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TRENDS/CASES

Family, community, and educational outcomes in South Asia

Amita Chudgar · M. Najeeb Shafiq

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Abstract In this article, we review research on the economics and sociology of education to assess the relationships between family and community variables and children's educational outcomes in South Asia. At the family level, we examine the variables of family socioeconomic status (SES), parental education, family structure, and religion and caste. At the community level, we assess the limited research on the relationships between economic, cultural, and social characteristics and children's educational outcomes. The literature presents several consistent relationships between the roles of family and community characteristics in determining educational outcomes and reveals several possibilities for further research.

Keywords South Asia · Family · Community · Educational outcomes

South Asia faces significant educational challenges. For example, of the 115 million primary-school-aged children worldwide who are not in school, 42 million reside in South Asia (UNESCO 2003a). This article responds to such challenges by providing a systematic and up-to-date review of existing quantitative research in the economics and sociology of education and then by identifying issues that require greater attention from researchers and policymakers. In particular, we examine the relationships between children's educational outcomes in South Asia (such as attainment, enrolment, and learning) and two sets of characteristics: family characteristics (SES, parental education, family structure, and religion and caste) and community characteristics (economic, cultural, and social). In light of the continued educational challenges facing the region, our focus on the role of home and community is motivated by several factors. Home, community, and school factors are

A. Chudgar (✉)
College of Education, Michigan State University, 426 Erickson Hall, East Lansing, MI 48824, USA
e-mail: amitac@msu.edu

M. N. Shafiq
School of Education, University of Pittsburgh, 5907 Posvar Hall, 230 S. Bouquet Street, Pittsburgh, PA 15260, USA
e-mail: mnshafiq@pitt.edu

crucial to efforts to improve educational outcomes (Coleman 1988). While several extensive and updated reviews of quantitative studies have focused on the role of school factors in general and on South Asian countries in particular (mainly the work by Hanushek 2009), the same cannot be said of the reviews of quantitative research on home and community. Since the last comprehensive review of quantitative studies by Behrman (1999), a series of new quantitative studies have emerged, guided by advances in quantitative analysis and the availability of better data from the region.[1] To our knowledge this review is the first attempt in the last 10 years to systematically revisit the growing body of quantitative literature.

This article is restricted to quantitative research that has been published in peer-reviewed journals and to a lesser extent publications and working papers from universities, governmental organizations, large non-governmental organizations, and key international organizations, mainly in the last two decades. Thus, the research being reviewed is methodologically adequate or influential or both. Nonetheless, as in all reviews, the quality of studies varies. These studies typically use multivariate regression analysis to determine the statistical associations or correlations between an educational outcome and family and community characteristics; therefore the research provides suggestive evidence, if not definitive proof, of causal relationships between educational outcomes and home and community factors. Finally, it must be acknowledged that beyond rudimentary statistical reports, virtually no quantitative research has been conducted on Afghanistan, Bhutan, Burma, and the Maldives. Therefore, this review focuses on research on Bangladesh, India, Nepal, Pakistan, and Sri Lanka.

Framework and background

Conceptual frameworks of educational outcomes typically represent them as influenced by family characteristics (including child characteristics), community characteristics, and school characteristics (Nechyba et al. 1999; Strauss and Thomas 1995). Educational outcomes include attainment, enrolment, and learning. In our review, we found that most studies on South Asia examine the educational attainment of children, as measured by years of schooling and graduation rates. Only a small share of the available research on South Asia examines learning levels, or cognitive achievement, often also referred to as the quality of education. The main reason behind this limited research is that nationally representative, reliable test score data are not available from most South Asian countries. One important debate among researchers worldwide, on which we cannot focus on in this review, is the relative importance of the home versus the school environment in improving learning outcomes (Heyneman and Loxley 1983).[2] It must also be noted that "attainment"

[1] More frequent data collection initiatives, better access to computing power, and a growing emphasis on evidence-based policymaking are some of the reasons for these recent developments. Fuller (1986) is an example of another comprehensive but dated review of the literature on the determinants of schooling outcomes in Asia and other developing regions.

[2] Most recently attempts have been made to collect internationally comparable learning data in India, but such information is still not available on a national scale (Das and Zajonc 2008). Leading researchers are now making important strides in this area of work, however. For instance, most recently the journal *Education Economics* devoted an entire issue to quality education in South Asia (Kingdon and Riboud 2009). This literature on learning outcomes is still under development in the South Asian context but it is much more developed in areas outside this region (for a broader literature review see Chudgar and Luschei 2009).

itself is a fairly broad term. The conception of the term that we use in this review broadly addresses access and retention issues. But the very issue of inclusion in and exclusion from schooling is a nuanced concept, as is clear in recent work emerging from South Asia and elsewhere, most notably the work at the Consortium for Research on Educational Access, Transition and Equity. For example, research from Bangladesh and India indicates that children can be excluded from education not just by lack of access; even after gaining access they can be excluded from learning in multiple ways (Ahmed et al. 2007; Govinda and Bandopadhyay 2008).

Family characteristics include family income, parental education, family structure, religion, ethnicity, caste, and parental engagement; each directly influences the time and resources that are dedicated to children's educational outcomes. In addition, family characteristics indirectly influence educational outcomes in various ways; examples of such indirect effects include family members voting, volunteering, and protesting. The educational advantage that children enjoy from the relationships with their families is sometimes considered family-level social capital (Coleman 1988).

Community characteristics include the community's economic characteristics (such as its levels of industrialization, the local infrastructure, the adult and child labour markets, and school availability and costs) and cultural and social practices, such as hypergamy, dowry, and patrilocal exogamy (the practices of women marrying more educated men, bringing money to the marriage, and moving to live with the husband's family). The extent of support offered by a child's own community is sometimes referred to as localized social capital, whereas the support from a larger community (in a region or country) is sometimes referred to as generalized social capital (Coleman 1988; McAslan 2002).

School characteristics include the class size, teacher qualifications, per-pupil expenditure, teaching materials (such as books and blackboards), infrastructure (such as cooling and lavatory facilities), and school type (public, private, religious, or NGO-run). Because of the relatively large number of studies on school characteristics and educational outcomes in South Asia, a review of that literature is beyond the scope of this article; for reviews of quantitative research on school characteristics in South Asia and other developing regions, see Hanushek (2009) and Glewwe and Kremer (2006).

Figure 1 offers a simple conceptual framework showing the ways that family- and child-level factors affect educational outcomes. The solid lines indicate that research is available documenting these relationships in South Asia; the dotted lines indicate a dearth of such research. Thus, as Fig. 1 shows, the bulk of the research on educational outcomes in South Asia examines the direct role of family characteristics, while limited research exists on the role of community characteristics.[3]

Recent educational outcomes for some South Asian countries are encouraging. According to UNESCO's annual *Education for All* (EFA) reports (UNESCO 2010), Bangladesh has joined Sri Lanka in achieving universal primary education, in which all children complete primary education, a key goal of the United Nations' Millennium Development Goals (MDGs). Bangladesh has also achieved the MDG goal of gender parity in education (Asadullah and Chaudhury 2009; Shafiq 2009). Between 9.5 million and 13.5 million of India's children are not in school (accounting for 23% of the world's out-of

[3] Furthermore, though it is known that family- and community-level characteristics are intertwined and affect each other, researchers find it hard to separate family from community influences, and vice versa. It is also worth noting that educational outcomes can affect family and community characteristics. For example, high-performing children can encourage their parents to get more education or to initiate community-improvement programs. However, no research on these topics has been conducted in South Asia.

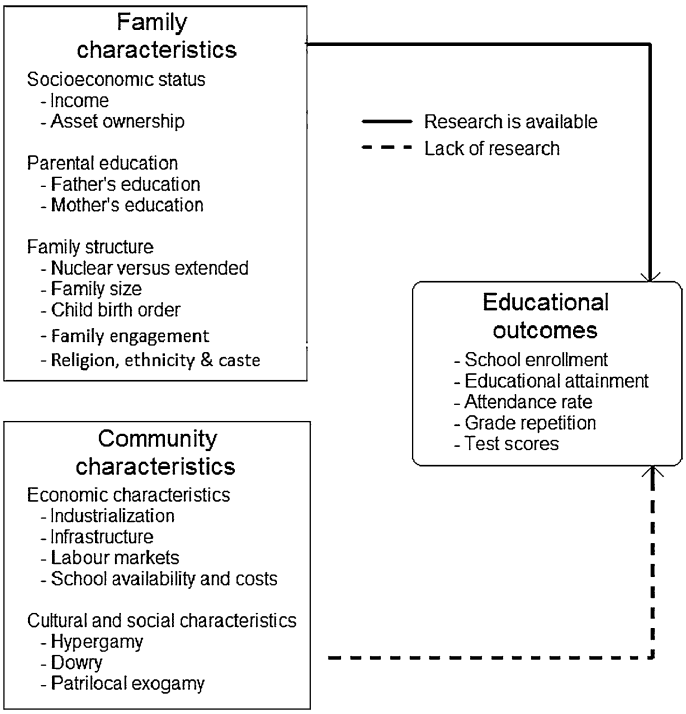

Fig. 1 The influence of family and community characteristics on children's educational outcomes. *Source:* Modified version of the framework in Nechyba et al. (1999)

school children), but the 2008 EFA Report indentifies India as a country with a high chance of achieving the universal primary education MDG by 2015. Another recent report spanning the last two decades shows that India has improved the education of rural children, girls, and children from socially and economically disadvantaged backgrounds (Sankar 2007). Similarly, the 2008 EFA Report projects that Nepal will reach the universal primary education MDG by 2015, and that the gender parity MDG appears practical for Nepal (Benoliel et al. 1995). It is clear, however, that without tremendous efforts by families, communities, and policymakers, Afghanistan, Burma, and Pakistan will not reach universal primary education by 2015 (Warwick and Reimers 1995; UNESCO 2003a). It also remains unclear when Bangladesh, India, Nepal, and Sri Lanka will attain universal secondary education.[4]

[4] According to data compiled by economists Barro and Lee (2001), between 1960 and 2000 the average years of education of adult men and women in South Asia increased significantly, with the exception of Afghanistan. Improvements in average educational attainment in Afghanistan, Bangladesh, and Nepal are particularly modest: average attainment increased from about 1 year in 1960 to less than 3 years in 2000. The increases in India and Pakistan are better: from 2 years of education in 1960 to 4 years of education in 2000. In any given year, Sri Lanka's average educational attainment has been far larger than in other South Asian countries: from 4 years in 1960 to 7 years in 2000. Regarding the gender gaps in the average educational attainment of adults, larger pro-male gaps persist in Afghanistan, Bangladesh, India, and Pakistan—greater than 1 year of education. In Burma and Sri Lanka, the pro-male gender gaps are smaller—less than 1 year. In Nepal in the early 1960s and 1970s there was no gender gap because the educational attainments of both men and women were nearly zero; over time, Nepal's pro-male gender gaps became similar to those in Afghanistan, Bangladesh, and Pakistan.

Family

Family socioeconomic status (SES)

Studies from industrialized and developing countries consistently found socioeconomic status to be a key predictor of educational outcomes (Buchmann and Hannum 2001; Hannum and Buchmann 2004). Studies usually use income and/or asset ownership to measure family SES.

Family income enables households to pay for food, water, shelter, clothing, transportation, health care, and the direct costs of education, such as tuition, fees, supplies, transportation, and private tutoring. Family income also determines the family's ability to afford the indirect cost of education: foregone earnings from child labour. In addition, income affects parental decisions about working versus childrearing. Accordingly, children from higher income families are likely to have better educational outcomes because their families can afford the direct costs of education, need not depend on their children's labour, and can afford to spend time on child-rearing activities (Edmonds 2008). For instance, a household survey conducted in Bangladesh revealed that "scarcity of money" was the single most important reason why children were not enrolled in school or dropped out (Ahmed et al. 2007).

Several studies in South Asia confirm the importance of family SES for educational outcomes (Holmes 2003; Shafiq 2007a; Shariff 1999). In India, Filmer and Pritchett (1999) found that 82% of the children from the richest 20% of all families complete grade 8, but only 20% of children from the poorest 40% do so. Although Sri Lanka has achieved universal primary education, Arunatilake (2006) and Ranasinghe and Hartog (2002) note that poverty prevents children from remaining in school beyond the primary level. Low SES typically affects girls more adversely than boys. Filmer and Pritchett (1999) show that educational gender gaps vary by family SES: in India, 80% of girls in the richest 20% of all families complete grade 8, compared to only 9.5% of girls in the bottom 40%.

There is evidence that families change their behaviour towards education as their incomes change. Most rural families in South Asia experienced income gains in the 1970s because of the Green Revolution, when technological advances in farming methods resulted in significantly larger crop yields and rising income and lower food prices. Using panel data, Rosenzweig and Schultz (1982) found that as rural Indian families benefited directly from the Green Revolution, their increased income resulted in better educational outcomes.

Several policy interventions have emerged in response to the finding that low family SES affects educational outcomes. Notably, Bangladesh has adopted several conditional cash transfer programmes that compensate families for enrolling their children in school and meeting minimum performance standards. Ravallion and Wodon (1999) evaluated the food-for-education programme in rural Bangladesh, which involves government food grants targeted to the poorest 40% of families; they found that a grant worth considerably less than the average child wage was sufficient to assure that participants would attend school nearly full school time. The grant also led to a reduction in the incidence of child labour, but this effect accounted for only a small proportion of the increase in school enrolment. The authors concluded that in rural Bangladesh, poor families reduce other uses of their children's time (such as leisure), in order to secure the gain in income from the programme without significantly reducing the earnings from the children's work. Similarly, Arends-Kuenning and Amin (2004) used panel data to evaluate the food-for-education programme and a national stipend programme for girls' secondary schooling in

two Bangladeshi villages; they also found that families enrolled more of their children in response to the programmes, even though the grant amount does not pull most families out of poverty. They also found that the modest change in the family SES had a greater influence on girls' schooling than on boys' schooling. Therefore their findings justify the major interventions in place in Bangladesh to reduce the direct and indirect costs of educating girls.

A few studies have directly measured family SES by assessing the ownership of assets such as land, farms, and businesses. The conventional theory that asset ownership improves educational outcomes has been challenged by the "wealth paradox" hypothesis proposed by Bhalotra and Heady (2003): that families that have assets are more likely to have their children work than families without assets—and that work may harm children's educational outcomes. They support this hypothesis using evidence from rural Pakistan. In earlier studies, Duraisamy and Malathy (1991), Dréze and Kingdon (2003), and Rosenzweig and Evenson (1977) all found evidence from rural India that owning more land was associated with weaker educational outcomes. In rural Bangladesh, Shafiq (2007a) directly examined the effect on families of owning land, farms, and businesses; he found that asset-owning families are more likely both to practice child labour and to enrol their children in school; in other words, families with assets prefer to combine schooling and child labour. Therefore, the conclusion from studies that measure family SES using asset ownership is that family SES has an ambiguous effect on children's educational outcomes.

Parental education

In both industrialized and developing countries, the most consistent and influential family-level predictor of educational outcomes is parental education. It affects children's educational outcomes in several ways. First, parental education and children's academic ability may be positively correlated, raising the likelihood that a child will remain in school. Second, educated parents bolster educational outcomes by helping with homework and being knowledgeable about children's nutritional and health needs. Third, during income shocks such as unemployment and natural disasters, educated parents know more about available safety nets and can therefore avoid disrupting their children's education. For all these reasons, then, the low educational attainment of adults in South Asia has a detrimental effect on children's educational outcomes.

Given the highly significant rates of adult illiteracy in South Asia, a large proportion of newly enrolled children are the "first generation learners" (Govinda and Bandopadhyay 2008) in their families; not surprisingly, variations in parental education levels are strongly associated with the children's educational attainment. Several studies have documented the strong association between parental education and children's educational outcomes in South Asia but cannot say precisely why parental education matters. Dréze and Kingdon (2003) analyzed the determinants of school enrolment in rural north India and concluded that parents' educational attainment is important in determining school enrolment. In rural Nepal, Shrestha et al. (1986) noted that the literacy level of adult family members was the single most important determinant of school participation; also in rural Nepal, Jamison and Lockheed (1987), using multi-generation data, found that the schooling levels of second-generation family members were key determinants of whether members of the third generation attended school. Usually, the gains in educational outcomes from parental education are largest if a parent has completed primary education; additional gains come from completing subsequent levels of education, but the size of the gains diminishes with each subsequent level. Building on this research, Chudgar (2009) used two separate,

nationally representative datasets from rural India, and found that in fact even a small gain in parental literacy may be strongly associated with impressive gains in the child's school enrolment and elementary school completion. Specifically, the mere fact of the parent being literate (able to read parts of a sentence, or having some primary education) confers upon the child huge educational advantages, compared to the child whose parent is illiterate. However, these findings on literacy may not hold for all outcomes, grades, or regions. For example, Goyal (2009) found that paternal literacy and maternal literacy have a statistically insignificant association with primary school children's reading and math scores in the poor eastern state of Orissa.

Research on parental education from industrialized and developing countries has generally found that the educational attainment of mothers is an especially strong predictor of children's educational outcomes; evidence from South Asia largely confirms this phenomenon. UNESCO (2003b) reports a robust association between mother's education and school enrolment in Bangladesh, India, Nepal, and Pakistan; in Nepal, for example, 78.4% of out-of-school children have mothers with no formal education. In rural India, Behrman et al. (1999) and Duraisamy (2002) found that the mother's education has a strong influence on school enrolment. Similarly, Ranasinghe and Hartog (2002) concluded that the mother's education had a considerable effect on children's educational outcomes in Sri Lanka. In the rural Matlab region of Bangladesh, Maitra (2003) estimated that the father's completing a given level of education raised the probability of a child's school enrolment by 4–6%, whereas the mother's doing so raises the probability by 5–8%. There are exceptions, however. In rural Pakistan, Holmes (2003) estimates suggest that the father's education matters slightly more than the mother's to the child's chances of completing school.

Evidence from South Asia indicates the education of mothers is especially beneficial for girls. In rural Bangladesh, Shafiq (2007a) found that a mother's education has a stronger association with girls' enrolment than boys' enrolment. Similarly, in rural India, Dréze and Kingdon (2003) found that mother's education is associated with girls' enrolment but not boys' enrolment. Using standard statistical methods, it is typically difficult to disentangle the effect of father's and mother's education because of marital homogamy: educated women tend to marry educated men. For instance, Chudgar (2006) found that the coefficient of correlation between father's and mother's education in India is 0.64.[5]

Family structure

There are two main types of family structure: nuclear and extended. Nuclear structures only involve two parents and their children; in industrialized countries, the nuclear family structure is common. In contrast, extended families, which also include other family members, are the norm in South Asia, particularly in rural areas.

Whether a family structure is nuclear or extended has implications for the children's educational outcomes. According to Hamilton's Rule, an idea from evolutionary biology, the degree of genetic relatedness (or biological ties) between two people determines their altruistic behaviour. If all else is the same, Hamilton's Rule predicts more favourable

[5] In a different context, using data for 22 countries from the Demographic and Health Survey, Desai and Alva (1998) showed that the relationship between a mother's education and her children's health outcomes was uniformly reduced once the researchers accounted for the father's education, various socio-economic status indicators, and location. Thus they call into question the causal link between maternal education and children's well-being.

educational outcomes for children in nuclear structures because their own father or mother is the head of the family. In extended family structures, grandparents, uncles, or aunts may head the family, and may be less committed to a given child's education. In fact, in rural Bangladesh, Edlund and Rahman (2005) found that nuclear families invest more in children's education than do extended families.

Families also consider the children's birth order as they make educational decisions. Among poor families in developing countries, elder children typically do less well in school (Hannum and Buchmann 2004); in particular, the education of the oldest girls is sacrificed so they can care for younger siblings and engage in other housekeeping activities. In rural India and Nepal, studies show girls do less well in school if younger children are present in their families (Jamison and Lockheed 1987; (Jeejeebhoy 1993). In Pakistan, too, a recent longitudinal study found that the arrival of an unexpected (unplanned) sibling in the household was significantly associated with at least one older girl dropping out of school (Lloyd et al. 2009).

Qualitative research also highlights the disadvantaged position of girls who have younger siblings. For instance, the PROBE Team (1999, p. 31) quotes one Indian father of an 8-year-old girl as saying "She will go to school when these grow a little older", referring to siblings aged 6 months, 2 years, and 3 years. The report also confirms such observations with quantitative evidence that a higher family dependency ratio (that is, the number of children divided by the number of adults in a family) is negatively associated with girls' school enrolment. Though most of the evidence suggests that siblings compete for family resources, there is some evidence that siblings help with educational outcomes. Aslam (2009b), for example, shows that students in Pakistan benefit academically if their siblings help with school work.

Family engagement

Worldwide, the literature on educational social capital within the family indicates that family engagement in children's educational endeavours is one of the main determinants of educational attainment (Coleman 1988). Data and studies on family engagement in educational activities are rare but a couple of studies have addressed the issue. In Sri Lanka, Aturupane et al. (2007) found that several factors—family support for private tutoring, help from the mother, number of books in the home, and the provision of preschool in the home—are associated with higher scores on math, English, and first-language exams. Aslam (2009b) also found that students in Pakistan scored slightly higher in mathematics if parents helped with schoolwork.

Religion, ethnicity and caste

There is considerable heterogeneity in religious identities in India and to a lesser extent in Bangladesh, Nepal, and Sri Lanka. According to some research, family religious identity affects educational outcomes. In India, Kingdon (2005) found lower enrolment rates among Muslim boys and girls, and Borooah and Iyer (2005) noted that Muslim families in northern India reject education because they perceive the curriculum to be overtly Hindu. The high-level Sachar Committee (2006) report on the social, economic and educational status of India's Muslim community analysed time trends and noted that "despite overall improvement in educational status, the rate of progress has been the slowest for Muslims". In contrast, in rural Bangladesh, Shafiq (2007a) found no evidence that religion leads to differences in educational outcomes.

There is some evidence that family ethnicity and educational outcomes are associated in South Asia. In Sri Lanka, Aturupane et al. (2007) found that Tamils and Moors score lower on mathematics exams than non-Tamils. Our review of the literature indicates that most researchers opt to examine the region of residence, as a proxy for ethnicity, rather than focus specifically on family ethnicity.

The caste of a family is typically a predictor of educational outcomes in India and Nepal. Stash and Hannum (2001) and the World Bank (2007) showed that caste affects both selection into and attrition from primary school in Nepal and that the probability of school completion is significantly higher for children of the Hindu upper class than for middle-class Hindus, Hindu Dalits, religious minorities, and members of the Janajati-hill and Janajati-tarai groups. Also in Nepal, Prennushi (1999) found that the effect of caste varied with gender: Brahmin girls are more likely to enrol in school compared to members of the Chhetry and other ethnic groups; for boys these relationships are less strong but not entirely absent. In India a child, especially a girl, belonging to a traditionally disadvantaged scheduled caste or scheduled tribe is less likely to enrol in school (Govinda and Bandopadhyay 2008). However, recent research from India has indicated that after accounting extensively for other family background factors such as poverty, parental education, and household structure, at least some of the "scheduled caste" disadvantage was no longer evident (Chudgar 2009; Goyal 2009; Kingdon 2005; UIS [UNESCO Institute for Statistics] 2005). Stash and Hannum (2001) also found an interaction between caste and gender but they argue that higher positions in the caste hierarchy did not ensure decreased gender discrimination. In short, caste seems to have a stronger effect on girls than boys, producing weaker educational outcomes for girls in underprivileged castes.

The community

Economic characteristics of the community

The economic characteristics of a community include its levels of industrialization, its infrastructure, the potential to earn money in the labour market, and local schooling costs in the community. These factors interact with children's schooling outcomes in a variety of ways.

Industrialization, child labour, and the opportunity cost of schooling

As can be inferred from our review so far, much of the existing research on South Asian educational outcomes focuses on rural agricultural communities. The dependence on child labour and the low level of economic development in agriculture-based South Asian communities have frequently been cited as causing weak educational outcomes (Dar et al. 2002; Edmonds 2003, 2008). However, several studies on communities undergoing industrialization are revealing. For example, Kambhampati and Rajan (2006) and Swaminathan (1998) found that in certain Indian regions industrialization was accompanied by increased hiring of child labourers; presumably, the rigid and tiring nature of factory work worsened the educational outcomes for some children in those regions. But other evidence shows that industrialization and the accompanying rise in the amount that girls can earn can increase the family's preference for girls. For example, in Nepal, Koolwal (2007) reported that families in communities where child wage rates are higher have a stronger preference for girls.

A related economic aspect of the community is the availability of local opportunities to earn an income. Lack of such opportunities often leads families, especially poor and landless ones, to migrate. Such migrations can adversely affect the education of children by depriving them of a stable schooling environment; they often end up working in the informal sector of the community where the family resides temporarily (Govinda and Bandopadhyay 2008).

Availability of infrastructure and alternative schooling opportunities within the community

The nature of the infrastructure in a community also influences the decisions of families and schools. In rural Pakistan, Holmes (2003) and Alderman et al. (1996) found that the availability of sewage disposal (and therefore sanitation) affected family decisions about school enrolment. In rural India, Dréze and Kingdon (2003) found that the presence of a post office, piped water, and a village education committee are associated with better educational outcomes. The availability of credit markets has also been identified as a key community-level determinant of educational outcomes in South Asia. Without banks or other financial institutions, agricultural families in most rural communities cannot borrow money in the short term (usually from one crop cycle to another) against their future earnings; if they cannot compensate for low income during crises they may be forced to pull their children out of school.

Schools can also be considered a part of the community infrastructure. In many rural and urban slum areas of South Asia, no local schools are available and distant schools are not an option because of transportation costs and worries about safety (Borooah and Iyer 2005; Hazarika 2001); Afghanistan and Pakistan, for example, have struggled to meet international educational goals because of the lack of schools. But if schools are available within a community, the quality of the infrastructure and teachers are major concerns in South Asia (CAMPE 1999; PROBE Team 1999; Warwick and Reimers 1995). In Pakistan's Punjab district, Andrabi et al. (2008) found that teacher-student ratios in public schools typically exceed 35–1, with less than half of all students having desks. In India, Shariff (1999) and the World Bank (1997) documented the high prevalence of shared toilet facilities in schools and the lack of female teachers, both of which affect girls' educational outcomes. Similarly, Ahmed et al. (2007) discuss the lack of school resources and facilities in Bangladesh. In Bangladesh and India, Chaudhury et al. (2006) and Kremer et al. (2005) also found high levels of absenteeism among teachers and school administrators.

To tackle the issues of school availability and quality, some communities encourage non-governmental organizations and religious organizations to set up schools. The growth of low-cost private schools is a relatively new phenomenon (Andrabi et al. 2008). In Bangladesh, for example, BRAC schools educate a small share of rural children in areas without public schools (Nath 2002). Islamic schools *(madrasas)* have received considerable notoriety in policy circles but remain very minor providers of schooling; in Pakistan, for example, fewer than 1% of all enrolled children are in madrasas (Andrabi et al. 2006). In Pakistan, Cockcroft et al. (2009) found a slightly higher madrasa enrollment rate (2.9%) among children aged 5 to 9 on the basis of survey data from 53,960 households and 853 focus groups, with higher rates among urban and less educated households. Similarly, in India, Sachar (2006) estimated that 6.3% of all Muslim children study in any form of madrasa, with higher proportions in the north, in rural areas, and among males.

Rate of return to education within the community

A body of research on the rate of return to education (RORE), a term traditionally used by economists, attempts to understand family decisions about education in terms of the costs of education and the labour markets in the broader regional and national community (Becker 1981). In essence, the RORE framework considers the decision about education to be a decision about investment; the investment becomes more attractive when educated workers can earn more and when education is cheaper, in terms of both direct and indirect costs. When the RORE is negative, education is not an attractive investment for a family, and it may not enrol its children. Conversely, a positive RORE encourages a family to invest in education. While a positive RORE is necessary for a family to invest in education, it is not sufficient in itself. This is because a family may also want more from the RORE. They may want it to exceed the returns from other possible investments, such as farming or business equipment, and the interest rates on educational loans if it needs to borrow to finance education (Loury 1981); it must also exceed the family discount rate, which indicates its preference for current consumption over future consumption. If a RORE is lower than these alternative returns, interest rates, and discount rates, then the family may choose not to enrol its children in school.

Table 1 presents RORE estimates for South Asian countries and other world regions. It shows that in South Asia, investing in education is profitable for families, but less so than elsewhere in the world. The average RORE is 11.8% for primary education, 12.6% for secondary education, and 18.5% for higher education; these are substantially lower than RORE estimates from other developing regions, and slightly lower than the world RORE estimates. This suggests that, in local and national communities in South Asia, the monetary incentives are generally lower than they are in communities of other developing regions.

Table 1 Rates of return to education (RORE)

	Primary (vs. below primary)	Secondary (vs. primary)	Higher (vs. secondary)	Vocational (vs. secondary)
Bangladesh	4.1	4.0	12.8	–
India	7.9	13.8	11.7	14.9
Nepal	16.6	8.5	12.0	11.9
Pakistan	8.4	13.7	31.2	–
Sri Lanka	22.0	23.0	25.0	–
South Asia	11.8	12.6	18.5	–
Asia	20.0	15.8	18.2	–
Europe/Middle East/North Africa	13.8	15.8	18.8	–
Latin America/Caribbean	26.6	13.6	19.5	–
Sub-Saharan Africa	37.6	24.6	27.8	–
OECD	13.4	17.0	11.6	–
World	26.6	17.0	19.0	–

South Asia figure is calculated as the average for Bangladesh, India, Nepal, Sri Lanka. It excludes estimates for Afghanistan, Bhutan, and Maldives. A dash (–) indicates that estimates are unavailable

Sources: Psacharopoulos and Patrinos (2004), except for Bangladesh (Asadullah 2006), India (Duraisamy 2002), and Sri Lanka (Aturupane 1997)

In the agricultural, manufacturing, and services sectors, increased educational attainment generally pays off. The Nobel laureate Schultz (1975) wrote that educated agricultural workers are better at handling risk and technological change; since then, a large body of research has confirmed that primary education provides a large RORE in agriculture (Dhakal et al. 1987; Jamison and Moock 1984; Lockheed et al. 1980). In a study of rural India, however, Behrman et al. (1999) found a low RORE for secondary education in the agricultural sector. Typically, the RORE in the manufacturing and services sectors is larger than in the agricultural sector; Fafchamps and Quisumbing (1999) suggest that the higher RORE in non-agricultural sectors encourages rural Pakistani families to shift from farm work to off-farm work. With improvements in communications and transportation facilities, it is likely that a greater share of South Asian families in various communities will consider the RORE when making educational decisions for their children. In India, for example, Chamarbagwala (2008) and Kochar (2004) found evidence that the RORE in urban communities affects the decisions of rural families.

Considerations about RORE are often put forward as a key reason why families are reluctant to invest in girls' schooling. As discussed earlier, girls in South Asia have traditionally been restricted to work within the family; since such work contributes little money, families perceive that the RORE for girls is small. Even when families are willing to allow their girls to work in the local labour market, there have traditionally been few opportunities for educated women. In rural India, for example, Behrman et al. (1999) found that the RORE for women with secondary education is especially small because so few occupations require secondary education. However, the RORE for women in the region is steadily rising because of continuous improvements in women's labour market opportunities.

Across all levels of education, it remains unclear whether the RORE is greater for boys' education or girls' education; this is a particular concern for poor families, which must choose between educating their sons or their daughters. Since it is difficult to convince employers to increase the pay for women, some communities have improved the RORE for girls by reducing the direct costs of education for girls; for example, schools in Bangladesh frequently charge less to educate girls than boys (World Bank 2000). There is also evidence that the level of labour market discrimination for highly educated women is falling; in urban India, for example, Kingdon and Unni (2001) found that all else being equal, the RORE for higher education is comparable for men and women. In Pakistan, however, using recent, nationally representative household data Aslam (2009a) found that, while rates of returns to education may be higher for women, the overall labour market returns are still higher for men; this may in turn lead households to under-invest in the education of their daughters.

Caution is needed in using RORE estimates to understand family responses to community-level labour market earnings and educational costs. Data limitations prevent researchers from including the non-monetary benefits of education, such as better health and child-rearing skills (Bennell 1996). RORE studies from South Asia also do not distinguish the contributions of a person's natural ability from those of their schooling; that is, it is possible that workers earn more because of their natural ability than because of their schooling. In addition, a large share of the RORE studies from South Asia do not adequately value the earnings of those engaged in self-employment in farms and businesses because it is so difficult to determine each worker's contributions. Furthermore, RORE studies from South Asia typically do not account for the direct costs of schooling and foregone child labour earnings; as Shafiq (2007b) illustrates, incorporating both types of costs produces RORE estimates that are almost one-half of the estimates produced using

conventional methods. Finally, the RORE estimates for women suffer from severe selection bias because earnings data are available only for the small share of women who are engaged in wage work (Salmon 2002); by omitting the sample of women who work within the family farm or business, RORE estimates for women provide an incomplete perspective on labour market prospects.

Social and cultural characteristics of the community

A robust tradition in the literature acknowledges and directly addresses the importance of the context within which individuals or families are situated, for understanding and explaining the individual's or family's behaviour. Individual agency, background, and status are all important in deciding how one will interact with a given set of context variables. This recognition of interactions between the individual and the context marries the economic notion of a rational actor with the social notion that actors are governed by social norms.

Rao and Walton (2004) and Sen (2004) broadly promote a more holistic approach to explaining family actions. At the same time, these authors caution against overemphasizing the role of context because family-level variables are important in determining how the same context variables affect a certain family and child. Also, it is important to view the context as not just a set of binding constraints that necessarily affect an individual negatively.

Borooah and Iyer (2005) and Dréze and Kingdon (2003) note that, in India, family characteristics generally matter more than community characteristics in explaining educational outcomes. It must be noted, however, that one reason for the relatively weak influence of community-level variables in studies is the failure to factor in the hierarchical structure of data and to include a sufficient number of variables to account for community-level characteristics.

In general, studies in South Asia focus on the influence that social and cultural characteristics have on gender differences in educational outcomes. In a study of rural India, Chudgar (2008) found that district-level measures of women's agency (including indicators of women's literacy, higher education, exposure to the media, and autonomy in family decision making) are positively associated with girls' school enrolment; thus, she showed that two very similar families living in two different communities may have hugely different likelihoods of enrolling their children in school. Murthi et al. (1995) highlight the role of institutions related to women's agency in 296 districts in rural India; they found that indicators such as the rates of female literacy and female labour force participation rate point to better educational outcomes, especially for girls. Further, in an effort to explain the underrepresentation of girls in rural Indian schools, Chudgar (2006) showed that the agency of women at the community level is a stronger predictor of girls' educational outcomes than are community-level economic characteristics; this finding is consistent with the UNESCO (2003b) assertion that social and cultural considerations are important in influencing family decisions to educate girls.

Another community-level cultural characteristic that is associated with female educational outcomes is hypergamy: the practice of women marrying men who are more educated than they are (Chudgar 2008; Rose 2004). When this happens frequently, the existing educational level among the men in the community may become an invisible threshold that determines how much education a girl will get. Similarly, the community practice of dowry—the bride's family offering payment to the groom's family—is likely to restrict girls' educational attainment because a family may shift money away from a girl's

education to save for her dowry. Finally, some communities encourage patrilocal exogamy: sons remain close to their parental family and contribute to the family income, while daughters move in with their husband's family upon marriage. In communities where patrilocal exogamy is common, girls are likely to have weaker educational outcomes. So far, no quantitative studies have examined the influence that hypergamy, dowry, or patrilocal exogamy have on educational outcomes in South Asia.

Conclusions

This literature review presents several consistent findings about the influence of family and community characteristics on educational outcomes. Higher levels of parental education, higher family income, and higher rates of return to education are associated with better educational outcomes. So are being one of the later-born among one's siblings, and belonging to a smaller or nuclear family. Owning a farm or business generally has a positive effect on educational outcomes, but the children may have to combine schooling with working on the family asset. Even if all else is kept constant, families in South Asia are typically more reluctant to support girls' education, thereby depriving families and communities of the large benefits conferred by educated females (Schultz 2001). At the community level, industrialization may or may not improve educational outcomes because the accompanying opportunities for children to work for wages may conflict with their schooling. Finally, the availability and quality of schools in a community is critical in determining educational outcomes.

This review reveals several possibilities for further research. As discussed earlier, no quantitative research has been conducted on Afghanistan, Bhutan, Burma, or the Maldives. In addition, studies of South Asia have yet to identify how the behaviour of educated parents differs from that of less educated parents; studies from industrialized countries, for example, document the amount of time educated parents spend on helping with their children's homework (Nechyba et al. 1999). There is also minimal research on children who do not reside with their families or who do not have families, including orphans, street children, bonded child labourers, and other child labourers. Also sparse is South Asian research on urban communities, and the influence of community-level variables such as access to credit, along with the traditions of hypergamy, dowry, and patrilocal exogamy. Without more research on communities, it is also not possible to assess the relative contributions of the family and the community. Finally, as in much of the available research from industrialized countries (Epstein and Sanders 2000), quantitative researchers have yet to disentangle the complex interactions between family- and community-level characteristics, and how these characteristics interact with educational outcomes.

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Author Biographies

Amita Chudgar (India) is an assistant professor at Michigan State University. As an economist of education, her current research focuses on equity in educational access and achievement in the international comparative context.

M. Najeeb Shafiq (Bangladesh) is an assistant professor of Economics and Education at the University of Pittsburgh. He uses advanced quantitative methods to investigate the social benefits of education, child labour, educational gender gaps, and educational privatization in the Middle East, North Africa, South Asia, and the U.S.