

Stephan Klasen, a University of Göttingen economics professor, has a Ph.D. in economics from Harvard University. He was a staff member at the World Bank, a research fellow at King's College at Cambridge University in the United Kingdom, and a professor of economics at the University of Munich. His research is focused on gender and development with a particular emphasis on causes and consequences of gender bias in developing countries. He has advised numerous national and international donor organizations on economic policy issues, including the German Ministry for Development Co-Operation, the Organisation for Economic Cooperation and Development, the United Kingdom Department for International Development and the World Bank. A prodigious researcher and author, Stephan Klasen is considered a leading expert on gender and development.

Question: The Millennium Development Goal of gender parity in primary and secondary education is about to come due. As an economist, can you explain in lay person's terms, how failure to achieve this goal will affect development?

Stephan Klasen: *I think there are a few issues one should point out. Even before I directly answer the question, I think one should ask, "How has progress been and how has the development goal actually helped galvanize action in this direction?" I think it has helped galvanize quite a lot of action. Had one said 10 years ago, "This goal will be reached by the majority of developing countries," one would have said, "That's impossible." And it now looks like the vast majority of the developing countries are going to reach the goal this year of parity in primary and secondary enrolment. So I think quite a lot has been achieved.*

But there are those 35 to 45 countries that are unlikely to reach the goal. We are already in 2005. We will only know next year or the year after, when we have all the data in, which countries actually end up failing to meet that goal. And the question is, "What are the costs to them?" And here I want to distinguish between the social and welfare costs and the more narrow economic costs. If we start with the first one, those girls that won't be able to go to school are basically denied the fundamental right that has been recognized by the UN Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), which has been signed and ratified by nearly every country of the world. They are basically suffering from a particularly egregious form of discrimination. That is against our understanding of equity that should not be based on ascriptive things, such as your sex. And therefore there are major costs in terms of equity, major costs in terms of injustice to be borne by those who are suffering under the failure to reach that goal.

On the more economic side, we now have a very large body of literature that has documented empirically – and there's theoretical work to back this up – that female education has a particularly important role to play in promoting economic development in a broad sense. It does so directly by allowing educated females to become part of the work force, become part of the productive resource of the economy, to increase their productivity and contribute to economic growth. There are quite a number of studies that have shown that countries that have a large gender imbalance in their education have ended up growing slower than those countries that have gender balance in education, basically because those countries with a gender imbalance are not drawing on their best talents, but are neglecting one half of their population. Apart from this talent waste, in a sense, educated women tend to have children who are better educated, children who are healthier, and they tend to have fewer children, all three of which are factors that are important in their own right for reaching other Millennium Development Goals, but also for economic growth. So in a sense, these are self-reinforcing processes, and countries that are failing to meet those goals will not partake in those self-reinforcing processes and therefore are

suffering costs in terms of growth, health improvement, nutrition improvement, fertility reduction.

Q: In terms of the lower fertility rates, the lower mortality rates, how does that actually translate into increased economic productivity?

SK: *Well, basically we recognize that economic productivity depends on the quantity and quality of assets that are used in the production process. We have physical assets, such as machines, we have land as an asset, but it turns out that increasingly, more important in today's world are human assets. And human assets are both health and education, and innovation of people. If girls are poorly educated, they do worse in the creation of human assets for the next generation for several reasons. First, they tend to have larger families. As a result, they cannot invest as much in each child, because there's a tight budget constraint, and more children mean fewer resources per individual child. And they also have to be worried that some of the children will not survive, and they would be much more reluctant to invest. Thirdly, the health knowledge and the knowledge how to invest will be lower. If you have an educated woman, she's likely to have fewer children, thereby she is able to put more resources into each of them. That will lower their mortality rate. That will make it easier for them to be healthy, easier for them to be educated and therefore these children will have greater human assets, which will lead to higher productivity for the entire economy.*

Q: You said, "health knowledge." What do you mean by that?

SK: *Economists think of health as being a good that is produced within households. And you need some resources in order to produce health in your household. But you also need some knowledge about immunization practices, about hygiene practices, about feeding practices, about what is adequate nutrition. We find that among educated women, those types of health knowledge are considerably higher. They also have much higher awareness and knowledge of contraception.*

Q: In your 2004 paper, *The Cost of Missing the Millennium Development Goal of Equality*, you mentioned the diminishing returns for gender parity favoring boys, and I think that what you meant by that is that less qualified innately talented boys will be educated over talented girls. Is that accurate? If so, could you say more about that?

SK: *Those are actually two slightly separate arguments. But they both suggest that gender gaps in education are bad for society. Let me take the first argument. We basically think – and there's good empirical evidence for that – that there is a diminishing monetary return for education in general. That for the first year of education, let's say you get a 20 per cent increase in your lifetime income. For the second year, you get an additional 18 per cent increase in lifetime income. You earn more than with one year, but the additional increase keeps getting smaller. So that basically, if you go from 15 years to 16 years of education, the marginal (i.e. additional) year of education further increases your lifetime earnings or your lifetime well being, but it's much smaller than for the first few years.*

That's what economists call a 'stylized fact'. It's broadly true in most developing countries. Now, one would have to nuance the statement in various ways. It is indeed not true that the marginal return for every year's education goes down linearly. Sometimes there are jumps in the marginal returns. For example, if you have completed secondary education, then suddenly your returns jump quite a lot compared to if you drop out a year before. But broadly that is a trend that is true.

Now, if that's the case and you have two societies, one where boys and girls all get six years of education, and the other one where all boys get nine and all girls get three years of education – the average years of education of the two societies is six years. Where you have the gender gaps, the marginal increase in education that the boys have gotten in their ninth year of education is much smaller than what the girls would get if they would get a fourth year of education. That's the argument. If we then said, "Let's take the boys out of school from grades six to nine and instead put the girls in there from grades four to six," – now I'm not recommending we follow this policy, but as a thought experiment – then the benefit for the society would be positive, because the gains to the girls would be bigger than the losses to the boys. So that's the first argument.

The second argument is slightly different. Basically, we believe that talent is unequally distributed, that we have a distribution of talents that looks like a bell curve. There's no good empirical evidence that the curve differs in systematic ways between males and females. We would usually assume that the distribution is pretty similar for males and females – same mean and same spread. So once again, you have two societies. In one society, let's say the 50 per cent best-talented boys get educated and the 50 per cent best-talented girls get educated. In the other society, we take the 70 per cent best-talented boys and only the 30 per cent best-talented girls. Now, what we're doing therefore in that second society is we are scraping deeper on the bottom of the barrel of talent of the males than we are with the females. As a result, we have quite a lot of very talented females who are sitting at home and have taken in less talented males instead. The society that draws equally from both would make better use of their society's talents than the society that basically says, "Well we take the most talented boys, rather than the most talented people." In the end, the productivity of your human assets depends on the education that people have, but also on the talents that they have. And if you're not using the talents of girls by keeping them at home and not sending them to school, you are hurting yourself.

Q: In your article, *Low Schooling for Girls, Slower Growth for All*, you gave the number that there was a 0.4 to 0.9 point difference in annual per capita growth rates between East Asia and the regions of sub-Saharan Africa, South Asia and the Middle East. Based on the differences and gender gaps in education, could you explain in lay person's terms again, how you came to that conclusion?

SK: *The story is quite simple. We run what's called a 'cross country regression'. A cross country regression is a way to find factors that are correlated with economic growth. We have on the left-hand side of the equation the average annual per capita growth rate of 110 countries or so over the period 1960 to 1992. Then we have on the right-hand side all possible variables that could affect economic growth: the investment rate, the amount of the overall education, the population growth rate, and a few other variables that are typically used to try to explain*

economic growth and growth differences between countries. Apart from the average level of education, we also measure the gender gap in education as an additional variable that plays a role. We add a variable on the gender gap in education growth – initially in 1960 at the starting period, as well as how rapidly they've closed the gender gap in education. And it turns out both of these variables have significant effects. Meaning, the higher the female education relative to male, the lower the gender gap in 1960, the higher economic growth. And the faster the gender gap in education was closed, the higher was economic growth. That's what comes out of this regression.

And what you can do with that is say, "Let's look at how large was the gender gap in education in 1960 in East Asia and how large is it in sub-Saharan Africa? How fast did East Asia close it and how fast did sub-Saharan Africa close it?" You compare how these countries differ, both in initial conditions and in closing of this gender gap. And then you can multiply that difference with the coefficients from those regressions to then say, "How large is the impact of the difference in gender gap between those two regions on economic growth?" And it comes out to be 0.4 to 0.9 percentage points per year.

To put this into perspective, East Asia grew by 3.5 per cent per year faster, every year, than sub-Saharan Africa. It has become a lot richer since, as we all know. The gender gaps in education seem to account for somewhere between 15 and 25 per cent of that difference in the growth performance. The implicit argument we're saying is, "Had sub-Saharan Africa in 1960 adopted East Asia's gender gaps in education, which were much lower, and had it adopted East Asia's policy of closing the gender gap, which was much faster in East Asia than in sub-Saharan Africa, they would have grown by 0.4 to 0.9 per cent faster than they actually did and therefore the growth difference that they had would be much smaller." In that paper we find Africa grew an average 0.6 per cent per year per capita, so they would have added 0.4 to 0.9 percentage points on top of that.

Q: You've indicated that the projections for the number of countries that will meet gender parity in education goal are deceiving. Could you explain?

SK: *When you project the future you always have a lot of uncertainty. So, what we did was use the methodology that other institutions use as follows, "Let's see how these countries expanded education in the 1990s. Let's just assume that they will continue to expand education at the same pace into the future." We did that by sex – for male education and for female education. Now you have a few countries – I think Bangladesh is a dramatic example – where they just expanded female education at a very, very rapid pace in the 1990s, by 10 percentage points a year. In our assessment we let them continue to expand female education at this rate. Now, it's pretty unlikely that it could continue just going up like this. There are limits to that. At some point, all girls are in school. Sometimes it's really hard to get the hard-to-reach girls to go to school – those who are really remote or where the parents are not interested in education, or who live on the streets, etc. So the inherent assumption that was used in these projections is questionable.*

Today we know a little bit more because we have some more data on what happened up until at least 2002. So we can see how actually the story has changed. And it turns out that – even though the numbers we had were deceiving – actually a lot of countries are going to meet the

goal. I just checked recently on the list of countries that are likely to have made it and the list is impressively long, including lots of countries which one wouldn't have thought would be included, such as Bangladesh or China or even quite a large number of countries in sub-Saharan Africa, including Botswana, Lesotho, Tanzania, Uganda, and so on.

Q: When you still have 20 million people out of school in a country, gender parity could be equal number of children not in school.

SK: *That's right. One shouldn't look at this indicator in isolation. We found a few countries that are going to reach 'the goal' by taking boys out of school more rapidly than girls. There were a few countries, including some in Africa, where education is in a really serious crisis and where enrolment rates are dropping. Also some countries, like Iraq was in that category, prewar – I'm not sure what's happening there now – where actually male enrolment rates were dropping more rapidly than female enrolment rates, and they were reaching the goal of gender equity. Now that is obviously not in the spirit of MDG3. That obviously goes against the objectives of MDG2 education for all. Clearly this is a worry. One has to treat that with some caution.*

Q: When you're saying that the male enrolment rate is decreasing, is it that fewer males are enrolling initially or is it that boys are dropping out more, or both?

SK: *I think in the countries that are affected, both is happening. The education system is getting worse in terms of quality, in terms of acceptability. Households are getting poorer and so they're more reluctant to send children to school. So things are just going badly all around. I think there were a few war-torn African countries, but also countries with severe economic crises – I think in that paper we mentioned a few countries where this is exactly what's happening. Those countries, one should flag. These are not shining examples of countries meeting MDG3.*

Q: On a personal level, what brought you into the field of economics? Particularly, why does gender and development interest you?

SK: *I've been interested in development issues for a very long time. At a very early age, it must have been related to my father. My father was a politics teacher in high school and was very interested in issues of poverty and development. And so I was brought in closer to those issues, when I was 10-years-old, I was already part of church groups collecting money for some sort of development project. I've had a very early initiation into questions of development and poverty and at the same time, I think in high school, I became fascinated with economics as a tool of understanding development issues at a deeper level, and understanding the levers that affect development. I've been interested in inequality from various dimensions for a long time and gender inequality is one important dimension of inequality. I'm also working on other dimensions such as income inequality. I should pay some due to Amartya Sen who was my dissertation supervisor and who suggested I work on some specific issue of gender inequality – gender inequality and mortality, which was the topic of my dissertation. Then I branched out a little bit, looking at other aspects of gender inequality, particularly education and now I'm doing some work on gender inequality in employment and access to resources.*

Q: You're a professor, yes?

SK: *I am a professor, so most of the time I am here doing teaching and research. My main contribution to development is through my research activities. I do occasional work on research projects that are done by international organizations. For example, I am currently involved with the UNDP – we are looking at the way its doing gender-related development indicators – called the GDI (Gender-Related Development Index) and the GEM (Gender Empowerment Measure). I'm advising them on that. In Southern Africa, I have been working on a development project for some time, where I'm advising the World Bank team on a couple of issues. But my main comparative strength is being a researcher and a teacher on development issues. Part of my active involvement in development projects is to keep up my own education to make sure that I stay connected to the realities as they are in developing countries.*

Q: Do you think that donors understand the importance of the Education Millennium Development Goals?

SK: *Yes. I think that they certainly receive a lot of attention and quite a lot has happened to achieve progress here. On the resource side, quite a lot has been accumulated to support expansion of education. I think there are still problems. An inherent weakness of the Millennium Development Goal approach to things is that it is very much about quantitative targets that are not paying nearly enough attention to quality issues. So you can push up enrolment rates quite quickly, through various incentive measures, but that doesn't necessarily improve quality, and sometimes it may contribute to the deterioration of quality.*

I think we are still at a loss about what to do in the countries where the economic or political or military circumstances are very difficult to operate in. Because those are the countries that are really failing to meet the MDGs – all of them. We are still struggling to see what one can do to help in conflict and post-conflict situations and with countries that are in severe economic crisis. Committing enough resources to education has been, in a sense, a relatively easy sell to the international community, particularly girls' education. And I think we've seen tremendous progress. If one had said that countries like Bangladesh would have gender parity in education by 2005, even 10 years ago, one wouldn't have thought that was conceivable. They've done it.

Q: Bangladesh is often held up as an example to other countries.

SK: *That's right. I think they've done quite a bit – they've done remarkable things on gender issues more generally, not only in relationship to education. I'm thinking of the Grameen Bank, which gives micro credit to women mostly. They've done quite a lot to improve the health of women. And they have created a secondary schooling grant that only goes to girls to reduce the gender gap in schooling.*

Q: With the competing crises in the developing world, such as the HIV/AIDS pandemic, hunger, drought, armed conflict – what would you say to a donor who says we cannot afford to invest in girls' education?

SK: *Clearly, there are always tough choices to be made. If we can prioritize, girls' education is pretty far up the list, not only because it benefits the girls, but it actually benefits the society at*

large. Educating girls helps improve nutritional status, agricultural yield, health. So quite a few of the problems that are mentioned here as competing are actually partly solved by improving girls' education.

I think that the one thing that may be at least up there or above is peace. In countries where there isn't peace, it's very difficult to invest in any education. So I think to make any kind of concerted development effort happen, you need peace and security. That's actually something where the international community could do quite a lot more than they currently do. But barring that, I think as soon as you have peace, girls' education should be right up there with things like HIV/AIDS and hunger.

Q: Are you optimistic or pessimistic about the donor community responding adequately to girls' education financial needs? Or development in general?

SK: *On girls' education, I'm quite optimistic. I think that the donor community has in the last 10 years responded quite munificently. But I think that the bigger praise should go to the country governments that have done quite a lot to prioritize girls' education.*

Q: Countries receiving the aid?

SK: *Exactly. The developing countries themselves investing in and making female education a priority. I think they have done a tremendous job of trying to achieve that. We're currently in a rather uncertain era, because many big promises have been made on further expansion of education. We're not sure whether those financial promises will be kept at the moment. They may not be kept. So there is further room for action to make sure that the promises that were made will be kept. Where there are still significant gaps in education in general, in girls' education in particular, those countries could achieve it in the sense that they are at peace, that they have a functioning government that does want to promote education and female education. It would be unconscionable not to provide them with the support that they need. And I'm fairly optimistic that certainly on that issue, support will be coming, but it's too early to tell. This year has been full of promises and we're not sure yet whether the monies will come to back them up.*

Q: Is there anything that you would like to add?

SK: *My general sense of the MDG3 is that it shows actually the value of MDGs as a kind of focusing device of policy makers both in developing and in industrialized countries. Enunciating the Goal, especially on the importance of education, has actually had an impact. I think this is a positive example that the MDGs have made a difference.*