GÖTEBORGS UNIVERSITET

DEPARTMENT OF POLITICAL SCIENCE

THE SILENT RESISTANCE

Emancipative values and the COVID-19 pandemic.

Robin Holmér

Master's Thesis:	30 credits
Programme:	Master's Programme in Political Science
Date:	2021-06-23
Supervisor:	Amy Alexander
Words:	13320

Abstract

This thesis explores how emancipative values in societies influence the number of people directly affected by COVID-19 during 2020. The theoretical framework builds on Evolutionary emancipative theory. I predict that more emancipative societies will have higher numbers of directly affected, because these societies will be more reluctant to limit the utilisation of freedoms. The thesis is conducted with material from World value survey, European value study, John Hopkins University and Oxford Government response tracker. It is a quantitative analysis with data from 88 countries from all continents during 2020. The result is partly consistent with my prediction, under control for relevant alternative factors, more emancipated societies have more directly been affected by COVID-19 while no effect has been established on the efficiency of restriction by emancipative values. However, the results also offer new possible research avenues as COVID-19 still needs to be further studied.

Key words: Evolutionary emancipative theory, COVID-19, restrictions, values.

Acknowledgements:

I would like to express my gratitude to my supervisor Amy for all her help and support.

This thesis is dedicated to Sara, for without your support and encouragement this thesis would not been possible.

Content

1. Introduction

The year 2020 was in virtually all aspects of life affected by the COVID-19 pandemic. Starting in late 2019 in China, COVID-19 spread to the rest of the world during late winter and in early spring it was proclaimed a pandemic by the WHO. Although unevenly affected by COVID-19 at the point in time, most countries imposed extensive restrictions and urged their citizen to act precautious and responsible to stop COVID-19 (Hale et al 2020a).

Values are assumed to play a part in explaining the spread of COVID-19. Firstly, there is a discussion in the literature what properties societies has who are better or worse in adapting voluntarily action against COVID-19(see Brzezinski, Deiana, Kecht & Dijcke 2020; Frey, Chen & Presidente 2020). On the one hand individualistic societies are deemed less likely to take personal cost like limiting personal movement, stay home from work with only minor symptoms, avoid social gatherings like meeting friends, go to church or shopping (Hilyard, Freimuth, Musa, Kumar & Quinn 2010). On the other hand individualistic societies are viewed as more cooperative and trusting, hence making collective action easier (Allik & Realo 2004). One might assume that more self-enhancing or selfish societies are less likely to voluntarily adapt self-sacrificing action for the common good. But what constitutes a selfish society is not clear (Welzel 2013).

Secondly, values have also been suggested to influence the conformity to government restrictions (Frey, Chen & Presidente 2020). The societies where people's values lean to liberation from (government) constraints will, by this logic, be less conforming to government restrictions compared to societies that acknowledge authority and hierarchies. Hence more individualistic, emancipated or liberty-oriented, depending on the choice of term, societies will have higher spread of COVID-19.

Lastly, values run deep in society and although they do change over time, they changes slowly (Welzel 2013). The political establishment in a country is very familiar with the same countries people´s values and preferences. With this in mind governments in more liberty-oriented societies will be more careful to adapt policy that severely restricts freedoms.

Values are a broad field of study and many different concepts exists. Some studies employ concepts particular for that study or a specific context (like a certain country). Among the more established researchers and theories some more universal concepts exist. Among the primary work we find Ronald Inglehart (1971) that both constructed value dimensions and theorised on the evolvement of these value dimensions. Geert Hofstede (1980) created cultural dimension, which are popular since they offer accessible ranking between countries. Originally based on surveys on IBM employees, the cultural dimensions have moved from management into being used in broader social sciences (Hofstede 2011). Inglehart who was founding president of the World Value Study, is the contributor whose work has provided a continually updated way of measuring values worldwide. Succeeded today by Christian Welzel who has developed Inglehart's theories further into the *Evolutionary Emancipative Theory* in *Freedom Rising* (2013).

Regardless of choice of framework, most have a liberty-oriented dimension. And these liberty-oriented values could be clashing with the ability for voluntarily actions against COVID-19 if much appreciated freedoms are limited. In the next section *Research question*, the aim of this thesis will be specified, and a research question formulated. Following section *Previous research* will discuss the literature on values and the emerging literature on the COVID-19

pandemic. Next section is *Research design* where the theoretical framework is introduced along with specification of hypotheses and model. In the section *Method and material*, the statistical method is specified along with the operationalisations of the model. The thesis is concluded with three sections *Analysis, Results* and *Conclusions* that will present an answer to the research question.

2. Research question

Values are assumed to effect individual's behaviour and in a pandemic important behaviour are preventive action (like self-distancing, isolation, and sanitation) to stop the spread of COVID-19. On the one hand some societies that are individualistic and value liberties high, like New Zeeland, took swift action prevent the pandemic to spread uncontrolled in the island nation (Sibley et al 2020). Also trust seem to enhance voluntary self-distance (Brzezinski, Deiana, Kecht & Dijcke 2020) and we know that emancipative values catalyst generalised trust (Welzel & Delhey 2015). On the other hand, societies with collectivist and obedient culture characteristics have proven to lower mobility more than individualistic during the pandemic. Furthermore, while autocratic regimes imposed more restrictions and reduced more mobility, democratic regimes seem to reduce mobility slightly more with the same level of restrictions (Frey, Chen & Presidente 2020). Also, it seems that populist leaning governments have been less likely to act forcefully if it harms their popularity (Bayerlein et al 2021).

The puzzle is that why have many well organised, stable, and democratic accountable countries seem to have handled COVID-19 quite poorly? Given that we know that COVID-19 is transmitted through physical contact and closeness, what could influence people to act less cautious? What presumably many of these countries have is more liberty-oriented societies. Since many of the precautious action does affect the ability conduct ones lives freely more liberty-oriented societies should have a harder time adjusting to these limitations and have a higher degree of free-riders. This seems to be a possibility worth exploring.

The aim for this thesis is therefore to establish if more aggregated liberty-oriented values result in more people infected or lost in COVID-19 (hereafter directly affected). The analysis will be done on national level in a cross-country analysis to examine the relationship on global level. Alterative explanations, such as a societies general trust and regime type will be addressed. Furthermore, government restrictions will be considered, as this has been a central question for all governments worldwide and are intimately connected to the adaption of precautions for individuals.

The contribution of this thesis is to test one possible contributor to cross country differences in affected by COVID-19. Furthermore, it will also provide a new angle on how liberty-oriented values effect societies in crisis. Both these contributions should be relevant both academically and for the society as a whole. The research question is formulated as follows:

Do liberty-oriented values influence the number of directly affected by COVID-19?

What liberty-oriented values I will focus on is discussed below in the section *Theory and previous research*. The precise framework will be specified in the section *Research design* alongside the hypotheses.

3. Theory and previous research

The theory and previous research section is divided into a first part that discuss value research more broadly, a second part that focus on more recent studies in connection with COVID-19 pandemic although making the essential links to the broader value discourse, and lastly a third party that discuss alternative explanations. This literature offers many potential ways to follow this study through and in the following section, *Research design*, the chosen theoretical framework will be specified.

3.1. Liberty-oriented values

Aggregated values are used broadly in several fields of study. Hofstede, constructed his cultural dimensions from a management perspective, to understand differences between cultures. According to Hofstede (2011:3) "Culture is the collective programming of the mind that distinguishes the members of one group or category of people from others". Inglehart (1971) on the other hand, first presented the generational effect across societies, a perspective that focus more on similarities across countries change over time and between generations. Together with Welzel (for example Inglehart & Welzel 2005) the dynamics of value change was developed as well as the value dimensions. The value dimensions reflect the development of postmodern values or emancipative values. These values overlap to some part with Hofstede's cultural dimensions (Ingelhart and Oyserman 2004). Welzel (2013) use values to describe individuals appreciating of freedoms, how highly they value them. Emancipatory values can therefore be understood "as the mindset that arises as human empowerment proceeds" (Ibid:XXV). The six cultural dimensions offers a more explicit and static view of comparing societies, while emancipatory values are universal and in transition.

Given Hofstede's popularity and reoccurrence in modern research, (for example Frey, Chen & Presidente 2020) it is necessary to give a short introduction. Hofstede's (2011) six cultural dimensions has since its introduction (of the four first) in 1980 been widely used, replicated in other studies but also criticised. The dimensions were constructed from a survey made in the IBM company during the 1970´s to reflect different cultures in countries. Countries was given scores on the different dimensions and was a major contributor to management research that spread further into the social sciences. The six dimensions are, firstly, *power distance* that capture power relations in society, between employer and employee, within families and individual vs. the state. This describe how rooted strict hierarchies are in society. Secondly, *uncertainty avoidance*, this capture how flexible and tolerant a society is for diversity, both in life choices and in points of view. Thirdly, *individualism* (versus *collectivism*) capture if people are mainly considered individuals or as nested within groups. This describes some individual integrity factors but equally capture self-centrism. Fourthly, *masculinity* (versus *femininity*) is concerned with largely gender equality but also touches religion. Hofstede changed his framework after critique and added a fifth dimension, *long* (vs, *short*) *term orientation* that capture the divide between a static view of society and a more dynamical and adaptable. It was inspired by a critique of the original four dimensions, that the Confucian traits was not captured in the original framework. The last dimension *indulgence* (versus *restraint*) also added as a response on critique and capture both the aim to be and the perceived possibility to become happy and consent with your life.

Ingelhart and Oyserman (2004) describes a strong empirical relationship between Hofstede´s culture dimension individualism vs collectivism and Inglehart's survival vs. self-expression values. Beugelsdijk and Welzel (2018) reformulate Hofstede´s six cultural dimensions into

three dimensions; (1) Individualism – collectivism, (2) Duty – joy, and (3) Trust - Untrust. The aim for the reformation was not theory development per se, rather a necessity to apply Hofstede's dimensions on Inglehart's theory on value change. The reformulation made it possible to use WVS data for all dimensions. This reformed individualism – collectivism dimension describes the relationship between individuals and the rest of society. This is based on the power distance and individualism of Hofstede's dimensions.

"*Individualist cultures replace the individual's dependence on particular support groups, especially family and acquaintances, by a more anonymous form of dependence on impartial institutions and universal norms*" (ibid:1481).

This concept is broad and capture both the relationship between individual and to the state. It is operationalised by tolerance for gay rights, abortion, private ownership, child-parent relationship, and nationals' rights to jobs over others (Beugelsdijk & Welzel 2018 online appendix). The Duty -Joy dimension "captures beliefs about proper goals in life" (Beugelsdijk & Welzel 2018:1484) rather than actual productiveness and can be described as the choice between to live for work or work to live. This is a narrower concept and capture an interesting concept to complement individualism. It is based on the long-term orientation and indulgence versus restraint dimensions. The Distrust – Trust dimension is based on uncertainty avoidance dimension. This concept lies very close to other broader trust concepts. This creates a bridge from Hofstede´s work to the concept of general trust and social capital.

Main elements of Inglehart/Welzel framework reoccur in Hofstede (and vice versa) and the differences are quite theoretical in the sense that the empirical comparations indicate similarities and shared patterns (Ingelhart & Oyserman 2004; Welzel & Beugelsdijk 2018). Based on this, it is reasonable to believe that the results of application of one framework would not totally contrast the results of the application of the other framework.

Inglehart major contribution to modernization theory is extensive, but for the sake of this thesis, his work can be summed up in two major contributions. Firstly, in *Silent revolution in Europe* (1971) Inglehart launches the dynamics describing how modernisation drives changes in fundamental values. This was a shift from materialistic to post materialistic values. Values are developed in the socioeconomic setting of each generation, contributing to a generational value gap. This generational gap has proven persistent since people's values change slowly (Welzel 2013). This was further developed into the Evolutionary Emancipative theory by Welzel. The dynamics of value change is further developed in the utility ladder of freedom. Material changes results in the possibility to utilise some freedom, and the realisation that one can utilise this make one value this freedom. To ensure the protection of this freedom, like-minded join in solidarity to promote institutionalisation of this freedom. Couse freedoms are most secure if they are widespread, hence people's values shift in favour of universal freedoms. This sums up the utility-value link which is important to understand the mechanism behind widespread support for emancipative values (Welzel 2013).

Secondly, Inglehart's work also constructed the two value dimensions, the Sacred-Secular rational dimension and the survival/self-expression value dimension. Emancipative values are Welzel development of Inglehart's self-expression values. According to Welzel (2013) emancipatory values are people's motivations for freedoms and are a result of a process where increased resources create a utility for certain freedoms, following a shift in values for these freedoms and this end up in demanding the institutionalisation of these freedoms. Welzel sums

up emancipation with a paraphrasing of Immanuel Kant. "*Emancipation is people's liberation from external domination"* (ibid:57). Emancipations is understood as freeing people of external constraints and emancipatory values reflect the will to act in one's own agency. This is a collective struggle, because to institutionalise the protection of one's freedoms means protecting all individuals' freedoms (at least in the same polity). According to Welzel *"The human empowerment process would be complete if the sole remaining constraint on everyone's freedoms is everyone else's equal freedoms"* (ibid:38).

Individualism is a constantly repeated concept that differ between authors, sometimes drastically. Welzel (2013) explores the relationship between emancipative values, individualism, and pro-civic orientation. In pro-civic orientation (1) unselfishness, (2) trustful and (3) humanism is considered key elements. Unselfishness is understood as valuing others well being as well as the environment. In another term one concerns transcends the one's own person (ibid:196-198). Trustfulness is understood as generalised trust, that includes trust in others that are close as well as unknown (ibid: 199-200; Welzel & Delhey 2018). Humanism is understood as "resists judging people by their origin and instead welcomes human diversity" (Welzel 2013:200). Contrary to some, Welzel argue that individualism is combined with pro-civic orientation like unselfishness. Individualism should be understood as autonomy, emancipation from collective constrains. This combination of individualism and pro-civic orientation is described as benign individualism.

3.2. Pandemic and values

The literature often refers to value dimensions or cultures based on a collectivist – individualism dimension, sometimes the very same designed by Hofstede, sometimes a more contextual version. As noted, earlier concepts of individualism are strongly related to emancipative values, although not entirely the same. Individualism comes in many forms, as seen in the previous section, and in empirical studies this diversify further.

In a working paper for the National Bureau of Economic Research (Bazzi, Frisbein & Gebresilasse 2020) the historical legacy of frontier community (during the 19th century) in American counties effects on response to the pandemic are explored. The results indicate that both self-imposed distancing and government response to pandemic correlates negatively with this legacy. This is explained by a combination of individualism and anti-statism, a value package the authors call "rugged individualism". This study defines individualism in a more self-centred way (than for example Welzel's (2013) benign individualism) and this individualism is a negative influence on attempts to lower spread of COVID-19. They put it like this:

"The primacy of personal goals over group goals and the regulation of behaviour by personal attitudes rather than social norms… are likely to weaken voluntary social distancing and mask use" (Bazzi et al 2020:2).

The individualistic values considered here are closer to what others call selfish orientation or self-enhancement (see Welzel 2013:199). "Rugged individualisms" second aspect is the anti-state involvement values and corresponding low trust in government. This is also an explanation for lack of compliance with government health restrictions (Bazzi et al 2020). Hofstede (2011) argue that individualism is more self-centred in this way but Welzel (2013) does not agree and argue that the pursue of individual freedoms is not necessary combined with selfishness.

Following on a related logic. Another study compares mobility changes (as measured by Google) and restrictions (Oxford government response tracker) on country level. The results indicate that collectivist countries do better than individualist, Hofstede´s culture dimensions, but also that autocratic countries are less efficient than democratic in reducing mobility with the same level of restriction. Autocratic countries also employ harsher restrictions compared to democracies (Frey, Chen & Presidente 2020). This indicates that the presumed connection between values and restrictions needs to be accounted for. Furthermore, it singles out regime type as an important controlling factor.

In a study of US during the swine flu epidemic shows that people are less positive to self-constraining measures like staying home from work and school or closing churches and stores. The respondents were more positive to extensive actions, like closing borders, with less clear direct effect on everyday life. More appreciated was measures like supporting home care and medicine access (Hilyard et al, 2010). This indicates that direct personal costs are harder to accept than more abstract societal costs. It would be reasonable to expect that the same logic will hold for the subsequent COVID-19 pandemic.

Inglehart and Oyserman (2004:6) writes that "*Individualists balance off relationships' costs and benefits, leaving relationships when the costs of participation exceed the benefits*". Individualism is a popular explanation for the preference to opting for less precautionary action, like the example with rugged individualism (Bazzi Frisbein & Gebresilasse 2020). However, the results are not entirely conclusive. From earlier we noted that all individualism is not self-centred, like the case of benign individualism (Welzel 2013). Furthermore, other also find higher social capital being related to more individualism. This pattern is found both within US, on state level, as well as globally by country comparison. This relationship is explained as that by becoming more individualistic we become more specialized and therefore more dependent on interactions and cooperation with others in our society (Allik & Reallo 2004). Following this, counties in the US that have higher average trust in science, more urban, higher education, and higher income people, they employed higher levels of self-distancing (lower mobility) in early COVID-19 pandemic. This leads the authors to suggest that it would be more efficient to target the areas with low self-distancing to avoid nationwide lockdowns (Brzezinski, Deiana, Kecht & Dijcke 2020).

3.3. Alternative explanations

To evaluate the influence values have on affected by COVID-19, one must take the level of restrictions into account, given it´s centrality in the debate the last year. An early March report from Imperial College (Fergusson et al 2020) warned for extremely high death numbers if the COVID-19 was not addressed with restrictions. This report suggested several restrictions including school close, isolation of cases, household quarantine and social distancing for elderly (70 years +). This with the aim to "flattening the curve, reducing peak incidence and overall deaths" (ibid:7). Nearly all counties imposed some form of restrictions early spring 2020, as a reaction to COVID-19. Indeed, in many countries restrictions was imposed before COVID-19 was very established in each society (Hale et al 2020a).

While the surveys that are the material for emancipative values are conducted, almost exclusively, before the pandemic, the restriction are a reaction on the pandemic and reported continually over the pandemic (Hale et al 2021). The rising number of affected of COVID-19, or the fear of the same, initiated the first restrictions quite simultaneously across most countries.

49 countries did employ high stringency restrictions, often referred to as lockdowns, before they had a confirmed death in COVID-19 (Hale et al 2020a:3-5). These restrictions had some effect on the affected, at least on personal mobility (Frey, Chen & Presidente 2020; Hale et al 2020a:5-7: Fergusson et al 2020:7-9). How COVID-19 continued to develop caused reactions from the governments, whereby they adjusted the restrictions. These variables both theoretically and empirically are related in a circular pattern. While realizing that this makes the restrictions a problematic predictor, the alternative, not to model for government restrictions, must be considered worse. Here it is important to remember that the aim for this thesis is not to establish the effect of restriction on directly affected, but the effect of values. And the effect of values, as discussed above, will be possible to evaluate with these conditions.

In modern societies out group trust is important for a large society to operate well. This since everyday interaction often include people that are unfamiliar with each other. Welzel and Delhey (2015) explore how outgroup trust emerge independent of in group trust. The driver of out-group trust is emancipatory values. This they call transcendent outgroup trust, to be separated from derivative outgroup trust that emerge from in group trust. Modernization creates the conditions for transcendent outgroup trust by making outgroup interaction relatively more important in peoples lives meanwhile the ingroup power relationship weakens. This explanation relies on Evolutionary Emancipation Theory (Welzel 2013), where modernization through changes in material conditions brings people utility for rights and norms that protect individuals to make life choices. This brings a shift in people's values to support rights and norms that in turn results in the institutionalisation of new freedoms. The core mechanism is the utility-value function, people will demand freedom they perceive they can utilize. Welzel and Delhey (2015) find support for that outgroup trust can grown independently of ingroup trust with emancipatory values as a facilitator. A reoccurring explanation to collective action is social capital or trust. One study in Taiwan connects three different social capital indicators to influenza precautions (Chuang, Huang, Tseng, Yen & Yang 2015). Moreover, a study in the US also show that high trust counties conform to more voluntarily actions (Brzezinski, Deiana, Kecht & Dijcke 2020).

In a democracy government are responsive and constitutionally bound, thus should be less likely to apply strict policy that violate rights and freedoms. More democratic countries tend to adopt less stringent restrictions and adopt them later. But stronger democracies also seem to be more recipient to influence of neighbours and follow their lead (Sebhatu, Wennberg, Arora-Jonsson & Lindberg 2020). While democratic regimes overall choose less stringent restrictions, the efficiency of the same level of restrictions was higher in democracies compared to autocracies, as measured in reduced mobility (Frey, Chen & Presidente 2020). Also, populist governments in competitive electoral systems seem to be less likely to enforce to unpopular restrictions (Bayerlein, Boese, Gates, Kamin & Mansoob Murshed, 2021).

Overall, the Varieties of democracy institute reports that autocratization continued in 2020 and several reported violations of rights connected to government action against COVID-19 (Alizada et al 2021). Since we have seen a democratic backsliding the last decade (Lührmann & Lindberg 2019) it is important that we take recent regime type into consideration. Yet, a V-Dem working paper Maerz, Lührmann, Lachapelle and Edgell (2020) explore governments violations of democracy and rights when addressing COVID-19. Regime type does only moderately correlate with democracy violating government action, and the violations does not seem to influence the number of dead either.

4. Research design

In this section the theoretical framework is described, hypothesises are formulated and some limitations are discussed. The following section methodology will thereafter go into detail with the analysis and how it is conducted.

4.1. Theoretical framework

The theoretical framework is drawn from Evolutionary Emancipative theory. The central argument is that the utility-value link will make emancipated societies more reluctant to reduce the rights to utilise freedoms. People do value freedoms because they can utilise them, it is important in their lives. Freedoms are best guaranteed when they are universal, since you make sure that they apply to you to that way. Therefore, emancipated societies will act to reduce voluntary action to reduce COVID-19 and those directly affected by it.

By the choice of framework, the concept that capture liberty-oriented values will of course be emancipative values. This is also a practical choice, since values change slowly, several surveys made by World Value Survey and the associated European Value Study can be used as material.

In the previous section I touched on the question of self-enhancing or benign individualism. I argue that accepting benign individualism does not change the argument above. In emancipated societies freedoms and the right to exercise them universally are valued. This is sufficient for expecting resistance to change behaviour in a way that limit freedoms. Of course, the same result would be possible to assume from self-enhancing individualism. People do not act if it does not suit their interests.

The argument above has been made with regard to voluntarily action, but the same logic can be applied to government enforced restrictions. The same individuals that might be less willing to employ self-restrictions might also cut corners when it comes to government restrictions. There are several ways the combined effect of restriction and emancipative values can be modelled to explain the number of directly affected by COVID-19. In themselves, the aim of restrictions are to lower (or obliviate) the quantity that get infected (Fergusson et al 2020). As establish earlier, restrictions might be affected by values, possibly in both in efficiency and policy stringency (Frey, Chen & Presidente 2020). For the aim of this thesis two models are chosen:

Firstly, to evaluate the direct effect of values on the number of directly affected, restrictions can be used as a control variable to model for alternative explanation for variations in directly affected.

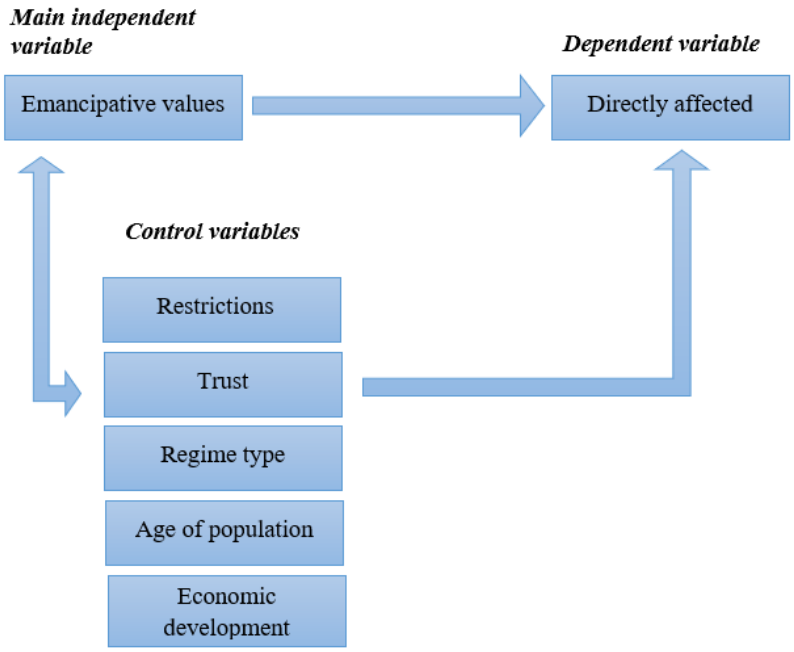
Secondly, to examine the effect values has on the efficiency of restriction, an interaction can be modelled. The purposed relationship here is that higher emancipative values will make people less prone to follow restrictions hence the marginal effect of more restrictions differs for different levels of emancipative values.

4.2. Hypothesises

My assumption is that emancipative values will result in higher number of directly affected by COVID-19. People in these societies are not more selfish per se, but because they both utilize and value freedoms higher compared to others (Welzel 2013). This should both have a direct effect and indirect effect via the compliance with restrictions.

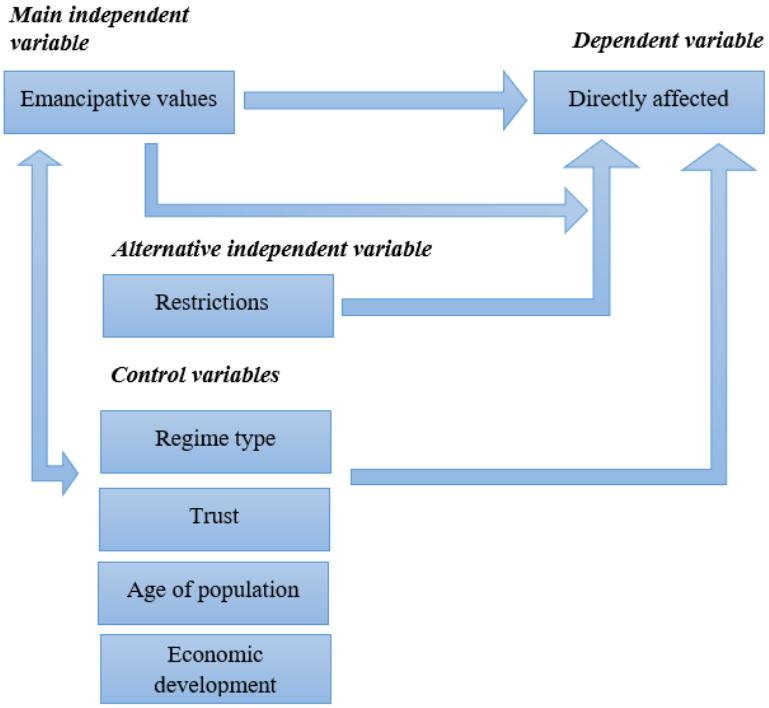
H1: Higher emancipative values result in higher numbers of total deaths. (See Figure 1).

Figure 1



H2: Higher emancipative values have a moderating effect on restrictions resulting in higher marginal effect on the total number of deaths. (See Figure 2).

Figure 2



4.3. Limitations

As a model is a simplification of reality, all possible aspects cannot be included, hence we must resort to choosing the most relevant, testable, and correctly specified model. This unfortunately includes choosing not to include some factors, and these choices are motivated in this section.

Firstly, I have chosen not to include a geographical variable, this because of the high correlation with several other predictors. Variations in emancipative values, trust and regime type are rather geographically bound. The highest concentration of liberal democracies is found in western and northern Europe and the same area score high emancipative values and overall high trust. Indeed, emancipative values are largely explained by geographically bound factors, for example common history or the cold-water condition put forward in the evolutionary emancipative theory (Welzel 2013). It is therefore better to use the actual value, trust, and regime differences as predictors, they will automatically capture the important geographical differences. Some geographical matters are not fully covered in the model by this, for example the countries with a geographical position to early isolate themselves successfully, like New Zeeland (Sibley et al 2020). This is however hard to create in an unbiased way and this potential factor will be a limitation to this model.

Secondly, even though the classical grouping of societies in Inglehart and Welzel builds on the two-dimensional value system of emancipative values (prior self-fulfilment values) and sacred-secular values, the inclusion of both does not seem suitable. Like the argument above concerning geographical controls, the tight relationship with the other predictors makes it obsolete.

Thirdly, political affiliation has been suggested in the US to matter (Barrios & Hochberg 2020) and this pose the question if political affiliation matters globally? It might, but it is hard to take the contextual factors of different party systems into account and make it a fair global predictor. This variable is more suitable for with country analysis.

Fourthly, for the purpose of this thesis, I have omitted one possible relationship concerning emancipative values, restrictions and affected by COVID-19. That is, the direct relationship where emancipative values effect level of restrictions, thus in turn having an effect on the number of affected by COVID-19. This is an interesting and testable relationship, however it drifts to far from the purpose stated earlier and are beyond the scope of this thesis. It has also been discussed by Frey, Chen and Presidente (2020), who urge for more research on the matter.

5. Method & Material

5.1. Statistical analysis

The preferred method is computer aided statical analysis, performed with the software STATA. Both bivariate and multivariate regression analysis will be used. The cases in this analysis are countries, and at one single point in time, thus all multilevel and time-series methods are irrelevant. This is suitable since the dependent variable is on a continues scale, as most independent variables are. Furthermore, interaction/moderating techniques will be used to tackle combined effects of predictors. In the section "Regression analysis robustness discission" the concrete application of these techniques will be described as well as the statistical soundness of the model and predictors. This discussion is important for the valuation of the results.

5.2. Material

A combination of data sources will be used. The dependent variable is provided by a data set collected by John Hopkins University (Dong, Du & Gardner, 2020), composed by Martins School, University of Oxford (Roser, Ritchie, Ortiz-Ospina & Hasell, 2020) this includes various measurements on confirmed cases and deaths in COVID-19 for almost all countries in the world. This dataset collects data from several sources, WHO, government agencies, John Hopkins University and more.

This brings us to the stringency index, the main predictor from the Government response tracker, Blavatnik School of Governance, University of Oxford (Hale, Angrist, Cameron-Blake, Hallas, Kira, Majumdar, Petherick, Phillips, Tatlow & Webster 2020), also provided in the dataset by Martins school (Roser et al, 2020). This predictor is made up of eighth restriction areas that construct an index. This stringency index is available for most countries and some other territories in the world.

The second main data source is the World Value survey (WVS) (Inglehart, Haerpfer, Moreno, Welzel, Kizilova, Diez-Medrano, Lagos, Norris, Ponarin & Puranen et al. 2020; Haerpfer, Inglehart, Moreno, Welzel, Kizilova, Diez-Medrano, Lagos, Norris, Ponarin & Puranen et al. 2020) and the European value survey (EVS) (European Values Study 2017). The WVS wave 6 and 7 together with EVS wave 5 collet data on individuals from almost 100 countries during the last decade.

The third main material is the Variates of Democracy dataset (Coppedge et al 2021) from 2021, measuring the regime related data in all countries during 2020 (Pemstein et al 2021).

5.3. Operationalisation

5.3.1. Directly affected of COVID-19

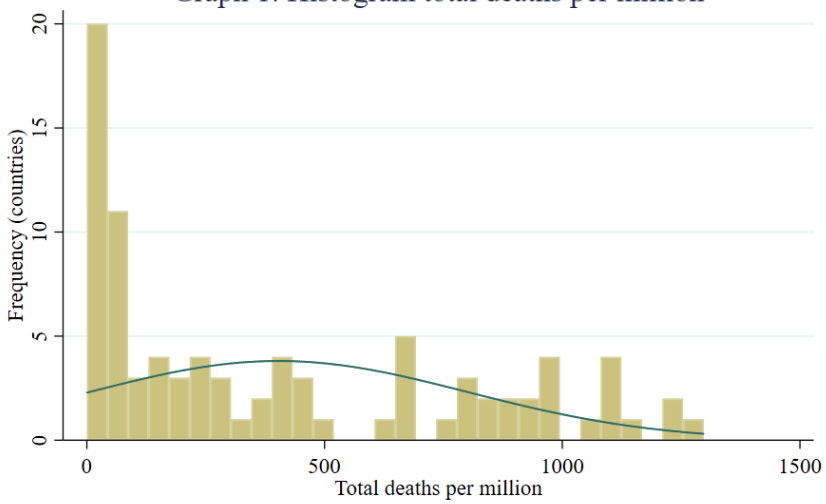
There are several possible ways to measure those directly affected by COVID-19. Firstly, the number of confirmed cases in a country. This is considered having major problems with comparability, countries have different testing policy and capacity varies too. More comparable is number of fatalities in COVID-19, as deceased are normally controlled by some authority. However also in this practice countries can differ and thus also create issues with comparability. The last way is to compare excess-mortality, the difference between 2020 and earlier years in total mortality. Since COVID-19 can be characterized as an external chock, the difference between the years should correspond to the impact of the pandemic. However, it is possible that some restrictions aiming to reduce COVID-19 also reduces usual diseases thus boosting the effect on excess mortality. Also, excess mortality is affected by many other contextual factors

that also might vary between countries and is hard to control for. Both confirmed deaths and excess mortality does of course measure fatalities rather than infected. This is not a problem for the analysis per se, rather something to keep in mind discussing the results.

The confirmed *total deaths per million* have been chosen as the measure for the dependent variable. Data for *total cases* and *deaths* are collected by John Hopkins University (Dong, Du & Gardner 2020) and provided by Martin School, Oxford University (Ritchie 2020). The values chosen are the maximum *total deaths per million* reported during 2020, in most cases the figure is reported the last days of December 2020. The excluded alternative *total cases per million* are calculated in the same way and provides a somewhat different results, this is discussed further in the section *Regression analysis robustness discussion* and regression tables are found in appendix C.

This histogram shows the distribution of the dependent variable "total deaths per million" including the 88 final countries in the analysis. A normal curve has been added for distribution comparation.

Graph 1: Histogram total deaths per million



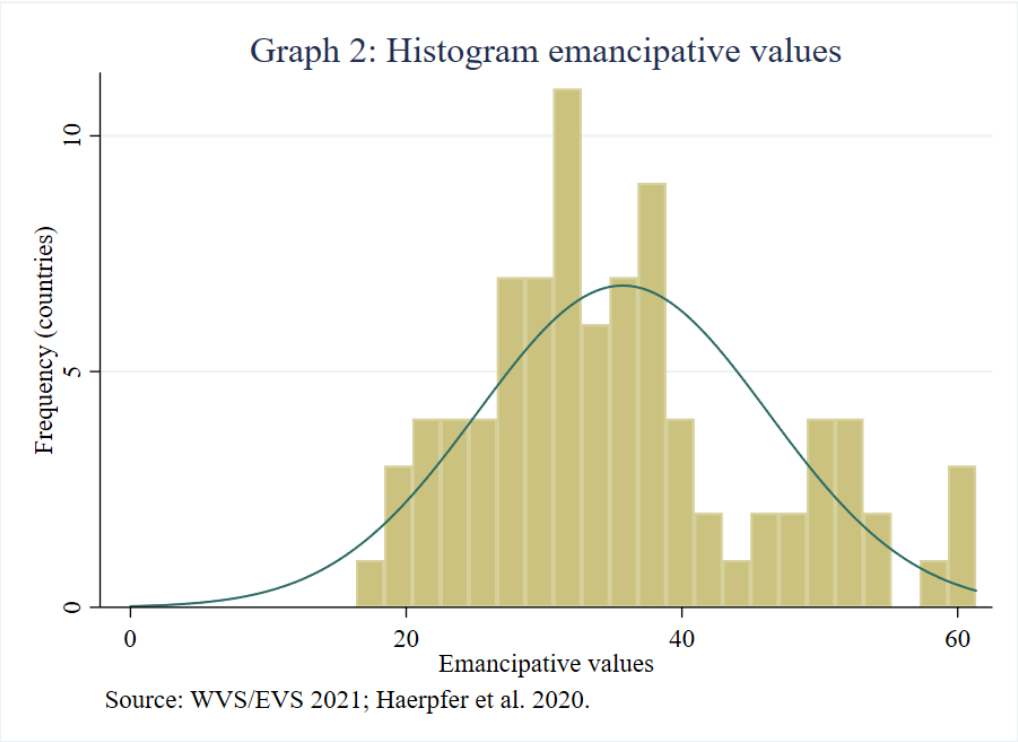
Source: Dong, Du & Gardner 2020.
Distribution of frequencies with a normal curve for comparison.

5.3.2. Emancipative values

Emancipative values are constructed according to the instructions found in Welzel (2013) online appendix (2013:15-27) as well as on WVS website (Welzel 2020). Emancipative values are constructed by items reoccurring in both WVS and EVS datasets. Since values change slowly, I find it suitable to use data from the most recent of last decades surveys. This means the WVS wave 6 and the joint WVS wave 7 and EVS wave 5. If a country occurs in WVS7 or EVS5 I use data from these surveys. If a country does not occur in WVS7 or EVS5 (EVS/WVS 2021) I use data from WVS6 instead (Haerpfer et al. 2020). If a country does not occur in neither of these three surveys they are excluded.

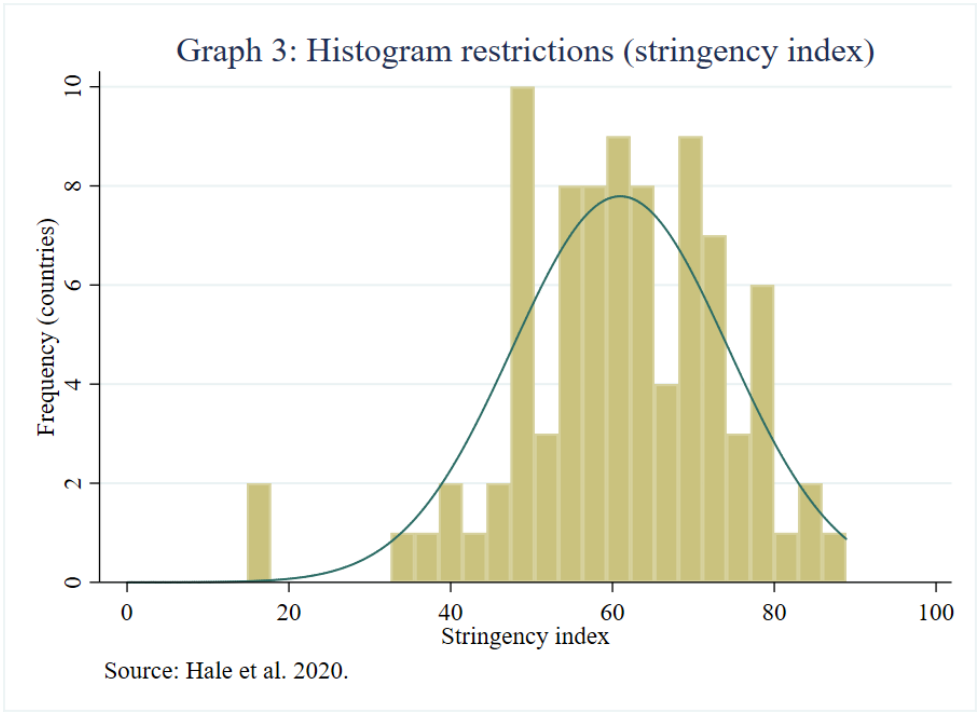
Emancipative values are constructed as an index ranging from 0 to 1 on an approximately continuous scale. For the analysis this is changed to a scale ranging from 0 to 100, also on an approximately continuous scale. This is simply achieved by multiplying both indexes with 100. This is to make comparing easier, as stringency index range from 0 – 100. Also, interpretation of the coefficients will be more clear if the independent variable and the control variables have

the same theoretical range. This could of course be archived by rescaling stringency index to 0-1 scale also, but I admittedly arbitrary find the range 0-100 more pleasant and more intuitive.



5.3.3. Restrictions

Restrictions are a wider concept and is an extensive and time-consuming work to do on your own. Luckily, a group of scientists (Hale et al. 2021) at Blavatnik School of Government, Oxford University, has collected data on the matter already. The Oxford Government Response tracker measure government actions that are associated with COVID-19 restrictions (Hale et al



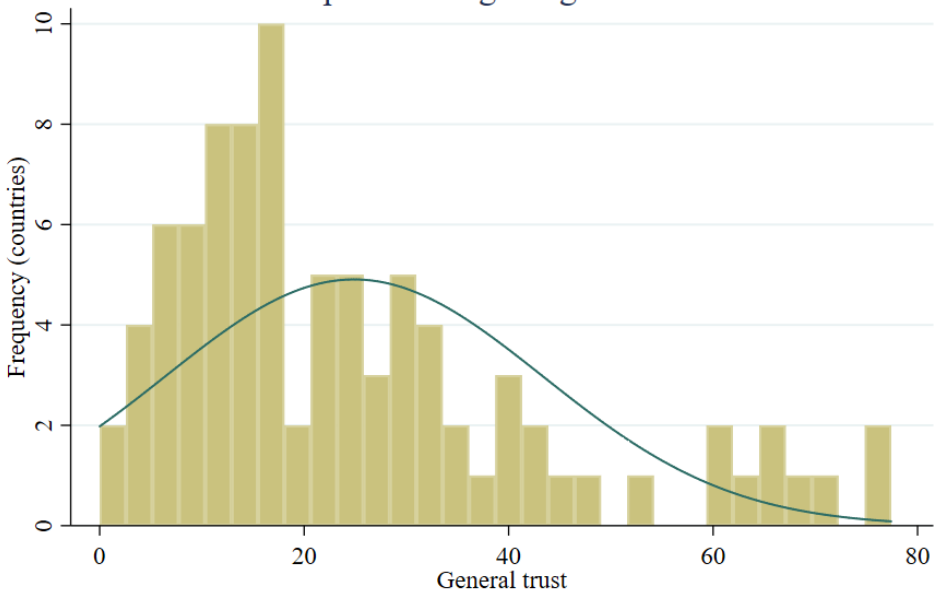
2020b). These are quantified by a score on the Stringency index, ranging from 0 to 100. The values used in this thesis is the mean over the reported values during 2020, from the first reported case in each country.

The use of an index instead of the subordinated predictors that make up the index comes of two reasons. Firstly, our theoretical framework would need to be further developed to give a firm ground for modelling the expected outcome of each of the eight different stringency predictors. Secondly the adding of this into the model would not aid the answering of the research question. A more in-depth study of the eighth stringency predictors is a valid enterprise but does not fit in the scope of this thesis.

5.3.4. Trust

There are many ways to measure trust, by singular items or by more or less complex indexes. I have chosen to use a singular item to provide transparency and clarity. Trust is based on the general trust question "Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?", (EVS/WVS 2021; Haerpfer et al, 2020) with the answers "most can be trusted"/"need to be very careful" and are simply constructed by the country mean of all individuals. The country mean is converted to a 0-100 scale and can be described as approximately continuous.

Graph 4: Histogram general trust



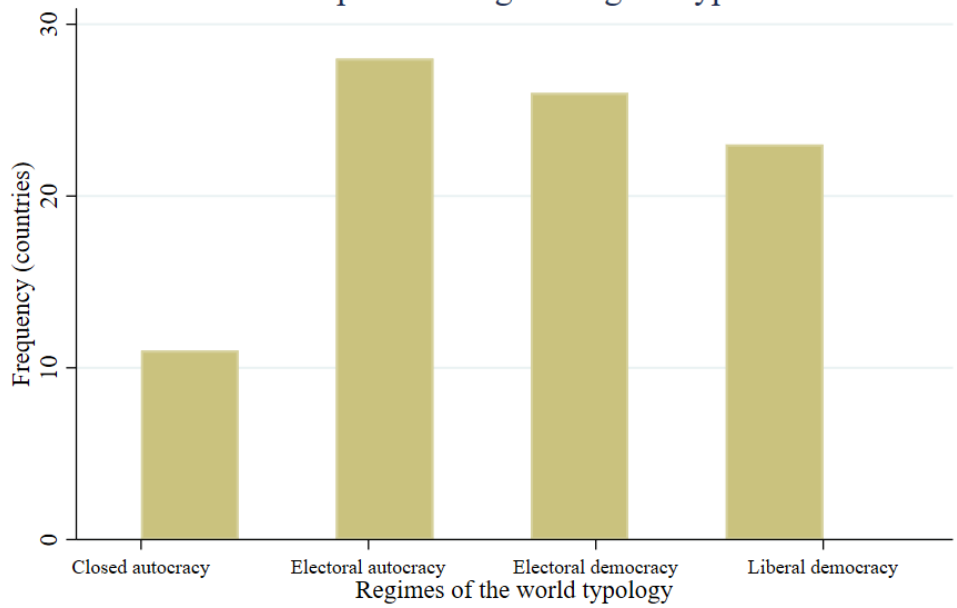
Source: EVS/WVS 2021; Haerpfer et al. 2020.

5.3.5. Regimes

Regimes are constructed by the pre-pandemic measure by V-Dem institute. The regimes of the world 4-scale regime typology are used. This typology offers a categorization with clear lines between the regime types that still take many important factors into account. The typology is based on regimes actual performance and operationalised with the V-Dem extensive material. The typology has two non-democracies, *closed* and *electoral autocracy*, and two democracies, *electoral* and *liberal*. What set them apart is the country's democratic progress. The difference, in short, between closed and electoral autocracy is that the latter has elections, albeit not entirely free and fair, while the former does not. For a country to qualify as a democracy the conditions for Dahls polyarchy must be met. For a democracy to qualify as a liberal, compared merely electoral, certain liberal institutions need to be in place (Lührmann, Tannenberg & Lindberg 2018). I find this typology more intuitive, theoretically robust, and transparent compared, for example, to Freedom House typology "Not free", "Partly free and" "Free" (Repucci & Slipowitz 2021). I also find the Regimes of the World typology a more theoretical robust operationalisation than just using a continues index, like the Electoral democracy index, because the typologies build on more conditions than just being above the threshold on one index. It is also more easily interpreted.

In Graph 5 we see the distribution of regimes according to this typology. The number of closed autocracies are 11, electoral autocracies are 28, electoral democracies are 26 and liberal democracies are 23. In total 39 autocracies and 49 democracies in this sample, in the whole population there is 88 autocracies and 92 democracies. Hence there is a slight overrepresentation of democracies in the sample. Another argument to control for regime type.

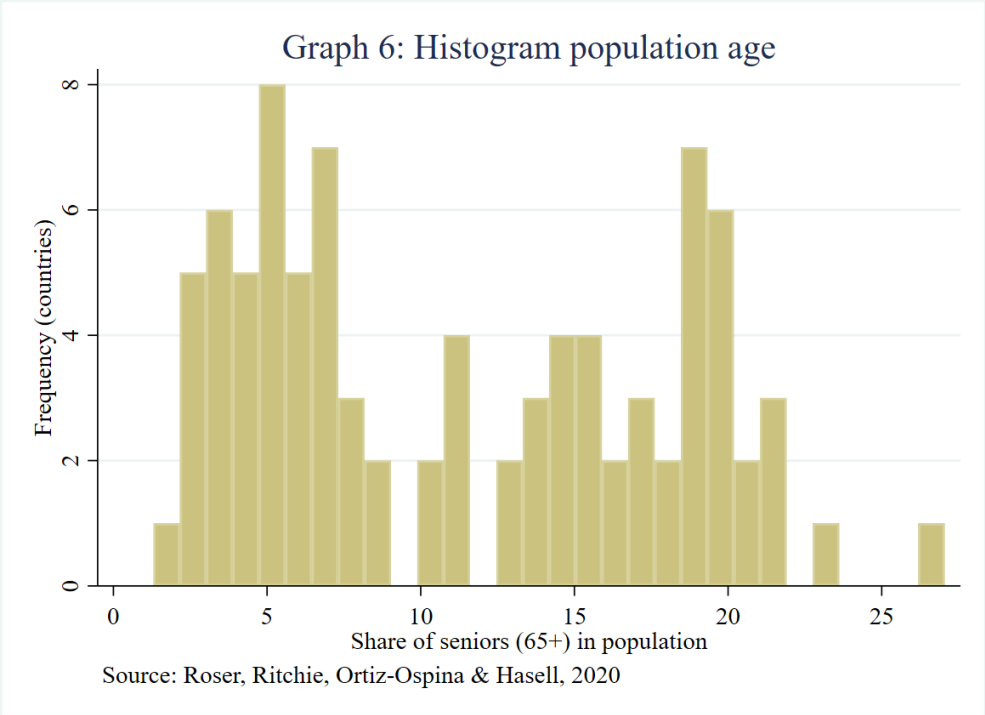
Graph 5: Histogram regime type



Source: Coppedge et al 2021.

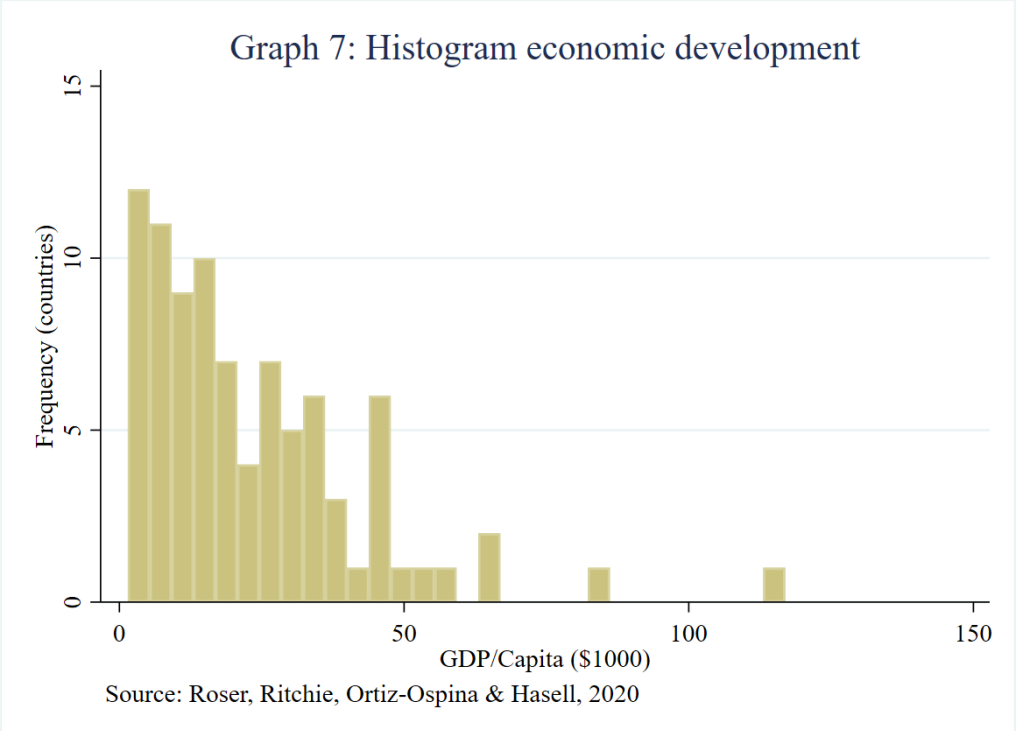
5.3.6 Age of population

The part of population that are seniors, expressed as percentage from 0-100. This variable is access through the same Martin school dataset as stringency index and the dependent (Roser, Ritchie, Ortiz-Ospina & Hasell, 2020). Originally the data comes from the World Bank.



5.3.7 Economic development

This is expressed as GDP per capita, originally from the world bank accessed through Martin school's dataset (Roser, Ritchie, Ortiz-Ospina & Hasell, 2020). The variable is the gross domestic product at purchasing power parity anchored in 2011 US dollars. The variable is transformed to express $1000 per capita.



5.4. Descriptive statistics

In Table 1 all variables descriptive statistics are summarised. The 5th, 25th, 50th, 75th and 95th percentiles are included to give a sense of the distribution that also has been illustrated in Graph 1-5. In Table 2 correlations are presented between pairs of variables. Notably emancipative values, share of seniors and regime type has a moderate positive correlation with the dependent, total deaths per million. Please also observe that in the case for the correlation regime type has been treated as an approximately continuous variable, although later will be treated categorical. Stringency index has a weak positive correlation with the dependent and trust is very weakly negatively correlated with the dependent. Emancipative values and stringency are moderately negatively correlated. The main independent variable, emancipative values, is moderate highly correlated to share of seniors, GDP, trust and regime type. These relationships are expected since it has occurred in the literature before (Welzel 2013). In the next section the robustness of the models will be discussed.

Table 1: Descriptive statistics

	Mean	SD	Min	5th	25th	50th Percentile	75th	95th	Max
Total deaths per million	403.06	398.94	0.36	4.96	47.68	238.60	769.81	1090.32	1297.30
Emancipative values	35.71	10.52	17.94	21.38	28.61	34.19	39.65	53.59	61.34
Stringency index	60.97	13.35	15.14	40.12	52.89	61.55	70.91	79.01	88.90
Share of seniors (65+)	11.35	6.57	1.31	2.92	5.33	10.86	17.61	21.21	27.05
GDP/capita	23.29	19.82	1.47	1.90	8.11	17.61	32.51	57.41	116.94
General trust	24.89	18.47	2.14	4.54	11.88	18.81	32.08	65.77	77.42
Regime	1.69	1.00	0	0	1	2	3	3	3

Note: This is the summative statistics for each variable during the condition that all other variables have values for each value point, i.e., all countries are represented. This is to ensure comparability with the discussion in the section *Result*. N=88. Source: Coppedge et al 2021; Dong, Du & Gardner 2020; EVS/WVS 2021; Haerpfer et al 2020; Hale et al 2020b.

Table 2: Correlation matrix

	Total deaths per million	Emancipative values	Stringency index	Age (part of pop over 65)	GDP/capita	General trust	Regime (autocracy to democracy)
Total deaths per million	1						
Emancipative values	0.326	1					
Stringency index	0.121	-0.320	1				
Share of seniors (65+)	0.480	0.640	-0.441	1			
GDP/capita	0.135	0.549	-0.213	0.441	1		
General trust	-0.032	0.670	-0.429	0.511	0.563	1	
Regime (autocracy to democracy)	0.381	0.659	-0.273	0.675	0.345	0.365	1

Note: Regime is a four-scale categorical variable but is here treated as an approximately continues to work in a correlation matrix. Hence it is a linear approximation with closed autocracy as the lowest value and liberal democracy as the highest. In the analysis however Regime is treated as a categorical variable.
Source: Coppedge et al 2021; Dong, Du & Gardner 2020; EVS/WVS 2021; Haerpfer et al 2020; Hale et al 2020b.

5.5. Regression analysis robustness discussion

The models are performed with a regression technique called *ordinary least squares (OLS),* a method suitable because we use continues and approximately continues variables. This method has several assumptions that must be reasonably fulfilled. Firstly, the model has to be correctly specified, meaning that all variables have to be relevant, and all relevant variables should be included. This includes that the variables should have a linear relationship, that it could be expressed with the slope of a straight line. Otherwise, we must create linearity through some measures. Secondly, the independent variables should not be multicollinear, meaning that the explaining variables should not be strongly correlated. One threshold is correlations over 0.8, where 1 is perfect correlation and 0 is no correlation. Thirdly, OLS assumes homoscedasticity, that the error term has constant variance. This means that we have no significant trend within the error term that could skew the results, called heteroscedasticity. Heteroscedasticity can be tackled with robust standard errors, that gives a penalty to the model and larger standard errors to compensate for this imperfection. Fourthly, that the error terms have a mean of zero. This is a property that comes as default in a OLS regression. Fifthly, uncorrelated error terms, that largely is a problem for times series, panel data and multilevel data. Sixthly, errors are assumed to be normally distributed. Not here that the variable itself does not necessarily has to be normally distributed, but the error terms rather. This is especially important in small samples. Lastly, we must study influential cases (sometimes called outliers). These cases have a larger influence on the model due to their oddity compared to the other cases. Even though it is not suitable to simply drop influential cases it is important to discover who they are and discuss the potential effects on the model (Mehmetoglu & Jacobsen 2017).

Table 3: Regression diagnostics for Model 1-11

	Specification (linearity/curvilinearity)	Multicollinearity	Homoscedasticity	Normal residuals	Functional form	Influential cases
Model 1	OK/NO	-	NO	OK	-	0
Model 2	NO/NO	exponential	NO	NO	OK	0
Model 3	NO/NO	exponential	NO	OK	NO	0
Model 4	OK/OK	OK	NO	OK	NO	0
Model 5	OK/NO	OK	NO	OK	NO	0
Model 6	OK/NO	exponential	NO	OK	NO	0
Model 7	OK/OK	OK	NO	OK	OK	0
Model 8	NO/OK	interaction	OK	OK	OK	0
Model 9	OK/OK	interaction	NO	OK	OK	0
Model 10	OK/OK	interaction	NO	OK	NO	0
Model 11	OK/OK	interaction	NO	OK	OK	0

Models 2-11 are tested with STATA command *regcheck*. Model 1 is checked with *linktest, estat hettest, sktest* and influential cases using leverage/hat statistics and Cook´s distance. All values that are acceptable without comment are denoted OK except influential cases that simply express the number above the Cook´s distance threshold. NO express that the threshold was not met. The specification test (linktest) first part-test if the model has good linearity and second part-test if there might be curvilinear function rather than linear. Exponential & Interaction express that the multicollinearity is due to the specification and unavoidable. "-"express that the test was not suitable for a bivariate regression, *regcheck* only work on multivariate regressions.
Source: Coppedge et al 2021; Dong, Du & Gardner 2020; EVS/WVS 2021; Haerpfer et al 2020; Hale et al 2020b.

As explained above in *Operationalisations*, confirmed deaths are chosen as operationalisation for the dependent variable. The main relationship with the alternative operationalisation

confirmed *total cases per million* as dependent is tested as a robustness check and holds for the bivariate Model 1, although with weaker significance and lower R^2 compared to the result presented in the following pages. Models 5, 8, 10 and 11 are insignificant (see Appendix C for details). This indicates that the results are less stable with other operationalisations of the dependent and should be considered.

STATA can perform tests to check some of the assumptions and the result of these test are presented in Table 3. Models included are the same that occur in the regression tables (Table 4 and 6).

Starting with the assumption of linearity. In model 1 (Table 4), bivariate regression, we detect problems with linearity, more precisely we use build in test *linktest* in STATA with the result that we probably have a non-linear relationship. Investigating further the main independent variable, *emancipative values (EV)*, seems to have a curvilinear relationship to total deaths per million. This is adjusted for with an *emancipative value squared (EV^2)* variable in Model 2 (Table 3). This seems to not work either since the specification test still indicate curvilinearity, on top of that the test now indicate poor linearity. Adding some control variables[1] in Model 3 the linearity issues remain unsolved. A possible reason is that EV does not have a curvilinear relationship to the dependent, the effect is due to a unaccounted control variable. Adding trust and removing EV^2 solves the linearity issues (Model 4). The reason as seen in table 4 and appendix A, trust correlate negatively with the dependent thus high trust countries account for the suspected exponential relationship for EV. It was really an obfuscated effect of high trust countries being high EV countries as well. However further adding the last control variable, regimes, in the full Model 5 results in a curvilinear issue again. Two ways of handling this is presented. For one, the full model is rerun with a exponential EV added (Model 6) without any changes in the specification test. For two, controls are excluded, and apart from excluding regimes (as in Model 4) the specification problem vanish if share of seniors and GDP are excluded (Model 7).

Tests are also done for functional form and in Models 3-6 and 10 indicate problems. This should be interpreted as that there are non-linear combinations of the explaining variables that explain more variance than the current model. This could be addressed as re specifying the model with interactions or adding/excluding explaining variables. In Model 5 the functional form issues disappear if share of seniors is excluded[2] (Model 7) but remain if EV^2 are used to specify an exponential function (Model 6). Then interpreting the result in the next section of the thesis Model 5 is used instead of Model 7 because of the theoretical importance and size of coefficient for share of seniors. As mentioned earlier theoretical correct specification is also of great importance in statistical analysis. Further Model 10 also has specification issues. Model 9 does not have these problems and differ in control variables (trust, GDP and regimes are not included). Also Model 11, an exponential (EV^2) version of Model 9, does not have functional form issues. Here again, judgement is importance in interpreting these models.

Multicollinearity is not a problem in any of the models. Multicollinearity issues arise because of exponential curvilinear relationship modelled and/or because of interactions but this is expected an unproblematic. Both operations are by definition related since it measures joint

[1] Stringency index, share of seniors and GDP/capita.

[2] In Model 7 GDP is also excluded, however additional test not included in Table 3 & 4 show that GDP does not affect the functional form issue, only the linearity issue hence GDP is excluded in Model 7.

predictive power, hence not a problem for the model. Lastly, Model 1 has only one predictor therefore no multicollinearity.

Continuing with the assumption of homoscedastic error terms. Only one model (8) has homoscedastic errors, the other exhibits heteroscedastic errors. Therefore, all regressions are preformed with robust standard errors, hence lower the risk of faulty results. In practise this usually decrease predictors statistical significance.

Residuals are approximately normally distributed in all models except Model 2. Therefore, the result from that particular model has to be interpreted with caution. The last assumption to be tested is influential cases and according to the test no influential cases was observed (Cook´s distance threshold).

As an additional point, the number of countries/observations (N) for the study is 88. Originally 95 countries (and territories) were collected from WVS/EVS. This is because Armenia, Montenegro and North Macedonia does not appear in Oxford government response tracker. Furthermore Hongkong, Macau and Puerto Rico are omitted because has no separate reporting of total deaths per million. At last, adding regimes of the world typology from 2020 also excludes Andorra. This loss of seven cases should not have a major impact on the results although is regrettable since a larger N gives more stable results.

6. Results

The result will be presented in two parts. First, we discuss the results from the models without interaction. This section will start with a sequential build-up and motivation to the final model that represents the focal relationship presented in *Research design*. This model will be interpreted, and the results exemplified with predictions made from that model. Moving forward we repeat the same steps with the interaction models and end up with a preferred model for the moderated relationship presented in *Research design*. In appendix B all models are presented including stepwise introduction of controls for the reader who wish to consult them. All models are not selected to be presented in this section, rather the selected models that constitutes the basis for discussion in the results. The discussion is based on the models presented in Table 4 and Table 5, respectively. As a reminder the first hypothesis was *H1: Higher emancipative values result in higher number of total deaths.* And this first section tries to evaluate that statement.

6.1. Results part 1

Table 4: Regression results for emancipative values effect on total deaths per million

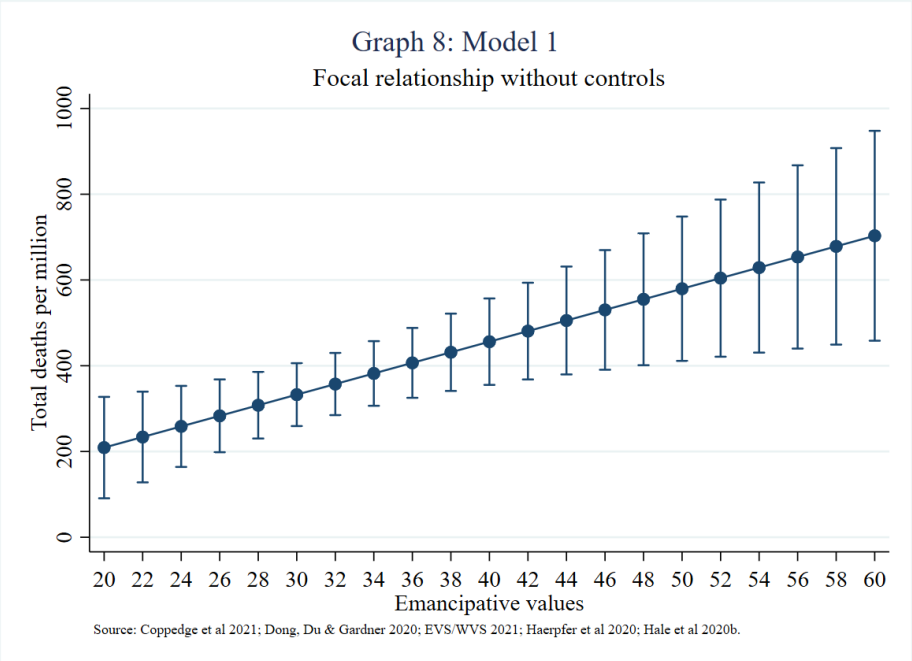
Model no	1	2	3	4	5	6	7
Emancipative values (EV)	12.350** (4.116)	78.896*** (19.627)	49.420** (17.210)	11.460* (5.519)	10.895* (4.914)	8.834 (19.253)	14.878** (5.587)
Emancipative values squared (EV^2)		-0.854*** (0.256)	-0.573** (0.216)			0.029 (0.281)	
Stringency Index			11.880*** (2.654)	9.553*** (2.430)	8.494*** (2.315)	8.468*** (2.379)	4.960* (2.118)
Seniors (share of population 65+)			36.118*** (7.499)	39.321*** (7.320)	34.825*** (7.524)	35.061*** (7.591)	
GDP per capita			-1.966 (1.572)	-0.228 (1.472)	0.634 (1.680)	0.643 (1.665)	
General trust				-9.117*** (2.771)	-5.270 (2.777)	-5.416 (3.178)	-2.713 (2.818)
Regime: base Lib. Dem.							
Vs. Closed autocracy					93.800 (115.047)	99.249 (137.394)	-171.612 (115.434)
Vs. Electoral autocracy					120.106 (117.248)	123.139 (123.778)	-92.253 (130.968)
Vs. Electoral democracy					339.820** (110.689)	342.864** (118.372)	303.881* (125.837)
Constant	-37.91 (134.37)	-1232.27*** (340.86)	-1656.70*** (363.40)	-802.54*** (226.22)	-932.93*** (265.79)	-899.06 (409.59)	-402.01 (260.88)
Observations	88	88	88	88	88	88	88
R^2	0.106	0.183	0.413	0.460	0.536	0.536	0.401
Adjusted R^2	0.096	0.164	0.378	0.427	0.489	0.483	0.356

Standard errors are in parenthesis

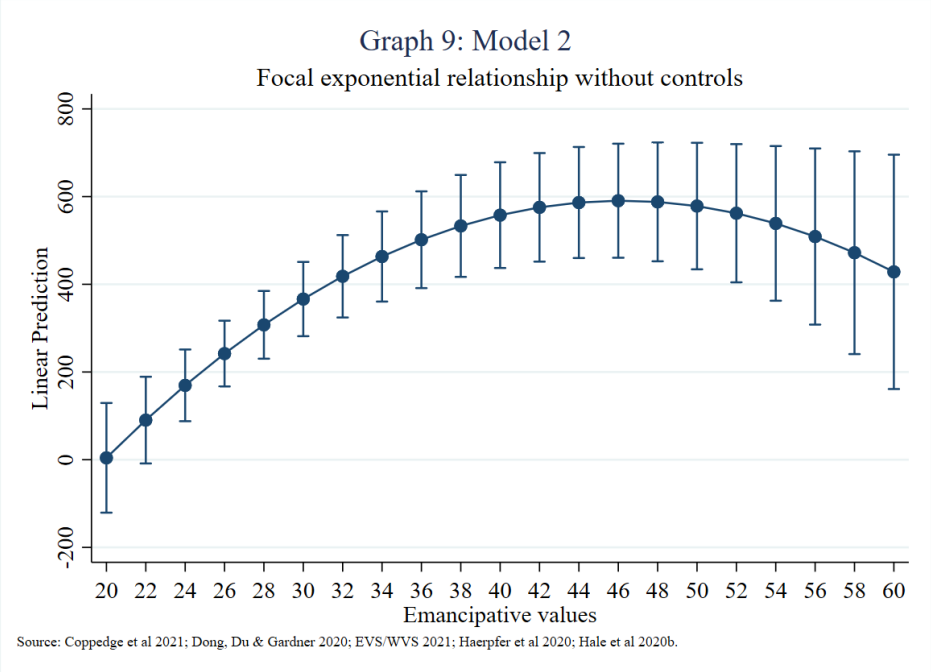
**** p<0.001, ** p<0.01, * p<0.05*

Source: Coppedge et al 2021; Dong, Du & Gardner 2020; EVS/WVS 2021; Haerpfer et al 2020; Hale et al 2020b.

The bivariate regression, Model 1, shows a positive coefficient, 12.35 (significant at the 99 percent level), indicating the number of total deaths per million a one-step higher emancipative values would result in. This is in line with H1, and the relationship is illustrated in graph 8. However as discussed earlier Model 1 has problems with linearity (see Table 3).



In Model 2, a variable is added, EV^2, to adjust the linearity issues in Model 1. This variable is EV squared hence exhibits an exponential relationship to EV. This added variable does not fully correct the problem with linearity although making it smaller. The exponential Model 2 explain more variance (higher adjusted R^2) than Model 1, which is understandable since it is a more complex modelling of the relationship. Note, this model does not fulfil the requirement of normal residuals, specification and should thus be interpreted carefully. The results of Model 2 is largely in line with the suggested focal relationship, although the curvilinear relationship might suggest a more nuanced modelling is needed. In graph 9 we can see the curvilinear relationship but also that the insecurity in model 2 grow larger with increasing EV.



Model 2 is however still a uncontrolled model. Adding restrictions (stringency index), share of seniors and GDP to Model 2 we gain Model 3. Model 3 largely gives us the same results as in Model 2, a positive relationship between EV and the dependent, coefficient 49.42 (significant at the 99 percent level) and a plateau or possible negative slope for high EV values due to a negative relationship between EV2 and the dependent, coefficient -0.57 (significant at the 99 percent level). Among the control's restrictions and share of seniors are positively correlated with and significant (at the 99.9 percent level). GDP[3] is not significant. Model 3 has problems with specification and functional form and therefore should be considered with care.

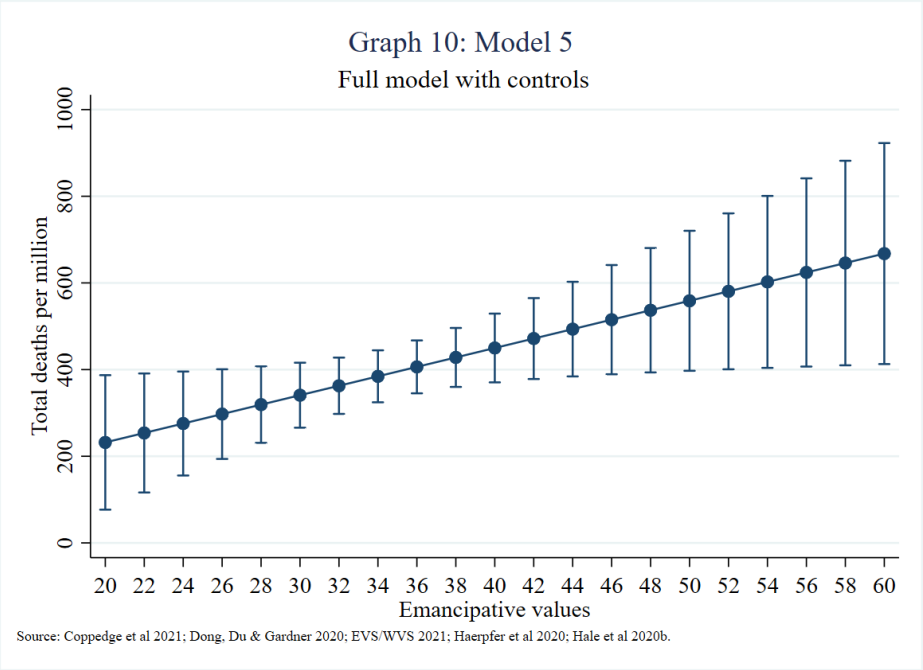
As mentioned in the robustness discussion, there might be an obfuscated effect of an unaccounted factor that form the curvilinear relationship of EV on the dependent (Model 2-3). As we see in appendix A, high EV countries score high on trust as well. In Model 4 trust has been added from Model 3 and EV^2 has be withdrawn. Trust has a negative relationship (significant at the 99.9 percent level) with the dependent and explain why high EV seem to have a negative slope. The linear prediction for EV is positive with a coefficient of 11.46 (significant at the 95 percent level). Restrictions and share of seniors remain positively related to the dependent and significant (at the 99.9 percent level). GDP is insignificant. The adjusted R^2 for the model is 0.427, to be considered as a moderate explanatory model. The results in Model 4 are consistent with H1. Model 4 has adjusted the specification problems found in Model 3, however remain problematic for functional form. Further regime type is not included in Model 4, adding this last control variable we gain Model 5.

Model 5 is the full model and EV, restrictions, share of seniors and GDP remains virtually with the same coefficients and are significant at the same levels. The main independent, EV, has a coefficient of 10.90 (significant at the 95 percent level) and consistent with H1. The effect of EV in Model 5 on the dependent is illustrated in graph 10. Trust however lose explanatory power and becomes statistically insignificant. Model 5 adds regime type as categorical control variable. In practise one category, Liberal democracy, is a base category that compares to the other three categories. There are significant differences to electoral democracy (at the 99 percent level) but no significance to closed and electoral autocracy[4]. The adjusted R^2 is 0.489, somewhat higher than for Model 4. Model 5 has two aspects from the robustness discussion worth to mention. Firstly, specification issues indicating possible curvilinear relationship and secondly functional form issues. To control for this Model 6 displays the full model with a EV^2, this as seen in Table 3 does not correct the problem and Model 6 therefore makes less sense to interpret as I have no other reasons for modelling a curvilinear relationship. The explained variance is marginally lower with a adjusted R^2 of 0.483. Worth notice is that modelling for squared terms inflate the insecurity in the model hence making EV and EV^2 insignificant, hence Model 6 is not consistent with H1. In a second attempt modelling with less control variables are tried, and the model that had no issues in the robustness discussion is Model 7, where share

[3] For robustness reasons GDP per capita was transformed to a logarithmic scale and the main models was rerun with the same results.

[4] The regression was rerun with electoral democracy as base value, and the differences between electoral democracy and both electoral autocracy and closed autocracy was significant at the 95 percent level.

of seniors and GDP are excluded. Model 7 are consistent with H1 but of course lack theoretical robustness compared to Model 5, as well as lower adjusted R^2, 0.356.



On the whole, Model 5 seem to be the most representative model and will be interpreted more closely. Even though EV, stringency index, share of seniors and trust is on the same theoretical range, 0 – 100, they differ in empirical range (see Table 1). Therefore, to make sense of the size of the effect for each predictor Table 5 presents the increase in total deaths per million, the effect on the dependent, between pairs of values on the explanatory variables. These pairs are (1) the 25th and 75th percentile, (2) the 5th and 95th percentile, and (3) minimum value and maximum value. Even though their absolute difference varies, the relative difference are constant between variables. Since EV, stringency index and share of seniors are the significant predictors these are included. Regime type, as a categorical variable, cannot be included in a sensible way. Better to compare with Table 4, there the significant difference between liberal and electoral democracy is 339.82 for Model 5. This is comparable with a move from the 5th to the 95th percentile for EV and stringency index, this indicate that regime is relatively important. Also, the difference between the 25th and 75th percentile for share of seniors are larger than the former three differences, indicating that share of seniors being relatively very important. EV and stringency index are however comparable in size.

Table 5: Predictions for significant predictors Model 5

Difference between predictions for three pairs of values on each variable.			
	Diff. 25th to 75th percentile	Diff. 5th to 95th percentile	Diff min to max.
Emancipative values	120.28	350.92	475.83
Stringency index	153.06	330.32	626.49
Share of seniors	427.65	636.95	896.40

All values are computed from the coefficients in Model 5. To compare with regime type please see Table 4.

Before continuing to Results part 2 I shall shortly address the curious results for the effect of restriction on the dependent. The coefficient for stringency index is 8.49 (significant at the 99.9 percent level), a positive relationship to the dependent. This might seem to be counterintuitive, since the expressed idea with restrictions is to lower the number of infected and deaths (see Fergusson eta al 2020). However, this might be because the more infected countries have higher restrictions, because the initial restrictions did not work or the government acted later. The type of design applied in this thesis will not be able to sort this out, to do that a timeseries analysis is needed. However, restrictions is such a important theoretical factor that the benefit of including stringency index is greater than excluding it.

To sum up the first part of the results, the results are consistent with what we expect from the focal relationship described in hypothesis H1. On the next page we move on and discussed the interaction models presented in Table 5. The hypothesis we investigate there is *H2: Higher emancipative values have a moderating effect on restrictions resulting in higher marginal effect on total number of deaths.*

6.2. Results part 2

Table 6: Regression results for interaction between emancipative values and stringency index.

Model no	8	9	10	11
Emancipative values (EV)	-67.284***	-75.146***	-44.048**	48.485
	(16.459)	(12.313)	(16.564)	(85.166)
Emancipative values squared (EV^2)				-1.422
				(1.175)
Stringency Index (SI)	-40.708***	-33.166***	-21.022*	12.188
	(9.639)	(7.098)	(8.431)	(24.639)
Interaction EV*SI	1.454***	1.369***	0.917***	-1.234
	(0.283)	(0.221)	(0.272)	(1.448)
Interaction EV^2*SI				0.033
				(0.021)
Seniors (share of population 65+)		36.528***	33.437***	33.788***
		(7.229)	(7.101)	(7.842)
General trust			-3.156	-4.301
			(2.599)	(2.922)
GDP per capita			1.027	1.076
			(1.648)	(1.593)
Regime: base Lib. Dem.				
Vs. Closed autocracy			21.584	94.874
			(118.990)	(128.913)
Vs. Electoral autocracy			108.844	144.133
			(112.125)	(114.466)
Vs. Electoral democracy			278.630*	328.140**
			(107.971)	(106.525)
Constant	2185.901***	1773.614***	857.498	-582.126
	(598.045)	(423.707)	(547.545)	(1476.714)
Observations	88	88	88	88
R^2	0.302	0.493	0.579	0.598
Adjusted R^2	0.277	0.469	0.531	0.540

Standard errors are in parenthesis

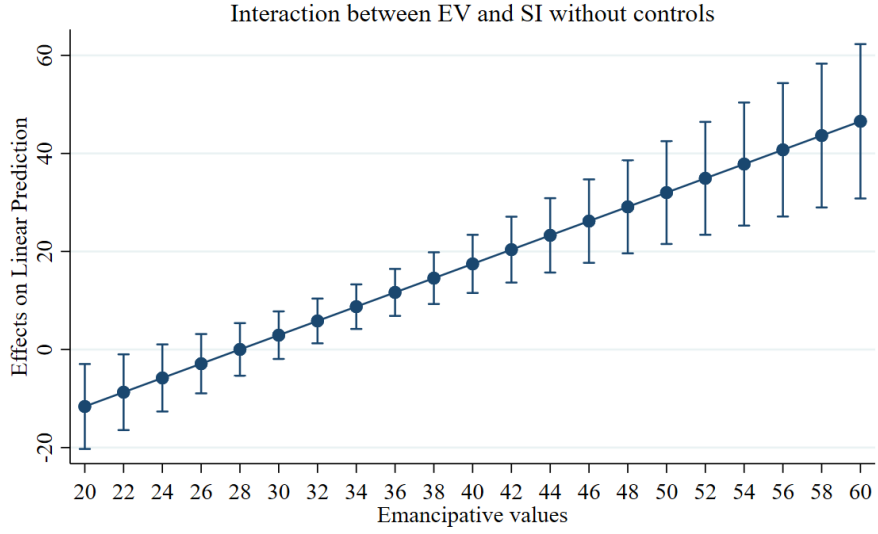
*** $p<0.001$, ** $p<0.01$, * $p<0.05$

Source: Coppedge et al 2021; Dong, Du & Gardner 2020; EVS/WVS 2021; Haerpfer et al 2020; Hale et al 2020b.

The simplest expression of the interaction model without any controls is Model 8 (see Table 6). This model show a significant positive interaction between emancipative values and stringency index, with a coefficient of 1.45 (significant at the 99.9 percent level). In Graph 11 we can see this interaction displayed as the marginal effect of one change in SI on the dependent, over different levels of EV. It clearly shows that higher EV result in a higher marginal effect of SI on the dependent. The result from model 8 is in short consistent with H2. Furthermore as seen in Table 3, Model 8 has a weak linearity and some caution should be employed. However, to fully test H2 the model need to control for other factors. In Results part 1 share of seniors

emerged as the most sizable explanatory variable. In Model 9 the senior control has been added to the basic model (Model 8) and the result are stable. The interaction coefficient is 1.37 (significant at the 99.9 percent level) and share of seniors has a coefficient of 36.53 (significant at the 99.9 percent level). The weak linearity detected in model 8 are now corrected, as we see Table 3.

Graph 11: Model 8

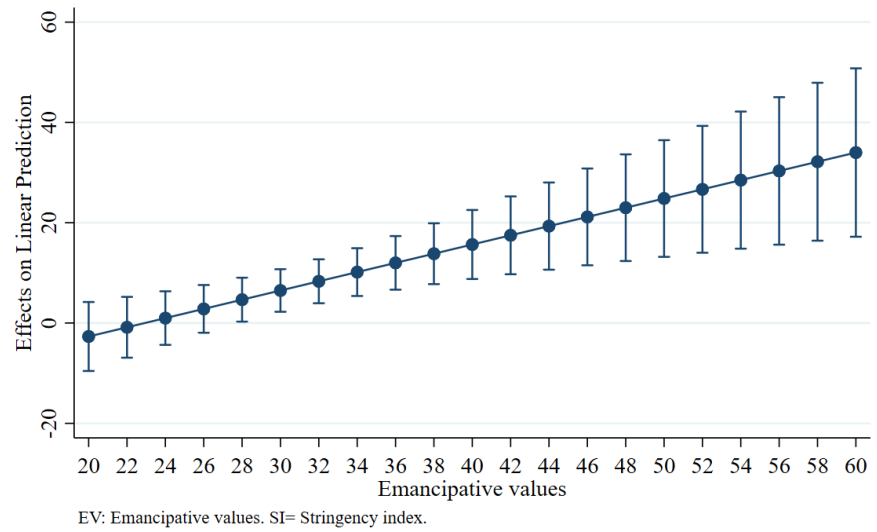


EV= Emancipative values, SI = Stringency index.

Source: Coppedge et al 2021; Dong, Du & Gardner 2020; EVS/WVS 2021; Haerpfer et al 2020; Hale et al 2020b.

Adding the remaining control variables in Model 10, the interaction remains positive, 0.92, and significant (at the 99.9 percent level). For share of seniors, the coefficient is virtually unchanged. Among the added control variables trust and GDP are insignificant. Regime type repeat the pattern from the Results part 1, the only significant difference is between liberal democracy and electoral democracy. The effect of the model is displayed in Graph 12. The result from model 10 are consistent with H2.

Graph 12: Model 10



EV: Emancipative values. SI= Stringency index.

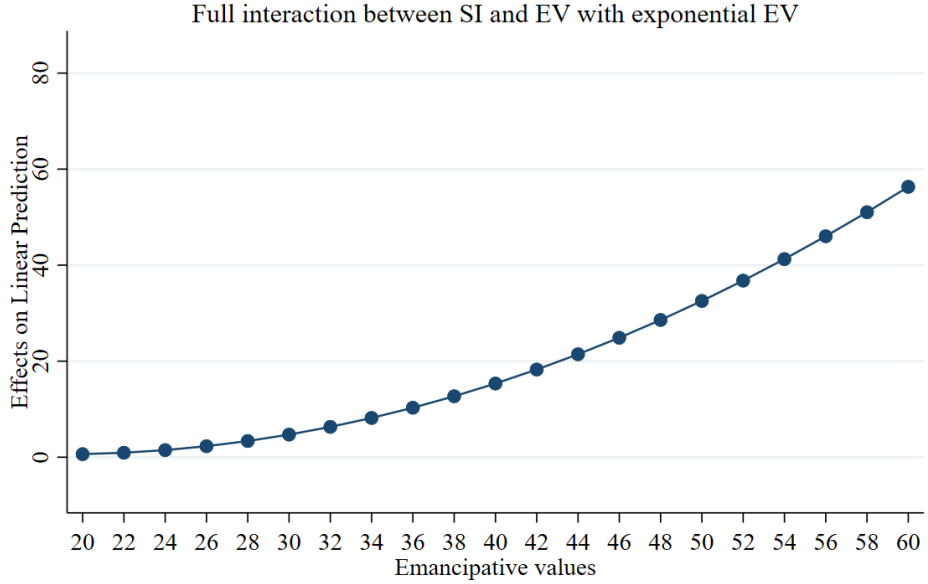
Source: Coppedge et al 2021; Dong, Du & Gardner 2020; EVS/WVS 2021; Haerpfer et al 2020; Hale et al 2020b.

However, in model 10 potential functional form issues are detected. This tells us that the relationship might be better specified with a non-linear combination of the independent

variables, or it could also be a less functional combination of explaining variables. Hence it is reasonable to test if respecifying the model helps. Adding EV^2 to the interaction creates a different specification of the interaction relationship. In model 11 we see the full model now expressed as a curvilinear relationship. This relationship is illustrated in Graph 13 and show a positive slope with higher marginal effect for higher EV. This slope is not statistically significant as we see in Table 6. The adding of a squared term does enlarge the error terms several times (compared to model 10) and the interaction coefficients are not significant (at the 95 percent level). Model 11 does not support H2, in the sense that no relationship is significant. In Table 3 we can see that all robustness tests are indicating a working model.

Graph 13: Model 11

Full interaction between SI and EV with exponential EV



Source: Coppedge et al 2021; Dong, Du & Gardner 2020; EVS/WVS 2021; Haerpfer et al 2020; Hale et al 2020b.

Choosing between Model 10 and Model 11, which is the most suited to answer H2 fairly? Model 10 has a functional form issue that Model 11 does not have, this likely because the more complex model captures the variance better. Comparing the Adjusted R^2 for both models shows that Model 11 explain marginally more variance (difference 0.009). This should be the argument for Model 11. However, comparing the coefficients (easiest to study Graph 12 and 13) we see that the predictions is nearly the same. The models have very similar predictions, but Model 11 has, due to the more complex modelling, inflated the standard errors hence making the interaction coefficients insignificant. Further, there is no theoretical reason to use an exponential component of EV, the Results part 1 rather indicate a linear relationship. In the end however, it is better to be cautious and use the least favourable Model 11. This leads to the result that while indicating the presence of a interaction effect, it is not established with confirming statistical significance.

It is of course problematic that stringency index is positively related to the dependent. As discussed earlier, this variable exhibits a challenging relationship with the dependent, since restrictions that aim to reduce the affected by COVID-19 are created because there already is a spread of the virus. I consider that the advantage of using the variable as a control is larger than the not using it.

7. Conclusions

The COVID-19 pandemic has changed many lives and put our societies to test in unexpected ways. To clear out all effects that contributed to the development we saw during 2020 is a combination puzzles that will take many years to sort out. I hope this thesis has helped with one piece. The aim for this thesis was to establish if more societies with more liberty-oriented values, or put more neatly, emancipated societies, acted in such fashion that resulted in more people directly affected by COVID-19. The rational for this assumption is that in more emancipated societies people are more used to utilise their freedoms and therefore value them high. This makes it hard to take action that severely limit these freedoms. This is not a (necessarily at least) principal matter, the assumption is that the relevant freedoms are valued because they bring high utility for people. In sort, the more used to exercise freedoms the more reluctant to limit the same. This brings us to the research question stated early in the thesis:

How does liberty-oriented values influence the number of directly affected by COVID-19?

Liberty-oriented values, in this thesis understood as emancipative values, has at least two effects on the number of directly affected by COVID-19. First, the results in this thesis are consistent with H1, which suggests that higher average emancipative value in a country is related with higher total deaths per million under control for relevant factors. This leads to the conclusion that emancipative values do influence behaviour that are related to more people affected by COVID-19.

Second, the results are inconsistent with H2 thus not confirming that higher emancipative values make restrictions less effective. However, more research is needed to fully understand the effect restrictions have on the number of affected by COVID-19 and what in turn effect the efficiency of restrictions. The design of this thesis could not fully explore the direct relationship between restrictions and number of affected and the results here urge us to explore this in more detail.

My conclusion is that liberty-oriented values, as emancipative values, influence people's behaviour in such way that the number of directly affected by COVID-19 becomes higher than less emancipated societies. This effect holds under control for relevant factors, but in size is smaller than the effect of share of seniors in a country. This should be expected since COVID-19 is more fatal if the infected are older (Ferguson et al 2020:5). It should be stressed that the effect remain even though tested against very established and related explanations, trust and regime type. Trust, although not significant in all models, seem to have a negative relationship to the dependent which is very interesting. In the *Research design* section (page 12) I argue that the difference between more selfish and benign individualism should matter little for this thesis. Maybe this was a to bold assumption, since the combination of high emancipatory values and trust are signs of a more benign individualism (Welzel 2013). This is however something that need to be addressed more throughout before any conclusions can be made. Regime type also provided an interesting pattern, that electoral democracy singled out as the least effective regime type (in the context of this study of course) and the effect of emancipative values (on the dependent) in different regime context is something that also should be given more consideration in future research. It should also be addressed that, although widely used concept in research and practice, GDP/capita does not seem to have any effect in the context of this study.

The thesis has however not established a significant effect of emancipative values on the efficiency of restrictions. It is also possible that the theoretical link between emancipative

values and the conformity to restrictions should be further develop. This thesis does not separate between different types of restrictions, this might be fruitful in the future. Firstly, to separate between recommendations and more coercive restrictions and bans. Secondly, to compare between target areas of restriction, like travel ban, school closure or limitations to public meetings. It is possible that this thesis analysed this matter on a to abstract level.

The higher fatalities should not be seen as an argument against emancipation per se but should be taken into consideration for future crisis that will demand self-sacrificing action of us. Furthermore, this thesis only scratched the surface of this issue and it would be rewarding to follow further down this path of enquiry.

Apart from already mentioned avenues, for future research I propose an individual level replication of this study when such material become available. To be able to tie both individual values to the same individual's behaviour should open many possibilities. The dependent variable must be operationalised differently of course, but the underlying concept could be more throughout explored.

A second avenue is the already mentioned link between restrictions and people's compliance with the same. Here a time-series analysis is prudent, to be able to model for causality between these concepts. Also, should of course more moderating factors than values be accounted for, such as regime or compensating policies like economic compensations. The Oxford Government response tracker offers such possibilities with a wider selection than just the stringency index.

A third avenue would be to replicate this study with excess mortality as the operationalisation of the dependent. It would provide more insight into the matter and if the results remain make the conclusions more robust. However, the control variables should need to be overviewed if the dependent variable should change to maintain theoretical relevance.

This thesis limited the scoop to 2020, thus largely avoiding the vaccination programs. Future studies will have the opportunity to explore emancipative values effect on the implementation of this mass vaccination campaigns. With new data becoming available every week new opportunities to further study this field opens up in the same rate.

8. References

8.1 Data sources

Coppedge, M., J. Gerring, C. Henrik Knutsen, S. I. Lindberg, J. Teorell, N. Alizada, D. Altman, M. Bernhard, A. Cornell, M. S. Fish, L. Gastaldi, H. Gjerløw, A. Glynn, A. Hicken, G. Hindle, N. Ilchenko, J. Krusell, A. Luhrmann, S. F. Maerz, K. L. Marquardt, K. McMann, V. Mechkova, J. Medzihorsky, P. Paxton, D. Pemstein, J. Pernes, J. von Römer, B. Seim, R. Sigman, S-E. Skaaning, J. Staton, A. Sundström, E. Tzelgov, Y. Wang, T. Wig, S. Wilson and D. Ziblatt. 2021. "V-Dem [Country–Year/Country–Date] Dataset v11.1" Varieties of Democracy Project. https://doi.org/10.23696/vdemds21

European Values Study 2017: Integrated Dataset (EVS 2017). GESIS Data Archive, Cologne. ZA7500 Data file Version 4.0.0, doi:10.4232/1.13560

EVS/WVS (2021). Joint EVS/WVS 2017-2021 Dataset (Joint EVS/WVS). GESIS Data Archive, Cologne. ZA7505 Data file Version 1.1.0, https://doi.org/10.4232/1.13670.

Haerpfer, C., R. Inglehart, A. Moreno, C. Welzel, K. Kizilova, J. Diez-Medrano, M. Lagos, P. Norris, E. Ponarin & B. Puranen et al. (eds.). 2020. World Values Survey: Round Seven–Country-Pooled Datafile. Madrid, Spain & Vienna, Austria: JD Systems Institute & WVSA Secretariat. doi.org/10.14281/18241.10

Hale, T, N. Angrist, E. Cameron-Blake, L. Hallas, B. Kira, S. Majumdar, A. Petherick, T. Phillips, H. Tatlow & Samuel Webster (2020). Oxford COVID-19 Government Response Tracker, Blavatnik School of Government.'

Inglehart, R., C. Haerpfer, A. Moreno, C. Welzel, K. Kizilova, J. Diez-Medrano , M. Lagos, P. Norris, E. Ponarin & B. Puranen et al. (eds.). 2020. World Values Survey: All Rounds – Country-Pooled Datafile. Madrid, Spain & Vienna, Austria: JD Systems Institute & WVSA Secretariat [Version: http://www.worldvaluessurvey.org/WVSDocumentationWVL.jsp].

Roser, Max, H. Ritchie, E. Ortiz-Ospina and J. Hasell (2020) - "Coronavirus Pandemic (COVID-19)". Published online at OurWorldInData.org. Retrieved from: 'https://ourworldindata.org/coronavirus' [Online Resource]

8.2. References

Alizada, N., R. Cole, L. Gastaldi, S. Grahn, S. Hellmeier, P. Kolvani, J. Lachapelle, A. Lührmann, S. F. Maerz, S. Pillai, and S. I. Lindberg. (2021). Autocratization Turns Viral. Democracy Report 2021. University of Gothenburg: V-Dem Institute.

Allik, J., and A. Realo. (2004). "Individualism-Collectivism and Social Capital." Journal of Cross-cultural Psychology 35.1 : 29-49.

Barrios , J. M. and Y. Hochberg. (2020). Risk Perception Through the Lens of Politics in the Time of the COVID-19 Pandemic. WorkingPaper 27008. National Bureau of Economic Research.

Bayerlein, M., V. A. Boese, S. Gates, K. Kamin, S. Mansoob Murshed (2021) *Populism and COVID-19: How Populist Governments (Mis)Handle the Pandemic* University of Gothenburg, Varieties of Democracy Institute: Working Paper No. 121.

Bazzi, S. M. Fiszbein, & M. Gebresilasse, Rugged Individualism and Collective (In)Action During the COVID-19 Pandemic (September 1, 2020). NBER Working Paper No. w27776. URL: Rugged Individualism and Collective (In)action During the COVID-19 Pandemic | NBER

Beugelsdijk, S., and C. Welzel. (2018). "Dimensions and Dynamics of National Culture: Synthesizing Hofstede With Inglehart." Journal of Cross-cultural Psychology 49.10 : 1469-505.

Brzezinski, A., G. Deiana, V. Kecht, & D. Van Dijcke. (2020). 'The COVID-19 Pandemic: Government vs. Community Action Across the United States'. INET Oxford Working Paper No. 2020-06.

Chuang Y, Y. Huang, K-C. Tseng, C-H. Yen & L. Yang (2015) Social Capital and Health-Protective Behavior Intentions in an Influenza Pandemic. PLoS ONE 10(4): e0122970.doi:10.1371/journal.pone.0122970

Dong, E., H. Du, and L. Gardner. (2020). "An Interactive Web-based Dashboard to Track COVID-19 in Real Time." *The Lancet Infectious Diseases* 20.5: 533-34.

Ferguson, N. M, D. Laydon, G. Nedjati-Gilani et al. (2020) Impact of non-pharmaceutical interventions (NPIs) to reduce COVID-19 mortality and healthcare demand. Imperial College London (16-03-2020), doi: https://doi.org/10.25561/77482.

Frey, C. B., C. Chen, & G. Presidente. (2020). Democracy, Culture, and Contagion: Political Regimes and Countries Responsiveness to COVID-19. COVID Economics, 18, 1-20.

Hale, T, T. Boby, N. Angrist, E. Cameron-Blake, L. Hallas, B. Kira, S. Majumdar, A. Petherick, T. Phillips, H. Tatlow & S. Webster. (2020b). "Variation in Government Responses to COVID19" Version 9.0. Blavatnik School of Government Working Paper.

Hale, T, N. Angrist, B. Kira, R. Goldszmidt, A. Petherick, & T. Phillips, (2020a) Pandemic Governance Requires Understanding Socioeconomic Variation in Government and Citizen Responses to COVID-19. Available at SSRN: https://ssrn.com/abstract=3641927

Hale, T., N. Angrist, R. Goldszmidt, B. Kira, A. Petherick, T. Phillips, S. Webster, E. Cameron-Blake, L. Halls, S. Majumdar & H. Tatlow (2021). A global panel database of pandemic policies (Oxford COVID-19 Government Response Tracker). *Nature Human Behaviour* **5,** 529–538. https://doi.org/10.1038/s41562-021-01079-8

Hofstede, G. (1980). Culture's Consequences: International Differences in Work-Related Values. Beverly Hills, CA: Sage.

Hofstede, G. (2011). Dimensionalizing Cultures: The Hofstede Model in Context. Online Readings in Psychology and Culture, Unit 2. Retrieved from http://scholarworks.gvsu.edu/orpc/vol2/iss1/8

Hilyard, Karen M, V S Freimuth, D Musa, S Kumar, & S. Crouse Quinn. (2010). "The Vagaries of Public Support for Government Actions in Case of a Pandemic." Health Affairs (Project Hope) 29.12 : 2294-2301.

Inglehart, R. (1971). "The Silent Revolution in Europe: Intergenerational Change in Post-industrial Societies." "American Political Science Review" 65 (December): 991-1017. The American Political Science Review, 100(4), 685.

Inglehart, R. and D. Oyserman. (2004) "Individualism, autonomy and self-expression: the human development syndrome" In Vinken, H., Soeters, J. M. M. L., & Ester, P. (Eds.). *Comparing cultures: dimensions of culture in a comparative perspective*. Leiden, The Netherlands: Brill.

Inglehart, R., & C. Welzel. (2005). *Modernization, Cultural Change, and Democracy: The Human Development Sequence*.

Lührmann, A., M. Tannenberg, & S. I. Lindberg. (2018). Regimes of the World (RoW): Opening New Avenues for the Comparative Study of Political Regimes. Politics and Governance, 6(1), 60-77.

Lührmann, Anna & S. I. Lindberg (2019) A third wave of autocratization is here: what is new about it?, Democratization, 26:7, 1095-1113, DOI: 10.1080/13510347.2019.1582029

Maerz, S. F, A. Luhrmann, J. Lachapelle, and A. B Edgell (2020). “Worth the ¨ sacrifice? Illiberal and authoritarian practices during COVID-19”. In: Illiberal and Authoritarian Practices during COVID-19 (September 2020). V-Dem Working Paper 110.

Pemstein, D.l, K. L. Marquardt, E. Tzelgov, Y. Wang, J. Medzihorsky, J. Krusell, F. Miri, and J. von Römer. (2021). “The V-Dem Measurement Model: Latent Variable Analysis for Cross-National and Cross-Temporal Expert-Coded Data”. V-Dem Working Paper No. 21 , 6th edition. University of Gothenburg: Varieties of Democracy Institute.

Repucci, S. & A. Slipowitz (2021). Freedom in the world 2021: Democracy under siege. *Freedom House*.

Ritchie, H. (2020). Our World in Data switches to Johns Hopkins University as our main data source for COVID-19 cases and deaths. *Our World in Data.* URL: Our World in Data switches to Johns Hopkins University as our main data source for COVID-19 cases and deaths - Our World in Data

Sebhatu, A., K. Wennberg, S. Arora-Jonsson, S. I. Lindberg (2020) Proceedings of the National Academy of Sciences Sep 2020, 117 (35) 21201-21208; DOI: 10.1073/pnas.2010625117

Sibley, C. G., L. M. Greaves, N. Satherley, M. S. Wilson, N. C. Overall, C. H. J. Lee, P.Milojev, J. Bulbulia, D. Osborne, T. L. Milfont, C. A. Houkamau, I. M. Duck, R. Vickers-Jones, and F. Kate Barlow. (2020)."Effects of the COVID-19 Pandemic and Nationwide Lockdown on Trust, Attitudes Toward Government, and Well-Being." *American Psychologist* 75.5 : 618-30.

Welzel, C. (2013) Freedom Rising: Human Empowerment and the Quest for Emancipation.

Welzel, C., and J. Delhey. (2015). "Generalizing Trust: The Benign Force of Emancipation." Journal of Cross-cultural Psychology 46.7 : 875-96.

Welzel, C. (2020). Constructing indices for Secular and Emancipative Values. World Value Survey. URL: WVS Database (worldvaluessurvey.org)

Appendix A

Table of all variables per country.

Country	Emancipative value	Total deaths per million	Share of seniors	GDP per capita	Stringency index	Trust	Regime type
Egypt	17,94	74,57	5,16	10,55	61,65	7,35	Electoral Autocracy
Pakistan	18,42	46,07	*4,50*	5,03	63,55	23,50	Electoral Autocracy
Kyrgyzstan	18,88	229,61	*4,49*	3,39	71,06	11,85	Electoral Autocracy
Bangladesh	19,08	45,90	*5,10*	3,52	78,76	12,93	Electoral Autocracy
Tajikistan	21,38	9,44	*3,47*	2,90	46,51	20,58	Electoral Autocracy
Yemen	21,61	20,45	*2,92*	1,48	36,50	40,40	Closed Autocracy
Iraq	22,08	318,55	*3,19*	15,66	75,65	11,24	Electoral Autocracy
Jordan	22,48	375,77	*3,81*	8,34	69,18	15,97	Closed Autocracy
Myanmar	23,41	49,29	*5,73*	5,59	79,01	15,08	Electoral Autocracy
Nigeria	23,86	6,25	*2,75*	5,34	63,18	12,68	Electoral Democracy
Georgia	24,31	627,95	*14,86*	9,75	68,78	10,77	Electoral Democracy
Cyprus	24,34	135,86	*13,42*	32,42	65,07	8,02	Liberal Democracy
Indonesia	25,09	80,94	*5,32*	11,19	61,39	5,19	Electoral Democracy
Azerbaijan	25,28	260,48	*6,02*	15,85	78,03	30,36	Electoral Autocracy
Iran	25,60	657,47	*5,44*	19,08	55,42	14,84	Electoral Autocracy
Libya	26,33	215,10	*4,42*	17,88	88,90	11,60	Closed Autocracy
Kazakhstan	26,62	147,04	*6,99*	24,06	78,64	23,89	Electoral Autocracy
Turkey	26,75	247,58	*8,15*	25,13	63,93	14,26	Electoral Autocracy
Qatar	27,00	85,04	*1,31*	116,94	71,10	21,44	Closed Autocracy
Ghana	27,40	10,78	*3,39*	4,23	51,56	4,96	Liberal Democracy
Ukraine	28,15	440,87	*16,46*	7,89	63,94	30,65	Electoral Democracy
Zimbabwe	28,61	24,42	*2,82*	1,90	75,83	2,14	Electoral Autocracy
Ethiopia	28,62	16,73	*3,53*	1,73	69,95	11,91	Electoral Autocracy
China	28,72	3,32	*10,64*	15,31	72,17	65,44	Closed Autocracy
Romania	29,20	819,59	*17,85*	23,31	58,45	12,63	Electoral Democracy
Palestine	29,46	274,43	*3,04*	4,45	78,83	17,71	Electoral Autocracy
Russia	29,66	385,59	*14,18*	24,77	55,40	23,68	Electoral Autocracy
Lebanon	29,83	215,08	*8,51*	13,37	67,04	9,92	Electoral Autocracy
Thailand	30,16	0,90	*11,37*	16,28	48,81	31,37	Closed Autocracy
Uzbekistan	30,32	18,35	*4,47*	6,25	61,78	14,09	Closed Autocracy
Malaysia	30,84	14,55	*6,29*	26,81	57,70	19,57	Electoral Autocracy
Rwanda	31,04	7,10	*2,97*	1,85	72,09	16,63	Electoral Autocracy
Philippines	31,20	84,36	*4,80*	7,60	71,78	5,35	Electoral Autocracy
Bulgaria	31,67	1090,32	*20,80*	18,56	48,28	18,05	Electoral Democracy
Albania	32,01	410,38	*13,19*	11,80	67,22	2,52	Electoral Democracy
Kuwait	32,32	218,71	*2,35*	65,53	72,20	30,00	Closed Autocracy
Bolivia	32,32	785,14	*6,70*	6,89	83,07	8,60	Electoral Autocracy
Algeria	32,45	62,85	*6,21*	13,91	70,77	17,93	Electoral Autocracy
Morocco	32,49	200,16	*6,77*	7,49	71,32	12,53	Closed Autocracy
Tunisia	32,59	395,65	*8,00*	10,85	53,38	14,25	Electoral Democracy
Belarus	32,64	150,70	*14,80*	17,17	16,64	42,51	Electoral Autocracy
Peru	33,60	1142,79	*7,15*	12,24	81,24	5,30	Electoral Democracy
South Korea	33,78	17,89	*13,91*	35,94	49,95	32,93	Liberal Democracy
India	34,04	107,78	*5,99*	6,43	68,82	17,63	Electoral Autocracy

Bosnia and Herzegovina	34,35	1234,45	*16,57*	11,71	57,41	9,61	Electoral Democracy
Taiwan	34,45	0,90	*11,37*	16,28	48,81	30,99	Closed Autocracy
Poland	34,52	754,47	*16,76*	27,22	56,60	25,49	Electoral Democracy
Lithuania	34,86	659,74	*19,00*	29,52	49,86	32,79	Electoral Democracy
Nicaragua	35,18	24,91	*5,45*	5,32	15,14	4,25	Electoral Autocracy
Ecuador	35,32	795,44	*7,10*	10,58	69,83	5,86	Electoral Democracy
Vietnam	35,98	0,36	*7,15*	6,17	60,56	27,67	Closed Autocracy
Japan	35,98	26,03	*27,05*	39,00	34,47	35,60	Liberal Democracy
Slovakia	36,07	391,60	*15,07*	30,16	54,64	21,12	Electoral Democracy
Guatemala	36,41	268,65	*4,69*	7,42	77,73	17,96	Electoral Democracy
Serbia	36,87	471,89	*17,37*	14,05	59,29	17,44	Electoral Autocracy
Colombia	37,57	849,26	*7,65*	13,25	75,46	4,54	Electoral Democracy
Czech Republic	37,94	1081,34	*19,03*	32,61	52,40	22,89	Electoral Democracy
Haiti	37,95	20,70	*4,80*	1,65	56,14	21,66	Electoral Autocracy
Chile	38,00	868,79	*11,09*	22,77	73,28	14,27	Electoral Democracy
Brazil	38,16	917,15	*8,55*	14,10	67,23	6,65	Electoral Democracy
Greece	38,33	464,16	*20,40*	24,57	62,89	8,42	Liberal Democracy
Portugal	38,72	677,28	*21,50*	27,94	66,14	16,82	Electoral Democracy
Croatia	38,80	954,87	*19,72*	22,67	48,88	17,60	Electoral Democracy
Estonia	39,01	172,63	*19,45*	29,48	43,10	33,90	Liberal Democracy
Mexico	39,06	975,76	*6,86*	17,34	68,20	10,31	Electoral Democracy
Trinidad and Tobago	39,42	90,75	*10,01*	28,76	72,45	3,22	Electoral Democracy
Argentina	39,88	956,84	*11,20*	18,93	84,42	20,69	Electoral Democracy
Hungary	41,45	987,23	*18,58*	26,78	58,41	28,46	Electoral Autocracy
Italy	41,97	1226,54	*23,02*	35,22	64,39	28,48	Liberal Democracy
Singapore	43,56	4,96	*12,92*	85,54	50,16	38,52	Electoral Autocracy
South Africa	46,26	480,01	*5,34*	12,29	64,21	23,63	Electoral Democracy
The US	46,74	1063,23	*15,41*	54,23	59,58	39,74	Liberal Democracy
New Zealand	47,99	5,18	*15,32*	36,09	40,12	59,50	Liberal Democracy
Austria	48,98	690,84	*19,20*	45,44	54,76	48,46	Liberal Democracy
France	49,21	950,27	*19,72*	38,61	57,92	28,09	Liberal Democracy
Slovenia	50,04	1297,30	*19,06*	31,40	60,58	27,17	Electoral Democracy
The UK	51,02	1084,50	*18,52*	39,75	61,81	41,39	Liberal Democracy
Australia	51,04	35,65	*15,50*	44,65	58,93	54,02	Liberal Democracy
Switzerland	51,59	883,34	*18,44*	57,41	49,76	60,81	Liberal Democracy
Spain	51,97	1087,31	*19,44*	34,27	61,45	41,04	Liberal Democracy
Germany	52,21	403,31	*21,45*	45,23	55,87	45,28	Liberal Democracy
Finland	53,01	101,25	*21,23*	40,59	40,60	72,22	Liberal Democracy
Netherlands	53,36	672,61	*18,78*	48,47	57,92	62,16	Liberal Democracy
Uruguay	53,59	52,11	*14,66*	20,55	50,04	15,25	Liberal Democracy
Sweden	58,75	864,12	*19,99*	46,95	52,34	67,38	Liberal Democracy
Denmark	60,55	224,09	*19,68*	46,68	53,55	77,42	Liberal Democracy
Iceland	61,07	84,98	*14,43*	46,48	44,98	65,77	Liberal Democracy
Norway	61,34	80,42	*16,82*	64,80	48,30	75,11	Liberal Democracy

Appendix B

Table appendix B1

Emancipative values (EV)	12.350**	15.394***	1.180	23.908***	10.972*	13.645**	10.895*
	(4.116)	(4.065)	(5.234)	(5.279)	(4.948)	(4.394)	(4.914)
Stringency index (SI)		7.499**					8.494***
		(2.423)					(2.315)
Share of seniors			27.921**				34.825***
			(8.725)				(7.524)
Trust				-9.823***			-5.270
				(2.957)			(2.777)
Regime: base Lib. Dem.							
Vs. Closed autocracy					-145.398		93.800
					(121.242)		(115.047)
Vs. Electoral autocracy					-41.323		120.106
					(133.862)		(117.248)
Vs. Electoral democracy					388.212***		339.820**
					(117.682)		(110.689)
GDP per capita						-1.253	0.634
						(1.828)	(1.680)
constant	-37.906	-603.779**	44.072	-206.122	-72.094	-54.958	-932.932***
	(134.371)	(219.834)	(123.328)	(131.108)	(233.920)	(133.813)	(265.788)
Observations	88	88	88	88	88	88	88
R^2	0.106	0.163	0.231	0.220	0.364	0.109	0.536

Standard errors are in parenthesis

**** p<0.001, ** p<0.01, * p<0.05*

Table appendix B2

EV	78.896***	80.271***	56.742**	57.754**	43.198	78.966***	8.834
	(19.627)	(18.935)	(18.804)	(21.253)	(22.009)	(19.693)	(19.253)
EV^2	-0.854***	-0.833***	-0.698**	-0.466	-0.427	-0.846**	0.029
	(0.256)	(0.247)	(0.236)	(0.311)	(0.297)	(0.259)	(0.281)
SI		7.255**					8.468***
		(2.387)					(2.379)
Share of seniors			25.049**				35.061***
			(8.671)				(7.591)
Trust				-7.717*			-5.417
				(3.377)			(3.178)
Regime: base Lib. Dem.							
Vs. Closed autocracy					-189.908		99.249
					(138.862)		(137.394)
Vs. Electoral autocracy					-73.170		123.139
					(142.485)		(123.778)
Vs. Electoral democracy					322.500*		342.864**
					(138.806)		(118.372)
GDP per capita						-0.636	0.643
						(2.053)	(1.665)
constant	-1232.272***	-1751.533***	-940.961**	-821.998*	-596.962	-1230.380***	-899.061*
	(340.859)	(372.890)	(318.396)	(374.036)	(385.099)	(342.223)	(409.586)
Observations	88	88	88	88	88	88	88
R^2	0.183	0.236	0.281	0.238	0.380	0.184	0.536

Standard errors are in parenthesis

**** p<0.001, ** p<0.01, * p<0.05*

Table appendix B3

EV	-67.284***	-75.146***	-48.886*	-45.989*	-68.470***	-44.048**
	(16.459)	(12.313)	(18.684)	(18.411)	(16.950)	(16.564)
SI	-40.708***	-33.166***	-34.731***	-27.303**	-41.089***	-21.022*
	(9.639)	(7.098)	(9.513)	(9.804)	(9.779)	(8.431)
Interaction SI EV	1.454***	1.369***	1.224***	1.011**	1.467***	0.917***
	(0.283)	(0.221)	(0.299)	(0.318)	(0.286)	(0.272)
Share of seniors		36.528***				33.437***
		(7.229)				(7.101)
Trust			-5.061			-3.156
			(2.882)			(2.599)
Regime: base Lib. Dem.						
Vs. Closed autocracy				-241.467*		21.584
				(118.930)		(118.990)
Vs. Electoral autocracy				-97.540		108.844
				(123.861)		(112.125)
Vs. Electoral democracy				239.479		278.630*
				(126.471)		(107.971)
GDP per capita					0.477	1.027
					(2.006)	(1.648)
constant	2185.901***	1773.614***	1782.813**	1543.944*	2213.941***	857.498
	(598.045)	(423.707)	(586.156)	(634.005)	(607.326)	(547.545)
Observations	88	88	88	88	88	88
R^2	0.302	0.493	0.326	0.452	0.302	0.579

Standard errors are in parenthesis
**** p<0.001, ** p<0.01, * p<0.05*

Table appendix B4

EV	212.459**	212.459**	36.287	196.688*	222.273**	211.365**	48.485
	(78.066)	(78.066)	(90.056)	(78.357)	(80.112)	(77.232)	(85.166)
EV^2	-3.723***	-3.723***	-1.530	-3.399**	-3.659**	-3.714***	-1.422
	(1.113)	(1.113)	(1.232)	(1.140)	(1.117)	(1.109)	(1.175)
SI	39.528	39.528	-0.678	37.437	52.625*	39.186	12.188
	(22.657)	(22.657)	(25.131)	(22.215)	(24.287)	(22.404)	(24.639)
Interaction SI EV	-3.115*	-3.115*	-0.555	-3.000*	-3.653*	-3.098*	-1.234
	(1.404)	(1.404)	(1.553)	(1.371)	(1.452)	(1.393)	(1.448)
Interaction SI EV^2	0.062**	0.062**	0.027	0.059**	0.065**	0.062**	0.033
	(0.021)	(0.021)	(0.022)	(0.021)	(0.021)	(0.021)	(0.021)
Share of seniors			34.499***				33.788***
			(7.578)				(7.842)
Trust				-4.219			-4.301
				(3.100)			(2.922)
Regime: base Lib. Dem. Vs. Closed autocracy					-179.297		94.874
					(122.357)		(128.913)
Vs. Electoral autocracy					-79.207		144.133
					(121.260)		(114.466)
Vs. Electoral democracy					273.097*		328.140**
					(127.068)		(106.525)
GDP per capita						0.195	1.076
						(1.960)	(1.593)
constant	-2818.365*	-2818.365*	-132.388	-2500.016*	-3177.510*	-2796.585*	-582.126
	(1317.022)	(1317.022)	(1486.092)	(1335.220)	(1422.420)	(1300.239)	(1476.714)
Observations	88	88	88	88	88	88	88
R^2	0.347	0.347	0.500	0.361	0.492	0.347	0.598

Standard errors are in parenthesis

**** p<0.001, ** p<0.01, * p<0.05*

Appendix C

Table appendix C

Model no	(1)	(5)	(8)	(10)	(11)
EV	609.548**	78.907	-57.100	-937.010	3593.828
	(225.267)	(226.027)	(1332.672)	(811.169)	(4243.155)
EV^2					-70.635
					(59.912)
SI		316.272**	-305.725	-229.489	1436.248
		(107.202)	(684.057)	(440.634)	(1195.006)
Interaction SI*EV			14.444	16.956	-91.972
			(21.543)	(13.733)	(70.028)
Interaction SI*EV^2					1.675
					(1.007)
Trust		-119.825		-80.745	-147.277
		(128.610)		(126.720)	(141.085)
Regime: base Lib. Dem.		9246.295		7910.990	11956.113
Vs. Closed autocracy		(6602.943)		(6876.116)	(7376.213)
		9604.454		9396.212	11393.685
Vs. Electoral autocracy		(6790.431)		(6780.669)	(6855.154)
		16072.818**		14941.389*	17618.986**
Vs. Electoral democracy		(5478.362)		(5745.745)	(5750.167)
Share of seniors		1602.624***		1576.948***	1609.685***
		(358.546)		(361.624)	(388.027)
GDP per capita		362.349**		369.613**	373.092**
		(120.590)		(122.098)	(118.346)
Constant	753.597	-34273.338**	11145.944	-1167.493	-70666.132
	(7690.457)	(12520.972)	(42923.866)	(28508.132)	(73036.349)
Observations	92	88	89	88	88
R^2	0.096	0.501	0.151	0.508	0.534

Standard errors are in parenthesis
*** *p<0.001*, ** *p<0.01*, * *p<0.05*