

**Global inequalities in girls and women's education: How can we measure progress?<sup>1</sup>**

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**Abstract**

*The informational base is one difficulty entailed in initiatives to advance global concerns with gender equality in education .. This paper critically reviews existing measures of gender equality in education used by international agencies and governments and outlines alternative forms of measurement that seem better able to capture aspirations of Education for All.*

*The Gender Equality in Education Index (GEEI), developed through critical engagement with the capability approach, is presented and its use by a range of international organisations since 2004 described. . Problems with data sources, aggregation and ranking are explored. Drawing on district level data from South Africa the paper contrasts analysis based on GEEI like measures with EMIS data.*

*While the GEEI may be useful in considering how to distribute resources for gender equality in education it does not give a very full picture of how empowerment does or does not work within the education system. A Gender Empowerment Measure in Education is suggested but the importance of keeping work on social indicators in close dialogue with the findings from qualitative and critical research is stressed.*

**Introduction**

More than 1 billion adults and children worldwide have little or no schooling. Women and girls comprise nearly two thirds of this number<sup>2</sup>. Gender inequalities are a feature of the processes that keep such large numbers from school, but are also implicated in the institutions that deliver education and in limitations on change. Schools themselves are marked by gendered processes which affect curriculum pedagogy, management and governance. Education departments and NGOs involved in the delivery of education often draw on gendered discourses, implement rules based on gendered assumptions and sanction particular practices which make change for gender equality complex. There is widespread disquiet and distress at the extent and depth of gender inequality in education worldwide, but there is no clear consensus on

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<sup>1</sup> This paper utilises research assembled through participation in a number of research and consultancy projects. Research conducted as part of consultancies commissioned by the Commonwealth Secretariat (2004), UNESCO Bangkok (2004), UNECEF Regional Office for South Asia (2005) form a major part of the argument. I am grateful to all three bodies for permission draw on this work in developing this paper.. The consultancy reports are published in Unterhalter, Rajagoplan and Challender (2004), Unterhalter, Kioko-Echessa, Pattman et al (2005), and Unterhalter (2006a) The first phase of the *Beyond Access* project, a partnership to develop and circulate knowledge about the MDGs, was funded by DFID. Beyond Access has been a key setting in which many of the ideas discussed in this paper developed. I thus gratefully acknowledge the contribution of work in the project to the development of this paper. The paper also draws on some field data collected as part of a higher education link with the Education Department at the University of Kwazulu Natal funded by the British Council. I am grateful to the colleagues who worked with me during the link (lebo Moletsane, Deevia Bhana, Rob Morrell, Debbie Epstein and Jenni Karlsson for help in collecting and interpreting this material. Lastly, thanks to Jacob Steel for research assistance with the census data.

<sup>2</sup> Figures calculated from UNESCO, 2005

how to bring about change. One problem in seeking to understand the nature of gender inequalities in schooling worldwide is the informational base and limitations in the indicators used in monitoring, planning, and policy formulation. . This paper explores how a limited meaning of gender in the existing social indicators has contributed to social policy addressing only single dimensions of the complexity of gendered inequalities in education. It then proceeds to look at alternative means of conceptualising gender and considers how better social indicators might help build a richer informational base to guide a more appropriate policy.

### **Monitoring gender in the EFA movement**

The Jomtien conference on Education for All (EFA) in 1990, a gathering of 155 governments, 20 IGOs, and 150 NGOs, which adopted the World Declaration on Education for All, began to put in place global collaborations to achieve EFA. Gender was one component of this work, but generally in the programmes established in response to Jomtien, gender tended to be understood as a noun, and generally taken to mean girls. (Unterhalter, 2007 forthcoming) Thus, in the social indicators that developed to monitor EFA, what appeared important was counting the numbers of girls in and out of school, and their rate of progression through school.

However, it became evident how weak the informational base for the loose coalition of governments, Inter-Government Organisations, NGOs and academics who comprised the EFA movement was. In an influential intervention Stephen Heyneman (1997) castigated government officials and the staff of multilateral institutions on weak data gathering machinery through which progress could be tracked. Thereafter countries began to strengthen their EMIS (education management information system) and multilateral organizations associated with the UN (UNICEF, UNESCO and UNDP) began to produce annual analyses of the data produced by governments and reviewed through the UN Institute for Statistics. From the late 1990s, gender-disaggregated data have become available on enrolment and progression through school, with data often available by district. While there are limitations with this data, as discussed below, the achievement of many countries in putting in place systems to collect gender disaggregated data down to local community level should not be underestimated.

The reports of UN agencies, most notably UNDP's *Human Development Reports*, UNICEF's *State of the World's Children* and UNESCO's *Global Monitoring Report*, go some way to providing the information from which national progress on EFA could be assessed, but there are a number of serious limitations with this data. Amongst these are problems about what it measures, the quality of data, and how accountable these measures and data are. Yet, despite these problems, when the indicators for the Millennium Development Goals (MDGs) were set, two very limited indicators of gender and schooling were selected – gender parity in education (that is equal numbers of boys and girls in any phase of education) was one of the indicators associated with MDG3 on women's empowerment. The indicators selected for MDG 2 on universal primary education (UPE) concerned all girls and boys enrolling in primary school and completing grade 5.

The complex processes that take place in education, particularly with regard to its gender dynamics are not particularly amenable to analysis through 'simple' measures based on inputs and outputs to the system, such as enrolment rates and achievements in examinations. However, gross and net enrolment rates, intake rates retention over five years in primary school, and transfer to secondary school have become the standard measures of efficiency used in international statistics. This form of monitoring carries within it the implication that gender equality in education is only

about numbers of girls, access and efficiency. The data thus suggests a meaning of gender as 'girls' or 'boys'. The extensive theoretical debates about sex and gender that have been influential in sociology, philosophy, politics and economics are largely ignored by this meaning.

The gender-related EFA index (GEI), developed by UNESCO for use in its Global Monitoring Reports (GMR) was an attempt to indicate the extent to which boys and girls were equally present at different levels in the education system (primary, secondary, and adult education). However, a country could have a GEI of 1, indicating complete equality between boys and girls, but still have low rates of access, retention, and achievement for girls and boys. For example, in 2003 Myanmar had a GEI of 0.949, with only 84 per cent primary NER, and Kuwait had a GEI of 0.966 with a primary NER of 83 per cent (UNESCO, 2003, 288-9). Gender parity, another term for what the GEI measures, on its own can not tell much about gender equality in relation to accessing education, progressing through school, and living in a gender-equitable society after school. Nonetheless gender parity is the measure used to monitor gender equality in education and, on the basis of this women's empowerment, in the Millennium Development Goals (MDGs). (Millennium Project, 2000)

In an attempt to bring together information on access, quality, and the gender gap, UNESCO developed the Education Development Index (EDI) from 2003 (UNESCO, 2003, 284-292). The EDI constituents and related indicators were:

- universal primary education: measured through net enrolment ratio;
- adult literacy: measured through the literacy rate of the group aged 15 and over;
- gender: gender-specific EFA index (GEI, the arithmetical mean of the Gender Parity Indices for the primary and secondary gross enrolment ratios and the adult literacy rate);
- progression: survival rate to grade 5.

There are several problems with the EDI with regard to gender. Firstly, its main gender component, the GEI, was concerned with parity, which gave insufficient insight into context. Men and women, or girls and boys, may have gender parity in literacy or access to schooling but have low levels of participation. Secondly, the EDI did not take account of gender in children's survival in schooling. It primarily considers gender in relation to access and not achievement. Thirdly the EDI weights each of its four components equally. Thus enrolments, and gender parity in enrolments are weighted equally with achievements. However, research in many countries shows that enrolling children in school is only the first hurdle. Ensuring attendance and completion are much harder tasks, and this has particularly been the case for girls, whose progress has been constrained by many factors linked to safety, hygiene, nutrition, and family responsibilities (Watkins 2000; Tomasevski 2004; Aikman and Unterhalter, 2005). Weighting access as equivalent to achievement underestimated the EFA challenge that confronts governments, but it is particularly serious because of its failure to adequately assess gender-related aspects of schooling and its consequences .

The GEI and the EDI gel well with instrumental arguments for gender and schooling which suggest that the importance of the education of girls and women is for economic growth, reduced fertility, or cultural and political solidarity. Interventionist approaches to global social justice, that is approaches which see the 'problem' of gender as a problem of girls or boys out of school, requiring only simple interventions

by governments or IGOs, say stipends, toilets, or free textbooks (Unterhalter, 2007 forthcoming) . However they provide very little insight into the multidimensionality of gender inequalities associated with schooling and poverty. Some aspects of this concern the ways in which schools and education departments work as gendered sites of power enhancing access to decision-making and resources for some groups and excluding or exploiting others. Gender inequality is also associated with the ways in which some forms of knowledge are marginalised, some forms of practice are rendered invisible or deviant, and the ways in which insufficient attention is given to realising gender equality enshrined in legal rights or articulated in wider understandings of how gender constrains opportunities ( Unterhalter, 2005; Skelton, Francis and Smulyan, 2006)

Monitoring, when utilized as a form of regulation and management of global social justice, has the potential for developing institutions to address gender, but it has not been used this way. Rather, monitoring has been used to locate gross insufficiencies, for example girls and boys with little or no education, in certain countries. These forms of monitoring have been little used to regulate the provision of schooling in more complex ways that attend to problems of distribution. For example in many countries girls are required to perform cleaning duties at school and other forms of housework at home. Inevitably this will mean they have less time to devote to their studies, but monitoring only attendance and progression through school is not acute enough to pick up that what these girls need is extra tuition or some concern with sharing responsibility for cleaning the school with boys. Generally statistics in many countries show girls drop out as they progress beyond primary school. But the indicators are not refined enough to pick up the gender inequalities that might be contributing to this. Issues about the gendered content or form of schooling may also have considerable bearing on parents' decisions to keep their daughters and sons in school and girls' and boys' experiences (Vavrus, 2003) But existing social indicators provide information only on numbers of teachers, their level of training and sometimes the ratio of books to learners gendered dimensions of learning and teaching, well captured by qualitative research, have not been matched with appropriate social indicators.. Thus, the approach to measurement has failed to support a platform for developing institutions to measure more complex dimensions of rights. The mechanism for monitoring have promoted a minimal interventionist objective to get girls into school and excluded consideration of wider meaning of gender, equality and education.

Over and above the reliance on an instrumentalist view of gender equality in education, this form of monitoring has a number of additional problems relating to data quality. EMIS is only as good as the relations of trust, truthfulness, and accuracy that underpin a system. In some contexts, local officials do not know the reasons why they collect data for EMIS. They may have difficulties in reaching areas that are socially or geographically distant to collect information; they may believe that underestimating or overestimating children on the school register may bring additional facilities to a locality. Carr Hill *et al.* (1999) emphasize the fragility of the data on which many national and international conclusions are based. District Household Surveys used in much development planning provide no data on people who do not live in households, because they are migrants or because they live on the street. Sampling which aims to include representatives of particular excluded groups, may result in the least excluded members of those groups being surveyed, because they are the easiest for data collection teams to contact. In nomadic regions of Northern Kenya , it has been reported that social surveys contact only the most easily accessible groups within these regions, and thus distort the conclusions that come to be drawn (Leggatt, 2005).

When participatory activities are held in villages to identify children who are not at school, more robust data are assembled. However, there are difficulties in translating local mobilising actions into official data on GER and NER, although in some countries this form of micro-planning is used by governments as well as NGOs. These activities were used with particular success in the very large school development programmed in India the District Primary Education Programme (DPEP) and subsequently in *Sarva Shiksha Abhiyan* (SSA). In Bangladesh in 1998 the Campaign for Mass Primary Education (CAMPE) ran large-scale surveys to assess which children were in school and their achievements in learning. Their conclusions offer a far less rosy picture of levels of access and achievement than official statistics (Chowdhury et al, 1999). With regard to gender, although these participatory processes use the same descriptive categories as EMIS and focus on gender as a noun, that is on girls and boys, but the *process* of data gathering has the potential to raise questions about the meaning of gender equity and equality and forms of engagement with state institutions particularly when used as part of widespread discussions on these issues (Ahmed and Chowdhury, 2005; Subrahmanian, 2005).

Accountability is a key problem associated with monitoring as an approach to regulation and institution building. There has been a tendency for governments engaged in collecting EMIS data to see lines of accountability running upward from district officials to national departments and then to international monitoring publications. On the whole, governments have not disseminated EMIS data generally, and data on gender in particular, downwards so that national and regional patterns are discussed at village and district level. While this data may be available on web sites or in government publications in this form it is not accessible to district education officials, teachers, or school management committees.

However, some local dissemination has taken place. UNDP has worked to develop national UNDP offices and to publicize country based Human Development Reports. In some Poverty Reduction Strategy Processes (PRSPs), regulating access to aid, there are mechanisms for the discussion of EMIS data at local level. Some NGOs affiliated to the global advocacy network, the Global Campaign for Education (GCE), have used official data as part of their campaigning and advocacy work (Elimu Yetu, 2005). Some, like CAMPE have conducted their own studies to challenge official presentations. In much of this work gender categories have been taken from the official instruments. Thus what is monitored is the presence or absence of girls, not wider meanings of gender equality. Although UNDP's work on the GDI (gender development index) and the GEM (gender empowerment measure) suggest more complex meanings of gender, these have not been widely taken up and discussed in work on schooling. As a result, NGOs, although trying to use EMIS to enhance accountability, have tended to work with limited meanings of gender. These forms of accountability have not yet been able to engage the potential of monitoring in relation to the multidimensionality entailed by rights and capabilities. Nonetheless, the initiatives that focus on the accountability of official statistics point to the potential for global civil society to engage strategically with monitoring as a form of regulation. This yields opportunities to identify where interventions should take place and to build strategic alliances for global social justice.

The achievements of the forms of monitoring instituted from the late 1990s by governments, IGOs and NGOs has been to secure gender disaggregated information and to circulate this through global publications like the UNDP *Human Development Reports*, the UNESCO *Global Monitoring Reports*, national census reports and the

surveys and locally based participatory studies undertaken by NGOs. However, the difficulty with this form of monitoring is that as yet the means to understand gender in education in more complex and multidimensional forms that those of access and achievement have not been developed. Using this form of monitoring it can appear, as is the case in South Africa, that there are good levels of gender equality in an education system when qualitative research raises questions about this (Unterhalter, 2005a).

Existing monitoring methods, therefore, talk largely to an instrumental understanding of schooling satisfied by a commodity of a set number of years in school and the presence of girls in the system. They invite an interventionist approach to global social justice and suggest there is no further cause for concern if girls and boys are enrolled in school and achieving at equal levels. That there might be gender based violence in school, racial discrimination, failure to flourish or a dislocation between school and lives of value is not signalled by this approach to monitoring. It thus fails to affirm aspects of the intrinsic value of education except insofar as this may be minimally guaranteed by legal instruments. When this approach to monitoring is used in conjunction with processes of building civil society and enhancing democratic participation, however, it can stimulate discussion and alert people to hidden dimensions of their society. But it is often used as a form of counting by officials who are not aware of its significance and disengaged from any democratising project (Page, 2005). It is evident that forms of monitoring that mesh with descriptive and unidimensional meanings of gender, for example by concentrating on counting girls, evade the issues suggested by thinking about women's rights and global social justice. A complex meaning of rights and gender equality calls out for an approach to global monitoring to manage development that has some semblance of this multidimensionality.

### **Rights and capabilities**

Critiques of a too tight connection between education and economic growth led to the emergence of the rights based approach to policy development. This turn in education coincided with a largely tactical move by activists in the women's movement to utilise the language of rights to gain access to international policy forums (Cook, 1993). In the rights-based approach, gender equality was one dimension of the universalism that underpinned the moral and legal basis of rights. Rights apply to everyone either as an attribute of being human or because legal instruments dictate that they do. However, monitoring gender, rights and education in the work of UNESCO and UNICEF has generally not looked very different to monitoring access because of a utilitarian calculus linked to human capital theory. Gender monitoring systems that have sought to develop indicators for rights have mainly concentrated on gender budgeting as a means to make governments accountable for the money they spend on education and its gender implications (Beyond Access, 2005).

The capability approach is a general normative and evaluative framework that seeks to provide some insight into the nature of the moral obligations that underpin rights and some practical applications of how evaluations that draw on a different metric for social justice can be effected (Robeyns, 2004; Robeyns, 2005). Drawing on the capability approach Sen argues for the intrinsic importance of gender equality in education, firstly because it helps establish conditions in which a wider capability set is available to girls and boys, secondly because it alerts us to differential conversion processes linked to gender and other social divisions with regard to how resources are utilized to establish the capability set; and thirdly because of the importance of gender equality in basic education in preventing human insecurity and establishing

conditions for capabilities and freedoms. His arguments are thus concerned with gender equality, education and opportunities, and not simply with particular outcomes linked to education. In this, there is a key difference with human capital theory concerned with gender equality in education yielding specific rates of return, but with no concern with a wider concept of freedom. There is also a difference with the approach to gender equality in education linked in the libertarian tradition to rights which are morally 'self evident' and not linked to other processes of social transformation or justice. I draw out below the ways in which Sen sees rights and capabilities as connected but separate.

Sen's focus on gendered processes constraining and enlarging capabilities in relation to education has similarities and differences with Nussbaum's analysis. Nussbaum's argument for the intrinsic importance of gender equality in education is opportunity based, like Sen's, but has elements of an outcome oriented approach. However, her understanding of outcomes is different from that which emphasises social benefits as de-emphasises the individual as in human capital theory. Her argument is that when establishing or evaluating social and political institutions their structure should be chosen with a view to promoting the threshold level of capabilities on her list. Gender equality in education is implicit in many of the capabilities on the list and thus forms part of the intrinsic threshold for justice she advocates (Nussbaum, 2000). In specific work on gender equality in education Nussbaum has argued that education is key to women 'making progress on other problems in their lives' (Nussbaum, 2004, 319-320). In this work she enjoins governments to make women's education a higher priority, and calls on governments in rich and poor countries, corporations and citizens to devote more resources to it. Her article is a critique of the position that the demand for literacy for women is Western and undermines local forms of 'wisdom'. Nussbaum argues instead that literacy secures the possibility of work and movement outside the home, affords women opportunities to meet with others and develop networks of solidarity, and enhances access to the political and legal process locally, nationally and internationally. She also asserts the importance of learning for women involved in physical labour in cultivating 'mental space' and helping draw out the value 'of their own humanity' and capacities to question and inquire (Nussbaum, 2004, 335-6).

The capability approach, Nussbaum argues, illuminates how actions need to be guided both by respect for the dignity of all humans (whether educated or not) and concern with how to attend to conditions that mar the chances of individuals, for example through lack of access to education which harms that dignity (Nussbaum, 2004, 357). Nussbaum is here concerned with women and their capabilities and not with how gender equality can open a wider capability set, as Sen is. She is less interested in gender (as a verb or adjective) and conversion, and more interested in gender as a noun and women denied full opportunities or capabilities. Elsewhere, Nussbaum differentiates the demand for women's education based in capabilities from that based in rights, because she sees rights overly concerned with aspects of negative freedoms and thus insufficient to take forward the strong forms of provision nationally and internationally she associates with advancing women's education globally (Nussbaum, 2005.)

Sen (1997) has outlined how human capital and human capability are inter-related. The concept of human capital, he writes, with its stress on knowledge, skills and effort suggests how these can be converted into valued personal or economic functionings. But he draws out how the notion of human capability is wider, entailing not only a growth in productivity but an enlargement of wider freedoms. The instrumental importance associated with human capital might provide an analysis of what gender equality in education can achieve, for example that it enhances economic growth or national status, but it cannot explain why gender equality in

education might be intrinsically important as the capability approach suggests because it expands 'human freedom to live the kind of lives that people have reason to value' (Sen, 1997, 1959). This notion makes the importance of gender equality in education go considerable beyond its instrumental importance. Sen describes here policy directions linked to looking at human capabilities rather than human capital. These are concerned with social changes, not simply economic changes. Adapting these with regard to human capabilities, the implication is that policy makers and practitioners should take account of how gender equality in education is relevant to the well-being and freedoms of people. Instituting this will influence economic production and raise questions about the indirect role of gender equality in education on social change.

The capability approach to the intrinsic importance of gender equality in education differs both from the instrumentalism associated with human capital theory and basic needs and from the universalism associated with the rights based approach. In human capital theory gender equality in education was efficient because it was seen to maximize a household or a nation's earning over several generations. For the capability approach this efficiency is not the reason gender equality in education is important. It is important because it widens opportunities enables the realisation of other capabilities and alerts us to human difference. Interpretations of basic needs came to associate the satisfaction of basic needs with the provision of a 'basic' commodity – commonly viewed as five years in school. The capability approach is more attuned to human diversity and it would be impossible to generalize that all capabilities could be addressed by a single form of school provision for girls and boys.

In the rights-based approach, gender equality was one dimension of the universalism that underpinned the moral and legal basis of rights. Rights apply to everyone either as an attribute of being human or because legal instruments dictate that they do. Nussbaum shares some of this universalism, although her capabilities express positive rather than negative freedoms including gender equality in education. Sen's version of the capability approach stresses the importance of establishing the conditions for capabilities as reasoned actions. Gender equality in education is not dictated morally or legally, but is a necessary condition to allow reflection on capabilities, the conversion of resources into capabilities for differently situated people and to enable the development of further capabilities. Thus, gender equality in education is part of the processes, the dialogues and the deliberation that underpin rights. What the rights-based approach dictates from assumptions about what is good or laid down in lawlike texts, the capability approach opens up to reasoned actions that take account of diversity.

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In the following sections I explore how utilising insights from the capability approach concerning how gender equality links to reflection on capabilities, conversion of resources into valued outcomes, and the development of further capabilities can be

utilised in designing social indicators for gender equality in education that highlight richer meanings of gender, equality and education.

## The GEEI

The limitations inherent in the forms of monitoring used to assess global inequalities in girls' and women's education, prompted a discussion within the *Beyond Access* project of alternative ways to monitor gender equality in education<sup>3</sup>. It was apparent, for example, how much monitoring enrolment and progression appeared to drive the policy on gender and schooling, rather than the other way round. *Beyond Access* worked to develop some alternative measures that engaged more fully with gender equality understood in terms of rights and capabilities. Initial conceptual work illuminated some of the key dimensions entailed in a richer measure of education equality that would take to some of the complexities of distribution beyond concerns for 'efficiency' (Unterhalter and Brighouse, 2003; 2007 forthcoming). Subsequent work attempted to put some of these ideas into practice developing a number, termed the GEEI (Gender Equality in Education Index) that could be derived from existing data sources and used in monitoring progress on gender equality in education in particular countries. Each country or region could have a GEEI calculated and increases and decreases in GEEI could be tracked over time in ways that were similar to those utilized by the Human Development Reports and UNESCO's GMR (Unterhalter, Challender and Rajagopalan, 2005).

But there were reservations within the project on what the GEEI was. Could a GEEI express a richer notion of gender equality in education than that entailed by counting girls' and boys' enrolment or progression. GEEI tables would represent the interrelationship between countries or regions as competitive creating a culture of winners and losers. The ranking of countries when the HDI is published is often accompanied by newspaper reports of 'We are the best'. This is quite at odds with notions of cosmopolitanism concerned with linkages between countries and their need of each other which was a key dimension of how the project worked. Utilising any form of measurement in this field relies on an arbitrary board of scorers, who usually have little experience of delivery, to judge performance. Establishing a numerical measure of performance tends to downplay the processes of working towards achievement suggesting the steps on the way to a particular score are not important, it is only achieving the score that is valuable. These were compelling reasons for *Beyond Access* not to proceed with work on a quantitative measure of gender equality in education. However, alongside these arguments it was also important to confront the absence of any way of tracking progress on gender equality in education through ideas located in rights and capabilities and not just a limited concept of gender as girls or boys. The development of the GEEI was therefore partly an attempt to address the distributional question and issues of equalities in terms that went beyond access to school. The rationale was based on the view that it was important to work strategically to develop a methodology for measurement of a problem of global significance. The benefits of developing a somewhat better measure were seen to mitigate to some degree the negative dimensions associated with measuring performance (Unterhalter 2005b; Unterhalter, 2005c). If *Beyond*

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<sup>3</sup> The *Beyond Access: Gender, education and development* project ran from 2003-2006 as a partnership between Oxfam, Institute of Education, University of London, and DFID to produce and circulate knowledge about MDG 2 and MDG 3. It is continuing from 2006 as a partnership between Oxfam and the Institute of Education to publish material for policy makers, researchers and practitioners on gender, education and development. I have worked with Sheila Aikman of Oxfam as joint co-ordinator of the project.

Access could utilize the GEEI as a means to engage in dialogue with governments, IGOs and civil society while keeping open the tentativeness of the measure and the need to use it in conjunction with other forms of quantitative and qualitative research, it seemed that it might be useful as a form of interactive global social justice.

The GEEI has been developed to look at girls' access, retention and quality of life through learning in broader ways than heretofore . (For full information on calculations see Appendix 1.) We are looking at not only numbers of girls who attend and remain in primary school, but also whether those girls are able to translate that attendance and retention into future schooling at a secondary level and healthy lives where they earn a reasonable income. Four widely used measures have been used to develop the GEEI. These measures are:

- girls' net attendance rate at primary school
- girls' survival rate over 5 years in primary schooling
- girls' secondary Net Enrolment Ration (NER)
- a country's gender development index (GDI)

These measures were selected because they point to four areas that are important with regard to gender equity and girls' education: access into primary schooling (net attendance rate) derived from household surveys, retention in primary schooling (survival rates), potential of the education system to generate teachers, social development workers and managers with some concerns with gender equality (girls' secondary NER), and the possibilities for women to survive and flourish as adults (GDI). We are aware of the considerable difficulties in using NER because of the inadequacy of birth registration information. We are also aware that retention in the last years of primary school is probably more important than the first 5 years, because this is when there is a higher rate of girls' drop out in Africa, but there is not countrywide comparable data on retention at the level. However these, like all the other measures in the GEEI, are a proxy and possibly there are better proxies for this available. The Gender Empowerment Measure (GEM) would have been a stronger indicator of gender equity than the GDI, but the GEM has not been calculated for most countries in Africa; therefore the GDI was used.

The measures were weighted , unlike those in the UNESCO Global Monitoring report Education Development Index. While these weightings are open to the accusation of arbitrariness, we believe that a weighted measure better expresses the difficulties countries face in delivering on the MDGs than an unweighted measure which suggests all processes are more or less the same in importance. While enrolling children in school is one challenge, keeping them there and ensuring they learn is as important as enrolment and attendance, while progress to secondary school is an indicator both of success at the primary level and potential to contribute to advancing gender equality in the future, Levels of gender inequality in a society point to difficulties for women in realising some of the benefits of their education. The weightings are as follows to achieve a percentage:

- Girls' primary net attendance x 1.25
- Girls' survival through five years of primary school x 2.5
- Girls' net enrolment rate at secondary school x 1.75
- A country's GDI x 2.5

:Thus primary attendance was only half as important as survival through 5 years of primary schooling and secondary NER somewhat more important than primary attendance, while the health and wealth dimensions of the society that the GDI points

to was considered twice as important as primary attendance. The data for the GEEI has been largely based on government data collected by the UNESCO Institute for Statistics for the EFA Global Monitoring Reports and earlier UNESCO reports, the UNICEF report on the State of the World's Children, countries' own EFA assessments and the Human Development report (UNESCO, 2003; UNECEF, 2003; UNDP, 2004). The first GEEI calculations were undertaken as part of commissions from the Commonwealth Secretariat, UNESCO and UNICEF to highlight the importance of greater mobilisation in support of the MDGs (Unterhalter, Kioko-Echessa, Pattman et al, 2005; Unterhalter, Rajagopalan, Challender, 2005; Unterhalter and McCowan, 2005). Subsequently the measure was used by ASPBAE and Oxfam as part of campaign documents to report progress on the delivery of EFA (ASPBAE, 2005; Oxfam, 2005). To date, however, the GEEI does not appear to have been used as a monitoring mechanism beyond its initial concern with dialogue, discussion and the capability approach. But the fluid processes associated with the forms of global social justice associated with NGO campaigns mean that there is no in built mechanism that means that the GEEI may not be used as a crude form of performance management, very different from the concerns which guided its design. The strength of the GEEI is that it goes a small way beyond the instrumental assumptions about monitoring associated with existing approaches. Its weaknesses are that it is not able to provide an approach to monitoring empowerment more fully..

### What the GEEI shows: Africa and South Asia

Detailed calculations of changes in GEEI at country level in Commonwealth countries Africa and South Asia have been made.

Table 1 Changes in GEEI for Commonwealth countries in Africa, 1993-2003

| Country      | GEEI 1990 | Rank | GEEI 2000 % | Rank | Percentage increase/decrease 1993-2003 |
|--------------|-----------|------|-------------|------|--|
| Botswana     | 73        | 2    | 78          | 2    | 7                                      |
| Cameroon     | 33        | 11   | 15          | 14   | -55                                    |
| Gambia       | n.a       |      | n.a         |      |  |
| Ghana        | 34        | 10   | 39          | 8    | 15                                     |
| Kenya        | 36        | 9    | 26          | 10   | -28                                    |
| Lesotho      | 37        | 8    | 42          | 7    | 14                                     |
| Malawi       | 20        | 15   | 26          | 10   | 30                                     |
| Mauritius    | 89        | 1    | 81          | 1    | -9                                     |
| Mozambique   | 20        | 15   | 20          | 12   | 0                                      |
| Namibia      | 62        | 6    | 72          | 3    | 16                                     |
| Nigeria      | 26        | 13   | 20          | 12   | -23                                    |
| Seychelles   | n/a       |      | N/a         |      |  |
| Sierra Leone | n/a       |      | N/a         |      |  |
| South Africa | 64        | 5    | 66          | 4    | 3                                      |
| Swaziland    | 68        | 4    | 60          | 5    | -11                                    |
| Tanzania     | 33        | 11   | 39          | 8    | 16                                     |
| Uganda       | 24        | 14   | 54          | 6    | 125                                    |
| Zambia       | 42        | 7    | 36          | 9    | -14                                    |
| Zimbabwe     | 73        | 2    | 42          | 7    | -42                                    |

Source: derived from calculations set out in Appendix 1 and Unterhalter, Challender and Rajagopalan , 2005, 73

A number of issues arise from a consideration of Table 1. Firstly the Commonwealth countries in Africa are clustered into two groups. In the early 1990s there was a small group of countries with relatively high GEEI (Mauritius Botswana, Namibia, South Africa, Swaziland and Zimbabwe) and GEEI increased a small amount over the decade for most in this group, although Mauritius and Swaziland experiences a small decline in GEEI and Zimbabwe a catastrophic fall. However the majority of countries have GEEI of less than 50% at the start of the decade and for some (Kenya, Nigeria, Zambia, Cameroon) this fell even further over 10 years.

South Africa, with the largest economy and the highest GDP per capita on the continent, is not the country at the top of the rank order. Countries which rank quite high on the UNESCO EFA Development Index in 2004 (Swaziland and Zimbabwe) do not rank so highly on the GEEI. While a number of countries in Southern and Central Africa have had longer histories of large numbers of girls in school than those of East and West Africa, in c. 2004 Uganda had a higher GEEI than a number of these countries and was also the country with the most spectacular increase in GEEI over the decade. Countries with long and devastating histories of war (eg. Mozambique,) are at or near the bottom of the GEEI ranking and have not made significant progress over the decade, highlighting how vast the task of taking account of gender equality in reconstruction is. Countries with long histories of democratic government are at the top (Botswana and Mauritius) and remain there, despite some decrease in GEEI for Mauritius and despite the harsh conditions of the decade marked by the effects of structural adjustment and the HIV/AIDS epidemic. Countries which, despite a history of war and a past marked by undemocratic government, have paid attention to reconstruction and governance also come near the top (Namibia, South Africa) and maintain a position in the top half of the table over the decade. Countries, for whom the decade was marked by periods of military rule or internal repression (Nigeria, Zimbabwe) have experienced significant falls in GEEI. Conversely, countries which have paid particular attention to policies to advance girls' enrolment and retention (Malawi and Uganda) have seen great gains in GEEI. (Unfortunately this data does not reflect the effects of the introduction of free education in Kenya in 2003). Countries with high levels of women's activism or concerns with gender equality, even if this is not necessarily in the sphere of education, like Uganda, Namibia, and South Africa, score higher than countries where there has been minimal mobilisation on these issues or where the mobilisation has been sporadic and generally 'top down'. Countries where economies have been squeezed by structural adjustment (Zambia, Zimbabwe, Kenya, Ghana and Tanzania) are much lower in GEEI than they might have been given the resource infrastructure they built up in the 1970s and 1980s. Countries with vast regional inequalities (Kenya, Ghana, Nigeria) have considerably lower GEEI than countries where regional inequalities are not an issue on this scale (Mauritius, Botswana, Namibia, Swaziland and Lesotho).

Table 2 provides GEEI calculations over the same decade for South Asia

**Table 2 GEEI for South Asia: c.1993–c.2001**

|                               | <b>GEEI c.1993</b> | <b>GEEI c.2001</b> | <b>Percentage Increase/Decrease</b> |
|-------------------------------|--------------------|--------------------|-------------------------------------|
| Sri Lanka                     | 58                 | 94                 | <b>38</b>                           |
| India                         | 28                 | 41                 | <b>46</b>                           |
| Bangladesh                    | 23                 | 48                 | <b>109</b>                          |
| Pakistan                      | 23                 | 20                 | <b>-13</b>                          |
| Nepal                         | 20                 | 36                 | <b>80</b>                           |
| Afghanistan, Bhutan, Maldives | n.a.               | n.a.               |                                     |

*Source:* Unterhalter, Rajagopalan and Challender 2005; Unterhalter and McCowan, 2005

The table shows that Sri Lanka made spectacular gains in GEEI in a decade of low economic growth. Bangladesh and Nepal made huge gains in GEEI, but remain under a score of 50. India, despite its large growth in GDP per capita, did not make gains in GEEI equivalent to Nepal or Bangladesh but nevertheless saw a large rise from a low base. Only in Pakistan is there a fall in GEEI over the decade, leaving it with the lowest level GEEI of the countries in the region for which there is data.

Table 3 looks at the percentage gain in GEEI of Commonwealth countries in Africa and countries in South Asia over the 1990s and shows the extent of the challenge they face in scaling up both from small scale good practice initiatives and in relation to the further effort that is needed to meet the MDGs by 2015. The assumption is that a GEEI of 95% points to achievements in MDG2 on education and MDG3 on women's empowerment. A GEEI of 95% is attained when a country has 90% or more net attendance rate for girls at primary school, a 90% survival rate of girls over 5 years in primary school, a secondary NER of 60% for girls, and a GDI of 0.800 equivalent to the gender equality levels in life expectancy, education and income a little higher than Mauritius, Trinidad or Mexico in 2000. Table 3 shows the percentage gain in GEEI needed by Commonwealth countries in Africa to achieve this. Table 4 shows this for selected countries in South Asia .

The graph in Figure 1 shows how steep the rise needs to be for countries who had GEEI over 60% in c. 2003, while the graph in Figure 2 looks at this for countries with GEEI under 60% in c.2003., which had made progress in GEEI between 1993 and 2003. Figure 3 graphs increases needed for countries whose GEEI fell or had had no increase between 1993 and 2003, resulting in a GEEI below 60%.

Table 3 Percentage increase in GEEI 1993-2003 in Commonwealth countries in Africa and percentage increases needed to reach a GEEI of 95% by 2015

|              | % increase GEEI 1993-2003 | % increase GEEI needed 2005-2015 to reach GEEI 95% |
|--------------|---------------------------|--|
| Mauritius    | -9                        | 17   |
| Botswana     | 7                         | 22   |
| Namibia      | 16                        | 32   |
| South Africa | 3                         | 44   |
| Swaziland    | -11                       | 58   |
| Uganda       | 125                       | 76   |
| Lesotho      | 14                        | 126  |
| Zimbabwe     | -42                       | 126  |
| Ghana        | 15                        | 144  |
| Tanzania     | 18                        | 144  |
| Zambia       | -14                       | 164  |
| Kenya        | -28                       | 265  |
| Malawi       | 30                        | 265  |
| Mozambique   | 0                         | 375  |
| Nigeria      | -23                       | 375  |
| Cameroon     | -55                       | 533  |

Derived from Table 1 and Unterhalter, Challender and Rajagopalan, 2005, 73

It is evident from the table and the graphs below how large the task confronting Commonwealth countries in Africa is with regard to achieving the limited dimensions of gender equality in education the GEEI measures. In South Asia, although generally there were not falls in GEEI over the 1990s, except in Pakistan, in all countries, except Sri Lanka the challenge of gender equality in education is enormous.

Table 4 GEEI scores South Asia c.1993–c.2001 and improvements needed to reach GEEI 95 by 2015

Comment [JE1]:

|                     | GEEI c.1993 (%) | GEEI c.2001 (%) | Percentage Improvement c.1993–c.2001 | Percentage Improvement needed to reach GEEI of 95 by 2015 |
|---------------------|-----------------|-----------------|--------------------------------------|---|
| Bangladesh          | 23              | 48              | 109                                  | 98  |
| India               | 28              | 41              | 46                                   | 132   |
| Nepal               | 20              | 36              | 80                                   | 164   |
| Pakistan            | 23              | 20              | -13                                  | 375   |
| Sri Lanka           | 68              | 94              | 38                                   | 1   |
| Maldives            | 85              | n.d.            |                                      |   |
| Afghanistan, Bhutan | n.d.            | n.d.            |                                      |   |

Source: Unterhalter and McCowan, 2005

Table 4 shows that despite the considerable increases in GEEI for virtually all countries in South Asia for which there is data, the percentage improvement required to reach a GEEI score of 95 per cent by 2015 is still enormous. Sri Lanka would be

required to sustain the gains made between 1993 and 2001. It already scores highly in the education areas of the GEEI, and it is only in the GDI that its score is not excellent. Bangladesh would have to maintain the levels of improvement in girls' education and women's lives put in place between 1993 and 2001. This would entail work in all the three education dimensions of the GEEI, where it currently at a mid level, and considerable improvement of its GDI, which points to quality in and equality through education. Nepal would have to double its rate of improvement in GEEI and India would need to treble this. Pakistan, which saw a fall in GEEI between 1993 and 2001, would need to give maximum momentum to this improvement with nearly 400 per cent improvement over the next decade.

## **INSERT GRAPHS HERE**

### **Using gender equality in education measures at district and local level in South Africa**

When countries collect district level data on school attendance, progression, secondary enrolment and the GDI it would be possible to do GEEI calculations at a district level. These would show, as the country level calculations indicate, where aspects of gender equality in and as a result of school have been attained and where more resources and policy attention would need to focus. The problem with calculating the GEEI at a district level, however, raise some issues familiar from debates about the UNDP human development indicators. With a large entity like a country it is assumed that the index is a 'rough indicator'. With a smaller entity like a district issues arise concerning accuracy and local level processes that affect data quality in a much sharper form. For example the GEEI uses the GDI to fill the field regarding what the outcomes of education are for women. The GDI calculates this over the lifetime of a woman using census data education statistics and economic surveys. It is indicative rather than definitive over a large population. However in a district, the assumption is that a measure like the GDI is definitive of a smaller population. Here data can be skewed by migration and problems with some populations who are hard to survey. Nonetheless these issues do not, in my view, prevent work on calculating district level GEEIs. However assembling the data for this is a considerable undertaking.

The capability approach thinking that has underpinned the development of the GEEI, however, suggests some further ways in which data routinely collected for a census may be re-analysed. to explore gender equality through schooling. Data drawn from the South African census was analysed by province in terms of weighted levels of schooling for men and women and weighted levels of earning. (Appendix 2) Table 5 shows the pattern of gender equality that emerged:

Table 5 Gender equality and inequality in levels of education and earning in South Africa by province

| Province          | Eastern Cape | Free State | Gauteng | KwaZulu-Natal | Limpopo | Mpumalanga | Northern Cape | North West | Western Cape |
|-------------------|--------------|------------|---------|---------------|---------|------------|---------------|------------|--------------|
| Women's education | 4.4          | 4.8        | 6.2     | 4.6           | 3.8     | 4.2        | 4.7           | 4.7        | 6.1          |
| Men's education   | 4.6          | 5.0        | 6.2     | 5.1           | 4.5     | 4.6        | 4.8           | 4.8        | 6.0          |
| Ratio             | 0.96         | 0.97       | 1.00    | 0.91          | 0.85    | 0.92       | 0.99          | 0.99       | 1.01         |
| Women's income    | 3.9          | 3.4        | 4.7     | 3.9           | 3.5     | 3.6        | 3.7           | 3.8        | 4.4          |
| Men's income      | 4.3          | 3.9        | 5.0     | 4.5           | 4.0     | 4.1        | 4.2           | 4.2        | 4.8          |
| Ratio             | 0.91         | 0.88       | 0.94    | 0.88          | 0.87    | 0.87       | 0.87          | 0.91       | 0.91         |
| Women's mean age  | 27.7         | 28.3       | 29.4    | 27.0          | 26.2    | 26.0       | 28.9          | 27.7       | 29.4         |
| Men's mean age    | 24.2         | 26.3       | 28.6    | 24.1          | 22.2    | 24.5       | 27.4          | 26.8       | 28.0         |
| Difference        | 3.5          | 1.9        | 0.8     | 2.8           | 4.0     | 1.6        | 1.5           | 0.9        | 1.4          |

## Graphs here

It can be seen that that inequality correlates with absolute value in both education and income. If there is plenty to go round then it's shared out evenly, but if not then women lose more. Generally the arguments made concerning the increasing exam success of girls and women in school indicates increasing levels of gender equality and suggests it is not important to pay attention to other areas where gender inequalities persist. Reading the data another way drawing on insights from the capability approach suggests the importance of developing policy to address how gender inequalities in education and earning intermesh and how restrictions on capabilities in the labour market may make it difficult for women to translate the valued capabilities from education into valued activities in work.

A second way in which approaches to measurement that draw on the capability approach can enrich indicators at a local level emerges from analysing the ways in which school budgets are allocated. Field work in a school in Durban in 2005 revealed a number of anomalies relating to a failure to take account of gendered processes in how resources might be converted into learning outcomes. South African schools are graded in terms of facilities and ranked in deciles. The best equipped schools in the most affluent areas of Durban are in the top decile. However, the school, in which I conducted fieldwork, in a former township, where many of the children are so poor they have to take the crusts of bread from the rubbish bins after a home economics lesson, is in the second highest decile, because it has running water, electricity and a rutted playing field for soccer is attached. There is nothing in the audit of schools relating to facilities and their classification that looks at gender issues or the socio-economic conditions of the children. Teachers talk of children coming to school hungry as there is no feeding scheme for secondary schools. They also raise how unpleasant the girls' lavatories are, how often they are blocked, how shameful it is for girls during their periods when they cannot use the lavatories. The playing fields are not routinely used by girls for the sports they play. At the level of facilities there are thus problems when neither class nor gender inequalities are audited. The social indicators used, based on resources, give an entirely misleading picture of how the children from this township can convert schooling into experiences of value. Strikingly the indicators pay no attention to different gendered conversion processes for girls and boys.

In addition the allocation of the staff establishment is done purely on a per capita basis and a seemingly arbitrary weighting. Posts are provisioned on the numbers of learners in each subject. Thus in a school, where the majority of children have Zulu as a first language, the same number of English teachers as Zulu teachers are allocated as the weighting for these posts (0.179) is the same. Moreover, despite many studies which confirm how mathematics is an area which many children, particularly those from historically disadvantaged schools find difficult, the weighting for staff allocation of these posts is the same as subjects which may be more accessible.

Table Post provisioning allocation for a Durban high school in selected subjects 2005

| Subject                 | Weight |
|-------------------------|--------|
| Biology                 | 0.179  |
| Economics               | 0.179  |
| Electrician work        | 0.425  |
| English second language | 0.179  |
| Geography               | 0.179  |
| Home economics          | 0.283  |
| Mathematics             | 0.179  |
| Physical science        | 0.213  |
| Welding                 | 0.272  |
| Zulu                    | 0.179  |

The approach to weighting pays no attention to children's particular learning needs. It also gives scant attention to gendered learning styles. In a number of studies of children's learning styles in the UK, South Africa, and Kenya, many girls appear to need more support with maths and boys with language. In South Africa there may well be gendered patterns in optional subject areas which would repay examination in allocating teachers. Drawing on the capability approach reveals how a single weighting will not fit all schools or all learner profiles. Assessing gender equality in relation to resource allocation is not a simple matter of matching ungendered numbers of learners with teachers but thinking more about conversion and better indicators that will show this.

### **Conclusion: Towards a Gender empowerment measure in education**

MDG 3 is about women's empowerment, yet the indicator associated with the target is gender parity in enrolments. This paper has shown how gender parity is an indicator of only one dimension of gender inequality, whether girls and boys are equally present in the system. Richer meanings of gender and more multifaceted approaches to equalities are inequalities point to the need for concern with structures of discrimination, exclusion and diverse processes of realising valued opportunities and outcomes. The multidimensionality of the capability approach provides some normative thinking to address this. The approaches to measuring gender equality in education presented here all emerge from thinking about how the capability approach might consider questions of redistribution, diversity and public deliberation. It is hoped that these processes could contribute to developing a gender empowerment measure in education that will better express the aspirations of the global women's movements and the EFA movement and allow for a recasting of the indicator for MDG3 so that it fully expresses the aspiration 'To promote gender equality and empower women'.

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Appendix 2

| Province | Eastern Cape | Free State | Gauteng | KwaZulu-Natal | Limpopo | Mpumalanga | Northern Cape | North West | Western Cape |
|----------|--------------|------------|---------|---------------|---------|------------|---------------|------------|--------------|
|----------|--------------|------------|---------|---------------|---------|------------|---------------|------------|--------------|

**Education**

Girls

|              |         |        |         |         |         |        |        |         |         |
|--------------|---------|--------|---------|---------|---------|--------|--------|---------|---------|
| No schooling | 462501  | 142071 | 258826  | 689354  | 565201  | 269800 | 46564  | 220665  | 82259   |
| Some primary | 341731  | 182350 | 315039  | 483175  | 191814  | 134882 | 52623  | 208734  | 214582  |
| Complete     |         |        |         |         |         |        |        |         |         |
| Primary      | 139775  | 66609  | 161314  | 159465  | 75936   | 50350  | 22212  | 72783   | 122025  |
| Some         |         |        |         |         |         |        |        |         |         |
| Secondary    | 552827  | 257952 | 1036065 | 767788  | 364162  | 227853 | 76890  | 311089  | 554182  |
| Grade 12/Std |         |        |         |         |         |        |        |         |         |
| 10           | 252468  | 139582 | 816464  | 518346  | 193888  | 153798 | 40072  | 195325  | 351093  |
| Higher       | 120247  | 51982  | 371636  | 185878  | 93500   | 50218  | 15058  | 66870   | 162418  |
| Total        | 1869549 | 840546 | 2959344 | 2804006 | 1484501 | 886901 | 253419 | 1075466 | 1486559 |

Boys

|              |        |        |         |        |        |        |       |        |        |
|--------------|--------|--------|---------|--------|--------|--------|-------|--------|--------|
| No schooling | 281199 | 109338 | 245793  | 410937 | 270284 | 186946 | 42116 | 203122 | 80523  |
| Some primary | 302190 | 158404 | 358244  | 365970 | 160623 | 129666 | 49310 | 217291 | 217116 |
| Complete     |        |        |         |        |        |        |       |        |        |
| Primary      | 100563 | 55735  | 167204  | 127604 | 61903  | 47980  | 18106 | 71397  | 102503 |
| Some         |        |        |         |        |        |        |       |        |        |
| Secondary    | 410601 | 224273 | 1019890 | 679886 | 289325 | 212787 | 68454 | 308174 | 483929 |
| Grade 12/Std |        |        |         |        |        |        |       |        |        |
| 10           | 206722 | 135261 | 862441  | 477270 | 157362 | 147692 | 40285 | 198482 | 314048 |
| Higher       | 84441  | 47063  | 385069  | 162866 | 77342  | 47445  | 14608 | 57979  | 156711 |

|       |         |        |         |         |         |        |        |         |         |
|-------|---------|--------|---------|---------|---------|--------|--------|---------|---------|
| Total | 1385716 | 730074 | 3038641 | 2224533 | 1016839 | 772516 | 232879 | 1056445 | 1354830 |
|-------|---------|--------|---------|---------|---------|--------|--------|---------|---------|

Weightings

|                  |    |
|------------------|----|
| No schooling     | 0  |
| Some primary     | 3  |
| Complete Primary | 5  |
| Some Secondary   | 6  |
| Grade 12/Std 10  | 8  |
| Higher           | 10 |

These are the relative values of a given level of educational achievement.  
They can be freely altered to give different weightings.

These are the weighted average levels of education achieved by males, females and total, by province.

| Province      | Eastern Cape | Free State | Gauteng | KwaZulu-Natal | Limpopo | Mpumalanga | Northern Cape | North West | Western Cape |
|---------------|--------------|------------|---------|---------------|---------|------------|---------------|------------|--------------|
| Women's score | 4.4          | 4.8        | 6.2     | 4.6           | 3.8     | 4.2        | 4.7           | 4.7        | 6.1          |
| Men's score   | 4.6          | 5.0        | 6.2     | 5.1           | 4.5     | 4.6        | 4.8           | 4.8        | 6.0          |
| Ratio         | 0.96         | 0.97       | 1.00    | 0.91          | 0.85    | 0.92       | 0.99          | 0.99       | 1.01         |

**Income**

| Province | Eastern Cape | Free State | Gauteng | KwaZulu-Natal | Limpopo | Mpumalanga | Northern Cape | North West | Western Cape |
|----------|--------------|------------|---------|---------------|---------|------------|---------------|------------|--------------|
|----------|--------------|------------|---------|---------------|---------|------------|---------------|------------|--------------|

Women

|                 |        |        |         |        |        |        |       |        |        |
|-----------------|--------|--------|---------|--------|--------|--------|-------|--------|--------|
| 0               | 11609  | 6513   | 26388   | 22350  | 8240   | 6000   | 2064  | 6129   | 14555  |
| R1-400          | 81163  | 91419  | 97080   | 138657 | 104425 | 67727  | 22602 | 56206  | 55507  |
| R 401-800       | 64497  | 46550  | 195499  | 149837 | 56390  | 58317  | 20623 | 52464  | 133807 |
| R 801-1600      | 59692  | 29426  | 252919  | 132510 | 33751  | 38979  | 10697 | 52119  | 163771 |
| R 1601-3200     | 60646  | 30493  | 208057  | 113496 | 37562  | 29634  | 11455 | 43736  | 126557 |
| R 3201-6400     | 55800  | 25695  | 214873  | 97997  | 35523  | 23978  | 10262 | 32008  | 106414 |
| R 6401-12800    | 17198  | 8475   | 123203  | 35444  | 9546   | 7678   | 3153  | 10009  | 43993  |
| R 12801-25600   | 2470   | 1395   | 39219   | 7125   | 1222   | 1464   | 486   | 1663   | 11142  |
| R 25601 - 51200 | 925    | 565    | 11180   | 2345   | 627    | 557    | 177   | 535    | 2895   |
| R 51201-102400  | 745    | 510    | 5518    | 1465   | 465    | 426    | 202   | 414    | 1533   |
| R 102401-204800 | 269    | 159    | 2570    | 584    | 119    | 101    | 42    | 168    | 651    |
| R 204801+       | 119    | 67     | 1191    | 269    | 91     | 72     | 25    | 60     | 273    |
| Total           | 355133 | 241267 | 1177697 | 702079 | 287961 | 234933 | 81788 | 255511 | 661098 |

Men

|               |       |       |        |        |       |       |       |        |        |
|---------------|-------|-------|--------|--------|-------|-------|-------|--------|--------|
| 0             | 10630 | 6835  | 31585  | 21485  | 7654  | 6673  | 2329  | 8427   | 14911  |
| R1-400        | 58038 | 83285 | 87810  | 99365  | 78174 | 67060 | 20344 | 69156  | 41968  |
| R 401-800     | 68842 | 64733 | 182118 | 141504 | 73443 | 81544 | 31203 | 73632  | 130546 |
| R 801-1600    | 89679 | 71052 | 442666 | 206435 | 71544 | 92132 | 21601 | 129070 | 210029 |
| R 1601-3200   | 72629 | 58800 | 383131 | 189783 | 69116 | 70858 | 20716 | 121612 | 173162 |
| R 3201-6400   | 52942 | 35046 | 242780 | 127219 | 47884 | 40278 | 16221 | 53064  | 119444 |
| R 6401-12800  | 30541 | 19984 | 177237 | 72334  | 19492 | 24391 | 9728  | 25697  | 78972  |
| R 12801-25600 | 10635 | 6518  | 106796 | 28400  | 5480  | 8468  | 3130  | 8526   | 39251  |

|                 |        |        |         |        |        |        |        |        |        |
|-----------------|--------|--------|---------|--------|--------|--------|--------|--------|--------|
| R 25601 - 51200 | 2919   | 1800   | 41230   | 8000   | 1583   | 2125   | 902    | 2433   | 12971  |
| R 51201-102400  | 1250   | 935    | 11803   | 2974   | 849    | 892    | 408    | 975    | 3947   |
| R 102401-204800 | 721    | 486    | 5806    | 1722   | 420    | 533    | 268    | 501    | 2087   |
| R 204801+       | 380    | 264    | 4116    | 965    | 246    | 291    | 110    | 286    | 1332   |
| Total           | 399206 | 349738 | 1717078 | 900186 | 375885 | 395245 | 126960 | 493379 | 828620 |

Weightings

|                 |              |            |         |               |         |            |               |            |              |
|-----------------|--------------|------------|---------|---------------|---------|------------|---------------|------------|--------------|
|                 | 0            |            | 0       |               |         |            |               |            |              |
| R1-400          |              |            | 2       |               |         |            |               |            |              |
| R 401-800       |              |            | 3       |               |         |            |               |            |              |
| R 801-1600      |              |            | 4       |               |         |            |               |            |              |
| R 1601-3200     |              |            | 5       |               |         |            |               |            |              |
| R 3201-6400     |              |            | 6       |               |         |            |               |            |              |
| R 6401-12800    |              |            | 7       |               |         |            |               |            |              |
| R 12801-25600   |              |            | 8       |               |         |            |               |            |              |
| R 25601 - 51200 |              |            | 9       |               |         |            |               |            |              |
| R 51201-102400  |              |            | 10      |               |         |            |               |            |              |
| R 102401-204800 |              |            | 10      |               |         |            |               |            |              |
| R 204801+       |              |            | 10      |               |         |            |               |            |              |
| Province        | Eastern Cape | Free State | Gauteng | KwaZulu-Natal | Limpopo | Mpumalanga | Northern Cape | North West | Western Cape |
| Women's score   | 3.9          | 3.4        | 4.7     | 3.9           | 3.5     | 3.6        | 3.7           | 3.8        | 4.4          |
| Men's score     | 4.3          | 3.9        | 5.0     | 4.5           | 4.0     | 4.1        | 4.2           | 4.2        | 4.8          |
| Ratio           | 0.91         | 0.88       | 0.94    | 0.88          | 0.87    | 0.87       | 0.87          | 0.91       | 0.91         |

