



Munich Personal RePEc Archive

# **An investigation into the reported closing of the Nicaraguan gender gap**

Alan T. Piper

Europa-Universität Flensburg

May 2018

Online at <https://mpra.ub.uni-muenchen.de/86769/>

MPRA Paper No. 86769, posted 18 May 2018 18:37 UTC

## An investigation into the reported closing of the Nicaraguan gender gap

Alan Piper  
(alan.piper@uni-flensburg.de)

International and Institutional Economics  
International Institute of Management and Economic Education  
Europa-Universität Flensburg  
Germany

May 2018

**Abstract:** For the last five years, the World Economic Forum's annual Global Gender Gap Index has been reporting that Nicaragua is one of the most gender equal countries in the world. This is the culmination of a remarkable increase in gender equality in Nicaragua during the past decade, charted by the same index. This paper discusses the Index and the Nicaraguan context and then refers to the results of several waves of the Latinobarometer to investigate whether the change in gender equality has affected Nicaraguans' (and particularly Nicaraguan women's) perceptions of their lives and society. The underlying question is therefore whether satisfaction with life, satisfaction with democracy, and opinions about gender equality have, in the average opinion of Nicaraguans, altered between the period when Nicaragua was placed low on the gender equality ranking to when it had attained a high rating on the index just a few years later. The findings, which come from ordered probit regression analysis, reveal some evidence of improvements over this time period.

JEL Codes: I31, N36

Keywords: Nicaragua; gender equality; Global Gender Gap Index; life satisfaction; Latinobarometer.

---

Acknowledgements: I am grateful to Amina Ahmed Lahsen for research assistance.

## An investigation into the reported closing of the Nicaraguan gender gap

### 1. Introduction

According to the World Economic Forum's annual Global Gender Gap (GGG) Index, Nicaragua is supposedly one of the most gender equal countries in the world and has consistently been for several years (World Economic Forum, 2017). For example, in the 2014 Index covering 142 countries, only 5 had greater gender equality than Nicaragua according to the index (these 5 countries, in order of gender equality, are Iceland, Finland, Norway, Sweden and Denmark). Since then, it has been ranked twelfth in 2015, tenth in 2016 and sixth once more in 2017. These very high global rankings mean that Nicaragua has been "the best performer in the Latin American and the Caribbean region" (World Economic Forum 2017, p.14) since 2012. Nicaragua was not always so highly placed in the index. Indeed, the rise of Nicaragua in these rankings has been one of the more remarkable developments since the inception of the WEFs GGG Index. In 2006, the report's first year, it lay in 65<sup>th</sup> place out of 115 countries.<sup>1</sup> This rise has been noted by a GGG report too: "Since 2006, the country [Nicaragua] has recorded the highest improvement to date" (2014, p.22). This striking rise is not due to methodology, since the methods used to compile the index have remained unchanged over its life, and although it has been the target of both praise and scepticism, it has received little academic attention. Given that a stated purpose of the report is that it should be a useful guide for policy, such scrutiny is advisable (World Economic Forum, 2006, p.3).

In counterpoint to the country's considerable rise, its high current ranking in the report and the positive headlines this generates for Nicaragua, women's rights advocates claim that there is still a long way to go. Abortion, which is still illegal in every possible circumstance, is just one of several issues that concern such groups (Aizenman 2006; Human Rights Watch 2017). Other issues include domestic violence, unpaid work, poverty, housework and childcare, which are discussed below. It has also been argued that the Index itself is flawed and may not adequately reflect gender (in)equality in particular countries. These criticisms are found in newspaper articles and blog posts rather than academic literature. One of the rare examples of academic interest and scrutiny is perhaps the most important investigation in this respect, conducted by Barns and Preston (2010), who take Australia's high position in 2006 and related claims made in that year's report that it is a world leader in closing the gender gap as a starting point for scrutiny. More generally, Barns and Preston (2010) argue that there is a need to examine such indices, particularly if they are going to be used by politicians to make claims about social progress. In Nicaragua, there is evidence that this does indeed occur and the current high ranking in the GGG Index has been trumpeted as a success story ("Nicaragua sube...", 2017; "Nicaragua: Ortega...", 2013).

This investigation does not directly investigate and critique the Index itself – although critical commentary is offered – but instead takes this rise as a motivation for investigating whether life has improved over this period for Nicaraguans, and especially Nicaraguan women. If the report has credibility in the Nicaraguan context, and is worthy of the acclaim it has generated, then presumably the closing of the gender gap to which it attests should be manifest in improved well-being among

---

<sup>1</sup> The WEF published a report similar to the index in 2005 which covered 58 countries, however Nicaragua was not one of them (Moitra & Kelly, 2013).

the country's (female) citizens. Whether this is actually so is assessed below using regression analysis of data from the Latinobarometer, a survey conducted with a reasonably representative repeated cross-section sample of Nicaraguans. Furthermore, this investigation also considers whether the remarkable increase in equality is at all credible by considering people's responses to questions about their satisfaction with democracy and their opinions on whether things are getting better in terms of gender inequality, as well as their individual self-reported life satisfaction.

The remainder of this article is organized as follows. Section 2 considers the Index itself and the Nicaraguan context. Section 3 describes the Latinobarometer dataset and explains the methodological choices made. Section 4 presents results, and Section 5 discusses these results and limitations of this study. Finally, Section 6 offers concluding remarks.

## **2: The Global Gender Gap Index, the Nicaraguan Context, and Literature Relevant to Both**

This section begins with a consideration of the Index itself and then moves on to situate it in the Nicaraguan context. The third subsection links the discussions in the two previous subsections, summarizing them with respect to the economics of life satisfaction research area.

### **2.1 The Index itself**

The Index comprises four dimensions which consider the following aspects of gender disparity/equality: economic participation and opportunity; educational attainment; health and survival; and political empowerment. Within these dimensions, interest centres on gaps between males and females in terms of 14 specific outcome variables, for example, income (economic participation and opportunity), literacy (educational attainment), life expectancy (health and survival) and number of legislators (political empowerment). The World Economic Forum website provides very clear details about how the Index is constructed and how the various dimensions are measured.<sup>2</sup> Importantly, the Index is not weighted for the absolute levels of the outcome variables. Thus a country can rank high with a low level of literacy, as long as the gap between each gender's literacy is minimal. The same is true of other components and the justification for this approach is that it is considered to provide an illustration of gender (in)equality irrespective of a country's level of economic development. However, this methodology allows for the possibility that women's well-being in a particular country could actually deteriorate during a period in which the Index shows that the gender gap is narrowing. For example, if a particular indicator such as life expectancy worsened for both genders, but the decline was more extreme among males, then the gender equality Index would increase. As a result, improvements in Gender Gap scores do not necessarily indicate improvement in the lives of women. Each of the four dimensions is further discussed below, contributing to a critical appreciation of the Index.

There are good reasons for suspecting that the Index might not fully (or even adequately) capture how life is for women and men in terms of gender equality and life as a whole. One major reason for this is that the four dimensions and their components can only present a narrow picture of what is a complex situation. This is perhaps most apparent with the health and survival sub-index, which comprises just two ratios: the birth ratio between men and women and the healthy life expectancy

---

<sup>2</sup> See particularly table 1 of this webpage: <http://reports.weforum.org/global-gender-gap-report-2016/measuring-the-global-gender-gap/>

ratio. Clearly much is missing. Similarly, the political engagement ratio consists of three statistics: the ratio of women with seats in parliament compared to men; the ratio of women to men at ministerial level; and the number of years when the country has had a female head of state. Furthermore, as the authors of the WEF report acknowledge ‘a clear drawback in this [political empowerment] category is the absence of any indicators capturing differences between the participation of women and men at local levels of government.’ (World Economic Forum, 2016, p.7).

Given that Nicaragua has scored particularly high on the political empowerment sub-index, it is worth discussing further. Even though in Nicaragua females are reasonably well represented in government and the political system, it has been argued that the female politicians are not independent and merely provide an additional voice for the president (Ruiz Seisdedos & Grande Gascón, 2015). The same weakness has been highlighted at a more local level (for example, Flores et al., 2016). One reason for this could be that some governments initially adopted gender quotas for symbolic reasons, in order to gain support and sympathy from female voters (Chen, 2010; Sagot, 2010). In the political arena, such gender equality initiatives are often criticized by scholars who believe that they only lead to quantitative success rather than resulting in radically transformed policy outcomes (Htun & Jones, 2002). For example, by enabling a rise in ratios and indices such as the WEF’s with a potentially negligible (or even zero) effect on the lives of the population. Other authors have doubted the independence of female politicians, arguing that the great majority of them are related to male politicians (Blázquez & Ruiz, 2002). It has also been argued that this reflects unwritten cultural rules/the existence of a patriarchal state, in which improvements to women’s status are sanitized, while pre-existing (inherited) structures of marginalization are left intact (Piscopo, 2015). In summary, Nicaragua scores relatively high in the political empowerment dimension, which is responsible for a considerable proportion of its high position on the GGG Index. However, as we have seen, this rank may not adequately reflect gender equality in the political realm.<sup>3</sup> The next subsection returns to the Nicaraguan context in more detail.

Moving on to economic participation, as Barns and Preston (2010) amply demonstrate, here too these broad measures miss out on many other important nuances. Australia has a high score for female economic participation, but, as Barns and Preston show, this substantially reflects the rise of casual and part-time work. Similarly, there is some evidence of a gender divide in labour force participation in Nicaragua too: a time-use study in Nicaragua finds that men spent more hours per day in paid employment (approximately seven) than did women (approximately two), whereas women spent more hours per day in unpaid activities (approximately six compared to one for males) (Ferrant 2014), which is possibly a pattern that starts early in life. There is also evidence of substantial gender differences in time use among adolescents in Nicaragua (Ritchie et al. 2004).

Additionally, labour market statistics like those used for the Index can ignore further complexity. People may be underemployed or overeducated for their jobs, which is known to reduce life satisfaction (see Erdogan et al., 2012 and Piper, 2015a), or may be in precarious employment

---

<sup>3</sup> The Nicaraguan poet and political activist Gioconda Belli summarises some views on what effective female representation might look like, and how it can fail: “It is a big step to have women as presidents, but in the patriarchal structure of power we have all inherited, very often women are still forced to prove that they are as “tough” as the toughest of men. A woman president who would defy the masculine model of power and infuse it with the feminine ethic of caring and real equality is still in the making” (Belli, 2016)

situations previously demonstrated to be problematic for mental health (see, for example, Dawson et al., 2015). World Bank data supports the possibility of a gender difference with respect to vulnerable employment, at least over the period during which the GGG Index has been compiled, showing that the percentages of females in vulnerable employment are higher than those of males (World Bank, 2017a; 2017b)

The final dimension assesses the gender gap with respect to educational participation. To do so, it uses four statistics from the same organization, the United Nations Educational, Scientific and Cultural Organisation. Three of these statistics are on enrolment at the three broad stages of education (primary, secondary and tertiary) and the fourth is on literacy rates. As with the other dimensions, much can be considered missing and it is not difficult to find grounds for criticism. For example, in some countries there might be systematic gender differences in rates of completion of stages of education, something not possible to pick up with a reliance on enrolment data. Overall, with all four dimensions, there are many reasons to treat the Index with caution.

Nevertheless, the index is not always considered critically. For example, a recent study by Mastracci (2017) sees improvements in the Index as indicative of improvements in the lives of females, thus ignoring the possibility of absolute decreases in indicators (as mentioned above), asserting that “increasing the proportions of women in public sector management, administration, and politics is linked to increases in the Global Gender Gap Index, which in turn reflects a decrease in gender inequality in education, health, and economics worldwide” (p.1, emphasis added). This places too much confidence in the Index as a barometer of inequality (and offers a further reason to test changes in the Index using subjective well-being reported by females). In the Australian context, and given their considerations on the economic participation sub-index, Barns and Preston (2010) caution against uncritical acceptance of the GGG Index reports; a message worth heeding with respect to other countries as well.

Indeed, other indices can present a different picture: the World Bank’s single item gender equality is pretty consistent over the duration of the GGG Index, at either 3.5 or 4 from a scale of 1 to 6 (where 6 represents the most equal).<sup>4</sup> Improvements in indices should not be seen as a goal in themselves, but instead, hopefully, they will reflect the quality of life lived by a country’s citizens or an important aspect of that life.

Indices should be scrutinized, especially when single item figures can give a potentially misleading picture of a more complex situation (Barns and Preston 2010). In particular, we should remember that the GGG Index does not measure levels. Nicaragua’s high placing does not take into account its level of development. The situation for females will improve alongside men if there is economic development and a concomitant reduction in poverty (and of course such gains are shared amongst the sexes). If this gain is equally shared among the sexes, the Index would not record any change, though the lives of females have become objectively better. Similarly, if the situation is bad for both genders, but similarly bad, the Index will report (accurately) a narrow gender gap. Furthermore, the

---

<sup>4</sup> This reflects an assessment regarding the extent to which Nicaragua has installed institutions and programs to enforce laws and policies that promote equal access for men and women in education, health, the economy, and protection under law ([www.worldbank.org](http://www.worldbank.org)).

Index does not consider situations where females might be doing better than men. As an example, school enrolment at the secondary level: if more females enrol than males (and in Nicaragua in 2017 they did), this is counted as perfect gender equality. The same or better, on any measure, is considered gender equality with the exception of the two health measures, where parity is considered 0.94 female to male births and 1.06 female to male life expectancy being considered parity. With the exception of life expectancy, there is the basic assumption that there is nothing in which women will be better off than men. However, in 2017, females in Nicaragua enrolled in primary and secondary education in greater proportion than males, they were (slightly) more represented as professional and technical workers, and they were found in more ministerial positions than males.

Given these concerns, it is important not to take the Index at face value and automatically assume that increases necessarily signal improvements. An empirical analysis of these issues is presented in sections 3 and 4, which follow a discussion of the Nicaraguan context and a brief recapitulation of the issues covered so far.

## **2.2. Contextual background: Nicaragua and the index**

Figure 1 illustrates how Nicaragua's country ranking for gender equality has changed over time in percentage terms (the higher the percentage, the higher the relative position). The Global Gender Gap methodology has been consistent since its inception in 2006, but the number of countries in the ranking has increased. This is important since, for example, as Barns and Preston (2010) point out Australia's ranking has fallen slightly since 2006, but its gender gap (as measured by Australia's overall score in the Index) has narrowed slightly over this period. Rankings must therefore be considered in the context of the number of countries assessed. One method of accounting for changes in the number of countries assessed is to convert absolute ranks to percentages, as in Figure 1.

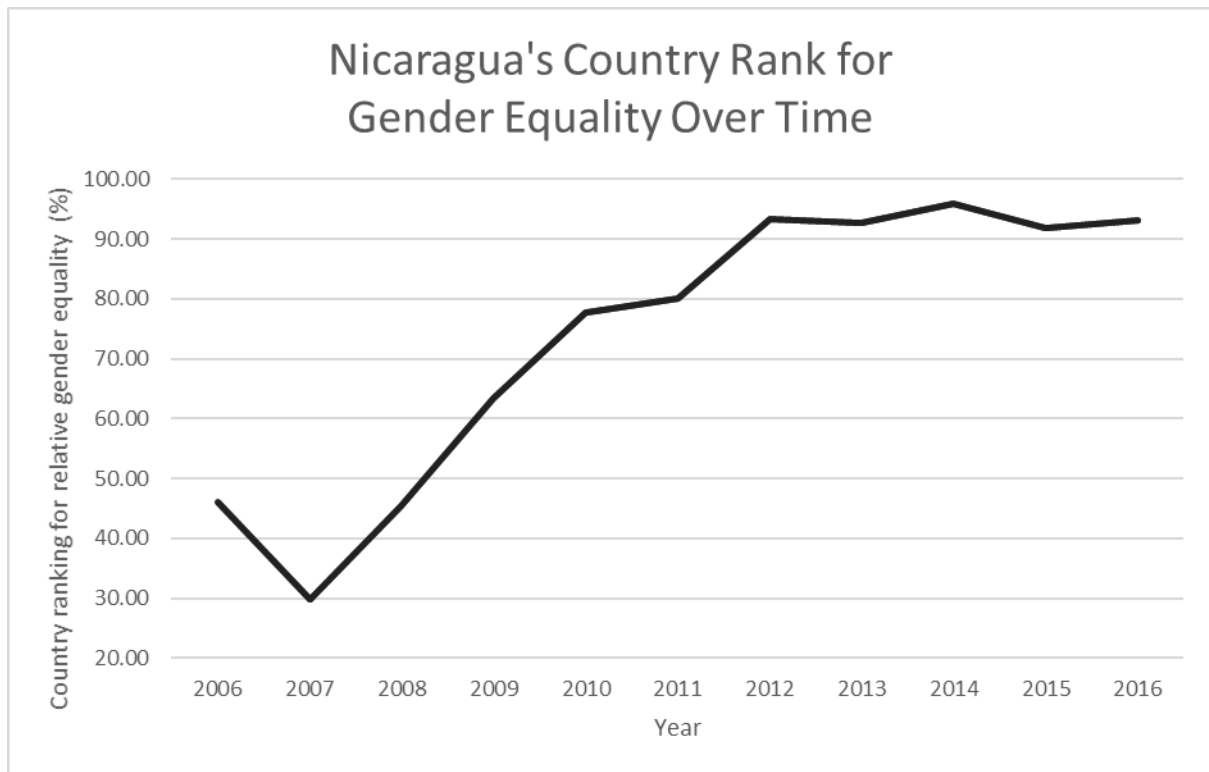


Figure 1: Nicaragua's country rank for gender equality over time.

Note: based on the World Economic Forum's GGG Index. 100% represents the most gender equal country; 0% represents the least.

Figure 1 shows that Nicaragua was just above the bottom quartile of gender-equal countries in 2007, but in the top 5% in 2014. In 2016, Nicaragua ranked equal first for educational attainment (with no gender gap) and equal first for the broad dimension of health and survival (with a minimal gender gap, scoring 0.98 for health and survival equality on a scale of 0 to 1). It was ranked fourth for political empowerment, but ninety-second for economic participation and opportunity. The years where it is within or very close to the top 10 percent of all countries for gender equality (2012 onwards), exhibit a broadly similar pattern. Nicaragua is ranked high in three of the four dimensions, and its greatly above average ranking predominantly reflects the political sphere, particularly the number of female ministers and women in parliament more generally.<sup>5</sup>

Following on from figure 1, we can talk about a period of time during which Nicaragua's gender gap according to the Index was quite wide (2006-2009), and a period during which it was quite narrow (2012-2016). For major macroeconomic variables, there have been some instances of change between these two periods, but other variables have remained fairly static.

Among indicators showing some evidence of change, World Bank figures (2018) show that Nicaragua's GDP has grown at approximately 5% per year since it last receded in 2009, in response

<sup>5</sup> This is because where Nicaragua is equal first (educational attainment, health and survival), it is equal first with many countries, thus not especially contributing to its high rank, unlike the political empowerment dimension where its equal first position is much less widely shared.



to the economic crisis.<sup>6</sup> Annual inflation (measured by consumer prices) was higher in the 'wide gender gap' period than in the 'narrow gender gap' period, ranging from 9 to 19% in the first compared with 4 to 8% in the second. Unemployment has fallen from 8% to between 5 and 6% of the total labour force (based on an International Labour Organisation [ILO] modelled estimate).

However, the unemployment figures demonstrate little difference by gender, and haven't since the first year of ILO equivalent figures (i.e. since 1991). Nicaragua's exports and imports and its trading partners have remained largely unchanged. The gravity model holds up somewhat with respect to Nicaragua's trading partners: over half of its exports go to the USA, with much of the rest going to neighbouring countries and these countries are also the main source of its imports. Its main exports are from the clothing and food sectors, and its imports being related to broad categories of mineral fuels, oils, and electrical machinery. Over this period, Nicaragua has run a small trade deficit.<sup>7</sup>

While the economy has improved, the concerns expressed with regard to Nicaraguan society and gender have not. For example, in 2006 a law was passed making abortion illegal in any circumstance; a law that has not been repealed since despite many protests (Aizenman 2006; Human Rights Watch 2017). Joffe et al. (2004) discuss abortion and the rights of women further. Other issues central to the lives of women in Nicaragua include domestic violence, poverty and the division of labour within the household, particularly regarding parenting and housework. These are discussed below.

The issue of violence against women in Nicaragua has been attracting growing attention over the past few years. For example, a study predating the GGG Index estimated that one out of every two women in Nicaragua had experienced some form of violence in her lifetime (Ellsberg et al., 2000). More recently, in 2012, Nicaragua passed a comprehensive law addressing violence against women (*Ley Integral Contra la Violencia Hacia Las Mujeres*, or *Ley 779*, [Nicaragua 2012])<sup>2</sup>. However, two years later, the law was reformed, retracting part of the law that banned mediation for cases of violent assault or sexual harassment ("Nicaraguan women...", 2013). Luffy et al. investigated women's perceptions and opinions of violence against women and femicide in Ocotal (a town in the North East of Nicaragua) since the introduction of Law 779 and found that this reform is widely regarded as a threat, likely to put women's lives at risk (2015). One explanation could be that many women are economically reliant upon their partners and will therefore not agree to face them. Fearing the response/reaction of their partner, they may deny their suffering and reconcile with their abusive partner. Furthermore, the participants investigated perceived that the law has actually resulted in an increase rather than a decrease in femicide. They suggested that this (perceived) increase could be caused by underlying issues such as weak enforcement by the National Police and machismo among the men in Ocotal, Nicaragua.

Poverty, both in Nicaragua and more generally, is often considered something that females suffer from more than males (Jackson 1996; Espinoza-Delgado & Klasen, 2017) although differences between urban and rural settings have been observed in the proportions of male and female headed households and in the incidence of poverty (Altamirano Montoya & Teixeira 2017). Gibbons and Luna (2015) expand on this, reporting that the proportion of female headed households is increasing in Central America, and such households are often poorer than male households (Luchsinger, 2017).

---

<sup>6</sup> 2009 appears to be a blip in the trend, with growth for that year being -3.8%, followed by the economy restarting a period of consistent growth in 2010.

<sup>7</sup> This international trade information is from the Atlas of Economic Complexity ([www.atlas.cid.harvard.edu](http://www.atlas.cid.harvard.edu)).

Gibbons and Luna also cite ethnographic studies to provide an indication of the problems female headed households suffer from in the region. These complaints are often about a lack of support, both financially and with raising children, which can be a problem even if the fathers are not physically absent. Lancaster (1992), cited by Gibbons and Luna, offers an example: one Nicaraguan mother wryly said of her husband, “there apparently isn’t a woman in the world he can say no to! And he isn’t supporting any of his children, not really - well, anyway, he isn’t supporting mine” (Lancaster 1992, p. 45). As Gibbons and Luna highlight, this is not just a Nicaraguan issue, or an issue from the recent past: A Ladina woman in Guatemala said, among similar statements “it’s just me, by myself. So yes, even when he’s home, I’m the one in charge of the kids” (Menjívar 2011, p. 150). Further differences between the genders with respect to sexual relationships and parenting, are provided by Gibbons and Luna (2015), who consider gender roles and related (and established) ideologies, for example both machismo and Marianismo, to be responsible for behavioural gender disparities like those illustrated just above.

Some of the issues mentioned above are often found in combination with each other. For example, poverty and violence are often interlinked. The latest United Nations Women Annual Report explains that females living along the North Atlantic coast of Nicaragua have benefited from a UN trust fund because of the violence they face. This, the report states, is particularly the case for indigenous women who are marginalized by poverty and discrimination (Luchsinger, 2017).

The GGG Index, if credible, indicates a substantial improvement in the lives of women since the mid-2000s in Nicaragua (subsection 2.1) however, as this subsection indicates, there is still cause for concern regarding the lives and roles of females.

One way to check what the index appears to show is to test whether people’s opinions about, or satisfaction with, their lives and their opinions about gender equality in their country (for example) have changed over the same period. If improvements recorded in the Index are matched by greater satisfaction manifest in what people (and particularly females) say, while controlling for other known and important factors that influence well-being, then we can have a modicum of confidence that the Index reflects lived experience (at least in Nicaragua, and for the period since the Index’s inception). This investigation assesses whether self-reported quality of life has improved for women (and men) over this period, reflecting the positive change in the Index.

The next subsection explains how this investigation inspects the lives of women over this period through the prism of the ‘economics of life satisfaction’ area.

### **2.3 Summary and the economics of life satisfaction**

One of the purposes of many indices like the WEF’s GGG Index is to inform – however imperfectly – about the lives of individuals. In the case of Nicaragua, based on the Index, we can reasonably expect that the lives of women have improved over the life of the index. However, this should not be assumed. Clearly, there are reasons not to take the Index and Nicaragua’s high position in it at face value. To summarise what has been mentioned above, any index will fail to capture all, or even the majority of, pertinent aspects of a complex issue, and the GGG Index is no different. The GGG Index takes no account of, for example, violence against females (including femicide) or of cultural norms with respect to sexual behaviour and family responsibility. However, scholars have identified these issues as pertinent to the lives of females in Nicaragua (and elsewhere).

The Index itself also provides grounds for caution regarding reading too much into the sharp rise in Nicaragua's country ranking for gender equality.

The discussion in the previous two subsections makes it clear that the four dimensions and 14 components of the GGG Index do not account for established social behaviour patterns, they do not include any measure of violence against females, and they give no account of how vulnerable an individual's life and employment situation may be, among many other possible factors. Thus, we probably cannot expect the GGG Index to give a clear picture of how life is for both genders in a particular country. Furthermore, although Nicaragua has climbed a very long way in terms of country rankings, the actual figures for the gender gap index indicate a more modest closing of the Nicaraguan Gender Gap. While the improvement is better than nearly every other country, the rise represents a change in the WEF score of about 0.12, from 0.6747 in 2008 to 0.7967 in 2012 (where 1.00 is supposed to represent equality on the scale, although if women were to score higher than men, the score would still be 1). Nevertheless, if this improvement is matched by how people feel, a change of this magnitude should be detectable in a reasonable quality secondary dataset. The next section attempts to do just that – to detect the same change in a different dataset; if the GGG Index is useful in informing about the lives of females (and males), it might be possible to detect improvements in how Nicaraguans report about the lives they lead.

The main way this is investigated is via the economics of life satisfaction research area. The economics of life satisfaction is an established, and validated, research area with a broad scope (see for example, Oswald 1997 and the introductory discussions of Frey, 2008 and van Praag & Ferrer-i- Carbonell, 2007). Investigations in this area often have a regional focus (Oswald and Wu, 2010, Piper, 2015b, Morrison & Weckroth 2018) and have also been concerned with respect to issues of importance for the lives of females (Ambrey et al., 2017, Ebberts & Piper, 2017). A central thrust of this research area is that it is both possible and worthwhile to investigate individual well-being. In line with this research area, subjective data about individual satisfaction with life can be used to assess individuals' opinions of the lives they are living, and their satisfaction with their lives in particular. Thus, the next section presents such an assessment, making use of data from the Latinobarometer, a near annual repeated cross section dataset which asks Nicaraguans how satisfied they are with their lives, among other socio-economic questions. In addition to this main focus, the investigation also inspects whether there has been a notable change in satisfaction with democracy, and whether there has been an increase in perceptions that men and women have equal rights in their country and whether these rights are upheld. This inspection is considered further in section 3, where the data and methodology are discussed, before the results are presented in section 4.

### **3. Data and Methodology,**

The above discussion was inspired by Nicaragua's recent, remarkable climb in the country rankings for gender equality. The empirical analysis takes this discussion a step further and investigates whether, over the same period of time as the rise through the rankings, there has been a noticeable change in the lives of (males and) females in Nicaragua. Of primary interest here is the self-reported satisfaction with life of Nicaraguans. To do this, this investigation makes use of data from the

Latinobarometer.<sup>8</sup> Collected in most years since 1995, it is an oft-used source of information about people’s socioeconomic characteristics, values, beliefs and opinions in Latin America.

Table 1a indicates that both sexes have reported a higher level of average happiness in the later period. This might reflect the decreased gender inequality, but it could also reflect changing economic circumstances (among other things), hence there is a need for regression analysis. Averages for the subjective income measure have changed a little, although the proportions for the interviewer ranking of the respondent’s socioeconomic level have not really changed between the two time periods.<sup>9</sup> The averages in table 1a also demonstrate a higher level of education reported by respondents in the later years (although we cannot know if this reflects increased education generally or just the new respondents). Also notable in table 1a is the difference between the genders with respect to labour force status. In both time periods, half of all females are not in the labour force, compared with less than ten percent of males. A substantial amount of this difference is explained by the higher prevalence of males who report being self-employed.<sup>10</sup> Finally, a weakness of the data relates to health, which is an important component in the life satisfaction of an individual, but is largely lacking in the Latinobarometer, hence its omission in the analysis below.<sup>11</sup>

**Table 1a: Descriptive statistics: key socioeconomic variables, by gender.**

	Females		Males	
	2006-2008	2011-2015	2006-2008	2011-2015
Life Satisfaction (1-4)	2.94	3.14	2.95	3.16
Income: sufficient	0.04	0.06	0.06	0.08
Income: just sufficient	0.22	0.22	0.28	0.33
Income: insufficient	0.48	0.48	0.45	0.42
Income: v. insufficient	0.26	0.26	0.21	0.32
Socioecon lvl: v. good	0.05	0.04	0.06	0.05
Socioecon lvl: good	0.23	0.22	0.23	0.22
Socioecon lvl: not bad	0.41	0.40	0.42	0.41
Socioecon lvl: bad	0.21	0.24	0.20	0.23
Socioecon lvl: v. bad	0.10	0.08	0.09	0.07
Age	35.17	35.43	35.42	35.60
Self-employed	0.23	0.22	0.51	0.49
Employed	0.25	0.13	0.24	0.23
Unemployed	0.05	0.04	0.06	0.07
Retired	0.01	0.01	0.03	0.04
Student	0.08	0.06	0.08	0.08
Not in labour market	0.48	0.54	0.07	0.09
Partnered/married	0.55	0.57	0.57	0.55

<sup>8</sup> Freely available online ([www.latinobarometro.org/lat.jsp](http://www.latinobarometro.org/lat.jsp))

<sup>9</sup> These subjective categories are used here, because the Latinobarometer does not contain absolute wage or income data.

<sup>10</sup> A high incidence of self-employment is expected in Nicaragua and indeed more widely in Latin America. The Latinobarometer breaks down the self-employed into four further categories. The generic self-employment category Business Owner is the most frequent, followed by fisherman, and then self-employed within the informal sector. All three categories are much more important (in terms of frequency) for self-employment than the fourth possibility: self-employed professional.

<sup>11</sup> Other popular datasets which might ordinarily be considered, for example the World Values Survey, contain no data from Nicaragua.

Single	0.33	0.34	0.38	0.41
Separ/Divor/Widowed	0.11	0.09	0.05	0.04
Educ: Illiterate	0.22	0.22	0.25	0.24
Educ: incomp. primary	0.29	0.22	0.29	0.22
Educ: comp. primary	0.11	0.14	0.11	0.16
Educ: incomp. second	0.25	0.19	0.22	0.20
Educ: comp. second	0.07	0.12	0.05	0.10
Educ: incomp. higher	0.02	0.06	0.04	0.05
Educ: comp. higher	0.03	0.04	0.04	0.03

Notes: Data from the Latinobarometer; both the columns feature three years of data (there is no available data for 2012 and 2014). All are dummy variables apart from life satisfaction (positively coded) and age.

**Table 1b: Descriptive statistics: subjective ratings of indicators of national equality, by gender.**

	Females		Males	
	2006-2008	2011-2015*	2006-2008	2011-2015
Gender Equality (1-4)	2.67	2.86	2.87	2.93
Democracy (1-10)	5.48	6.26	5.36	6.36
Income distribut. (1-4)	2.11	2.31	2.15	2.36
Country for powerful	0.74	0.49	0.74	0.51

Notes: Data from the Latinobarometer; both the columns feature three years of data (there is no available data for 2012 and 2014). Gender equality refers to an individual's opinion about whether males and females have equal rights (higher numbers indicating higher agreement); democracy refers to satisfaction (higher numbers representing higher satisfaction); income distribution is an opinion about income inequality (higher numbers indicate a belief of less inequality). The remaining variable is a dummy asking if the respondent believes that the country is run for the powerful (1= agreement).

Assuming that we accept that the individuals surveyed represent the population, then table 1b indicates cautious evidence of progress with social equality goals, or at least perceptions of progress. All four averages (relating to gender, democracy, income inequality and a dummy variable asking respondents whether they believe the country is run for the powerful) demonstrate an increase towards more equality, both when the assessment is made by women and men. Of greatest interest for this investigation, of these four averages, is the four-point scale about gender equality. As the note below the table states, this is from a question asking respondents to indicate on a scale of 1 to 4 to what extent equality of men and women exists in Nicaragua. The table suggests general progress here, although the 2015 figure is lower than the 2013 average for both genders (data not shown).<sup>12</sup> The other averages in the table demonstrate more satisfaction with democracy, a belief that the income distribution is a bit more equal, and a lower proportion of the sample agreeing that the country is run only for the powerful.

Regression analysis is needed for a more detailed investigation of whether people (females especially) experience life in a way concomitant with the closing of the gender gap. With three different outcome variables - life satisfaction (of females); satisfaction (of females) with democracy;

<sup>12</sup> This may reflect, to some extent, revocation of an important provision of Law 779, as discussed in section 2.2.

and gender equality – the estimations aim to determine whether the information in the Latinobarometer supports the remarkable closing of the gender gap in Nicaragua that is indicated by the WEF’s reports. Given the ordinal nature of these three variables, and because the scales contain only four possible responses for two of the three measures, ordered probit estimation will be used for the regressions. Our main interest is whether both genders are, on average, more satisfied with their lives, whether they are more satisfied with democracy in Nicaragua and whether they consider that gender equality applies more fully in Nicaragua.<sup>13</sup>

#### 4. Results

The first of the three outcome variables investigated is life satisfaction. If life is getting better for Nicaraguans, and particularly females, this should be demonstrable empirically with the regression analysis. Table 2 presents the coefficients obtained and the variable of key interest is the dummy variable for the narrow gender gap period (which equals one in the 2011-2015 period and zero in the 2006-2008 period). The results show that average life satisfaction is higher in the period which corresponds to greater gender equality, according to the WEF’s Index, for both men and women (i.e. in columns 1 and 2). As section 2 highlighted, GDP growth was also higher in the period with a narrow gender gap, but even when GDP growth is controlled for (columns 3 and 4), there is a higher reported life satisfaction in the later period (i.e. when there was greater ‘gender equality’). As expected, GDP growth does play a small moderating role on the size of the coefficients for the narrow gender gap period; a result indicative of GDP growth contributing to the subjective well-being of Nicaraguans. Of interest too are the coefficients on labour market status which indicate no substantial difference (*ceteris paribus*) for females no matter what their labour market status. Individuals are happier in the latter period, but the relationships between their labour force status and well-being are largely unchanged.

**Table 2: Life Satisfaction of Nicaraguans, Ordered Probit coefficients, Latinobarometer data.**

VARIABLES	(1)	(2)	(3)	(4)
	Life Satisfaction Females No GDP growth control	Life Satisfaction Males No GDP growth control	Life Satisfaction Females GDP growth controlled for	Life Satisfaction Males GDP growth controlled for
Narrow gender gap dummy	0.24*** (0.046)	0.23*** (0.047)	0.18*** (0.058)	0.12** (0.058)
GDP growth (%)			0.06* (0.038)	0.12*** (0.038)
Income: sufficient	0.23** (0.103)	0.23** (0.090)	0.23** (0.103)	0.23** (0.090)
Income: insufficient	-0.05 (0.042)	-0.11*** (0.044)	-0.05 (0.042)	-0.11*** (0.044)
Income: very insufficient	-0.18*** (0.046)	-0.21*** (0.050)	-0.18*** (0.047)	-0.21*** (0.050)
Socioeconomic level: v good	0.13 (0.105)	0.25** (0.103)	0.13 (0.105)	0.25** (0.103)
Socioeconomic level: good	0.09	0.06	0.09	0.06

<sup>13</sup> The Latinobarometer does have a question about violence against women, but it was only asked in one year (2006), thus no comparisons can be made between the two periods of interest.

	(0.055)	(0.056)	(0.055)	(0.056)
Socioeconomic level: bad	-0.19***	-0.13**	-0.20***	-0.13**
	(0.055)	(0.056)	(0.055)	(0.056)
Socioeconomic level: very bad	-0.33***	-0.22***	-0.34***	-0.22***
	(0.080)	(0.083)	(0.080)	(0.083)
Have partner or married	-0.00	0.19***	-0.00	0.18***
	(0.048)	(0.052)	(0.048)	(0.052)
Separated, divorced or widowed	-0.19**	-0.02	-0.19**	-0.03
	(0.080)	(0.109)	(0.080)	(0.109)
Age	-0.02***	-0.03***	-0.02***	-0.03***
	(0.007)	(0.007)	(0.007)	(0.007)
Age squared	0.00***	0.00***	0.00***	0.00***
	(0.000)	(0.000)	(0.000)	(0.000)
Education: incomplete primary	0.06	-0.04	0.06	-0.05
	(0.062)	(0.060)	(0.062)	(0.060)
Education: complete primary	0.07	0.02	0.07	0.02
	(0.075)	(0.074)	(0.075)	(0.074)
Education: incompl. secondary	0.07	-0.06	0.07	-0.05
	(0.070)	(0.069)	(0.070)	(0.069)
Education: completed secondary	0.16*	0.09	0.17*	0.09
	(0.090)	(0.095)	(0.090)	(0.095)
Education: high school incompl.	-0.07	-0.05	-0.07	-0.03
	(0.121)	(0.118)	(0.121)	(0.119)
Education: high school complete	0.13	0.37***	0.14	0.37***
	(0.128)	(0.132)	(0.128)	(0.132)
Self-employed	0.05	-0.02	0.05	-0.02
	(0.071)	(0.054)	(0.071)	(0.054)
Unemployed	-0.08	-0.22**	-0.06	-0.21**
	(0.109)	(0.091)	(0.110)	(0.091)
Retired	0.22	-0.13	0.23	-0.14
	(0.210)	(0.137)	(0.210)	(0.137)
Not in labour market	0.05	-0.23**	0.05	-0.22**
	(0.065)	(0.092)	(0.065)	(0.092)
Student	0.18*	-0.01	0.17	-0.02
	(0.107)	(0.099)	(0.107)	(0.099)
Observations	2,897	2,814	2,897	2,814
Constant cut1	-2.09***	-2.44***	-1.76***	-1.77***
	(0.180)	(0.175)	(0.270)	(0.270)
Constant cut2	-0.91***	-1.22***	-0.58**	-0.55**
	(0.176)	(0.170)	(0.268)	(0.267)
Constant cut3	0.06	-0.24	0.40	0.43
	(0.176)	(0.169)	(0.268)	(0.267)

Notes: standard errors in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1; base categories: income just sufficient; socioeconomic level not bad; single; education level illiterate; employed.

Table 3 presents coefficients for an individual's satisfaction with democracy. This satisfaction was, on average, also higher in the narrower gender gap period. There is an interesting gender divide with respect to the moderating role GDP growth plays. For females, controlling for GDP growth means that satisfaction with democracy is not as high as it would have been, but for males GDP growth has no impact. This suggests that a successful, growing economy can positively influence the feelings of females about democracy, while for Nicaraguan males GDP growth does not influence opinions about democracy.

**Table 3: Nicaraguans' Satisfaction with Democracy, Ordered Probit coefficients, Latinobarometer data.**

VARIABLES	(1)	(2)	(3)	(4)
	Life Satisfaction Females	Life Satisfaction Males	Life Satisfaction Females	Life Satisfaction Males
Narrow gender gap dummy	0.26*** (0.045)	0.34*** (0.045)	0.19*** (0.056)	0.34*** (0.056)
GDP growth (%)			0.08** (0.037)	0.01 (0.036)
Income: sufficient	0.06 (0.096)	-0.01 (0.081)	0.05 (0.096)	-0.01 (0.081)
Income: insufficient	0.07* (0.042)	-0.04 (0.042)	0.07* (0.042)	-0.04 (0.042)
Income: very insufficient	-0.10** (0.046)	0.04 (0.048)	-0.10** (0.046)	0.04 (0.048)
Socioeconomic level: v good	0.06 (0.098)	-0.03 (0.094)	0.06 (0.098)	-0.03 (0.094)
Socioeconomic level: good	0.08 (0.053)	-0.05 (0.053)	0.08 (0.053)	-0.05 (0.053)
Socioeconomic level: bad	-0.03 (0.056)	-0.03 (0.055)	-0.03 (0.056)	-0.03 (0.055)
Socioeconomic level: very bad	0.23*** (0.082)	-0.00 (0.083)	0.23*** (0.082)	-0.00 (0.083)
Have partner or married	0.00 (0.047)	0.01 (0.050)	0.00 (0.047)	0.01 (0.050)
Separated, divorced or widowed	-0.10 (0.079)	-0.00 (0.107)	-0.11 (0.079)	-0.01 (0.107)
Age	-0.01 (0.007)	-0.01 (0.007)	-0.01 (0.007)	-0.01 (0.007)
Age squared	-0.00 (0.000)	0.00 (0.000)	0.00 (0.000)	0.00 (0.000)
Education: incomplete primary	-0.04 (0.063)	-0.09 (0.059)	-0.04 (0.063)	-0.09 (0.059)
Education: complete primary	0.07 (0.076)	-0.12* (0.072)	0.06 (0.076)	-0.12* (0.072)
Education: incompl. secondary	-0.05 (0.070)	-0.09 (0.067)	-0.05 (0.070)	-0.09 (0.067)
Education: completed secondary	-0.12 (0.087)	-0.10 (0.088)	-0.12 (0.087)	-0.10 (0.088)
Education: high school incompl.	-0.21* (0.116)	-0.26** (0.111)	-0.21* (0.116)	-0.26** (0.111)
Education: high school complete	-0.22* (0.122)	-0.21* (0.118)	-0.21* (0.122)	-0.21* (0.118)
Self-employed	0.00 (0.068)	-0.04 (0.051)	0.01 (0.069)	-0.04 (0.051)
Unemployed	-0.01 (0.106)	-0.11 (0.088)	0.02 (0.107)	-0.11 (0.088)
Retired	0.23 (0.200)	-0.24* (0.133)	0.23 (0.200)	-0.24* (0.133)
Not in labour market	0.04 (0.062)	-0.03 (0.089)	0.04 (0.062)	-0.03 (0.089)
Student	-0.11 (0.101)	-0.07 (0.093)	-0.13 (0.101)	-0.07 (0.093)



Observations	2,656	2,681	2,656	2,681
Constant cut1	-1.55*** (0.179)	-1.55*** (0.166)	-1.15*** (0.264)	-1.51*** (0.257)
Constant cut2	-1.32*** (0.179)	-1.32*** (0.166)	-0.91*** (0.264)	-1.29*** (0.257)
Constant cut3	-1.05*** (0.178)	-1.07*** (0.165)	-0.64** (0.264)	-1.03*** (0.257)
Constant cut4	-0.74*** (0.178)	-0.77*** (0.165)	-0.34 (0.264)	-0.73*** (0.257)
Constant cut5	-0.26 (0.178)	-0.27* (0.164)	0.15 (0.264)	-0.24 (0.256)
Constant cut6	0.02 (0.178)	0.01 (0.164)	0.42 (0.264)	0.04 (0.256)
Constant cut7	0.27 (0.178)	0.27 (0.164)	0.68** (0.264)	0.30 (0.256)
Constant cut8	0.58*** (0.178)	0.57*** (0.164)	0.99*** (0.264)	0.60** (0.256)
Constant cut9	0.75*** (0.178)	0.73*** (0.165)	1.15*** (0.264)	0.76*** (0.256)

Notes: standard errors in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1; base categories: income just sufficient; socioeconomic level not bad; single; education level illiterate; employed. Latinobarometer data.

The last outcome variable relates to individual perceptions regarding gender equality. The Latinobarometer uses a four-point Likert response scale for an item asking whether their country guarantees the equality of women and men. Table 4 suggests that, ceteris paribus, females do consider that, on average, the situation has improved in terms of guaranteeing equal rights between the genders. This result is not found for males, where there is no significant difference between the wider (2006-2008) and narrower (2011-2015) gender gap periods. When the moderating factor of GDP is controlled for, however, this difference for females between the two periods is not as large though it is still marginally significant.

**Table 4: Nicaraguans' opinions regarding how well the country guarantees equality between the genders, Ordered Probit coefficients, Latinobarometer data.**

VARIABLES	(1)	(2)	(3)	(4)
	Life Satisfaction Females	Life Satisfaction Males	Life Satisfaction Females	Life Satisfaction Males
Narrow gender gap dummy	0.16*** (0.062)	0.01 (0.062)	0.12* (0.070)	0.07 (0.070)
GDP growth (%)			0.05 (0.040)	-0.08* (0.040)
Income: sufficient	-0.02 (0.120)	0.02 (0.104)	-0.03 (0.120)	0.02 (0.104)
Income: insufficient	-0.01 (0.053)	-0.06 (0.054)	-0.01 (0.053)	-0.06 (0.054)
Income: very insufficient	-0.03 (0.061)	-0.09 (0.065)	-0.04 (0.061)	-0.09 (0.065)
Socioeconomic level: v good	0.27** (0.115)	0.05 (0.120)	0.27** (0.115)	0.05 (0.120)
Socioeconomic level: good	-0.08 (0.067)	0.02 (0.067)	-0.08 (0.067)	0.02 (0.067)

Socioeconomic level: bad	-0.03 (0.071)	-0.02 (0.072)	-0.03 (0.071)	-0.01 (0.072)
Socioeconomic level: very bad	0.13 (0.101)	-0.18* (0.104)	0.13 (0.101)	-0.18* (0.104)
Have partner or married	-0.04 (0.059)	-0.06 (0.064)	-0.04 (0.059)	-0.05 (0.064)
Separated, divorced or widowed	-0.07 (0.101)	-0.13 (0.130)	-0.08 (0.101)	-0.12 (0.130)
Age	-0.01 (0.009)	-0.01 (0.009)	-0.01 (0.009)	-0.01 (0.009)
Age squared	0.00 (0.000)	0.00 (0.000)	0.00 (0.000)	0.00 (0.000)
Education: incomplete primary	0.04 (0.079)	0.01 (0.076)	0.04 (0.079)	0.01 (0.076)
Education: complete primary	0.17* (0.096)	-0.07 (0.093)	0.17* (0.096)	-0.07 (0.093)
Education: incompl. secondary	0.07 (0.088)	0.02 (0.087)	0.08 (0.088)	0.02 (0.088)
Education: completed secondary	-0.00 (0.110)	-0.22* (0.116)	0.00 (0.110)	-0.22* (0.116)
Education: high school incompl.	0.05 (0.153)	-0.11 (0.145)	0.05 (0.153)	-0.14 (0.146)
Education: high school complete	-0.01 (0.152)	-0.04 (0.150)	0.00 (0.153)	-0.05 (0.150)
Self-employed	-0.12 (0.086)	-0.03 (0.066)	-0.12 (0.086)	-0.03 (0.067)
Unemployed	-0.07 (0.135)	-0.26** (0.114)	-0.05 (0.137)	-0.26** (0.114)
Retired	-0.01 (0.255)	-0.40** (0.164)	-0.01 (0.255)	-0.39** (0.164)
Not in labour market	-0.10 (0.079)	-0.03 (0.112)	-0.09 (0.079)	-0.05 (0.112)
Student	-0.22* (0.131)	-0.10 (0.124)	-0.24* (0.132)	-0.08 (0.124)
Observations	1,840	1,823	1,840	1,823
Constant cut1	-1.49*** (0.220)	-1.80*** (0.212)	-1.22*** (0.308)	-2.23*** (0.310)
Constant cut2	-0.68*** (0.218)	-1.03*** (0.210)	-0.40 (0.307)	-1.46*** (0.308)
Constant cut3	0.20 (0.218)	-0.19 (0.209)	0.47 (0.307)	-0.62** (0.307)

Notes: standard errors in parentheses; \*\*\* p<0.01, \*\* p<0.05, \* p<0.1; base categories: income just sufficient; socioeconomic level not bad; single; education level illiterate; employed. Latinobarometer data.

In summary, average life satisfaction is higher for both genders in the WEF Index's narrow gap period than the in the wide gap period. This difference is almost a quarter of a point on the four-point life satisfaction scale for both genders when GDP growth is not controlled for, and almost a fifth (for females) and almost an eighth (for males) when it is. Overall, there is evidence of improvements in terms of individual life satisfaction, satisfaction with democracy in Nicaragua and, for females, an opinion about whether the government guarantees equal rights between men and women from the years associated with the period of greater gender inequality (as assessed by the GGG Index) to the, later, period of less inequality. These improvements were somewhat moderated

by the improved GDP growth percentages in the later period; a finding which was particularly the case with respect to the opinions of females regarding how they perceive gender equality in Nicaragua. These results are somewhat suggestive of a brightening picture for females over the period of the GGG Index

## **5. Discussion**

No index can fully capture (and perhaps not even come close to fully capturing) the complexities of important socioeconomic issues like gender equality. The WEF's GGG Index is no exception. Rather than being taken at face value, such indices should be subjected to academic scrutiny. Such scrutiny could involve, as in work by Barns and Preston (2010), regarding the economic participation sub-index, an attempt to compare what the Index claims to show with further (often more detailed) statistics and a consideration of current government policy. This can provide, as well as more detail, more nuance and understanding regarding a particular situation than an index is able to offer. Another possibility is that the findings and claims of indices can inspire scholars to investigate whether these proclaimed outcomes are, in some way, being experienced by the populace. The 'economics of life satisfaction' area is well suited to this. This investigation took the latter approach, following the notion that what is important about these indices is what they might tell us about people's lives. During the investigation, cautious evidence was found for improvements, on average, in the lives of Nicaraguans from a period of less gender equality to a later period when gender equality was more prevalent. These improvements were found with respect to life satisfaction, satisfaction with democracy, and perceptions regarding whether equal rights between the genders are protected in Nicaragua.

Thus, while the Index is not trying to assess the well-being of women, this investigation has taken the remarkable reported improvements in gender equality in Nicaragua as an inspiration for an investigation into whether women (and men) in Nicaragua have, on average, more subjective well-being. Evidence was presented that both women and men were more satisfied with their lives in the period with less gender inequality than in the period of greater gender inequality. This result held, although with smaller coefficients, when GDP growth was controlled for (which, as stated in section 2.2, was higher in the period with the narrow gender gap). Thus, there does seem to have been greater life satisfaction in the period concomitant with the WEF's identification of greater gender equality. Likewise, average satisfaction with democracy was also higher in this period of greater gender equality. This result is particularly interesting, given that Nicaragua's remarkable rise in the Index was to a substantial degree due to what it calls 'political empowerment' (which, in reality, means the gender gap between males and females in parliament and government).

As with every study using the Latinobarometer, it is important to highlight that the data is repeated cross-section data. Because the same people are not interviewed, we cannot be sure that any differences are not simply due to the change in individuals. However the comparison relies on the averages from nearly 3,000 Nicaraguans in each period and, furthermore, the Latinobarometer is representative of the Nicaraguan population (Graham, 2002). A further limitation is with respect to health, a very important aspect of life satisfaction (Downward and Dawson, 2016, Piper 2018). Self-reported health data is first available in the Latinobarometer in 2001 and too intermittently for analysis since then. There are other questions that the Latinobarometer asks that would be interesting for investigations of gender and well-being, but they do not appear in both the period

when Nicaragua was ranked near the bottom and when it was ranked near the top for gender equality. For example, a question about violence against women was only asked in the 'wide gap' period. In the 'narrow gap' period, the Latinobarometer elicited opinions about whether respondents think that their country's education system puts them at a disadvantage (with one group being women). In 2015, questions were also asked about the difficulties women face in the labour market.<sup>14</sup>

Future work might address these limitations with specific datasets; a qualitative investigation into changes in gender equality over time in Nicaragua would likely be fruitful and highlight more nuance than the WEF's index misses. More generally, future work could assess other phenomena that arise from a comparison of different years of the GGG Index and its related reports. The closing of the Nicaraguan gender gap is one of the more striking developments, but there are likely others too. As Barns and Preston (2010) assert, if such indices are being used by politicians to praise their own policies, they should also be scrutinized by academics.

## **6. Conclusion.**

The World Economic Forum's GGG Index is a popular measure of gender equality. Each year, when published it generates media attention, column inches, and blog posts. When the Index offers grounds for praise for some countries, politicians in these particular countries often talk about it too. This has been so in Australia (Barns and Preston, 2010) and Nicaragua (see above). Despite its popularity, the Index is rarely subjected to academic scrutiny, and there are reasons why it should be. In short, gender equality is complex and no index can hope to capture all of its nuances and facets. Nicaragua has, based on the GGG Index, been one of the countries that has done the most to improve gender equality since the first year of the Index (2006). Women's rights advocates are rather sceptical about this perceived improvement, and offer comments about abortion, economic participation and violence against women as reasons for caution in praising Nicaragua for improving the lives of Nicaraguan women.

Rather than criticize the report and its methodology, this article takes it as inspiration to see whether one of the most notable trends illustrated in the report can be detected in a representative dataset. Looking at GGG Index data since its inception, it is possible to highlight two distinct periods of time in terms of the gender gap in Nicaragua: the first, a period in which the gender gap was wider, i.e. a period of greater gender inequality, spanning from 2006 to 2008, and the second, a period between 2011 and 2015, when the gender gap was narrow. Ordered probit regression estimation techniques and economics of life satisfaction methodology were used to test whether Nicaraguans, both male and female, were more satisfied with their lives in the narrow period than the wide period. Furthermore, estimates were also made for satisfaction with democracy, and for opinions about gender equality in Nicaragua.

---

<sup>14</sup> There are other relevant questions that were not asked in both periods. For example individuals are asked how strongly they agree or disagree with the following statements 'If the woman earns more than the man, she will almost certainly have problems' and 'It is preferable to have the woman in the house and man in his work'. It would be interesting to see how average levels of agreement changed between the two time periods.

Concomitant with the Index, both female and male Nicaraguans were more satisfied with their lives in the narrow gender gap period compared to the wide gender gap period. This held even when GDP growth was controlled for; important given the better growth in the narrow, later period. For females, more satisfaction with democracy was also observed in the narrow period, both when GDP growth was taken into account and when it was not. Finally, females noted an improvement in the narrow gap period compared with the wide gap period with respect to gender equality, but males did not. Though caution is necessary because of all of what the index does not and cannot measure, this result is somewhat supportive of the WEF's GGG Index and one of the most remarkable occurrences over its life: the reported closing of the Nicaraguan gender gap.

## References

- Aizenman, N.C. (2006) Nicaragua's total ban on abortion spurs critics. *Washington Post*. Nov 28:A1, A13.
- Altamirano Montoya, Á.J. & Teixeira, K.M.D. (2017) Multidimensional Poverty in Nicaragua: Are Female-Headed Households Better Off? *Social Indicators Research* 132: 1037.  
<https://doi.org/10.1007/s11205-016-1345->
- Ambrey, C., Ulichny, J., & Fleming, C. (2017). The social connectedness and life satisfaction nexus: a panel data analysis of women in Australia. *Feminist Economics*, 23(2), pp. 1-32.
- Barns, A. & Preston, A. (2010). Is Australia Really a World Leader in Closing the Gender Gap? *Feminist Economics*, 16(4), 81-103.
- Belli, G. (2016) *Why has 'macho' Latin America elected more female leaders than the US?* Theguardian.com. Retrieved April 1, 2018, from <https://www.theguardian.com/global-development-professionals-network/2016/nov/07/macho-latin-america-elected-more-female-leaders-than-us>
- Blázquez Vilaplana, B. & Ruiz Seisdedos, S. (2002) *Mujer y poder político en Centroamérica: el caso de Nicaragua y Panamá*. Ponencia presentada al Congreso Latinoamericano de Ciencia Política. Salamanca, 2002.
- Chen, L. J. (2010). Do gender quotas influence women's representation and policies?. *The European Journal of Comparative Economics*, 7(1), 13.
- Dawson, C., Veliziotis, M., Pacheco, G. & Webber, D.J. (2015) Is temporary employment a cause or consequence of poor mental health? A panel data analysis, *Social Science & Medicine*, Volume 134, pp 50-58,
- Downward, P.M. & Dawson, P. (2016). Is it pleasure or health from leisure that we benefit from most? An analysis of well-being alternatives and implications for policy. *Social Indicators Research* 126 (1), pp. 443-465
- Ebbers I. & Piper A., (2017) Satisfactions comparisons: women with families, full-time and part-time self-employed, *International Journal of Gender and Entrepreneurship*, Vol. 9 Issue: 2, pp.171-187, <https://doi.org/10.1108/IJGE-11-2016-0046>
- Ellsberg, M., Peña, R., Herrera, A., Liljestrand, J., & Winkvist, A. (2000). Candies in hell: women's experiences of violence in Nicaragua. *Social Science & Medicine*, 51(11), 1595-1610.
- Entra en vigencia Ley 779 con "las manos peladas".(2012) Elnuevodiario.com. Retrieved Feb 28, 2018, from <https://www.elnuevodiario.com.ni/nacionales/255536-entra-vigencia-ley-779-manos-peladas/>
- Erdogan, B, Bauer,T.N, Truxillo, D.M., & Mansfield, L.R. (2012) Whistle While You Work: A Review of the Life Satisfaction Literature. *Journal of Management*, Vol. 38 No. 4, pp. 1038 – 1083  
DOI:10.1177/0149206311429379
- Espinoza-Delgado, J. & Klasen, S. (2018) *Gender and Multidimensional Poverty in Nicaragua: An Individual-Based Approach* Retrieved April 26, 2018 from <http://dx.doi.org/10.2139/ssrn.3016287>
- Ferrant, G. (2014) Time use as a transformative indicator for gender equality in the post-2015 agenda. [http://www.oecd.org/dev/poverty/Time%20use%20\\_final\\_2014.pdf](http://www.oecd.org/dev/poverty/Time%20use%20_final_2014.pdf)

- Flores, S.; Evans, K.; Larson, A. M.; Pikitle, A.; Marchena, R. (2016) *La participación de mujeres indígenas rurales para fortalecer la gobernanza comunitaria*. CIFOR Infobrief 2016 No.140 pp.4 pp. ref.13
- Frey, B., Stutzer, A., Benz, M., Meier, S., Luechinger, S., & Benesch, C. (2008). *Happiness: A Revolution in Economics*. MIT Press. Retrieved from <http://www.jstor.org/stable/j.ctt5hhhtv>
- Gibbons J., Luna S. (2015) For men life is hard, for women life is harder: Gender roles in Central America. In: Safdar S., Kosakowska-Berezecka N. (eds) *Psychology of Gender Through the Lens of Culture*. Springer, Cham
- Graham, C. (2012). *Happiness around the world: The paradox of happy peasants and miserable millionaires*. Oxford University Press.
- Htun, M. N., & Jones, M. P. (2002). Engendering the right to participate in decision-making: electoral quotas and women's leadership in Latin America. In *Gender and the politics of rights and democracy in Latin America* (pp. 32-56). Palgrave Macmillan, London.
- Human Rights Watch (2017) *Nicaragua: Abortion Ban Threatens Health and Lives*. Retrieved April 24, 2018, from <https://www.hrw.org/news/2017/07/31/nicaragua-abortion-ban-threatens-health-and-lives>
- Jackson, C. (1996). Rescuing gender from the poverty trap. *World Development*, 24(3), 489-504.
- Joffe, C. E., Weitz, T. A., & Stacey, C. L. (2004). Uneasy allies: pro-choice physicians, feminist health activists and the struggle for abortion rights. *Sociology of Health & Illness*, 26(6), 775-796.
- Lancaster, Roger N. (1994) *Life is Hard: Machismo, Danger, and the Intimacy of Power in Nicaragua*. University of California Press, 30 Aug 1994
- Ley Integral Contra la Violencia Hacia las Mujeres y Reformas a la Ley 641 " Código Penal ", (2012) *Sistema de Información sobre la Primera Infancia en América Latina*, UNESCO, Retrieved April 26, 2018, from <http://www.sipi.siteal.iipe.unesco.org/normativas/683/ley-ndeg-7792012-ley-integral-contra-la-violencia-hacia-las-mujeres-y-reformas-la-ley>
- Luchsinger, G (2017) *UN Women Annual Report 2016-2017* Retrieved April 26, 2018 from <http://www.unwomen.org/-/media/headquarters/attachments/sections/library/publications/2017/un-women-annual-report-2016-2017-en.pdf?la=en&vs=0>
- Luffy, S.M., Evans, D.P., & Roachat, R.W. (2015). "It Is Better If I Kill Her": Perceptions and Opinions of Violence Against Women and Femicide in Ocotol, Nicaragua, After Law 779. *Violence and Gender*, 2(2), 107-111.
- Mastracci, S. (2017). The effect of women's representation on the Global Gender Gap Index. *International Journal of Public Sector Management*. 30. 241-254. 10.1108/IJPSM-05-2016-0095.
- Menjívar, C. (2011) *Enduring Violence: Ladina Women's Lives in Guatemala*. University of California Press
- Moitra, S. & Kelly, K. (2013) World Economic Forum Global Gender Gap Report (2005), in Stange, M.Z., Oyster, C.K, & Sloan, J.E. (Eds) *The Multimedia Encyclopedia of Women in Today's World Encyclopedia of Women in Today's World* <http://dx.doi.org/10.4135/9781452270388>
- Morrison, P.S., & Weckroth, M. (2018). Human values, subjective well-being and the metropolitan region. *Regional Studies*, 52(3), pp. 325-337.

- Mujeres en política: nada que celebrar. (2016) Laprensa.com. Retrieved Feb 28, 2018, from <https://www.laprensa.com.ni/2016/03/08/politica/1998298-mujeres-politica-nada-celebrar>
- Nicaragua (2012) *Ley N° 779*, Retrieved April 26, 2018, from [http://www.sipi.siteal.iipe.unesco.org/sites/default/files/sipi\\_normativa/ley\\_no.\\_779\\_ley\\_integral\\_contra\\_la\\_violencia\\_-nicaragua.pdf](http://www.sipi.siteal.iipe.unesco.org/sites/default/files/sipi_normativa/ley_no._779_ley_integral_contra_la_violencia_-nicaragua.pdf)
- Nicaragua Ortega claims progress in gender equality doubts persist. (2013) Courvyint.com. Caribbean & Central America – November, Retrieved Mar 1, 2018, from <http://www.courcyint.com/component/k2/item/58431-nicaragua-ortega-claims-progress-in-gender-equality-doubts-persist.html>
- Nicaragua sube ranking mundial equidad (2017). Elnuevo.com.ni. Retrieved Mar 1, 2018, from <https://www.elnuevodiario.com.ni/nacionales/445335-nicaragua-suberanking-mundial-equidad-genero/>
- Nicaraguan women may have to negotiate with their abusers. Ipsnews.net. Retrieved Mar 1, 2018, from <http://www.ipsnews.net/2013/05/nicaraguan-women-may-have-to-negotiate-with-their-abusers/>
- Oswald, A. J. (1997) Happiness and Economic Performance. *Economic Journal*, Royal Economic Society, vol. 107(445), pp. 1815-1831.
- Oswald, A. J. & Wu, S. (2010) Objective Confirmation of Subjective Measures of Human Well-Being: Evidence from the U.S.A. *Science* Vol. 327, Issue 5965, pp. 576-579 DOI: 10.1126/science.1180606
- Piper, A.T. (2015a). Heaven Knows I'm Miserable Now: Overeducation and Reduced Life Satisfaction, *Education Economics*, 23 (6): 677-692.
- Piper, A.T. (2015b). Europe's Capital Cities and the Happiness Penalty: An Investigation Using the European Social Survey, *Social Indicators Research*, Vol 123, pp. 103-126. <https://doi.org/10.1007/s11205-014-0725-4>
- Piper, A.T. (2018) Adult life satisfaction: largely (though not wholly) contemporaneous? A System General Method of Moments dynamic panel analysis, *MPRA Paper 85601*, University Library of Munich, Germany
- Piscopo, J. M. (2015). States as gender equality activists: The evolution of quota laws in Latin America. *Latin American Politics and Society*, 57(3), 27-49.
- Ritchie A; Lloyd CB; Grant M (2004) *Gender differences in time use among adolescents in developing countries: implications of rising school enrollment rates*. New York, New York, Population Council, 2004. 30 p. (Policy Research Division Working Papers No. 193)
- Ruiz Seisdedos, S., & Grande Gascón, M. (2015). Participación política y liderazgo de género: las presidentas latinoamericanas. *América Latina Hoy*, 71, 151-170. doi:10.14201/alh201571151170
- Sagot, M. (2010). Does the Political Participation of Women Matter? Democratic Representation, Affirmative Action and Quotas in Costa Rica. *IDS bulletin*, 41(5), 25-34.
- Van Praag, B.M.S., & Ferrer-i-Carbonell, A. (2007). *Happiness quantified: A satisfaction calculus approach*. Oxford: Oxford University Press.



- World Bank (2017a) *Vulnerable employment, male (% of male employment) (modeled ILO estimate)*. Retrieved April 24, 2018, from <https://data.worldbank.org/indicator/SL.EMP.VULN.MA.ZS?locations=NI>;
- World Bank (2017b) *Vulnerable employment, female (% of female employment) (modeled ILO estimate)*. Retrieved April 24, 2018, from <https://data.worldbank.org/indicator/SL.EMP.VULN.FE.ZS?locations=NI>
- World Bank (2018) GDP growth (annual %), Retrieved May 07, 2018, from <https://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?end=2016&locations=NI&start=2006>
- World Economic Forum (2016) *Measuring the global gender gap*. World Economic Forum, Geneva. Retrieved April 24, 2018, from <http://reports.weforum.org/global-gender-gap-report-2016/measuring-the-global-gender-gap/>
- World Economic Forum (2017), *The global gender gap report*. World Economic Forum, Geneva. Retrieved Mar 1, 2018, from [http://www3.weforum.org/docs/WEF\\_GenderGap\\_Report\\_2006.pdf](http://www3.weforum.org/docs/WEF_GenderGap_Report_2006.pdf)