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Oil: a curse for gender equality?

Evidence from Latin America

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Abstract

Latin America is considered the most unequal region of the world - and also, its second largest oil producer. Using prior research on resource curse and its potential effects on democracy in the mentioned area, combined with research on gender equality in the Middle East - this paper aims to explore the existence of a potential statistical relationship between oil and gender equality. The author uses two dependent variables to measure gender equality: *Female Labor Force Participation* and *Female Political Representation*. The paper carries out two sets of estimators, the first one employs a first-difference model along with pooled time-series cross-sectional data for 20 countries between 1970 and 2014. The second one used is a between estimator that examines variations across the states. This cross-national model covers a time period of 16 years, between 1999 and 2014, including the two recent oil shocks. The results suggest that oil rents have no significant effect on *Female Labor Force Participation*. However, there is a positive correlation established between oil rents and *Female Political Representation*- unless only high oil dependent countries are accounted for.

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1 Introduction

It is October 3rd of 2019 and Ecuador's president decides to cut the petrol subsidies that had been in place for four decades. The cuts raised the price of diesel to more than double, and petrol's price increased by 30 percent – all overnight. The government also announced other labor and tax reforms, that were to be followed as part of an agreement with the IMF¹. Considering Ecuador's long history of protesting changes (Hurtado, 2018) it was not surprising to wake up the following day with the streets full of people objecting these measurements. Indigenous groups mobilized to the capital to strike against the IMF agreement. Eleven days later, the president revoked the fuel subsidies. Although this paper does not intend to analyze what happened in Ecuador during the protests - it is important to clarify the chaos and instability that they brought with them. The debate started to mingle around: *is it good or bad to have petrol subsidies?* And this aroused more intense debates questioning oil negotiations of previous governments; from mortgaging Ecuador's oil to China to several corruption cases involving oil deals. Naively, one would view a natural resource that provides more revenue to a country than other sectors do as a blessing. Yet the question to be asked is - *when does oil become a curse?*

This year, on the 28th of April, Ecuador voted in favor of women and decriminalized abortion in rape cases. The Constitutional Court voted 7-2 in favor; the decision was a response to a petition submitted by women's rights groups (Fundación Surkuna, 2021). Abortion remains a deeply divisive issue in Latin America, where countries have strict laws banning terminations. The only places where abortions are currently legal in the region are Argentina, Uruguay, Cuba, Guyana and parts of Mexico. However, according to advocacy group Center for Reproductive Rights more countries in the same region allow terminations in rape cases – such as Bolivia, Brazil, Chile, Colombia and Panama. The struggle for women in Latin America is not only related to reproductive rights and health - according to the UNPD², Latin American countries are still far from achieving gender equality. The reader may now wonder, what do the above-mentioned incidents have in common? Both of them is what led to the motivation for this research paper – that intends to examine gender inequality based on rather uncommon factors in order to try to understand why women still face huge disadvantages compared to men in the Latin American region of the world. Why are girls still forced to be mothers in some Latin American countries? Why are Uruguay and

¹ International Monetary Fund

² United Nation Development Programme

Argentina so progressive in their sexual reproductive rights, having abortion legal upon request, while their neighbor Brazil penalizes abortion with 1 to 3 years if rape or danger of the woman's life cannot be proven? Why does Nicaragua continuously outperform their neighbor, Guatemala, in international gender equality rankings such as the UNDP Gender Equality Index and the World Economic Forum? In other words, why do Guatemalan women have less opportunities than men in education, health, the economy and politics compared to Nicaraguan women? Still bearing in mind the heterogeneity of the region, it is fair to mention that, overall, it has a similar background when it comes to history, religion and culture. But what about their natural resources? Is it too far-fetched to draw the conclusion that the oil sector harms gender equality?

Latin America is the most unequal region of the world (Oxfam, 2020). It is also the second largest oil producer in the world (World Bank, 2020). Over 200 years after most of its nations claimed independence - the region still faces the aftermath of colonization, especially when it comes to understanding the complexity of the diverse identities that characterizes these countries. Previous studies have associated the disadvantages that women face compared to men in Latin America with cultural and social constructs, including religion (ECLAC, 2018). With no intention of minimizing these potential factors, this paper intends to explore other reasons that could explain the current unequal situation that women face in the region. Taking advantage of the geographical, historical and cultural similarities that these nations have, the author intends to explore why some Latin American countries are performing significantly better when it comes to international gender equality measurements. Moreover, it relies on previous resource curse research and its potential effects on democracy in Latin America, and on gender equality in the Middle East. And uses the notorious difference between countries of Latin America regarding their natural resource wealth, specifically oil, to explore if there is a statistical relationship between oil and gender equality. Therefore, this paper aims to answer: *does oil harm gender equality?* In order to answer this question, this paper uses data on oil rents, female labor force participation and female political representation by comparing oil-rich countries such as Venezuela and Ecuador to oil-poor countries like Uruguay and Nicaragua.

2 Theoretical Frameworks

This section will clarify terms and theories to be used in this paper in relation to the research question at hand. It will begin by defining the *resource curse*, that lays the foundation for the continuation of the paper. Moreover, *measurements of oil dependency* and the *definition of gender equality* will be outlined and further on linked together to show the potential correlation between the two.

2.1 Defining “Resource Curse”

Richard Auty (1993) coined the term resource curse to explain the paradox of countries with rich natural resources having less economic growth, less democracy, and worse social well-being. In recent years, different scholars have used this phenomenon to try to understand and explain the adversities faced by resource-rich countries, especially in Latin America, Africa, and the Middle East (Ross, 2015). Moreover, a vast majority of literature in economics has questioned the relationship between natural resource wealth and economic growth (Frankel 2012, van del Ploeg 2011). To better understand the *natural resource paradox*, it is important to identify the peculiarities of natural resource wealth. Unlike other sources of wealth, natural resource wealth does not need to be produced - only extracted. Another important distinction is the fact that natural resources - especially oil and gas - are nonrenewable. Sachs et al. (2007) neatly explained that “they -oil and gas wealth- are thus less like a source of income and more like an asset”. The extraction of natural resources places several risks to the country’s economy, one of them being what scholars call the “rent-seeking behavior”. This is caused by the gap between the cost of extraction and the actual value of the natural resource, resulting in incentives for the private sector and the government to capture these rents (Humphreys, Sachs & Stiglitz, 2007). Other factors related to natural resource wealth include unequal expertise. This can be explained as the knowledge disadvantage that governments experience when negotiating with international corporations; the sudden rise in the natural resource exports causing an appreciation in the real exchange rate - normally referred to as the “Dutch Disease”; volatility of the natural resource’s price and quantity; and insufficient investments in human capital, meaning the lack of incentives that the government has to invest in education or other types of specialization in order to diversify the skills of the workforce (Gylfason, 2001, Humphreys et al, 2007).

2.2 Empirical Measurements of Oil Dependency

The term petroleum itself is derived from the Latin words – *Petra*, meaning “rock”, and *Oleum*, meaning “oil”. Petroleum in its pure form can be described as a thick mixture of gaseous, liquid and solid hydrocarbons naturally occurring beneath the earth’s surface (AAPG, 2021). It belongs to the family of fossil fuels, meaning that it has been created by the decomposition of organic matter for over millions of years (World Bank, 2012). The extended definition of what petroleum is includes various forms of gas and crude oils. However, for the purpose of this paper, petroleum, and all that encompasses its definition, will simply be referred to as *oil*.

Researchers have employed different measures of oil wealth of a country. Two common methods that have been applied are – (1) the oil exports divided by GDP³ and (2) the Oil Rents divided by GDP. However, before exploring the empirical measures of oil dependency, it is important to clarify the volatility of oil’s price, and the reasons for its instability. In fact, the volatility of the oil price plays a major role in causing a country to fall into the resource curse trap (Kakanov et al, 2018). In the long-term, these variations can be assumed to be associated with different macroeconomic frameworks. Nonetheless, in the short-term, despite a common shock, such as an oil boom, the consequences of oil price fluctuations vary across oil exporters’ countries (Kakanov et al, 2018). Fiscal policy is a major factor that impacts the sharp fluctuations in oil prices (Arezki et al, 2011).

It is worth noting that there are various ambitious and extensive techniques, not mentioned in this research, to measure oil dependency – however, this paper acknowledges its limited access to data and will, therefore, use the two methods mentioned above as valid ways to measure oil reliance of a country.

2.2.1 Oil Exports Divided by GDP

Although dividing total oil exports by the country’s GDP might be intuitive and tempting, Ross (2008) summarizes the limitations of this measurement. Resource curse literature suggest that oil production could potentially be harmful because it generates revenues to the governments along with rents to the economy. Therefore, using *oil exports* when measuring oil wealth would exclude the oil produced and consumed domestically. To further show this – imagine two different countries that produce the exact same amount of oil,

³ Gross Domestic Product

with the only differentiating factor being that one of the countries is considered rich and the other one is poor. The rich country will primarily consume their oil domestically, and then export the leftovers, whereas the poor country will most likely export most of the produced oil. Therefore, when computing this into the calculation of oil wealth using *oil exports*, the poor country's oil exports, hence the numerator, will be significantly smaller than the rich country's numerator. Moreover, using the ratio of oil exports to GDP invites for several endogeneity problems to potentially occur. Continuing with the previous example of one rich and one poor country – the poorer country will have a smaller denominator due to its lower GDP. A larger oil export to GDP ratio could hypothetically harm a country's economy, but it could also be large due to factors such as corruption, civil war or a combination of the two (Ross, 2008).

2.2.2 Oil Rents Divided by GDP

The second possibility of measuring oil wealth – dividing oil rents by GDP – also presents limitations as dividing any factor by the GDP of a country could create some endogeneity to the results. Nevertheless, this measurement is seen to be more aligned with the purpose of this paper. Additionally, Ross (2008) suggests that a more precise way of measuring oil dependency would be to divide the Oil Rents by the country's population, rather than by the GDP. However, this paper acknowledges the limited access to data and will use the World Bank's indicator – the ratio of total oil rents to the country's GDP. As the paper focuses on only on Latin American Countries, the variance in GDP per capita does not significantly vary as it would if the whole world was to be taken into consideration – therefore, the indicator to be used is supported by the context that is being analyzed.

2.3 Gender Equality Definition

The definition starts from the basic differentiation of gender from biological sex – stating that *gender stems from how males and females are socially viewed in their behaviors, identities and roles along with the freedoms and constraints that follow these roles* (Scott et. Al, 2013).

Feminist thought cannot be seen as a monolithic ideology, nor assume that all feminists think alike. There are different approaches, perspectives, and frameworks that feminists use

to explain women's⁴ oppression, and furthermore, to propose solutions for its elimination (Tonge, 2013). In order to define female empowerment, economist Naila Kabeer (2005) starts by defining power as the ability to make choices, thus, to be disempowered means to be denied choice. In contrast to this, empowerment refers to the change from being denied the ability to make choices to acquirement of such an ability. Kabeer states the distinction between being empowered and being powerful – with the latter one never having been disempowered in the first place. To further explore the term “empowerment”, she introduces three interrelated dimensions: agency, resources, and achievements. Where the first one represents the processes by which choices are made, the second is the medium through which agency is put into effect, and achievements are the outcomes of agency. The interaction between these three explain the ways through which female empowerment can occur.

Moreover, according to UNICEF - gender equality means that women, men, girls, and boys must have access to equal rights, resources, opportunities and protections. Furthermore, the United Nations start from the basic fact that women and girls represent half of the world's population, and, therefore, half of its potential. This means that gender equality, besides being a fundamental human right, is essential to achieve peaceful societies and reach full human potential along with sustainable development. In 1948, Gender Equality was, indeed, made part of the international human rights law by the Universal Declaration of Human Rights (UN, 2021).

Concentrating on the field of development economics, one can use Amartya Sen's (1990) phenomenon of “missing women” to illustrate the urgent need for gender equality. Sen observes that in developing countries, the proportion of women is lower than what would be expected if they were given equal medical care and food as men are. In 2005, it was estimated that there were between 60 and 100 million women less in these countries (Duflo, 2005). These missing women are not actively killed, their cause of death is simply neglect (Duflo, 2005, Sen, 1990). This is because they are continuously treated differently than men – which is reflected inside their homes with brothers and sisters being treated differently or within heterosexual couples. However, these differences are not only clear within the homes but also in different domains outside of the private sphere – such as access to education, labor force participation, and political representation. It is relevant to introduce Duflo's definition

⁴ Though this paper frequently refers to “women”, the author is fully aware that women is not a homogenous group but is rather characterized by a complex interaction of different experiences and realities. Therefore, the feminist lenses used are as intersectional as possible, while still acknowledging the limitations due to generalized data.

of female empowerment, as the improving ability of women to access the constituents of development. These constituents include health, education, earning opportunities, rights, and political participation. Considering the purpose of this research and its field of study, this paper will specifically use Duflo's definition of female empowerment.

In the recent decades, the relevance of gender equality has increased for policy makers as well as for the public eye. As an example of this, gender equality and women's empowerment are one of the seventeenth United Nations Sustainable Development Goals (SDGs). Although this is an improvement, there is still much to be done. As of 2021, the socioeconomics impacts of COVID-19 have been counterproductive in regard to gender equality. Violence against women and girls have intensified, child marriage is expected to rise in the following years, and the increase care work has disproportionately affected women (UN, 2021). Although over 90% of countries mandate nondiscrimination on the basis of gender in the workplace, data over recent years show that nearly half of these countries continue to restrict women from certain jobs and industries. Surveys report that 1 in 3 women from the age of 15 have been subjected to physical and/or sexual violence by an intimate partner, or sexually assaulted by a non-intimate partner at least once in their lifetime. In the political arena, data show that as of early this year, the global average of women in the single or lower chamber of parliaments reached 25.6% - with only 23 countries having 40% or more women in these chambers. Additionally, 20 countries report that most of the seats occupied by women in their local governments have been done so through gender quotas.

Based on this, the existence of a bidirectional relationship between economic development and gender equality should not be too surprising. Duflo (2005) explains this relationship by showing evidence of a positive relationship between poverty and gender inequality – saying that poverty and gender inequality decreases simultaneously. In other words, when economic development reduces poverty, it reduces for everyone, including men, but when poverty declines, the condition of women improves more than for men. However, Duflo emphasizes that economic development is not enough to achieve gender equality - policy action is still necessary.

2.4 Empirical Measures of Female Empowerment

Simply defining gender equality and female empowerment is not enough in order to analyze potential social effects caused by gender disparities - it is also necessary to find a way of measuring gender equality. Studies show that women's participation in the labor force

has a direct impact on fertility rates, female schooling, mortality rates, and female political involvement (Ross, 2005). There are several consistent and valid methods of measuring gender equality, however, this paper will primarily follow the GII⁵ proposed by the UNDP as it goes aligned with the selected relevant literature. The UNDP measures gender inequality by dividing it into three main dimensions: *health, empowerment, and labor market*. Health is measured by the maternal mortality ratio and the adolescent birth rate. Female and male population with at least secondary education and female and male shares of parliamentary seats are used to measure empowerment. Lastly, the third dimension is measured by the female and male labor force participation rates (UNDP, 2021).

The GII intends to reflect gender-based disadvantages and the loss in potential human development due to inequality between women and men in the three dimensions mentioned above. The index ranges from 0 to 1, where 0 means that women and men have equal opportunities, and 1 is when one gender scores as poorly as possible in all measured dimensions. The GII is built on the same framework as the Inequality Human Development Index (IHDI), thus it intends to measure the human development costs of gender inequality. The higher the GII, the more differences between genders – resulting in more of a loss in human development.

2.5 Linking Oil Dependency and Gender Equality

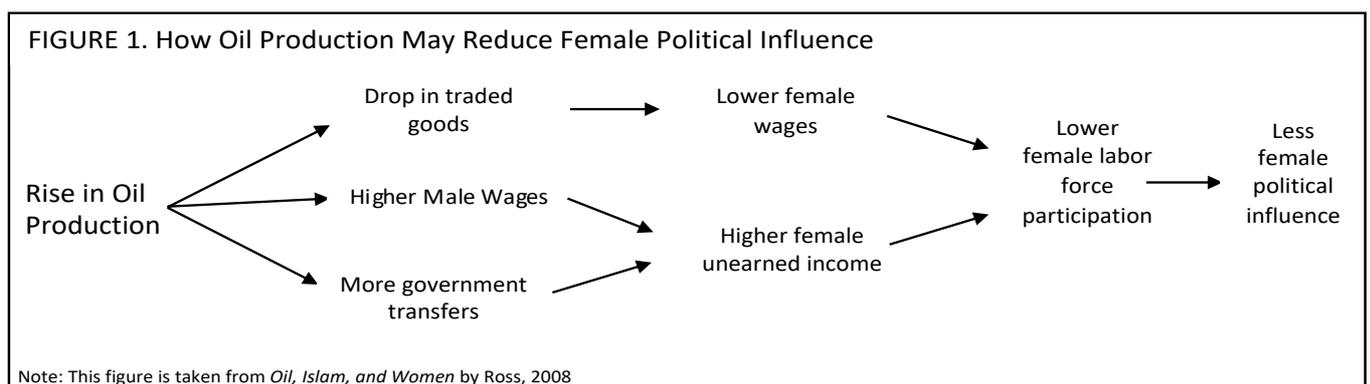
Moving forward and combining the pieces outlined above, the question that now needs to be addressed is *how could oil production affect gender equality?* The relationship between the two can be explained using the previously mentioned term “Dutch Disease” – referring to the sudden rise in natural resource exports causing an appreciation in the real exchange rate. This economic condition illustrates the shift of economy from the traded sector - *agriculture and manufacturing* - to the nontraded sector - *construction and services*. In other words, a boom in oil will make it cheaper for locals to import tradable goods and, simultaneously, the new wealth will expand the non-tradable sector. However, classic models of the Dutch Disease lack the gender lenses by ignoring the fact that these changes affect women and men differently (Frederiksen, 2007, Ross, 2005). There are two key factors that influence the number of women in the labor force: *the prevailing female wage* and *female unearned income* (Mammen and Paxson, 2000). When *the prevailing female wage* increases, women have more incentives to enter the market for wage labor. On the other hand, the *female unearned*

⁵ Gender Inequality Index

income refers to the indirect income of women - as her family's income increases, she becomes less inclined to seek a job (Ross, 2008). This could be better understood by introducing another term commonly used by social theorists: the reservation wage – referring to the wage, in this case women's, at which she finds it worthwhile to leave the house and join the labor force (Frederiksen, 2007, Ross, 2008). This implies that when the economy depends on oil and mineral extraction, women are discouraged from entering the labor force and the gap between men and women increases.

Combing all of these pieces, can improve the understanding of why an oil boom could potentially harm the participation of women in the labor force. In many developing countries, women are mostly employed in the traded sector, such as textiles and agriculture, while being excluded from the nontraded sector, such as construction and retail. Consequently, an increase in oil dependency of a country will decline the demand and supply of female labor, causing a reduction of women in the workforce (Ross, 2008).

Using what social theorists have long claimed, Ross argues that women can achieve social and political emancipation by entering the workforce. In other words, female labor force participation unchains other important factors that are associated with the increase of gender equality - such as female school enrolment and fertility rate. Moreover, female labor force participation tends to boost female political influence at an individual level by affecting women's political views, at a social level, by increasing the number of female political networks, and finally, at an economic level, by pressuring the governments to account their interests.



3 Setting the Regional Context

This section will clarify the setting of this paper and outline how the terms and frameworks mentioned in the previous section relate specifically to Latin America.

3.1 Latin America

Geographically, the Latin American region begins south of the US-Mexico border in North America, extends throughout Central America along with parts of the Caribbean and then continues until the southernmost tip of South America (Enciclopedia del Ecuador, 2001). However, the complexity of this group of countries begins already with the name – *Latin America*, that implies a “Latin” origin, when in reality part of its population does not have such an origin (Munck, 2013).

Although inequality has decreased in recent years, Latin America still remains the world’s most unequal region (ECLAC, 2016). The numerical statistics speaks for itself - in 2014 the richest 10% of people in Latin America had amassed 71% of the region’s wealth. From 2002 to 2015, the slim number of existing billionaires in the region saw their fortune grow by 21%, on average per year - which has been estimated to be six times greater than the growth of the whole region’s GDP (Oxfam, 2015). More recently, economic and social consequences of COVID-19 have intensified the already existing structural difficulties – such as *high levels of inequality, labor informality, lack of social protection, poverty and vulnerability* (ECLAC, 2021).

3.2 Oil in Latin America

According to the IOGP⁶, Latin America held one fifth of the world’s oil reserves at the end of 2016 – only defeated by the Middle East, Latin America is the second largest oil-producing region (Valdivia & Lyall, 2018). Since a decade ago, oil production in the region is at a high level of more than 7 million barrels per day (IOGP, 2016). Venezuela have previously held the top position as the region’s largest producer – with around of 18% of the world’s total oil reserves. To put this into perspective, Saudi Arabia’s reserve in 2019 was at around 17%. However, due to recent political and economic instability have resulted in a significant drop in the country’s oil production. On the other hand, Brazil’s oil production has been increasing significantly since 1985 – making the country the largest producer in the region with a 35% regional share in 2016 (IOGP, 2016). Other major oil producers of the region are Mexico, Colombia, Argentina, and Ecuador (World Bank, 2021). Most countries in Latin America produce some oil, however, they differ not only in terms of the quantities

⁶ International Association of Oil & Gas Producers

produced, but also in domestic consumption levels - determining their net balances and, thus, their capacity to export (IOGP, 2016; Palacios, 2002).

Based on the IOGP 2016 report, oil demand is on an upward trend in the region and has since the 1970s been the region's single most important export (Palacios, 2002). On average, the demand for oil in Latin America has increased by a factor of four since 1970s (IOGP, 2016). The US is the world's largest oil consumer, and it is also the largest purchaser of Latin American oil - importing around 26% of crude oil from the region (Valdivia & Lyall, 2018). Ironically, about 56% of US exports of refined fuels are shipped to Latin America. This trade pattern allures to the complicated relationship between Latin America and oil – confirming established structures of economic dependence and colonialism (Bebbington and Bury, 2013; Watts, 2016). To better understand the current situation of the oil industry in Latin America, one would have to turn the clock back to the early 20th century and, more specifically during World War I. This is when oil became a global strategic resource, making Latin America an attractive region for exploitation and investment (Valdivia & Lyall, 2018). Major oil firms of the era such as Royal Dutch (Shell), Standard Oil, Chevron, Texaco, Mobil, British Petroleum, and Gulf, took advantage of the lack of expertise and capital of Latin American countries to engage in refining activities. Therefore, most of the oil rents did not remain in the local country, and the the oil rents that did stay in the region generally went from firm to landowners and provisional authorities – all avoiding paying taxes (Valdivia & Lyall, 2018).

The following decades deepened dynamics of internal colonization, through the irresponsible contamination of the land and exploitation of local labor by international oil companies (Valdivia & Lyall, 2018). In 1960, OPEC⁷ was founded by Venezuela along with other oil producing Middle Eastern countries. Ecuador joined in 1973, the same decade that the “petro-states” emerged - referring to countries whose economies heavily depended on oil income, such as Venezuela and Ecuador (Acosta, 2009). As a result of a raise in oil income, states expanded their public spending - reinforcing elite control of political power and state resources (Gledhill, 2008). In other words, oil rents transformed the governmental power in the region. The first and second oil shocks in 1973 and 1979 respectively, caused the oil price to dramatically increase, which led to Latin American oil producing countries expanding their loans and spending in economic development. However, by the 1980s, a drop in oil prices led

⁷ Organization of the Petroleum Exporting Countries

to a sluggish economic growth, hyperinflation and an increase in debt in the region (Valdivia, 2018, Acosta, 2009).

In the late 1980s, a combination of anti-neoliberal protests in several countries of the region and an increase of international oil prices opened up for the possibility of a shift in oil governance referred to as the “post” neoliberal moment. Between 1998 and 2008, the international benchmark oil price WTI⁸ rose from \$17 to \$157 per barrel (OPEC, 2010). Despite a slip following the 2008 financial crisis, prices spiked again through mid-2014. In this period, several oil-producing states renegotiated with international oil companies, and in some cases, they nationalized oil reserves to take control over the oil rents. During this boom, Venezuela and Ecuador’s oil revenues constituted over half and one third of their state budgets, respectively. Other countries that experienced rising resource rents and increased social and economic spending were Bolivia, Brazil, and Argentina (Valdivia, 2018). However, there were oil producing countries that did not follow these trends, instead they continued with liberalization policies, among them were Colombia, Guatemala, and Peru (Acosta, 2009).

3.3 Gender Inequality in Latin America

Prior to the COVID-19 pandemic, Latin American women earned less than men, and a larger percentage of women than men worked in the informal sector. Additionally, women engaged in more part-time, temporary and own-account work than men (ILO, 2019). Moreover, women in the region spent more than three times as many hours performing unpaid work as men did (ECLAC, 2019). Data shows that the main barrier to women’s full participation in the workforce is due to family responsibilities such as domestic and care work (ECLAC, 2019). The presence of children lowers the possibilities for women to engage in the labor force, especially in low-income households. After surveying a large sample in ten countries in the region, ECLAC (2019) reported that approximately 60% of the women in households with children under 15 do not have a job because of their family responsibilities, while in households where there were no children under the age of 15, only 18% of women answered the same. Considering the region’s lack of quality public services, poor women have a much harder situation as they cannot afford to purchase services that would allow them to participate in the labor force (ECLAC, 2019). As an example, one third of women in low-income households between the ages of 20 and 59 are not participating in the labor market due to family responsibilities (ECLAC, 2019).

⁸ West Texas Intermediate

Although the region has seen a growth in the number of completed school years along with a rise of 8% in their partaking in the workforce between the years of 1990 and 2010, the female participation rate is still not even slightly more than two thirds of the male participation rate in 2019 (ILO, 2019). The current occupational segregation continue to be one of the structural challenges of inequality in Latin America, as it tends to reduce both the number of jobs available to women and their wages (ECLAC, 2018). The rigid division of labour in the region and the lack of gender-perspective policies have major implications in terms of the gaps existing between men and women, between women in different socioeconomic groups and between women living in different areas or countries. These inequalities are likely to deepen further in the region due to the COVID-19 pandemic (ECLAC, 2020). For instance, reactivation policies have historically prioritized sectors such as mining, construction and natural resource exploitation - which all employ a large number of men (ECLAC, 2020).

Extensive data associate prolonged absences from the labour market with a deterioration in a person's career path or job opportunities and a lower level of present and future earnings (Crittenden, 2002). Indeed, the term "mommy tax" has been used to explain how women are more affected than men when they pause their careers (Waldfogel, 1997; Sigle-Rushton and Waldfogel, 2007). The urgent need for the region to take action is mainly because gender gaps produce and reproduce poverty and inequality (ECLAC, 2020). In other words, closing the gaps between the male and female labour force participation rates could help to reduce poverty and inequality significantly (Braunstein, Bouhia and Seguino, 2020). ECLAC estimates that if women had the same participation rates as men, poverty in 18 Latin American countries could be lowered by between 1 and 12 percentage points and inequality (as measured by the Gini coefficient) could be reduced by between 1 and 4 percentage points. Meanwhile, closing the gender-based income gap would result in a reduction of poverty of between 1 and 14 percentage points and a reduction in the Gini coefficient of between 2 and 8 percentage points (ECLAC, 2014).

4 Literature Review

This section will analyze previous research on this paper's main theme. The chosen papers demonstrate an extensive and comprehensive analysis of the resource curse debate. The main purpose of this literature review is to show three different approaches and conclusions regarding the social, political and economic effects of the oil industry. First it will examine

Ross' paper arguing that oil wealth harms gender equality in the Middle East, thereafter, it will explore Dunning's paper that argues that in Latin America, oil wealth has been a blessing for democracy. Lastly, it will explore Haber and Menaldo's paper that concludes that oil wealth in Latin America is neither a curse nor a blessing

4.1 Ross (2008): Curse

In the paper *Oil, Islam, and Women*, Ross challenges two common gender equality associations: religion and economic growth. The Middle East is the region where women hold the least number of seats in government, and with the fewest number of women working outside the home (World Bank). Most observers have attributed this to the region's Islamic traditions. However, Ross suggests that rather than Islam - oil dependency is the reason why women are underrepresented in politics and the workforce. Furthermore, he questions the common belief about economic development that implies that economic growth promotes gender equality. In his paper he suggests that the focus should not rely on the existence of economic growth, but rather the type of economic growth. According to his empirical research, he concludes that different types of economic growth have different effects on gender empowerment.

Ross uses two sets of estimators to explore the effects of oil production on gender equality. The first one is a first-differences model with country fixed-effects, where he analyzes a pooled time-series cross-sectional data for all states between 1960 and 2002. For the second estimator, he uses a cross-national model with a between-estimator that covers all countries in a period of ten years, from 1993 to 2002. He intends to use the first-differences model to examine variations over time within countries, while using the cross-national model to measure variations across them.

In order to measure gender equality, he uses two indicators: *female labor force participation* and *female political influence*. Using what social theorists have long claimed, Ross argues that women can achieve social and political emancipation by entering the workforce. In other words, female labor force participation unchains other important factors that are associated with the increase of gender equality - such as female school enrolment and fertility rate. Moreover, female labor force participation tends to boost female political influence at an individual level by affecting women's political views, at a social level, by increasing the number of female political networks, and finally, at an economic level, by pressuring the governments to account their interests. Thus, he uses two dependent variables: female labor force participation and the seats held by women in a country's parliament. Whereas the dependent variable is Oil Rents Per Capita, which is a country's total rents from oil and gas divided by its midyear population. He argues that this is a better way of measuring oil wealth than Oil Exports Over GDP, a variable that is frequently used in resource curse

studies, because not only it is a more precise way of measuring the value of oil production, but it also avoids endogeneity caused when measuring exports instead of production.

Ross finds that oil rents have a significant negative impact on female labor force participation. Based on the results of the first-differences estimations, in a given year, the increase of oil rents is consistently linked to the decrease of the variable of female labor force participation. Moreover, in the cross-national estimations, the independent variable is also linked to lower female labor force participation. Results from both models are robust. When looking at the second dependent variable, results confirm that oil rents have a negative effect on seats held by women in a parliament's country.

4.2 Dunning (2010): Blessing

In his book *Crude Democracy*, Dunning explores under what conditions oil promotes authoritarianism and when it promotes democracy. He outlines an equifinality and multifinality proposal regarding authoritarianism and resource wealth - respectively. Dunning also acknowledges that while there are different reasons leading a country to an authoritarian regime, resource wealth does not necessarily have to be one of those reasons. In other words, he argues that resource wealth can equally promote or obstruct democracy. Moreover, Dunning attempts to address the possibility of conditional effects in his research – by investigating which mechanisms of resource wealth harms democracy. One of his findings is that the effect of natural resource wealth depends on the income distribution of the country – which explains that the more unequal the income distribution is in a country, the less likely said country is to fall into the resource curse trap. This is not intended to imply that democracy benefits from inequality, but that although inequality hurts society, resource wealth can mitigate the negative impacts of inequality – specifically in highly unequal countries.

To showcase this with an example, Dunning uses Latin America - where oil rents are positively related to democracy in the time-series cross-section data. Additionally, he specifically highlights rich-oil countries in the region as evidence of a positive intertemporal relationship within countries between the extent of oil rents and democracy. In particular, he focuses on the case of Venezuela - one of the world's oldest oil exporters - to illustrate the parallel trend that oil rents and democratic stability have followed since the late 1970s. Dunning's focus on Latin America allows for counterarguments to previous negative associations of oil rents and democracy in other parts of the world - such as Africa and the Middle East – and, moreover, it supports his theory that oil rents have conditional effects –

meaning it mainly depends on the extent of resource dependence and the level of private inequality.

4.3 Haber & Menaldo (2011): Neither Curse nor Blessing

Haber and Menaldo (2011) reject both hypothesis about the effects of natural resource wealth on democracy, concluding that natural resources have neither been a curse nor a blessing in Latin America. The authors, use a time-series and counterfactually-drive approach to mainly answer: *what would a resource reliant state look like had it not found resources?* In order to answer this question, they employ a difference-in-differences estimator, assuming that a resource reliant country would have followed the same path of regime as the non-resource reliant countries in the same geographical region if it had not exploited its natural resources. They also emphasize the importance of employing time series centric methods when analyzing the existence of a resource curse in a given country. Thus, in their analysis they use a country-by-country time series approach, along with a dynamic panel framework with country fixed effects. By constructing their original datasets, the authors ensure robustness by employing four different measures of resource reliance: *fiscal reliance, total oil income per capita, total fuel income per capita, and total resource income per capita.*

The econometric approach to explore how a particular country's political trajectory would have looked like if it had not been natural resource reliant is by creating a synthetic non-resource-reliant country. This synthetic country is represented by the average democracy score of the non-resource countries in the region. A comparison is then made between natural resource dependent countries to this synthetic country. After ruling out the possibility of reverse causality, the results indicate that as oil income increases, countries experience more democracy. Based on these findings, Haber & Menaldo suggest scholars to revisit the idea of the "resource curse". More specifically, they emphasize the importance of analyzing variance within countries over time, rather than exploiting the variance across countries. Additionally, the authors show that since independence in the early nineteenth century, Latin America has experienced waves of democratization as well as periods of authoritarianism. Since 1970, there is a clear trend towards democracy in all of Latin America - suggesting that resource reliance makes no difference to the countries' political trajectories.

5 Empirical Strategy

This paper explores oil dependency's potential effects on gender equality. As previously discussed, there is an ongoing debate whether or not oil wealth harms democracy in Latin

America. There is currently very scarce literature on the relationship between oil dependency and gender equality in Latin America – the research most aligned with the topic is found by Ross, which is why this research paper will mainly follow his proposed methodology, thus *Female Labor Force Participation* and *Female Political Representation* are the two dependent variables. Additionally, there is already existing data supporting a potential direct relationship between these two indicators and oil wealth. However, in order to allow new findings to present themselves, this paper will use *Adolescent Fertility Rate* (one of the GII indicators) as a control variable in both models. Thus, two hypotheses arise after establishing the dependent variables:

H₁: A rise in oil rents will reduce female participation in the labor force;

H₂: A rise in oil rents will reduce female political representation.

Female Labor Participation

To explore the first hypothesis, this paper analyzes oil wealth and employment data for 20⁹ Latin American countries from 1970 to 2014. However, adjustments had to be made in order to adapt to the existence of available data – therefore, the analysis is divided into two parts. The World Bank dataset lack data regarding continued female labor force participation between 1970 and 1990 - compromising the robustness of my results. For this reason, this paper relies on two external sources for collecting the data. First, Ross' dataset was used, however, it is worth noting that 2003 was the last reported year. Consequently, this led to the first time period - 1970 to 2003. Thereafter, the ILO¹⁰ datasets were used to complete the data – however, data was only available from 1990 to 2014. Thereby, defining the second time period - 1990 to 2014. Thus, the same model was ran twice, with keeping all factors equal except for the data source and the time frame.

The first estimator uses a first-difference model and employs pooled time-series cross-sectional data for 20 countries between 1970 and 2014. The reasoning behind this choice is that by employing the previously mentioned estimator, this paper will be able to examine variations over time within the chosen states. Moreover, the advantage of this model is that it looks at whether changes in the explanatory variables are associated with changes in the dependent variable (Ross, 2008). As it focuses on changes, rather than levels, this model allows for a control of country heterogeneity (Verbeek, 2017). Additionally, the model also

⁹ The countries are: Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, and Venezuela

¹⁰ International Labour Organization

facilitates the correcting of trending in the dependent variable - the steady rise of female labor force participation. The paper also uses an AR1 process to control any remaining correlation. Ultimately, the explanatory variables will be lagged by 1 year in order to reduce endogeneity (Ross, 2008).

The first-differences model can be written out as follows:

$$Y_{i,t} - Y_{i,t-1} = \alpha_i + \beta(x_{i,t-1} - x_{i,t-2}) + (\epsilon_{i,t} - \epsilon_{i,t-1})$$

i = the country

t = year

x = series of explanatory variables

The right-hand side variables (x) are lagged by 1 year.

Moving forward, a second estimator will be employed in order to examine variations across the states. This is a cross-national model with a between estimator and will cover a period of 16 years from 1999 to 2014 - including the last two oil shocks. This estimator allows for a comparison between the mean values of high oil reliant countries and low oil reliant countries. Using the average of each variable over a 16-year period also facilitates the reduction of measurement error (Ross, 2012).

The between estimator can be written as the following:

$$\bar{Y} = \alpha + \beta \bar{x}_i + \epsilon_i$$

i = the country

x = explanatory variables

Female Political Representation

Following Ross' strategy, this paper analyzes the available data on female political representation from the most recent year that the author found data for - 2014. In order to measure female political representation, the World Bank indicator - *women in parliaments* - was employed, this indicator represents the percentage of parliamentary seats in a single or lower chamber held by women.

In this case, this paper also applied a cross-national estimator - but only for one year. This between estimator allowed for the comparison of female political empowerment between high-oil reliant countries and poor-oil reliant countries.

The estimator may be written as the following:

$$Y_i = \alpha + \beta x_i + \epsilon_i$$

i = the country

x = explanatory variables

Variables

The independent variable is Oil Rents (% of GDP) and it is described by the World Bank as *the difference between the value of crude oil production at world prices and total costs of production*. This is used as the independent variable in all of this research paper's models.

Moreover, the selected models include several control variables:

Income: the log of GDP per capita and is controlled in all models.

Income Squared: the log of GDEP per capita squared, and it is used for the Female Labor Force Participation.

Working Age: the fraction of the population between the ages of 15 and 64. It is added to the regressions for Female Labor Force Participation.

Adolescent Fertility Rate: the annual number of births by women 15 to 19 years of age per 1,000 women in that age group (World Bank). This variable is controlled in all models.

GII Index: which is used for the Political Representation regression.

Polity Score: which uses a 21-point scale to measure a state's democracy level. This variable has previously been used by Ross (2008), Dunning (2010), and Haber & Menaldo (2011). It is added to the political representation regression.

6 Robustness

The robustness of the model is tested in three manners. First, two different data sources are used to measure female labor force participation. Second, all regressions are run again after dropping the most influential countries - Venezuela and Ecuador -, without finding any significant differences in the results. Cuba was also dropped from the Female Political Representation, in order to avoid any bias based on their unique political regime compared to the other selected countries. To control the Polity score, Haiti and Cuba were excluded as their scores were negative. Finally, the research runs its first-difference estimator with fixed effects to control the possible trends in female labor force participation to vary from country to country - the results remained mostly unchanged.

7 Results

Female Labor Force Participation

TABLE.1. Pooled Time-Series Cross-sectional Regressions, with First Differences			
1970-2003 (Ross)	Dependent variable is Female Labor Force Participation		
	(1)	(2)	(3)
Income (log)	-58.38* (-2.13)	-53.36 (-1.95)	-53.45 (-1.96)
Income Squared (log)	3.663 (2.09)	3.423 (1.94)	3.430 (1.95)
Working Age	1.086*** (8.72)	0.806** (3.46)	0.804** (3.43)
Adolescent Fertility Rate		-0.0800 (-1.82)	-0.0804 (-1.82)
Oil Rents			-0.0143 (-0.39)
Constant	199.3 (1.80)	198.2 (1.79)	198.6 (1.79)
Observations	660	660	660
Countries	20	20	20
R-squared: within	0.718	0.741	0.741
R-squared: between	0.0560	0.0594	0.0601

*Note: t statistics in parentheses. *Significant at 5%; **significant at 1%; *** significant at 0.1%.*

TABLE 2. Pooled Time-Series Cross-sectional Regressions, with First Differences			
1990-2014 (ILO)	Dependent variable is Female Labor Force Participation		
	(1)	(2)	(3)
Income (log)	2.621 (0.16)	6.476 (0.38)	6.018 (0.36)
Income squared (log)	0.0733 (0.07)	-0.172 (-0.18)	-0.144 (-0.15)
Working Age	0.629* (2.02)	0.926** (2.75)	0.921** (2.73)
Adolescent Fertility Rate		0.137* (2.19)	0.137* (2.18)

Oil Rents			0.0203 (0.59)
Constant	0.112 (1.05)	0.177 (1.61)	0.179 (1.62)
Observations	536	536	536
Countries	20	20	20
R-squared: within	0.0131	0.0212	0.0216
R-squared: between	0.218	0.209	0.226

Note: *t* statistics in parentheses. *Significant at 5%; **significant at 1%; ***significant at 0.1%.

	Dependent variable is Female Labor Force Participation, 1999-2014		
	(1)	(2)	(3)
Income (log)	2.423 (0.88)	1.004 (0.34)	1.034 (0.34)
Income squared (log)	-0.286 (-2.83)	-0.162 (-1.10)	-0.272 (-1.64)
Working Age	0.00498 (0.01)	-0.468 (-0.49)	-0.344 (-0.35)
Adolescent Fertility Rate		-0.169 (-1.58)	-0.197 (-1.96)
Oil Rents			0.498 (2.08)
Constant	48.73 (1.32)	94.62 (1.98)	95.35 (2.13)
Observations	20	20	20
R-squared	0.0654	0.144	0.218

Note: *t* statistics in parentheses.

Oil Rents has no significant effect on Female Labor Force Participation. In the first-differences estimators using Ross' data (Table 1), the increases in Oil Rents in a given year are linked to a decrease in *Female Labor Force Participation* the following year, however, the results are not statistically significant to conclude this. While the regression using the ILO data (Table 2) shows a positive impact of oil rents on the independent variable - this relationship is again not statistically significant. In both tables, one can observe that the control variable - *Working Age* - is positively correlated with *Female Labor Force Participation*. Additionally, looking at the regression from 1990 to 2014, the control variable

Adolescent Fertility Rate presents a significant correlation with the independent variable (column 2 and 3). This finding is particularly noteworthy, and even counterintuitive, as it suggests that an increase in the *Adolescent Fertility Rate* in a given year is correlated with an increase in the *Female Labor Force Participation* of the following year. The possible explanation to this will be addressed in the following section.

Similar to the first-differences results, the cross-national results expose no significant relationship between oil rents and the dependent variable. Moreover, in this regression the control variables have no statistical correlation with the *Female Labor Force Participation*. In other words, the cross-national results are not significant enough to base any conclusions between the dependent variable and the explanatory variables. To ensure that cases of extreme data was not affecting the results, this research also ran the regressions dropping every single country – resulting in mostly the same outcome.

These results are not consistent with H_1 , which states that oil production will reduce female labor force participation.

Female Political Representation

TABLE 4. Cross-national Regressions on Female Seats in National Parliament				
Dependent variable is parliamentary seats held by women (%), 2014				
	(1)	(2)	(3) High	(4) Low
Income (log)	-14.85** (-3.97)	-15.66*** (-4.58)	-19.10* (-8.76)	-11.04* (-3.46)
GII Index	-156.8*** (-5.10)	-118.0* (-2.33)	-310.9* (-4.40)	-138.0** (-4.71)
Oil Rents	1.948** (3.70)	2.591 (1.69)	-4.198 (-2.19)	6.915 (1.12)
Polity		1.914 (0.56)		
Adolescent Fertility Rate			2.315 (2.65)	0.371** (3.62)
Constant	215.8*** (5.20)	190.5** (3.52)	186.7* (4.75)	146.8** (3.89)
Observations	19	18	7	12
R-squared	0.674	0.657	0.957	0.781
<i>Note: t statistics in parentheses. Note: t statistics in parentheses. *Significant at 5%; **significant at 1%; ***significant at 0.1%. Column (3): Countries with high Oil Rents. Column (4): Countries with low or non-existent Oil Rents.</i>				

I define states as “high oil dependents” if their oil rents were at least 1% of their total GDP. Otherwise, they were defined as “Low oil dependents”. Nine out of the twenty countries have zero oil rents. Cuba is not included in any of the regressions.

In cross-national regressions, Oil Rents is positively correlated with *Female Political Representation*, unless only high oil dependent countries are considered. In the first column of table 4, we can observe that when including the 19 countries, an increase in oil rents is significantly correlated with an increase in female political participation. However, when including the control variable Polity (column 2), and excluding Haiti, the results suggest no statistical significance between oil rents and the percentage of parliamentary seats held by women. It is worth mentioning that due to the lack of significance of the Polity variable, based on the literature review, the author originally expected to see a positive correlation between the democracy score of a country and the female political participation. The reason for excluding Haiti when running the Polity variable is because the country is still considered to be a “democratic transition”. As previously mentioned, Cuba was excluded from all the regressions as it is the only state from the sample to be considered a communist country, therefore, their Polity Score data is negative, making it the only country from the sample to have a negative polity score.

Column 3 shows the countries that are considered to have a high oil dependency. It is striking to find that when only taking these countries into consideration, the correlation between oil and political female representation is negative – yet, not significant enough to draw any conclusions. In regard to the countries considered to have a low oil dependency (column 4), there is a positive relationship between adolescent fertility rate and the dependent variable.

It is counterintuitive that *Income* is negatively correlated in all the regressions with the female political representation. Indicating that a decrease in income could potentially be linked to an increase in female political representation. Finally, the GII Index has a significantly negative relationship with the dependent variable – in all the regressions. It is once again worth highlighting that the closer the Index is to zero - the less inequality there is between men and women. In other words, a decrease in the GII Index is linked with an increase in female political participation. This is intuitive, as a better GII Index score implies a more equal society for women, which is reflected in the female representation in politics. These results are not consistent with H₂.

8 Discussion

After having controlled income, there is no statistically significant effect of oil rents on *female labor force participation*. While the second dependent variable, *female political participation*, has a significant positive link with oil rents, after including other control variables – the significance of this fades away.

Haber & Menaldo (2011) findings show similar results when exploring a potential resource curse on democracy in Latin America. After analyzing the extensive data, they drew the conclusion that the answer to whether or not oil wealth is a curse, or a blessing, depends on how one weighs the statistical significance of coefficients versus their magnitude. In this paper, an emphasis on statistical significance would incline more towards a potential blessing, as suggested by Dunning (2010), than towards a curse. However, if there is any impact of oil rents on female labor force participation and female political representation, its effect is minimal.

Previous literature suggests that oil-rich countries in Latin America have avoided many facets of the resource curse (Lederman and Maloney, 2007). Compared to other oil exporters, these countries' governments have been relatively democratic (Ross, 2015). Dunning (2008) explains that it is not about whether oil wealth is a curse, rather through which mechanisms the dependency on natural resources can harm or bolster democracy. Additionally, he suggests that this conditional influence of oil depends on the level of inequality of the region or country. Although he establishes a relationship between oil wealth and democracy, this reasoning could potentially explain why previous literature has found a negative relationship between oil wealth and female empowerment in the Middle East. However, when using Latin America as a region - the results differ completely. In other words, oil may be a curse for the Middle East (Ross, 2008), but a blessing or neither for Latin America – it is worth noting that the latter – Latin America - is considered the most unequal region in the world.

In response to Ross' findings, Kang (2009) provides a new argument for the possible negative correlation between oil wealth and female political representation - gender quotas. By applying the same data as Ross (2008), she shows that the institution of gender quotas offsets the effects of oil rents on women's political representation. In the case of the region of Latin America, only Guatemala and Venezuela are lacking laws that ensures a minimum percentage of women in the parliament (ACE, 2021). This potentially explains the incongruence between Latin America's results compared to the Middle East - as the percentage of countries that have implemented gender quotas in the latter region is

significantly lower than the former region. As Kang explains, the inclusion of quotas in models of political representation in cross-national studies creates a “fast track” to create more gender equal parliaments. Identifying the relationship of political institutions and natural resources facilitate the understanding of under which conditions natural resources wealth may generate gender effects (Kang, 2009). Amidst an oil boom, the absence of gender quotas may perpetuate gender inequality - as leaders could be more likely to ignore the demands of the female population (Kang, 2009, Ross, 2010). Kang’s results suggest, in her own words, that “oil patriarchy” is a tendency but not necessarily the destiny.

A noteworthy result is the positive relationship between the adolescent fertility rate and female labor force participation. This may sound counterintuitive, as one can expect that an early fertility rate will make it harder for women to enter the labor force. However, this result could be further explained by Kögel’s (2004) interpretation of the positive relation. The author explains that both female employment and fertility tend to move in the same direction because the presence of a third variable – involving social norms and socio-institutional background. This argument is aligned with the explanation for why there is a significant positive relationship between these two variables when using the most recent years (table 2), while in table 1, that only includes years until 2003, there is no such relationship. The more time passes and advances, the more rights women have earned, and parenthood has become more equal (Oshio, 2019). However, it is important to note that this argument applies to the *total fertility rate*, whereas in this paper the *adolescent fertility rate* was only used. Another possible explanation for the positive relationship could be the assumption that pregnant girls abandon school, resulting in the mother working, while the adolescent remains at home taking care of the household while preparing for the birth of the child (Fundación Surkuna, 2019). As the adolescent fertility rate was chosen as a control variable, there is not enough statistical significance to draw conclusions – however, this could be worth exploring in future research.

9 Concluding Thoughts and Limitations

After having used between and within estimators in order to analyze oil wealth’s impact on gender equality across Latin American countries – there is not sufficient evidence to draw a conclusion about whether or not the existence of such a resource is a blessing or a curse. Additionally, there is not a clear trend indicating that high oil reliant countries perform worse on the international gender equality index. For instance, Chile, Costa Rica and Uruguay are

leading nations on the GII table. These three countries are considered to be “low-oil dependent” – whereas the fourth country on the list, Argentina, is a high-oil dependent country. Moreover, when solely focusing on political female representation, Bolivia - high-oil dependent – performance the highest and is followed by Nicaragua - a low-oil dependent country.

This research paper used abortion rights as the underlying motivation behind exploring the variations between countries in the Latin American region. Argentina, Uruguay and Mexico proved the leading nations for reproductive rights to women. However, the GII index takes additional indicators into consideration - such as education, labor force, and political representation – resulting in the previously mentioned countries no longer performing the strongest in said index. This emphasizes the complexity of measuring gender equality – a country may outperform others in one of the indicators, but the same country can also underperform within other indicators. Therefore, it is highly important to be aware of this when implementing policies. As shown in the discussion section of this paper, simply having representative quotas may entirely change the percentage of female representation in the political arena of a country. This change can thereafter trigger other changes impacting female labor participation or vice versa - creating a chain of changes leading to a fairer society.

Originally, the idea for this research paper was to conduct an analysis of oil dependency’s effect on a national level – with Ecuador as the sole case study. However, due to complications in regard to accessing the data needed - the context changed to a regional level. Aside from the clear similarities of the selected countries, the author of this paper does still acknowledge that the heterogeneity of the countries still plays a role and that this could potentially be viewed as a limitation when comparing data across the nations. Analyzing on a national level, would have made it possible to explore the effects of natural resource wealth in a more detailed manner. In other words, by examining on a national level, the idea of treating women as a homogenous group is no longer a limitation, as it would have allowed for a more thorough investigation of the effects of oil wealth and aim to answer questions such as – does oil wealth specifically effect indigenous women more than mestiza¹¹ women? Is oil wealth a curse for women living in rural areas but a blessing for women living in larger cities? Simply put - *could oil wealth be a blessing for certain women but a curse for others?*

¹¹ A woman of racially mixed ancestry – e.g., mixed indigenous and European (Surkuna, 2021)

Along the lines of limitations to this paper, the access to consistent data from the chosen time period – 1970 to 2014 – was a significant obstacle that the author faced. The intention was to follow Ross’ (2008) paper on Oil, Islam, and Women, however, the manner of measuring oil wealth had to be adjusted as the access to data was restricted. In the end, rather than using Ross’ recommendation of applying *Oil Rents Per Capita* - a country’s total rents from oil and gas and divided by its midyear population - the author used the World Bank indicator *Oil Rents as percentage of GDP*. Although the latter is still a valid measurement of oil wealth, the author does not discard the possibility that the results would have been different if the measurement of oil would have been different. Additionally, the data for the female labor force indicator was also a limitation. The World Bank did not provide consistent data for the chosen Latin American countries, skipping a significant number of years – potentially resulting in biased results as the estimators involved a time series analysis. For this reason, the author made the decision to use Ross’ database for the years missing the data from the World Bank. Additionally, the data used made no distinction between work in the agricultural and the nonagricultural sector. When considering a future analysis, it would be interesting to make such a distinction to see how the results would differ thereof. Finally, Haber & Menaldo (2011) use a creative way of analyzing the “what if” scenario for a country by creating a synthetic country based on the characteristics of their neighbors. This analysis would also be interesting to implement in future research to potentially answer the following question: *how would country X be if it had/not had resource wealth?*

The original intention with this research paper was to explore potential answers to better understand the limited opportunities for girls and women in Latin American counties, however, it resulted in raising more questions regarding the potential factors that impact female empowerment. Based on the literature review, the author was inclined to establish the existence of a resource curse, however the analysis resulted in the opposite outcome. The phenomena of starting at one point and then, after analyzing the data, having to reject the hypothesis - only showcases the need to be more careful and detail-oriented when analyzing the results. From a personal perspective, the author might have been hopeful and naïve in the quest of finding an explanation for the injustices that women face every day in the selected region, and in the world. However, after writing this paper, the author reinforces the importance of approaching social research topics from a multidisciplinary perspective. An intersectional approach provides more insight regarding potential environmental effects and further provide more understanding to why these effects vary depending the selected group of

people. Perhaps oil is not a curse for women in Chile, but mining might still be for indigenous communities? In a globalized world, where information and economic tools are continuously more accessible, it is fundamental for social scientists to broaden the view by combining different research areas - environmental and gender studies should be transversal. The final goal for social scientists is to provide relevant information to enable policymakers, families, and society as a whole - who are required to act under high uncertainty - to make decisions. As Esther Duflo said - *“Awareness of our problems does not necessarily mean that they are solved. It may just mean that we are able to perfectly anticipate where we will fall”*.

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