

***ADDRESSING INEQUALITIES***

**The Heart of the Post-2015 Development Agenda and the Future We Want for All**

*Global Thematic Consultation*

***Tackling the root causes of gender inequalities in  
the post-2015 development agenda***

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Despite broad agreement that gender equality matters in its own right and is a driver of development, policy makers continue to grapple with why stark gender gaps persist. Among the key root causes of unequal outcomes for women and men are social institutions – norms, laws and practices – which discriminate against women and girls. The OECD Development Centre’s Social Institutions and Gender Index (SIGI) measures discriminatory social institutions across five dimensions including family discrimination, gender-based violence, access to resources, son bias and access to public space. Using updated data from the 2012 edition, this paper presents the SIGI as a conceptual framework for measuring additional dimensions of gender inequality. Analysis using the SIGI finds that countries with high levels of discrimination against women not only perform poorly on gender equality indicators such as women’s employment, but also on a range of human development outcomes. A greater focus on discriminatory social institutions in the post-2015 development framework will be vital for tackling the root causes of gender inequalities and accelerating progress on several development outcomes.

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## I. INTRODUCTION

There is broad consensus that gender equality matters as a fundamental human right and for development, so the question for the post-2015 development agenda is not *whether* but *how* global progress towards gender equality should be measured. Whilst Millennium Development Goal (MDG) 3 on ‘Promoting Gender Equality and Women’s Empowerment’ has been successful in mobilising resources and garnering political will, the targets of the goal have been criticised for being overly narrow in focus. One dimension of gender inequality that has been neglected in the current MDG framework, has been the *underlying drivers* of gender inequality or *discriminatory social institutions* – social norms, laws and practices that restrict women and girls’ access to opportunities, resources and power.

Social institutions have gained currency as a framework to explain what is stopping women and girls from achieving equal outcomes in areas such as education, employment, business, health and political participation (World Bank, 2011; International Finance Corporation, 2011; Jones et al., 2010; OECD Development Centre, 2010). The OECD Development Centre’s Social Institutions and Gender Index (SIGI), launched in 2009, was the first attempt to capture, quantify and measure some of the social institutions that discriminate against women and girls. The 2012 SIGI scores countries on 14 variables that are grouped into five sub-indices: Discriminatory Family Code, Restricted Physical Integrity, Son Bias, Restricted Civil Liberties and Restricted Resources and Entitlements.

This paper presents the SIGI as a framework to understand and capture discriminatory social institutions as the root causes of gender inequality. Statistical association tests show that the index provides unique information on gender inequality, in comparison to other gender indices.<sup>i</sup> Further, regression analysis shows that higher levels of underlying discrimination against women is related to poor development outcomes such as women’s employment, education attainment and child health, even when controlling for factors such as the level of economic development and urbanisation. These findings have clear implications for the post-2015 development agenda: any new framework should take a holistic approach to measuring gender inequality and should specifically address discriminatory social institutions.

This paper is set out as follows. The first section introduces the SIGI, explaining why discriminatory social institutions matter for gender inequality and development and sets out the conceptual and methodological framework used to select the variables and build the index. The second section assesses whether the SIGI provides new information on gender inequality compared to other gender equality measure and discusses regional differences in discriminatory social institutions. The third section examines the relationship between discriminatory social institutions and several human development indicators. The paper

concludes with a discussion of the implications of the findings for the post-2015 development agenda.

## II. INTRODUCING THE SOCIAL INSTITUTIONS AND GENDER INDEX (SIGI)

### *Discriminatory social institutions: why do they matter?*

Social institutions are defined as formal and informal laws, social norms and practices that shape or restrict the decisions, choices and behaviours of groups, communities and individuals (Jütting et al., 2008; North, 1990; Sen, 2007). Social institutions set the parameters of what decisions, choices or behaviours are deemed acceptable or unacceptable in a society and therefore play a key role in defining and influencing gender roles and relations. Social institutions are not fixed, and there are often variations across countries, regions and communities. They are also in constant flux and change over time, albeit slowly. While social institutions in themselves are not inherently good or bad, *discriminatory* social institutions are those that restrict or exclude women and girls and consequently limit their access to opportunities, resources and power which negatively impacts upon development outcomes. Through their influence on the unequal distribution of power between men and women in the private sphere of the family, in the economic sphere and in public life, discriminatory social institutions constrain the opportunities of men and women and their capabilities to live the life they value (Sen, 1999). Discriminatory social institutions reflect and reproduce underlying gendered power relations which is what makes them difficult, but not impossible, to transform (Sen, 2007).

Social institutions exert their influence both directly and indirectly (Jütting and Morrison, 2005). Discriminatory formal and informal laws, social norms and practices can directly influence women's social and economic role, for example by not allowing women to access bank loans, preventing women from owning land or restricting women's ability to move freely in public space. An example of social institutions exerting indirect influence on women's economic and social role is the social norm which ascribes greater social value to sons over daughters, and thus results in underinvestment in the health and education of girls. Social institutions operate and exert influence at micro, meso and macro levels. For example, social institutions regarding women's status in the family (Discriminatory Family Code) play out at a household level (micro) in behaviours and attitudes; at a community level in specific beliefs or sanctioned practices (meso); and at a country level in terms of broader social norms or laws which allow discrimination (macro).

As has been evidenced in numerous studies, discriminatory social institutions play an important role in determining opportunities and outcomes for women and girls, and subsequently, development outcomes. For example, early marriage for girls, particularly with large age gaps between spouses, is linked with lower educational attainment for girls (Ambrus and Field, 2008; Lloyd and Mensch, 2008). Marrying young can also lead to high rates of adolescent fertility, higher rates of infant mortality, poor maternal health and increased vulnerability to HIV (Bruce and Clark, 2004; UNFPA, 2004). There is also evidence of the relationship between gender-based violence, women's limited sexual agency and increased HIV rates amongst women. For example, population-based studies in Botswana and Swaziland have found that women's lack of control over sexual decision-making, including the decision of whether or not to use condoms, is a key factor influencing their vulnerability to HIV (Physicians for Human Rights, 2007). Studies have also found that women's lower access to productive assets is related to lower agricultural production and food insecurity (FAO, 2011). The exclusion of women and girls from public, social, political and economic spaces due to discriminatory practices also limits their access to education, employment and health services (Jones et al., 2010).

### ***The Social Institutions and Gender Index***

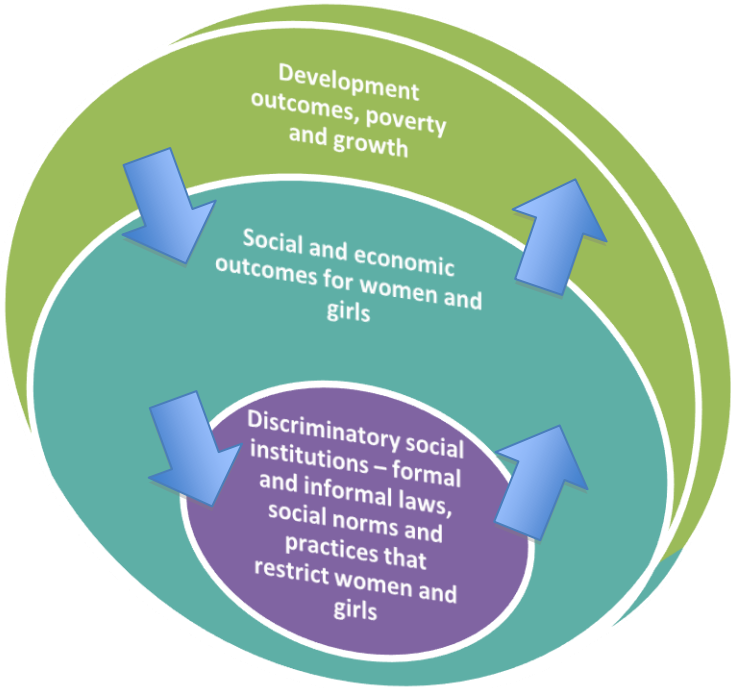
Against this background, the overarching concept of the SIGI is to capture the discriminatory social institutions that influence social and economic outcomes for women and girls, and consequently, shape development and growth. This is not a straight forward relationship, for improved development outcomes can have an influence on women's economic outcomes which, in turn, may change discriminatory social institutions (see Figure 1). For example, better economic opportunities can help women accessing these opportunities and in turn transform discriminatory attitudes about women's role in the private and public spheres (Seguino, 2007).

There are challenges related to measuring discriminatory social institutions. One challenge is endogeneity, the difficulty in differentiating between 'underlying factor' and 'outcome' in relation to gender inequality (Morrison and Jütting, 2005). Discrimination against women is multi-faceted, inter-related and self-reinforcing. For example, the lower status of girls in the family leads to practices such as early marriage which in turn limits the educational attainment of girls. Lower educational attainment limits employment opportunities which in turn have an influence on women's decision-making power in the household. Early marriage also limits the decision-making power of women and girls. Women's lack of decision-making power in the household limits the educational attainment of children, particularly girls, thereby contributing to an inter-generational effect of continued discrimination. Due to the circular and reinforcing nature of gender inequality, it is often difficult to make a clear cut distinction between 'causes'

and 'outcomes' when measuring gender inequality, yet attempts to capture all parts of the cycle are necessary.

Another challenge is the conceptual difficulty in capturing social institutions and then selecting appropriate and measurable variables. As social institutions are often based on community attitudes and informal practices, they are inherently difficult to measure. For example, while the SIGI uses the existence of a law to provide a proxy indicator for a discriminatory social institution such as inheritance practices, there may be a disjuncture between the law and practice or the attitudes of the population. Laws that provide equal rights and entitlements for women and men may not be adequately implemented, and therefore may not reflect the reality of practices or attitudes. The SIGI captures these differences between law, attitudes and practice by using both quantitative and qualitative variables based on detailed country notes that are validated with country and regional experts. Further, the availability of quantitative data on discriminatory social institutions has gradually improved in recent years, for example, for the prevalence of female genital mutilation and attitudes towards domestic violence. Indeed, the availability of this data has enabled improvements between the 2009 and 2012 versions of the SIGI to include more quantitative data sources on discriminatory social institutions. However, there remain significant gaps in the availability of high quality and comparable data on discriminatory social institutions so there is a need for continued investment in the collection and analysis of this type of data.

**Figure 1: Discriminatory social institutions matter for gender equality and development**



The 2012 SIGI is composed of five sub-indices which each represent a distinct dimension of discrimination against women: Discriminatory Family Code, Restricted Physical Integrity, Son Bias, Restricted Civil Liberties and Restricted Resources and Entitlements. Each sub-index is made up of variables that are selected on the basis of their conceptual relevance, whether it provides distinct information, data quality and coverage (see Table 1: The composition of 2012 SIGI). The statistical association and correspondence of the variables in each sub-index is then tested to ensure the variables belong to a distinct dimension of discrimination against women. The SIGI sub-indices are then constructed by aggregating the variables using polychloric Principal Component Analysis (PCA) (Branisa et al., 2009).<sup>ii</sup>

The SIGI score<sup>iii</sup> is an un-weighted average of a non-linear function of the sub-indices. Equal weights are given for the sub-indices, as there is no reason for valuing one of the dimensions more or less than the other. The non-linear function arises because of the assumption that gender inequality and discrimination corresponds to deprivation experienced by the affected women, and that deprivation increases more than proportionally when inequality and discrimination increases. Thus, high inequality and discrimination is penalised in every dimension. The non-linearity also means that the SIGI does not allow for total compensation among sub-indices, but permits partial compensation. Partial compensation implies that high inequality in one dimension can be only partially compensated with low inequality on another dimension. For further information on the technical construction of the SIGI please see OECD Development Centre, 2012 and Branisa et al., 2009.

$$SIGI = \frac{1}{5}(Subindex_{DFC})^2 + \frac{1}{5}(Subindex_{RH})^2 + \frac{1}{5}(Subindex_{SB})^2 + \frac{1}{5}(Subindex_{RRE})^2 + \frac{1}{5}(Subindex_{RCL})^2$$

**Table 1: The composition of 2012 SIGI**

2012 SIGI sub-index	What is being captured	Variables and what they measure (see Appendix for explanation and data sources)	
<b>1. Discriminatory Family Code (DFC)</b>	Social institutions that limit and restrict women's decision-making power and status in the household and the family	1. Legal Age of Marriage	Whether women have the same rights with respect to the legal minimum age of marriage
		2. Early Marriage	The percentage of girls between the ages of 15 and 19 who are married, divorced or widowed
		3. Parental Authority	Whether women have the same right to be a legal guardian of a child during marriage, and whether women have custody rights

			over a child after divorce
		4. Inheritance	Whether widows and daughters have equal rights to their male counterparts as heirs
<b>2. Restricted Physical Integrity (RPI)</b>	Social institutions that limit and restrict women and girls' control over their bodies	5. Violence Against Women – Laws, Attitudes and Prevalence	The existence of women's legal protection from rape, assault and sexual harassment, the prevalence of domestic violence and attitudes towards domestic violence
		6. Female Genital Mutilation	The percentage of women who have been subjected to any type of female genital mutilation
		7. Reproductive Integrity	The extent to which women can exercise reproductive autonomy
<b>3. Son Bias (SB)</b>	Social institutions that foster intra-household bias towards sons and the devaluation of daughters	8. Missing Women	Gender bias in mortality due to sex selective abortions, female infanticide or insufficient care given to baby girls
		9. Fertility Preferences	Gender bias in parental fertility preferences using the share of males as the last child
<b>4. Restricted Resources and Entitlements (RRE)</b>	Social institutions which restrict women's access to, control of, and entitlement over economic and natural resources	10. Access to Land	Women's legal and de facto access to agricultural land
		11. Access to Credit	Women's legal and de facto access to bank loans
		12. Access to Property other than Land	Women's legal and de facto access to other types of property, especially immovable property
<b>5. Restricted Civil Liberties (RCL)</b>	Social institutions that restrict women's access to, participation and voice in the public and social spheres	13. Access to Public Space	The level of restrictions women experience in freely and equally accessing public space
		14. Political Voice	The level of discrimination against women with respect to political participation



## II. UNIQUE INSIGHTS INTO GENDER INEQUALITY

### ***Does the SIGI provide additional information compared to other measures of gender inequality?***

While other indices such as the UNDP Gender Inequality Index<sup>iv</sup> and the World Economic Forum Global Gender Gap Index measure gender inequality in terms of outcomes such as education attainment or labour market participation, SIGI's focus on discriminatory social institutions provides additional insight into gender inequality for development policy makers and practitioners. For instance, the 2012 SIGI regional results, by sub-index, highlight regional differences on issues such as violence against women, access to resources and discrimination in the family. One striking observation, for example, is that while Europe and Central Asia<sup>v</sup> show lower levels of discrimination in the family compared to other regions due to equal laws and low rates of early marriage, the region shows higher levels of son bias, in comparison to other regions. This prevalence of son bias in the region is not necessarily captured in other indices such as the World Economic Forum Global Gender Gap Index where Europe and Central Asia perform relatively well on indicators such as the gender gaps in education and employment.<sup>vi</sup>

To assess whether the SIGI provides any additional information compared to other gender measures, it is possible to test the statistical association between the SIGI and the World Economic Forum Global Gender Gap Index and the UNDP Gender Inequality Index (Branisa et al. 2009). This test draws on the analysis of McGillivray and White (1992) to test the statistical association between well-being and development measures using the Kendall tau b test. The Kendall tau b test reveals that the SIGI is not redundant when assessed with other gender indices, indicating that it provides additional information. Secondly, the SIGI is negatively correlated with the WEF Global Gender Gap Index, where high SIGI scores (high discrimination) correlated with low scores on the Global Gender Gap (high gender inequality). The SIGI is positively correlated with the UNDP Gender Inequality Index, where high SIGI scores (high discrimination) correlated with high scores (high gender inequality).<sup>vii</sup> These results suggest that while SIGI measures a similar phenomenon to the other gender indices, it provides additional information on gender inequality not captured by the other gender indices.

### ***2012 SIGI: Regional differences in discriminatory social institutions***

The results of the 2012 SIGI bear important implications for the post-2015 development agenda as they bring to light dimensions of gender inequality that are not typically captured in other measures. In addition to the overall SIGI score, the scores for the SIGI sub-indices can be used as an additional tool to understand the level of discrimination faced by women in each of the

dimensions in a country or a region. The 2012 SIGI results show that there are significant regional differences across the sub-indices of the SIGI (Figure 2). For instance, Latin America and the Caribbean<sup>viii</sup> shows a strong performance across all sub-indices of the SIGI. Analysis of the Early Marriage variable between the 2009 and 2012 editions of the SIGI indicate that the practice of early marriage is declining across the region, and the region has made significant progress on laws to address violence against women, although enforcement remains a challenge. Latin America and the Caribbean has made striking progress in improving women's political participation: the region has the highest share of women in parliament among developing countries, a figure that jumped from 12% in 1997 to 20% in 2011.

The SIGI data shows regional differences in the dimension of Son Bias, which is measured by variables of Missing Women and Fertility Preferences. South Asia<sup>ix</sup> shows the highest level of discrimination in this area, followed by Europe and Central Asia<sup>x</sup>, Middle East and North Africa<sup>xi</sup> and East Asia and the Pacific<sup>xii</sup>. In addition to the grave violation of human rights for girls, the high level of Son Bias in some countries presents a serious demographic challenge, with skewed sex-ratios potentially leading to social unrest and violence (UNFPA, 2007).

Similar regional differences can be observed for the Restricted Physical Integrity sub-index. Sub-Saharan Africa<sup>xiii</sup> shows the highest level of discrimination in this area, followed by Middle East and North Africa. Despite progress across both regions in laws to address violence against women, in Sub-Saharan Africa, 12 countries remain without laws to address domestic violence. The lack of legal protection is compounded by widespread attitudes that normalise domestic violence - over 75% of women in Guinea, Ethiopia, Somalia, Congo, the Democratic Republic of the Congo and Mali agree that domestic violence is justified in some circumstances.

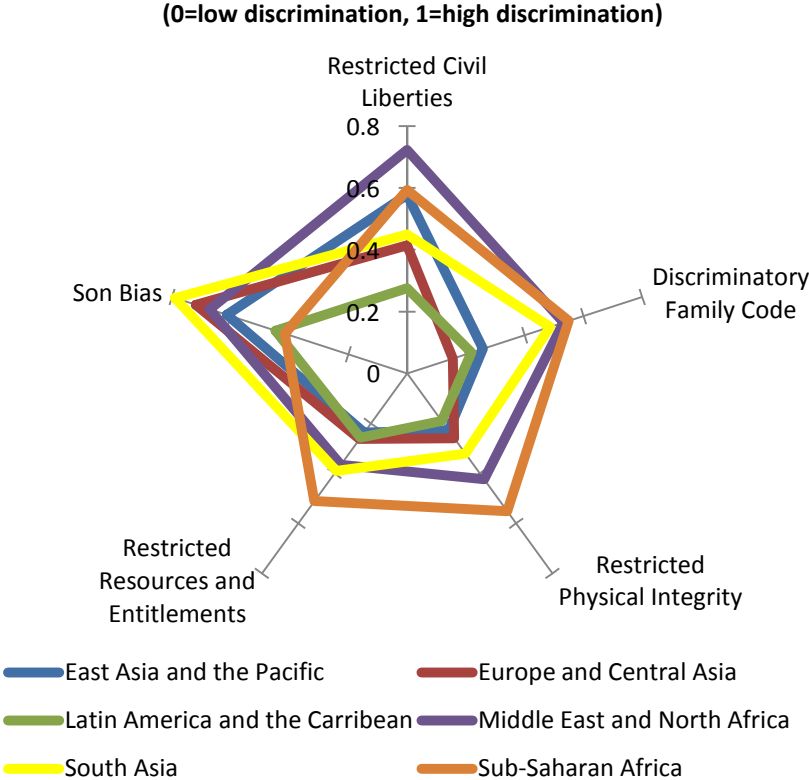
The Middle East and North African region shows the highest level of discrimination for the Restricted Civil Liberties sub-index. This can be attributed to restrictions on women's access to public space and low levels of women's participation in the political sphere. In Yemen for example, women cannot leave the house without permission of their husband or male guardian and a woman is unable to obtain a personal identity card or passport without the consent of her guardian. Interestingly, Sub-Saharan Africa has made impressive progress in ensuring women's political participation: 17 countries have quotas for women's political participation at national and/or sub-national levels.

Sub-Saharan Africa shows the highest level of discrimination in the Discriminatory Family Code and Restricted Resources and Entitlements sub-indices. Discrimination in the family and in accessing resources often stems from dual or tri-partite legal systems, where customary or religious laws often discriminate against women. Even where civil laws have been introduced to

provide equal rights to inheritance and ownership, these are not necessarily implemented or respected at a local level due to persistent social norms and discriminatory attitudes. Middle East and North Africa and South Asia also have high levels of discrimination against women in the family, compared to other regions.

**Figure 2: There are regional differences in different dimensions of discriminatory social institutions**

SIGI 2012 sub-index scores, by regional average.



As outlined above, the SIGI sub-indices shed light on deeply entrenched social norms and practices, such as violence against women and discrimination in the family, which are fundamental to women’s empowerment yet often overlooked. While the SIGI attempts to capture these ‘hidden’ dimensions of gender inequality, one limitation for measuring discriminatory social institutions is the availability, coverage and quality of data. Including discriminatory social institutions such as violence against women, son bias or women’s access to resources in the post-2015 development agenda would not only mean that these important indicators of gender inequality are tracked, but that there is commitment to statistical capacity building to improve the data sources in these areas.

### III. WHAT CAN THE SIGI TELL US ABOUT GENDER INEQUALITY AND DEVELOPMENT?

This section will use the 2012 SIGI data to illuminate how discriminatory social institutions relate to gender inequalities and other development outcomes. The first part uses the SIGI data to analyse women's employment outcomes, focussing on the type and quality of employment. In this section, the SIGI data is also used to evaluate the role of social policies in addressing gender inequalities by assessing the relationship between discriminatory social institutions, women's employment outcomes and maternity leave entitlements. The second part applies the 2012 SIGI data to analyse the connections between specific dimensions of underlying discrimination against women and development outcomes in the areas of education, health and peace/security. The analysis provided in the following sections does not aim to be exhaustive but provides some examples of the relationships between discriminatory social institutions and outcomes.

#### ***Discriminatory social institutions and women's employment outcomes***

Several studies have found that expanding women's access to quality employment opportunities is important for economic growth and development (Klasen and Lamanna, 2009; OECD, 2012). However, discriminatory social institutions which undermine women's position in the family may mean that women are less able to negotiate paid work with caring responsibilities. Violence against women has also been found to be another social institution negatively associated with female employment (Alexander, 2011; Kimerling et al., 2009; Meisel et al., 2003). Similarly, restrictions on women's access to public space such as the law providing that husbands have the sole authority to choose the place of residence, or women's limited access to economic resources such as land or credit can influence women's employment opportunities. Discriminatory social institutions often reflect social norms that reinforce stereotypes of women as inferior, less able or less deserving of quality jobs. Thus, in countries with higher gender discrimination, it can be expected that women may be relegated to jobs or sectors that offer lower opportunities, poor working conditions and lower remuneration.

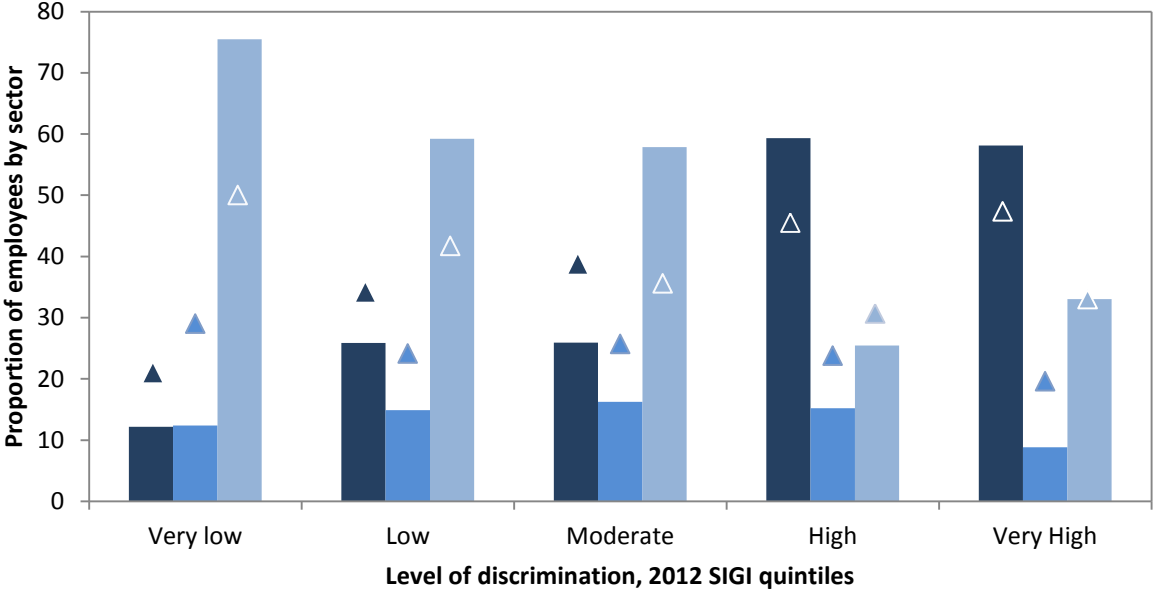
To understand the relationship between discriminatory social institutions and women's employment, we analyse the distribution of women and men in the three economic sectors of agriculture, industry and services across 2012 SIGI index quintiles. The proportion of both women and men in agriculture is higher for countries with higher levels of discrimination. This is not surprising given that many of the countries in the bottom two 2012 SIGI quintiles have agriculture based economies. However, the proportion of men and women in agriculture changes as the level of discrimination against women changes. In countries with low-moderate levels of discrimination, there are more men than women in agriculture, while in countries with

high-very high discrimination, the proportion of women employed in agriculture is substantially higher than that of men. This is salient because in many developing countries, particularly in Sub-Saharan Africa and South Asia, women in agricultural employment are often employed in vulnerable positions as unpaid, casual or seasonal workers. They work for long hours, are often paid less than men despite performing similar tasks, or are engaged in unpaid activities in the family business or farm.

In countries with low-moderate levels of discrimination, there is a higher proportion of women employed in the service sector, compared to men. On the contrary, in countries with higher levels of discrimination, there are a higher proportion of men in the services sector. Gender differences in the industry sector do not appear to be correlated with discriminatory social institutions as there is a consistently higher proportion of men in this sector, compared to women. Figure 3 shows the gender differences in the three sectors with the SIGI data. The chart highlights a clear pattern of gender segregation in agriculture and services associated with levels of discrimination. This is consistent with previous analysis by Luci et al. (2012) which found that discriminatory social institutions are a key factor in explaining the gender segregation in sectors, even when controlling for commonly studied factors such as education, country income level and fertility.

**Figure 3: Countries with higher gender discrimination show higher gender sector segregation**

Proportion of employees by gender, sector and 2012 SIGI quintiles

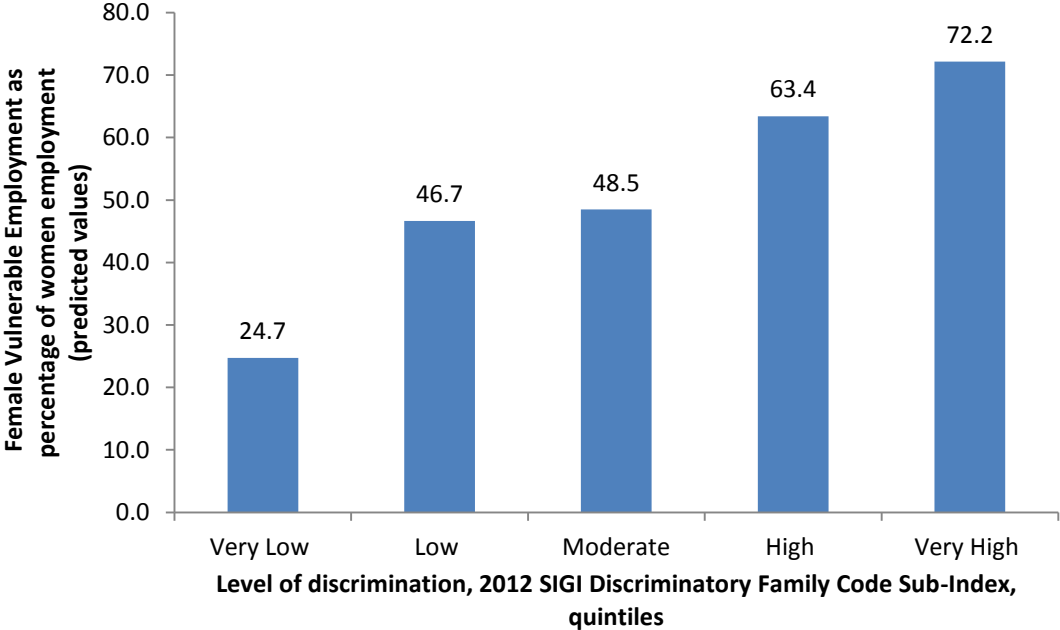


Sources: 2012 OECD Gender Institutions and Development Database, 2010 World Bank World Development Indicators.

Several studies have found that women are more likely than men to be in informal employment, where they are less likely to have social protection coverage and are at a higher risk of poverty (OECD 2012; Chen, 2010). To understand whether this evidence is related to discriminatory social institutions, a linear regression model is estimated to analyse the relationship between vulnerable employment and the SIGI sub-indices controlling for GDP per capita. The SIGI sub-index Discriminatory Family Code is statistically significant and positively associated with the share of women in vulnerable employment.<sup>xiv</sup> Countries with higher levels of discrimination against women in the family have higher levels of women in vulnerable employment. Thus, discriminatory social institutions are related to women’s access to quality jobs. Figure 4 shows the share of women in vulnerable employment as a percentage of total female employment by SIGI Discriminatory Family Code quintiles.

**Figure 4: There is positive relationship between female vulnerable employment and discrimination in the family**

Predicted female vulnerable employment as percentage of female employment.



Sources: 2012 OECD Gender Institutions and Development Database, World Bank World Development Indicators (average values for 2005-2010).

Note: The chart shows the relationship between the SIGI 2012 Discriminatory Family Code sub-index and the predicted values of female Vulnerable Employment as percentage of women employment, estimated by linear regression with the following explanatory variables: GDP, GDP square, 2012 SIGI Discriminatory Family Code sub-Index. The R-squared of the regression is 0.77. Regression results available upon request from the authors.

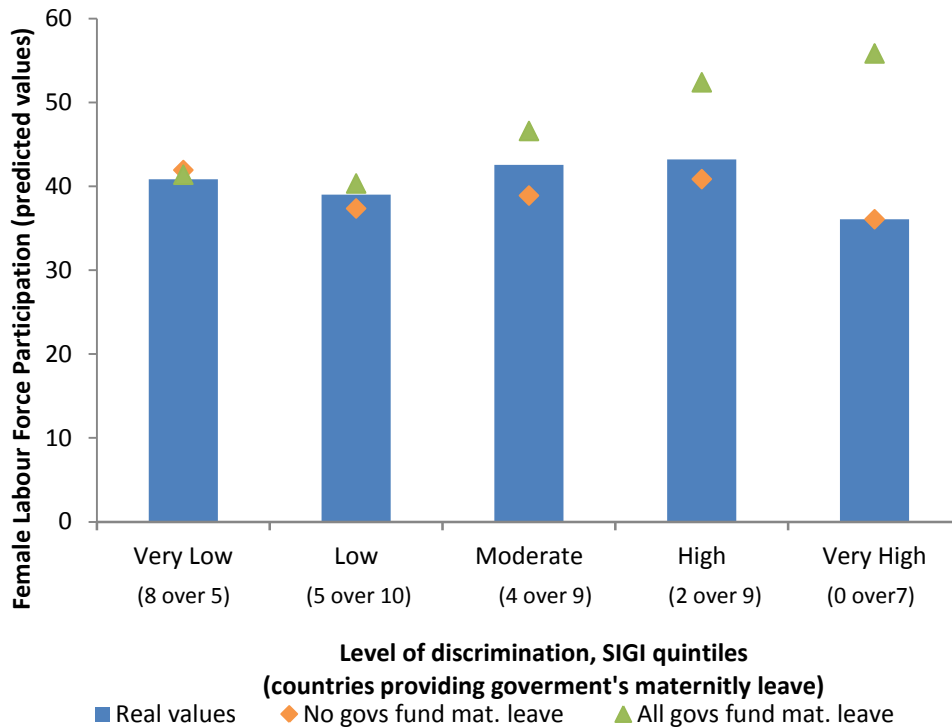
As a third example, the SIGI is used to assess the effect of social policies such as government funded paid maternity leave on women's employment. Several studies, primarily focussed on high-income countries, have found a positive relationship between paid maternity leave and female employment (Del Boca et al., 2005; Ruhm, 1998). However, these studies have not sought to understand the additional role discrimination against women plays in interacting with the effectiveness of such policies. Using 2010 data on women's labour force participation and controlling for years of schooling, fertility rate, urbanisation and country income level, a linear regression model is estimated to understand how female labour participation is affected by social policies, i.e. government funded paid maternity leave, in countries with different levels of gender discrimination. While there is no statistically significant relationship between the SIGI and female labour force participation, the interaction term between the SIGI and government-funded paid maternity leave is positive and statistically significant. This indicates that the introduction of government-funded paid maternity leave would positively affect female labour participation more in countries with higher levels of discrimination against women than in countries with lower levels of discrimination.

Figure 5 shows the predicted values of female labour force participation, considering the number of countries that actually provide government-funded paid maternity leave. The chart shows the predicted values assuming that all countries have government-funded paid maternity leave and no countries have government-funded paid maternity leave. Where it is assumed that all countries had government-funded paid maternity leave, female labour force participation would be considerably higher in countries with high levels of discrimination. The effect of government-funded paid maternity leave is negligible in countries with low levels of gender discrimination.<sup>xv</sup>

Discriminatory social institutions play an important role in shaping women's employment outcomes. During the post-2015 development agenda debate, discussions around women's employment outcomes need to consider the role of discriminatory social institutions. Addressing discriminatory social institutions such as women's status and role in the family will be necessary to fully understand the norms and practices that are holding women and girls back from reaching their full economic potential.

**Figure 5: Government funded paid maternity leave has greater effect on female employment in countries with higher levels of discrimination**

Predicted Female Labour Force participation by 2012 SIGI quintiles for three scenarios of maternity leave: real values, no countries have government-funded maternity leave, all countries have government-funded maternity leave.



Sources: 2012 OECD Gender Institutions and Development Database, 2010 World Bank World Development Indicators.

Note: The chart shows the relationship between the SIGI 2012 and the predicted values of Female Labour Force Participation rate estimated by linear regression for 42 countries with the following explanatory variables: GDP, GDP-square, urbanisation, fertility rate, dummy for employee-funded maternity leave, dummy for government-funded maternity leave, SIGI 2012, and interaction between government funded maternity leave and SIGI 2012 value. The R-squared of the regression is 0.6. Regression results available upon request from the authors.

***Discriminatory social institutions and development outcomes***

A further reason to consider discriminatory social institutions for the post-2015 development framework is the relationship with important development outcomes. Understanding the connections between discrimination against women and poor development outcomes is vital to inform the design of effective policies. The following analysis is not intended to provide *causal explanations* of poor development outcomes, but to provide an indication of the *relationship* between discriminatory social institutions and development, thus highlighting the need to address these dimensions of gender inequality in the post-2015 development agenda.



## *Education outcomes*

Human capital is a critical gateway to poverty reduction and development. Discriminatory social institutions can negatively influence education attainment in several ways. Practices such as early marriage or sexual harassment can lead to girls leaving their studies early (Alam et al., 2009; Ambrus and Field, 2008; Lloyd and Mensch, 2008; OECD, 2012). For example, Alam et al. (2009) found from a study in Bangladesh that 43% of girls had experienced some form of sexual harassment on the way to school or college. A recent report from Plan UK (Lucas, 2012) has found high levels of sexual violence and abuse in schools, often perpetrated by teachers. The research cites the example of Mali, where 15% of children interviewed named a teacher as responsible for the pregnancy of a classmate. Discriminatory social institutions can also have an impact on overall educational attainment. For instance, discrimination against women in the family and household limits their decision-making ability regarding the health, education and welfare of their children, resulting in negative inter-generational effect of poor educational attainment (UNICEF, 2006).

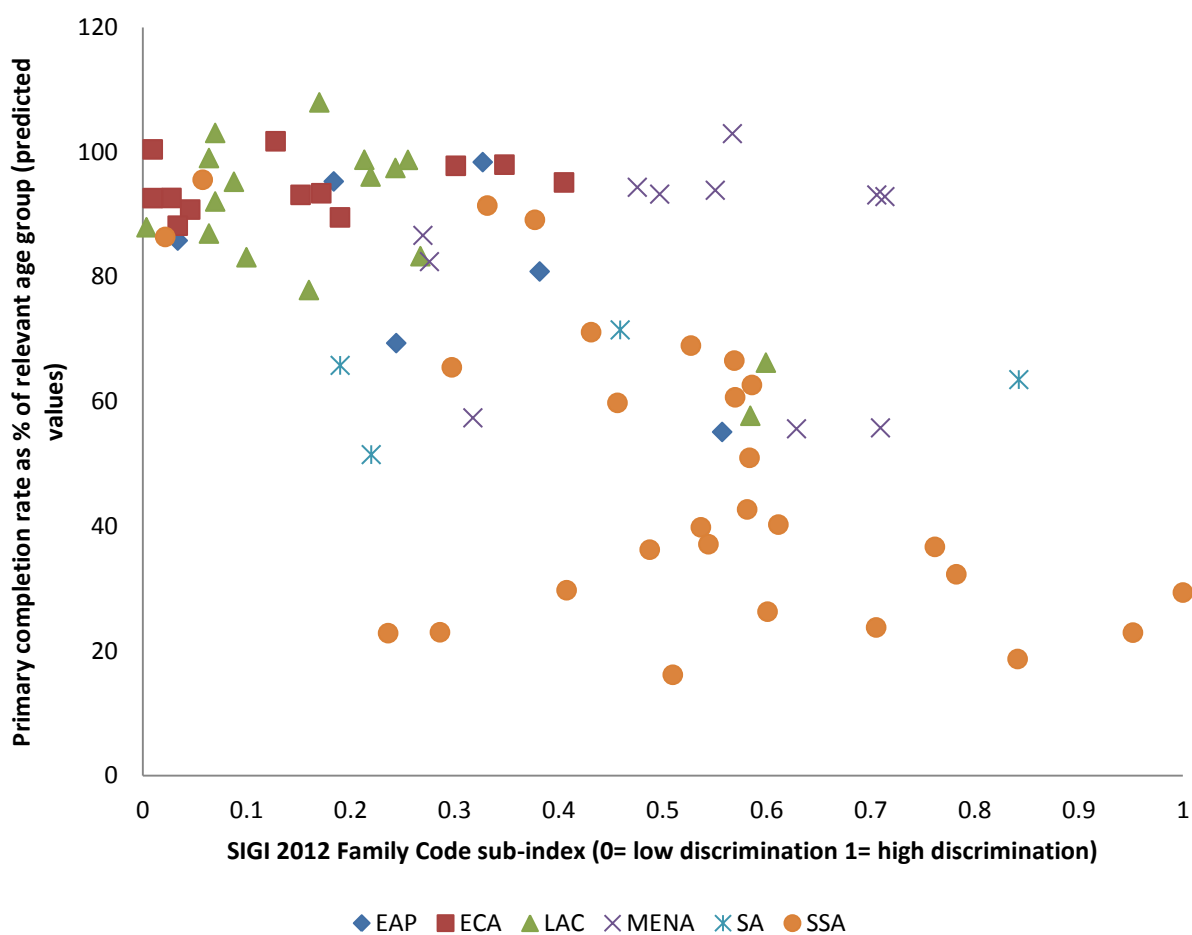
To understand the relationship between discriminatory social institutions and education outcomes, gender gap in secondary education (female/male ratio of secondary school enrolments) is analysed with the SIGI and its sub-indices. While there has been impressive progress in closing the gender gap in primary school enrolment, in some parts of Sub-Saharan Africa and South Asia, gender gaps in secondary school education persist (OECD, 2012). A linear regression model is estimated, controlling for country income level, urbanisation and the fertility rate. The SIGI bears a significant and negative relationship with gender gap in secondary school enrolment: countries with lower levels of discrimination against women are more likely to have gender parity in secondary school enrolment. When SIGI sub-indices are included in the model, the Restricted Civil Liberties and Restricted Physical Integrity sub-indices are significant and negatively related to the gender gap in secondary school enrolment. This suggests that ensuring women and girls' equal access to the public sphere and decision-making, addressing violence against women and ensuring reproductive autonomy are important factors for closing the gender gap in secondary school enrolments.

A similar analysis is conducted for primary school completion rates. While the relationship with the SIGI is not significant, when all five sub-indices are included in the model, Discriminatory Family Code bears a significant and negative relationship, even when controlling for country income level, urbanisation and the fertility rate. Where women have greater status and power in the family, children are more likely to complete primary school. Figure 6 illustrates this relationship showing the predicted values for primary school completion, by 2012 Discriminatory Family Code sub-index, with the controls above and grouping the countries by

region. As discussed in the earlier section on the 2012 SIGI results, Sub-Saharan Africa has the highest level of discrimination in the family and also has more countries with lower rates of primary school completion compared to other regions. Interestingly, Middle Eastern and North African countries stand out as they also have higher levels of discrimination in the family but have higher levels of primary school completion. This analysis indicates the two-fold influence of discriminatory social institutions: first, they are associated with the gender gap in education and second, they play a role in lower overall education outcomes (boys and girls).

**Figure 6: There are lower primary school completion rates in countries where women have lower status and decision-making power in the family**

Primary School Completion, by 2012 Discriminatory Family Code sub-index.



Sources: 2012 OECD Gender Institutions and Development Database, World Bank World Development Indicators (2010 data)

Note: The chart shows the relationship between the SIGI 2012 Discriminatory Family Code sub-index and the predicted values of primary school completion rate estimated by linear regression for 77 countries with the following explanatory variables: GDP, urbanisation, fertility rate, and SIGI 2012 Discriminatory Family Code sub-index. The R-squared of the regression is 0.75. Regression results available upon request from the authors.

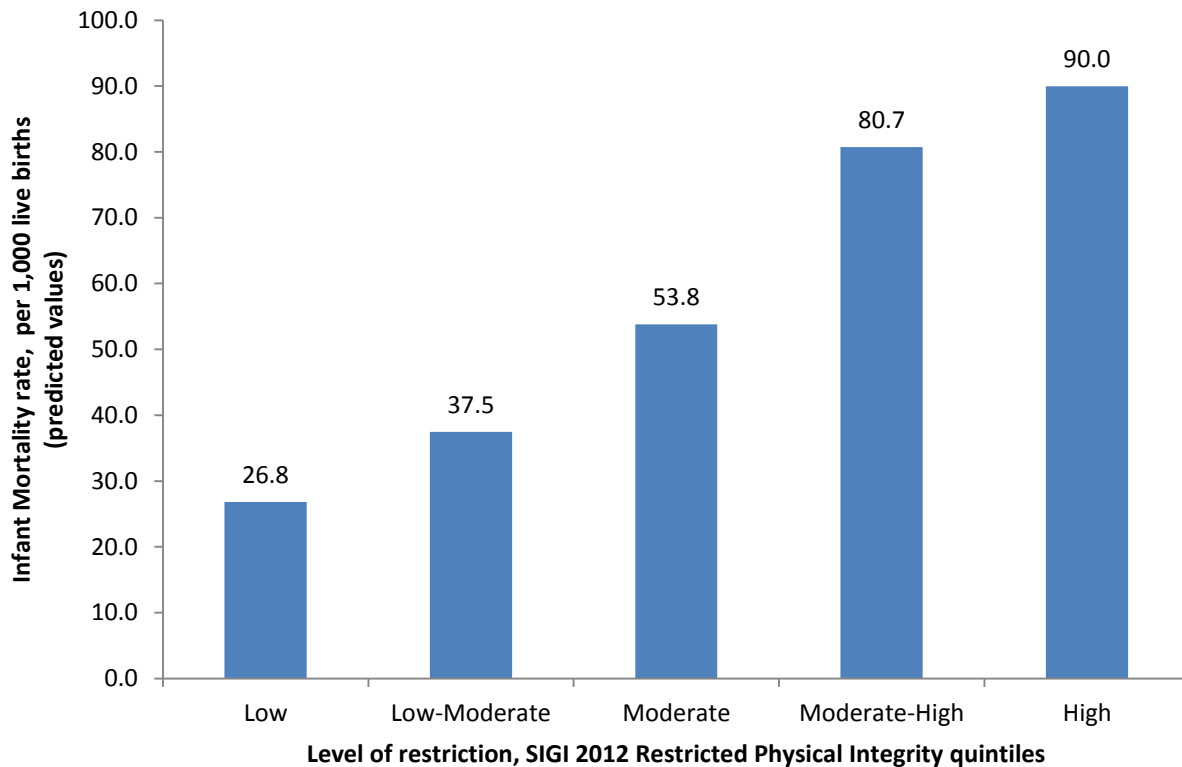
### *Child health outcomes*

Improving child health outcomes is a cornerstone of the current MDGs framework. While many countries are on-track to meet the targets on this goal, UNICEF (2012) estimates that 19,000 children under age five were dying every day in 2011. Several studies have demonstrated the link between aspects of women's empowerment and child health and mortality. Hossain et al. (2007) found that women's enhanced autonomy and authority (the two dimensions of women's status used in the study) significantly reduced post-neonatal mortality and child mortality respectively. Similarly, Bhagowalia et al. (2012) found that there is a significant relationship between child stunting (the measure of child nutrition used in the study) and attitudes towards domestic violence, maternal height, maternal education and age at first marriage. A study in Nepal also found a strong association between women's land ownership and improved child health (Allendorf, 2007). As such, it can be expected that discriminatory social institutions are related to child mortality.

To understand which dimensions of discrimination against women are linked with child mortality, the relationship between infant mortality rates and the SIGI and its sub-indices are analysed. A linear regression model is used, controlling for the fertility rate, country income level and urbanisation. When all sub-indices are included in the model, Restricted Physical Integrity is positive and significant. This indicates that countries with high levels of restrictions on women's physical integrity also have high levels of infant mortality. There is also a significant and negative relationship with the Son Bias sub-index. The finding linking high levels of child mortality with lower levels of son preference can be explained by the SIGI's two measures of son preference (Missing Women and Fertility Preferences). Including the two variables in the model instead of the sub-index, Fertility Preferences remain significant and negatively associated with child mortality but Missing Women is not significant. In countries with a higher share of boys as the last child (high son preference) it is likely that parents are investing more care and resources into sons, thus implying a lower infant mortality rate. Figure 7 illustrates the relationship between child mortality and Restricted Physical Integrity, adjusting for country income level, fertility rate, urbanisation and the Son-Bias score. Countries with high levels of restrictions on women's physical integrity (measured by Violence Against Women, Female Genital Mutilation and Reproductive Integrity variables) have an average infant mortality rate more than three times the rate for countries with low levels of restrictions.

### Figure 7: There are higher child mortality rates in countries where women’s physical integrity is highly restricted

Predicted values of Infant Mortality rates, by 2012 Restricted Physical Integrity sub-index quintiles. Controlling for country income level, urbanisation, fertility rate and 2012 Son Bias sub-index value



Sources: 2012 OECD Gender Institutions and Development Database, World Bank World Development Indicators (2010 data)

Note: The chart shows the relationship between the SIGI 2012 Restricted Physical Integrity sub-index and the predicted values of Infant Mortality rate estimated by linear regression for 85 countries with the following explanatory variables: GDP, urbanisation, fertility rate, SIGI 2012 Son Bias sub-index and SIGI 2012 Restricted Physical Integrity. The R-squared of the regression is 0.81. Regression results available upon request from the authors.

### ***Peace and security***

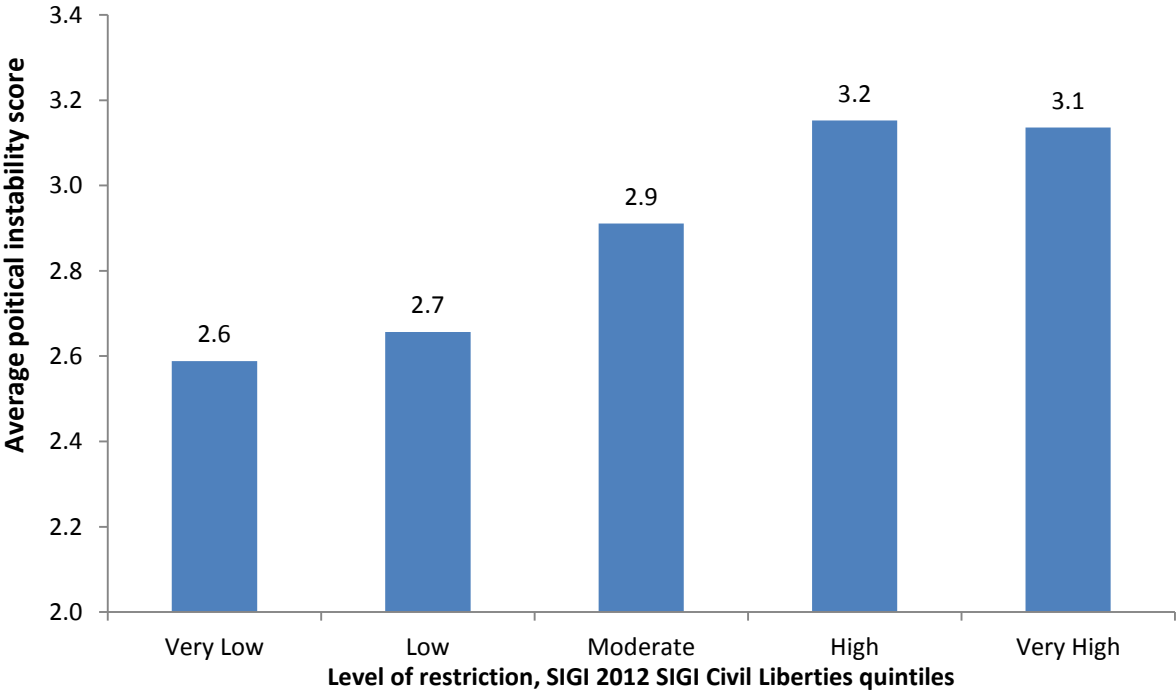
Over the past decade, since Security Council Resolution 1325 on women, peace and security, there has been increasing attention to the role of women in making and maintaining peace. While there are limited studies in this area, some researchers have sought to highlight the link between gender inequality and peace. Caprioli (2005) found that gender inequality increases the chances of intra-state conflict, even when controlling for economic factors. Similarly, Melander (2005) finds a significant relationship between women’s educational attainment ratio and female representation in parliament and lower levels of conflict within a country. With respect to women’s attitudes towards peace, a 2009 cross-country study also found that

women were more positively consistent in their attitudes towards peace than men (Yablon, 2009). Further, research from the International Crisis Group (2006) in Sudan, Congo and Uganda found that women who participate in peace talks often raise issues that are important for maintaining peace such as human rights, security, justice and healthcare. It is therefore expected that there may be a relationship between discriminatory social institutions and indicators of peace and conflict.

Given the links in the literature between women’s participation in the public sphere, the relationship between the SIGI Restricted Civil Liberties sub-index and political stability is assessed using data from the Global Peace Index. There is a positive relationship between the 2012 SIGI Restricted Civil Liberties sub-index and the Political Stability score for countries (2012 Global Peace Index). In countries where there are greater restrictions on women’s participation and access to the public sphere there is also a higher level of political instability. As illustrated in Figure 8, the average political instability score for countries with very low levels of restrictions on women’s access to and participation in the public sphere is 2.6 (out of 5), compared to 3.1 for countries with very high levels of restrictions.

**Figure 8: There is greater political instability (qualitative assessment) in countries where women’s civil liberties are highly restricted**

Average political instability score (1= very low, 5 = very high), by 2012 Restricted Civil Liberties sub-index quintiles



Sources: 2012 OECD Gender Institutions and Development Database, 2012 Global Peace Index

#### **IV. CONCLUSION**

Three major implications stem from the analysis related to discriminatory social institutions in this paper. First, there is value in capturing and measuring discriminatory social institutions. Despite the conceptual and methodological challenges of measuring discriminatory social institutions, the SIGI draws attention to aspects of gender inequality that are often invisible, yet powerful drivers of economic and social outcomes for women and girls. According to the analysis above, discriminatory social institutions are related to women's employment, education, child health and political stability. As such, discriminatory social institutions should be measured not only because they provide information on important dimensions of gender inequality that are often overlooked, but also because they matter for development outcomes.

Second, while a focus on social and economic outcomes related to gender equality and women's empowerment should of course remain in the post-2015 development agenda, discriminatory social institutions should also be specifically addressed, both in the context of a specific gender equality goal and mainstreamed into broader development goals. Despite progress in some areas, stark gender inequalities continue to affect the daily lives of a significant portion of the world's population. To address to full complexity of gender inequalities, the post-2015 development should take a holistic approach. Specifically, the post-2015 development agenda should include the dimensions of gender inequality that were overlooked in the current MDG framework such as violence against women; women's status and role in the family; and women's access to and control over assets.

Finally, given the gaps in quality, comparability and coverage of data, greater statistical capacity building related to discriminatory social institutions and gender equality is needed. High quality data with comprehensive coverage will ensure that decision-makers have the information they need to design policies and allocate resources to promote gender equality and consequently improve development outcomes. In particular, there is a need to improve sub-national data on discriminatory social institutions to provide a deeper understanding of how discriminatory social institutions play out in the context of urban/rural differences and amongst different groups in the population.

The post-2015 development agenda presents a unique opportunity to build on progress so far and even take a step further to tackle the root causes of gender inequality. This will enable international, national and local actors to monitor trends, identify challenges, target resources and design effective policies to achieve a shared global vision of lasting gender equality, poverty reduction and sustainable development.

## Appendix: 2012 SIGI variables and data sources

Discriminatory Family Code		
Variable	How the variable is coded and data sources	Conceptual validity
<b>Legal Age of Marriage</b> <i>Whether women have the same rights with respect to the legal minimum age of marriage</i>	Assigned a score based on one component: minimum legal age of marriage.  0: The law on the minimum age of marriage does not discriminate against women 0.5: The law on the minimum age of marriage discriminates against some women, for example through customary, traditional and religious law 1: The law on the minimum age of marriage discriminates against all women or there is no law on the minimum age of marriage  <i>Source: country specific sources in SIGI country notes</i>	Captures formal discrimination against women with respect to marriage and is a proxy for social norms regarding early marriage of girls, compared to boys.
<b>Early marriage</b> <i>The percentage of girls between the ages of 15 and 19 who are married, divorced or widowed</i>	Percentage of women married between 15-19 years of age. <i>Source: UN World Marriage data (2008) and other sources including Demographic Health Survey (DHS) data and Multiple Indicator Cluster Survey (MICS) data (see <a href="http://www.genderindex.org">www.genderindex.org</a> for full list of sources and year)</i>	Provides a proxy indication of the social acceptance and practice of early, forced and arranged marriage.
<b>Parental Authority</b> <i>Whether women have the same right to be a legal guardian of a child during marriage, and whether women have custody rights over a child after divorce</i>	Assigned a score based on an average of two components: legal guardianship of a child during marriage and custody rights over a child after divorce. 0: Equal rights for women and men 0.5: (Some) women have (some) rights, but less than men 1: Women and men have unequal rights <i>Source: country-specific sources in SIGI country notes</i>	Captures formal discrimination with respect to women's decision-making power in the family, particularly in relation to children.
<b>Inheritance</b> <i>Whether widows and daughters have equal rights to their male counterparts as heirs.</i>	Score based on an average of two components: inheritance rights of spouses and inheritance rights of daughters. 0: Women and men have equal rights of inheritance 0.5: (some) women have (some) rights, but less than men 1: Women and men have unequal rights of inheritance <i>Source: country-specific sources in SIGI country notes</i>	Captures formal discrimination with respect to women's status in the family.
Restricted Physical Integrity		
<b>FGM</b> <i>The percentage of women who have been subjected to any type of</i>	Percentage of women who have undergone female genital mutilation <i>Sources: World Health Organization, Population Reference Bureau, Multiple Cluster Indicator Surveys, Demographic</i>	Captures the prevalence of FGM, and a proxy for social norms that accept the

<i>female genital mutilation</i>	<i>Health Surveys</i>	practice.
<p><b>Violence against Women</b>  <i>The existence of women's legal protection from rape, assault and sexual harassment, the prevalence of domestic violence and attitudes towards domestic violence</i></p>	<p>The Violence Against Women variable is based on the average of three components:</p> <ul style="list-style-type: none"> <li>a) Laws</li> <li>b) Attitudes towards domestic violence</li> <li>c) Lifetime prevalence of domestic violence</li> </ul> <p><b>a) Laws</b>  Score based on an equally-weighted average of three components: existence of laws against sexual assault or rape; existence of laws against domestic violence; and existence of laws against sexual harassment. Value based on following scale:  0: There is specific legislation in place  0.25: There is specific legislation in place, but there are widespread reported problems with implementation  0.5: There is general legislation in place, or specific legislation is inadequate (e.g. rape laws do not criminalise marital rape)  0.75: Legislation is being planned, drafted or reviewed or existing legislation is highly inadequate  1: No legislation</p> <p><i>Source: Country specific sources from SIGI country notes</i></p> <p><b>b) Attitudes towards domestic violence</b>  Percentage of women who agree that a husband/partner is justified in beating his wife/partner under certain circumstances.</p> <p><i>Source: Demographic Health Surveys or Multiple Cluster Indicator Surveys.</i></p> <p><b>c) Life time prevalence of domestic violence</b>  Percentage of women who have experienced physical and/or sexual violence from an intimate partner at some time in their life.</p> <p><i>Source: UN WOMEN compilation of violence against women prevalence for Progress of the World's Women (2011) and country specific sources in SIGI country notes</i></p>	<p>Captures the level of social acceptance of violence against women. Laws are a considered a proxy for social norms.</p>
<p><b>Reproductive Integrity</b>  <i>The extent to which women can exercise reproductive autonomy</i></p>	<p>Percentage of married women aged 15-49 with unmet need for family planning. Defined by the Demographic Health Surveys and World Health Organization as married women who do not want any more children for the next two years and not using contraception.</p> <p><i>Source: Demographic Health Survey data, Multiple Indicator</i></p>	<p>Captures restrictions on women's reproductive autonomy due to lack of access to family planning.</p>



	<i>Cluster Surveys, World Health Organization data and other reproductive health surveys</i>	
<b>Son bias</b>		
<b>Missing Women</b> <i>Gender bias in mortality due to sex selective abortions, female infanticide or insufficient care given to baby girls</i>	<p>Score calculated by Professor Stephan Klasen, based on analysis of sex ratio data for ages 0-4, 5-9, 10-14, 15-64, 65+.</p> <p>The analysis is based on considering expected age-specific sex ratios and comparing them to actual ones and is based on methods discussed in Klasen and Wink (2002, 2003).<sup>xvi</sup></p> <p>The variable assigns a value of 0, 0.25, 0.5, 0.75 or 1, based on a scale where 0 indicates that missing women are not a problem, and 1 indicates a severe incidence of missing women. The score is particularly influenced by sex ratios in young age, although adult sex ratios are also considered as secondary information.</p> <p><i>Source: Sex ratio data from UN Population Division and Central Intelligence Authority (2011)</i></p>	<p>Proxy measure for social norms and practices that undervalue daughters and value sons.</p>
<b>Fertility Preferences</b> <i>Gender bias in fertility preferences using the share of males as the last child</i>	<p>Percentage share of males as the last child in the household, calculated from household surveys.</p> <p><i>Source: Demographic Health Surveys, Multiple Indicator Cluster Surveys and selected household surveys</i></p>	<p>Proxy measure of the preference of parents towards the gender of their children, where a greater share of sons as the last child represents higher son preference.</p>
<b>Restricted Resources and Entitlements</b>		
<b>Access to Land</b> <i>Women's legal and de facto access to agricultural land</i>	<p>Score based on women's legal rights to own and/or access agricultural land.</p> <p>Value based on the following scale:</p> <p>0: Women have the same legal rights as men to own and access land</p> <p>0.5: Women have equal legal rights with men to own and access land, but discriminatory practices restrict women's access to and ownership of land in practice</p> <p>1: Women have no/few legal rights to access or own land or access is severely restricted by discriminatory practices</p> <p><i>Source: country-specific sources from SIGI country notes</i></p>	<p>Captures formal, informal laws and practices that restrict women's access to land.</p>
<b>Access to Credit</b> <i>Women's legal and de facto access to bank loans</i>	<p>Score based on women's legal access to credit.</p> <p>Value based on the following scale:</p> <p>0: Women have the same rights to access credit and bank loans as men</p> <p>0.5: Women only have the right to access some kinds of credit (for example only through microcredit), or they have rights but in practice they face discrimination in accessing credit</p> <p>1: Women have no/few rights to access credit or access is severely restricted by discriminatory practices</p>	<p>Captures formal, informal laws and practices that restrict women's access to credit and bank loans.</p>

	<i>Source: country-specific sources from SIGI country notes</i>	
<b>Access to Property other than Land</b> <i>Women's legal and de facto access to other types of property, especially immovable property</i>	<p>Score based on women's legal access to property other than land.</p> <p>Value based on the following scale:</p> <p>0: Women have equal legal rights to own and administer property other than land as men</p> <p>0.5: Women only have rights to own and administer some kinds of property (i.e. goods they received from their parents such as inheritance or dowry) or they have equal legal rights but in practice they face discrimination to owning and administering property</p> <p>1: Women have no/few/unequal legal rights to own or administer property other than land or their access is severely restricted by discriminatory practices</p> <p><i>Source: country-specific sources from SIGI country notes</i></p>	<p>Captures formal, informal laws and practices that restrict women's access to property other than land.</p>
<b>Restricted Civil Liberties</b>		
<b>Access to public space</b> <i>The level of restrictions women experience in freely and equally accessing public space</i>	<p>Score based on legal restrictions or discriminatory practices affecting women's access to public space, for example the restrictions on women's choice of domicile, restricted ability to visit family and friends, requirements for husband's approval apply for a passport or widespread threats of political violence</p> <p>Value based on the following scale:</p> <p>0 = No legal restrictions and no discriminatory practice is reported</p> <p>0.5 = No legal restrictions, but discriminatory practices widely reported</p> <p>1 = There are legal restrictions or discriminatory practices are widespread</p> <p><i>Source: country-specific sources from SIGI country notes</i></p>	<p>Captures legal restrictions on women's access to public space and practices that restrict women's equal participation in the public sphere.</p>
<b>Political Voice</b> <i>The level of discrimination against women with respect to political participation</i>	<p>Variable based on average of two components:</p> <p>a) Political participation</p> <p>b) Quotas</p> <p><b>a) Political participation</b>  Percentage of women in national parliament (inversed to fit 0-1 scale where 0 represents equality)</p> <p><i>Source: Inter-Parliamentary Union (February 2012)</i></p> <p><b>b) Quotas</b>  Score assigned based on the existence of legal quotas to promote women's political participation at national and/or sub-national levels.</p> <p>0: There are legal quotas to promote women's political participation at national and sub-national levels</p>	<p>A proxy measure of discriminatory attitudes towards women's political and civic participation</p>

	<p>0.5: There are legal quotas to promote women’s political participation at national or sub-national levels  1: There are no legal quotas to promote women’s political participation</p> <p><i>Source: The Quota Project (International IDEA and Stockholm University) or UN Women Progress of the World’s Women 2011 report</i></p>	
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Note: 1) In cases where no or insufficient information exists, variables are not assigned a value; 2) The legal indicators are assessed based on all applicable legal frameworks, including civil law, religious law, customary law and traditional law; 3) Where data is only available for one component of a variable, the score is based on the component where data is available.

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<sup>i</sup> Other gender indices include the World Economic Forum Global Gender Gap Index and the UNDP Gender Inequality Index.

<sup>ii</sup> The method of polychloric principal component analysis is used to extract the common information of the variables corresponding to a sub-index. This method is used when there are both continuous and categorical variables. See Branisa et al (2009) for more information on this method.

<sup>iii</sup> Countries are included in the SIGI if they are non-OECD or non-European Union countries; they have a population of more than 1 million; and subject to the availability of data on discriminatory social institutions. Please refer to OECD Development Centre (2012) for further information.

<sup>iv</sup> The UNDP Gender Inequality Index is the replacement for the Gender-Related Development Index (GDI) and Gender Empowerment Measure (GEM)

<sup>v</sup> Note that the Europe and Central Asia grouping excludes OECD and EU countries.

<sup>vi</sup> Note that the World Economic Forum grouping for Europe and Central Asia includes OECD and European Union countries, while the SIGI grouping excludes these countries.

<sup>vii</sup> Note that SIGI scores range between 0-1 where 0 represents low discrimination and 1 represents high discrimination. Global Gender Gap scores range between 0-1, where 0 represents high inequality and 1 represents low inequality. Gender Inequality Index scores range between 0-1, where 0 represents low inequality and 1 represents high inequality.

<sup>viii</sup> Latin America and the Caribbean includes: Argentina; Bolivia; Brazil; Colombia; Costa Rica; Cuba; Dominican Republic; Ecuador; El Salvador; Guatemala; Haiti; Honduras; Jamaica; Nicaragua; Panama; Paraguay; Peru; Trinidad and Tobago; Uruguay; and Venezuela.

<sup>ix</sup> South Asia includes: Afghanistan; Bangladesh; Bhutan; India; Nepal; Pakistan; and Sri Lanka.

<sup>x</sup> Europe and Central Asia includes: Albania; Armenia; Azerbaijan; Belarus; Bosnia and Herzegovina; Croatia; Georgia; Kazakhstan; Kyrgyzstan; The Former Yugoslav Republic of Macedonia; Republic of Moldova; Russian Federation; Serbia; Tajikistan; Turkmenistan; Ukraine; and Uzbekistan.

<sup>xi</sup> Middle East and North Africa includes: Algeria; Bahrain; Egypt; Iran; Iraq; Jordan; Kuwait; Lebanon; Libyan Arab Jamahiriya; Morocco; Palestinian Authority; Oman; Saudi Arabia; Syrian Arab Republic; Tunisia; United Arab Emirates; and Yemen.

<sup>xii</sup> East Asia and the Pacific includes: Cambodia; China; Chinese Taipei; Fiji; Hong Kong Special Administrative Region of China; Indonesia; Democratic People's Republic of Korea; People's Democratic Republic of Lao; Malaysia; Mongolia; Myanmar; Papua New Guinea; Philippines; Singapore; Thailand; Timor-Leste; and Viet Nam.

<sup>xiii</sup> Sub-Saharan Africa includes: Angola; Benin; Botswana; Burkina Faso; Burundi; Cameroon; Central African Republic; Chad; Congo; The Democratic Republic of the Congo; Côte d'Ivoire; Equatorial Guinea; Eritrea; Ethiopia; Gabon; Gambia; Ghana; Guinea; Guinea-Bissau; Kenya; Lesotho; Liberia; Madagascar; Malawi; Mali; Mauritania;

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Mauritius; Mozambique; Namibia; Niger; Nigeria; Rwanda; Senegal; Sierra Leone; Somalia; South Africa; Sudan; Swaziland; United Republic of Tanzania; Togo; Uganda; Zambia; and Zimbabwe.

<sup>xiv</sup> Similar results are found using the overall SIGI value.

<sup>xv</sup> Similar results are found using 2012 SIGI Discriminatory Family code sub-index instead of the overall SIGI value.

<sup>xvi</sup> Klasen, S. and C. Wink (2002) A Turning Point in Gender Bias in Mortality? An Update on the Number of Missing Women. *Population and Development Review* 28; Klasen, S. and C. Wink (2003) Missing Women: Revisiting the Debate. *Feminist Economics* 9, 263-299