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Can female empowerment drive human development?

An empirical study contrasting female empowerment, formal and informal institutions on human development, 1960-2018.

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Abstract

Several researchers argue that female empowerment is a powerful source for human development. Others argue that empowering all, through for example democracy, will have greater influence. Yet others argue that oil-wealth and Islam affect female empowerment and therefore also human development. These questions are examined directly in this paper. To do this, a multivariate empirical examination with data mainly from V-Dem is carried out. The analysis include data on 172 countries over a time period of 58 years. Results from the analysis show a significant and substantive effect of female empowerment on human development, even when controlling for other indicators that are thought to influence development, such as political institutions and the geographical region of the Middle East and North Africa. Further, results show a negative effect of both oil-wealth and Islam on female empowerment. However, results suggest that the effect of female empowerment alone is not enough to trump the conditional negative effect of oil-wealth and Islam. This suggests that female empowerment has a substantial and significant effect on human development.

Sammendrag

Mange hevder at myndiggjøring av kvinner har stor påvirkningskraft på menneskelig utvikling. Andre argumenterer for at mer helhetlig myndiggjøring, for eksempel ved demokrati, vil ha større påvirkningskraft. Det blir også argumentert for at oljerikdom og islam påvirker kvinnelig myndiggjøring og dermed også menneskelig utvikling. Disse spørsmålene er undersøkt i denne studien. Effekten av kvinnelig myndiggjøring på menneskelig utvikling blir testet ved bruk av paneldata hovedsakelig fra V-Dem fra 172 land og 58 år. Resultatene fra denne analysen viser en signifikant og tydelig effekt av kvinnelig myndiggjøring på menneskelig utvikling, selv når man kontrollerer for indikatorer som er forventet å påvirke utvikling, som demokrati og den geografiske regionen Midtøsten og Nord-Afrika. Videre viser resultatene en negativ effekt av både oljerikdom og islam på kvinnelig myndiggjøring. Dog indikerer resultatene at effekten av kvinnelig myndiggjøring alene ikke er nok for å trumfe den betingede negative effekten av oljerikdom og islam. Dette indikerer at kvinnelig myndiggjøring har en betydelig og signifikant påvirkning på menneskelig utvikling.

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Norunn Hornset

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Content

Tables

Models

1.0 Introduction

It is estimated that 6 million women are "missing" every year, illustrating that females might be suffering injustices that are fatal by being treated differently to males (Duflo, 2012; Klasen, 1994; Sen, 1992). Gender inequality is further evident in the global community when considering the fact that women currently hold only 27 percent of managerial positions, and that 104 countries carry out laws that prevent women from taking part in certain occupations. Moreover, two-thirds of the illiterate population across the world is made up of women (United Nations, n.d; World Bank, 2018). Also, women perform 66 percent of the world´s work but earn only 10 percent of the income (Véras, 2015, p. 110). Undoubtedly, there are global gender differences today that disadvantage women, and addressing such issues have an intrinsic moral value. To be equal and have identical rights and opportunities has a value in itself. Several researchers, like Nobel Prize Winner of Economic Science in 2019, Esther Duflo, believes that gender inequality has a crucial impact on society. She argues that women´s empowerment is a strong force for development (Duflo, 2012, p. 1076). This statement is supported by several scholars and is highlighted through statements and actions by powerful actors globally. For example, by it being one of the 17 sustainable development goals by the United Nations (United Nations, n.d; Klasen, 2017; Sundstrom, Paxton, Wang & Lindberg, 2017). Evidence from above shed light upon why we should focus on female empowerment to understand challenges in development around the world, suggesting that empowering women might also have instrumental value. Advancing the rights of women could accelerate development.

This thesis examines the question of female empowerment and human capital development directly and indirectly vis-a-vis the natural resource curse with which both female empowerment and human capital formation are interrelated. Researchers claim that human development is crucial for social and economic development in a society, and it is therefore meaningful to explore how human development is influenced by gender empowerment. Some researchers, like Duflo (2012) and Sundstrom et al (2017), claim that empowering women has an added value because it will lead to economic growth, social progress and development for society. This theory will be tested and measured against broad-based empowerment as measured by formal democracy. Scholars, such as Acemoglu and Robinson, believe that institutions are crucial for development (Acemoglu & Robinson, 2008a; 2013). How female empowerment affect human development compared with formal institutions is this paper´s

first point of attack. The second point of attack is how natural resources affect human development, as captured in the natural resource curse theory. This will help explain why some regions of the world, like the Middle East and North Africa (MENA) lags behind when it comes to gender equality and human development. This will be held up against other acknowledged explanations, such as the influence of religion on gender empowerment. The following is the paper´s main question: *Does female empowerment matter for predicting human development compared with formal institutions, and how does the question of female empowerment matter compared with questions about the natural resource curse and religion?*

To explore if there is an observable effect of female empowerment on human development both globally and specifically in the Middle East, a quantitative study with data mainly from V-Dem is performed. The measures used to capture human development are equality of access to education, equality of access to quality health services and the objective indicator of the under-five mortality rate. Also, the analysis will hold up women´s empowerment against broad-based empowerment as measured by formal democracy. To understand the true impact of female empowerment, it should be controlled for other factors that are thought to influence development, such as inclusive political institutions. Further, we look to the Middle East to explore why some regions experience slower development of female empowerment. If female empowerment conditions the effects of resource abundance in a positive direction, then one might in fact prove that female empowerment matters causally, given strong findings in the literature suggesting that oil in particular hinder the social development of women. Using the latest available data, the results show a strong, positive and significant effect of female empowerment on human development, over and above the effect of democracy. Further, being a Middle Eastern or North African country has a negative effect on female empowerment, and this effect is strengthened by being a resource abundant country. However, results indicate that female empowerment alone is not enough to overrule the conditional effects of resource abundance and Islam.

This paper will begin with a review of relevant theory. Next, the method of the paper and overview of data will be presented, followed by a multivariate empirical examination of the hypotheses. Finally, the results will be discussed followed by a brief conclusion.

2.0 Theory

2.1 Female empowerment

Defining female empowerment is challenging, some even claim it is impossible to do so (Kabeer, 1999, p. 437). One reason for this difficulty is that the literature uses the terminology in various ways in different contexts (Malhotra, Schuler & Boender, 2002, p. 4). This paper will make use of the definition of female empowerment given by the authors of the V-Dem dataset (Sundstrom, et al., 2017, p. 4). Female empowerment will be defined as a process of increasing capacity for women, which will give women greater agency, choice and participation in societal decision-making (Sundstrom, et al., 2017, p. 4). The following section will explore what is meant by agency, choice and participation.

Most scholars agree that agency is the essence of empowerment. Agency in this context means that women have the ability to make strategic choices and control resources and decisions that will influence their life in a significant way (Malhotra & Schuler, 2005, p. 72-73). Another element to agency includes that individuals should be able to create goals and act upon those (Kabeer, 1999, p. 438). It is also highlighted that women need to be active participators in this process of change. In other words, women need to be part of the process from being unempowered to empowered (Sundstrom, et al., 2017, p. 6-7).

Greater choice is emphasized as another element of empowerment. Choice is related to power because power gives the capacity to make choices. Being unempowered can be understood as an actor who is denied a choice. To be empowered indicates that an actor was not previously able to make choices, but was given such an opportunity (Kabeer, 1999, p. 437). Some choices are of greater importance than others, for example choices of whom you marry and having children. Having power over such choices will affect women in terms of freedom of movement, justice and property. Women should have the power to make meaningful and important choices that will affect their lives (Sundstrom, 2017, p. 4-6).

Finally, being able to participate in societal decision-making is crucial for female empowerment. An example of this is political participation where women should be active participants in the decision-making (Sundstrom, et al., 2017, p. 7-8). This is emphasized as necessary if female interests shall be represented and considered when political decisions are being made.

Several researchers stress the importance of empowerment as a process (Sundstrom, et al., 2017, p. 8; Malhotra et al., 2002, p. 4-5; Kabeer, 1999, p. 437). It is emphasized that the transition from being unempowered to empowered has to happen from below and that this process will take time. It is also emphasized that women need to be active participants in this process. Finally, the time aspect is highlighted as an important factor when studying empowerment because changes tend to be slow (Sundstrom et al., 2017, p. 5).

2.1.1 The instrumental value of female empowerment

Female empowerment has been acknowledged as a goal for international development for a long period of time (Malhotra & Schuler, 2005, p. 71). Empowerment of women is set aside from other forms of empowerment because women are a cross-cutting category of individuals which overlap with other smaller groups that may be disempowered (Malhotra et al., 2002, p. 5). Empowerment of women is prioritized over empowering men, even though both genders meet inequality. The focus on female empowerment is justified by women being, on average, less advantaged and more discriminated against (Véras, 2015, p. 110-111).

Empowerment can be understood as a mean in itself and a tool to something bigger. This can be explored by separating the intrinsic and instrumental value of female empowerment. When focusing on the intrinsic value of female empowerment, one looks at equality as a goal in itself. Having equal rights, be able to live without fear, feeling worthy and be respected for who you are has a value in itself. One can also choose to look at empowerment of women as a mean to specific outcomes, such as social and economic development (Naryan, 2005, p. 15; Sundstrom, et al., 2017, p. 3; Duflo, 2012, p. 1051; Klasen, 2017). Scholars have seen a positive correlation between female empowerment and development, which highlights the value of female empowerment (Sundstrom, et al., 2017, p. 3; Duflo, 2012, p. 1064).

Empowerment as an instrumental value is the focus of several studies where a link between strengthening women´s role in society and greater social outcomes is observed (Bratton & Ray, 2002, p. 435; Chattopadhyay & Duflo, 2004, p. 1440; Swiss, Fallon & Burgos, 2012, p 551; Sundstrom et al., 2017, p. 3). These studies observe a difference in priorities between women and men. Women tend to prioritize public goods such as children's health, clean water and school attainment which leads to increased survival rates and a more educated population. Others believe that the returns of empowering women are more likely to benefit society than

investment in men. They argue that women´s increased knowledge and resources will be shared with members of the family and their community. Women are also more likely to work for and consume goods from their local community, which will benefit society (Véras, 2015, p. 117).

International organizations such as the United Nations and the World Bank also focus on the instrumental value of female empowerment. They argue that empowering women through education, increased policy-making possibilities and increased rights will be the most effective mean for increased development. It can even be looked at as a weapon against poverty. Empowering women will give significant social returns through reduction in fertility, increased child survival and increasing capacities in the population. This will also lead to considerable inter-generational payoffs (World Bank, 2001, p. 22-23; Cornwall & Edwards, 2010, p. 1; United Nations, 2005). Further, James Wolfensohn (2005, p. 23-28; Duflo, 2012, p. 1064) supports that there is an instrumental value of female empowerment because education of women leads to higher education attainment for their children, lower mortality rates and greater environmental management.

Several studies focus on the effect of increased political power for women. Women´s different priorities become visible in their political activity, because women are directly responsible for promoting policies that are of female interest (Klasen, 2017; Chattopadhyay & Duflo, 2004; Swiss, Fallon & Burgos, 2012). Women as elected leaders invest more in public goods, and this affects sectors such as health and education. There is observed an increase in investment for child-care which consequently leads to lower child mortality (Bratton & Ray, 2002). Further, higher female representation is associated with a decrease in poverty, specific health outcomes such as immunization, higher female secondary enrollment and lower levels of corruption (Klasen, 2017; Swiss, Fallon & Burgos, 2012, p. 530-540).

Women´s opportunities in the labor market may affect the overall economic performance in a country. When occupational sectors are closed to women, the pool of talent to employ from decreases. Consequently, this will reduce the average ability of the workers (Klasen, 2017, p. 11). Even though policies for equality in employment has positive effects on society, one observes a bigger effect of equality in other parts of society, especially education. However, governments tend to apply policies for female employment, not for female education.

When women are empowered through access to education, household decisions will be based on knowledge. This will affect the distribution of resources in the family and matters of education and health tend to be prioritized. These effects are also observed when women get political power. This will, in turn, lead to better resistance towards health challenges, increased attainment in schools and lower mortality rates. Subsequently, this shows that female empowerment has an impact on human development (Duflo, 2012, p. 1076).

Prior studies on female empowerment have received critique for using inadequate measures that makes for biased results, creating uncertainty about their conclusions (Sundstrom, et al., 2017). One element that has been questioned is the number of years included in the datasets. Scholar agree that empowerment is a process that happens over time, and if the dataset does not cover enough years, this will affect the results. Also, some measures for gender equality has been accused of not having sufficient data from developing countries, thus leading to biased results (Sundstrom, et al., 2017, p. 324). Further, it is emphasized that a sufficient measure for female empowerment should include both absolute and relative measures. Absolute measures will be useful in situations where both women and men are experiencing inequality to make sure that this does not come across as increased rights for women. Other elements are more useful to measure relatively, such as political representation (Sundstrom, et al., 2017, p. 323-325). The argument from above emphasizes the need for further research on female empowerment with updated and improved data to increase the understanding of the effects of female empowerment. This paper will make use of V-Dem´s measure for female empowerment which strives to answer such concerns (Sundstrom, et al., 2017, p. 325).

2.2 Human Development

Human development can be understood as an increase in welfare and enlarging people's choices (Gerring, Thacker & Alfaro, 2012a, p. 4; Anand & Ravallion, 1993, p. 133; UNDP, 1990, p. 10). Several social and physical conditions affect people's quality of life, and these conditions are often connected to welfare functions such as basic education and health care (Sen, 1998, p. 1). When studying human development, one is concerned with the processes that lead to a long life with decent living standards, education and good health. Elements such as political freedom and human rights are also accentuated (UNDP, 1990, p. 10). Together, these broad-based indicators can lead to increased development and growth.

To understand human development, researchers often focus on indicators such as general health standards, level of education, liberties and life expectancy (Anand & Ravallion, 1993, p. 135). Studies are often most concerned with the less advantaged citizens and how these groups are affected by welfare indicators (Gerringer, et al., 2012a, p. 4). The human development approach is different from comparable approaches because of its focus on the current state of people's life. The main focus is on people´s lives, not on possessions or objects detached to people´s life (Anand & Ravallion, 1993, p. 136).

It is meaningful to explore human development for several reasons. Above all, human development is an end in itself, which makes it a matter of interest. Secondly, human development leads to productivity through a healthy and educated labor force. These workers will be skilled and therefore a productive resource for society. Further, human development tends to decrease human reproductivity. This is regarded as favorable for society because each family can invest more in their children. Finally, human development seems to benefit the physical environment. Developing countries tend to affect the environment negatively through for example deforestation and soil erosion because of their dependency on the land. Also, under-privileged people tend to be hit the hardest from environmental catastrophes (Streeten, 1994, p. 233-234).

2.2.1 Measuring human development

One well-known measure for human development is the human development index. This index was first introduced by the Human Development Report in 1990 and aimed to expand the measure of development by including a broader set of indicators (Sagar & Najam, 1998, p. 249-250). The index includes indicators for knowledge, health and standard of living. After the introduction of the index, it has been much used and discussed. This paper will include the same three indicators for development; knowledge, health and standard of living, but these will be represented by other variables. Education equality, access to health services and under-five mortality rate will serve as indicators for human development in this paper. The theoretical foundation for this will be explained below.

One of the more common variables for measuring human development is Gross Domestic Product per capita (GDP). This is also one of the indicators in the human development index (Sagar & Najam, 1998, p. 251). Gerringer et al (2012b) explain thoroughly why GDP is an inadequate measure for human development. GDP per capita measures the mean income in a country, which does not give a clear image of how the poorest citizens in a country live. They

tend to participate in more informal businesses where income levels rarely get recorded. Consequently, Gerringer et al (2012) argues that GDP per capita will often give biased results, and we will not receive information about the social classes we are most interested in. Gerringer et al (2012a, p. 4-5) propose that mortality rates would be a better measure for human development because it is an absolute value, rather than a relative one. Under-five mortality rate (U5MR) is the number of deaths before the age of five per 1000 live births (World Bank, 2019a). Several researchers argue that U5MR is a favorable variable for measuring human development because living longer is a shared aspiration, valued because it is necessary to reach goals and carry out plans. In other words, living has both an intrinsic and an instrumental value (Sen, 1998). Mortality rates are emphasized as a good measure for human development because of its accessibility, accuracy, comparability and sensitivity to change (Ranis & Stewart, 2000, p. 56-57).

Health is the foundation for an individual's survival. It gives people a chance to educate themselves, participate in the workforce and live meaningful lives. Having a healthy labor force is crucial for productivity, development and growth in society (Gilson, Doherty, Loewenson & Francis, 2007, p. 8). Human capital formation through for example health services are vital for growth. Human capital indicates the capabilities people have, including education, health and different types of skills (Pillay, 2006, p. 63). It is observed that human capital works as a social determiner on both micro- and macro level.

Studies show that poor health- and education systems are associated with slower growth and development (Pillay, 2006). It is also known that weaker groups in society are more affected by differences in for example health outcomes. There are mainly three reasons why these groups are more receptive to the burden of disease. They tend to lack basic facilities such as food and clean water, they rarely seek medical care and they are not in a financial situation to do so (WHO, 2002, p. 3). Several forms of inequality are recognized as determiners for health differences, but most important is access, affordability and availability of health services (Baru, Acharya, Acharya, Kumar & Naharaj, 2010, p. 50). Based on this, it is suggested that increased investment in health services where the facilities are located closer to communities will increase health equality. These facilities should also include health promotion and health-related information (Gilson, et al., 2007, p. 10).

Education is the foundation for human capital and a crucial element for development in a country. Human capital affects human development in form of economic growth, increased

social mobility and increased wages for people (Mbelle & Katabaro, 2003, p. 1-2; Schultz, 2002, p. 219) Education is emphasized because it is a mean to human capital acquisition. Examples of this are found in higher-achieving countries (Pillay, 2006, p. 66). Investments in education will benefit individuals and society as a whole (Mbelle & Katabaro, 2003, p. 1). Research show that gender equality, especially in education, is necessary for human development (Pillay, 2006, p. 64).

As seen above, investment in education for women will increase human capital and human development. There is both an intrinsic and instrumental value of this since empowering women will lead to greater involvement in society and increase knowledge in families. This will further benefit society because an educated population will make sustainable decisions which may lead to increased economic growth and development. It is also argued that women´s priorities are different to men´s, which suggests that female participation in politics will have different outcomes, perhaps with greater attention to human capital development.

2.2.2 Human capital theory

The foundation of human capital theory is that the population is capital for development. This capital is achieved and developed through education. Supporters of human capital theory argue that education helps develop cognitive skills which will increase productivity in the working force. People´s capacities are resources in production of goods and services which may lead to a more effective and productive labor force. Education is fundamental for this productivity (Nafukho, Hairston & Brooks, 2004, p. 545-546; Seligson & Passé-Smith, 2014, p. 366; Olaniyan & Okemakinde, 2008, p. 479). Health is also a necessary element in human capital theory. For people to be a capital for development, they need a certain level of health. Without an educated and healthy population, there will be no human capital to develop a country (Gilson, et al., 2007, p. 8).

Several studies emphasize the role of female education for development of human capital. Primary education for girls is important, even though chances are fewer girls will become formal workers compared to boys (Seligson & Passé-Smith, 2014, p. 366). The effect of educating girls can for example be seen in the families through lower fertility rates. This is beneficial for society because it is possible to increase public resources per child in services such as education and health which again can lead to increased quality of public services (Seligson & Passé-Smith, 2014, p. 366).

Human capital theory has received some critique. Questions are raised about whether it is possible to detect a direct link between education and improvement in income. Further, it is argued that the theory alone cannot explain the growing gap between people´s education levels and suitable jobs. Even so, economists agree that human capital is important for social and economic development. This support the human capital theory´s foundation, that investment in human capital leads to development (Olaniyan & Okemakinde, 2008, p. 481-482).

2.2.3 The capability approach

Supporters of the capability approach emphasize the need for public services to increase human development. Capabilities represent what a person can achieve or be, and can be helpful for understanding social phenomenons (Sen, 2005, p. 153). Capabilities can for example be public services such as education, access to health services, clean water and sanitation. These capabilities will lead to beneficial social outcomes in society (Anand & Ravallion, 1993, p. 133-136). Furthermore, by focusing on capabilities, the attention will be shifted away from means, such as income or primary goods. This is useful because two individuals can have different opportunities even when given the same means. Reasons for this might be physical or mental health, variation in non-personal resources or environmental diversity (Sen, 2005, p. 153-154).

Supporters of the capability approach believe that financial resources should be distributed in the population so that more people have access to public services which will improve their life. A fair distribution of finances and access to services will benefit society in terms of increased human capital and human development (Anand & Ravallion, 1993, p. 142). Supporters of this approach argue that the goal of development is to enlarge people's choices and expand the options of what people can do and be in their lives. The most basic capabilities for human development are to be knowledgeable, live long and healthy lives, have a decent standard of living and be able to participate in a community (Anand & Ravallion, 1993, p. 147; UNDP, 2001, p. 9).

Human development means an increase in welfare and choices for people. How human development evolves is captured by human capital theory and the capability approach. Human capital theory focuses on how people are capital for development, and how increasing people's capital through increased education and access to health services will lead to social

and economic development. Further, supporters of the capability approach argue that increased access to public services will help develop society. In both theories, education- and health services are fundamental mechanisms for achieving social and economic development. Based on the theories presented above, human development will in this paper be measured by the three indicators education equality, access to health services and under-five mortality rates.

2.3 Institutions

One could argue that empowerment of all social and gender groups has the most influence on development, especially in terms of the ability to have actual political influence through competitive democratic processes. Acemoglu and Robinson (2008a, p. 1; 2006, p. 1) argue that economic and political institutions are key determiners for a country´s economic and social outcomes. They define institutions as "the rules of the game in society or, more formally, the humanly devised constraints that shape human interaction" (Acemoglu & Robinson, 2008a, p. 2). Consequently, institutions will form people's incentives in social, political and economic matters. This definition is based on an assumption that people can control political outcomes, within certain limits. Further, one assumes that incentive is driving development.

Global inequality is deriving from differences in economic and political institutions, according to Acemoglu and Robinson (2008a, p. 1). The foundation for a society's development is economic institutions. They affect distribution, efficiency, growth and incentive (Acemoglu, Johnson & Robinson, 2004, p. 3). Economic institutions will also influence human capital, physical capital and technological development which are crucial elements for increasing development (Acemoglu & Robinson, 2008a, p. 1). How economic institutions are formed will affect how key actors in society invest in physical and human capital, and how production is organized (Acemoglu, Johnson & Robinson, 2004, p. 3).

In Acemoglu and Robinson´s view, economic institutions are closely related to political institutions. How economic institutions are formed is a result of a collective choice, and different groups will have conflicting interests. Which groups that get to determine the rules of economic institutions are determined by political institutions. Inclusive political institutions will allow several groups in society to be part of the decision-making through pluralistic

institutions and centralized power (Acemoglu & Robinson, 2006, p. 325). Extractive institutions will concentrate power to a few individuals or a small group of people which will extract resources from others. Such institutions are often characterized by elements of de facto power, such as force, bribery or lobbying (Acemoglu & Robinson, 2006, p. 326). States with extractive political institutions will have a small group of people determining the rules of the game in the economic institutions. According to Acemoglu and Robinson, this will hinder development.

Acemoglu and Robinson argue that how economic and political institutions are formed is crucial for a country´s development. Countries with inclusive institutions will experience growth and development, while extractive institutions will affect growth and development negatively (Acemoglu & Robinson, 2013, p. 43-44). This paper will use democracy and level of state corruption to measure the state of institutions. These are estimates for robustness and stability in a country, and are known to have great influence on political, economic and social outcomes in a country (Acemoglu & Robinson, 2008b; Akcay, 2006).

2.4 The resource curse

The thesis´ second point of attack is to examine an exogenous source of human development, which is how natural resources, such as oil, affect human development. This is captured by the natural resource curse theory. The resource curse might help us explain why some regions, like for example the Middle East, is lagging behind when it comes to female empowerment and human development. This paper will add to this debate by exploring how such regions affect gender equality and in turn human development.

Supporters of the resource curse theory argue that countries that are rich in natural resources tend to perform badly when it comes to growth and development (Sachs & Warner, 2001, p. 827-828). There is no known single reason for this, but several explanations for the resource curse relate to the lack of activity in other sectors such as in trade and manufacturing or the export sector. This will slow down growth and competition in other sectors. Others argue that the natural resource sector gets monopoly on entrepreneurs which slows down the innovation and activity in the rest of the country. Yet others believe that when a country is resource abundant, governments are more likely to go into rent-seeking and possible corruption. These actions will slow down growth, innovation and activity (Sachs & Warner, 2001, p. 834-835).

The resource curse is associated with decreasing human development. Research show that increased oil-rent is related to lower spending on public health and education. This affect development because health care and education are crucial for human capital development and sustainable economic growth (Cockx & Francken, 2014, p. 145; Cockx & Francken, 2016, p. 402). Further, scholars have found significant and robust results which indicate that countries with resource abundance experience slower economic growth (Sachs & Warner, 1995, p. 21-22). Meaning, there are evidence which indicate that the resource curse affects human development negatively.

Ross (2008) argues that the resource curse is especially harmful for the development of gender equality. He argues that when a country´s oil sector increases, the number of women in the labor force will be reduced. When women are left out of the working force, they will have less political influence. As a result, women´s activities outside their home is limited, and they will be less likely to share information with other women. Without information exchange, there will not be any cooperation towards collective issues. Consequently, they are not as likely to mobilize politically and lobby for their rights. This will affect social structures, economic growth and public institutions (Ross, 2008, p. 107). Further, studies show that when women make up a small part of the working force, fertility rates increase, fewer girls get an education, women marry younger and they are less influential both in the family and society.

According to Ross and the resource curse, when the oil sector is a significant part of a country´s income, it will lead to higher rent-seeking and less use of female workers. In turn, women will be less active in society and consequently achieve less power in society and the family (Ross, 2008, p. 107).

2.5 The effect of Islam on female empowerment

Much is written about the connection between human development, gender equality and Islam. It is a known fact that fewer women work outside the home and there are fewer female representatives in governments in the Middle East and North Africa (MENA) than any other region of the world (Ross, 2008, p. 107). Status for women varies between countries but compared with countries globally women in the MENA region experience less equality than in any other regions (Littrell & Bertsch, 2013, p. 251). In the MENA region, women

experience discrimination that keeps them from reaching their potential and keep them subordinate to men. Women also lack opportunities and resources to take part in high-skilled professions. This affect individuals, women´s role in the family as well as society and the national economy (Littrell & Bertsch, 2013, p. 251).

Norris and Ingelhart (2001) argue that religion is the cause for these matters, not the resource curse as Ross (2008) argues. Norris and Ingelhart argue that institutions and formal structures are not enough to give a complete analysis of the women´s rights issue in the MENA region, culture has to be taken into consideration as well. They believe that different cultures bring with them different attitudes toward women. This is supported by Klasen (2017) who argues that informal institutions, such as culture and religion, have a powerful effect on social and economic outcomes for women. Informal institutions affect the private sphere and are therefore easily reproduced and difficult to change. Especially religion seems to have great impact on the development of gender equality. Religion has traditionally functioned as an important determiner of social norms and moral values, which also affect gender equality. Some religious organizations, such as Islamic fundamental leaders and the Catholic Church, are strong carriers of traditional norms and values. They want to keep women´s role in society separate from men (Norris & Ingelhart, 2003, p. 50). Research show that religious values and norms are determiners for reinforcement of traditional norms and gender patterns. Further research show that this is not likely to go away with newer generations, rather the opposite. This trend is especially clear in countries with a large Muslim population, where values seem to remain unchanged from older to newer generations (Norris & Ingelhart, 2003, p. 68).

Attitudes derived from traditional norms affect women´s willingness and opportunity to be politically active. Norris and Ingelhart (2001, p. 131) argue that culture appears to be an important reason why nations with strict Islamic traditions often rank at the bottom when exploring political equality. Previous research show that traditional attitudes are significant barriers to election of women and have significant influence on the proposition of women in parliament (Norris & Ingelhart, 2001, p. 132). When women are held out of political decisions, policies that benefit women tend to be ignored. This is reinforced by religious authorities who often limit opportunities for women outside their home for example in education and the labor market (Norris & Ingelhart, 2003, p. 71).

Norris and Ingelhart believe that religion and culture reinforce values and norms that impact female empowerment negatively. Different religions bring with them different attitudes towards women, but especially the Islamic religious heritage seems to work as a powerful barrier against gender equality (Norris & Ingelhart, 2003, p. 71). According to Norris and Ingelhart, these norms and values have greater impact on equality than state institutions.

2.6 Hypotheses

Based on the theory of female empowerment as an instrumental value, the first hypothesis is: *H1 – There is an instrumental value of female empowerment on human development.* This theory is also the theoretical grounding for *H2 – Agency has greater impact on human development than choice and participation.* Further, Acemoglu and Robinson (2008a) claim that institutions determine development. This theory will be tested in the third hypothesis: *H3 – Institutions have a bigger effect on human development than female empowerment.* Next, the resource curse theory argues that resource abundant countries have a negative effect on human development. This will be explored in the fourth hypothesis: *H4 - Resource abundant countries, that are largely majority-Muslim countries in the geographical region of MENA, have a negative impact on human development.* Further, Norris and Ingelhart claim that low levels of female empowerment can be explained by cultural and religious differences, while Ross argues that this is due to the resource curse, especially affected by a country´s level of oil-rent. The fifth hypothesis is thus *H5 – Oil-rents per GDP has a greater negative influence on female empowerment than religion does.* Finally, to conclude the assessment of the effect of female empowerment, we want to explore the effect of female empowerment on human development when conditioned by oil wealth and Islam. *H6 - Female empowerment has a positive effect on human development, conditional on oil wealth and Islam´s majorities.*

3.0 Method

3.1 Data

The hypotheses will be tested with a cross-sectional, time-series (TSCS) dataset. This means that each unit (country) will have multiple observations over time. The key variables are taken from the V-Dem dataset´s newest edition (V-Dem, 2019c). The data are annual and cover the time period 1960-2018. In addition to V-Dem, variables from the World Bank´s Development Indicators (WDI) dataset, Uppsala Conflict Data Program (UCDP) and Religious Characteristics of State Data Project (RCSDP) are used. All of the variables used are publicly available and easily accessible. The analysis is performed in Stata.

3.2 Variable Description

3.2.1 Dependent variables

The dependent variables seek to measure human capital as people´s capabilities as well as government priorities. The first two indicators for human development, health services and education equality, are both measured as equality of access. These variables reflect government priorities and indirectly people´s capabilities in terms of receiving access to quality health and education services. Both these variables are subjective measures derived from expert opinion. The variables are based on country experts reports from a given country but subject to rigorous analysis for ascertaining reliability. The third indicator for human development, under-five mortality rates, is an objective measure. This variable can be thought of as a stock of capital because the mortality rate should capture the willingness and ability of a society to prevent the death of children.

The variable for education equality (v2peedueq) is taken from the V-Dem Dataset (V-Dem, 2019c). Education equality measures people of the age 6 – 16 which get access to high-quality education. Additionally, the variable will give an indicator of who gets prioritized in a given country. The question asked is: *To what extent is high-quality basic education guaranteed to all, sufficient to enable them to exercise their basic rights as adult citizens?* The data was recorded on an ordinal scale from 0 – 4 where 0 represents extremely unequal and 4 represents equal access to good quality education. The variable was then transferred to

interval scale by using the measurement model, making the variable more suitable for statistical analysis across time and place (V-Dem, 2019a, p. 192).

The variable for equal access to health (v2pehealth) is also taken from the V-Dem dataset. The question asked is: *To what extent is high-quality basic healthcare guaranteed to all, sufficient to enable them to exercise their political rights as adult citizens?* This variable is also measured on a scale from 0 – 4 where 0 represents extremely unequal and 4 represents equality for all. Further, the variable is transferred from ordinal to interval scale by the measurement model (V-Dem, 2019a, p. 193).

The variable for under-five mortality rates, more objectively measured, is taken from the World Bank´s WDI dataset. Under-five mortality rate measures the probability that a newborn will die before reaching the age of five per 1000 live births. The data is developed by the UN Inter-agency Group for child mortality estimation (World Bank, 2019a).

3.2.2 Independent variables

The main independent variable, female empowerment (v2x_gender), is taken from the V-Dem dataset. The variable is coded based on the question: *How politically empowered are women?* As a clarification to the question, it is referred to V-Dem´s definition of female empowerment, as referred to in the theory section of this paper (V-Dem, 2019a, p. 268). The variable is measured on a scale from 0 – 1 where 0 represents low values of female empowerment and 1 represents the highest. It is important to note that access to education and health is not directly considered in V-Dem´s variable for female empowerment. This variable is constructed by several indicators for female empowerment, where three of them exist as independent variables in the dataset. These three variables will be used independently in table 3. The first of the three variables is women civil liberties index (v2x_gencl). The variable represents women´s civil liberties such as freedom of movement, labor and right to private property (V-Dem, 2019a, p. 268). Secondly, women civil society participation index (v2x_gencs) measures whether women can participate in discussions and organizations, and if they are represented in journalism (V-Dem, 2019a, p. 268). Finally, women political participation index (v2x_genpp) measures female representation in political institutions and overall distribution of power (V-Dem, 2019a, p. 269).

This paper also seeks to compare the relative effect of female empowerment with democracy. Electoral democracy measures whether people elect their own government in free and fair elections, where people´s opinions are not formed by government violence or other means (Coppedge et al. 2011, p. 254). Some researchers have observed a connection between level of democracy and human development. They argue that public participation in government empowers people, even the poor ones. Giving people the right to participate makes the government more accountable to the citizens´ interests (Gerringer, 2012a, p. 2). The variable for electoral democracy (v2x_polyarchy) is taken from the V-Dem dataset, and is represented with a dummy-variable where 0 represents low values of democracy and 1 represents high levels of democracy (V-Dem, 2019a, p. 39).

In addition to electoral democracy, a variable for government corruption is included. Corruption is known to be an indicator of weak institutions, which affects society negatively. Known consequences from corruption are a reduction in both economic growth and expenditures for health and education. Research also connect corruption to higher inequality and increased child mortality rates (Akcay, 2006, p. 29). The variable for corruption (v2x_corr), is taken from the V-Dem dataset. The variable measures to which degree the legislative, judicial, executive and public sector branches of government experience corruption. Corruption is measured on a scale from 0 – 4 where 0 represents state corruption as frequent while 4 represents that it happens seldom. The scale is transferred to interval level by the measurement model (V-Dem, 2019a, p. 266). In this paper, corruption will serve as a proxy for extractive political institutions.

Also, this paper explores a more exogenous source of human development. Therefore, a variable for oil-rent is included. The resource curse if often applied to countries that are rich in natural resources, meaning that they tend to perform badly when it comes to social and economic development. Much research connects countries which are oil abundant with slower development (Sachs & Warner, 2001; Ross, 2008). The variable for oil-rent is taken from the WDI dataset. The World Bank defines oil-rent as "the difference between the value of crude oil production at world prices and total costs of production" (World Bank, 2019d). The variable for oil-rent is measured in percent of GDP.

The effect of Islam is included and held up against other indicators that are thought to influence female empowerment and human development. Countries with a high Muslim

population are associated with lower gender equality. In practice, this often means fewer women in the working force and government positions, fewer opportunities for women in education and personal development and higher fertility rates (Ross, 2008; Littrell & Bertsch, 2013). The variable for Muslim population is taken from Religious Characteristics of States Data Project and measures percentage of Muslims in each state (Brown & James, 2019). Muslim population is time invariant, which means there is no reason for exploring the within effects. Therefore, all models including the variable for Muslim population will be run with time-fixed effects only.

3.2.3 Control variables

Income per capita

The level of economic development is associated with human development through lower fertility rates, increased political stability and increased productivity (Goldstein, 1985). Further, it may affect human development through household activities such as increased investments in education for children, clean water and nutrition. Studies show that when women get to decide how to distribute financial resources, they tend to prioritize goods that lead to human development, such as education for children (Ranis & Stewart, 2000, p. 198). Income is represented in the analysis with the variable GDP per capita. This variable is taken from the WDI dataset (World Bank, 2019b).

Population

In the last century, we have witnessed an increase in social and economic development and a decline in human fertility level (Myrskyla, Kohler & Billari, 2009, p. 1). Several studies show a connection between low fertility rates and economic and social development (Myrskyla et al., 2009, p. 1-2). The population variable is taken from the WDI dataset (World Bank, 2019c).

Conflict

Violence is, by some, rated as the most important challenge to development in the world today (Justino, 2011, p. 5). War leads to long-term consequences for example through a decrease in the economy, disrupt of schooling and harm of private property. These challenges tend to hit the poorest groups hardest (Justino, 2011, p. 5; Chamarbagwala & Moran, 2011, p. 41). The variable for conflict is taken from the Uppsala Conflict Data Program (UCDP). Here, conflict is defined as an armed conflict between state and rebel organizations where at least

25 battle-related deaths have occurred in a single year (Gleditisch, Wallensteen, Eriksson, Sollenberg & Strand, 2002, p. 619). The variable did originally measure three levels of conflict but is transformed into a dummy-variable where 1 represents an ongoing conflict and 0 represents no ongoing conflicts (UCDP, 2019, p. 6). Along with the conflict variable, a variable for number of peace years is included. This matters because number of years since the last conflict will affect a country´s current state. The variable for peace years is created from the conflict variable from UCDP (UCDP, 2019, p. 6).

Table 1. Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Education Equality	9591	0.286	1.502	-3.102	3.634
Access to health services	9591	0.328	1.522	-3.271	3.689
Under 5 mortality rates	10097	76.635	77.379	1.7	418.4
Female Empowerment	9392	0.606	0.235	0.055	0.975
Women´s civil society participation	9834	0.567	0.255	0.014	0.975
Women´s political participation	9577	0.658	0.282	0.063	1
Women´s civil liberties	9834	0.589	0.278	0.001	0.985
Electoral democracy	9776	0.419	0.287	0.008	0.948
Government corruption	9505	0.496	0.292	0.006	0.976
Oil-rent % of GDP	7578	3.881	10.146	0	88.866
Muslim population	11924	21.609	34.410	0	99.848
Income per capita	9243	11740.32	18508.81	132.202	193745.6
Population size	12695	2.42e+07	1.01e+08	3893	1.39e+09
Civil war	9358	0.152	0.359	0	1
Peace years	9358	17.142	16.193	0	57

3.3 Method description

The data used in this study is a time-series cross-sectional (TSCS) dataset. The data consist of observation of the same units (countries) at several time points (1960-2018). When using TSCS data, one will have a big pool of observations that gives robust and precise estimates. This allows us to explore changes over time (Mehmetoglu & Jakobsen, 2017, p. 252).

A challenge by using TSCS data is the possibility of spurious correlation or omitted variable bias. Meaning, the risk of influence from external effects and individual characteristics on the results. A solution to this challenge is the use of fixed effects. To explore whether this is necessary, a Hausman test is run for the basic model of the paper. The Hausman test explores if the error-term is correlated with one or several independent variables, and indicates whether or not fixed effects should be included. Results from the Hausman test indicate that random effects are not adequate for this analysis and we should make use of fixed effects[1]. Therefore, I will make use of two-way fixed effects for all models in this paper, except for model 6 and 7, where only time-fixed effects will be used. Two-way fixed effects mean that all variables are fixed in time and space. When variables are fixed in time and space, a dummy variable for each year and country will be added, making it possible to explore changes over time and between countries. This will remove the problem of spuriousness between the variables and we will find a robust relationship between the dependent and independent variables that might generally be interpreted as casual (Mehmetoglu & Jakobsen, 2017, p. 241-250; Wilson & Butler, 2007, p. 104).

The use of fixed effects also comes with some challenges. One being that variables with small changes over time often will have high standard errors because they correlate with the fixed effects, which may lower the explanatory power of the variable. In other words, taking away an effect that is there. However, it would be more concerning if using fixed effects led to accepting results that are not true, and the use of two-way fixed effects is therefore considered both necessary and adequate in this analysis (Wilson & Butler, 2007, p. 105).

The presence of autocorrelation is a common challenge when using time-series data. Typically, the error term will be correlated over time leading to biased standard errors. This

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[1] Result from Hausman test: chi2(6)=295,15 – Prob>chi2=0,0001

often leads to standard errors being too small, and false-positive findings. Correlated data over time increase the change of disclaiming a correct H0 (Mehmetoglu & Jakobsen, 2017, p. 231). To control for autocorrelation a Woolridge test is run. The results show that the null hypothesis "no autocorrelation" could not be rejected[2]. To compensate for this, regressions with Newey-West standard errors will be used. Newey-West standard errors are robust to first-order serial correlation and heteroscedasticity (Gerring, Thacker & Alfaro, 2012). In addition to using Newey-West standard errors, Driscoll-Kraay standard errors will be included to adjust for dependency between the variables. There is a chance that female empowerment and human development cluster in space because elements affecting these events spread across geographical areas. Therefore, it is important to account for spatial dependence to secure independence (Driscoll & Kraay, 1998; Hoechle, 2007; Sunstrom, et al., 2017).

Yet another challenge with TSCS is the issue of non-stationarity. This means that elements of the data, such as variance and mean, do not change over time. This can affect the results by showing a false positive relationship caused by spurious relationships. A solution to this issue is to include a lag, making sure that historical factors are taken into account, and that the dependent and independent variable is not observed at the same point in time (Mehmetoglu & Jakobsen, 2017, p. 253-254). Therefore, all models in this paper will be run with a lag of one.

Finally, unequal distribution of data in the variables might also be a challenge. If the distribution of the variable is pointy or skewed it might cause problems for the regression. It is therefore useful to transform the variables so that outliers are pulled in, making the distribution more symmetrical. Transforming the data will not affect the relative difference between observation for a specific variable. Therefore, all models in this paper are run with logged variables (Mehmetoglu & Jakobsen, 2017, p. 329).

3.4 Reliability and validity

3.4.1 Reliability

Neutrality is always a goal in research, but absolute neutrality is impossible in the social sciences. However, transparency in the research process will make the research more robust

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[2] Result from Woolridge test: F (1, 170) = 732,042 – Prob>F=0,0001

and reliable (Tjora, 2012, p. 204). The creators of the V-Dem dataset are concerned with keeping their data as transparent as possible. Consequently, they have made a thorough explanation of their methodology which is freely available on their webpage (V-Dem, 2019b). One technique that is meant to secure neutrality is the measurement model. This lowers the risk of bias by the researchers and the informants. Several of the variables used in this paper are transformed with the measurement model. Another element that strengthens V-Dem´s reliability is that the dataset is public and free of charge (V-Dem, n.d). This makes it possible to avoid bias from potential investors and it increases transparency. Based on the argument above, I consider the reliability of this dataset as high.

3.4.2 Validity

Validity is concerned with whether we measure what we seek to measure (Tjora, 2012, p. 206). Transparency is important for validity as well. V-Dem display how they choose country experts, how variables are coded and where they have gathered data from (V-Dem, 2019b). This openness makes it possible to control the validity of the data. Tests have been run on V-Dem data, comparing it to other datasets to explore the validity. The variable for access to health services was compared with the data from Global Burden of Disease (GBD), and these tests show high correlation between the datasets[3] (Fullman, et al., 2018). Further, V-Dem´s index for female empowerment is compared to other known indexes measuring similar concepts[4]. Also here, there is high correlation between V-Dem and the other datasets. For further analysis, the model was run with the GBD variable for healthcare access and quality as the dependent variable. The results were indistinguishable from the original model. The argument above strengthens the validity of the V-Dem dataset, and one may consider the validity as high.

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[3] V-Dem´s variable for access to health services has a correlation on 0,82 with GDB´s variable for access to health.

[4] V-Dem´s variable for female empowerment correlates with the gender inequality index at -0,71 and the gender empowerment measure index at 0,81.

4.0 Results

In this section, results will be presented in six different tables. First, a basic model will be presented where the instrumental value of female empowerment on human development will be explored. In table three, the effect of agency, choice and participation on human development will be explored. Next, the relation between female empowerment, institutions and human development will be investigated. The fifth table will give insight into the effect of the resource curse and female empowerment on human development. Next, the debate on whether oil-rent or Islam causes low gender equality will be explored. Finally, the effect of female empowerment on human development when oil-rent and Islam are taken into account will be explored. The focus will mainly be on the dependent variables, but towards the end of the chapter, control variables will also be discussed briefly.

4.1 Female empowerment´s effect on human development

Table two shows female empowerments´ effect on the three indicators for human development; education equality, access to health services and under-five mortality rates. The table is run with both Newey-West standard errors and Driscoll-Kraay standard errors. This table examines H1: *There is an instrumental value of female empowerment on human development.*

Table 2. The effect of female empowerment on human development, all countries, 1960-2018.

Dependent variable	(2.1)	(2.1.1)	(2.2)	(2.2.1)	(2.3)	(2.3.1)
			Access to	Access to	Under 5	Under 5
	Education	Education	health	health	mortality	mortality
	equality	equality	services	services	rates	rates
	N-W	D-K	N-W	D-K	N-W	D-K
Female						
empowerment (log)	2.05***	2.05***	1.99***	1.99***	-0.16**	-0.16**
	(0.15)	(0.28)	(0.13)	(0.15)	(0.07)	(0.06)
Electoral						
democracy (log)	-0.09	-0.09	-0.02	-0.02	-0.10**	-0.10*
	(0.09)	(0.07)	(0.08)	(0.11)	(0.04)	(0.05)
Income per capita						
(log)	0.24***	0.24***	0.28***	0.28***	-0.26***	-0.26***
	(0.03)	(0.05)	(0.03)	(0.05)	(0.02)	(0.03)
Population size						
(log)	0.13**	0.13	-0.03	-0.03	0.26***	0.26***
	(0.06)	(0.09)	(0.07)	(0.06)	(0.04)	(0.05)
Constant	-5.50***	0.00	-2.77**	0.00	3.37***	0.00
	(1.11)	(0.00)	(1.21)	(0.00)	(0.62)	(0.00)
Observations	7,737	7,737	7,737	7,737	7,498	7,498
Number of						
countries	172	172	172	172	172	170

Standard errors in
parentheses
*** p<0.01, ** p<0.05, * p<0.1

The results are nearly indistinguishable whether Newey-West or Driscoll-Kraay standard errors are used. This indicates that the results are robust to alternative estimating procedures. The variable for female empowerment has a significant effect on all dependent variables. The effect is positive on education equality and access to health services but negative on under-five mortality rates. Meaning that increased female empowerment leads to increased equality in education, higher access to health services and lower under-five mortality rates. Further, we

are interested in looking at the explanatory power of female empowerment on human development in terms of its substantive effect. Increasing female empowerment by a standard deviation increases equality of access to health by 23 percent of the standard deviation of human development[5]. This can be interpreted as a significant and substantive impact. These results support the theory explaining the instrumental value of female empowerment. Based on the results, H1 can be accepted, there is an instrumental effect of female empowerment. Notably, female empowerment´s effect on health access and education equality is substantively large.

4.1.1 The effect of agency, choice and participation on female empowerment

Female empowerment captures the three indicators; agency, choice and participation. In the data analysis, agency is represented by civil society participation, choice is represented by civil society liberties and participation is represented by political participation. It is already stated that there is an instrumental effect of female empowerment, and that makes it interesting to explore which of the indicators are most influential for human development. Table three examines this relationship and is run with both Newey-West and Driscoll-Kraay standard errors. Table three reviews H2: *Agency has greater impact on human development than choice and participation.*

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[5] An increase in a standard deviation of female empowerment increases the access to education equality by 33,6% of the standard deviation of education equality, 34,4% of the standard deviation of access to health services and 1,2% of a standard deviation of under-five mortality rates.

Table 3. The effect of agency, choice and participation on human development, all countries, 1960-2018.

Dependent variables	(3.1) Education equality	(3.2) Access to health services	(3.3) Under 5 mortality rates	(3.4) Education equality	(3.5) Access to health services	(3.6) Under 5 mortality rates	(3.7) Education equality	(3.8) Access to health services	(3.9) Under 5 mortality rates
Women´s civil society participation (log)	1.59***	1.35***	-0.14***						
	(0.12)	(0.11)	(0.05)						
Women´s civil liberties (log)				1.26***	1.16***	0.04			
				(0.13)	(0.12)	(0.05)			
Women´s political participation (log)							0.75***	0.77***	-0.15***
							(0.08)	(0.08)	(0.04)
Electoral democracy (log)	0.03	0.19**	-0.07**	0.21***	0.27***	-0.16***	0.52***	0.57***	-0.12***
	(0.08)	(0.08)	(0.04)	(0.08)	(0.08)	(0.04)	(0.07)	(0.07)	(0.03)
Income per capita (log)	0.26***	0.29***	-0.26***	0.23***	0.27***	-0.25***	0.24***	0.27***	-0.26***
	(0.03)	(0.03)	(0.02)	(0.03)	(0.04)	(0.02)	(0.03)	(0.04)	(0.02)
Population size (log)	0.20***	0.05	0.20***	0.24***	0.08	0.19***	0.14**	-0.01	0.27***
	(0.06)	(0.07)	(0.04)	(0.06)	(0.07)	(0.04)	(0.06)	(0.07)	(0.04)
Constant	-6.42***	-3.81***	4.23***	-6.96***	-4.28***	4.34***	-5.77***	-3.11**	3.25***
	(1.09)	(1.19)	(0.62)	(1.11)	(1.20)	(0.62)	(1.13)	(1.24)	(0.62)
Observations	7,858	7,858	7,601	7,858	7,858	7,601	7,745	7,737	7,498
Number of countries	172	172	170	172	172	170	172	172	170

Standard errors in parentheses

*** p<0.01, ** p<0.05, *p<0.1

Table three shows the same model as table two, but the dependent variable is now each of the three indicators for female empowerment. All the variables are significant and in the expected direction. In other words, increased women´s civil society participation, women´s civil liberties and political participation lead to increased education equality, increased access to health services and decreased under-five mortality rates. The exception is the effect of women´s civil liberties on under five-mortality, which is not significant.

Further, it is interesting to explore the explanatory power of each of these three indicators for female empowerment. An increase in the standard deviation of civil society participation increases human development by 16 percent of a standard deviation of human development[6]. An increase in the standard deviation of political participation increases the dependent variable by 8 percent of the standard deviation of human development[7]. Finally, an increase in the standard deviation of civil society liberties increases human development by 14 percent of the standard deviation of human development[8]. Meaning that civil society participation, which captures agency, has the greatest influence on human development. This finding is supported by several researchers who believe that agency is the indicator that best captures the essence of empowerment (Malhotra & Schuler, 2005, p. 72-73). Also, it supports H2: *Agency has greater impact on human development than choice and participation*.

4.2 The effect of female empowerment and institutions on human development

In table four, the relative effect of democratic institutions compared with female empowerment will be explored, holding constant the same controls as above. In this table, only developing countries are included to ensure that any observed effects are not strictly a

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[6] An increase in a standard deviation of women´s civil society participation increases the access to education equality by 25,8% of the standard deviation of education equality, 21,8% of the standard deviation of access to health services and 0,27% of a standard deviation of under-five mortality rates.

[7] An increase in a standard deviation of women´s political participation increases the access to education equality by 9,5% of the standard deviation of education equality, 13,7% of the standard deviation of access to health services and 3,1% of a standard deviation of under-five mortality rates.

[8] An increase in a standard deviation of women´s civil liberties increases the access to education equality by 22,2% of the standard deviation of education equality, 20,3% of the standard deviation of access to health services and 0,8% of a standard deviation of under-five mortality rates.

result of the variance between the developed and developing countries. The two-horse race between our main variables of interest is now examined, which is theoretically captured by H3: *Institutions have a greater effect on human development than female empowerment*.

Table 4. The effect of female empowerment and institutions on human development, developing countries only, 1960-2018.

Dependent variable	(4.1) Education equality N-W	(4.1.1) Education equality D-K	(4.2) Access to health services N-W	(4.2.1) Access to health services D-K	(4.3) Under 5 mortality rates N-W	(4.3.1) Under 5 mortality rates D-K
Female empowerment (log)	2.09***	2.09***	2.07***	2.07***	-0.07	-0.07
	(0.16)	(0.34)	(0.14)	(0.18)	(0.07)	(0.07)
Electoral democracy (log)	-0.44***	-0.44***	-0.54***	-0.54***	-0.03	-0.03
	(0.09)	(0.09)	(0.09)	(0.09)	(0.04)	(0.04)
Government corruption (log)	-0.88***	-0.88***	-1.40***	-1.40***	0.19***	0.19**
	(0.10)	(0.13)	(0.08)	(0.10)	(0.05)	(0.09)
Income per capita (log)	0.22***	0.22***	0.24***	0.24***	-0.24***	-0.24***
	(0.03)	(0.06)	(0.04)	(0.05)	(0.02)	(0.02)
Population size (log)	0.47***	0.47***	0.20**	0.20***	0.18***	0.18***
	(0.08)	(0.08)	(0.09)	(0.06)	(0.05)	(0.04)
Civil war (log)	-0.03	-0.03	-0.02	-0.02	0.01	0.01
	(0.03)	(0.03)	(0.02)	(0.03)	(0.01)	(0.02)
Peace years (log)	-0.00	-0.00	0.00**	0.00	-0.00	-0.00
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Constant	-10.01***	0.00	-5.03***	0.00	4.37***	0.00
	(1.35)	(0.00)	(1.47)	(0.00)	(0.80)	(0.00)
Observations	6,370	6,370	6,370	6,370	6,147	6,147
Number of countries	148	148	148	148	146	146

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

There is still no visible difference between using Newey-West and Driscoll-Kraay standard errors. By examining our main independent variable, one can observe a positive and significant effect of female empowerment on human development. However, female empowerment does no longer have a significant effect on under-five mortality rates. A reason for this might be that mortality rates are a complex matter relating to geography and disease vectors in developing countries and cannot be explained purely by social factors, such as female empowerment.

The two-horse race between female empowerment and institutional quality will now be explored. Therefore, variable for democracy and government corruption is of great interest. Table four shows that democracy has a negative effect on all dependent variables, meaning that increased democracy will lead to lower education equality, lower access to health services and lower mortality rates. However, this is only significant for education equality and access to health services. These results are surprising but support scholars like Ross (2008), who believe that democracy does not necessarily speed human development. This matter will be discussed further in the next section of the paper. By looking at the variable for government corruption, we see that this has a negative effect on education and health, meaning that increased corruption leads to lower education equality and lower access to health services. Corruption has a positive effect on under-five mortality rates, meaning that increased corruption leads to higher mortality rates.

When exploring a two-horse race, one is especially interested in looking at the strength of each variable. This gives us an indicator of the variables explanatory power. It is already established that a standard deviation increase in female empowerment explains 23 percent of the standard deviation of human development. Looking at democracy, the effect is much lower. Democracy explains about 6 percent of the standard deviation of human development[9]. The variable for government corruption shows a somewhat stronger effect. A standard

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[9] An increase in a standard deviation of democracy increases the access to education equality by 8,3% of the standard deviation of education equality, 10,2 % of the standard deviation of access to health services and 0,76% of a standard deviation of under-five mortality rates (not significant).

deviation increase in corruption increases child mortality by 12,9 percent of the standard deviation of human development[10].

The results presented above show a minor effect of democracy on human development. Somewhat stronger is the effect of corruption. However, the positive effect of female empowerment on human development is much stronger than the negative effect of corruption. This implies that the effect of female empowerment is potentially stronger than the effect of institutions. Consequently, H3 must be rejected, institutions do not have a bigger effect on human development than female empowerment. While institutions matter, especially corruption, female empowerment shows an independent direct effect with greater magnitude. Since others (Klasen, 2017, p. 2; Chattopadhyay & Duflo, 2004, p. 1410) show that women´s empowerment also lowers corruption, the direct and indirect effects of female empowerment are likely to be quite large.

4.3 The effect of the resource curse and Islam on female empowerment and human development

Much is written on the relationship between female empowerment, oil wealth and the role of Islam on economic and social development (Ross, 2008). It is therefore interesting to explore whether the question of female empowerment might add to the explanation of what affects gender equality and human development in terms of oil versus Islam. In this section, effect of the resource curse on human development and female empowerment will be explored. Also, it will add to the debate about why this region experiences low levels of gender equality. This will be done by examining the two-horse race given by Ross and Norris (Ross, 2008; Norris & Ingelhart, 2003) about whether oil-rent and the resource curse or religion and culture lead to low level of gender equality. Finally, the effect of female empowerment on human development when oil-rent and Islam are taken into account will be explored.

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[10] An increase in a standard deviation of government corruption increases the access to education equality by 17,6% of the standard deviation of education equality, 0,38% of the standard deviation of access to health services and 6,7% of a standard deviation of under-five mortality rates.

4.3.1 The effect of the resource curse on human development

The following table is similar to table four, except for an included interaction term. This addition will give an indication of the effect of the resource curse in MENA countries, on female empowerment and on human development. Table five will examine the matter theoretically captured by H4: *Resource abundant countries, that are largely majority-Muslim countries in the geographical region of MENA, have a negative impact on human development.* Human development will in this model be represented by under-five mortality rates alone to get a clearer image of real outcomes without too much interference from politics.

Table 5. The effect of the MENA geographical region, developing countries only, 1960-2018.

	(5.1)
Dependent variable	Under 5 mortality rates
Female empowerment (log)	0.05
	(0.07)
MENA geographical region (log)	0.30***
	(0.05)
Female empowerment x Mena geographical region (log)	-1.14***
	(0.13)
Electoral democracy (log)	-0.08*
	(0.04)
Government corruption (log)	0.18***
	(0.05)
Income per capita (log)	-0.23***
	(0.02)
Population size (log)	0.24***
	(0.04)
Civil war (log)	0.02
	(0.01)
Peace years (log)	-0.00
	(0.00)
Constant	3.26***
	(0.73)
Observations	6,147
Number of countries	146

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Our main independent variable is no longer significant in this model. However, that was expected based on the results from table four. Our main interest in this table is the interaction term. The variable for MENA geographical region is positive and significant, suggesting that

this region has an elevated risk of child death under the age of five years. These results suggest that resource abundant countries that also happen to be largely Muslim, have a negative effect on human development. These findings show support for both Ross´s (2008) and Norris and Ingelhart´s (2003) argument. Further, by looking at the interaction term where both female empowerment and the MENA region is taken into account, we see a negative and significant correlation. Meaning that when female empowerment is higher among MENA countries, the effect reduces the under-five mortality rates. In other words, female empowerment has a positive effect, also in developing countries where conditions for under-five mortality rates tend to be very poor. It is also clear from this model that this effect is found, even independently of the main independent variable. These results can easily be interpreted by looking at the coefficient in table five, since MENA is a dummy variable. These results show a strong and robust effect of female empowerment supporting H1. Based on the result above, we accept H4 that resource abundant countries in the geographical region of MENA have a negative impact on human development.

4.3.2 The effect of the resource curse and Islam on female empowerment

We have established that the MENA region has poor conditions for female empowerment. Researchers argue at least two broadly different explanations for this phenomenon. First the resource curse argument based in the region´s resource abundance and secondly the religion and cultural explanation based on the region´s dominant religion, Islam. Table six address´ the resource curse argument theoretically captured by H5: *Oil-rents per GDP has a greater negative influence on female empowerment than religion does*. This model is run with time-fixed effects only, because Muslim population is time-invariant, which would drop out in the model.

Table 6. The effect of oil-rent and Islam on female empowerment, developing countries only, 1960-2018.

Dependent variable	(6.1) Female empowerment
Muslim population (log)	-0.04***
	(0.01)
Oil-rent % of GDP (log)	-0.23***
	(0.03)
Electoral democracy (log)	50.48***
	(1.23)
Government corruption (log)	-1.55
	(1.26)
Income per capita (log)	0.85***
	(0.28)
Population size (log)	1.01***
	(0.15)
Civil war (log)	-2.95***
	(0.75)
Peace years (log)	0.14***
	(0.02)
Constant	20.78***
	(3.40)
Observations	5,020
Number of countries	148

Standard errors in parentheses

*** $p<0.01$, ** $p<0.05$, * $p<0.1$

Our main variables of interest in this table are Muslim population and oil-rent. By examining the variable for Muslim population, we can see that the effect on female empowerment is significant and negative. In other words, an increase in the percentage of Muslims in the population leads to a decrease in female empowerment. Next, we examine the effect of oil-rent on female empowerment. We see that the variable is negative and significant. Meaning that increased oil-rent leads to a decrease in female empowerment. This finding tells us that

both variables have a negative effect on female empowerment but cannot tell us anything about the explanatory power of the variables.

To see which variable has the biggest explanatory power we go on to examine the two-horse race about whether oil-rent or Islam affects female empowerment the most. By examining the variable for Muslim population, we observe that an increase in the standard deviation of Muslim population leads to a 7,2 percent decrease in the standard deviation of female empowerment. Meaning that Islamic religion and culture do have a negative effect on female empowerment. Next, we explore the effect of oil-rent. An increase in the standard deviation of oil-rent leads to an 11,8 percent decrease of the standard deviation of female empowerment. These results show that both religion and oil-rent have a negative impact on female empowerment. However, the negative effect of oil-rent is greater than that of being Muslim, holding the other effect constant. This supports Ross´ (2008) argument and Norris´s claims about Islam. However, we can accept H5 which states that oil wealth has a greater negative influence on female empowerment than Islam.

4.3.3 Female empowerment, oil-rent and Islam´s effect on human development

Table six showed that both oil-rent and Islam have a negative effect on female empowerment. Table seven will explore this relationship further by interacting both variables with female empowerment and explore the effect on human development that empowering women under these negative conditions may have. These tests will empirically explore H6: *Female empowerment has a positive effect on human development, conditional on oil wealth and Islam´s majorities*. This model is run with time-fixed effects only, because Muslim population is time-invariant, and we cannot explore the within effects. Also, for brevity, this table will only include the objective measure, under-five mortality rates, as the dependent variable.

Table 7. The effect of female empowerment on human development, conditional for oil-wealth and Islam. Developing countries only, 1960-2018.

Dependent variable	(7.1) Under 5 mortality rates	(7.2) Under 5 mortality rates
Female empowerment (log)	-1.57***	-1.97***
	(0.11)	(0.14)
Oil-rent % of GDP (log)	0.03*	0.10***
	(0.01)	(0.01)
Muslim population (log)		-0.01***
		(0.00)
Female empowerment x Muslim population (log)		0.01***
		(0.00)
Female empowerment x Oil-rent % of GDP (log)	0.10***	
	(0.02)	
Electoral democracy (log)	0.78***	0.88***
	(0.08)	(0.09)
Income per capita (log)	-0.57***	-0.54***
	(0.01)	(0.01)
Population size (log)	-0.05***	-0.04***
	(0.01)	(0.01)
Civil war (log)	0.06*	0.06
	(0.03)	(0.04)
Peace years (log)	-0.00***	-0.00*
	(0.00)	(0.00)
Constant	10.50***	10.41***
	(0.22)	(0.22)
Observations	2,889	2,672
Number of countries	148	148

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

By looking at table 7.1, we can explore the first interaction term between female empowerment and oil-rent. By looking at the independent variable for female empowerment

we see that this is significant and in the expected direction. Further, by examining the variable for oil-rent one can observe a positive and significant effect on under-five mortality rates. Next, we want to examine the interaction term between female empowerment and oil-rent. The interaction term is significant and has a positive effect on under-five mortality rates. Indicating that increasing female empowerment in countries with oil-rent leads to lower human development. In other words, female empowerment among oil-rich countries does not show the expected favorable outcomes. Oil´s negative effects on human development seems to trump the favorable effects of female empowerment. Thus, we can reject H6 at least in terms of the interaction with oil-wealth.
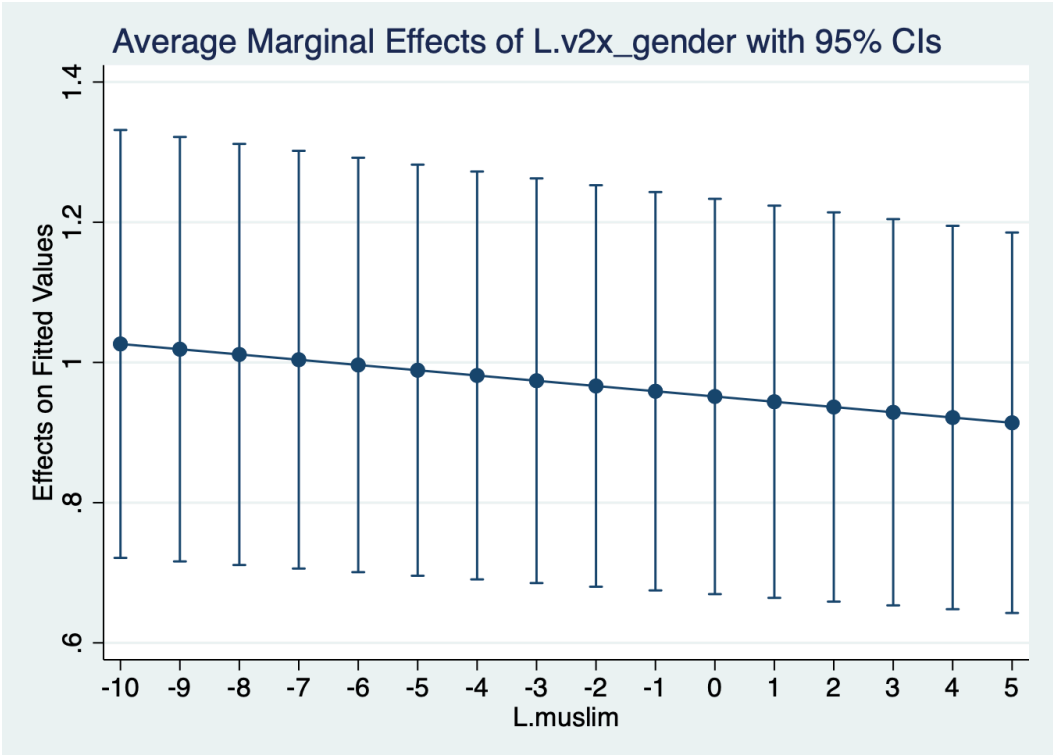
Further, we go on to table 7.2 to explore the effect of female empowerment and Islam on human development. The table shows that the independent effect of both female empowerment and Islam is positive and significant. The interaction term between female empowerment and Islam shows a negative and significant effect on under-five mortality rates, indicating that when female empowerment increases in countries with a Muslim population human development decreases. Thus, this does not support H6 suggesting that female empowerment has a positive effect on human development conditional on Islam.

The results of the conditional effects suggest that female empowerment alone cannot overrule the effect of oil wealth and Islam on the measure of human development examined here. This will be discussed further in the paper´s next section. The interaction between female empowerment and oil-rent is illustrated in model one below, while the interaction between female empowerment and Islam is illustrated in model two.

Model 1. Female empowerment´s effect on human development conditional on oil-wealth.

Average Marginal Effects of L.v2x_gender with 95% CIs
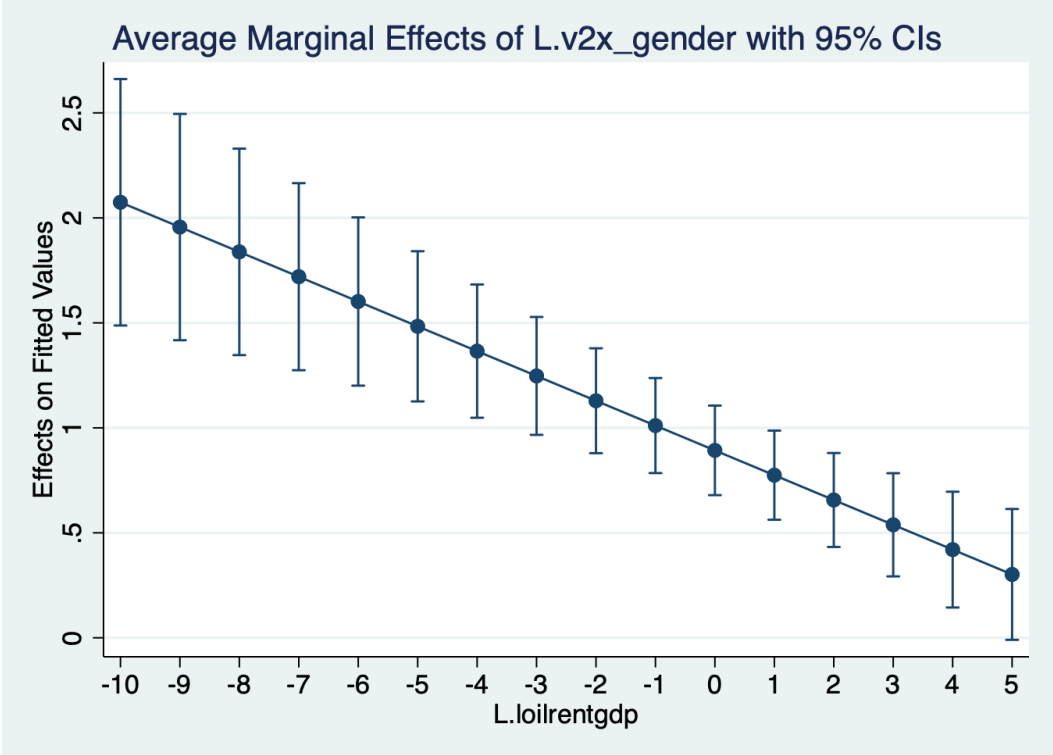
Model 2. Female empowerment´s effect on human development conditional on Islam.

Average Marginal Effects of L.v2x_gender with 95% CIs

The main control variables show reasonable and expected results. Higher income per capita show a positive effect on human development. The variable for population size shows a positive effect on education and health, meaning that an increased population leads to increased educational equality and access to health services. However, it also shows a positive effect on under-five mortality rates, indicating that bigger populations experience higher mortality rates. Further, the control variable for ongoing civil war shows a negative effect on human development. Finally, the variable for the history of peace year shows a positive effect on human development. This indicates that longer time in peace is associated with higher human development. Thus, all of the control variables show reasonable, expected results.

5.0 Discussion

This paper seeks an answer to two interrelated questions: *Does female empowerment matter for predicting human development compared with formal institutions, and how does the question of female empowerment matter compared with questions about the natural resource curse and religion.* In this section, results from the analyses will be discussed in relation to these questions and the paper´s hypotheses. Finally, possible improvements for the model and further research will be presented.

5.1 The instrumental value of female empowerment

Supporters of the theory of female empowerment argue that there is an added value to female empowerment, in terms of increased development and economic growth. Results from the models indicate a positive, significant and strong effect of female empowerment on human development. These findings are valid and robust even when controlled for elements such as democracy and the geographical region MENA.

Understanding the importance of the instrumental value of female empowerment can be useful for increasing development, through for example foreign aid. Foreign aid is much discussed, and many scholars are critical to the aid practice in the world today. Easterly (2006) is a well-known critic of how aid is distributed globally today. He argues that people who administer aid are either planners or searchers. Planners believe that we can solve global problems with one common approach, while searchers look for a specialized solution for each case. To have an understanding of the mechanisms in gender equality can help searchers develop tailored solutions for more independent and sustainable development in developing countries. Independent development or home-grown development is also emphasized by Easterly as crucial for development in the future (Easterly, 2006). To increase gender equality may be a way of securing home-grown development for developing countries in the future. Being able to make use of an educated and healthy population, including both genders, will increase human development which consequently will lead to economic and social development.

The creators of the V-Dem dataset have developed an index for female empowerment put together by several indicators, where agency, choice and participation are included. It is valuable to explore which of these indicators have the greatest influence on human

development because it can add to the explanation on how to increase female empowerment and also human development. Based on the argument by Malhotra and Schuler (2005, p. 72-73) it argued that agency is the most influential indicator for female empowerment. This argument is concurrent with results from this paper. This can be empirically observed as well. Several countries show high levels of women´s political participation but low scores on female empowerment overall. Examples of such countries are Eritrea, Afghanistan, Turkmenistan, China and Turkey. However, the data show few, if any, countries that score low on civil society participation and low on overall female empowerment. These findings show that the trend is visible in several regions of the world, which strengthens the role of agency.

Knowledge about these mechanisms in gender equality can help us understand why some countries struggle with increasing gender equality. Agency captures being able to make independent choices and set personal goals. These circumstances are highly influenced by norms in the household. Such matters are difficult to influence with public policies. As Klasen (2017) argues, culture and traditions are powerful determiners for everyday life in the household and such norms are typically reproduced between generations. A possible way of affecting agency for women is through equal access to education. Increasing women´s knowledge and skills will give them a foundation for making sustainable choices and creating goals for themselves. This can, in turn, lead to increased development because women will become capital for society, as argued in human capital theory. As emphasized in the capability approach, public services for example health- and education services are crucial for development. Increased public services can increase women´s agency, and therefore lead to higher gender equality and in turn, also increased human development.

5.2 The effect of institutions compared with female empowerment on human development

Some scholars (Acemoglu and Robinson, 2008) argue that political institutions are key determiners for development. Results from this analysis showed an unexpected negative effect of democracy on human development, while the positive effect of female empowerment was consistent. One could argue that inclusive institutions lead to increased female empowerment, meaning that countries with extractive institutions would have lower

levels of female empowerment. However, results from above suggest that there is an added value of female empowerment on human development. It is possible to argue that education levels might be a result of a country´s given institutions, but it is not likely that higher levels of corruption would lead to increased access to health services. Because the trend is similar for all our indicators for human development, it strengthens our results. Further, models including all countries, developing countries and different types of standard errors show similar results, which support our result. Indicating that the effect of female empowerment is stronger than that of institutions.

The results show a negative effect of the variable for democracy. Based on theories from for example Gerringer (2012) and Acemoglu and Robinson (2008a), we would expect that higher levels of democracy would lead to increased human development. However, the negative effect of democracy on human development are compatible with Ross (2006) and Swiss, Fallon and Burgos (2012). Ross (2006) argues that democracy alone does not help the situation of the poorest in society. He believes that we do not have a complete understanding of governments in developing countries, and therefore tend to underestimate their performance. Also, we lack sufficient data from such countries which makes research biased. Consequently, we overestimate the role of governments in the developed world and underestimate other governments. Swiss, Fallon and Burgos (2012, p. 35) support that democracy is not exclusively positive. They argue that many studies that find positive effects of democracies usually have one or two data points in their studies. If studies have several data points, as we have in this study, democracy more often shows negative effects. Another explanation for the effect of democracy is given by Bueno de Mesquita and Smith (2011) who argue that even authoritarian states have to provide their citizens with some benefits, especially in terms of health and education. This is necessary to maintain productivity and income to the state, which is crucial for authoritarian leaders to stay in power. Yet another explanation for the negative effect of democracy can be that several countries with low levels of democracy receive aid. Humanitarian aid seeks to increase the populations´ well-being, which often means investment in the education- and health sector, thus affecting human development.

5.3 The effect of the resource curse and Islam on female empowerment and human development

As argued in the theory of the resource curse, we would expect a negative effect from the resource abundant MENA countries on human development. Also, several researchers agree that this region will have a negative impact on female empowerment. Results from model five support these studies. However, it is interesting to see how the results emphasize the effect of female empowerment. The positive effect observed in the interaction term is positive independently of female empowerment in itself, which strengthens the results. These findings emphasize the importance of female empowerment to increase human development.

To gain insight into why countries in the geographical region of MENA score low on gender equality we explored whether oil-rent and the resource curse or religion have the greatest negative impact on female empowerment. The results showed that the negative effect of oil-rent is greater than that of religion. These findings support Ross´ (2008) theory about oil-rent, even with a more general measure for female empowerment. Ross measures how oil-rent affects women in the working force, while this analysis explores how oil-rent affects a more wide-reaching level of women´s life. This finding can help us understand why several countries with higher Muslim population score better on female empowerment than the MENA region. Examples of such countries are Indonesia, Niger, Senegal and Kazakhstan. This indicates that it is not religion that is the greatest determiner of a country´s level of female empowerment.

The results do show a clear, negative effect of being Muslim on levels of gender equality. Norris and Ingelhart (2003, p. 71) do express that Islam is the greatest religious barrier to gender equality. To understand the meaning of this, we compare the effect of being Muslim with other widely practiced religions in the world, for example Catholicism. Being Catholic did also show a negative and significant effect on female empowerment. By examining the explanatory power of Catholics, we observed a one percent difference in the standard deviation of female empowerment[11] compared with the effect of Islam. Meaning that the effect of being Muslim and being Catholic is almost identical. Next, a variable for Protestantism was included. This did also have a negative and significant effect on female

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[11] An increase in the standard deviation of percentage of Catholics led to a 7% decrease in the standard deviation of female empowerment.

empowerment, however the effect was somewhat weaker[12]. These results show that several religions have a negative effect on female empowerment, which might imply that it is religion in general, not Islam, that is a barrier against gender equality.

Others have explored the effect of oil-rent further and believe that it does not have to be exclusively negative. Mavisakalyan and Tarverdi (2019) have seen a connection between an increase in the oil-sector and growth in the service sector. They believe that an expansion of the service sector increases the number of women that participate in the labor force. In other words, they argue that oil can be positive for women in terms of increased possibilities in the labor force. This can possibly lead to women being a more active participant in society (Mavisakalyan and Tarverdi, 2019, p. 199). However, to be confident in these results it needs further research.

Finally, to conclude the tests of the effect of female empowerment, the effect of female empowerment on human development when the resource curse and Islam are taken into account was explored. The results suggested that the negative effects of oil wealth and Islam exceeded the positive effect of female empowerment. There might be several explanations for these results. One likely explanation for this is that these models illustrate a complex reality in which it is complicated to unpack the mechanisms. It is feasible that there are several mechanisms working at the same time, which makes it hard to capture and fully understand the reality by one statistic model. To capture and unpack the complexity of these interactions would be the goal for future studies. One would possibly get a greater understanding of the mechanisms by adjusting the data, for example through longer time-periods or different data. Another possible way of attacking this complexity is through carefully selected case studies where one could be able to reconstruct this issue in a more controlled environment.

5.4 Matters of interest

An interesting finding in the data was that under-five mortality rate was not significant in models that included developing countries only. Reasons for this might be that determiners for mortality rates are a complex matter with several explanations. Access to health services, such as vaccines and medicines will have a significant effect on children´s mortality rates. A

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[12] An increase in the standard deviation of percentage of Protestants led to a 4% decrease in the standard deviation of female empowerment.

family´s economic situation will also determine which opportunities are available for children. Further, the level of education in the family might impact mortality rates in terms of how capable they are to discover and treat different illnesses. Meaning that human capital has crucial effects on mortality rates. This might be a possible explanation as to why the variable is significant in models with all countries. More developed countries have greater access to human capital which again lowers mortality rates.

Another interesting effect we observed in the data was the positive effect of previous communist states. By observing the standard errors, one could see that the model underestimated levels of human development in these countries. This is compatible with research by for example Orenstein (2008) and Sotiropoulos, Neamtu and Stoyanova (2003) who argue that the communist states provided welfare services for a majority of their people, compared to other states. This is explained by the communist ideal of equality and valuing the working class (Orenstein, 2008, p. 82). By examining the data, we can see that this trend is especially clear for former Soviet states, such as Armenia, Turkmenistan and Estonia, which show high standard errors and significant results.

5.5 Suggestions for further research

To strengthen the model and become even more confident in the result, one should secure the causal relationship between the dependent and independent variables. In this paper, we assume that female empowerment affects human development, but it is possible that the relationship is reversed. Reverse causality is a known challenge in qualitative research, and one method to possibly solve this issue is an Instrumental Variable Approach. When using an instrumental variable, you replace the independent variable with an alternative variable that has an unobserved effect on the dependent variable (Sovey & Green, 2010, p. 188). For the instrument to be valid it needs to be relevant and independent of the original variable (Baum, Ganz, Subramanian & Kawachi, 2001). To find a relevant instrumental variable is challenging. It is especially challenging for this model because most historical and geographical indicators are affected by government decisions or institutions, which makes the instrument invalid. Therefore, this will be a task for further research.

6.0 Conclusion

It is argued that human capital is crucial for a country´s development and growth. How to accomplish this development is debated among scholars. Some researchers believe that empowering women will be a powerful force for development, while others argue that opening up to democracy matters. Yet others argue that a country´s amount of natural resources is an important determiner for development. This paper examines this question directly: *Does female empowerment matter for predicting human development compared with formal institutions, and how does the question of female empowerment matter compared with questions about the natural resource curse and religion.* The theoretical foundation for this question is theory of the instrumental value of female empowerment, human capital theory, the capability approach, Acemoglu and Robinson´s theory of institutions and the resource curse theory. The thesis question is explored with a multivariate empirical examination of the hypotheses in Stata.

Results from the analysis show a strong and significant effect of female empowerment on human development. The analysis shows a robust and positive effect on the indicators for human development; education equality, access to health services and under-five mortality rates. These results are consistent even when controlling for formal and informal institutions. The effect of female empowerment shows a stronger effect on human development than other indicators that are expected to affect human development, such as democracy. This indicates that female empowerment matter for predicting human development over and above the effect of formal and informal institutions. Also, the results showed how female empowerment is both valuable and influential in areas with slow human development, such as the MENA geographical region. These findings are consistent even when controlling for different sample sizes, variables and estimating techniques. However, results show that female empowerment alone is not enough to overrule the conditional negative effects of oil-wealth and Islam. Ultimately, results from this paper suggests that female empowerment has a substantial and significant effect on human development.

For further studies to be even more confident in the results, one should implement an instrumental variable approach to secure causality. Also, future research should explore the mechanisms behind the interacting effect of female empowerment, oil-rent and Islam on human development.

This study has contributed to a greater understanding of the instrumental value of female empowerment, and especially its effect on human development. This insight is intrinsically valuable to increase equality universally, but also instrumentally to reach global goals such as the United Nations Sustainable Development Goals. More comprehensively, it will improve social and economic development through increased human development.

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