The Parliament Paradox: Rwanda as a Case Against Composite Gender Indices

by

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Abstract

The purpose of this study is to use Rwanda as a case study to support the argument that composite gender indices should be set aside in favor of examining a wide range of individual gender-related indicators. It will begin by examining some of the problems with the six major composite gender indices. Then, it will use these identified problems to inform a critique of composite indices as a whole, even those not related to gender. Finally, it will examine Rwanda, the country with the highest representation of women in parliament in the world, in order to prove that individual gender-related indicators facilitate a more comprehensive and precise understanding of gender equality in a given country. It will conclude that composite gender indices have too many disadvantages to be an asset in studying gender equality. Observers would thus do better to analyze countries’ progress at reducing gender bias on the basis of careful examination of a host of individual indicators.
Introduction

In 2015, Rwanda’s *The New Times* heralded the country as the best place to be a woman in Africa (Karuhanga, 2015). Wikipedia states that “As of 2018, the African country Rwanda ranks in the top 5 countries for gender equality” (Wikipedia, 2019). The Huffington Post calls Rwanda “A Success Story of Women’s Empowerment,” citing its “stable and remarkably corruption-free government, where women hold key leadership roles and whose policies are cited as a model for gender inclusiveness” (Amour-Levar, 2018). The World Economic Forum praises Rwanda’s high female labor force participation rate as well as its number of female parliamentarians, claiming that the government has enacted a host of pro-women laws that have reduced gender bias in the country (Thomson, 2017).

In 2008, Rwanda became the first and only country in the world with a majority-female lower house of Parliament (Burnet, 2011: 305). Females composed 61.3 percent of the seats in the lower house after the September 2018 elections (Kwibuka, 2018), thus making it the country with the highest representation of women parliament in the world (Berry, 2015: 2). This is a noteworthy accomplishment that should be celebrated and is often the foundation for the notion that the country has substantially reduced gender bias. However, if one were to look beyond these headlines and attempt to use composite gender indices to evaluate how well Rwanda has done at increasing women’s empowerment and well-being, they would end up very confused.
Composite gender indices are compound measures of gender inequality and women’s position in a given country. Using a variety of aggregation rules, they combine various individual indicators, such as women’s share of legislative seats, the maternal mortality ratio, or female vs. male mean years of schooling, into single summary numbers that are easy to rank. These rankings facilitate comparisons of levels of gender equality across countries and changes in gender inequality over time within countries (van Staveren, 2013: 339-340). According to the United Nations Development Programme (UNDP), composite indices should have a strong and applicable theoretical foundation; lead to clear and simple interpretation; showcase the relationships between their dimensions; use well-defined, globally comparable, and adequate indicators; be able to stimulate policy debate, analysis, and advocacy; and build on current insights, knowledge, and experiences in the field (UNDP, 2015: 10).

When the UNDP first introduced composite indices, people agreed that they had a high potential to spur academic research, policy analysis, and country monitoring and evaluation. As of the early 2000s, however, these indicators had not actually shaped much discussion or debate about gender equality, nor had they led to increased attention to and policies regarding the issue (Schüler, 2006: 164). Instead, they had resulted in confusion about and misinterpretation of the underlying causes of gender inequality. Experts and scholars continue to identify problems with composite indices, and they are frequently criticized and reworked. Upon closer examination, it becomes clear that, despite these revisions, composite indices come with a host of drawbacks that are not worth their benefits.
This thesis will use Rwanda as a case study to support the proposition that composite gender indices are confusing and misleading. Thus, one would gain a more effective understanding of a country’s state of gender inequality through carefully examining a wide array of individual gender-related indicators. The first two chapters will discuss the various advantages and drawbacks of both specific composite gender indices and these indices in general. The first chapter will evaluate the six composite gender indices with the greatest number of hits on Google Scholar as of April 11, 2019. The Gender Development Index (GDI) (5,650 hits), the revised Gender Development Index (nGDI) (5,650 hits), the Gender Empowerment Measure (GEM) (6,150 hits), the Gender Inequality Index (GII) (5,790 hits), the Global Gender Gap Index (GGGI) (3,360 hits), and the Social Institutions and Gender Index (SIGI) (1,290 hits) are, by this criterion, likely the most widely known and studied composite gender indices. The second chapter will present a critique of composite gender indices in general, addressing nine major drawbacks of these indices that substantially outweigh their three major advantages.

The third chapter will use Rwanda to show how, to make it easier for scholars to track how well the country is progressing toward gender equality, they should opt for examining a wide array of individual gender-related indicators instead of a single composite gender index. It will first examine Rwanda’s heterogeneous performances on the four major composite gender indices that are still being produced today, from approximately 2000 to 2015. It will then contrast Rwanda’s perplexing showings on these indices to its performance on ten individual indicators during this same time period, using statistics from the World Bank World Development Indicators and the
Demographic and Health Surveys (DHS) STATcompiler. Rwanda has successfully improved its performance on five of these indicators: adolescent fertility rate, maternal mortality ratio, female labor force participation, female net primary enrollment, and the share of national lower house or unicameral parliamentary seats held by women. However, it has done less well at improving its performance on the other five indicators: female share of the HIV-positive population, female literacy rate, female vulnerable employment as a share of female total employment, percentage of the female population aged 15-49 with secondary or higher levels of education, and percentage of the female population who have suffered physical or sexual violence.

Chapter 3 will then hypothesize about some of the reasons why Rwanda has performed much better on the former indicators than the latter and use this analysis to underscore and further the critiques of composite gender indices. It will argue that, in the case of Rwanda, it is important to study individual indicators that are specifically relevant to disadvantaged women in order to understand the disparate effects that various dimensions of gender inequality have on women from different backgrounds. Overall, this thesis will shed light on the ways in which composite gender indices obscure important specifics that can be realized upon examination of a host of individual indicators. They are thus are disadvantageous to studying and understanding the nuances of gender inequality in different contexts and countries.
Chapter 1: The Major Composite Gender Indices

This chapter will review the six different composite gender indices with the greatest number of hits on Google Scholar as of April 11, 2019, which were listed in the introduction to this thesis, in order to illuminate some of the ways in which they are troublesome. Appendix Tables 1-6 outline the basic elements of each index. Many of these indices share common problems. Their multifaceted composition can obscure important lessons about particular dimensions of gender inequality. They are often highly correlated overall human development and Gross Domestic Product (GDP) per capita, giving short shrift to actual gender inequality. Many combine women’s absolute and relative achievements, conflate indicators of well-being with indicators of empowerment, and fail to account for interactions among their individual indicators. Composite indices can be insensitive to the direction of gender gaps (which do not always favor men) and their different implications. In addition, they are often difficult to interpret due to their use of heterogeneous indicators, complex calculations, and disparate aggregation and weighting schemes.

1.1. Gender Development Index (GDI) (UNDP, 1995-2009)

The UNDP’s Gender Development Index (GDI) was one of the first composite gender indices. The UNDP established the GDI in its 1995 Human Development Report (HDR) as a measure of gender-sensitive human development (Klasen, 2017: 4). The GDI was designed to measure a country’s overall development achievements, discounted for gender inequalities. Its depiction of gender inequality was in terms of its impact on overall human development (UNDP, 2018a). Thus, it
used the same dimensions and indicators as the UNDP’s Human Development Index (HDI). The GDI had to be compared to the HDI to have significant meaning, and the larger the gap between the HDI and the GDI, the greater the level of gender inequality in a society (Klasen, 2017: 4). Scores ranged from 0.000 to 1.000, where 1.000 signified perfect gender equality (UNDP, 1995: 76). The composition and aggregation of the GDI is detailed in Appendix Table 1.

There were various problems with the GDI, which is why the UNDP discontinued it in 2010. Perhaps its most significant problem was its close association with the HDI. The GDI used was simply the HDI, a measure of human development, adjusted for gender inequality (Dijsktra, 2006: 275). It could not be interpreted apart from a country’s HDI (Schüler, 2006: 163). It did not validly measure gender gaps, although it was often problematically misinterpreted as doing so (Klasen, 2017: 5). Rather, it signified the degree to which gender inequality diminished human development (Klasen & Schüler, 2011: 4). In practice, accordingly, the GDI amounted to little more than another measure of the absolute welfare of a country (Dijkstra, 2006: 278). The index mixed a country’s levels of female income, education, and health with its overall levels of these things. Thus, if a country had large gender disparities but also high human development, it could receive receive a high score on the GDI despite serious inequalities between women and men (Dijkstra & Hanmer, 2000: 42).

A second disadvantage of the GDI was that it was not sensitive to the direction of gender inequality. The index did not reveal whether gender disparities favored men or women. Therefore, the GDI penalized countries for inequalities that
favored women (Permanyer, 2008: 100). Inequalities that favor women, however, sometimes result from equity-focused programs and policies designed to help them get to an equal footing with men, which actually advance gender equality. In some cases, accordingly, the GDI may actually have penalized societies that were so successful in fighting gender inequality that females surpassed males on one or more of the relevant indicators. Insensitivity to the direction of gender inequality also meant that if women had an advantage on one dimension while men had an advantage on another, the index would have aggregated the two deviations (rather than allowing one to offset the other) and made gender inequality seem more severe than it actually was. Thus, the index would have treated a country with inequalities hurting women in all three dimensions the same way that it treated a country with equally-sized gaps favoring women on some dimensions and men on others, producing a misleading depiction of the level of gender inequality in a country (Klasen, 2017: 5).

A third problem with the GDI was that the last step in its calculation involved taking the arithmetic mean of its three dimensional indices. However, this formula meant that if one factor was a clear outlier, with either a very low value or a very high value, it could outweigh others and hide important disparities. For example, if a country had a very high female life expectancy because it had a high GDP that it could channel into quality healthcare programs, this fact could have concealed a very low female literacy rate, which is also an important dimension of gender equality. Achieving a high score in one dimension could have facilitated a high composite score for the index, which meant that people examining the GDI might have
mistakenly overlooked a country’s poor performance on a key dimension of gender inequality (Charmes & Wieringa, 2003: 429).

A fourth valid criticism of the GDI was that its earned income component dominated it. The HDI is correlated with GDP per capita. Due to the GDI’s status as simply a gender disparity-discounted version of the HDI, it too was correlated closely with GDP per capita. These two things are certainly related, but they are far from direct parallels. However, for most countries, the gap in earned income constituted over 90 percent of the overall gender penalty for the composite index (Charmes & Wieringa, 2003: 430). This could in part be attributed to the fact that when an individual indicator like the level of female secondary education contributes to another indicator in the same composite index, such as earned income, the latter indicator will implicitly receive more weight than the index’s algorithm assigns to it (Dijkstra & Hanmer, 2000: 47) Countries with low earned income gaps were thus penalized inadequately for differences in life expectancy and education, which are arguably more important for gender development (Jütting et al., 2008: 78). This domination by the earned income component is even more problematic given that differences in earned incomes do not necessarily equal differences in access to consumption, since consumption depends partly on how income is distributed within households (Klasen, 2018: 12). Overemphasizing earned income is also problematic because income can increase from negative activities, such as participating in crimes and drug-dealing. It can also increase alongside the depletion of natural resources and does not include unpaid work (Hirway & Mahadeyia, 1996: 89).
A fifth disadvantage of the GDI was that due to its use of the arithmetic mean to aggregate its three dimensions, it implied that all three of these dimensions were perfect substitutes for one another, such that it would be reasonable to tolerate a lower female life expectancy in a country that had high levels of female literacy and schooling. Such a tradeoff would not be reasonable, however, because women need to have a substantial lifespan to help make their access to education worthwhile (Tisdell et al., 2001: 388). As Jeni Klugman, Francisco Rodríguez, and Hyung-Jin Choi point out, “This would seem to run counter to the intuition that, the worse the deprivation in a particular dimension, the more urgent the efforts to improve achievements in that dimension should be regarded” (Klugman et al., 2011: 12).

1.2. Revised Gender Development Index (nGDI) (UNDP, 2014-present)

Because of the criticisms summarized in the previous subsection, the UNDP discontinued the original GDI in 2010. In the 2014 HDR, however, the UNDP introduced a revised version of the index, the revised Gender Development Index (nGDI), in order to remedy some of the previously discussed problems with the GDI (Klasen, 2017: 17). It differs from the original GDI in three main ways. First, it does not use the aversion to inequality parameter and just takes the ratio of the female to male HDI. Second, it uses the geometric rather than the arithmetic mean to aggregate its three dimensions in order to ensure that less inequality in one dimension does not overcompensate for more in another. Finally, it uses the mean and expected years of schooling rather than literacy and enrollment rates to measure the acquisition of knowledge (Klasen, 2017: 7). Scores range from 0.000 to 1.000, with 1.000 again indicating perfect equality. However, on the nGDI, countries can receive a score
greater than 1.000 if their gender inequality favors women (UNDP, 2017a) More
details about the nGDI’s makeup and aggregation scheme can be found in Appendix
Table 2.

Despite this 2014 revision, there are still many problems with the nGDI. First,
the earned income component dominates the nGDI, just as it did in the original GDI,
because earned income is an input variable that contributes to the other output
variables included in the index, life expectancy at birth and years of schooling.
Accordingly, the nGDI, like its predecessor, is still more of a proxy for GDP per
per capita than for gender equality, the more so because the earned income variable does
not distinguish how that income is distributed within households (Klasen, 2018: 16).
The nGDI still does not account for the ways in which its variables interact, which
means that indicators, such as earned income, that contribute to other dimensions are
effectively weighted more heavily in the overall calculation and continue to distort the
index.

A second disadvantage of the nGDI is that it uses the same dimensions as the
HDI (Klasen, 2018: 17). It is less dependent on the HDI than the original GDI, and a
country with a high score on the HDI will not necessarily achieve a high score on the
nGDI. However, it still assumes that the indicators that are most representative of
human development are also most representative of gender inequality. Though these
two things are connected, they are not the same, and they should not be treated as
such. Their indicators should be analyzed and chosen distinctively.

A third problem with the nGDI is that advantages on one dimension can still
make up for disadvantages on another. For example, Stephan Klasen details how
higher levels of female than male education can make up for low female earned incomes. Therefore, the nGDI can be greater than 1.000, for example, in countries where women have both greater longevity and more schooling than men. Although Klasen views this kind of compensation as an advantage of the nGDI (Klasen, 2018: 17-18), it is actually one of the newer index’s major disadvantages. When higher levels of female than male education make up for low female earned incomes in a given country and thus produce a higher score on the nGDI, policymakers may well overlook how low female earned incomes, which can be a significant source of bias in their own right, impact gender inequality in a country. According to Klasen, “By studying the ratio of the different components, one can, however, readily see whether the good performance is due to small gaps or ratios above 1 in a component compensating for ratios below 1 in another” (Klasen, 2018: 18). This assertion, however, begs the question of why having a composite index is desirable in the first place A better alternative, as will be argued in Chapter 2, might well be to just simply observe the individual indicators.

On the nGDI, countries can receive a score greater than 1.000 for having gender gaps that favor women. However, a fourth disadvantage of this index is that it ranks countries at the top of its list not for having the highest score on the index, but for having a score closest to 1.000. Therefore, countries with gaps favoring women are not ranked as highly as they would be otherwise (Klasen, 2017: 17). However, as previously discussed, gender gaps favoring women and those favoring men are the result of very different processes and circumstances, and gender gaps that favor women are often the result of policies designed to increase gender equality and
position women on an equitable footing with men in all aspects of life. The nGDI gives equal weight to deviations from equality that benefit both genders and thereby prioritizes equality over equity (Klasen, 2017: 17). However, this fact means that the index ignores the different implications of gender gaps, depending on which gender they favor. Additionally, the countries that receive scores higher than 1.000 typically do so because women live vastly longer than men, despite the different goalposts in place to partly adjust for this fact. For example, Qatar receives a score of 1.031 on the 2017 nGDI. However, the male value for estimated Gross National Income (GNI) GNI per capita is more than double the female value (UNDP, 2018c: 34). The multidimensional nature of this index would obscure this large and important disparity and, rather, make it seem like men are at an consistent disadvantage in the country.

A fifth drawback of the nGDI is that, like the original GDI, it assigns equal weight to each of its three dimensions. This equal weighting might seem at first thought like a good idea, but as Angela Hawken and Gerardo L. Munck argue, “This weighting choice seems to be largely a default option used less out of reasoned analysis than a sense that agnosticism regarding all possible weighting schemes somehow constitutes a justification for assigning equal weights to indicators and conceptual dimensions” (Hawken & Munck, 2013: 824). Assigning equal weights to the three dimensions of the nGDI implies that each of these dimensions is equally evident of gender equality. Arguably, however, the amount of income a woman earns relative to a man is less representative of gender equality if gender bias exists in the distribution and control of whatever income each partner produces for the household.
Therefore, it might not be as correlated with gender equality itself as an indicator like average or mean years of schooling. In addition, different indicators have different levels of salience and are more or less indicative of gender equality in different contexts and countries. If one were to analyze individual indicators, one could prioritize the ones that were most salient in a given society.

1.3. Gender Empowerment Measure (GEM) (UNDP, 1995-2009)

The Gender Empowerment Measure (GEM) was another UNDP composite gender index discontinued in 2010. This index attempted to measure the extent to which women can exercise different kinds of power. It was designed to capture female relative to male participation in economic, political, and professional realms. Scores ranged from 0.000 to 1.000, with 1.000 indicating perfect equality (UNP, 1995: 73). The UNDP in 2010 dropped the GEM in favor of the new Gender Inequality Index (GII), which will be discussed later. The GEM deserves scrutiny, however, not just because it worked its way into an impressive number of scholarly works (as of April 11, 2019, it had 6,150 Google Scholar citations), but also because its deficiencies are indicative of some larger problems with gender indices.

The GEM had a couple of problems similar to those of the original GDI. First, like the GDI, the GEM weighted deviations from equality that favored women equally to those from that favored men (Hawken & Munck, 2013: 820). Secondly, its rule for aggregating the three dimensions was to take their arithmetic mean, which means that one outlier dimensional outlier could skew the index, giving inappropriately short shrift to the other two (Charmes & Wieringa, 2003: 429). In addition, this weighting scheme was no less arbitrary than that of the GDI, and did
not account for the way in which the different dimensions influenced another and were more or less salient in different contexts.

A fourth problem with the GEM was it used GDP per capita in PPP$ to compare overall income levels for men and women. These measurements tended to dominate GEM scores, as they did in the original GDI and continue to do in the nGDI. Therefore, the GEM again was more of a proxy for a country’s GDP per capita than for its level of gender equality. High-income countries were usually at the top of the GEM rankings and low-income countries near the bottom, even if their earned income levels showed little disparity (Klasen & Schüler, 2011: 9).

A fifth disadvantage of the GEM was that it lacked a clear theoretical foundation (Hawken & Munck, 2013: 819-820). The UNDP indices were heavily informed by the capabilities perspective on human development associated with Amartya Sen. According to Irene van Staveren, this perspective regards human development as a process that requires four things: access to resources; enabling institutions; capabilities (the skills and opportunities necessary to use resources); and functionings (the states of well-being and doing that result from exercising one’s capabilities) (van Staveren, 2015: 349). The differences in the opportunities of men and women to make their own choices, or capabilities, are most indicative of inequality of empowerment, which the GEM attempted to measure. Not all people value the same things, and, therefore, they will not all make the same choices. What matters is that women have equal opportunities and capabilities to make their own choices, not that they actually make all the same ones. However, the GEM did not
measure this kind of equality. In practice, it focused on resources, institutions, and functionings, rather than on capabilities (Adjei, 2015: 66).

For example, the GEM’s indicator of the share of legislative seats held by women and its stipulated goalpost of a 50/50 male-female split in representation focused on equality of results and functionings rather than on equality of opportunities and capabilities. A country could have a high percentage of women in parliament, particularly because of quotas, but these women still might not have equal opportunities to act and contribute to the political process once in office (Hawken & Munck, 2013: 817). Quotas often act as a cover for underlying gender inequality. As Stephan Baffour Adjei writes, “A country may provide resources by way of policy commitment (e.g., affirmative action) but if women themselves lack the ability to exercise choice, the provision of structural opportunities per se will not result in empowerment” (Adjei, 2015: 72). For example, parliament is not always the center of political power in a country. Sometimes, the executive has most of the power while the legislature is little more than a rubber stamp. If this is the case, the share of legislative seats held by women will not be a valid indicator of women’s political power. If parliament does have power, what matters most is not the percentage of women in it, but that women’s voices and concerns are heard and considered, as is not the case in Rwanda and will be discussed in Chapter 3. Parliament is often dominated by male voices and decisions, no matter the number of women represented in it (Adjei, 2015: 65-66). This indicator is an example of how, in practice, the GEM measured functionings rather than capabilities even though “empowerment” is more closely associated with capabilities.
1.4. Gender Inequality Index (GII) (UNDP, 2010-present)

In 2010, when the UNDP discontinued the GEM and the GDI due to some of their previously discussed problems, it established the Gender Inequality Index (GII). The GII was designed to measure inequalities between men and women of both well-being and empowerment, both functionings and capabilities. According to the UNDP, “none of the GII’s underlying measures pertain to a country’s general level of development, so developing countries can perform relatively well if gender disadvantages are limited” (UNDP, 2010: 90). The UNDP claims that the GII measures the loss of achievement in key areas of human development that result from gender inequality (UNDP, 2010: 89-90). Scores range from 1.000 to 0.000, with 0.000 signifying perfect equality. Appendix Table 3 describes the GII’s composition and aggregation procedure.

The first disadvantage of the GII is that, as shown in Appendix Table 3, the GII uses a very complex calculation that is difficult to understand. It employs three different kinds of means, which is confusing. Furthermore, it is impossible to disaggregate the GII by dimension, which makes it harder to interpret. Thus, one cannot determine the respective contributions of its constituent indicators in order to understand the specific drivers of gender inequality in a given country (Permanyer, 2013a: 15).

A second drawback of the GII is that, despite its designers’ assertion that it measures gender bias uncontaminated by a country’s level of overall affluence (UNDP, 2010: 90), it combines measures of absolute and relative inequality. Some of its constituent indicators, such as maternal mortality ratio and adolescent fertility rate,
do not have male counterparts. Therefore, they are measures of women’s absolute welfare. Others are measures of women’s achievements in relation to men’s, such as the proportions of the labor force and parliament that are made up of women. As Iñaki Permanyer writes:

If all indicators were women specific, we might be talking about a woman’s status measure - that is, an index that could be used to assess women’s absolute achievement levels. If all indicators were available and comparable for women and men, we might have the possibility of constructing a gender inequality measure - that is, an index that could be used to assess the relative position of women vis-à-vis men. By including the two kinds of indicators simultaneously, the GII becomes an odd mixture halfway between both concepts, thus obscuring even more the interpretation of an already complicated index (Permanyer, 2013a: 7)

How women fare in general and how women fare in relation to men are two very different things, and composite indices such as the GII become incoherent when they attempt to measure both of them (Hakwen & Munck, 2013: 820). Indicators of absolute well-being are also often highly correlated with GDP per capita. Therefore, when the GII combines these two kinds of measures, it conflates a country’s overall affluence with its level of gender inequality. Since these indicators do not have male counterparts and are thus are compared to assumed norms of zero, their values are often implicitly given disproportionate weight in comparison to indicators on which low male values can offset low female values (Gaye et al., 2010: 15). Low-income countries thus perform badly on this index, regardless any accomplishments in its other dimensions (Klasen, 2018: 14-15). Contrary to the UNDP’s claim, the GII, like the original GDI that preceded it, is another composite gender index on which rich countries with high levels of gender inequality are likely to score well and poor countries with low levels of gender inequality are likely to score badly.
A fourth disadvantage of the GII is that, similarly to the some of the previously discussed indices, it confusingly combines measure of well-being and empowerment. The UNDP implicitly recognized this as a problem in 1995 when it created the GDI to measure women’s well-being and the GEM to measure women’s empowerment (Klasen & Schüler, 2011: 27). One of the GII’s dimensions is focused explicitly on women’s “empowerment,” but one of its other dimensions (“health”) measures women’s well-being. This fact means that when people examine the GII, if a country does poorly, it is unclear whether it is because of high gender gaps in functionings, such women’s level of health, capabilities, such as women’s ability to run for political office, or both. It is important to know the answer to this question because these two kinds of gender inequality call for different policies, programs, and solutions. Often, empowerment leads to well-being, such as when schooling provides lasting literacy, so these two kinds of indicators come at different points in the causal chain and thus need to be measured differently. Therefore, the mixing of well-being and empowerment makes interpreting this index even more difficult. It also implies that people are willing to tolerate tradeoffs between these two completely different factors, which cannot be allowed if a country hopes to obtain holistic gender equality (Klasen, 2017: 3). For example, despite the GII’s use of the geometric mean to aggregate the scores on its three constituent dimensions (which greatly reduces the likelihood that a good performance on one dimension will compensate fully for a poor performance on another), a high share of legislative seats held by women may still to some extent offset a gender gap in education (or a high maternal mortality
ratio) to the extent that the country’s final score on the GII becomes a misleading indicator of its prevailing level of “gender inequality.”

A fifth pitfall of the GII is that its broad country coverage means that its data on maternal mortality is mostly imputed for developing countries that lack the technology and databases to accurately measure this indicator. Since a significant indicator in the GII is based on imputed data, the index is inherently less accurate than it would be otherwise (Klasen, 2017: 15).

A sixth drawback of the GII is that the gender equality reference standard is an arbitrary measure that is not reported anywhere. As detailed in Appendix Table 4, this reference standard is computed by taking the geometric mean of arithmetic means of the male and female values for each indicator, without regard for inequality. In regards to this problem, the GII is worse than the GDI, since at least one knew that the GDI with perfect equality was equivalent to a country’s HDI (Klasen, 2017: 15).

1.5. Global Gender Gap Index (GGGI) (World Economic Forum, 2006-present)

The World Economic Forum (WEF’s) Global Gender Gap Index (GGGI) examines a broad spectrum of indicators, each of which is a ratio of male-to-female achievement. The GGGI is designed to rank countries based on the size of their gender gaps, rather than on the basis of women’s overall levels of well-being and empowerment. Scores range from 0.000 to 1.000, with 1.000 evidencing perfect equality (World, 2018a: 4). The composition and construction of the GGGI is detailed in Appendix Table 5.

The first disadvantage of the GGGI is that, much like the UNDP with the GEM, the WEF never provided a theoretical rationale for its choice of indicators and
dimensions. It is unclear what the index is trying to measure, and its large numbers of dimensions and indicators makes it difficult to interpret. Moreover, many countries lack data for at least one of the individual indicators. Therefore, it is harder to calculate comparable GGGIs across countries, which makes it difficult to make comparisons across countries and to compare change over time between them (Klasen, 2017: 7). This disadvantage could also complicate the analysis of changes over time within countries, if, in a particular year, data suddenly began to appear for an indicator on which data had previously been unavailable.

Although the WEF claims otherwise, a second drawback of the GGGI is that the index comprises both indicators of well-being, or functionings, and empowerment, or capabilities. As previously discussed, well-being is not empowerment, and separate composite indices are needed to measure each type of advantage (Klasen, 2017: 7). For example, healthy life expectancy is a variable that expresses a functioning, the state of living healthily, while net enrollment rates express a capability, the opportunity to attend school. These are two different kinds of gender inequality that come at different points in the causal chain in which capabilities lead to functionings, and, therefore, should not be situated side-by-side in the same index.

A third problem with the GGGI is that it assigns higher weight to indicators whose standard deviations are lower. The purpose of this weighting is to ensure that indicators whose values are widely dispersed do not have an unduly strong impact on the combined dimensional index, which was one of the major problems with the GEM (Hawken & Munck, 2013: 825). However, though this weighting scheme
ensures that individual indicators cannot skew the dimensional indices, there is nothing in place to ensure that one dimension cannot skew the composite index. The GGGI uses an arithmetic mean to compile its four dimensions and calculate a country’s overall score. Therefore, one dimensional outlier can still have a disproportionate effect on a country’s results on the index. For example, in aggregating the indicators into the political empowerment dimension, if a country has a very high proportion of women in parliament due to gender quotas, this statistic might highly influence the GGGI’s political empowerment dimension. Then, in aggregating the dimensions into the composite index, the political empowerment dimension would have an unduly strong impact on the composite index.


The Organization for Economic Cooperation and Development (OECD)’s Social Institutions and Gender Index (SIGI) focuses on discriminatory social institutions, defined as “formal and informal laws, attitudes and practices that restrict women’s and girls’ access to rights, justice and empowerment opportunities” (OECD, 2019a). The SIGI encompasses many dimensions that are not typically included in composite gender indices (Gaye et al., 2010: 7) and covers more categories of indicators than any of the other five previously discussed indices (Hawken & Munck, 2013). Its aggregation method and constituent indicators are described in Appendix Table 6. Scores range from 0 percent to 100 percent, with 0 percent indicating no gender discrimination (OECD, 2019d).

The primary disadvantage of the SIGI involves the heterogeneity of its indicators, which measure resources, institutions, functionings, and capabilities. Some
of its indicators do not have direct male counterparts, such as female genital mutilation. Some compare women’s and men’s performances on different indicators, while others simply examine rights that men and boys have that women and girls do not (Gaye et al., 2010: 7).

A second problem with the SIGI is that, unlike the other indices, it provides no clear guidelines for data collection. Its indicators are poorly-defined, and it is often unclear what specific pieces of data are used to quantify them (Hawken & Munck, 2013: 819). For example, the SIGI measures laws household responsibilities by determining “Whether women and men have the same legal rights, decision-making abilities and responsibilities within the household” and giving countries a score of 0, 0.25, 0.5, 0.75, or 1, where 1 indicates full equality and 0 indicates no equality (OECD, 2019b). However, OECD does not specific from where this information comes, nor how something as broadly defined and difficult to survey as “decision-making abilities” is measured.

A third drawback of the SIGI is that since it uses so many indicators, some of them are redundant. For example, in the “restricted civil liberties” dimension, experts are asked to evaluate both citizenship rights and access to justice, even though to deny citizenship rights is to deny access to justice (Hawken & Munck, 2013: 829).

The fourth pitfall of the SIGI is that using such heterogenous indicators makes this index unusually difficult to interpret, undermining simplicity, which is supposedly one of the greatest benefits of composite gender indices. Similarly, the SIGI’s constituent indicators have shifted from year to year, which makes comparisons over time more difficult.
1.7. Conclusions

This review has shown that, despite revisions and attempts to deal with some of the problems with specific composite gender indices, attempts to reduce a concept as broad as gender equality into a single index have led to the misinterpretation and misrepresentation of a complex phenomenon. Gender inequality is a multidimensional concept that includes issues of absolute and relative achievements; empowerment and well-being; and resources, institutions, functionings, and capabilities. Its dimensions interact in different ways, and have different meanings and levels of salience depending on their context. Combining these dimensions into a single summary number using complex calculations and weighting schemes can obscure important substantive issues that could be realized by examining indicators separately. This review of six widely-used composite gender indices suggests that it is more effective to examine individual indicators of gender inequality rather than attempt to synthesize them into one simple number. This kind of research ensures that the many different dimensions of gender inequality are all given their due analysis and consideration. The next chapter will take the lessons learned from examining these six specific indices and apply them to a broader discussion of the advantages and disadvantages of composite gender indices.
Chapter 2: Advantages and Drawbacks of Composite Indices Related to Gender

The problems with the specific composite gender indices discussed in the previous chapter are indicative of the larger problems with composite indices in general, even those unrelated to gender. Composite gender indices have advantages: their simplicity facilitates greater publicity of gender issues, they can increase the likelihood of policies tackling gender inequality, and to the extent that one imprecisely measured indicator is counteracted by several more precisely measured indicators they are less sensitive than individual indicators to measurement error. However, composite gender indices also have disadvantages: their multifaceted composition obscures important nuances and lessons, their designers do not always give persuasive justifications about the indicators included and weighting schemes incorporated, and interactions among indicators are not taken sufficiently into account. Composite gender indices also often combine absolute with relative achievements, stock with flow variables, and gender gaps that favor men with those that favor women. They sometimes cannot be accurately produced for certain countries due to a lack of reliable data, and their broadness and simplicity often leads to misguided policies. If one wanted to effectively examine the state of gender inequality in a country, one might well do better to study countries’ scores on specific individual indicators to gain a more valid impression of gender bias in a particular country.
2.1. Advantages of Composite Gender Indices

Like all composite indices, composite gender indices have advantages as well as drawbacks. The first advantage of composite gender indices is that they produce simple, singular, eye-catching numbers. These values streamline the focus of attention on a specific issue, such as gender inequality and increase the likelihood of international coverage and holistic assessments of it (Michalos et al., 2011: 13). Their uniformity across many cases and use of a common measurement scale makes for more efficient comparisons of countries’ levels of gender equality, as well as interpretations of and predictions about gender-related change over time in individual countries (Gaye et al., 2010: 3). Additionally, composite indices’ simplicity means that they can be effective communication tools for many constituencies, such as the media, the general public, elected officials, and other prominent decision-makers (Booysen, 2002: 142). Their second advantage is that their simplicity and visibility send a clear message about when inequality is high in a country, making it easier for activists to call for policy changes and providing incentives for policymakers to pay attention to gender inequality (Dijkstra & Hamner, 2000: 42). A third advantage of composite indices is that they are potentially less distorted by measurement error than are certain individual indicators. Because they are composed of a number of individual indicators, there is a greater likelihood that, if one indicator is prone to measurement error, the accuracy of the others will overpower it and thus not unduly distort the picture of overall gender inequality in a country.
2.2. Disadvantages of Composite Gender Indices

Counterbalancing these acknowledged and potential benefits of composite gender indices are a number of drawbacks. The following subsections will detail nine of these indices’ major disadvantages to support the proposition that composite gender indices are troublesome and misleading.

2.2.1. Multidimensionality obscures important lessons. The first disadvantage of composite indices is that their multifaceted composition obscures important lessons and information that could be learned from scrutinizing each indicator individually. Because composite indices involve a variety of dimensions, it is often unclear exactly what they are trying to measure, especially in terms of cause and effect. They produce a single cumulative number, so it is difficult to know whether the individual dimensions and components are each contributing equally to gender inequality, or if particular indicators are intentionally or unintentionally overweighted. Complex aggregation schemes bury prominent problems and significant changes in specific dimensions (Michalos et al., 2011: 14). For example, when examining a specific country’s composite GII value, one would not know if female education rates, the maternal mortality ratio, or the female share of seats in parliament overwhelmingly affects the state of gender inequality in the country, or if it is due to some more balanced combination of the three. Additionally, if a country had an unusually high representation of women in parliament, but still low levels of female education and high rates of maternal mortality, a good performance on legislative representation might make the level of gender equality seem greater than it actually is.
2.2.2. Limited indicators. A second problem with composite gender indices is that they are limited in their use of individual indicators. In selecting individual indicators, composite indices first face a tradeoff between comprehensiveness and unwieldiness. Composite indices such as the SIGI, which cover a wider range of dimensions of gender equality are often criticized for being difficult to interpret. This point presents a paradox. The more indicators a composite index uses, the more thorough a picture of gender inequality it portrays, but the more difficult it is to interpret, which detracts from one of the major benefits of composite indices: their simplicity. As discussed in the previous chapter, well-being and empowerment are different, but equally important, kinds of gender equality. Female well-being can be high while empowerment is low, and female empowerment can be high while well-being is low (Klasen, 2017: 3). Each needs to be considered and dealt with to get a full picture of gender inequality. However, as the critiques of various composite gender indices evidence, it is not a good idea to combine them into a single index.

Possibly because using an abundance of indicators that encompass both well-being and empowerment makes composite indices more difficult to interpret, the most widely-used indicators are based on only a few individual indicators (Permanyer, 2010: 190-191). To be useful for cross-national and over-time comparisons, these indicators should be universally significant and data pertaining to them should be widely available (Booysen, 2002: 119). These requirements mean that certain possibly important individual indicators have to be omitted from the composite indices (UNDP, 2015: 2). For example, the GII and the nGDI, which are the most widely-cited composite gender indices, are made up of only three dimensions, each of
which includes no more than two indicators. However, gender equality arguably has more than just three dimensions, and each dimension is unlikely to be summarized adequately by one or two indicators. Additionally, individual indicators are not equally meaningful in all countries, and their relevance changes over time. However, since composite indices use the same indicators to compare all countries, they implicitly and unjustifiably assume universality (Permanyer, 2013b: 928). A wide range of individual indicators and dimensions require due consideration when examining a country’s level of gender inequality, but different indicators require different kinds of attention in different contexts.

With such limited indicators, choosing to incorporate even just one over another can make huge differences in scores and rankings (Permanyer, 2010: 197). For example, if violence against women is widespread in particular country but is omitted from a composite gender index, the country may be depicted as having less gender bias than it actually does, especially if it performs better on the included indicators than on violence against women. Additionally, because composite indices have to be based on globally available indicators to cover many countries, they cannot incorporate indicators like the incidence of female genital mutilation, which takes place only in certain countries (UNDP, 2015: 10).

To ensure simplicity and interpretability, composite indices must favor indicators for which a wide range of countries have data available. This necessity can have the effect of obscuring differences among women based on class, ethnic, and regional identities. For example, in measuring political representation, composite indices generally only examine the national legislature, to which elite, or wealthy and
educated, women are typically elected. Female representation at local levels of
government, which tend to incorporate less privileged women, does not appear in
composite indices. Analogously, in measuring economic activity, composite indices
generally only examine overall rates of labor force participation, rather than these
rates disaggregated into specific employment sectors. In some countries with high
female labor force participation women tend to be overrepresented in agricultural and
informal sectors, which indicates that women are more likely to be poor and live in
rural areas. In selecting these indicators, composite indices often reduce the visibility
of the specific issues that these women face and leave inequalities among women
unaddressed.

2.2.3. Subjective weighting schemes. A third disadvantage of composite
indices is that after selecting which individual indicators to include in an index an
aggregation method must be chosen, and alternative aggregation methods can
produce markedly different results (Bérenger & Verdier-Couchane, 2007: 1268). It is
difficult to justify any sort of weighting system (Kovacevic, 2010: 34), and it is nearly
impossible to strike a balance between objective assignment and subjective choice in
determining one (Nardo et al., 2011: 31). Experts often assume that all dimensions are
equally important and therefore assign equal weight to all of them. However, as
discussed in the previous chapter, this method is usually the arbitrary default option,
rather than resulting from a reasoned analysis rooted in explicit principles (Hawken &
Munck, 2013: 824). If one were to attempt this kind of analysis to come up with a
specific weighting scheme, it would be a very difficult and subjective process, since
different indicators have different salience in different countries and contexts. It
would also depend on expert rather than popular opinions and inherently give priority to developmental goals that not all citizens share (Booysen, 2002: 126-127). It might make sense for different societies to use different weighting schemes, since nations do not advance equally on the path to development, but this option would inhibit the meaningful comparisons that are a big benefit of composite indices (Booysen, 2002: 128).

The number of conceptual dimensions in a given index also affects the weights of the constituent indicators for each dimension (Hawken & Munck, 2013: 824). For example, in an index in which female educational attainment is one of five equally-weighted dimensions, that dimension will have a weight of 20 percent, but in an index in which it is one of three equally-weighted dimensions, female educational attainment will have a weight of 33 percent. If female educational attainment is particularly deficient in a given country, the state of gender equality will look better with the former index than with than the latter. It is important to examine how a country performs on each dimension of a composite gender index before rushing to draw conclusions about the state of gender inequality based on a single summary number that weighting schemes can distort significantly (Permanyer, 2013b: 944).

2.2.4. Lack of recognition of interdependencies. A fourth drawback of composite gender indices is that they do not account for the causal relationships among their constituent indicators. Composite indices often combine input, output, outcome, and impact indicators, each of which comes at a different point in the causal chain (Burchi & De Muro, 2016: 128). For example, an increase in the level of female education might lead to more women running for political office and thus to a higher
share of female seats in parliament. In addition, women with more schooling are more likely to get better jobs and thus to achieve higher earned incomes, which can increase their access to quality healthcare, resulting in a higher life expectancy. The causal priority of women’s education (and/or some of the other individual indicators within a composite index) conflates means and ends, inputs and outputs, further undermining the weighting scheme used to combine the indicators. If a means variable contributes to some ends also included in a multidimensional index, but not to others, the ends to which the means indicator leads will implicitly receive more weight than is assumed by the algorithm combining the indicators. This conflation is known as double-counting and results in situations of disproportionate weighting and variable redundancy (Nardo et al., 2008: 32). It is particularly problematic when earned income is included in a composite index. Variables included in composite indices, such as female education and labor force participation, are very often means to increased earned income. Therefore, earned income almost always receives disproportionate weight in composite gender indices, which thereby run the risk of becoming little more than proxies for GDP.

To ensure simplicity and interpretability and avoid things like double-counting and variable redundancy, composite indices should only include variables that are either means or ends. This strategy is first problematic because some variables are both kinds of indicators. Literacy is both an end in terms of being able to read and write, as well as a means to increasing future earning potential. It would also only work in a static setting that disregarded important causal relationships and the dynamic and interdependent nature of gender equality (Burchi & De Muro, 2016:
There are horizontal and vertical links between all physical, sociocultural, religious, political, legal, and economic spheres of gender equality at individual, household, community, state, regional, and global levels (Charmes & Wieringa 2003). As Jacques Charmes and Saskia Wieringa argue:

If women’s agency is limited to concerns related to the manifest, visible level, and other levels are ignored, there is also a limit to what women’s agency can lead. A good example is the struggle for women’s political rights. Without equal rights women cannot participate fully in the economic, social and political spheres. Yet when women’s subordination is left untouched on other levels, such as the subjective or the religious spheres, women will not allow themselves to make full use of their rights (Charmes & Wieringa 2003).

Thus, composite indices face another dilemma. An easy-to-interpret summary score from a composite gender index should operate using only one kind of indicator, and thus could never capture this interdependency between political rights and religion. There are very complex linkages between the various spheres of gender inequality. It is nearly impossible to mathematically represent the ways in which they interact. Not including all of them further oversimplifies the index, but doing so makes them difficult to interpret and prone to issues such as double-counting and variable redundancy (Michalos et al., 2011: 8).

2.2.5. Combining absolute and relative achievements. A fifth problem with composite gender indices is that they often combine women’s absolute and relative achievements. Absolute achievements pertain to how women fare overall in a country, and relative achievements pertain to how they fare in relation to men. The former is a general measure of well-being, while the latter hinges on a comparison to men. Most composite indices do not specify which kind of achievements they are attempting to measure, and some end up including both absolute and relative ones.
Absolute achievements without male counterparts are thus benchmarked to an assumed norm of zero and become stand-ins for their own determinants. This process ends up conflating gender equality with overall affluence.

For example, the GII uses a country’s maternal mortality ratio and adolescent fertility rate to calculate its reproductive health dimension. These indicators specify the absolute well-being of certain groups of females, specifically expectant and new mothers and teenage girls, rather than the relative well-being of males and females. The GII proposes no male analogue to the maternal mortality ratio or to the adolescent fertility rate, so there is no comparison to make, as there is for its other indicators. Moreover, indicators of absolute well-being are highly correlated with GDP per capita. When the UNDP economists introduced the GII to replace the GEM, they indicated that the GII would fix the problem of combining absolute and relative achievements, which had resulted, as the UNDP economists recognized, in the GEM being dominated by its earned income component. According to the 2010 HDR, in the new GII, “none of the underlying measures pertains to a country’s general level of development, so developing countries can perform relatively well if gender disadvantages are limited” (UNDP, 2010: 90). In fact, however, the GII does indeed include two absolute indicators of women’s well-being that do not have male counterparts – adolescent fertility rate and maternal mortality ratio – and that are closely correlated with overall affluence, which renders the GII little more than another proxy for a country’s GDP per capita. The fact that the countries at the top of the GII rankings, Switzerland, Norway, Sweden, and Denmark, are all rich (UNDP, 2017c) is evidence of this affluence bias. If a composite gender index includes
indicators that measure the absolute well-being of females, it is likely to conflate the absolute wealth or human development of a country with the relative status of men and women, as the GII does.

2.2.6. Combining stocks and flows. A sixth disadvantage of composite gender indices is that they combine stock and flow variables. Stock variables measure quantities existing at a specific point in time that have been accumulated in the past. Flow variables measure quantities accumulating over a specific interval of time, and they are expressed in units per time unit. Adult literacy and life expectancy at birth are examples of stock variables, and GDP per capita growth and gross enrollment rates are examples of flow variables (Kocacevic, 2010: 6). Expectations of stock variables are conditional on current flows. For example, in the nGDI, mean years of schooling is a stock variable conditional on flow variables such as annual enrollment rates (Burchi & De Muro, 2016: 133). However, since these variables use different units, they cannot be meaningfully compared, even though they are in the same composite index (Kocacevic, 2010: 6).

Additionally, stock and flow variables are differentially responsive to policy changes. Policy changes tend to take more time to affect stock variables, such as literacy and life expectancy, than flow variables, like annual enrollment and age-specific mortality rates, because their changes are not measured over time. Therefore, stock variables tend to quantify the outcomes of past efforts rather than recent policy changes (Kocacevic, 2010: 6). When composite indices combine stock and flow variables, they conflate levels of gender inequality at different points in time. Because they use different units and implicitly examine different timeframes, stock and flow
variables should not be used in the same index. Flow as well as stock indicators each contribute to gender inequality, but they are better observed individually than amalgamated into a hard-to-interpret composite index.

2.2.7. Treatment of female advantage. A seventh drawback of composite gender indices is that they sometimes fail to distinguish inequalities that favor women from inequalities that favor men. Composite indices like the nGDI give equal weight to deviations from equality that benefit each gender. These two kinds of gaps are indicative of different things, however, and should be treated as such. Gender gaps that favor women are often a result of policies designed to ameliorate their historical disadvantages, while gaps that favor men are typically a result of the historical disadvantages that women-friendly policies were designed to counteract. Countries should not be penalized on indices designed to measure equality for gaps that favor the disadvantaged group. At minimum, they should not be weighted as heavily as gaps favoring the advantaged group.

The GGGI, for example, includes the ratio of female to male tertiary enrollment. However, the World Bank’s World Development Indicators show that nearly two-thirds of the world’s countries have more females than males enrolled in tertiary education (World Bank, 2019). All else equal, a country with significantly higher female than male tertiary enrollment will score lower on the GGGI than a country with slightly higher male than female tertiary enrollment. If one were to examine the indicator individually, significantly higher female than male tertiary enrollment might be taken as a sign of progress toward reducing gender bias. When
included in the GGGI, however, the female advantage in tertiary enrollment counts as indicative of gender inequality.

2.2.8. Lack of data. An eighth drawback of composite gender indices is that they are often handicapped by a lack of gender-disaggregated data. Measures incorporated into composite indices need to be available for a wide range of countries in order to make useful comparisons. Therefore, as noted in Section 2.2.2, composite gender indices are limited to the most oft-reported indicators, which makes them less comprehensive than would optimally be the case (Booysen, 2002: 139). Lack of gender-disaggregated data forces most composite gender indices to disregard some of the more interesting and telling aspects of gender bias, such as those involving property ownership, participation in community life and decision-making, seats on corporate boards, gender-based violence (Gaye et al., 2010: 28), poverty, hiring, promotion, and access to and control over economic assets (Kapitsa, 2008: 11), which are just as indicative of gender inequality as factors like the female share of seats in parliament and average years of schooling, among the other frequently-incorporated constituent indicators. Their omission further oversimplifies indices that already simplify a very complex phenomenon (Permanyer, 2013b: 929).

Poor countries are less likely to have available the data necessary to compute their composite indices (Syed, 2010: 286). Therefore, experts may have to impute specific pieces of data for certain countries. This fact means that countries sometimes do not receive scores for these indices, or, if they do, they are likely to be less accurate. As Michalos and his collaborators point out, “Although the use of interpolations, imputations, and insertions of next-best figures in time series is not
unusual for statistical analyses, it is unfortunate and undesirable, and the more one has of such things, the less valuable is one’s monitoring system” (Michalos et al., 2011: 36). When experts impute data, users often mistakenly think that the imputed figures are based on actual measurements. When the amount of missing data is small and insignificant, it can be legitimately handled with imputations. However, too many imputations undermine the overall quality of a composite index (Nardo et al., 2008: 25, 48). This situation often occurs for poor countries, and thus means that their composite index scores are usually less accurate and meaningful. Additionally, individual indicators are sometimes difficult to measure and thus fallible to underreporting. For example, when birth records are inadequate, which they often are in developing countries, it is difficult to determine longevity, thus further undermining a composite index’s accuracy (Diener & Suh, 1997: 195).

2.2.9. Misguided policy directions. A ninth problem with composite indices is that despite their potential to shape policies and spending related to gender equality, their oversimplified messages often lead to misleading or simplistic inferences. This fact results in poor policies and programs, as well as to less effective and efficient patterns of public spending in regards to gender equality (Michalos et al., 2011: 14). For example, if a country received a high score on the nGDI because of its high female life expectancy at birth, this fact might cause policymakers to overlook the country’s low female expected years of schooling. Thus, they would be less likely to enact policies aimed to increase the number of females with access to education. Additionally, as previously discussed, composite gender indices typically measure a small range of individual indicators. Given that “what is measured gets done” (Burchi
& De Muro, 2016: 130), policymakers will likely prioritize those dimensions of gender issues and ignore or give short shrift to the rest.

2.3. Conclusions

There is no way to effectively capture everything embedded in a set of numbers in one number. According to Sudhir Anand and Amartya Sen, “there is some loss of detailed information in using an aggregate number (a “scalar”) for a bunch of numbers representing individual circumstances (a “vector”)” (Anand & Sen, 1994: 2). Although composite indices are simple, more public and politically relevant, and less sensitive to distortion, gender inequality is nevertheless too multi-dimensional and complex of an issue to be effectively captured in one “magic indicator” (Jütting et al., 2008: 79). Composite indices designed to capture in a single number the state of gender inequality in a country are thus best set aside in favor of individual gender-related indicators.

While composite indices are designed to measure multi-dimensional concepts that single indicators supposedly cannot capture, exploring a wide array of individual indicators could indeed capture them (Nardo et al., 2008: 13). For example, instead of examining a country’s nGDI, one could just compare its male and female life expectancies and birth, expected and mean years of schooling, and income shares. They would then ensure that all of these indicators are given their due weight and consideration, and they would not have to worry about implicit or explicit weighting schemes distorting the index and overweighting one variable, such as earned income. They would also know that they were not conflating different kinds of indicators, such as means and ends, stocks and flows, and absolute and relative achievements. In
examining individual indicators, observers could simply disregard the specific indicators that suffer from insufficient data or measurement error.

Observing individual indicators would also result in the added benefit of being able to determine which of these indicators were specifically driving gender inequality in the country at hand, which composite indices often obscure. Examining individual indicators thus usually results in more efficient public sector expenditure allocation and policies. Since they make it easier to identify direct causes and effects, as well as know determine exactly which dimensions of gender inequality to prioritize, they also make it simpler to distinguish between situations of gender inequality that result from a lack of resources and those that result from weak functionings and thus know how to address each problem individually (Bérenger & Verdier-Couchane, 2007: 1269). Composite indices often lead to broad generalizations about a country’s level of gender equality, but individual indicators send clear and specific messages about what needs to change and what areas should be targeted in order to increase gender equality in a country (Fukuda-Parr, 2003: 306).

One of the biggest benefits of composite indices is their simplicity, but this advantage inherently limits the number of constituent indicators that they can feasibly include. If one were to instead examine individual indicators, they could examine as many they wanted to, thus ensuring comprehensiveness without the tradeoff of unwieldiness. One could also scrutinize different indicators for different countries, since not all indicators are equally relevant and accepted in all contexts and societies. Additionally, one could examine specific indicators that are more relevant to the lives
of poor, rural women, such as the share of seats held by women in local councils and
the percentage of the female labor force that is self-employed.

Individual indicators lead to a more valid impression of the state of gender
inequality in a country. The following chapter will use Rwanda as a case study to
support this assertion. It will show where Rwanda stands on the four composite
gender indices examined in Chapter 1 that are still being produced today. It will then
use its performance on individual indicators to show how the composite indices,
despite certain advantages, can be confusing and misleading, obscuring very
important and specific aspects of gender equality that a broad range of individual
indicators are better able to capture.
Chapter 3: Rwanda’s Indicator Inconsistency

Rwanda is used in this chapter as a case study to explore the proposition that individual indicators do more than composite gender indices to reveal the level and type of gender inequality in a country. The first section highlights the heterogeneity of Rwanda’s scores on the Gender Development Index, Global Gender Gap Index, Social Institutions and Gender Index, and Gender Inequality Index from approximately 2000 to the present, roughly equivalent to the administration of Paul Kagame of the Rwandan Patriotic Front (RPF). The second section shows how much more is revealed about gender inequality in Rwanda by examining specific individual indicators on which Rwanda has done, respectively, well and poorly at reducing gender bias. The third section advances some hypotheses about why Rwanda has performed well on certain indicators but poorly on others. A forth and concluding section summarizes how Rwanda underscores problems with composite indices as well as the advantages of using individual indicators to reveal the level and type of gender inequality in a society.

As evidenced by the headlines from the introduction to this thesis, Rwanda’s high representation of women in parliament has led many to believe that the country is a sanctum of gender equality. In reality, although women elected to parliament have introduced some substantial gender-related legal changes, the authoritarian nature of the RPF has limited their impact, and they have neglected reforms benefiting poor women living in rural areas. Composite indices cannot call attention
to such nuances in a country’s progress at reducing gender bias in the way that individual indicators can.

3.1. Rwanda on Composite Gender Indices: A Confusing Portrait of Gender Bias

An observer who relied on composite indices to evaluate how well Rwanda has done at reducing gender bias would end up rather confused. Chapter 2 discussed how the subjective and misguided processes through which composite gender indices are designed often result in one country performing markedly differently depending on the composite index on which it is examined. This has certainly been the case for Rwanda, as its disparate percentiles evidence.

Rwanda’s best performance was on the GGGI, on which it has only ever scored in the 95th-97th percentile. In converting its ten indicators into female-to-male ratios, the GGGI does not take absolute levels of well-being into account and thus is not a proxy for GDP per capita. Rwanda’s 2017 GDP per capita was low: only $749, in comparison to $10,722 for the world and $1,574 for the sub-Saharan African region (World Bank, 2019), so it is unlikely to perform well on indices that are related to these figures. As part of its political empowerment dimension, this index also includes the share of legislative seats held by women, accounting for 8 percent of a country’s score (World Economic Forum, 2018b). The GGGI uses an arithmetic mean to aggregate its four dimensions, so the country’s strong performance on this ratio boosts its performance on this index appreciably and is not at all hindered by the its low level of affluence.

On the SIGI, Rwanda started out in the 35th percentile in 2009, rising above the world average three years later in 2012 and not changing much in percentile terms
in 2014. Most recently in 2019, it performed worse than average, scoring in the 46th percentile. Vexingly, the indicators included in the SIGI have changed over time. In 2009 the SIGI did not include an indicator of the share of legislative seats held by women (Branisa et al., 2009: 5), which helps to explain why it scored poorly in that year. When this indicator was added in 2012 (OECD, 2012), Rwanda’s score and percentile rose considerably, likely due to the fact that its use of an arithmetic mean resulted in this indicator distorting the index. However, this indicator comprises only 3 percent of the overall score (OECD, 2019b), and the SIGI does include a few indicators that are loosely correlated with affluence, such as child marriage and female genital mutilation. These facts go some way toward explaining why Rwanda does not perform as well on the SIGI as on the GGGI.

Rwanda performs considerably worse on the GII and nGDI than on the GGGI or the SIGI. Although the GII and nGDI were not introduced until 2010 and 2014, respectively, the UNDP has since calculated these indices retroactively to 2000 (Appendix Table 7). Rwanda’s worst performance was on the nGDI, on which it has always ranked below the median and is now in the 38th percentile. Although the nGDI is a simple measure of female-to-male achievement, it does not take political representation into account. Additionally, this index includes an indicator of GNI per capita, as well as two other variables, expected and mean years of schooling, that are means to the former. Thus, earned income is double-counted in this index, which makes it more indicative of Rwanda’s overall economic development than of women’s political empowerment.
On the GII, Rwanda in 2000 started well below the median, in the 35th percentile, and has only risen modestly, to the 46th percentile, since. Rwanda does better on the GII than on the nGDI because the former considers the share of legislative seats held by women. However, it offsets it by including both the maternal mortality ratio and the adolescent fertility rate, each of which is highly correlated with GDP per capita. Rwanda between 2000 and 2015 actually did extremely well at reducing each of these rates (Appendix Table 8), but its low GDP per capita means that its 2015 levels of maternal mortality and adolescent fertility remained fairly high in cross-national perspective. The index’s other indicators, secondary and tertiary schooling levels and labor force participation, are also means variables that contribute to increased GDP. Thus, Rwanda’s low level of overall affluence masks its high share of seats held by women in parliament in its GII score.

3.2 Rwanda on Individual Gender Indicators: Toward Clarity in Measuring Gender Bias

However, since Rwanda receives such a wide range of scores on composite gender indices, it is confusing to try to infer anything specific about its state of gender inequality from them. Rwanda’s composite index scores seem to be most affected by its GDP per capita or its representation of women in parliament, which means that they indicate less about its performance on other gender-related indicators. Appendix Tables 8, 9, and 10 examine Rwandan women’s performance on the ten individual indicators of gender bias and women’s well-being noted in the introduction to this thesis during the Kagame administration, from approximately 2000 to the present. Comparisons are made to men in Rwanda, women in sub-Saharan Africa, and women
in the world during the same time period. In the case of secondary or higher education and experience of physical or sexual violence, for which a sub-Saharan African average was unavailable, Rwandan women are compared to women in five nearby sub-Saharan African countries averaged together (Kenya, Malawi, Tanzania, Uganda, and Zimbabwe). These individual indicators paint a more lucid picture of women’s well-being and gender bias than do multidimensional composite indices.

Rwanda does well on the five individual indicators depicted in Appendix Table 8: the adolescent fertility rate, maternal mortality ratio, female labor force participation rate, female share of national lower house or unicameral legislative seats; and female net primary enrollment rate. These variables are widely-known indicators of gender equality and are often included in composite indices, but are in some respects misleading. As previously discussed, the adolescent fertility rate and maternal mortality ratio depend heavily on GDP per capita as well as on women’s position in a given society. Even if a country has done well at reducing these things, its achievements will always be limited by its overall level of development. Female labor force participation, for its part, does nothing to indicate the quality or security of women’s jobs. Having a high share of national legislative seats held by women, an indicator that is particularly pertinent in Rwanda, does not necessarily lead to policies that benefit all women, and it indicates nothing about representation of women at lower levels of governance. Finally, net primary enrollment rates are not particularly indicative of gender equality because primary enrollment is high across genders and almost universally guaranteed around the world. In 2017 the world average of net
(age-appropriate) primary enrollment was 88 percent for females and 90 percent for males (World Bank, 2019).

Rwanda by contrast does poorly on the five individual indicators depicted in Appendix Tables 9 and 10: female share of the population living with HIV/AIDS, female literacy rate, female vulnerable employment as a share of total female employment, the percentage of the female population aged 15-49 with secondary or higher education, and the percentage of the female population who have suffered physical or sexual violence. These indicators are less likely than those on which Rwanda has performed well to be included in composite indices, but they are often more indicative of the contextual specifics of gender inequality. Because most countries have nearly universal primary education, measuring gender bias at the secondary level is a more telling way to assess a country’s success at increasing women’s access to education. Additionally, the literacy rate is more indicative of the quality of education to which women have access. The female share of the HIV-positive population shows how much a country is doing to improve women’s health, without being substantially linked with GDP per capita and thus mixing the two dimensions. The percentage of the female labor force that is vulnerably employed shows that, even if women are employed, their jobs may involve unpaid family labor or informal and insecure work arrangements. The percentage of women who have suffered physical or sexual violence is more indicative of the existing unequal power dynamics between women and men, which is an important aspect of gender inequality that is often left out of composite indices. When one examines individual gender-related indicators, Rwanda looks better to the extent that the indicators
observed are less valid, and looks worse to the extent that the indicators that are more valid. The heterogeneity of its performance on these indicators appears to have been lost on many journalists and casual observers, however, as the headlines from the introduction make apparent.

It is also telling to consider Rwanda’s score on individual indicators such as the V-Dem Liberal Democracy Index and its Freedom House Ratings. As detailed in Appendix Table 10, Rwanda scores 0.16 on the V-Dem Liberal Democracy Index, where 0 = the least liberal democracy and 1 = the most liberal democracy, which is even lower than the sub-Saharan African average of 0.31 (V-Dem, 2019). According to Freedom House, Rwanda is “Not Free,” receiving a score of 6 for its political rights and 7 for its civil liberties, on which 1 = the most rights and 7 = the least rights (Freedom House, 2018). A political system that lacks these essential rights and freedoms is unlikely to be able to sustain a high level of women’s rights.

3.3. Why has Rwanda Done Well on Some Individual Gender Indicators but Poorly on Others?

Instead of doing great overall at improving life for women, Rwanda since 2000 has done well on some indicators and poorly on others. This inconsistency could never be captured in one composite index that tries to synthesize such disparities into a single number, which hides important lessons about why having a high representation of women in parliament is not necessarily a panacea for substantially reducing gender bias across dimensions. Assessing its performance on individual indicators ensures that each is examined equally and given its due consideration. This is especially important for indicators that are most relevant to the lives of poor rural
women, which are often excluded from composite indices. It would also allow politicians to identify specific failures to serve as policy targets, resulting in more meaningful and effective changes in legislation. The following paragraphs examine why Rwanda has done better at reducing some aspects of gender bias, but less so at reducing others, in the hope that careful consideration of each indicator will avoid confusion about the country’s drivers of and progress towards gender equality, as well as about the extent to which having a high number of women in parliament is indicative of gender equality.

3.3.1. Women in parliament. One of the areas in which Rwanda has most substantially reduced gender bias is in the representation of women in the legislature. The lower house of parliament, or the Chamber of Deputies, has 80 seats, of which 24 are reserved for women. The upper house of parliament, or the Senate, has 26 seats (Freedom House, 2018). Rwanda’s 2003 post-genocide Constitution guarantees a minimum 30 percent quota for representation of women in all decision-making organs, including both houses of parliament, as well as at the sub-national level (International IDEA, 2019). However, Rwanda has long surpassed this quota, with the share of seats held by women in the Chamber of Deputies increasing from 26 percent in 2000 to 61 percent in 2018 (Appendix Table 8), after the most recent election on September 3, 2018 (Kwibuka, 2018). Women also constitute 42 percent of Cabinet members, 32 percent of Senators, 50 percent of judges, and 43.5 percent of city and district council seats (UN Women, 2018). Some observers claim that this increased inclusion and participation of women in Rwandan politics in the post-genocide era has both helped them find respect (Burnet, 2011: 320) and ensured
effective gender-related policies (Devlin & Elgie, 2008: 251). From these perspectives, Rwanda’s success at reducing things like maternal mortality and adolescent fertility and at achieving high levels of female labor force participation and primary enrollment, can surely be attributable at least in part to the fact that so many women are included in policymaking and governance.

The increased representation of women in parliament in Rwanda has roughly coincided with the administration of President Paul Kagame (2000-present) and the RPF, which has been the ruling party in Rwanda since the end of the genocide in 1994. The RPF was led by a group of Tutsi refugees who fled the country between 1959 and 1973 due to persecution from the ruling minority ethnic group, the Hutus. They spearheaded a civil war in 1990 when they invaded the country from Uganda with Ugandan support with the goal of bringing down the extremist Hutu government (Reyntiens, 2013: xviii). This civil war culminated in a brutal genocide in 1994 during which the government targeted Tutsis and moderate Hutus (Powley, 2003: 12), killing approximately 800,000 people, or one-fifth of the population (Strobl, 2017: 1378). Organized mobs and militia, known as Interahamwe, were largely responsible for perpetrating these violent acts and convincing others to partake in them (Powley, 2003: 12). The RPF ended the genocide approximately 100 days after it began, at which time the party took over the national executive (Berry, 2015: 7). Kagame and his party have supposedly been supportive of women working to help rebuild and redefine the country through their championing of female representation (Madsen, 2018: 74). However, a closer look at the RPF reveals that one reason why Rwanda’s
level of gender equality is lower than many assume is because of the party’s authoritarian nature.

3.3.2. The authoritarian nature of the RPF. The RPF’s authoritarianism limits women’s ability to make and influence policy, blocking off other avenues for political and civic participation and ensuring that the women who are participating in the policymaking process have similar identities and political ideologies. Rwanda on paper is a presidential republic with a multiparty regime, but the RPF has dominated the political sphere since the end of the genocide (Berry, 2015: 7). Rwanda is a case of “developmental patrimonialism,” in which the ruling party gains support by providing goods and services, rewarding supporters, and buying off potential opponents (Abbott & Malunda, 2016: 563). Other parties are tolerated only if they agree not to question the RPF, and dissent is silenced through threats and violence (Reyntiens, 2013: 30, 96). The regime systematically accuses its critics of acting in bad faith and practicing character assassination and avoids partaking in any sort of debate (Reyntiens, 2013: 133-134). According to Freedom House, Rwanda lacks free and fair elections and electoral laws, rights to organize, realistic opportunities for the opposition to gain power, an independent parliament and judiciary, safeguards against corruption, due process, and protection from the illegitimate use of physical force, as well as freedoms of the press; academics; expression; assembly; association and equality of opportunity (Freedom House, 2018). It is difficult to imagine how women could be considered equal citizens in a political system in which no Rwandan has access to these basic rights and liberties. Gender equality is about more than just women and men being on an equal footing, especially if that footing is very low. It is
about different groups of women and men around the world having equal access to rights and freedoms that allow them to exercise their capabilities and achieve the specific functionings that they find desirable.

Paul Kagame of the RPF is has been the president since 2000, when he took office after the resignation of Pasteur Bizimungu. The 2003 post-genocide constitution grants the president sweeping powers, such as the rights to appoint the prime minister and dissolve Parliament (Freedom House, 2018). Kagame was first elected president in 2003, with 95 percent of the vote, and, he won again with 93 percent in 2010 (Reyntiens, 2013: 52) In 2015 legislation ratified by a popular referendum passed a constitutional amendment that allowed Kagame in 2017 to run for a third seven-year term, which he won with 99 percent of the vote, and that enabled him to run again for two five-year terms after that (Reyntiens, 2018: 520).

Elections under Kagame’s rule have been susceptible to electoral fraud through threats and intimidation, workers showing favoritism toward the ruling party, ballot stuffing, and nontransparent counting (Reyntiens, 2013: 27). The tightening control of the Kagame regime has led to a lack of voice and accountability among and from citizens (Ansoms & Rostagno, 2012: 432), and thus a widening gap between grassroots, local needs and the government’s ambitions and policies (Reyntiens, 2018: 521).

Rwanda has no effective or legally registered opposition. Opposition parties are allowed to form, but they are widely known to have no chance to gain real power. According to Filip Reyntiens, “Rwanda is clearly a case of hegemonic authoritarianism, where under the guise of seemingly regular elections in a multi-

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party context the polls do not perform any meaningful function other than consolidating a dictatorship” (Reyntiens, 2018: 521). In 2003, all parties represented in parliament either placed their candidates on the RPF list or supported the RPF candidate for president (Reyntiens, 2013: 39). In the 2010 elections, opposition parties formed, but none had permission to register or participate in the electoral process, and they thus were intimidated, attacked, and arrested (Ansoms & Rostagno, 2012: 432). In 2017, Kagame had two challengers, Frank Habineza from the Democratic Green Party and an independent named Philippe Mpayimana, who both complained of supporter intimidation and campaign sabotage. The electoral commission disqualified another independent, Diane Shima Rwigara (BBC News, 2017). In addition, the RPF controls local elections, which their pre-selected candidates are usually assured of winning (Burnet, 2008: 365-366).

The RPF also has a stronghold on civil society, which limits a major avenue for political and civic participation (Abbott & Malunda, 2016: 564). A 2001 law put the government in charge of NGOs, giving them broad powers to control their management, finances, and projects. NGOs risk being unable to register legally, or losing their registered status, if they fail to fall in line with the government’s policies and strategic plans (Burnet, 2008: 375-376). Constraints on civil society mean that women’s organizations have had limited impact, and those that oppose the regime have been subject to threats and intimidation. In 2005, the head of a women’s organization questioned the effectiveness of Rwanda’s female parliamentarians, comparing them to flowers, which look good to outsiders but do not do much more
than that. This statement earned her condemnation by the RPF government, and subsequent threats forced her to flee the country (Reyntiens, 2013: 41).

The government’s pro-woman policies and gender quotas are often used to make the political regime appear liberal, democratic, and in favor of equality while it simply furthers its authoritarianism (Burnet, 2008: 371). The 26 members of the Senate are either appointed by the regime or elected indirectly, while 53 members of the Chamber of Deputies are elected through a proportional representation system. The other 27 seats, including the 24 reserved for women, are indirectly elected through an electoral college (International IDEA, 2019). Because the RPF regime controls so many legislative seats through direct appointments and indirect elections, it ensures that these seats go to women from the party. For example, in the 2003 elections, “for the 24 women seats only 58 candidates out of an initial 154 remained on polling day. The manipulation clearly showed in that, in every province, the two women who were elected obtained high and similar results, whereas the other candidates got negligible scores; in other words, it was very clear which candidates had to be elected” (Reyntiens, 2013: 39). Despite the high representation of women in parliament, the seats that are reserved for women are still given out in exchange for loyalty to the RPF, and the RPF places women whom it knows will not challenge it in these spots (Bauer, 2008: 355, 361).

Authoritarianism is not necessarily inconsistent with policies that support female equality, but since the RPF uses women as a way to further its domination, women’s influence within Rwanda’s state structure is limited. Women are often used simply to legitimize Kagame’s agenda (Ansoms & Rostagno, 2012: 441), which has
focused on economic development and modernization in order to appeal to donors and increase GDP (Reyntiens, 2013: 162-164). Its success in achieving these goals helps to explain Rwanda’s improving performance on indicators directly related to economic growth, such as adolescent fertility, maternal mortality, and labor force participation. Rwanda has done less well on indicators less immediately related to economic growth, like the incidence of physical and sexual violence or the share of HIV-positive Rwandans who are women. Since the RPF gave them their seats, many women feel that they must be loyal to the party at the expense of reforms that might be more beneficial to women overall (Devlin & Elgie, 2008: 241). Rwanda’s female parliamentarians have voted for bills that destroyed the opposition, gave the RPF tools to mask dissent, and eliminated an independent civil society (Burnet, 2008: 381), implicitly reducing the number and variety of women’s voices and concerns.

Additionally, because Rwanda is not a multiparty democracy with diverse representation, the women in parliament tend to have similar political ideologies and identities. In order to ensure that gender-related laws and policies actually help and are reflective of more women, female parliamentarians need to represent the spectrum of identities of Rwandan women today (Berry, 2015: 6), rather than simply the elite Tutsi women who are typically high-ranking officials of the RPF. The fact that these voices are typically excluded from policymaking is detrimental to women’s empowerment and diminishes the relevance of these policies (Debusscher & Ansoms, 2013: 1113), which will be discussed in the following section.
3.4. Gender-Related Institutions, Policies, and Laws

Despite authoritarianism, the increased representation of women in parliament in Rwanda and Kagame’s supposed commitment to gender equality has in fact resulted in an increase in the number of institutions, laws, policies designed to deal with issues of gender equality (Abbott & Malunda, 2016: 569), but the regime looks better on paper than in practice. Many have assumed that these laws and policies have created an environment in which women can “thrive economically and pull themselves and their families out of poverty” (Rugege, 2016: 492). They have certainly helped the Kagame government improve its performance on the indicators listed in Appendix Table 8. However, Kagame and the RPF often undermine these policies through their insistence on top-down control and lack of attention to the grassroots level, which helps to explain why these policies have not produced significant gains on the indicators listed in Appendix Tables 9 and 10.

3.4.1. Gender-related institutions. Rwanda has a host of institutions that directly address gender equality. Article 9 of the post-genocide 2003 constitution establishes a commitment to equality between women and men to which all national laws must conform, and Article 7 of the Electoral Law stipulates the previously discussed 30 percent quota. The Vision 2020 development framework that sets out the country’s development goals between 2000 and 2020 promotes gender equality, promising to continuously update and adapt laws concerning gender, eradicate all forms of discrimination, support education for all, and positively discriminate in favor of women (Rugege, 2016: 478-480). Rwanda also has a National Gender Policy which aims to integrate gender issues into and correct gender imbalances in all
sectors of development, as well as include men in implementing gender-related policies (Rugege, 2016: 481-482).

After the genocide, the government created the Ministry for Gender and Family Promotion (MIGEPROF) to help coordinate and implement the National Gender Policy, promote gender equity, and ensure women’s empowerment (Abbott & Malunda, 2016: 570). The Ministry also helps to establish ways for other key ministries to address gender in their work, monitoring their progress on women’s issues and working to determine what the impact of their policies might be on women. It also holds gender awareness trainings for various population groups and helps to establish both communal funds for female economic development and local women’s councils (Powley, 2003: 19). Alongside MIGEPROF, Rwanda’s Gender Monitoring Office (GMO) is in charge of monitoring, evaluating, and reporting on the progress of gender-related policies (Abbott & Malunda, 2016: 570).

Rwanda’s National Women’s Council is charged with assuring the representation of the interests of all women by spreading information on gender policy and programs, as well as doing advocacy and capacity-building for women’s organizations at all levels. (Abbott & Malunda, 2016: 570). Among the vehicles for this capacity-building are local women’s councils, grassroots structures to which only women elect female representatives. These councils operate parallel to general local councils to ensure that they represent women’s concerns (Powley, 2003: 21), while also advising local governments on women’s issues and teaching local women about participating in politics (Burnet, 2008: 368).
However, these diverse institutions designed to promote women’s interests suffer from poor coordination. Many have overlapping tasks and often fail to fulfill their duties. There is a consistent lack of clarity on their division of responsibilities (Abbott & Malunda, 2016: 570). It is unlikely that any of them are explicitly tasked with improving Rwanda’s performance on the more specific and less-widely studied indicators listed in Appendix Tables 9 and 10. Thus, they have likely been less attentive to these issues, which is why Rwanda has done less well at tackling them. By contrast, the indicators listed in Appendix Table 8 on which Rwanda has improved are more linked to economic development, which the Rwandan government has explicitly focused and tasked institutions with increasing.

3.4.2. Maternal health care policies. Rwanda has made remarkable gains in the area of maternal health. More women seek antenatal care and use family planning than ever before. From 2000 to 2015 the total fertility rate fell from 5.6 to 3.9 while the share of births attended by trained personnel rose from 31 percent to 91 percent (World Bank, 2019). The maternal mortality ratio and adolescent fertility rate have also dropped dramatically, by 72 percent and 45 percent respectively (Appendix Table 8). The Rwandan government in 1999 established a universal health care plan called Mutuelles, requiring all Rwandans to purchase community-based health insurance (Strobl, 2017: 1377) that provides low-cost family planning and contraceptives (Berry, 2015: 11). Mutuelles may well help account for Rwanda’s changes in its adolescent fertility rate and maternal mortality ratio.

However, this program has not been effective at reaching and assisting all women. For example, pharmacists sometimes deny women contraceptives due to the
value placed on women’s virginity. More often, women let their fear of pharmacists or communities judging them prevent them from even trying to obtain contraception in the first place (Berry, 2015: 11). Although the government designed Mutuelles to be affordable, insurance prices rose from 1000 Rwandan francs to 3000 Rwandan francs between 2000 and 2010. Many poor households can no longer meet the cost of the program (Ansoms & Rostagno, 2012: 438) but cannot opt out, even if it becomes a serious financial burden (Golooba-Mutebi & Habiyonizye, 2018: 14). The government’s strict top-down control of the health sector has thus resulted in increased financial burden for many women and families in a poor country, despite a decreased adolescent fertility rate and maternal mortality ratio.

Additionally, abortion is still illegal in Rwanda, and 40 percent of illegal abortions induce complications that require medical treatment. When women have these complications, they risk imprisonment by showing up at the hospital to receive proper medical attention, and many die as a result (Berry, 2015: 16-17). The government also fines women who do not use health centers for delivery, which are often less accessible to poor women living in rural areas (Abbott & Malunda, 2016: 573).

In a similar vein, the Rwandan government created the Women’s Equity in Access to Care and Treatment (WE-ACTx) program in 2003. This program provides women with HIV counseling and testing, treatment for HIV with transport support, care for PTSD and depression, economic empowerment, food supplements, family planning services, assistance with children’s school fees, and legal advocacy (Cohen et al., 2015: 784). However, as evidenced by Appendix Table 9, women still make up
62.6 percent of the population living with HIV in Rwanda. Though the overall prevalence of HIV in the population fell from 5 percent in 2000 to 2.7 percent in 2017 (World Bank, 2019), women’s share of this population increased. Thus, while WE-ACTx may have been successful at helping to reduce the overall share of the population living with HIV, it has not succeeded in its goal of providing women with equitable access to care and treatment.

3.4.3. Women’s employment and land ownership. Rwanda has also administered a multitude of laws designed to provide women with equal access to employment and land ownership. The Economic Development and Poverty Reduction Strategy (EDPRS), enacted in 2000 as a part of Vision 2020, was designed to enhance women’s access to economic resources and opportunities, financial services and property ownership, skills development, and market information (Rugege, 2016: 481). In addition, a 1999 law aimed to provide women with equal opportunities for inheritance, as well as equal rights to enter into contracts, seek paid employment, own property in their own names, and open their own bank accounts (Burnet, 2008: 376). A 2013 law forbade sex discrimination in land access (Rugege, 2016: 479). Finally, a 2009 law called for equal pay for equal work, a minimum work age (16) for both males and females, protection for people under 18 from the worst forms of labor, protection for pregnant and nursing mothers, and provision for maternity leave for women in the formal sector (Abbott & Malunda, 2016: 569).

Laws designed to provide equality of access to employment have not done much, however, to reduce the share of women in the labor force who are vulnerably employed. Between 2000 and 2018 the share of women in vulnerable employment
fell only 10 percent (from 96 to 87 percent), while the share of men with such employment fell 19 percent (from 89 to 72 percent) (Appendix Table 9). According to the World Bank, “vulnerable employment is contributing family workers and own-account workers as a percentage of total employment” (World Bank, 2019). These kinds of workers are often employed in the agricultural sector. Thus, Rwanda’s economic development and the resulting increase in non-farm employment has mostly benefited men, as evidenced by that 2018 statistics indicating that in Rwanda 76.9 percent of the female labor force was employed in agriculture, in comparison to only 54.8 percent of the male labor force (World Bank, 2019). A 2011 survey of married men and women indicated that 74.4 percent of women were dependent family workers, with 73.7 percent in agriculture, in contrast to 2.6 percent of men (Abbott & Malunda, 2016: 575). Women working as dependent family workers in agriculture are by definition vulnerably employed, since their employment status fully depends on their husbands. According to Abbott and Malunda:

>a majority of women who define themselves as dependent workers are in fact co-owners of the land. They are aware of this but nevertheless they and their husbands continue to regard the land as really belonging to the husband. They also see their husbands as the person in charge of decision-making and the household finances (Abbott & Malunda, 2016: 576)

This quote shows that, even though approximately 50 percent of women own land jointly (World Bank, 2019), they do not necessarily control it, which has resulted in their lack of economic empowerment (Abbott & Malunda, 2016: 579).

3.4.4. Women’s education. Rwanda’s legislature in 2008 enacted a Girls Education Policy that focused on affirmative action in the workplace and school admissions in order to ensure that girls are getting a high-quality education, not
dropping out of school due to issues such as early marriage, and going into all sectors of work, particularly science and technology (Rugege, 2016: 482). Vision 2020 also ensures free primary school for all, regardless of gender.

However, boys are consistently more likely to pass their senior secondary school examinations, take science subjects, and gain places at state universities. Public sector higher education is expanding in the country, but girls are still gaining places at a constant rate of 30 percent (Abbott & Malunda, 2016: 574). In addition, they are more likely to drop out of school than boys at all levels of education due to factors such as the lower value placed on girls’ education, the perceived lower returns on investing in female education, the emphasis on women contributing to household duties, the lack of female role models in the classroom, women’s lack of access to sanitation facilities, the lack of a gender-sensitive curriculum (Devlin & Elgie, 2008: 121), teenage pregnancy, and increased domestic demands as women get older. There is also a high incidence of gender-based violence in schools, and girls are often harassed when they walk home (Abbott & Malunda, 2016: 574). These are issues that are prevalent throughout sub-Saharan Africa, but as of 2015, according to the Demographic and Health Surveys (DHS), only 23 percent of Rwandan women, compared to an average of 40 percent in five neighboring countries, had secondary or higher education (Appendix Table 10).

Despite such policies to ensure gender equality in access to education, Rwanda is still ridden with a lot of economic inequality in access to education, which disproportionately hurts girls because when families have limited resources, they are less likely to send their female children to school (Devlin & Elgie, 2008: 121).
Though primary school is free, there are still many “hidden” fees for uniforms, school supplies, PTA contributions, coaching, and weekend and evening classes. Upper secondary school is still private and costs money unless students receive a scholarship based on their scores on a national exam (Berry, 2015: 14). Students are classified as well-off, quite well-off, quite poor, poor, and vulnerable, but only those in the “vulnerable” category are eligible to receive these scholarships. This policy pushes slightly less impoverished families out of the education system because the cost of secondary and higher education in Rwanda is still beyond disposable resources for many “poor” and “quite poor” families (Ansoms & Rostagno, 2012: 439). These policies thus hinder girls from poor, rural families from getting an education.

As the statistics in Appendix Tables 8 and 10 demonstrate, although the rate of primary education for women is high, only about a quarter of Rwandan women have completed secondary or tertiary schooling. This performance has increased only by 17 percent during the Kagame era, about the same as for men but lower than the average improvement (21 percent) in five neighboring countries. The small percentage of women who complete their secondary education are usually from rich families (Berry, 2015: 14) and are the ones who are most likely to have the knowledge, resources, and social capital to be elected to parliament or get jobs in high-paying, less vulnerable fields.

3.4.5. Intimate partner violence against women. Law No. 59/2008 issued in October 2008 calls for the prevention and punishment of gender-based violence in Rwanda and qualifies harassment, verbal or physical, qualifies as an offense (Rugege, 2016: 480). Rwanda is also one of only six sub-Saharan African countries to outlaw
marital rape, and it is thought to be a regional leader in preventing domestic violence (Rugege, 2016: 485).

However, the percentage of women reporting having experienced physical or sexual violence actually rose from 40 percent in 2005 to 44 percent in 2015. This increase may be due to higher reporting, but the percentage of women reporting having experienced physical or sexual violence declined over the same period (by 12 percent overall based on a five-country average) in Kenya, Malawi, Tanzania, and Uganda (Appendix Table 10). Rwanda is the only one of these countries that had an increasing percentage (USAID, 2019). Moreover, most gender-based violence in Rwanda still goes unreported (Devlin & Elgie, 2008: 122). In a 2009 survey of women with HIV attending in Kigali a WE-ACTx clinic about intimate partner violence since the genocide, 414 women were interviewed, and 256 (62 percent) reported a history of abuse, through behaviors such as forced sex, denying women money for food, preventing them from leaving the house, and withholding their antiretroviral medication. This statistic was the same as a group of approximately the same size from the United States (Cohen et al., 2015: 784).

Domestic violence indicates unequal power relations between men and women, and scholars in recent years have begun to study how and to what extent intimate partners are willing to justify it. Six rounds of Demographic and Health Malaria Incidence surveys in Rwanda from 2005 to 2017 included 20,000 respondents, who were asked “if a husband is justified in hitting or beating his wife if: “she burns the food,” “she argues with the husband,” “she goes out without informing the husband,” “she neglects the children,” or “she refuses to have sex with the
husband.” Participants could respond with “yes,” “no,” or “don’t know.” They received a 1 for each “yes” and a 0 for each “no.” Someone who never justifies violence thus gets a “0,” and someone who justifies it in all 5 situations gets a “5” (Sardinha & Catalán, 2018: 3). Rwandans averaged 1.10, which was higher than both the African average of 1.02 and the 49-country average of 0.95. Rwandan women averaged 1.68, more than three times as high as men from the country (Sardinha & Catalán, 2018: 9-10). One possible explanation for this unexpected finding could be Deniz Kandiyoti’s (1998) theory of ‘patriarchal bargaining,’ which claims that women who live in situations of patriarchy justify domestic violence as a mitigation strategy. The study found that, generally, democracy, female literacy, low levels of poverty, lower prevalence of early marriage, and more economic rights for women were associated with lower acceptance of domestic violence. Women’s labor force participation and female primary education rates, which are two areas in which Rwanda has been successful at reducing gender bias (Appendix Table 8), were not significantly associated with acceptance of domestic violence. The indicator on which Rwanda performs spectacularly well, the share of female legislators, was actually associated with higher levels of acceptance of domestic violence (Sardinha & Catálan, 2018: 9, 12-13).

Rwanda shows that countries with a high share of legislative seats held by women, rapidly declining maternal mortality, and high female labor force participation can still have a high incidence of domestic violence and high tolerance for it. Laws are in place to deal with domestic violence when it occurs, but little has been done to confront social norms that lead to its occurrence and widespread
acceptance, especially at the subnational levels where progress is often slower. Elected officials’ abilities to influence policy depend on the overall strength of the institutions and committees within which they work (Sardinha & Catálan, 2018: 12), and Rwanda lacks strong democratic institutions. Therefore, laws in place to deal with domestic violence are less effective and do not change gender norms or public opinion, despite the intuitive assumption that a high representation of women in parliament would likely lead to the prioritization of issues of domestic violence and thus less acceptance of it.

3.5. Differences Among Women

Despite increased representation of women in parliament and increased attention to women’s issues in legislation (and sometimes policies), this legislation is not effectively implemented in a way that deals with all facets of gender equality and assists women from all walks of life (Rugege, 2016: 493). The lives of women in Rwanda have certainly been improved in some aspects under Kagame’s rule, as evidenced by the indicators in Appendix Table 8. Many of these successes can be attributed in part to the aforementioned programs and policies concerning the health, education, and work and land rights of women. However, Rwanda has performed less well on such indicators in Appendix Tables 9 and 10. Underlying Rwanda’s disappointing performances on the indicators in these tables is that policies are oriented insufficiently toward changing norms and institutions and often neglect the wants and needs of poor, rural, less-educated women, who are unlikely to be the female parliamentarians designing these policies. These policies would be more effective if they were effectively spearheaded and implemented at lower levels of
society such that they address the needs and situations of women from all walks of life. However, since these policies were created by, and therefore, implicitly, for elite Tutsi members of the RPF, these women are better positioned to claim and reap their benefits than others (Abbott & Malunda, 2016: 565).

The indicators on which Rwanda performs worse are those that pertain to the agency and well-being of less privileged women, such as those who are ethnically Hutu, living in rural areas, poor, and/or less educated. These indicators are less likely to be included in composite indices and would probably be overlooked if not examined on their own. According to Marie E. Berry, “Women’s empowerment efforts have been differentially successful: wealthy, Anglophone, Ugandan-raised, predominantly Tutsi women have benefited tremendously from the policies implemented by the government and NGOs, but these reforms have yet to trickle down to most women” (Berry, 2015: 7). This point becomes clear when one examines the country’s failures to reduce the prevalence of HIV and the level of vulnerable employment, as well as increase the proportion of the female population that is literate and has a secondary education. HIV is a disease that is more likely to impact impoverished women and thus this indicator is more evident of their access the healthcare programs and services. Secondary school is a level of education to which girls from privileged families are most likely to have access due to its expensive nature. Schools in poor, rural areas are also more likely to be of poorer quality, which means that women living in these areas are less likely to be literate. Additionally, the percentage of the female labor force that is vulnerably employed is more pertinent to women with lower-paying, less stable jobs. These indicators need to be examined in
order to get a complete picture of Rwanda’s progress towards gender equality for all women.

3.5.1. Ethnicity. Tutsi women tend to be better off than Hutu women. Despite the high representation of women in parliament, little effort has been made in post-conflict Rwanda to secure the adequate representation of Hutus and Tutsis alike. According to Carey Leigh Hogg, “in the void created by a deafening silence obscuring women representatives’ ethnic identities, the ‘politically represented Rwandan woman’ is created as a new ‘subject’ to fill the non-ethnic space” (Hogg, 2009: 37). The genocide, which set the stage for a new constitution with a gender quota, involved victims chosen mostly on the basis of ethnic identity, which is virtually ignored in women’s political representation today. The RPF has chosen to make gender more salient than ethnicity but, in doing so, it has ignored the important ways in which the two identities are intertwined. For example, Hutu extremists portrayed Tutsi women as seductresses who used their sexuality to trick Hutu men to promote ethnic cleansing and classified Hutus who married or even associated with Tutsi women as traitors (Hogg, 2009: 38, 42).

In addition, two-thirds of the most important political officeholders are Tutsi, although this ethnic group makes up only 10 percent of the population. Tutsis also have access to better jobs and benefits. Additionally, the majority of Rwandan university students are Tutsis (Reyntiens, 2013: 201-203). Therefore, the small number of women who have higher education and well-paying jobs are disproportionately Tutsi. Tutsi women, in short, are more likely than Hutu women, to come from well-off families, get an education, and thus run for political office. This
cycle further intensifies the Tutsi-dominated RPF’s stronghold on power and authoritarian nature.

3.5.2. Rural vs. urban residence. In 2017, 82.9 percent of Rwanda’s population lived in rural areas (World Bank, 2019), and women living in these areas are likely to be worse off than those living in urban areas. Because the RPF can resort when necessary to intimidation and coercion, its officials can formulate policies with little attention to the needs of specific geographic populations, which is further intensified by the fact that most politicians live in urban areas and are thus less aware of the needs of rural populations. When female parliamentarians neglect the specific needs of rural women, the well-being of such women suffers, as does gender equality in society as a whole. Such neglect could help explain why vulnerable employment has declined so slowly among Rwandan females (Appendix Table 9).

The Rwandan government’s increased focus on economic development has in reality left behind rural populations and agricultural workers. Smallholder farmers seem not to fit the government’s idea of a “modern Rwanda” (Ansoms & Rostagno, 2016: 428) and are thus forced to alter their livelihoods in burdensome ways. For example, Vision 2020 set out to transform Rwanda into a middle-income country through modernization, but it leaves rural workers “with ever mounting and costly obligations: the construction of latrines, the use of impregnated mosquito nets, the wearing of clean clothes after work on the fields, the joining of health associations and so on; compliance with those duties is enforced through fines” (Reyntiens, 2013: 169). Whereas a small group of urban women have gained access to salaried positions and greater purchasing power, the majority of women continue to work in the
increasingly marginalized agricultural sector in jobs that are typically unpaid or low-paid (Burnet, 2011: 329). Vision 2020 could thus be one reason why Rwanda in 2017 has a higher share of unpaid or insecure jobs held by women than men, as well as women in sub-Saharan Africa and the rest of the world (Appendix Table 9). It could also be indirectly contributing to the sluggish growth of the literacy rate and the percentage of women with access to secondary education (Appendix Tables 9 and 10), since women in rural areas working these kinds of jobs are less likely to have the means to send their daughters to school.

Another policy that has harmed the lives of rural women is villagization. Traditionally, people who live in rural areas live in dispersed settlements. However, as a part of the administration’s modernization drive, the Kagame regime tried to reconfigure rural spaces by resettling rural households into grouped settlements. This is a very costly obligation, because the grouped settlement dwellings are required to be built in accordance with expensive standards that many of these families lack the resources to achieve (Ansoms et al., 2017: 53). This increased financial burden in effect makes rural women less likely to be able to send their daughters to school or access treatment for HIV.

Rural women are also less likely than urban women to be educated and literate. From 2000 to 2015 Rwanda did much better at reducing its shortfall in female primary enrollment (Appendix Table 8) than at reducing its shortfall in female literacy or secondary or higher education (Appendix Tables 9 & 10). Since levels of primary education are universally high, the percentage of women with secondary and tertiary levels of it is a better indicator of educational gender disparities in Rwanda.
Factors such as early marriage, which is more prevalent in rural communities, limit women’s access to education in Rwanda, resulting in lower levels of empowerment and decision-making (Musonera & Heshmati, 2017: 33-34).

Rural women are also less represented in politics. Despite high percentages of women represented at the national and even district levels of government, these achievements do not hold at local levels of governance, nor in leadership positions in community-based organizations (Abbott & Malunda, 2016: 578). For example, in 2016, only 39.4 percent of village councilors and 41.7 percent of cell councilors were women (Commonwealth, 2018). This is in part due to the fact that at the rural level, things like the lack of access to secondary education and basic literacy, which are noted in Appendix Tables 9 and 10, inhibit women from running for and serving in political office (Powley, 2003: 31). Local women’s councils were created to remedy these problems, but they are really just another instrument of the RPF, which gives their representatives demanding workloads (Burnet, 2011: 327) and tasks them with duties that are more closely linked with the party’s agenda than improving their own communities (Debusscher & Ansoms, 2013: 1130). Local women’s councils are also often under-resourced, and their members are not paid (Powley, 2003: 4, 21). Rural women are also typically unable to attend meetings where policy implementation is discussed due to their other duties, such tending to their crops and earning enough money for survival (Abbott & Malunda, 2016: 578). Due to all of these factors, the policies of the RPF administration in Kigali are less representative of rural experiences and less able to tackle the aspects of gender inequality that are more pertinent to women who live in these areas.
3.5.3. Class. Rwanda is one of the fastest growing economies in Eastern Africa, with its GNI per capita in constant 2011 international dollars increasing at a rate of 5.2 percent per year between 2000 and 2015, tied for first among the 30 sub-Saharan African countries with data (World Bank, 2019). Despite this economic development, Rwanda is still one of the poorest countries in the world (World Bank, 2016a). The economy is mainly based on subsistence farming (Strobl, 2017: 1378). In 2018, 65.7 percent of its population worked in agriculture. In 2016, 55.5 percent of the population was living on less than $1.90 (2011 PPP) a day (World Bank, 2019). This sort of poverty mainly falls on women (Wallace et al., 2008: 120). While almost all girls are enrolled in primary school for at least some time, a 2016 study found that only 45 percent of girls from the poorest fifth of households completed it, in comparison to 71 percent from the wealthiest fifth (Abbott & Malunda, 2016: 574). Women from wealthier families are also more likely to make decisions alone (Musonera & Heshmati, 2017: 28).

However, the government promotes the kind of economic development that benefits the wealthy, rather than helps poor communities improve their livelihoods. For example, Rwanda has little protection for people working in the informal sector, in which women and specifically poor women are overrepresented (Debusscher & Asoms, 2013: 1120). The government has prioritized large-scale, capital-intensive projects (Ansoms & Rostagno, 2012: 432) and thus failed to assist many poor women who do not have the means to formalize their enterprises (Ansoms et al., 2017: 59). It also has blocked investment in small-scale initiatives that might allow poor women to increase their income and improve their social class (Ansoms & Rostagno, 2012: \ldots\).
432). Thus, the country has not been able to substantially alter its percentage of women who are vulnerably employed (Appendix Table 9).

Additionally, modernization has led to more strictly enforced regulations that poor citizens are unable to meet. For example, children cannot enter school if they do not wear shoes and uniforms, and people cannot access health centers and hospitals if they are barefoot (Reyntiens, 2013: 169). As a part of modernization, the Rwandan government also demolished the homes of many poor residents of Kigali in order to build residential developments in which poor residents could not afford to live. They thus had to resettle far away from the city, where it was costly for them to travel into areas in which they could access things like power, running water, or schools (Reyntiens, 2013: 17). Modernization oriented toward the interests of wealthier citizens could be contributing to Rwanda’s poor performance in areas regarding health and education on indicators that are more sensitive to the empowerment and well-being and empowerment of poor women (Appendix Tables 9 & 10).

A more democratic political system in which opposition parties had a greater chance of influence over legislation and policy would likely lead to more well-rounded policies that address the differences among women and ways in which gender intersects with things like class, education level, ethnic identity, etc., thereby improving the areas in which Rwanda lags at reducing gender bias. While democracy might not seem feasible given the current state of the Rwandan government, it could potentially be advocated by the international community were foreign governments and international organizations to become more active in holding Kagame accountable for and challenging his authoritarianism. Such international pressure has
not been forthcoming, however, as is evidenced by the misleading headlines quoted earlier in the chapter. This lack of accountability is partially the result of the fact that Kagame has charmed the international community with a narrative about Rwanda’s increasing economic growth, high level of gender equality, and good technocratic governance (Reyntiens, 2013: 194). The present analysis has called this narrative into question, laying an empirical foundation that members of the international community can use to challenge the regime’s authoritarianism and increase the representation of women of all identities at all levels of government. Democratization could facilitate policies that would allow Rwanda to make progress on a wider range of dimensions of gender equality. Practical changes in this direction might include paying women to serve on local councils and giving such councils more autonomy, which would raise the incomes of rural women, allow them to devote more time to political activities, encourage the implementation of policies more in line with the needs and desires of community members (rather than policies that further the interests of the RPF), and allow women of non-elite backgrounds to gain experience that would give them a stronger chance of being elected to parliament, where they could shape national policies in way that represents a wider range of female identities and interests. An additional pragmatic change might involve getting rid of reserved and appointed seats while retaining some other kind of gender quota that involves the direct proportional election of female representatives.

3.6. Rwanda as Evidence for Individual Indicators

This analysis of Rwanda underscores and furthers the critiques of composite gender indices in Chapters 1 and 2, demonstrating that individual gender-related
development indicators are more useful than composite gender indices as measures of gender inequality. Though Rwanda is often heralded as a gender equality success story, the restriction of national parliamentary representation to elite women, the authoritarian nature and behavior of the RPF, the lack of an independent civil society, and the failure of the legislature to enact effective policies to promote the equality and well-being of all Rwandans show that a large share of legislative seats held by women does not guarantee progress toward meeting the substantive interests of most or all women in the country. The subjective and multidimensional character of composite indices leads to confusion and often obscures the substantive aspects of gender bias that Rwanda has been less successful at reducing. Composite indices often fail to include indicators that are more likely to be indicative of how poor, rural, less-educated women fare. As shown in Appendix Tables 8, 9, and 10, Rwanda performs less well on the individual indicators that best reflect the empowerment and well-being of such women than on the individual indicators that reflect the empowerment and well-being of wealthier urban women with higher levels of education. One would never be able to uncover these differences by simply examining Rwanda’s performance on composite indices. Considering individual indicators of gender development rather than composite indices thus do more to highlight aspects of gender bias that affect women from a disadvantaged backgrounds. Tracing the evolution of these individual indicators could also do more than tracing the evolution of a composite index to reveal which gender-related laws and policies have been most and least effective at improving the well-being and agency of women. This section will use these lessons from Rwanda to further the argument made in Chapter 2 about
the general advantages of using individual indicators instead of composite gender indices.

3.6.1. Relevance to the lives of disadvantaged women. Composite gender indices tend to measure a small range of basic, widely-available indicators that are far from the only measures evidencing the state of gender inequality in a country and do not do much to reveal how gender-related programs and policies affect women outside of elite groups. Many of them, especially the adolescent fertility rate and maternal mortality ratio, are more linked to economic development than increasing gender equality. However, economic development has been concentrated in the hands of a few and thus has not effectively benefited the majority of Rwandan women. Indicators that are not as correlated with GDP, such as women in parliament, also do not affect the lives of the majority of Rwandan women, since these women tend to be hand-picked from a small group of high-ranking RPF officials.

Aspects of gender bias that these indices fail to measure are often particularly pertinent in poor, rural Rwandan women’s lives and thus present a more holistic and accurate picture of gender inequality. None of the composite gender indices reviewed measure the extent to which rural women are more disadvantaged than urban women in the areas of schooling, healthcare, and employment. None includes an indicator of the female share of the HIV-positive population, which, in Rwanda, has increased over the Kagame era, and, at 62.6 percent, is significantly higher than the male share. While 94.3 percent of age-appropriate females are enrolled in primary levels of education, only 23.4 percent of women have achieved secondary or higher levels. These education statistics could account for the fact that only 66 percent of the female
population is literate, in comparison to 76.2 percent of males. Other than the GGGI, none of the composite indices examine the literacy rate, which is more indicative than enrollment rates of the quality of education women are receiving. While Rwanda has a high female labor force participation rate, these indices do not show that 87 percent of the female population is vulnerably employed. The SIGI is also the only index that includes any indicator of gender-based violence, which has actually increased by 8 percent during the Kagame administration. These individual indicators need to be equally considered in order to better understand how the authoritarian regime has inhibited the country from reducing gender bias in many areas. However, if one were to make inferences about Rwanda’s state of gender equality based on composite indices, they would not be giving these things their due consideration and thus neglecting a large subset of the population. Though these indicators are less widely-examined, their more specific nature makes them more telling than the oft-examined indicators in Appendix Table 8. Since Rwanda looks worse on these indicators, it is clear that its progress toward gender equality has been less substantial than many assume. In the case of Rwanda, the preoccupation of certain composite gender indices with women in parliament, primary education, adolescent fertility, maternal mortality, and labor force participation, at the expense of alternative but arguably more important indicators like secondary education, vulnerable employment, literacy rate, the incidence of domestic violence, and the female share of the HIV-positive population, lead to misleading perceptions of the country’s overall performance at reducing gender bias.
3.6.2 Understanding policy needs, impact, and outcomes. Individual indicators of women’s empowerment and well-being do more than composite gender indices to facilitate the understanding of the impact of policies on outcomes, and thereby to identify which circumstances and policies need to be changed in order to increase gender equality. For example, the high female share of the HIV-positive population cited in Appendix Table 9 is indicative of WE-ACTx’s failure to provide women with equitable access to resources that could reduce the transmission of the virus. It is also illustrative of Mutuelles’ failure to effectively address the social norms and prejudices that hinder women from obtaining contraception, which is related to the high prevalence of HIV in the female population. The Economic Development and Poverty Reduction Strategy (EDPRS) has mostly benefited men, which is supported by the statistics in Appendix Table 9 that show that a higher percentage of women are still vulnerably employed and thus likely living in poverty. While the Girls Education Policy has been successful at providing free primary school to all, regardless of gender, individual indicators that allow people to examine higher levels of education, such as the percentage of women with secondary or higher levels of education (Appendix Table 9 & 10), show that much needs to be done to ensure women have access to all of these levels. These disparities could be the result of Rwanda’s use of a gender quota for the national legislature as a formal, rather than substantive and bottom-up means to empowerment and representation or the failure of parliament to encompass a wide range of female identities. Regardless of the extent to which women’s parliamentary representation is responsible for these gender-related inadequacies, it is clear that composite gender indices fail to capture these very
important aspects of gender equality and thus result in misinformed policies. Individual indicators make it much easier to design and implement effective and necessary policies, as well as determine their impact and outcomes.

Having a high representation of women in parliament is a supportive but insufficient condition for reducing gender bias from a policy standpoint. In theory, increasing women’s share of legislative seats could be seen as a means to some other end like legal changes that empower women and thus the reason for Rwanda’s reduced adolescent fertility rate. While this could very well be the case for this indicator, the analysis of gender-related policies in Rwanda proves that this has not been the case in terms of reducing other things such as the female share of the HIV-positive population and the female literacy rate. In addition, the Sardinha and Catalán study found that across 49 low and middle-income countries with DHS surveys between 2005 and 2017, women’s share of legislative seats was associated unexpectedly with a significantly greater propensity for women to justify domestic violence (Sardinha & Catalán, 2018: 11). Increasing the representation of women in national parliaments is clearly insufficient for the enactment of policies that might begin to change gender-related social norms. In Rwanda from 2005 to 2015, even as the share of legislative seats held by women rose from 49 to 64 percent, the proportion of women reporting experiencing sexual violence rose from 40 to 44 percent (Appendix Tables 8 & 10). A closer look at this individual indicator has a higher potential to result in the implementation of substantial policies to tackle this issue.
3.6.3 Recognizing specific successes and failures. When individual indicators are combined into a single index, a country’s high performance on one indicator can mask low performance on another. For example, the political empowerment dimension of the GGGI considers both women in parliament and a country’s years with a female head of state. Rwanda scores 1 and is ranked first for women in parliament, but scores 0.015 and is ranked 55 for years with a female head of state. After this entire dimension is calculated, Rwanda still ranks fourth on this index, despite the fact that it has never had a female head of state (World Economic Forum, 2018b), which is overshadowed by the high percentage of women in parliament. Since Rwanda is not a democracy, the head of state has much more power than the legislature, so this indicator is arguably more important in Rwanda’s context. Also on the GGGI Rwanda ranks 109th on the education dimension, but sixth overall for the GGGI summary score (World Economic Forum, 2018b). This is an example of when a high performance on one dimension, political empowerment, overshadows the low performance on another, education. In addition, focusing on women in parliament as a form of representation hides important lessons about inequalities in representation at local and community levels. If one were to examine individual indicators, a high share of national legislative seats held by women would be less likely to obscure women’s inadequate access to higher levels of education or women’s insufficiently empowered representation at subnational levels of government. These indicators need to be contextualized and labeled as successes or failures in their own right.
3.7. Conclusions.

If one wanted to use statistics to inform their analysis of a country’s level of gender inequality, one would be well-advised to do so on the basis of its performance on individual indicators rather than composite gender indices. Individual indicators are more specific and show how countries can perform differently on different aspects on gender equality. Since they stand alone, they are more likely to ensure that all of these aspects are considered separately and equally. Composite indices imply that certain individual indicators matter more than others, and often neglect indicators that might do more to reflect the well-being of poor women in rural areas. Individual indicators also allow people to gauge the impact of policies aimed at particular aspects of women’s well-being. For example, changes in contraceptive prevalence can help observers monitor policies that are designed to reduce adolescent fertility.

Rwanda since 2000 has performed well on some gender-related indicators and poorly on others. Several factors explain these discrepancies. Today, the country has the highest representation of women in parliament in the world, thanks in part to a 30 percent quota for both houses of parliament, as well as a constitution guaranteeing female representation in subnational governments. In spite of the gender quota and the depiction in the world press of Rwanda as a paragon of gender equality, the RPF has entrenched an authoritarian regime and the country lacks a legitimate opposition and an independent civil society. Policies aimed ostensibly at improving the empowerment or well-being of women have helped Rwanda reduce its adolescent fertility rate and maternal mortality ratio while raising female labor force participation and the percentage of females enrolled in primary school. These
policies, however, were created by elite, card-carrying members of the RPF and tend accordingly to neglect the interests of women who fall outside of this identity group. This neglect is evidenced by Rwanda’s less impressive performance on the female literacy rate, the percentage of women who are vulnerably employed, the percentage of women with secondary or higher levels of education, the female share of the HIV-positive population, and the percentage of women who have experienced physical or sexual violence. Women in poor and rural areas still lack access to quality and affordable maternal healthcare, access to secondary and higher levels of education, and access to secure jobs that might provide them with the means to a more sustainable livelihood. Little improvement can be expected on such indicators unless and until women with various identities, not just wealthy urban women who belong to the RPF, are represented at all levels of government, including but not limited to the national parliament. Were such representation achieved, Rwanda might begin to perform better on a wider variety of individual indicators. If one were to simply examine composite indices instead of these individual indicators, they would be very confused about the country’s progress at reducing gender bias and likely ignore these important lessons and nuances that paint a clearer and more substantive picture of it.
Conclusions

While composite gender indices are simple and easy to interpret, they present a multitude of drawbacks that lead to misinterpretation and confusion and are not worth their benefits. Examining a variety of individual indicators would thus leave observers with a more valid impression of a country’s progress toward gender equality. With the highest representation of women in parliament in the world, Rwanda is often heralded as a country that has made significant progress at reducing gender bias. However, upon examination of its performance on a large variety of individual gender-related indicators, it becomes clear that this perception is ill-informed and that gender inequality is still very much present in Rwanda. By contrast, Rwanda receives very disparate scores on composite gender indices, which is confusing and hides the fact that Rwanda has done much better at progressing toward gender equality in some areas than others. Rwanda thus proves that observers would do better to analyze individual indicators in order to gain a comprehensive understanding of the specifics of gender inequality in a given country.

The review of the six major composite gender indices in Chapter 1 showed that, despite many revisions and new proposals, consistent problems have plagued these indices. For example, they typically combine absolute and relative achievements, issues of well-being and empowerment, and means and ends variables, which are all different things that cannot be effectively synthesized into one number and thus must be examined separately. They also use complex calculations and weighting schemes that often obscure or distort specific successes and failures. These
consistent criticisms of a range of composite gender indices suggest that these indices are inherently more deceptive than provocative.

The analysis in Chapter 2 explained that the drawbacks of composite indices, even those unrelated to gender, substantially outweigh their advantages. Composite gender indices are indeed simpler, easier tools for advocacy and policymaking, and less sensitive to measurement error than individual indicators. However, these indices are also prone to obscuring substantive issues and using subjective and distortionary weighting and aggregation schemes. They are also unable to incorporate a broad range of indicators, as well as showcase the ways in which their constituent indicators interact. In attempting to combine the different kinds of indicators listed in the previous paragraph, they become confusing and difficult to interpret, and the fact that they often have to rely on imputed data undermines their reliability. When the combination of these disadvantages facilitates misinterpretation of a country’s level of gender equality, it can lead to misguided policy directions that often do more harm than good. Composite gender indices should thus be set aside in favor of survey a host of individual gender-related indicators in order to make inferences about a country’s level of gender equality across dimensions. This process would ensure that a substantial number of indicators are considered equally and are selected because of their relevance and availability in a particular context. These indicators can also point to distinct drivers of gender inequality in these various contexts and thus lead to more effective policies in place to combat it.

In Chapter 3, it became clear that it is confusing to try to infer anything about the position of Rwandan women from composite gender indices. Many reporters and
casual observers perceive Rwanda to have made substantial progress toward reducing
gender bias. However, Rwanda in actuality has only made significant gains on some
gender-related indicators, such as the share of lower house or unicameral legislative
seats held by women, maternal mortality, adolescent fertility, female primary
enrollment, and female labor force participation. By contrast, it has had sluggish or
negative progress on indicators that are more specific and thus reveal more about the
state of gender equality in a country, such as the share of the female labor force that is
vulnerably employed, the female share of the HIV-positive population, the percentage
of women with secondary and tertiary levels of education, female literacy, and the
percentage of women who have experienced physical or sexual violence. This
inconsistency is in part explained by the fact that Rwanda is an authoritarian regime
that constrains its parliamentarians from acting on behalf of their female identities
and thus ensuring the prioritization and effective implementation of gender-related
policies. It is also due to a lack of attention to the problems and concerns of women
from less privileged backgrounds. These disparities could never be captured by
composite gender indices. Thus, this analysis of Rwanda both underscores and
furthers the aforementioned critiques of composite gender indices. It shows how these
indices neglect variables that are more specific and thus more indicative of a
country’s progress toward gender equality, especially in regards to the concerns of
disadvantaged women. It also exhibits how individual indicators can better capture a
country’s specific success and failures and thus lead to a better understanding of the
areas in which it should work to increase its level of gender equality, through policies
and legislation or other means.
Though, ideally, composite gender indices should be dismissed, these indices have been around for over twenty years. Thus, they cannot be discarded and disregarded so easily. However, these indices should at minimum be supplemented by a thorough examination of a wide range of individual gender-related indicators in order to gain a greater understanding of a country’s specific success and failures at reducing gender bias and how they affect women from different backgrounds. Rwanda is a great example of the confusing picture that these multidimensional indices often paint and the ways in which individual indicators lead to more comprehensive and revealing analyses of a country’s level of gender inequality. However, this study could be expanded through examining a larger scope of countries. An analysis of their scores on composite gender indices in comparison to a group of individual gender-related indicators would likely lead to further lessons about the value, or lack of value, of the former.

Additionally, this thesis was not able to substantially address the problems with examining some individual gender-related indicators on their own, regardless of their incorporation into composite gender indices. As previously mentioned throughout this thesis, indicators of earned income typically do not examine the way in which this income is distributed within households, thus indicating nothing about the disparities between men’s and women’s access to resources within the home. Additionally, indicators of school enrollment rates do not take quality of education into account, and ensuring that women get a high-quality education is essential for fostering gender equality (Dijkstra & Hanmer, 2000: 50). Examining literacy rates in addition to enrollment rates might be a first step in remedying this problem. Finally,
indicators of female labor force participation ignore women who are employed in informal, unpaid, or care sectors, which are important kinds of jobs that need to be considered, as well as the distribution of this employment within different sectors that provide women with varying levels of sustenance (Permanyer, 2013b: 6). These problems with individual indicators are particularly valid and the ways in which they might affect country-specific analyses of gender inequality deserve further consideration.

Ideally, the evaluation of a country’s performance on a wide range of individual gender-related indicators would be by supplemented by qualitative research that examines history and current events, as well as ethnographic studies that assess the specific thoughts and concerns of women living in the country at hand. For example, in Rwanda, this kind of analysis might involve conducting primary research through interviews with Rwandan women from a variety of backgrounds, in which they discuss their perceptions of the country’s progress toward reducing gender bias as well as their thoughts on its representation of women in parliament and the effectiveness of the Kagame regime’s gender-related policies. However, this kind of study and analysis extends well beyond the scope of this thesis.

Regardless of the other kinds of research in which one could partake, these individual gender-related indicators must be examined, or else observers would likely be misled by the headlines praising Rwanda’s progress toward gender equality or confused by its disparate percentiles on composite gender indices. These individual indicators can help people effectively comprehend the fact that gender inequality is a complex phenomenon that manifests in many different ways and affects women from
different backgrounds differently. If one wanted to ensure they were partaking in a thorough and accurate analysis of gender inequality in a country, they should set aside composite gender indices in favor of studying a wide variety of individual gender-related indicators.
Works Cited


Karuhanga, J. (2015). Rwanda Best Place to be a Woman in Africa. Retrieved April 7, 2019, from [https://www.newtimes.co.rw/section/read/194563](https://www.newtimes.co.rw/section/read/194563).


### Appendix Table 1 - Gender Development Index (GDI)

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</thead>
<tbody>
<tr>
<td>Human Development</td>
<td></td>
<td>Life expectancy at birth - adjusts for the fact that women tend to live longer than men (national achievements measured against “goalposts of 87.5 years for women and 82.5 years for men)</td>
<td>The unweighted arithmetic mean of the inequality-adjusted dimensional indices, which are the harmonic means of the male and female dimensional indices</td>
<td>UNDP</td>
<td>155</td>
<td>1995-2010</td>
<td>5,650</td>
</tr>
<tr>
<td>Knowledge</td>
<td></td>
<td>Adult literacy rate (two-thirds weight)</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Combined gross enrollment in education - primary, secondary, tertiary (one-third weight)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Access to basic resources</td>
<td></td>
<td>Estimated earned income (SPPP) shares – ratio of each gender’s wage to the average national wage, multiplied by each gender’s share of the labor force, then divided by each gender’s share of the population</td>
<td></td>
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### Appendix Table 2: Revised Gender Development Index (nGDI)

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</tr>
</thead>
<tbody>
<tr>
<td>Human Development</td>
<td>Health</td>
<td>Life expectancy at birth - <em>admits for the fact that women tend to live longer than men</em> (national achievements measured against “goalposts of 87.5 years for women and 82.5 years for men)</td>
<td>First, calculate the geometric mean of the three dimensions for each gender. Then take the ratio of the female HDI to the male HDI.</td>
<td>UNDP</td>
<td>164</td>
<td>2014 – present</td>
<td>5,650</td>
</tr>
<tr>
<td></td>
<td>Knowledge</td>
<td>Expected years of schooling <em>(estimated based on current gross enrollment rates)</em></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mean years of schooling <em>(estimated based on census and survey data)</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Standard of living</td>
<td></td>
<td>Estimated GNI per capita <em>(SPPP)</em> shares – <em>share of the wage bill for each gender, multiplied by the GNI per capita, adjusted based on gendered population shares</em></td>
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### Appendix Table 3 – Gender Empowerment Measure

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</thead>
<tbody>
<tr>
<td>Empowerment</td>
<td>Economic participation and decision-making power</td>
<td>Share of profession, technical, administrative, and managerial jobs</td>
<td>The unweighted arithmetic mean of the inequality-adjusted dimensional indices, which are the harmonic means of the male and female dimensional indices</td>
<td>UNDP</td>
<td>109</td>
<td>1995 – 2010</td>
<td>5,790</td>
</tr>
<tr>
<td></td>
<td>Political participation</td>
<td>Share of parliamentary seats</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Power over economic resources</td>
<td>Estimated earned income share (PPPS)</td>
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</table>
## Appendix Table 4 - Gender Inequality Index

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</thead>
<tbody>
<tr>
<td>Empowerment</td>
<td>Reproductive health</td>
<td>Maternal mortality ratio</td>
<td>First, aggregate across dimensions for each gender, using geometric means. Next, take the harmonic mean of these geometric means to obtain the inequality-adjusted dimensional index. Then, compute the reference standard by taking the geometric mean of the arithmetic means of the male and female values for each indicator, without adjusting for inequality. Finally, subtract the ratio of the inequality-adjusted dimensional index to the reference standard from one.</td>
<td>UNDP</td>
<td>157</td>
<td>2010 – present</td>
<td>5,790</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Adolescent fertility rate</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Empowerment</td>
<td>Share of legislative seats</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Secondary and tertiary enrollment rates</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Labor market</td>
<td>Labor force participation rate</td>
<td></td>
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</table>
# Appendix Table 5 - Global Gender Gap Index

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Gender Disparities</td>
<td>Economic participation and opportunity</td>
<td>Labor force participation rate</td>
<td>First, convert the indicators into female-to-male ratios using the equality benchmark of 1. Then, take the arithmetic mean of the ratios in each dimension. Higher weights are assigned to indicators with lower standard deviations. The GGGI is the unweighted arithmetic mean of the four dimensions.</td>
<td>World Economic Forum</td>
<td>149</td>
<td>2014 – present</td>
<td>3,360</td>
</tr>
<tr>
<td></td>
<td>Economic participation and opportunity</td>
<td>Wages for similar work</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Economic participation and opportunity</td>
<td>Number of legislators, senior officials, and managers</td>
<td></td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Economic participation and opportunity</td>
<td>Number of professional and technical workers</td>
<td></td>
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<tr>
<td>Educational attainment</td>
<td>Literacy rate</td>
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<tr>
<td></td>
<td>Net primary enrollment rate</td>
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<td></td>
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<tr>
<td></td>
<td>Net secondary enrollment rate</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Gross tertiary enrollment rate</td>
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</tr>
<tr>
<td>Health and survival</td>
<td>Female-to-male sex ratio at birth</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Healthy life expectancy</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Political empowerment</td>
<td>Number of seats in parliament</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>Number of ministerial positions</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Number of years with a female versus male head of state in the last 50</td>
<td></td>
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## Appendix Table 6 - Social Institutions and Gender Index (SIGI)

<table>
<thead>
<tr>
<th>Focus Concept</th>
<th>Dimensions (OECD, 2019b)</th>
<th>Indicators (OECD, 2019b)</th>
<th>Calculation (OECD, 2019c)</th>
<th>Producer</th>
<th>Country Coverage</th>
<th>Year Coverage</th>
<th>Google Scholar Hits</th>
</tr>
</thead>
</table>
| Gender Disparities | Discrimination in the family | Laws on child marriage, household responsibilities, inheritance, divorce  
Prevalence of child marriage | Take the arithmetic mean of the indicators comprising each dimension and then the arithmetic mean of the four dimensions together. Each dimension is weighted equally, but the SIGI exponentiates each indicator to allow for high inequality in one dimension to be partially offset by low inequality in another. | Organization for Economic Cooperation and Development | 120 | 2009, 2012, 2014, 2019 | 1,290 |
| | Restricted physical integrity | Laws on domestic violence, reproductive autonomy  
Attitudes towards and prevalence of FGM, domestic violence  
Sex ratio among 0-4 year-olds  
Unmet need for family planning | | | | | |
| | Restricted access to productive and financial resources | Laws on access to land assets, non-land assets, formal financial services, workplace rights  
Access to financial services  
Attitudes towards working women  
Representation in managerial positions | | | | | |
| | Restricted civil liberties | Laws on citizenship rights, freedom of movement, political voice, access to justice  
Security feeling  
Percentage of women in the legislature  
Confidence in judicial system and courts | | | | | |
## Appendix Table 7 - Rwanda on Composite Gender Indices

<table>
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</thead>
<tbody>
<tr>
<td>nGDI Value</td>
<td>0.883</td>
<td>0.922</td>
<td>0.953</td>
<td>0.936</td>
<td>0.942</td>
<td>0.942</td>
<td>0.940</td>
<td>0.941</td>
<td></td>
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</tr>
<tr>
<td>nGDI Rank</td>
<td>100</td>
<td>92</td>
<td>82</td>
<td>98</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>101</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>nGDI Percentile</td>
<td>29</td>
<td>40</td>
<td>48</td>
<td>40</td>
<td>39</td>
<td>39</td>
<td>39</td>
<td>38</td>
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<tr>
<td>nGDI Countries</td>
<td>141</td>
<td>153</td>
<td>158</td>
<td>162</td>
<td>163</td>
<td>164</td>
<td>164</td>
<td>164</td>
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<tr>
<td>GGGI Value</td>
<td></td>
<td>0.785</td>
<td>0.794</td>
<td>0.800</td>
<td>0.822</td>
<td>0.804</td>
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<tr>
<td>GGGI Rank</td>
<td></td>
<td>7</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>6</td>
<td></td>
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<tr>
<td>GGGI Percentile</td>
<td>95</td>
<td>96</td>
<td>97</td>
<td>97</td>
<td>97</td>
<td>96</td>
<td></td>
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<tr>
<td>GGGI Countries</td>
<td>142</td>
<td>145</td>
<td>144</td>
<td>144</td>
<td>144</td>
<td>149</td>
<td></td>
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</tr>
<tr>
<td>SIGI Value</td>
<td>16.9</td>
<td>15.4</td>
<td>13.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>27.6</td>
<td></td>
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</tr>
<tr>
<td>SIGI Rank</td>
<td>66</td>
<td>28</td>
<td>44</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>65</td>
<td></td>
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<tr>
<td>SIGI Percentile</td>
<td>35</td>
<td>67</td>
<td>59</td>
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<td></td>
<td>46</td>
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<tr>
<td>SIGI Countries</td>
<td>102</td>
<td>86</td>
<td>108</td>
<td></td>
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<tr>
<td>GII Value</td>
<td>0.555</td>
<td>0.487</td>
<td>0.438</td>
<td>0.42</td>
<td>0.398</td>
<td>0.389</td>
<td>0.381</td>
<td>0.381</td>
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<td>GII Rank</td>
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<td>85</td>
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<tr>
<td>GII Percentile</td>
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<td>42</td>
<td>43</td>
<td>44</td>
<td>43</td>
<td>46</td>
<td>45</td>
<td>46</td>
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<td></td>
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<tr>
<td>GII Countries</td>
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<td>144</td>
<td>149</td>
<td>153</td>
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<td>156</td>
<td>159</td>
<td>157</td>
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</tbody>
</table>

Sources: (UNDP, 2017a); (OECD, 2014); (World Economic Forum, 2014); (World Economic Forum, 2015); (World Economic Forum, 2016b); (World Economic Forum, 2017); (World Economic Forum, 2018b); (Branisa et al., 2009: 35); (OECD, 2012); (OECD, 2014); (OECD, 2019d)
## Appendix Table 8 - Rwanda on Individual Indicators: Successes

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</thead>
<tbody>
<tr>
<td>Adolescent fertility rate, Rwanda</td>
<td>49.0</td>
<td>42.9</td>
<td>34.8</td>
<td>26.0</td>
<td>26.8</td>
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<td>49.0</td>
<td>26.8</td>
<td>45%</td>
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<td>Adolescent fertility rate, sub-Saharan Africa</td>
<td>128.4</td>
<td>121.3</td>
<td>112.9</td>
<td>103.5</td>
<td>101.7</td>
<td></td>
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<td>128.4</td>
<td>101.7</td>
<td>21%</td>
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<td>Adolescent fertility rate, World</td>
<td>55.8</td>
<td>49.0</td>
<td>47.1</td>
<td>45.1</td>
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<td>55.8</td>
<td>44.6</td>
<td>20%</td>
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<td>Maternal mortality ratio, Rwanda</td>
<td>1020.0</td>
<td>567.0</td>
<td>381.0</td>
<td>290.0</td>
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<td></td>
<td>1020.0</td>
<td>290.0</td>
<td>72%</td>
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<td>Maternal mortality ratio, sub-Saharan Africa</td>
<td>846.0</td>
<td>717.0</td>
<td>625.0</td>
<td>547.0</td>
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<td>846.0</td>
<td>547.0</td>
<td>35%</td>
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<td>Maternal mortality ratio, World</td>
<td>341.0</td>
<td>288.0</td>
<td>246.0</td>
<td>216.0</td>
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<td>341.0</td>
<td>216.0</td>
<td>37%</td>
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<td>Female labor force participation, Rwanda (ages 15-64)</td>
<td>87.5</td>
<td>86.9</td>
<td>87.9</td>
<td>88.0</td>
<td>87.7</td>
<td>87.6</td>
<td>88.0</td>
<td>87.5</td>
<td>88.0</td>
<td>4%</td>
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<tr>
<td>Male labor force participation, Rwanda (ages 15-64)</td>
<td>90.5</td>
<td>88.0</td>
<td>88.8</td>
<td>87.0</td>
<td>86.0</td>
<td>86.0</td>
<td>86.0</td>
<td>89.0</td>
<td>86.0</td>
<td>-27%</td>
</tr>
<tr>
<td>Female labor force participation, sub-Saharan Africa (ages 15-64)</td>
<td>62.1</td>
<td>62.7</td>
<td>63.4</td>
<td>64.1</td>
<td>64.2</td>
<td>64.4</td>
<td>64.4</td>
<td>62.1</td>
<td>64.4</td>
<td>6%</td>
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<td>Female labor force participation, World (ages 15-64)</td>
<td>56.0</td>
<td>55.9</td>
<td>54.1</td>
<td>53.8</td>
<td>54.0</td>
<td>53.9</td>
<td>53.7</td>
<td>56.0</td>
<td>53.7</td>
<td>-5%</td>
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<td>Share of lower or unicameral legislative seats held by women, Rwanda</td>
<td>25.7</td>
<td>48.8</td>
<td>56.3</td>
<td>63.8</td>
<td>63.8</td>
<td>61.3</td>
<td>61.3</td>
<td>25.7</td>
<td>61.3</td>
<td>48%</td>
</tr>
<tr>
<td>Share of lower or unicameral legislative seats held by women, sub-Saharan Africa</td>
<td>11.6</td>
<td>16.2</td>
<td>18.7</td>
<td>23.6</td>
<td>23.5</td>
<td>24.2</td>
<td>24.2</td>
<td>11.6</td>
<td>24.2</td>
<td>14%</td>
</tr>
<tr>
<td>Share of lower-house or unicameral seats held by women, World</td>
<td>13.9</td>
<td>16.5</td>
<td>19.2</td>
<td>22.9</td>
<td>23.0</td>
<td>23.7</td>
<td>24.0</td>
<td>13.9</td>
<td>24.0</td>
<td>12%</td>
</tr>
<tr>
<td>Female % net primary enrollment, Rwanda</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>96.4</td>
<td>94.3</td>
<td>64%</td>
</tr>
<tr>
<td>Male % net primary enrollment, Rwanda</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>95.4</td>
<td>93.6</td>
<td>65%</td>
</tr>
<tr>
<td>Female % net primary enrollment, sub-Saharan Africa</td>
<td>56.3</td>
<td>66.1</td>
<td>71.6</td>
<td>75.0</td>
<td>75.3</td>
<td>75.3</td>
<td>75.3</td>
<td>56.3</td>
<td>75.3</td>
<td>43%</td>
</tr>
<tr>
<td>Female % net primary enrollment, World</td>
<td>80.6</td>
<td>85.5</td>
<td>88.1</td>
<td>88.4</td>
<td>88.5</td>
<td>88.4</td>
<td>88.4</td>
<td>80.6</td>
<td>88.4</td>
<td>40%</td>
</tr>
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</table>

Sources: (World Bank, 2019)
### Appendix Table 9 - Rwanda on World Bank Individual Indicators: Failures

<table>
<thead>
<tr>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>Female share of the population living with HIV, Rwanda</td>
<td>59.7</td>
<td>61.2</td>
<td>62.1</td>
<td>62.5</td>
<td>62.5</td>
<td>62.6</td>
<td>59.7</td>
<td>62.6</td>
<td>-5%</td>
<td></td>
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<tr>
<td>Female share of the population living with HIV, sub-Saharan Africa</td>
<td>57.8</td>
<td>58.8</td>
<td>59.0</td>
<td>60.0</td>
<td>60.0</td>
<td>60.0</td>
<td>57.8</td>
<td>60.0</td>
<td>-4%</td>
<td></td>
</tr>
<tr>
<td>Female share of the population living with HIV, world</td>
<td>50.2</td>
<td>50.9</td>
<td>51.3</td>
<td>51.8</td>
<td>51.9</td>
<td>52.0</td>
<td>50.2</td>
<td>52.0</td>
<td>-4%</td>
<td></td>
</tr>
<tr>
<td>Female literacy rate, Rwanda</td>
<td>60.0</td>
<td>61.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>60.0</td>
<td>66.0</td>
<td>15%</td>
</tr>
<tr>
<td>Male literacy rate, Rwanda</td>
<td>71.4</td>
<td>71.3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>71.4</td>
<td>76.2</td>
<td>17%</td>
</tr>
<tr>
<td>Female literacy rate, sub-Saharan Africa</td>
<td>47.0</td>
<td>49.6</td>
<td>50.7</td>
<td>56.1</td>
<td>57.1</td>
<td></td>
<td></td>
<td>47.0</td>
<td>57.1</td>
<td>19%</td>
</tr>
<tr>
<td>Female literacy rate, World</td>
<td>76.4</td>
<td>77.8</td>
<td>80.5</td>
<td>82.3</td>
<td>82.7</td>
<td></td>
<td></td>
<td>76.4</td>
<td>82.3</td>
<td>25%</td>
</tr>
<tr>
<td>Female vulnerable employment, Rwanda</td>
<td>96.2</td>
<td>90.7</td>
<td>87.9</td>
<td>87.0</td>
<td>87.5</td>
<td>87.5</td>
<td>87.0</td>
<td>96.2</td>
<td>87.0</td>
<td>10%</td>
</tr>
<tr>
<td>Male vulnerable employment, Rwanda</td>
<td>88.7</td>
<td>79.7</td>
<td>74.4</td>
<td>72.3</td>
<td>72.1</td>
<td>72.0</td>
<td>72.0</td>
<td>88.7</td>
<td>72.0</td>
<td>19%</td>
</tr>
<tr>
<td>Female vulnerable employment, sub-Saharan Africa</td>
<td>80.6</td>
<td>80.7</td>
<td>79.6</td>
<td>78.2</td>
<td>78.3</td>
<td>78.3</td>
<td>80.6</td>
<td>78.3</td>
<td>3%</td>
<td></td>
</tr>
<tr>
<td>Female vulnerable employment, World</td>
<td>50.8</td>
<td>47.3</td>
<td>43.5</td>
<td>42.4</td>
<td>42.6</td>
<td>42.7</td>
<td>50.8</td>
<td>42.7</td>
<td>16%</td>
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</table>

Sources: (World Bank, 2019)
Appendix Table 10 - Rwanda on Other Individual Indicators: Failures

<table>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Women with secondary or higher education, % of female population 15-49, Rwanda</td>
<td>10.6</td>
<td>9.6</td>
<td>16.2</td>
<td>23.4</td>
<td>10.6</td>
<td>23.4</td>
<td>17%</td>
</tr>
<tr>
<td>Men with secondary or higher education, % of male population 15-49, Rwanda</td>
<td>14.7</td>
<td>12.7</td>
<td>20.9</td>
<td>25.9</td>
<td>14.7</td>
<td>25.9</td>
<td>15%</td>
</tr>
<tr>
<td>Women with secondary or higher education, % of female population 15-49, 5 country avg</td>
<td>23.4</td>
<td>27.4</td>
<td>22.7</td>
<td>39.0</td>
<td>23.4</td>
<td>39.0</td>
<td>25%</td>
</tr>
<tr>
<td>Women who experienced physical or sexual violence, % of female population, Rwanda</td>
<td>40.4</td>
<td>47.9</td>
<td>43.9</td>
<td>40.4</td>
<td>43.9</td>
<td>43.9</td>
<td>-8%</td>
</tr>
<tr>
<td>Women who experienced physical or sexual violence, % of female population, 5 country avg</td>
<td>53.9</td>
<td>45.1</td>
<td>47.4</td>
<td>53.9</td>
<td>47.4</td>
<td>47.4</td>
<td>12%</td>
</tr>
</tbody>
</table>

V-Dem Liberal Democracy Index (0 = least liberal democracy, 1.00 = most liberal democracy).

<table>
<thead>
<tr>
<th>Year</th>
<th>2000</th>
<th>2005</th>
<th>2010</th>
<th>2015</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rwanda</td>
<td>0.13</td>
<td>0.16</td>
<td>0.17</td>
<td>0.21</td>
<td>0.16</td>
</tr>
<tr>
<td>sub-Saharan Africa</td>
<td>0.26</td>
<td>0.29</td>
<td>0.30</td>
<td>0.31</td>
<td>0.31</td>
</tr>
</tbody>
</table>

Freedom House Rating (Political Rights, Civil Liberties; 1 = most PR and CL, 7 = least PR and CL).

<table>
<thead>
<tr>
<th>Year</th>
<th>2000</th>
<th>2005</th>
<th>2010</th>
<th>2015</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rwanda</td>
<td>7.6</td>
<td>6.5</td>
<td>6.5</td>
<td>6.6</td>
<td>6.6</td>
</tr>
</tbody>
</table>

Sources: (USAID, 2019); (Freedom House, 2018); (V-Dem, 2019)
Glossary of Key Acronyms

DHS, Demographic and Health Surveys

EDPRS, Economic Development and Poverty Reduction Strategy

GEM, Gender Empowerment Measure

GDI, Gender Related-Development Index

ngDI, Revised Gender Development Index

GDP, Gross Domestic Product

GGGI, Global Gender Gap Index

GMO, Gender Monitoring Office

GNI, Gross National Income

GII, Gender Inequality Index

HDI, Human Development Index

HDR, Human Development Report

HIV, Human Immunodeficiency Virus

MIGEPROF, Ministry for Gender and Family Promotion

OECD, Organization for Economic Cooperation and Development

RPF, Rwandan Patriotic Front

SIGI, Social Institutions and Gender Index

WE-ACTx, Women’s Equity in Access to Care and Treatment

WEF, World Economic Forum

UNDP, United Nations Development Programme