisions on everyday purchases while a further 34 percent saw it as a joint decision. In Column 7 are the numbers of households in which both the heads and spouses responded to the corresponding questions about household economic decision-making. We have omitted households where the head and/or the spouse did not respond to the question so as not to introduce bias into the results. Since more heads responded to the questions than their spouses, including all the observations where only the head or spouse responded would have given more weight to the perceptions of the heads than to those of the spouses.

In Table 1, the heads perceive themselves to be dominant in all three decision types and in particular Livestock sales and purchases. The perception of spouses is not quite so clear cut though they still tend to view heads as having a larger role in decision-making than themselves. With regard to the two large irregular purchase types (livestock and dowry), both the head and the spouse tended to view the head as having a greater influence on livestock decisions as compared to dowry. This supports the idea that the male head is seen to have relatively greater authority when it comes to farm business decisions and relatively lesser authority when it comes to family money decisions. For all three types of decision, only a small handful of heads of household and spouses perceived the spouse as having the sole responsibility for any decision-making. The percentage of households in the survey with this perception ranged from 1 to 6 percent.

Another interesting feature of the results to this question was the difference between the head of household and his spouse over the extent of the head's influence on household money decisions. For all three types of economic decisions, the head of household thought he had a greater influence on the decision than was the perception of his spouse. While it was clear from the results that the head of household had the most influence in household money decisions, there was also a sizeable number of households in which decisions were perceived to be made jointly and a few where the spouse was seen to have sole responsibility for making the decision. This result will be particularly useful when we come to the third (and central) research question, an exploration of whether there is a relationship between households in which the spouse is involved in decision-making and the attitude of the head to bridging. For research question 3, the analysis will involve the responses to Everyday household money decisions, chosen because the responses for Everyday purchases lie in the middle between those for Livestock and those for Dowry.

***Research question 2: Do (male) heads of smallholder households in rural Pakistan have a relatively poor attitude to bridging while their (female) spouses have a relatively positive attitude to bridging?***

The literature suggests that in a strongly familist, patriarchal society such as rural Pakistan one would expect male heads of household to have a relatively poor attitude to bridging. If so, then development agencies will find it a challenge to engage them in bridging initiatives. On the other hand, if (female) spouses are found to have a more positive attitude to bridging, it might send a message to development agencies to try to work more closely with them as a way to enhance the likelihood of successful bridging.

The relevant results from our survey for this question are summarized in Table 2.

**Table 2: Average Responses of Heads and Spouses on Perceived Ease of Collaboration with Other Households**

Type of Collaborative Activity ↓	(Male) Head of Household	(Female) Spouse	Difference (Head – Spouse)			N (excludes missing cases)
	Average Response†	Average Response	Average Difference	SE mean	t-test statistic	
1. Buy community assets together	2.575	3.395	-0.820	0.068	-12.1**	671
2. Buy farm inputs together	2.519	3.346	-0.827	0.070	-11.9**	659
3. Sell farm outputs together	2.414	3.592	-1.177	0.071	-16.63**	671
4. Other community activities	3.443	4.054	-0.610	0.065	-9.44**	686

\*\* Significant at the 1 percent level of significance

† Possible responses: 1 = very difficult; 2 = difficult; 3 = neither difficult nor easy; 4 = easy; and 5 = very easy.

In the survey, respondents were asked the question: “How easy is it to work with other households in your village?” For this question, they were asked to consider four different types of collaborative initiative:

1. Buy community assets together (e.g. community bull, packing shed, storage shed);
2. Buy farm inputs together (e.g. AI services, fertilizer, seedlings)
3. Sell farm outputs together (e.g. milk, fruit, vegetables); and
4. Engage in other community activities (e.g. women’s group, festival)

The first three types are economic bridging initiatives while the fourth type is a non-economic (social) bridging initiative within the village community. For each type of initiative, the respondent was asked to give a score from 1 to 5 where: 1=very difficult; 2=difficult; 3=neither difficult nor easy; 4=easy; and 5=very easy.



The averages of the responses by gender are summarized in Table 2, Columns 2 (heads of household) and 3 (spouses). In those Columns, an average score of 3.0 would indicate an overall group perception of indifference (neither difficult nor easy), while an average score below 3.0 would indicate an overall group perception that bridging is difficult and an average score higher than 3.0 would indicate an overall group perception that bridging is easy. Thus, looking at Column 2, we see (male) heads of household tend to see the three economic bridging initiatives as being on the difficult side while they found the social bridging initiative to be on the easy side. And from Column 3, we see (female) spouses tend to see all four types of initiative as being easy and the spouses tended to be more positive about bridging than their husbands on all four types of initiatives.

Columns 4 to 6 of Table 2 provide the statistics for conducting t-tests of mean differences between the responses by heads of household and their spouses. As may be seen from Column 6, the average response of spouses to the ease of bridging is significantly more positive than it is for heads of household (at the 1percent significance level) for all 4 types of bridging initiatives. We can also note that both heads and spouses tended to view the *economic* bridging initiatives to be more difficult than the social (*non-economic*) bridging initiative. Further, considering just the 3 types of economic bridging initiative, on average spouses tended to be most positive about selling farm outputs together, while heads tended to be most negative about this type of economic bridging initiative.

The last column of Table 1 indicates the total number of households included in the analysis. For inclusion in this analysis, both the (male) head and (female) spouse of a household must have responded to the particular question. As in the earlier analysis of research question 1, households that did not meet this criterion were omitted so as not to introduce bias into the results arising from the greater number of responses of heads of household to these questions relative to the spouses. These results suggest that one way to enhance the likelihood of successful economic bridging initiatives is to work directly with women rather than men. While this might work in some cultural settings, it could be a difficult challenge in such a patriarchal society as rural Pakistan. An alternative approach might be for development agencies to try to improve the attitude of the men towards bridging though this also presents a serious challenge in such a strongly familist society as rural Pakistan. One possible approach to this might be to work on improving collaboration within the home (between the head of household and his spouse) as a way to improving collaboration outside the home. Perhaps increasing the involvement of spouses in household decision-making will lead to a more positive attitude of the heads of household to bridging with other households. This leads to the next research question.

***Research question 3: When the spouse is involved in household decision-making, is the head of household likely to have a more positive attitude to bridging?***

Westermann, Ashby and Pretty, (2005) suggest that the involvement of women in decision-making committees can increase the likelihood of collective action (i.e. bridging). We would like to see if this same finding occurs in low-income households in familist, patriarchal rural Pakistan. Our analysis aims to explore whether women who are more involved in household decision-making tend to also be associated with a more positive attitude to bridging. We recognize this is only a first step as our analysis can only be associational rather than causal. To

properly test for causality one would require the collection of data in a time domain rather than a cross-sectional domain. Such data would allow measurement of a change in attitude to bridging in response to a change in women's involvement in household decision-making. This is left for further research.

Table 2 shows that (female) spouses dominate decision-making in only a handful of households, but they are involved in joint decision-making in a significant number of households. Hence, the current piece of analysis uses this result to see if there is a correlation between female involvement in household decision-making and a positive view about bridging with other households.

To begin, let us define two types of household. Type H1 is a household in which only the male head is involved in household decision-making and Type H2 is a household in which the spouse is involved in household decision-making, either by herself or jointly with her husband. As shown in Table 1, Column 7, there are a total of 633 households in which both the head and spouse responded to the question about who makes the decision on everyday purchases. This is the beginning set of observations we used to address research question 3. However, from this set of observations we then subtracted out those households in which the head and spouse did not agree on whether the households were Type H1 or H2. This left a total of 420 households in which either heads and spouses agreed that the head alone made the decision (i.e. Type H1) or the heads and spouses agreed that the spouse was involved in the decision-making (i.e. Type H2). This total was further reduced slightly by missing observations on the variables concerned with the attitude to bridging. Thus, the total number of observations used in the analysis explaining the relationship between spousal involvement in everyday purchase decisions and the bridging attitude of the head of household to buying community assets is 411. This comprises 284 households in which both the head and spouse were of the view that the head alone was involved in decision-making and 127 households in which both the head and spouse agreed that the spouse was involved in decision-making.

To test the hypothesis of a positive relationship between spousal involvement in everyday household decision-making and attitude of the head to bridging, we ran Polytomous Universal Model (PLUM) regressions where PLUM is an extension of the general linear model to incorporate the ordinal nature of the dependent variable. The dependent variable in the regressions is categorical and can take on values from 1 to 5 where 1=very difficult, 2=difficult, 3=neither difficult nor easy, 4=easy and 5=very easy. In Table 3, the results of four regressions are summarized where the dependent variable in each regression is a categorical variable representing the attitude of the head of household to the four different types of bridging initiative. The explanatory variable in each regression is the same and is a zero-one variable where 1= Type H1 household and 0 = Type H2 household.

In these regressions, we are concerned with what might positively influence the attitude of the head to bridging initiatives rather than his spouse. In the context of rural Pakistan, as we have already seen, spouses are already favourably disposed to bridging while the heads of household are not. If successful economic bridging is to occur, it is the heads of households that need to be convinced, particularly because of the dominant role they play in household decision-making around the farm business.

**Table 3: PLUM Regressions by spousal involvement in everyday household purchase decisions**

Dependent Variable: Attitude of Head to bridging on:	Explanatory Variable*: 1 = H2; 0 = H1	Nagelkerke Pseudo R <sup>2</sup>	Wald test statistic	Number of observations		
				H1	H2	Total
1. Buying community assets	1.704	0.175	63.5	284	127	411
2. Buying inputs together	1.608	0.159	57.8	284	126	410
3. Selling outputs together	1.649	0.167	61.7	282	127	409
4. Other community activities	0.636	0.025	8.54	284	127	411

\* Threshold (intercept) values have been omitted for simplicity of presentation

For all four regressions, the Wald test statistic is highly significant indicating a strong positive relationship between the head's attitude to bridging and his spouse's involvement in household decision-making (with respect to everyday purchases). The estimated coefficients (Table 3, Column 2) are the estimated log odds ratios for bridging optimism. Thus, for example in the first regression, the slope coefficient 1.704 is an estimate of the log odds ratio for the corresponding ordinal regression resulting in an odds ratio of 5.5. This suggests that the odds of an H2 household having a more positive attitude to bridging are 5.5 times the odds of an H1 household having a more positive attitude. The order of magnitude is similar for all three economic types of collaboration (buying community assets, buying inputs together and selling outputs together). The estimated log odds ratio for the non-economic (other community) activities is lower at 0.636. This yields an odds ratio of 1.8 suggesting that even for non-economic activities, heads in H2 households are likely to be more optimistic about bridging than are heads in H1 households.

These regressions indicate a strong statistical correlation between spousal involvement in decision-making within the household and a positive attitude by the heads of household to bridging. It is tempting to suggest causality: that (female) spousal empowerment in the home leads to a greater propensity for bridging outside the home with other households. However, this would be premature. Our analysis simply shows that collaboration in decision-making in the home (between head of household and his spouse) and willingness to collaborate outside the home (bridging) appear to go hand in hand. We need further research to determine what, if any causality exists between these two arenas of collaboration. If indeed collaboration in the home can be shown to lead to a greater willingness of households to collaborate outside the home, this adds yet another rationale for empowering women.

***Research question 4: What are the most significant factors leading to (female) spousal involvement in household decision-making?***

This research question is supplementary to research questions 2 and 3. From the analysis of research question 2, we have found that spouses tend to have a positive attitude to bridging. Hence, if they were also able to achieve greater involvement in household decision-making this

may directly enhance the likelihood of successful bridging. From the analysis of research question 3, we found that in households where there was greater involvement of the spouse in household decision-making there was also a more positive attitude of the head of household to bridging. We cannot show causality, but it does raise an intriguing prospect of another possible avenue for enhancing the likelihood of successful bridging – indirectly through the head of household having a more positive attitude to bridging. Both the direct and (the possible) indirect avenues for enhancing the likelihood of successful bridging, stem from improved spousal involvement in household decision-making. Research question 4 aims to explore some of the factors that might be associated with improved spousal involvement in household decision-making.

The literature suggests that a wide variety of factors can influence female involvement in household decision-making. According to Weinberger (2001), education of the spouse is one possible factor. He argues that the education of women is positively related to their involvement in household decision-making. Education increases awareness by both husband and wife that joint decision-making is desirable in the household. Adato et al. (2000), argues that additional important factors include the amount of paid work by women, the extent of their interpersonal networks, and basic attitudinal attributes. However, the link between a spouse's power in household decision-making and these various factors may not be straightforward.

Malhotra and Mather (1997) argue that, notwithstanding these factors, it is social and cultural norms that largely define power in household decision-making in developing countries. Sharma (1982), in a comparative study of two North Indian communities, found that in both communities, patriarchal ideologies prevented women's empowerment. This was despite the women's extensive involvement in productive labour in both communities. Wolf (1985), in a Chinese study, found that greater access by women to education and the paid labour force does not significantly alter power relationships within the family. This finding is supported by Pandolfelli, Meinen-Dick and Dohrn (2008) who argue that, while women's contribution to the rural economy is vital and significant, their contribution does not translate itself into greater control of resources as their role is that of paid or unpaid labourers in tasks with low productivity and minimal technology. On the other hand, Lee, Hezekiah and Watters (1995) found that older women in households in rural Pakistan tended to exhibit more power relative to the younger women in the household. In addition, Papanek and Schwede (1988) argue that irrespective of income, Javanese women have historically had substantial access to economic resources, and there is a cultural notion that the women are more trustworthy with finances than men and thus they are usually preferred in management of finances. In some societies, the influence of traditional social and cultural norms has been moderated by the growth of women's organizations and the influence of religion. Thus, SEWA (Self-Employed Women's Association) in India has enabled women to increase their earning capacity, bargaining power and their role in domestic decision-making. The influence of religion appears to be more ambiguous. Caldwell (1986) and Cain, Khanam, and Nahar (1979) argue that the relatively more rigid forms of patriarchy as practiced in Islam lead to less decision-making power for women. However, Morgan *et al* (2002) argue that religion is less of a factor than location.

In our rural household survey, we collected data on some household characteristics that may provide some significant factors. These include household income, education of (female) spouse,

age of spouse and a variable to represent possible regional differences. Other factors discussed earlier in this Section which could not be included directly include the broad socio-cultural factors (i.e. social and cultural norms, a patriarchal ideology, the Islamic religion, interpersonal networks and women's organizations) or difficult to measure characteristics of the individual (i.e. basic attitudinal attributes of women including their trustworthiness with finance). The broad socio-cultural factors may be to some extent incorporated indirectly by other variables, notably household income and location. However, these can represent a number of things and to the extent they are significant one would want to dig deeper in further research.

The analysis was undertaken using a logistic regression with a binary dependent variable which takes on a value of 1 for Type H1 households and 0 for H2 households. The explanatory variables are:

1. Annual household income (INCOME) - as estimated by the head of household. This is a proxy for the overall socio-economic condition of the household. The expected impact of this on the involvement of the spouse in household decision-making is ambiguous. On the one hand, higher household income may indicate a more progressive household and hence more spousal involvement in decision-making. However, higher incomes may also have the opposite effect. When household income is very low, collaboration within the household may well be the best strategy for survival. However, as incomes rise and survival becomes less of an imperative, socio-cultural constraints may become a more significant determinant of household behaviour. In the analysis, household income is a categorical variable, which takes on the value:

1 = less than Rs. 5,000/month	6 = between Rs. 25,000/m. and 30,000/m.
2 = between Rs. 5,000/m. and 10,000/m.	7 = between Rs. 30,000/m. and 40,000/m.
3 = between Rs. 10,000/m. and 15,000/m.	8 = between Rs. 40,000/m. and 50,000/m.
4 = between Rs. 15,000/m. and 20,000/m.	9 = more than Rs. 50,000/m.
5 = between Rs. 20,000/m. and 25,000/m.	

2. Education of spouse (EDUCATION) measured in years.
3. Age of spouse (AGE). This is a categorical variable, which takes on the value:
 

1 = no more than 20 years	4 = between 40 and 50 years
2 = between 20 and 30 years	5 = between 50 and 60 years
3 = between 30 and 40 years	6 = over 60 years
4. PUNJAB and SINDH. These are location dummy variables to represent regional differences. See further Morgan *et al.*, (2002). Data for the survey were obtained from households in 3 Provinces; Punjab, Sindh and Khyber Pakhtunkhwa (KPK). To allow for differences in response between these Provinces, two zero-one variables were used, where:  
 PUNJAB = 1 if the respondent is located in Punjab, 0 otherwise  
 SINDH = 1 if the respondent is located in Sindh, 0 otherwise

The results of the regression analysis are summarized in Table 4.

**Table 4: Binary Logistic Regression explaining spousal involvement in household decision-making\***

Explanatory Variable	Parameter estimate	Wald Test Statistic	Significance Level	Exp(B)
INCOME	-0.178	16.1	.000	0.837
EDUCATION	0.065	4.96	.026	1.07
AGE	0.325	7.76	.005	1.38
PUNJAB	-0.649	5.14	.023	0.522
SINDH	-1.65	13.1	.000	0.191
Constant	-0.781	2.33	.127	0.458

\* N (number of observations) = 410, Nagelkerke  $R^2 = 0.140$

In this regression, all explanatory variables were found to be significant at the 5 percent level. Spousal involvement in decisions about everyday purchases was found to be negatively related to household income, and positively related to the spouse's education and age. The results on education and age accord with expectations and with the findings of Weinberger (2001) on spouse's education and Lee, Hezekiah and Watters (1985) on spouse's age. The finding of a significant negative relationship with household income is interesting. As mentioned earlier, household income can encompass a number of factors and warrants further research. But a negative relationship does support the view that poorer households have little alternative but to collaborate for survival, while less poor households are more influenced by socio-cultural traditions that give prominence to the role of men in decision-making. Finally, the zero-one variables, PUNJAB and SINDH had negative and significant coefficients. The reference category in this regression is KPK (Khyber Pakhtunkhwa) which is the third province in which the survey was undertaken. Thus, relative to KPK, the other provinces (Punjab and Sindh) were found to have a lower propensity for spousal involvement in everyday household purchase decisions.

### Conclusion

In the field of international development, facilitating collaboration among rural households has had a long history as a means for improving livelihoods. Historically, the emphasis has been on working with the (male) household heads because in traditional societies they tend to be the decision makers. While the potential benefits of collaboration are well-known they are often difficult to achieve, in part because men in traditional societies find it difficult to collaborate outside the family structure. In more recent times, there has been a growing focus on working with the women of the household for a number of reasons including empowering women as an end in itself. But also, to some extent there is a realization that women tend to have a higher willingness and ability to collaborate with others outside the household and many of these women's initiatives revolve around developing collaborative networks such as women's savings groups and women's self-help groups.

In this paper, we have used data from a household survey in rural Pakistan to explore the connection between women's involvement in household decision-making and their attitude to

bridging (collaboration with other households outside the family). An initial assessment of the data (research question 1) revealed that rural Pakistan is indeed a strongly patriarchal society in which the (male) heads of household have a dominant role in household decision-making, particularly where it comes to the farm business. Further analysis (research question 2) provided evidence that the (male) heads also had a poor attitude to bridging as one would expect with such a strongly familist, patriarchal society as rural Pakistan. However, we also found that their (female) spouses had a positive attitude to bridging which suggests that involving women in bridging initiatives might be a better strategy for improving livelihoods through bridging than working with the men alone. However, we also understand that in such a strongly patriarchal society there may be socio-cultural barriers to women interacting with other households outside the family. Thus, we were interested to see whether there was any connection between women's involvement in household decision-making and the attitude of their husbands, the male heads of household, to bridging. Perhaps empowering women by expanding their involvement in household decision-making can lead to better outcomes for bridging initiatives by engendering a more positive attitude to bridging by their husbands, the main decision-makers, when it comes to dealings outside the household. The next piece of analysis (research question 3) found there was a highly significant positive association between the spouse's involvement in household decision-making and the head of household's attitude to bridging. However, because the analysis only involved cross-sectional data, the results only establish that an association exists and not causality. To establish causality, further research is needed, where data is collected and analysed over the time domain.

The analysis involving research questions 2 and 3 thus explored two avenues by which women's empowerment in household decision-making might improve livelihoods through bridging initiatives. Bridging initiatives might be more successful either because empowered women are more directly involved in the bridging activities or because they have a more collaborative decision-making arrangement with their husbands which is associated with a more positive attitude in their husbands to bridging. Both avenues suggest a strategy to empower women in household decision-making. Thus, in the final piece of analysis (research question 4), an attempt is made to explore which household characteristics are related to the (female) spouse's involvement in household decision-making. We found that women's involvement in household decision-making was negatively related to household income and positively related to the spouse's education and age.

In rural Pakistan, a society characterized by classical patriarchy and familism, we have found that in households where women have a greater role in household decision-making the likelihood of successful bridging initiatives may be enhanced. We believe that encouraging families to move from a male-dominated, decision-making model in the household to one that is more collaborative involving both the husband and wife will be beneficial to improving collaboration outside the household and thereby enhancing household livelihood and well-being.

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