**Microfinance and the Decision to Invest in Children’s Education**

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Abstract: The primary objective of microfinance has long been presumed to be the reduction of poverty. However, more and more evidence seems to document that its impact on poverty has not been as great as has been previously presumed. At the same time, it is slowly becoming recognized that even if microfinance is no longer the panacea for poverty as expected, it does have some positive effects. For example, it has the potential to increase the range of products consumed by microfinance beneficiaries. While expenditure on consumption goods is to be expected, people know that one way out of poverty is through capital investments. And a prime capital good that is recognized by low-income people all over the world, is human capital. Even if not directly influential, microfinance may decrease poverty through its indirect effects on families’ decisions to invest in human capital. In this study, we describe a study that we undertook to gauge the impact of microfinance availability on expenditures on children’s education. Our tentative conclusion for our sample is that microfinance has no impact on the decision to invest in children’s education. The amount of gold held by the family and the social status of the family seem to be much more important. More research on the determinants of the decision to invest in education is warranted.

**Microfinance and the Decision to Investment in Education**

**Introduction:**

The primary objective of microfinance has long been presumed to be the reduction of poverty. However, more and more evidence seems to document that its impact on poverty has not been as great as has been previously presumed. At the same time, it is slowly becoming recognized that even if microfinance is no longer the panacea for poverty as expected, it does have some positive effects. At the very least, microfinance constitutes access to financial resources and as such, it might be expected that it would affect the demand for the different kinds of products on which people at the bottom of the pyramid spend their money. Consumption expenditures are, of course, likely to be expected as lenders have long known even when their loans were expected to be spent on starting new businesses. However, poor people, too, know that the only way out of poverty is through capital investments. And a prime capital good that is recognized by low-income people all over the world, is human capital. In this study, we describe a study that we undertook to gauge the impact of microfinance availability on expenditures on children’s education.

**Literature Review:**

There is some evidence to suggest that microfinance can have an impact on the demand for education. Jacoby and Skoufias (1997) present evidence that consumption and schooling investment decisions are not separable if financial markets are incomplete. For example, they find that seasonal variations in school attendance (replaced by child labor) are a form of self-insurance that significantly reduces the schooling of children in households that are vulnerable to risk and these variations are a costly form of insurance, particularly for poorer households. Behrman and Knowles (1999) show that there is an empirical association between parental long-run income measures and child schooling in Vietnam.

Such an impact may be even more likely if the decision maker is female. Esther Duflo (2012) documents that women have different preferences regarding how to use resources in the family compared to men. She notes that women spend more on children’s food than men. However she notes an interesting study by Edmonds (2006) who uses a reform of the pension system to study the impact of the pension program on education. He compares school enrollment of adolescents (ages 13 to 17) in families where there is an elderly member who is eligible for the pension and in families where there is an ineligible elderly member. Edmonds finds that compared to those in families with ineligible elders, children are more likely to be in school when they live with an eligible man than with an eligible woman! So women might care more about food, but men might care more about education.

Behrman and Skoufias (2010) note that the impact of imperfections in capital markets on the poor may be compounded if the poor have relatively high discount rates or are relatively risk averse because of living close to subsistence with risks of malnourishment or even starvation that cannot be averted through borrowing on capital markets or insuring in risk markets. Hence because risk aversion is positively related to poverty because of such nutrition and health threats, improved access to capital and insurance markets may increase all kinds of investment – including human capital investment, not only because of better access to capital and insurance but also because of lower discount rates and risk aversion.

If indeed microfinance affects the decision to invest in children’s education positively, under what circumstances are we likely to see such an effect? Are some situations more conducive to the positive relationship between access to capital and educational investments? For this we turn to the literature on the determinants of the demand for education. Breen-Goldthorpe (1997) propose a framework to explain class differences in educational outcomes involving three components: a) the subjective probability that different educational careers can successfully be completed, b) the expected costs when doing so, and, in particular, c) the returns from educational credential being likely to maintain the families' class position. Stocké (2007) tests this model on a sample of German families – in particular, it’s implications regarding the effect of class – and finds that the social class of origin exerts a strong effect on children's educational attainment. While this deals with the effect of class on education achievement, it is reasonable to assume that such effects would also exist in the decision to investment in education.

Schneider et al. (2007) uses data from the German Socio-Economic Panel (SOEP), a representative longitudinal study of private households in Germany to study the effect of health on education and finds that better health leads individuals with higher education to invest more in additional training. Good health means the same outcome can be obtained with less investment in education. Hence, if we can assume that education is not a Giffen good, better health should lead to greater investment in education.

Maldonado and Gonzalez-Vega (2007) develop a theoretical model, which they test using survey data from Bolivia. They find conflicting results; on the one hand, microfinance may increase the demand for education as a result of income, risk-management, gender, and information effects; on the other hand, credit-constrained households that cultivate land may discover new demands for child labor for farming (or perhaps taking care of siblings while the mothers operate a new or expanded business).

Adjei et al. (2007) study cross-sectional data from 547 respondents, clients of Sinapi Aba Trust, a microfinance NGO in Ghana. Their study found that participation in the program had enabled established clients to own savings deposits and subscribe to a client welfare scheme which served as insurance to pay off debts in times of illness or death. Established clients were also found to be in a better position to contribute towards the education of their children and payment of healthcare for members of their households as well as contribution towards the purchase of household durables.

The conclusion that we can draw from these studies is that improved financial circumstances are likely to increase investment in education, particularly if families are from higher socio-economic classes or where the parents themselves are already educated. The two existing microfinance studies confirm the positive relation between microfinance and education. However, Maldonado and Gonzalez-Vega (2007) found that this is not necessarily always the case. None of the two studies discussed above looked at the effect of family status or class on microfinance recipients’ decisions to invest in education.

**Hypotheses:**

Even though there are no fees for primary education, the students still have to incur special fees, examination fees, cost of reading and writing materials, clothing, travelling, study tours, donation to PTA, private tuition. Costs for college students are even higher, particularly for those not living at home. One study (CSES, 1997) found that the private expenses of engineering students in the government college who were staying away from their homes for studies was more than half of the average household income of Kerala.

A major trend in the nineties was the proliferation of unaided schools and the growth of self-financing courses and institutions in the higher education and technical education sectors that are not aided by private organizations or by the government. They try to recover the entire cost from the students. Furthermore, 26% of the schools up to Standard Ten were unaided private schools in 2006-7.

Apparently, access to education for BPL families is a problem: Ann George (2001), surveying the BPL families in one rural area and one urban periphery in the state found that the enrolment ratio of the poor is very low in the higher classes. The ratio is cent percent at the primary level (age 6 to 11) and 66.7% at the middle school level (age 11 to 14). At the secondary level (age 14 to 18), the ratio falls drastically to 25 per cent. The enrolment ratio among the poor at the higher education level (age 18 and above) is very poor at 1.9. The Human Development Report for Kerala (2005) comes to the conclusion that the deprived groups (SC/ST and OBC groups) lag behind the others in the achievement of this basic functioning.

Following the tentative results of the two microfinance studies described above (Maldonado and Gonzalez-Vega (2007) and Adjei et al. (2007), we decided to conduct a survey to look at the effect of access to finance and wealth on investment in education. We also looked at the effect of respondents’ social status on the education investment decision. Finally, following the well-known preference for male children in India, we also looked at the role of gender.

Our study has several innovations compared to previous work. First of all, we looked at investment in children’s education not only in terms of monetary investment, but also in terms of time investment. Second, we looked at investment in children’s education also in terms of the amount of time that siblings spent on education. Third, we used grandparents’ employment to measure family social status, independent from the family’s financial status. We also looked at medium-of-education effects.

The question that we study is whether access to microcredit has an impact on investment in education.  We have the two competing hypotheses: one, access to microfinance increases investment in education, and two, access to microfinance may decrease investment in education because children’s labor is needed for expanded business. This effect is expected to be stronger in agriculture and other industries where child labor may be utilized. We hypothesize that any positive effect would be stronger for boys, for families that fall in any one of these categories: families with fewer children or families with parents who studied in English medium.

Possible channels of the effect of microfinance on education expenditures are: a) through higher wealth flowing from microcredit which would lead to more expenditure on education, assuming that education is a normal good; b) social awareness that may accompany access to microcredit leading to a better understanding as to the economic value of education. The first channel will be evaluated in the analysis below. More information on the second channel will be obtained during focus-group interviews.

Our study consists of two parts. The first part is a survey administered to 38 borrowers in one of the Kollengode centers of a Kerala microfinance institution SRI (Society for Rural Improvement). The survey was administered by SRI employees during November 3 and 4, 2015. The second part is a focus group process that is further discussed in Appendix 4.

**Data:**

We considered the following measures for the dependent variable, investment in children’s education, using the data available from the survey: one, the rupee expenditure on the children’s education per child (exppch); two, the time invested in the children’s education by the parents per child (ptimpch); three, the time invested in the children’s education by siblings per child.[[1]](#footnote-1) While the monetary expenditure is a natural variable to consider, the inclusion of the second and third variables is an innovation of our paper.

Since information regarding the actual amount of loans from SRI was not available for reasons of confidentiality, we had to have recourse to alternate measures of access to microfinance. We used three variables that seemed to directly measure access to microfinance – one, number of loans from SRI (nl), number of loans from other financial institutions (nothl), number of years as SRI client (measured as the year when client joined SRI – memyr).

We also included other variables which could be expected to mediate the decision to spend resources on children’s education; these were primarily measures of the parent’s social status. The assumption was that the higher the social status of the family, the more they would be willing to invest in education. Historically, people’s access to education was highly correlated with their caste/social status. Thus, we used grandparents’ occupation as one indicator of social status. Similarly, occupations were also highly correlated in the not so distant past with caste/status. We created an ordinal variable to measure social status, as measured by grandparents’ occupation (details in Appendix 2). We used it in the analysis as if it were an interval variable, even though it was only an ordinal variable. However, we confirmed our results by dividing occupations into two groups – high status and low status. It must be noted, however, that the status variable may be measuring either social status or caste or the education level of the parents.

* 1. Average age of grandparents (the older the grandparents, the older the parents and less likely are the parents to have obtained education) (ageg)
	2. Categorical variable evaluating job class status of grandfather as inferred from his job.
	3. Average of Job class for grandfather and grandmother (jobg).
	4. Education of grandfather
	5. Average education of grandparents (educg).

Since these were considered mediating variables, we considered interactions of these variables with measures of access to microfinance, as well as measures of financial wellbeing.

Finally, we looked at other information regarding the financial well-being of families, as well as information available to respondents from SRI about education. Measures of financial well-being could be considered as being measures of access to wealth, independent of access to microfinance loans. However, it is very likely, given our imprecise measures of access to microfinance, that these wealth variables may also be measuring access to microfinance and may, well, be the outcome of previous loans from MFIs. As such, we also looked at the interactions of these variables with status the variables described in the previous paragraph.

1. Individual asset measures:
	* Rooms per resident (roomp)
	* A summary variable constructed through a weighted average of different kinds of vehicles owned by the family – bicycles, cars and autorickshaws (vehicle) (details in Appendix 3)
	* Dummy Variable for Refrigerator (fridge)
	* TV ownership (tvdum)
	* Is the family running a business or not? (busdum)
	* Dummy variable for ownership of gold (golddum)
	* The value of gold held by the respondent’s family: in India, particularly in South India, gold as a form of saving is considered very important and even more so by women. If so, assets in the form of gold might be more important in the parents’ decision to invest in a risky and long-term investment such as education, compared to other assets (goldval).
2. Total Asset measure: this was constructed by valuing the different assets using information available on the web and adding up the imputed values of the different assets. However, in all our regressions, this measure was dominated by the variable goldval, the total value of gold held by the family. This statistical insignificance could be due to the lack of information about the actual market value of the assets in question; in any case, we do not report results on this variable in what follows.
3. Measure of the amount parent’s information regarding education obtained from SRI: Did you get any information on education from SRI? (Y/N) (infsridum)

We also considered four other variables. The first one is the number of siblings. Our hypothesis is that the greater the number of siblings, the less likely is any one sibling to do well in school because of the need for resources, probably. Light and Strayer (2000), found that students in the best quartile of colleges had fewer siblings. The second variable is whether the children work in the parents’ business. If children work in the business then, following Maldonado and Gonzalez-Vega (2007), increased availability of finances might lead to lower investment in children’s education. The third one is the gender of the children. Parents may be more willing to invest in male children’s education. We measured this by looking at the average gender measure over all children in the family, where male was coded as one and female as zero. We also considered the medium of instruction for the children’s education. The choice of English schools might indicate more weight on social status leading to greater willingness to spend on children’s education. Of course, the choice of English schools might itself be an endogenous variable which depends on the availability of financing. There is no variation in the data on grandparents’ education – all of them studied in Malayalam-medium schools.

**Results:**

We now report the results of our regression analysis. We see from Panel A of Table 1 that gold is an important determinant in the decision to invest in children.[[2]](#footnote-2) We also see that the higher the value of jobg, i.e. the higher the social status of the family (following our interpretation of jobg), the greater the impact of gold availability on investment in education. The jobg variable is problematic from a methodological standpoint because the values that jobg takes are categorical.  A jobg value of 4 indicates higher status than a jobg value of 1, but not necessarily 4 times as much; but its use in an OLS regression basically assumes that.  Hence we created a categorical variable jobdum that takes the value 1 if jobg>1.5 and then ran the regression with goldval and the corresponding interaction variable. We found that the interaction variable was, once again, significant and the average net effect of goldval on exppch was 0.02.

Put Table 1 around here

When we regressed exppch on goldval and other asset variables, none of them turned out to be significant (Panel B). Hence the only asset variable that seems to be significant is gold. However, our negative results (the lack of an impact of microfinance) may be due to the fact that the variable in question is measured with a lot of error, thus masking its true effect.

We also looked at the mediating influence of gender, information obtained from SRI and the number of years that the respondent has been a member of SRI. Gender turned out to be completely irrelevant. However, we measured gender as an average of the genders of all the children; hence a true effect may be hidden which may be uncovered if we look at the expenditure per child and its gender.

Information provided by SRI seems to be relevant as a mediating variable. The number of years that the respondent has been a SRI member also seems to be relevant; however, looking at the size of the coefficients, it would seem that the total effect of information is very small.

Put Table 2 around here

We considered, further, if the effect of goldval may be partly or wholly due to the effect of one respondent who has Rs. 3 lakh worth of gold; this is twice as large as the next gold-wealthiest respondent. When we dropped this observation, we found that status is still significant as a mediating variable, but none of the others are. This suggests that the seeming mediating effect of information from SRI is solely due to the single outlier observation.

Put Table 3 around here

We also looked at the effect of total assets and gold assets in particular on the parents’ time investment per child. We found a marginal effect of the amount of gold possessed on the parents’ time investment in the child. None of the mediating variables were significant.

Put Table 4 around here

**Qualitative Observations derived from focus groups:**

During the course of the direct interviews that we conducted in January 2016, we tried to get some understanding about the factors that might have driven the results from our more systematic survey. Some of the issues that we tried to address were gender and the financing of education; education loans from other MFIs; and social status and expenditure on education. As far as the effects of microfinance on education expenditures, as mentioned above, we tried to see which of two possible channels of influence might have been more relevant. Would it have been through the higher wealth flowing from microcredit which would lead to more expenditure on education, assuming that education is a normal good; or would it have been through an increase in social awareness that may accompany access to microcredit leading to a better understanding as to the economic value of education? Of course, our quantitative results seem to suggest that microfinance does not have an impact on the demand for education. On the other hand, we do find an effect of wealth on the demand for education; hence, it is still possible that access to microfinance may have led to an increase in wealth, which, in turn, may have had an impact on the demand for education. Our group was divided into four parties, with each group talking to two sets of 4 or 5 women, for a total of 37 women respondents and eight group conversations.

Financial resources to pay for education:

We did ask about loans taken from other financial institutions, but we did not ask what the purpose of these loans were. On average, 9.5 loans were taken from SRI, whereas about 2.34 loans were taken from other financial institutions. Some of these other loans clearly were educational loans, as clarified in the face-to-face discussions that we conducted later on.

Some of the women indicated that they had indeed taken education loans, while others indicated that they had used savings to cover tuition costs, rather than loans. One woman stated, “I plan to utilize SRI to invest in my children’s education.”

One other group reported of their respondents: “One of them is a tailor, two work at a laundry mat, one sells clothes and the last one works on a chicken farm. These women work very hard to get enough money to pay for their children’s school expenses, which includes, uniforms, books and transportation. These women are able to pay for these expenses from their income from their jobs and have not yet needed to take an education loan.”

In another group, only one woman, Rehmathneesa, had taken an education loan, the other women were just using income loans to pay school expenses for their children, including transportation, special exam fees, study materials, and school uniforms.

Only 1 out of the 9 women we interviewed, Vijua, had taken out loans solely for education. The rest either paid for tuition with their savings or profits from their enterprises.

Madura, in another group, didn’t want to rely on loans to pay for tuition and instead wants for her oldest son to help pay for it with his income.

In two other groups, interviewers reported that none of the parents had taken out loans for the purpose of financing an education; rather all education expenses were financed with personal savings derived from income.

Social impetus:

One of the women, Saji, said education was very important because it was easier to get a job with a degree and to obtain a better financial status.

One group noted that, in order for microcredit to have an effect on investment in education, parents must have an influence on their children’s educational experience. However, “throughout the interview process, however, we learned that several children dropped out of school, with reasons ranging from the difficulty of school-work, to the lack of effort/desire, or simply the preference of work over learning.”

Ambujam explained that her son “failed a subject and then was not interested in continuing school.” Ambujam recognized he could have been more successful if he continued education, but his choice was the final say.

Although the mothers in the second group did not all finish their education, similarly to those in the first group, they believe that their children should finish standard education in order to reap the benefit of the education that they were never able to. Vijiaoea stated, “because I only went up to 5th Standard that is why I wanted to make my children study.” She even expressed, “both parents and children were interested,” in attending school. For Rabaha it was quite the opposite she explained, “she and her husband asked for her children to study, but they were not interested,” which is why her children did not finish their education. Rugmama agreed with Vijiaoea stating “she and her husband supported them (her children) to study.” As a result, we believe that the mothers may have a psychological influence on their children by being more aware and supportive of continued education, thus leading to the higher degree rate of the children in the second group. Rabaha recognizes the importance of continuing education as she stated “I believe that if my sons continued past 7th and 10th standard they would have made more money than they do currently.”

In another group, the interviewers found that, instead of the parents pressuring their children to continue studying, nearly all of the nine women in the group left the decision to pursue education up to their children. If their kids wanted to continue education then the parents would support them wholeheartedly. One exception was Madura who wanted her children to work as soon as they finish their education to help with family income.

**Conclusions:**

Some possible inferences from our results are:

1. Since none of the loan variables matter, microfinance has no impact on the education decision.
2. Assets do matter, as the “gold value” variable proves – both for the money spent on children’s education as well as the amount of time spent by parents working with the child on his/her education.  (This might also imply that microfinance does not help create assets!)
3. Information from SRI probably does not influence the decision to invest in education.
4. The impact of asset availability on the decision to invest in children’s education is affected by status as measured by the status of the jobs of the grandparents.
5. The gender of the children is completely irrelevant in the parents’ decision to invest time or money on the children’s education.

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**Appendix 1: Questionnaire used for survey**

(Note that questions in italics were not actually put to the respondents)

Date and time of interview

Name of interviewer

**Parents:**

Father

Name

Age

Education:

Medium of Education (Language):

Profession:

*Caste:*

*How important is education considered in your immediate and extended family?*

*In your opinion, how important is education? (On a scale of 1-5)*

*How important did you consider education to be, five years ago?*

**Parent:**

Mother

Name

Age

Education

Medium of Education (Language):

Profession

*Caste*

*How important is education considered in your immediate and extended family?*

*In your opinion today, how important is education? (On a scale of 1-5)*

*How important did you consider education to be, five years ago?*

**Residence**

Where do you live?

How far is it from the center of Kollengode Bus Stop?

House (Own or Rent?):

How many rooms in house?

How many people live in the house?

How much land do you own?

**Assets:**

What are your major possessions?

Car

Other vehicle

Refrigerator

How many mobiles in the family?

Colour TV

How many Laptops/Computers:

Credit Cards:

Other:

**Business (Shop, Farm, Factory etc.):**

Do you have a business (If so, what?)

How many employees do you have in the business, other than your family members (full-time equivalents)?

What family members help you in the business (per week)?

How many hours do your children help out in the business (per week)?

**Children:**

Child 1:

Name:

Age:

Gender:

Education:

Medium of Education (Language):

Where does s/he study?

How far is the school from his/her school?

How much do you spend on this child per month currently?

*(Please explain clearly to respondent: include all expenditures that would not be necessary if the child were not being educated, such as: examination fees, cost of reading and writing materials, clothing, travelling, study tours, donation to PTA, school fees – except private tuition and coaching)*

*Nature of expenses (note which of above list applies, as well as any others mentioned by respondent):*

*Expenditures on child per month for private coaching:*

*Education plans: Will this child go on to study further, after current educational goal is achieved? Please explain, providing details of plans, if known. (For example, if this child is in primary school, will s/he go on to high school; if child is studying towards 10th standard, will s/he go on to junior college, etc.)*

*Expected expenses (per month) if child goes on to study further:*

*If child will study further, what are the reasons that you are thinking of sending this child to study further?*

Do parents spend time with child on schoolwork?

How many hours per week?

Do siblings spend time with child on schoolwork?

How many hours per week?

Does anybody else spend time with child on schoolwork?

How many hours per week?

Child 2:

Name:

Age:

Gender:

Education:

Medium of Education (Language):

Where does s/he study?

How far is the school from his/her school?

How much do you spend on this child per month currently?

*(Please explain clearly to respondent: include all expenditures that would not be necessary if the child were not being educated, such as: examination fees, cost of reading and writing materials, clothing, travelling, study tours, donation to PTA, school fees – except private tuition and coaching)*

*Nature of expenses (note which of above list applies, as well as any others mentioned by respondent):*

*Expenditures on child per month for private coaching:*

*Education plans: Will this child go on to study further, after current educational goal is achieved? Please explain, providing details of plans, if known. (For example, if this child is in primary school, will s/he go on to high school; if child is studying towards 10th standard, will s/he go on to junior college, etc.)*

*Expected expenses (per month) if child goes on to study further:*

*If child will study further, what are the reasons that you are thinking of sending this child to study further?*

Do parents spend time with child on schoolwork?

How many hours per week?

Do siblings spend time with child on schoolwork?

How many hours per week?

Does anybody else spend time with child on schoolwork?

How many hours per week?

Child 3:

Name:

Age:

Gender:

Education:

Medium of Education (Language):

Where does s/he study?

How far is the school from his/her school?

How much do you spend on this child per month currently?

*(Please explain clearly to respondent: include all expenditures that would not be necessary if the child were not being educated, such as: examination fees, cost of reading and writing materials, clothing, travelling, study tours, donation to PTA, school fees – except private tuition and coaching)*

*Nature of expenses (note which of above list applies, as well as any others mentioned by respondent):*

*Expenditures on child per month for private coaching:*

*Education plans: Will this child go on to study further, after current educational goal is achieved? Please explain, providing details of plans, if known. (For example, if this child is in primary school, will s/he go on to high school; if child is studying towards 10th standard, will s/he go on to junior college, etc.)*

*Expected expenses (per month) if child goes on to study further:*

*If child will study further, what are the reasons that you are thinking of sending this child to study further?*

Do parents spend time with child on schoolwork?

How many hours per week?

Do siblings spend time with child on schoolwork?

How many hours per week?

Does anybody else spend time with child on schoolwork?

How many hours per week?

**SRI:**

Did you get any information on education from SRI? If so, what?

*If so, how important was it in your decision to spend money on your children’s education?*

*What kind of job would you like your children to get, once they finish their studies?*

When did you become a member of SRI?

How many loans have you taken from SRI?

For what purpose have you taken loans from SRI?

*What is the amount of your current indebtedness to SRI (total amount of your loans)?*

**Other banks or microfinance institutions:**

Do you have loans from other institutions?

How long have you had an association with other institutions?

For what purpose have you taken loans from other institutions?

*What is the amount of your current indebtedness to SRI (total amount of your loans)?*

*What is the amount of your current indebtedness to other institutions (total amount of your loans)?*

Appendix 2: Grandparents’ Occupation Grouping

|  |  |  |
| --- | --- | --- |
| **Profession** | **Assumed Sector**  | **Job\_Class** |
| No | Does Not Work | 0 |
| - | Does Not Work | 0 |
| Beediwork | Labor | 1 |
| Coolie | Labor | 1 |
| Daily Wages | Labor | 1 |
| Labour | Labor | 1 |
| Labour in Soda company | Labor | 1 |
| Bricks Work | Construction | 1 |
| Laundry | Services/Labor | 1 |
| Quarry Work | Services/labor | 1 |
| Quarry | Services/Labor | 1 |
| Tailor | Services | 2 |
| Tea Shop | Retail | 2 |
| Toddy Shop | Food & Beverage | 2 |
| Vegetable Business | Agriculture | 2 |
| Wood Work | Construction | 2 |
| Agriculture | Agriculture | 3 |
| Farmer | Agriculture | 3 |
| Farming | Agriculture | 3 |
| Fish Business | Agriculture | 3 |
| Goat Rearing | Agriculture | 3 |
| Astrologer | Services | 4 |
| Kerala State Electricity Board | Employment | 5 |
| Building Contractor | Construction | 6 |

Appendix 3: Digitalization of Other Vehicles data

|  |  |
| --- | --- |
| 1 | Bicycle |
| 2 | Motorcycle, TVS, Bike, Scooty |
| 3 | Auto |

An autorickshaw is a three-wheeler; Motorcycle, TVS, Bike, Scooty are all motorized two-wheelers.

We assume that whoever entered the data as Bike copied it as is from the questionnaire and did not write Bike when the original had bicycle.  Because bicycle is a cycle, but a bike is normally a motorized two-wheeler, i.e. a motorbike, this is assigned a value of 2, i.e. higher than a bicycle, but lower than a car.

Appendix 4: Focus Groups

As mentioned earlier, the second half of the study consisted of focus group interviews. These interviews were undertaken when the students actually visited SRI in Kollengode, Palghat in January 2016.  About half of the 38 survey respondents were chosen randomly to participate in this second component.  The 17 students formed five different groups (A-E).  Each group was provided with an interpreter.  The purpose of this second phase was to allow us to flesh out the human background to the numbers collected and analyzed in phase one.

Students asked questions to try and obtain qualitative answers to questions such as:

1. How important is education to the respondent (usually the mother)? Maybe ask her to compare it with other things…
2. Why is education important?
3. Have her ideas of the importance of education changed over time?
4. Where do you get the financing for funding your children’s education?
5. How far do you want to educate your child? Will this child go on to study further, after current educational goal is achieved? Please explain, providing details of plans, if known. (For example, if this child is in primary school, will s/he go on to high school; if child is studying towards 10th standard, will s/he go on to junior college, etc.)
6. Is education important to get a government job? Or is it only important to get a private sector job?
7. What are your aspirations regarding the kind of job that you want your child to have?
8. Do you think it’s more important for boys to study than girls? Why or why not?
9. Does everybody in your family share your views regarding education?
10. Do your friends share your views regarding education?
11. Have your views of education changed after becoming clients of SRI?
12. What sorts of education-related expenses do you have?
	1. examination fees,
	2. cost of reading and writing materials,
	3. clothing,
	4. travelling,
	5. study tours,
	6. donation to PTA,
	7. school fees,
	8. private tuition and coaching)
	9. other
13. Would you take loans to send your children to college or to pay for coaching or special tuition?
14. Do you think that caste status or other social status can be transcended by education?
15. Do you think that education is more important for people of higher caste or social status?
16. Would the need for your children to help you with your business or farm be a factor in your decision to send him/her to school?

Table 1: Regressions of Expenditure per child (exppch) on explanatory variables:

goldval: value of gold held by family.

Jobg: measure of family social status

goldjob: interaction between goldval and jobg

infsridum: dummy variable indicating access to information on education from SRI

roomp: number of rooms per person in family

Panel A:

 | Coef. Std. Err. t P>|t|

-------------+------------------------------------------

 goldval | -.0319131 .00581 -5.49 0.000

 goldjob | .0388675 .0034247 11.35 0.000

 \_cons | -46.96887 133.278 -0.35 0.727

Panel B:

 | Coef. Std. Err. t P>|t|

-------------+--------------------------------------------

 infsridum | 1634.819 570.0707 2.87 0.007

 goldval | .0339281 .0039822 8.52 0.000

 roomp | -994.7015 755.1376 -1.32 0.197

 \_cons | -878.3997 693.5302 -1.27 0.214

Table 2: Regressions of Expenditure per child (exppch) on goldval with additional mediating variables

chgender: average gender of children in family

goldgender = goldval\*chgender

goldinfsri = goldval\*infsridum

goldyr = goldval\*memyr

Panel A:

-------------------------------------------------------

 exppch | Coef. Std. Err. t P>|t|

-------------+-----------------------------------------

 goldval | .0319239 .0087498 3.65 0.001

 goldgender | -.0032994 .0146794 -0.22 0.824

 \_cons | -145.7111 290.8037 -0.50 0.620

-------------------------------------------------------

Adj R-squared = 0.5730

Panel B:

--------------------------------------------------------

 exppch | Coef. Std. Err. t P>|t|

-------------+------------------------------------------

 goldval | .0067037 .0045298 1.48 0.148

 goldinfsri | .0353596 .0053371 6.63 0.000

 \_cons | 24.99716 193.9855 0.13 0.898

--------------------------------------------------------

Adj R-squared = 0.8133

Panel C:

--------------------------------------------------------

 exppch | Coef. Std. Err. t P>|t|

-------------+------------------------------------------

 goldval | 10.29234 1.867306 5.51 0.000

 goldyr | -.0051162 .0009309 -5.50 0.000

 \_cons | 45.07108 214.6029 0.21 0.835

--------------------------------------------------------

Adj R-squared = 0.7735

Table 3: Regressions of Expenditure per child on goldval and different mediating variables (w/o outlier obs)

Panel A:

------------------------------------------------------

 exppch | Coef. Std. Err. t P>|t|

-------------+----------------------------------------

 goldval | -.0061424 .0037347 -1.64 0.110

 goldjob | .0097728 .0032235 3.03 0.005

 \_cons | 191.5994 68.5933 2.79 0.009

Adj R-squared = 0.3282

Panel B:

-------------------------------------------------------

 exppch | Coef. Std. Err. t P>|t|

-------------+-----------------------------------------

 goldval | .0023501 .002522 0.93 0.358

 goldgender | .0036925 .0036447 1.01 0.318

 \_cons | 245.3536 73.9542 3.32 0.002

-------------------------------------------------------

Adj R-squared = 0.1670

Panel C:

------------------------------------------------------

 exppch | Coef. Std. Err. t P>|t|

-------------+----------------------------------------

 goldval | .004796 .0017172 2.79 0.009

 goldinfsri | -.0019688 .0032962 -0.60 0.554

 \_cons | 247.5629 74.94479 3.30 0.002

-------------------------------------------------------

Adj R-squared = 0.1502

Panel D:

-------------------------------------------------------

 exppch | Coef. Std. Err. t P>|t|

-------------+-----------------------------------------

 goldval | .4995558 .8868795 0.56 0.577

 goldyr | -.0002466 .0004416 -0.56 0.580

 \_cons | 243.801 74.72676 3.26 0.003

-------------------------------------------------------

Adj R-squared = 0.1491

Table 4: Regressions of Time Spent per child on goldval and different mediating variables (w/o outlier obs)

-------------------------------------------------------

 ptimpch | Coef. Std. Err. t P>|t|

-------------+-----------------------------------------

 goldval | 2.96e-06 1.63e-06 1.82 0.078

 \_cons | .3851302 .0779305 4.94 0.000

-------------------------------------------------------

Adj R-squared = 0.0616

1. We also considered total expenditure (for both time and monetary outlays), rather than expenditure per child; the results were much stronger in terms of expenditure per child and only these results are reported here. [↑](#footnote-ref-1)
2. On the fact of it, though, it seems that it affects the decision negatively, i.e. having more gold means parents invest less! However, this is an incorrect reading. This is because the interaction variable goldjob is actually goldval\*jobg. Hence the average net effect of goldval on exppch is actually -0.032 + 0.0389 times (the average value of jobg) = -0.032 + 0.0389(1.58) = 0.0295 > 0. [↑](#footnote-ref-2)