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Faculty of Social Sciences
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BACHELOR THESIS

Measuring the Index of Constructive External Engagement: ICEE for the Czech Republic

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Declaration of Authorship

The author hereby declares that he compiled this thesis independently, using only the listed resources and literature.

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Signature

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Abstract

In this thesis we compute the Index of Constructive External Engagement (ICEE) for the Czech Republic. First, we introduce the theory of the index and discuss its differences with Commitment to Development Index from which ICEE originates. Second, we find the necessary data and compute the score of ICEE for the Czech Republic. Third, we discuss the overall result and subsequently the score of each component separately. Finally, we create an original comparison of ICEE with other related works to ascertain its current data validity.

JEL Classification	I3, O47, O40
Keywords	international ranking, engagement effectiveness, welfare, indexation

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Abstrakt

V této práci vypočítáme Index of Constructive External Engagement (ICEE) pro Českou republiku. Nejprve představíme teorii indexu a prodiskutujeme jeho rozdíly s Commitment to Development Index, ze kterého ICEE vychází. Poté opatříme potřebná data a vypočítáme skóre ICEE pro Českou republiku. Následně provedeme diskuzi konečného výsledku společně s výsledky jednotlivých komponent. Nakonec vytvoříme originální porovnání ICEE s ostatními souvisejícími pracemi abychom zjistili skutečnou současnou vypovídající hodnotu tohoto indexu.

Klasifikace JEL	I3, O47, O40
Klíčová slova	mezinárodní hodnocení, efektivita spolupráce, blahobyt, indexace

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Acronyms

CBD Convention on Biological Diveristy

CDI Commitment to Development Index

CGD Center for Global Development

CITES Convention on International Trade in Endangered Species of Wild Fauna and Flora

CMS Convention on the Conservation of Migratory Species of Wild Animals

CR Czech Republic

EPI Environmental Performance Index

GCI Good Country Index

GPI Global Peace Index

ICEE Index of Constructive External Engagement

IEF Index of Economic Freedom

LPI Legatum Prosperity Index

NATO North Atlantic Treaty Organization

OECD Organisation for Economic Cooperation and Development

U.N. United Nations

UNFCCC United Nations Framework Convention on Climate Change

Bachelor Thesis Proposal

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Preliminary scope of work:

ICEE is a newly released index measuring the constructive external engagement provided by the Centre for Global Development (namely David Roodman) currently for 21 countries with largest economies. Among these countries we can find important developed countries (Australia, Canada, France, Germany, Italy, Japan, Netherlands, South Korea, Spain, Sweden, Switzerland, United Kingdom, United States) as well as economicaly large developing countries (Brazil, China, India, Indonesia, Mexico, Russia, Saudi Arabia and Turkey). The aim of this Bachelor thesis is to collect the data for all the indicators measuring the external engagement in three areas – Trade, Environment and Security and thanks to that compute the ICEE for the Czech Republic. This will also lead to the comparison of the Czech Republic with other countries according to ICEE. Finaly, we inspect the data validity of ICEE itself.

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Chapter 1

Introduction

In nowadays globalised world each country influences other world nation with its economic and political behaviour. Changes in one state can have both positive and negative effects on others. We can rightfully inquire about what actions exactly precipitates the favorable impact and how we could enhance these to achieve higher prosperity globally. If we had answers to these questions we could purposedly adjust the politics to support the areas of influence that we lack in. That would not only increase the level of well-being in other countries but also our position. The change itself would promote our better situation and the following better position of other countries would subsequently positively influence us. So finally we could reach such a ripple effect.

This idea of interconnectivity and prosperity influence was not overlooked by economists and therefore there has been created the Index of Constructive External Engagements (ICEE). It explores areas of global influence and evaluates each country according to its performance in its individual components describing each area. Due to detail analysis provided by ICEE the country can properly detect the field in which it shoud improve its output. The ICEE is in the time the only work aiming exactly at external engagement - that is the level of prosperity that one country causes to others. This valuable investigation is currently provided for 21 countries[1].

The Czech Republic is not included in this set of explored countries. As the ICEE presents such an exclusive piece of information we can say that the Czech Republic is not evalued in constructive external engagement at all. That is of course an undesirable situation. With an investigation on which areas we

[1]Australia, Canada, France, Germany, Italy, Japan, Netherlands, South Korea, Spain, Sweden, Switzerland, United Kingdom, United States, Brazil, China, India, Indonesia, Mexico, Russia, Saudi Arabia and Turkey

perform well or worse in we could better set our political decisions. Therefore this thesis attempts to compute the ICEE for the Czech Republic and then discuss its ensuing results. It examines the overall score within the mentioned 21 countries and then it explains the scores of each component separately.

The current state of ICEE suffers from few deficiencies. We try to capture these and discuss why they occure and how they could be diminished as well. These imperfections are also the reason why the ICEE fails to notice the researchers in a greater extent. Therefore this work also endeavours to develop comparison of ICEE with other works as related as possible to inspect its data validity. Such an investigation has not been done yet for ICEE actually. We believe that not only the result of one additional country and its incorporation into present scores can be valuable for the index but also that original study of the index itself.

Thus my contribution to the existing literature on ICEE is following. First, I collect the necessary data and I estimate the results for the Czech Republic. Then I discuss these results and compare them with other countries included in the set. So I incorporate an additional score to an existing set of results which enriches the current issue of the index and can provoke further discussions. Second, I take similar research works and I apply statistical methods on them to analyze their correspondence and differences with ICEE. I try to demonstrate that even the current issue of the index should not be overlooked by experts due to its satisfactory data validity. This investigation can help future involved specialists to better determine the existing strengths and weaknesses of ICEE and further more efficiently develop the work of the index according to it.

Chapter 2

Index of Constructive External Engagement

2.1 Overview

Index of Constructive External Engagement (ICEE) is a policy index created by David Roodman under the Center for Global Development (CDI) based in Washington, D.C. It examines 21 large national economies in a question of how well these countries contribute to the prosperity of outer world. Among these examined economies both developed[1] and developing countries[2] can be found.

Although ICEE is a new index attempting to capture global situation as no one before, the way of computing ICEE is not purely original. We can say that ICEE evolved from another index of the Center for Global Development, namely the Commitment to Development Index (CDI). The CDI ranks countries according to their devotion in political practices to developing countries. CDI is very complex, thus it has many authors that focus on different areas, particularly on aid, trade, investment, migration, environment, security and technology (Roodman 2013b). However the main architect and also a manager of CDI is David Roodman. He used his detailed knowledge of CDI to arrange an index giving different information.

CDI is a broadly recognised index with important message to countries and nowadays it is widely used. Nevertheless we can say that ICEE brings a modern approach to this index. CDI strictly divides the world into two groups of countries - the developed and developing ones. Such a view is a standard one for

[1] Australia, Canada, France, Germany, Italy, Japan, Netherlands, South Korea, Spain, Sweden, Switzerland, United Kingdom, United States

[2] Brazil, China, India, Indonesia, Mexico, Russia, Saudi Arabia, and Turkey

the year of CDI creation - 2002 (Roodman 2013a). Since then however the world has undergone important changes. The crisis of 2008 provoked discussions whether it is a moment when developed countries are starting rather to fall and developed countries would slowly overtake their position as they have a good potential for growth. Such a fear concerns mainly China. A rigorous research of (Agarwal & Sayan 2014) shows that the shock has not brought us to such a situation, nevertheless the contribution of developing countries is growing, their share of world income and exports is increasing. And although worse in per capita, the developing countries are also rich in aggregate. That gives them significance on the global level. And that is also why the Center for Global Development with David Roodman decided that it is necesarry to create a new adjusted index besides the CDI - to reach the more balanced outcome.

2.2 Technical description

The ICEE consists of three components, therefore the separate results need to be weighted to compose the final score. The ICEE originated from an atheoretical concept of CDI. As a work lacking a solid theoretical background the CDI weights all the components equaly. So does the ICEE. The three components building ICEE thus gained on significance. Some attempts of redesigning the weights have been done and are later described in the subsection 4.1.1 of the chapter 4.

The scaling of standardized scores has been chosen between 0 and 10. Nevertheless it is allowed that singularly bad or good policies can reach a score slightly beyond these boundaries. The standardized averages of all the components should match for one base year at least. In case of CDI they are the same for the year 2008. The rearrangement of ICEE components however modified the results and caused these averages to marginally move. Therefore the standardized averages do not match in any year. Nonetheless the shift was so subtle that the author of the index did not find it necessary to recompute all the results.

We could go farther into detail with technical description of the index. It could be however an exhaustive repetition of not only the original ICEE and CDI reports but also the other comprehensive thematic works such as (Rehorova 2011). We always explain all the facts that we find important for understanding the computations and functionality of ICEE. We also always

mention all the differences between ICEE and the CDI arrangement. The main characterization and decompozition of ICEE is provided in the chapter 3. The majority of information introduced there base on official report of (Roodman 2013a).

2.3 Dropped CDI components

It is inevitable to often mention the CDI as it represents a core basis of ICEE. It is important to discern the divergence between these two indexes to understand the different meaning of their final results. Therefore we mention the main difference of structure regarding the components in the main description of ICEE.

2.3.1 Aid

An essential component of CDI is a measure of foreign assistance. Quantity and also quality of foreign aid reflects the commitment to development in the developing countries. ICEE on the other hand focuses on practices implying global benefit, not just a help to a particular group of countries. One could argue that in a long run such a support would lead to global prosperity as well. Nonetheless theoretical stances did not cause rejecting the aid component from ICEE but the lack of data. The majority of aid component figures come from the Development Assistance Committee (part of OECD) that collects detailed information about its members. Regrettably important part of necessary data is missing for non-members countries included in ICEE, that is why the aid component could not have been incorporated into ICEE computations.

2.3.2 Investment

Most of economists agree that a good investment is an important prerequisite for prosperity. Thus an investment component should be involved in ICEE computations. Nevertheless the necessary data experience a complication. The information is usually gained from surveys examined on embassies or analysis that requires more sophisticated judgments. So although the figures could be acquired, the author of ICEE decided to omit the component as the data extraction would require exceeding supplementary work.

2.3.3 Migration

In nowadays globalised world migration is a very alive topic both in positive and negative matters. It should be certainly incorporated into an index exploring external engagement. Nevertheless the component cannot be captured for ICEE countries. Migration component of CDI consists of five parts. Two indicators are already a little obsolete as they reflect the situation in 1990s. It is a problem also for a current CDI issue and the indicators should be updated or dropped. Two other indicators are again lacking information because they are collected by OECD only for its member countries. The last indicator would require a too exacting additional work as it was the case of investment component.

2.3.4 Technology

Not only technology itself leads to prosperity, Research and Development promotes international cooperation and higher employment. The unavailable information causes the necessary drop of this component from ICEE computations. One part of indicators comes from OECD database that does not include non-member countries and the other part of indicators would be difficult to retrieve.

As mentioned in these subsections, ICEE could be expanded to get a better validity. An extra endavour that goes beyond the original work of David Roodman and so also this work would have to be done. Nevertheless the potential for ICEE is huge[3] so the incorporation of some described information should be employed in the future by research economists.

[3]as described in section 4, section 4.2

Chapter 3

Components of ICEE

3.1 Trade

When speaking about devotion of countries to global prosperity, trade comes to ones mind as one of the most important influential factors. As (Mankiw 2012) mentions in his Ten Principles of Economics, the trade can make everyone better off. The issue is obviously very complex and many theories were created in favor of or against the trade openess.

Ricardian theory of comparative advantage and to it closed Heckscher-Ohlin theorem[1] both work well in theoretical point of view. The opinions for real implications can be sometimes met as not plausible as mentioned by (Rehorova 2011), but the empirical evidence examined for example by (Golub & Hsieh 2000) can show even surprisingly corresponding performance of the Ricardian theory. Among theories and phenomenons favoring the free trade we can remark also economies of scale or intra-industry trade. On the conrary the protectionism is supported by unemployment reasons, infant-industry argument or the so called second best opinion (in case of violation of perfect competition by someone else, it can pay off to protect the home industry).

With tariffs, quotas, subsidies and other restrains the reality is even more sophisticated. Nevertheless the protectionist opinions mentioned above are usually short-run headed while we focus on the long-run development. With free trade the country is most often better off in longer period. We also shouldn't forget about the interdependency that comes with free trade and supports

[1] Under fulfilled assumptions of Heckscher-Ohlin theorem on trade the two theories even equals as demonstrated by (Ford 1982).

peace. Therefore the component of trade measures the trade openess or we can say the scale of barriers that countries impose to others' exports.

3.1.1 Arrangement of Trade component

The construction of trade component is described in detail in (Roodman 2013b) and broadly in (Roodman 2013a) or (Rehorova 2011). For clearer picture we just mention the most important parts of the component and the differences of ICEE Index with CDI, introduced in separate subsection.

The trade component of ICEE consists of one main part - aggregate measure of protection. The tarriffs for this indicator were taken from the tariff database called the Market Access Map provided by the Centre d'Etudes Prospectives et d'Informations Internationales. The data include detail information also including the treaties such as Everything But Arms program or the Africa Growth and Opportunity Act. Nevertheless the weights are assessed as in (Roodman 2005) by the value of exporter's production in corresponding goods category rather then by its volume of exports as in original sources. The reason for this approach is to avoid the endogeneity bias arraising from the second mentioned method as the volume of exports is endogenous to protection.

Concerning other restraints of free trade such as quotas, in this case apparel and textile quotas, the Uruguary Round WTO treaty ceased these at the beginning of the year 2005. For the years 2003 and 2004 examined in ICEE index as well, the tariff-equivalents for the United States, the EU and Canada are subsumed according to estimates of (Francois & Spinanger 2004). Using OECD data and methodology of (Cline 2002), we are also able to convert the agricultural subsidies imposed by governments to their tariff equivalents. Some payments from the subsidy aggregates that are not connected with production were purged as they are assumed not to distort the markets. The subsidies equivalents to tariffs are obviously excluded as well as they are covered in the tariff section.

One issue that arised is the fact that the agricultural tariffs are often expressed in physical units (for example dollar per tone). As a consequence, ad valorem terms behave inversely to the world prices. The problem is that the market prices play very significant role in tariff values and it's nearly impossible to track policy variations in these data. In order to detect the policy changes we first multiply the tariff-equivalent of the beginning of the year in ad valorem terms by unit price of that given day and subsequently we divide this value by

the unit price of the last day of the year. So when we cannot find a score change, we most likely meet a lack of policy change.

3.1.2 Differences to CDI

The ICEE trade component is only composed of one part. However he original CDI used to be arranged by two main indicators - the aggregate measure of protection weighting 75% and then also a revealed openess indicator taking the resting 25%. It is worth mentioning that since the year 2013 CDI has undergone a slight change in matters of the trade component. Instead of revealed openness part, the indicator has been replaced with two other indicators, each weighting 12.5%. The first one is the measure of administrative barriers to goods importation, taken from surveys of the World Bank's Doing Business. The other one has been drawn from the World Bank team as well, it's the index of restrictions on services imports[2].

Regarding the weights of tariffs, in CDI computations the tarrifs are also weighted according to the poverty of a given exporter. As ICEE index does not try to find the approach of a given country towards developing countries but to all countries of the world in general, this attitude was omitted in ICEE index calculations. So the tarrifs are not weighted based on the exporter's poverty.

The CDI gives also the weight to actual imports of the given country. The countries for which the CDI is computed are the developed ones so they are expected to perform on the similar industrial level. So in that case the differences among countries would be implying differences in their policy. Nonetheless the ICEE index is assessed for the set of various countries including both developed and developing ones, so we cannot unequivocally assign the dissimilarities in imports to policy reasons. Therefore this approach is not covered in ICEE computations.

When speaking about the data of agricultural subsidies, OECD collects information about all its members such as Mexico or Turkey. It also gleans the data about some of its non-members such as Russia, China or Brasil. Unfortunately the enquiry for India, Indonesia and Saudi Arabia, all included in ICEE has not been done. That is why a proration for these three countries has been accomplished. The average of the ratio of the tariff-equivalent of subsidies to actual tariff protection for agriculture for 18 countries of the index with the

[2]In older issuances of CDI the barriers to trade in services were not integrated into the index at all. The research provided by The World Bank team as described in (Borchert *et al.* 2012) enabled such an incorporation.

data was taken and it is presupposed to be the same for the three countries lacking the necessary information. For better notion we mention that for the year 2012 this ration has the value of 0.374 (Roodman 2013a).

3.2 Environment

Global prosperity is tightly connected with sustainable growth. We care whether the increasing or at least the same level of well-being has its potential to be long-lasting, in ideal case ever-lasting. This is the core we want to achieve. An important and even crucial condition for this state is healthy and thriving environment. We can look at the environment, its importance and problems in three main points as (Pearce & Warford 1993) does. First, as we already said, the environment plays important role for economy and overall well-being of people. Second, the environmental degradation is mainly caused by mismanagement of the economy (heavy workings). Third, it will require incentives to preserve the resources to reach the amelioration of economic distortions to solve the environmental problems. The third assertion, the solution of environmental problems and thus providing the fertile ground for sustainable development is something what we should focus on.

Common problem among the developing countries is the predatory involvement of foreign countries that cause fast environmental degradation. The will to earn high income as fast as possible usually does not allow to use environmental-friendly technologies. As more empirical researches such as (Gupta & Singh 1984) show in their works, Kuznets curve of inverted U-shape often holds in environmental cases of developing countries. Favourably, according to an artical of (Levison 2008) introducing the Environmental Kuznets curve as an entry for New Palgrave Dictionary of Economics, the behavior following the Kuznets curve is avoidable or at least possible to be flattened.

Such a sustainable growth involves balanced development regarding both developing and developed countries. The given country should make use of its comparative advantage, but a sustainable equilibrium must be found. We can show this problem on an example of developing countries. Foreign countries usually focus on one kind of a resource in a given developing country, which couses distortions. Often such a focus is done to agriculture. The higher the proportion of labor force in agriculture within the population, the higher inequalities in economy (Gupta & Singh 1984). Economic disequalities subvert sustainable growth, that is why such an acting should be diminished.

This component is also important from the reason that environmental behavior of one country strongly affects the environment in other countries. The example of atmosphere or oceans speaks for itself. Therefore a strong focus has been hold to environmental issues in latest years. Along with that, many

of environmental treaties aiming at improvement of the environmental situation has been signed. The treaties need to take into consideration what causes sustainable state of a country. Environmental restrictions cannot be extremely high as they would bring about an outflow of foreign investors. As already indicated, a sustainable equilibrium needs to be always met.

3.2.1 Arrangement of Environment component

The structure of the environmental component takes into consideration both protecting activities and degrading behavior of a given country. It is built by three categories covering eight indicators. Each category and indicator has its weight according to which the results are finally averaged. Indicators regarding treaties ratification are scaled 1/0 - yes or no.

Global climate (60% of total)

Global climate category includes five indicators, all valued with similar weight. They focus on the pollution that is causing global warming and weakening of ozone layer.

First indicator weighting 10% of the overal environmental component is *Greenhouse gas emissions plus carbon equivalent of fossil fuel production, all per capita*. We use the CO_2 equivalents provided by UNFCCC for all the gases that are tracked in data sets of the same institution. As well as fossil fuel consumption, the fossil fuel production is involved and is important as it makes the world to create more pollution. The sum of all the pollutants (all described in carbon dioxide amount) is divided by the population of a given country. Such a per capita approach is much better than the division by GDP as the poorer countries would be much worse of and rich countries would have accepted even high polluting. Nevertheless still the most polluted areas (such as winter 2014 in New Delhi with pollution 60 times higher than it is considered to be safe (Busch 2014)) are not included.

Second part is *Average annual change in greenhouse gas emissions per unit GDP in last 10 years*, weighting 15%. Common trend in growing economies is faster growing economies than their pollution. This is a favourable observation. The responding policy can be captured when we take the differences in the rate of this decline. When we look at two countries with similar levels of wealth and growth, the one with bigger differences in this rate of decline is most likely to experience more felicitous policy. As the decline is not constant over time

and we want to avoid the seasonal sensitivity, the method of least squares is applied to find the average decline rate.

Third indicator with weight of 15% is *Gasoline taxes in PPP dollars per liter*. The far most important part of energy taxes in countries is represented by motor fuel taxation. The best indicator for motor fuel taxes is obviously gasoline taxation.

Fourth part of this category is represented by *Consumption of ozone-depleting substances per capita* weighting 10% of the environmental component. Thanks to the Montreal Protocol signed in 1987 the substances causing depleting of ozone layer were radically reduced in their usage. Due to this fact the reference year for this indicator is the year 2003, not the year 2012 as in the other cases. The recent years have so low consumption of the ozone-depleting substances that the indicator would reach negative numbers and would overshadow the other parts of the component.

The last indicator of the environmental component with the weight of 10% is the *Ratification of the Kyoto Protocol*. Kyoto Protocol is often supposed to be the most important step so far in the climate change combat. It sets the emission targets. In comparison with earlier mentioned Montreal Protocol however, it is widely discussed whether the Kyoto ratification have any real effects except of politics. As (Bohringer & Vogt 2003) state in their research on Kyoto Protocol, the Protocol represents rather an act of symbolic policy than a milestone in climate protection. Anyway if anything else, Kyoto Protocol still alerts the important environmental issues and its ratification is valued with 10 points.

Fisheries (10% of total)

In ICEE calculations the part of fisheries occupies 10% of the environmental component. It represents the ratification of the United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks. This treaty from the year 2001 is concerned with fish in international waters or migrating. The sign of the country is evaluated with 10 points, 0 points otherwise.

Biodiversity and global ecosystems (30% of total)

The last indicator of environmental component is divided into two parts both weighted with 15%. The first one is the *Completeness of required reporting to multilateral treaties relating to biodiversity.* This indicator evaluates the country with two points when it hands its reports on time and without any errors, with one point when the reports are submitted late or they contain errors and zero points otherwise.

The second part of the Biodiversity indicator and the last indicator of the environmental component is the *Value of tropical timber imports per capita.* The deforestation and tropical imports in general are intensively discussed environmental issues for a long time as the effects of the timber extraction are prolonged and disastrous for the environment of not only the exporting country. The European countries are evalued with averaged score of their port countries which have very high timber imports due to the fact that they are harbours for all the other European countries.

3.2.2 Differences to CDI

One of eight indicators in Global climate category, the Gasoline taxes in PPP dollars per liter takes the data from OECD database. Nevertheless Saudi Arabia, Russia, Indonesia, India, China and Brasil are not included in these data. So the estimation of these taxes was taken as the differences in the retail price data and pre-tax benchmark provided by the German Society for International Cooperation.

The Fisheries section in CDI computations consists of two parts. 5% is represented with already mentioned ratification of U.N. Agreement from the year 2001, the other 5% stands for the fishing subsidies per capita. The data for the second part are taken from the OECD Review of Fisheries. The non-OECD countries in our set, Brazil, China, India, Indonesia, Russia, Saudi Arabia and Switzerland do not have these information provided. Therefore the second part of the CDI Fisheries component was excluded from ICEE calculations. The disadvantage of this approach is the fact that landlocked countries with no reason to sign the U.N. Treaty on fisheries are worse off as their score is not compensated with low fishing subsidies.

3.3 Security

Global prosperity does not go along with omnipresent fear or military interventions. The peaceful environment is met as a crucial condition for a prosperous world.

Although one in Europe or U.S. could feel nowadays as a safe person, the events happening for example in the Near East or lately in eastern Europe are showing that the security is very alive topic and we should be actively discussing it and developing it. In Security component we focus on the meaning of security in purely army understanding. We do not take into account interconnection between countries through energy supplies and the like, which is meant to hold the peace as well. These other ways of understanding the security are already involved in preceding components.

The issue of security is vital for every country. Each state has its own armed forces that should be able to defend their nation. The history shows that it is important for states to cooperate in case of an attack from the outside. Many of the treaties have been signed to ensure such a partnership. As one large example we can mention the North Atlantic Treaty Organization (NATO). Member states of NATO should provide a military aid to any other member state in need.

In terms of security, highlighting also prosperity that we focus on, we can remark the Security and Prosperity Partnership of North America. This enhanced cooperation among United States, Canada and Mexico was again intending to coordinate the forces in case of an external menace. In this case the partnership was made as a reaction to the September 11, 2001. The events following the terrorist attacks such as chaos on both Canadian and Mexican borders with strongly negative economical influence (Rozental 2006) showed that the prosperity can be retrieved only with common participation in security issues.

3.3.1 Arrangement of Security component

The Security component is divided into two uneven indicators. Two thirds of the component are devoted to *Contributions to peacekeeping and forcible humanitarian interventions*. That part focuses on actual physical involvement of a country in foreign unsettled areas. The remaining third values the countries

according to their *Participation in security regimes*. That means a part in various security treaties.

The first indicator of *Contributions to peacekeeping and forcible humanitarian interventions* is rewarding a country for taking part in war interventions approved by NATO, U.N. Security Council or African Union. The intervention must be also intended to help the inhabitants of the country, which excludes the operations in Afganistan and Iraq. We look at the time span of 1993 - 2011 which includes East Timor events in 1999 and Kosovo separation. It is understandable that we do not gather the information for this indicator year by year as the events worth including are not happening so often. The contributions to such interventions also usually differ over time, that is why the costs are averaged over those years. ICEE comprises expenses on deploying and maintaining the military crews in subsumed interventions and contributions of countries to the peacekeeping budget of U.N. All these costs are counted as a share of the country GDP.

The indicator of *Participation in security regimes* takes the remaining 33%. The country is evalued with one point when it takes part in the given regime, zero otherwise. We examine eight security regimes that focus on nuclear, chemical, biological and conventional weapons, mines and munitions. The last treaty examined is the Rome Statute of the International Criminal Court.

3.3.2 Differences to CDI

In 2005 two indicators were added to the security component of CDI. It was the Sea lanes protection indicator and Arms exports indicator. The second mentioned one represents 25% of the Security component, the first one creates together with Peacekeeping and humanitarian interventions 50% of the component. Unfortunately we are missing necessary data for countries that are not included in CDI, that is why these two indicators were omitted.

As the author of ICEE David Roodman acknowledges in (Roodman 2013a), these two meaningful indicators could be added to ICEE in a visible future. Data for both these indicators are gained contractually for CDI, so it would be just a matter of extending this practise. Nowadays the countries are even penalised for hiding the figures of arms export from the public (Roodman 2013a), so it should be easier to acquire the required lacking data from this field.

Chapter 4

Outreach of ICEE

Unlike CDI that is a widely cited and used index, ICEE currently lacks behind in popularity. The Center for Global Development created a big team of people working on CDI and they succeeded in building an index carrying remarkable information. Due to this fact CDI has also a response from political sphere. ICEE on the other hand was developed only by one person. The extra effort given to the design was lower in comparison with forming CDI as ICEE strongly bases on CDI. Nevertheless ICEE has also an interesting data validity that is different from CDI. As an index with a recent origin in 2013 it could not be expected that it gets attention from politicians in such a short time. It is still necessary for ICEE to undergo broader comments and criticism of researchers. At the moment ICEE suffers from some drawbacks described below, but it contains a huge potential. So it is very attractive to discuss a possible future outreach. We undertake such a debate in the second part of this chapter.

4.1 Drawbacks

Together with all the pros of CDI, ICEE inherited the cons as well. We cannot ignore these negatives as they unfavorably influence the results of ICEE. Therefore they need to be taken into consideration when representing the outcomes and making conclusions. That is why we first mention the CDI criticism and then we proceed to separate ICEE imperfections.

4.1.1 Common criticism

CDI attracted a broader attention of experts and officials so it also experienced a sophisticated criticism from all over the world. That helped CDI to improve

its validity and recognition. Due to this fact many of the shortcomings of CDI have been eliminated.

As stated in (Rehorova 2011) the major critique was aimed at equal weighting of the components. Many researchers wanted to introduce fairer weighting. Some areas of CDI can affect the development more, some could be less important. Nevertheless CDI is not built on any elaborated theory as such does not exist. The various opinions of which components to favour more differed significantly.

The research of (Chowdhury & Squire 2006) questioned researchers from 60 countries. Over 100 experts answered on how the weighting of particular components of CDI should be set. The results showed that according to these revealed opinions trade together with investment should be more important then migration and aid, whereas the other components should stay with current weighting. Nevertheless using this different weighting we get very similar scores as with equal weighting. The correlation coefficient between these two approaches is over 0,99 (Stapleton and Garrod through (Rehorova 2011)). It would be really very difficult to find such a fairer weighting and after all it would receive perhaps even stronger criticism than the equal one before.

Another imperfection can be seen in evaluating EU countries in various indicators. In some cases the politics of EU countries in particular areas are agreed among others and do not reflect actual intentions of a given country. In some indicators the scores for EU countries are avareged as we have only agregate data and that causes very similar scores of the 14 EU countries. This problem then projects into statistical sphere. CDI has each component designed to have an average score of 5. Nearly identical scores of more then a half of the countries then negatively influences the scores of other countries. Therefore the EU countries should get more diversified data according to their internal policies or the Europian Union should be considered as only one country (Rehorova 2011). In my opinion, as EU countries are nowadays still significantly heterogenous, the first mentioned approach would be the more suitable one.

I find it slightly inequitable that in particular areas that are part of CDI some countries could be put in disadvantage. Specifically I talk about landlocked countries such as Switzerland or the Czech Republic that do not have any reason to sign treaties about ocean fisheries. On the other hand Fisheries indicator takes only 10% of CDI, so in this case the problem is of a minor importance. But each indicator should undergo discussions so that the possible similar disadvantages could be revealed.

4.1.2 ICEE imperfections

The biggest problem in ICEE computations is definitely the lack of necessary data. In the second chapter we described the reasons of dropped CDI components from ICEE and the major cause is the absence of information. And technology, investment or migration are the spheres that are indeed considered to boost development and prosperity as stated for example in (Vives *et al.* 2006). A significant extra effort should be done to acquire the information. As already mentioned a success of retrieval could be strongly expected in some cases. We could say it is even experts' obligation to accomplish this assignment in the future. As the need for any data is a very alive topic in research every day we can hopefully expect a better situation in a visible horizon.

The lack of figures can multiply the already mentioned problems of CDI, namely the problem of the last paragraph of the Common criticism. That is the disadvantage of some countries in particular areas. The already described problem of treaties connected with fisheries and landlocked countries magnifies when we remove some other indicators of the component. The original weight of 5 % assigned to treaties ratification doubles to 10 % after discarding the second indicator of the fisheries component. As this missing information describe the fisheries subsidies, the disadvantaged countries are even more worse off as their results are not compensated with the second indicator. The omitted data can sometimes unfavorably cause such a small ripple effect.

The biggest problem of skipping some components is however the lowered validity of ICEE results. The potential described below cannot be reached with incomplete figures. This is also the reason why the present issue of this index could not experience such a success as CDI did. Perhaps this is also a cause of current overlooking of ICEE in the experts area. Present state of the Index is rather percieved as unfinished. When the necessary data are accessible the ongoing situation could change radically.

From the practical point of view of an external researcher we would have an objection to the author of ICEE regarding the provided tables on the web page of the CGD. Some other indexes revisited in chapter 6 are accompanied with really well elaborated data sheets. In case of ICEE it is visible that the author was probably in hurry with publishing the figures material. Some of the references in tables are disfunctional which sometimes significantly manifolds the time spent on further computations of extending the index. Some of the references are sometimes even incorrectly linked. This is usually case of indi-

cators which are finally dropped from computations but this could bring very misleading results in the future when not properly revisiting the data.

4.2 Potential

When all the problems of ICEE computations are solved and the data validity is high, the situation of the index could change significantly. The informational value of the index will be profoundly interesting. In nowadays globalised world the interconnection between countries becomes more and more important then before. A change in one country has an effect on the other ones sometimes in a very short time range. It is desired and responsibility of each state to imply such politics that would promote prosperity to its nation and so to other countries as well. Prosperity in a foreign country would then countenance even a higher level of prosperity in the initial country and so on.

Therefore not only experts but also officials should be interested in ICEE results. CDI made a success with drawing attraction of both parties. The issue of developing countries is not only a theoretical problem. Actual foreign aid and steps of politicians influence these lands. CDI gives good validity that can decompose the problem into smaller parts. We can analyse which areas of politics are to be improved. This valuable guideline enables effectivity in these matters that was very difficult to reach before.

We can expect the very similar impact in case of ICEE. Politics towards developing countries is important but not a main matter of officials. However the politics leading to enhanced cooperation among all foreign countries is a subject of discussions on a daily basis. This interconnectivity should aim at subsequent higher prosperity. We can support this intended well-being with detailed study that can show which fields are to be focused on. And this is exactly the analysis that ICEE offers.

The real strenght of a theoretical concept is not only the numerous reviews in academic papers but actual implementation in the real world. In my opinion ICEE has exactly such a potential. Therefore we should keep our concern about this index. It could help to increase the efficiency of introduced political decisions and enhance the wellfare of countries.

Chapter 5

Computation of ICEE for the Czech Republic

The official ICEE computations include results for the years 2003 - 2012. The Czech Republic entered the Europian Union in 2004. Some indicators are using data of EU for the EU countries as some policies are the same. Some of these data are not well tracable for the years before the EU membership. Therefore we compute the ICEE of the Czech Republic for the years 2006 - 2012. We omit the first two years after joining EU to let the common politics settle a bit. Acquiring results for a time span and not only for a separate year we can not only compare the Czech Republic among other countries in the set but we can also track changes of correspoinding politics in time and also relatively to other countries.

Although we can use EU data for some figures sometimes we need to use information for particular countries as the politics in that field differ. Not always were these data available for example from the same source. These slight discrepancies are all described in Appendix together with the decomposed results.

Each component of ICEE is afterwards standardized according to the mean of scores of the countries in the set. To include another country in the index means the change of this mean. In this problematics I followed the work of (Rehorova 2011) already cited in this paper few times. She did a great job with calculating the Commitment to Development Index of the Czech Republic for the year 2010. She was not recomputing all the results of the countries with the new mean of scores. The mean changed negligibly and the new final results could become a bit confusing.

In original CDI computations the mean of each component is adjusted to 5 for the years 2004 and 2008. In case of ICEE calculations this condition is not fulfilled in any year. Some indicators of the included components were dropped in comparison with CDI and the mean of scores again changed only insignificantly. The author decided not to recompute all the resutls as mentioned in chapter 2, section 2.2. This is another reason why I did not adjust the final results according to the new mean of scores after supplementing ICEE with the Czech Republic. The slight changes are indeed perceived as too minor to require the recomputations of the whole index.

Table 5.1: ICEE results for the years 2006-2012

Country	2006				2007				2008				2009				2010				2011				2012			
	Trade	Environment	Security	Overall	Trade	Environment	Security	Overall	Trade	Environment	Security	Overall	Trade	Environment	Security	Overall	Trade	Environment	Security	Overall	Trade	Environment	Security	Overall	Trade	Environment	Security	Overall
Australia	6,8	2,6	13,7	7,7	6,8	2,7	12,9	7,5	6,8	3,8	12,3	7,6	8,2	3,0	11,8	7,7	8,2	3,7	11,2	7,7	8,3	3,9	10,6	7,6	8,3	3,9	10,1	7,4
Brazil	2,7	6,7	2,3	3,9	2,6	6,9	2,3	3,9	2,6	7,1	2,3	4,0	3,7	7,1	2,3	4,4	3,6	7,3	2,3	4,4	3,5	7,5	2,4	4,5	3,3	7,4	2,8	4,5
Canada	7,8	4,7	8,0	6,8	7,8	4,8	7,6	6,8	7,9	4,4	7,3	6,5	7,0	4,4	7,0	6,1	7,0	5,0	6,6	6,2	7,0	5,4	6,4	6,3	7,1	4,3	6,3	5,9
China	-9,2	6,4	1,3	-0,5	-9,2	6,2	1,3	-0,6	-9,3	6,0	1,3	-0,7	1,2	6,0	1,3	2,9	1,2	6,3	1,3	2,9	1,2	6,1	1,4	2,9	1,2	5,7	1,4	2,8
Czech Republic	5,6	6,9	5,7	6,1	5,4	7,2	5,6	6,1	5,4	6,8	5,4	5,9	6,4	6,1	5,3	5,9	6,4	6,0	5,3	5,9	6,3	6,8	5,1	6,1	6,2	6,7	5,2	6,1
France	5,2	6,6	9,3	7,1	5,3	6,6	8,9	6,9	5,3	6,5	8,6	6,8	6,2	6,4	8,5	7,1	6,3	6,5	8,5	7,1	6,3	7,1	8,2	7,2	6,3	7,3	10,0	7,9
Germany	5,1	6,7	5,9	5,9	5,2	6,6	5,9	5,9	5,2	6,4	5,9	5,8	6,2	6,1	5,8	6,1	6,3	6,2	5,8	6,1	6,3	6,9	5,8	6,3	6,2	7,0	5,7	6,3
India	-7,4	7,9	1,8	0,8	-7,4	8,0	2,1	0,9	-7,4	8,0	2,2	0,9	-2,6	8,5	2,2	2,7	-2,6	8,7	2,3	2,8	-2,6	8,5	2,3	2,7	-2,7	8,2	2,4	2,6
Indonesia	5,6	4,6	0,9	3,7	5,6	5,0	0,9	3,8	5,6	5,5	1,3	4,1	6,1	5,8	1,4	4,4	6,1	7,1	1,5	4,9	6,1	7,2	1,6	5,0	6,1	7,2	1,7	5,0
Italy	5,4	6,3	7,1	6,3	5,4	6,2	7,1	6,2	5,5	6,1	8,1	6,5	6,3	5,9	7,9	6,7	6,4	6,2	7,6	6,7	6,4	6,9	7,4	6,9	6,4	7,1	7,6	7,0
Japan	6,7	2,7	2,3	3,9	6,7	3,9	2,4	4,3	6,7	3,5	2,8	4,3	5,3	3,8	2,8	4,0	5,3	4,4	3,3	4,3	5,3	4,9	3,4	4,6	5,3	4,5	3,4	4,4
Mexico	3,5	4,4	2,1	3,3	3,5	4,7	2,0	3,4	3,5	4,9	2,0	3,5	5,4	4,9	2,0	4,1	5,4	4,9	2,3	4,2	5,4	4,8	2,3	4,2	5,4	4,7	2,3	4,1
Netherlands	5,5	6,9	10,1	7,5	5,6	6,8	9,6	7,3	5,7	6,6	9,1	7,1	6,5	6,4	8,7	7,2	6,6	6,4	8,2	7,0	6,6	7,0	7,9	7,1	6,6	7,0	7,9	7,2
Russia	2,1	7,4	3,5	4,3	2,1	7,6	3,4	4,3	2,2	7,5	3,2	4,3	4,4	7,6	3,1	5,0	4,2	7,8	3,1	5,0	4,0	7,7	3,0	4,9	3,6	7,1	3,0	4,6
Saudi Arabia	6,0	1,0	0,9	2,6	6,0	0,9	0,9	2,6	6,0	0,7	1,1	2,6	7,3	0,6	1,2	3,0	7,3	0,9	1,2	3,1	7,3	0,7	1,2	3,1	7,3	-0,2	1,2	2,8
South Korea	1,0	2,8	1,9	1,9	1,0	3,5	1,9	2,1	1,0	3,3	2,0	2,1	1,6	4,8	2,1	2,8	1,6	4,8	2,1	2,8	1,6	5,1	2,2	3,0	1,6	5,1	2,2	3,0
Spain	5,3	6,0	4,4	5,2	5,4	5,9	4,4	5,2	5,4	5,7	4,7	5,3	6,2	5,8	4,7	5,6	6,3	6,2	5,0	5,8	6,3	7,1	5,0	6,1	6,3	7,3	5,0	6,2
Sweden	5,5	7,7	8,3	7,2	5,5	7,3	8,0	6,9	5,6	7,1	8,1	6,9	6,5	6,9	7,8	7,0	6,5	7,1	7,4	7,0	6,6	7,8	7,2	7,2	6,5	7,7	7,0	7,1
Switzerland	4,0	4,6	6,5	5,0	4,0	4,7	6,3	5,0	4,0	4,6	6,1	4,9	1,6	4,5	6,0	4,0	1,6	4,8	5,8	4,1	1,5	5,4	5,7	4,2	1,5	5,5	5,6	4,2
Turkey	4,4	5,1	4,0	4,5	4,4	5,6	3,9	4,6	4,2	5,7	3,9	4,6	2,7	5,5	3,8	4,0	2,8	6,6	3,7	4,4	2,8	7,4	3,6	4,6	2,8	7,5	3,6	4,6
United Kingdom	5,3	7,4	13,0	8,6	5,3	7,3	12,3	8,3	5,3	7,0	11,6	8,0	6,2	6,8	11,1	8,0	6,3	6,7	10,5	7,8	6,4	7,4	10,3	8,0	6,3	7,4	10,0	7,9
United States	7,9	3,4	7,4	6,2	7,9	3,6	7,0	6,1	7,9	3,7	6,6	6,1	8,3	4,0	6,3	6,2	8,3	4,4	6,0	6,2	8,3	4,8	5,7	6,3	8,3	4,7	5,6	6,2

5.1 The ICEE results for the Czech Republic

First we need to keep in mind that the current issue of ICEE suffers from the mentioned imperfections that lower its validity, so a certain level of discretion is advised. Nevertheless even under such conditions we can say that the Czech Republic scores very well in matters of external engagement. In all examined years the Czech Republic ranks higher then all included developing countries. Such a fact confirms the decision of the World Bank from the year 2006 to mark the Czech Republic as a developed country (Velinger 2006). Furthermore, from the set of 22 countries, that is 14 developed countries, the Czech Republic takes 10th place in 4 explored years. That is indeed a great result for such a small country as the Czech Republic.

From the developed countries the Czech Republic scores always better than Switzerland, Japan and South Korea. In four years it also achieves higher rankings than Spain. Switzerland repeatedly performs better than the Czech Republic in Security component. Although it has lower expenditures on active military forces, it spends something between two or three times more on defence. On the other hand Switzerland significantly lags behind in Trade component as it behaves in a very protectionist way in terms of trade. This fact substantially lowers its final ranking. Both Japan and South Korea accomplish lower results in all three components except of Japan in Trade component in years 2006 - 2008. Japan was extending tariffs every year since 2006 (Masaki 2014) which a fact has projected into its score.

When investigating the scores of the Czech Republic among the years there was a visible drop of the score in years 2008 - 2010. The reason is the crisis of the year 2008 so it is not just the case of CR. Therefore the relative positioning of the countries did not change much. After the crisis the Czech Republic holds the 10th position. That means worsening its position by one rank.

Important for obtaining such a new ranking of the country is the embedding of the results into other academic works. Such an enquiry is the topic of the sixth chapter. Relevant is also the discussion of scores of individual components as they form the final result. This investigation is provided in the following subsection.

5.1.1 The results of the individual components

In comparison with CDI result of the Czech Republic we cannot say that the country excells in one area and loses in another one. In ICEE computations the Czech Republic performs relatively evenly in all the components.

In CDI results we are relatively more succesfull in the Environmental component. In ICEE environmental scores we suffer from the current necessary dropping of few indicators described in chapter 4, section 4.1. Namely the final figures are suppressed with absence of participation in fisheries trieties. If the Czech Republic had a reason to join the ocean agreements we would rank in the Environment component in top five countries. At least if the indicator of fishing subsidies was not removed the case of nonparticipation in ocean treaties would be compensated. Nevertheless due to our high gas taxation we take place in top four countries in Gasoline tax indicator. Also our average annual change of emissions is remarkably good, again the Czech Republic ranks among the first four countries. The environemntal component shows rather a still behavior over the years. The treaties do not change over time and for example emission reduction is not an indicator that would be changing rapidly year by year.

The Trade component of the Czech Republic reflects the EU trade policy which we are part of. It does not say much about real policy intentions of a particular EU country. Therefore the results in this area are nearly homogenous for all the EU countries included in the set. The results slightly differ only in agricultural subsidies, but these are anyway outcomes of the Common Agricultural Policy of EU. The Trade component evinces rather an improving performance over the years, though loosing a tenth from its score both last two explored years. That means we are rather opening our economy to a more free trade.

In the Security component we find the Czech Republic on the 10th place through the years. We take part in all the examined security treaties so we get the highest possible score in the Participation in security regimes. The relative place among the other countries in Military spending remains at the 11th position. Our military spending moreless corresponds with the average results of this indicator. The Arms exports is a dropped indicator in which the Czech Republic would score as the 16th country (excluding the countries not included in CDI set) due to trade of its arms factories. The exclusion of this indicator thus improves the final security result of the Czech Republic. The question is how the inclusion of the indicator would move its relative ranking as

we do not know arms exports of the countries not covered in CDI computations. From the nature of the Security component the security is the part that varies the less among the years.

Chapter 6

ICEE among other indexes

Not only the bare results and ranking of a measurement are importnat but also the comparison with other works of experts. It is always the final discussions and interpretation that matters and that is the aim of such kind of a research. The critical view on the outcomes can be done through incorporation of the results into the work discussing the similar problematics. We accomplish such a cursory survey on 5 indexes for the year 2012.

6.1 Methodology

For the purpose of rankings comparison I applied the linear regression analysis. In our case we want to compare whether the two rankings of individual rankings are similar or not. We can rephrase this requirement as how much the results of one ranking depend on the other one. Our null hypothesis would be thus that the two rankings are not similar. We can expect positive and also negative relationship between both rankings as one ranking can have in some extent opposite order of results than the other one. That is why we work with two-tailed test. We want to know and discuss whether the second ranking has the similar order or not in the same or an opposite direction. We inspect the significance of the explanatory variable and sign of its coefficient. We are though mostly interested in variation of one ranking explained by the other ranking. Therefore we observe the value of R-squared. Nevertheless all the regressions serve only for obtainig a rough insight into the similarity problem. We need to keep in mind the imperfections of ICEE computations that prevent us from too serious conclusions.

I always took the set of the countries and assigned them their rankings from

the given indexes. Afterwards I rearranged the rankings so that they would interpret the relative rankings in the scope of the set. That is having the set of n countries I recounted the positions obtaining the ranking in interval from 1 to n, preserving the relative positions of the countries.

To achieve a better imagination of the expected statistical values I designed few example rankings. Two identical rankings would give us an expected result of R-squared equal to 1. That is also a value of the coefficient of significant explanatory variable. If we changed two positions as described in Appendix in subsection A.2.1, we could get significant explanatory variable and R-squared of 0.8254. Another example I built is creating the second ranking with last position taking the first place and other positions remaining relatively the same. We obtain again a significant explanatory variable and value of R-squared equal to 0.5463. An example of three changed positions produces a significant explanatory variable with R-squared value of 0.3246. Afterwards I generated 10 random rankings and examined their statistical values. The R-squared of all the random rankings averaged is 0.03391. These described examples together with the following results of regressions are all in detail illustrated in Appendix in section A.2.

6.2 Indexes with similar measuring objective

6.2.1 Good Country Index

Although the first mentioned index has a pretty simple name it bears a resemblance to ICEE in its target and index composition. The Good Country Index measures the contribution of countries to the common good of humanity (Anholt 2014). GCI consists of 7 components - International Peace and Security, Planet and Climate, Prosperity and Equality, World Order, Science and Technology, Heatlh and Wellbeing, Culture. GCI is connected with ICEE not only in its target and structure but also in personnel matters. The authors of GCI, Simon Anholt and Robert Govers are on the first place acknowledging for guidance and advice David Roodman, the author of ICEE (Anholt & Govers 2014).

The Prosperity and Equality component of GCI includes an indicator of Trading across borders measuring the trade openess which corresponds with the ICEE trade measure of protectionism. Moreover another indicator deals with foreign direct investment that had to be dropped from ICEE computations

due to lack of data. Planet and Climate component represents very similar information as the Environment component of ICEE. It also covers CO_2 and other polluting gases emissions. GCI does not introduce fisheries part and ratification of biodiversity treaties. On the other hand it involves water pollutants and exports of waste. When decomposing the International Peace and Security part we can find all the ICEE security indicators included, plus arms exports together with Global Cyber Security Index results. From the necessaryly removed CDI components GCI also tracks the technology, already mentioned investment and aid (namely population charity givings, so a different approach to aid than the political one of CDI). The Health component is surely a measure that would ideologically fit into ICEE computations. The Culture part is rather seen as a difference between ICEE and GCI.

The regression run between the ICEE ranking and GPI ranking gives us a good view on similarity of the results between the two indexes. The significant explanatory variable has a positive value of its coefficient so the order of ranking in both cases is the same. That is the desired result. The value of R-squared is equal to 0.437. That is a considerably high result when taking into account the artificial example of three changed positions in the ranking described above. This example was for sure still an outcome accepted in our scopes with conclusion of similar rankings. The R-squared value of our regression is higher than the one in this illustration. Therefore we can conclude that both ICEE and GCI indexes yield similar rankings and appear to be approximately equal evaluators in the field. For the statistical table see Appendix, section A.2, subsection A.2.2, Table A.44.

The Czech Republic in GCI results scores the 13th ranking. That means it takes the worse position than in ICEE computations. Nevertheless the difference of 3 positions in set of 22 countries is not such a big difference. The R-squared value also shows a certain level of similarity, not the identity. So we can say that the ICEE score of the Czech Republic fits with the rankings of GCI.

6.2.2 Legatum Prosperity Index

The Legatum Prosperity Index (LPI) is a ranking of the Legatum Institute, an organisation of the Legatum group focused on promoting prosperity. Although the LPI measures prosperity of each country separately and does not purposedly aim at external engagement of the country, both targets are closely connected.

This statement is underlined with the fact that LPI consists of components similar to the ones of ICEE or it questions such areas that are supposed to be part of the ICEE in the future. The index of Legatum Institute has been cited in many newspapers such as The Times, Washington Post, The Daily Telegraph or The Guardian (Odone 2014).

The LPI consists of 89 variables that are separated into 8 groups - Economy, Safety and Security, Personal Freedom, Education, Health, Entrepreneurship and Opportunity, Governance and finally Social Capital (Alfaiate *et al.* 2014). The ICEE indicator of trade protectionism is actually not incorporated into LPI computations, but the Economy part of the index consists of indicators that are supposed to influence the global prosperity as well[1]. The case ICEE Security component[2] is likewise to the described case of trade. The Environment component is then hidden in the Governance group of indicators as the Environmental Preservation indicator. LPI also includes approximately all the parts of CDI that had to be dropped from ICEE. That is the Investment component covered in the Economy area of LPI, Migration inspected in the Personal Freedom, Aid divided into Governance and Social Capital and Technology that could be compared to some of the rich indicators of the Education component and of the Entrepreneurship and Opportunity component.

Even if after the short description someone disagreed that the LPI is not so much connected with ICEE it for sure is interesting to examine the relationship of ICEE and LPI results. That means to find out whether there is a connection between the prosperity of the country and its share on the overall global prosperity. Or in other words to explore whether the country implies rather a selfish way of politics or it just found the way how to rule towards common wellbeing.

As expected the regression examined between ICEE and LPI does not give a result of such a high similarity as the regression between ICEE and GCI. The GCI is supposed to be more similar evaluator to ICEE already from the more analogous composition of the index. Nevertheless the statistical analysis between ICEE and LPI shows a significant explanatory variable with positive coefficient. This again means the demanded result. The order of both rankings is not opposite. The R-squared reaches the value of 0.378. This value is still higher then the example of three changed positions so still we can claim that

[1]We can name few as Inflation, Confidence in Financial Institutions, Market Size or High-tech Exports.

[2]The indicators incorporated in the Legatum Prosperity Index supposed to promote global prosperity are for example Civil War or State Sponsored Political Violence.

the results of ICEE and LPI rankings are similar. From the researched result we can also conclude that there is a positive relationship between the prosperity of the country and its share on the overall global prosperity.

Again as in the GCI rankings, the Czech Republic takes the 13th positions among the countries in LPI results. Therefore if we accepted this result in case of GCI we should do the same with LPI ranking. So it seems that the Czech Republic is more succesful in helping other countries than in its own prosperity. The comparison of individual results of countries appears to be an interesting elaboration. Sweden for instance focuses more on its own situation. Such an investigation from these results could be however lead only on entertaining discussion level rather than be part of some more rigorous research inference due to ICEE imperfections.

From some interesting indexes we can name Better Life Index of OECD that makes an investigation of people well-being. It also includes factors such as environment or safety, but all are already exclusively aimed at individuals and do not longer match so much with the idea of ICEE. Besides such a observation would be quite similar to the one with the Legatum Prosperity Index. Another nearly identical index going into more local detail would be Regional Well-Being Index of OECD. We could of course find more indexes that could be thought-provoking to compare with ICEE results. It could be compelling to explore the connection between the country external engagement with changes in its social situation provided by Social Progress Index, an index of Social Progress Imperative[3]. Another attractive examination could be the correlation between ICEE results and Human Development Index[4] outcomes. Nevertheless we leave these ideas for some other research as they would be already slightly moving away from our inteded comparison of ICEE results and embedding the Czech Republic ranking in particular with similar works. The more important for us is to inspect the validity of individual components which we examine on following indexes.

[3]Team of the Social Progress Imperative includes top members of Harvard Business School, the Economist, Massachusetts Institute of Technology or University of Oxford.

[4]The Human Development Index is a measure of human development created by economists Amartya Sen and Mahbub ul Haq.

6.3 Indexes similar to individual ICEE components

6.3.1 Index of Economic Freedom

The Trade component of ICEE measures the trade openess. Therefore the Index of Economic Freedom (IEF) appears to be an appropriate piece of work for discussion. IEF is a classification created by The Heritage Foundation and The Wall Street Journal that is developing a ranking of countries according to their degree of economic freedom. The index composes of 4 aspects of the economy - Rule of law, Government size, Regulatory efficiency and Market openness.(Miller *et al.* 2014)

The regression between ICEE trade ranking and IEF gives an inspection-worth result. The positive sign of the coefficient indicates the same order of both rankings. The explanatory variable represents still satisfying p-value of 0.015. So we have the explanatory variable with appropriate validity. The R-squared value is equal to 0.2623. This value is lower then the examples with changed selected positions. On the other hand it is much higher value than the results of the random rankings. We still can say there is some similarity between the two rankings, but it could be higher. The IEF cover important areas of the given problem. So the result of the regression shows that ICEE trade component should be improved to gain the better validity.

The ranking of the Czech Republic in ICEE Trade component for the year 2012 equals to 12. In IEF scores the CR takes the 10th position. That is an attractive result. If we accept the fact that IEF carries better information of the give problem, the outcome indicates that the real position of the Czech Republic within the set of countries is better than stated in ICEE computations. On the other hand the difference of positions is only of two posts so with received R-squared we could still claim that the results are approximately similar.

6.3.2 Environmental Performance Index

With nowadays awareness of environmental issues it is expected that there exists an index ranking the countries only according to their environmental performance. An example of a rigorous index in this field is the Environmental Performance Index (EPI), a common work of Yale University and Columbia University in collaboration with the World Economic Forum. The ICEE component of environment focuses on global climate, sustainable fisheries and biodiversity. The EPI researches 178 countries in 9 environmental areas - Water

Resources, Agriculture, Forests, Fisheries, Biodiversity and Habitat, Climate and Energy, Health Impacts, Air Quality and finally Water and Sanitation (Hsu *et al.* 2014).

Before the investigation of regression results I would like to emphasize the overall ranking of the Czech Republic in EPI results. In years 2006 and 2014 that is already not part of our study, the Czech Republic took a place in the top five countries. Among 178 countries this is a noteworthy success. According to EPI scores we excell in Health Impacts and Biodiversity and Habitat. In comparison with ICEE we are not evaluated in Fisheries which brings us to more even position among others (as already discussed in chapter 4, section 4.1). The exceptionally good state of the Czech environment has been captured also in CDI computations discussed more below.

The regression of ICEE environmental component and EPI ranking shows a striking difference between the two measurements. Although the explanatory variable acquires the required positive coefficient, the variable itself is strongly insignificant. The R-squared values equals to 0.0113 which is a similar result to the random ranking from our example. Thus we can say there is no correspondence between ranking of both indexes. ICEE environmental component and EPI ranking differ. Not only the EPI covers much more environmental areas, but the ICEE environmental component suffers from some drawbacks (again referencing to section 4.1 of the chapter 4). For example in the Environment component of original CDI the Czech Republic evinced an excellent score. The EPI ranking confirms this position. The environmental component of ICEE should be revisited for sure to better correspond with other more valid indexes in the field and so with the reality.

6.3.3 Global Peace Index

In matters of security an interesting piece of work that has been created is the Global Peace Index (GPI) of the Institute of Economics and Peace. GPI is a composite index consisting of 22 indicators divided into three categories - Ongoing domestic and international conflict, Societal safety and security and Militarisation (Clements *et al.* 2014). Both the included components of ICEE, Military spending and Participation in Security Regimes are included in GPI, also together with the dropped ICEE component of Arms exports. The Institute for Economics and Peace keeps a list of endorsers of the GPI among which

we can find the organisations such as the OECD, the World Bank, the United Nations or 10 Nobel Laureates, for instance Kofi Annan or Joseph Stiglitz.

The result of the regression between the ICEE security component and the GPI reveals the biggest similarity between the ICEE component and another index. The significant explanatory variable acquires the positive coefficient so the order of both rankings has the same direction. The R-squared value equals to 0.3006. According to our artificial examples we consider such a value to declare similar results of both rankings. We can say that the ICEE security component has a good data validity. On the other hand this fact does not mean that the security component of ICEE should not be more developed.

The Czech Republic takes the 11th position in ICEE security component for the year 2012. The GCI result of the CR is very pleasurable, we rank as 5th in our set of countries. This outcome is maybe a little bit surprising because we already discussed that dropped indicator of arms exports that could lower our position due to noticeable arms trade. Nevertheless we also stated that we cannot know the result as we do not know arms exports of countries not included in CDI set. Besides the two components of GPI that are not part of ICEE - Ongoing domestic and international conflict and then Societal safety substantially elevate our overall score. In both mentioned areas we perform well because we do not suffer from internal conflicts and we are considered to have satisfying societal safety.

6.4 ICEE and CDI comparison

In the section 6.2 of this chapter we explored the relationship between the ICEE and the Legatum Prosperity Index. That means what is the relationship between the rate of how the country supports the global prosperity and the extent of its own promotion of wellbeing. In this section we take the opposite view. The CDI measures the degree of support to developing countries given by the country in the CDI set. The result of the regression between ICEE and CDI rankings thus tells us the relationship between the country commitment to overall prosperity and the devotion to development countries. When comparing the individual results we could ascertain whether the country is more oriented to developing or to the other countries in comparison with other states in the set.

6.4.1 CDI ranking

For ICEE and CDI comparison we can choose into the examined set only the countries appearing in both the rankings. That makes 14 countries of the explored group[5]. We again investigated the results of the year 2012.

As the ICEE strongly bases on CDI computations it is probably not surprising that there is a significant relationship between these two indexes. The significant explanatory variable gains the positive coefficient so the order of the rankings is the same. The R-squared value is equal to 0.6020. This is the highest R-squared value from all the regressions elaborated so far. That means there is indeed a stronger relationship between the country commitment to overall prosperity and the devotion to development countries. Both of the explored rankings are measuring the help to outside world. CDI is then specifying to which part of the world the help aims.

In general the differences between ICEE and CDI positions are not large. The most varied result of Canada acquires the difference of 5 positions. But on average the difference between ICEE and CDI result equals to 1,85 positions. The particular results can give us a better insight into individual cases. The Czech Republic that we focus on takes the 8th position in ICEE ranking of the given set of countries and the 10th position in CDI results. That means that the Czech Republic probably focuses more on the global engagement than on support to developing countries. For the country of Czech scopes and wealth such a result is understandable. We would expect more significant aid to developing countries by the countries with high level of wellbeing. That means countries highly ranked in the Legatum Prosperity Index for example. In 5 cases[6] the country is more devoted to pro-poor countries than to global prosperity, 2 countries[7] appear to have equal preferences and 7 countries[8] favor the global prosperity over developing countries. For more detail see Appendix, Table A.2.3.

[5]Australia, Canada, Czech Republic, France, Germany, Italy, Japan, Netherlands, South Korea, Spain, Sweden, Switzerland, United Kingdom, United States

[6]Canada(3rd), the Netherlands(4th), Spain(11th), Sweden(1st), Switzerland(5th). In brackets there is stated position of the country in the Legatum Prosperity Index within the set of our examined countries.

[7]Germany, South Korea

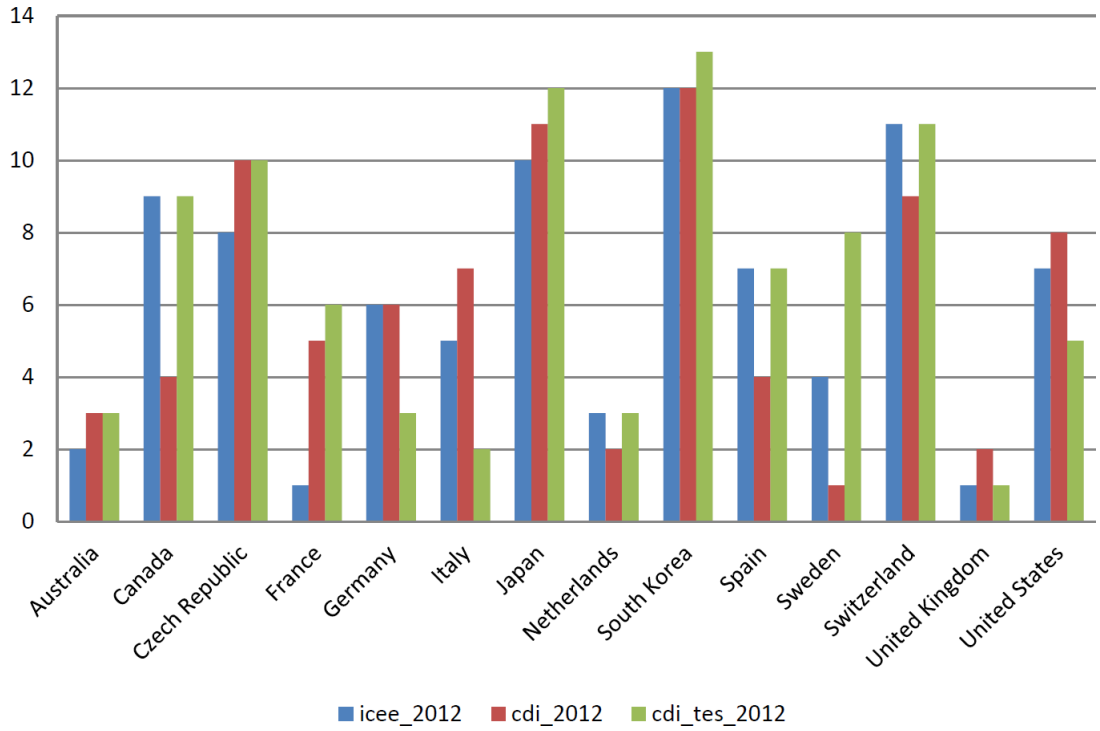
[8]Australia, Czech Republic, France, Italy, Japan, United Kingdom, United States

6.4.2 CDI ranking only with ICEE components

Another short study can be performed to verify the error level of the necessary droppings of few indicators from ICEE structure. We create an adjusted CDI index with dropped components of Aid, Finance, Migration and Technology. So the index remains with three components of ICEE - Trade, Environment and Security. We can thus compare the current ICEE and the theoretical ICEE without necessary indicator droppings. This can show us how much we deviated the present results with few necessary data removals.

The result of the regression reveals a strong similarity. The significant explanatory variable gains of course the positive coefficient. The R-squared value is equal to 0.6683. This is the highest level of similarity we have received. Actually, in this inquiry we should rather talk about analysing the identity relationship than a similarity relationship. The two rankings are not identical but their relationship is strong. We could hopefully claim that with current regretabble indicator droppings the similarity of ICEE with the theoretically created index is still satisfactory though we cannot say it would be identical. For a better insight into the values see the Figure 6.1 or Appendix, Table A.50.

Figure 6.1: The results of rankings for the year 2012



icee_ 2012 - ICEE results, *cdi_ 2012* - CDI results, *cdi_ tes_ 2012* - results of adjusted CDI with only three components of Trade, Environment and Security

Chapter 7

Conclusion

The computed ranking of the Czech Republic according to the ICEE shows that the performance of the CR in matters of global prosperity is on a very good level. It always scores higher than all the included developing countries and it never takes the last position among the developed ones. Among the developed countries it ranks approximately in two thirds, among the whole set of countries it scores slightly above the half. The Czech Republic does not significantly excel or legs behind in individual components, it performs rather equally in all the covered areas over all the examined years 2006 - 2012.

This result could be a good motivation for other countries to perform better in the given fields. In the ranking of the Legatum Prosperity Index the Czech Republic could be found in the second half of the inspected countries. Still the CR manages to be relatively more contributive in global scale than some other more affluent countries. It would be surely very interesting to know the ICEE rankings of some other likewise smaller countries not included in the set.

The ICEE ranking of the Czech Republic approximately corresponds with other research works from the area. The only significant difference was observed in environmental component. It appears that uneven conditions of ICEE computations in this particular case substantially lower Czech score. In reality that was more broadly depicted by Environmental Performance Index the Czech Republic occupies an excelent position in environmental matters.

The Czech Republic focuses more on the global commitments than on a purposeful aid to developing countries. This conclusion comes from the comparison of ICEE and CDI scores. Such a result is a consequence of the wealth situation of the country. The poorer the country, the lower the expected help to other worse-off countries.

The current situation of the ICEE suffers from some drawbacks that lower its validity. Some of the indicators or whole components had to be dropped due to lack of data for some countries included in the set. These necessary removals sometimes cause an uneven background for some countries. Therefore the acquired results should be taken with a certain level of discretion and the final discussion should not be missing.

Even the contemporary issue of the ICEE however produces reasonable results. This fact was verified with statistical analysis. Not only that the result of the Czech Republic resembles other expert rankings. It appears that the ICEE scores in general are statistically similar to the rankings of other indexes aiming at the likewise objectives. When comparing the validity of individual components of ICEE the environmental part should be revisited for sure as indicated also with the score of the Czech Republic. Both trade and security components occur to be satisfying. Their development would be though also recommended for overall improvement of the index.

If the ICEE gains a better validity by correcting the objections of critique it could provide an important insight into given problematics. The future rankings could serve as a very helpful guideline in matters of global prosperity. The officials could get a more sofisticated awareness of what areas are to be improved for a better global cooperation and consequential enhanced prosperity.

Therefore the further development and research of the ICEE is strongly recommended. That requires mainly procurement of the missing data to diminish all problems that are caused by the figure droppings. ICEE should also follow the amelioration of CDI imperfections as it suffers from the same negatives. For checking even the current data validity of ICEE I recommend further comparison with other related works. The worth examing indexes are certainly Human Development Index or Better Life Index but any other new creative ideas following associated works would be beneficial for verifying the accuracy of the index outcomes.

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Internet resources

http://www.cgdev.org/
http://www.worldbank.org/
http://unfccc.int/
http://www.un.org/

Appendix A

Appendix

A.1 ICEE computations

All the tables represented below follow the methodology of ICEE computations described in 3. Data for the Czech Republic of the year 2012 were derived from official release of CDI results in which the Czech Republic is already included. Sources of figures in other years are stated in each subsection devoted to individual components.

A.1.1 Final results of ICEE

Table A.1: ICEE 2012 results

Rank	Country	Trade	Environment	Security	Overall (Average)
3	Australia	8,3	3,9	10,1	**7,4**
15	Brazil	3,3	7,4	2,8	**4,5**
11	Canada	7,1	4,3	6,3	**5,9**
20	China	1,2	5,7	1,4	**2,8**
10	Czech Republic	6,2	6,7	5,2	**6,1**
1	France	6,3	7,3	10,0	**7,9**
7	Germany	6,2	7,0	5,7	**6,3**
22	India	-2,7	8,2	2,4	**2,6**
12	Indonesia	6,1	7,2	1,7	**5,0**
6	Italy	6,4	7,1	7,6	**7,0**
16	Japan	5,3	4,5	3,4	**4,4**
18	Mexico	5,4	4,7	2,3	**4,1**
4	Netherlands	6,6	7,0	7,9	**7,2**
13	Russia	3,6	7,1	3,0	**4,6**
20	Saudi Arabia	7,3	-0,2	1,2	**2,8**
19	South Korea	1,6	5,1	2,2	**3,0**
8	Spain	6,3	7,3	5,0	**6,2**
5	Sweden	6,5	7,7	7,0	**7,1**
17	Switzerland	1,5	5,5	5,6	**4,2**
13	Turkey	2,8	7,5	3,6	**4,6**
1	United Kingdom	6,3	7,4	10,0	**7,9**
8	United States	8,3	4,7	5,6	**6,2**

Table A.2: ICEE 2011 results

Rank	Country	Trade	Environment	Security	Overall (Average)
2	Australia	8,3	3,9	10,6	**7,6**
16	Brazil	3,5	7,5	2,4	**4,5**
7	Canada	7,0	5,4	6,4	**6,3**
21	China	1,2	6,1	1,4	**2,9**
10	Czech Republic	6,3	6,8	5,1	**6,1**
3	France	6,3	7,1	8,2	**7,2**
7	Germany	6,3	6,9	5,8	**6,3**
22	India	-2,6	8,5	2,3	**2,7**
12	Indonesia	6,1	7,2	1,6	**5,0**
6	Italy	6,4	6,9	7,4	**6,9**
14	Japan	5,3	4,9	3,4	**4,6**
17	Mexico	5,4	4,8	2,3	**4,2**
5	Netherlands	6,6	7,0	7,9	**7,1**
13	Russia	4,0	7,7	3,0	**4,9**
19	Saudi Arabia	7,3	0,7	1,2	**3,1**
20	South Korea	1,6	5,1	2,2	**3,0**
10	Spain	6,3	7,1	5,0	**6,1**
3	Sweden	6,6	7,8	7,2	**7,2**
17	Switzerland	1,5	5,4	5,7	**4,2**
14	Turkey	2,8	7,4	3,6	**4,6**
1	United Kingdom	6,4	7,4	10,3	**8,0**
7	United States	8,3	4,8	5,7	**6,3**

Table A.3: ICEE 2010 results

Rank	Country	Trade	Environment	Security	Overall (Average)
1	Australia	8,2	3,7	11,2	**7,7**
14	Brazil	3,6	7,3	2,3	**4,4**
7	Canada	7,0	5,0	6,6	**6,2**
20	China	1,2	6,3	1,3	**2,9**
10	Czech Republic	6,4	6,0	5,3	**5,9**
3	France	6,3	6,5	8,5	**7,1**
9	Germany	6,3	6,2	5,8	**6,1**
21	India	-2,6	8,7	2,3	**2,8**
13	Indonesia	6,1	7,1	1,5	**4,9**
6	Italy	6,4	6,2	7,6	**6,7**
16	Japan	5,3	4,4	3,3	**4,3**
17	Mexico	5,4	4,9	2,3	**4,2**
4	Netherlands	6,6	6,4	8,2	**7,0**
12	Russia	4,2	7,8	3,1	**5,0**
19	Saudi Arabia	7,3	0,9	1,2	**3,1**
21	South Korea	1,6	4,8	2,1	**2,8**
11	Spain	6,3	6,2	5,0	**5,8**
4	Sweden	6,5	7,1	7,4	**7,0**
18	Switzerland	1,6	4,8	5,8	**4,1**
14	Turkey	2,8	6,6	3,7	**4,4**
1	United Kingdom	6,3	6,7	10,5	**7,8**
7	United States	8,3	4,4	6,0	**6,2**

Table A.4: ICEE 2009 results

Rank	Country	Trade	Environment	Security	Overall (Average)
2	Australia	8,2	3,0	11,8	**7,7**
13	Brazil	3,7	7,1	2,3	**4,4**
8	Canada	7,0	4,4	7,0	**6,1**
20	China	1,2	6,0	1,3	**2,9**
10	Czech Republic	6,4	6,1	5,3	**5,9**
4	France	6,2	6,4	8,5	**7,1**
8	Germany	6,2	6,1	5,8	**6,1**
22	India	-2,6	8,5	2,2	**2,7**
13	Indonesia	6,1	5,8	1,4	**4,4**
6	Italy	6,3	5,9	7,9	**6,7**
16	Japan	5,3	3,8	2,8	**4,0**
15	Mexico	5,4	4,9	2,0	**4,1**
3	Netherlands	6,5	6,4	8,7	**7,2**
12	Russia	4,4	7,6	3,1	**5,0**
19	Saudi Arabia	7,3	0,6	1,2	**3,0**
21	South Korea	1,6	4,8	2,1	**2,8**
11	Spain	6,2	5,8	4,7	**5,6**
5	Sweden	6,5	6,9	7,8	**7,0**
16	Switzerland	1,6	4,5	6,0	**4,0**
16	Turkey	2,7	5,5	3,8	**4,0**
1	United Kingdom	6,2	6,8	11,1	**8,0**
7	United States	8,3	4,0	6,3	**6,2**

Table A.5: ICEE 2008 results

Rank	Country	Trade	Environment	Security	Overall (Average)
2	Australia	6,8	3,8	12,3	**7,6**
17	Brazil	2,6	7,1	2,3	**4,0**
6	Canada	7,9	4,4	7,3	**6,5**
22	China	-9,3	6,0	1,3	**-0,7**
9	Czech Republic	5,4	6,8	5,4	**5,9**
5	France	5,3	6,5	8,6	**6,8**
10	Germany	5,2	6,4	5,9	**5,8**
21	India	-7,4	8,0	2,2	**0,9**
16	Indonesia	5,6	5,5	1,3	**4,1**
6	Italy	5,5	6,1	8,1	**6,5**
14	Japan	6,7	3,5	2,8	**4,3**
18	Mexico	3,5	4,9	2,0	**3,5**
3	Netherlands	5,7	6,6	9,1	**7,1**
14	Russia	2,2	7,5	3,2	**4,3**
19	Saudi Arabia	6,0	0,7	1,1	**2,6**
20	South Korea	1,0	3,3	2,0	**2,1**
11	Spain	5,4	5,7	4,7	**5,3**
4	Sweden	5,6	7,1	8,1	**6,9**
12	Switzerland	4,0	4,6	6,1	**4,9**
13	Turkey	4,2	5,7	3,9	**4,6**
1	United Kingdom	5,3	7,0	11,6	**8,0**
8	United States	7,9	3,7	6,6	**6,1**

Table A.6: ICEE 2007 results

Rank	Country	Trade	Environment	Security	Overall (Average)
2	Australia	6,8	2,7	12,9	**7,5**
16	Brazil	2,6	6,9	2,3	**3,9**
6	Canada	7,8	4,8	7,6	**6,8**
22	China	-9,2	6,2	1,3	**-0,6**
8	Czech Republic	5,4	7,2	5,6	**6,1**
4	France	5,3	6,6	8,9	**6,9**
10	Germany	5,2	6,6	5,9	**5,9**
21	India	-7,4	8,0	2,1	**0,9**
17	Indonesia	5,6	5,0	0,9	**3,8**
7	Italy	5,4	6,2	7,1	**6,2**
14	Japan	6,7	3,9	2,4	**4,3**
18	Mexico	3,5	4,7	2,0	**3,4**
3	Netherlands	5,6	6,8	9,6	**7,3**
14	Russia	2,1	7,6	3,4	**4,3**
19	Saudi Arabia	6,0	0,9	0,9	**2,6**
20	South Korea	1,0	3,5	1,9	**2,1**
11	Spain	5,4	5,9	4,4	**5,2**
4	Sweden	5,5	7,3	8,0	**6,9**
12	Switzerland	4,0	4,7	6,3	**5,0**
13	Turkey	4,4	5,6	3,9	**4,6**
1	United Kingdom	5,3	7,3	12,3	**8,3**
8	United States	7,9	3,6	7,0	**6,1**

Table A.7: ICEE 2006 results

Rank	Country	Trade	Environment	Security	Overall (Average)
2	Australia	6,8	2,6	13,7	**7,7**
15	Brazil	2,7	6,7	2,3	**3,9**
6	Canada	7,8	4,7	8,0	**6,8**
22	China	-9,2	6,4	1,3	**-0,5**
9	Czech Republic	5,6	6,9	5,7	**6,1**
5	France	5,2	6,6	9,3	**7,1**
10	Germany	5,1	6,7	5,9	**5,9**
21	India	-7,4	7,9	1,8	**0,8**
17	Indonesia	5,6	4,6	0,9	**3,7**
7	Italy	5,4	6,3	7,1	**6,3**
15	Japan	6,7	2,7	2,3	**3,9**
18	Mexico	3,5	4,4	2,1	**3,3**
3	Netherlands	5,5	6,9	10,1	**7,5**
14	Russia	2,1	7,4	3,5	**4,3**
19	Saudi Arabia	6,0	1,0	0,9	**2,6**
20	South Korea	1,0	2,8	1,9	**1,9**
11	Spain	5,3	6,0	4,4	**5,2**
4	Sweden	5,5	7,7	8,3	**7,2**
12	Switzerland	4,0	4,6	6,5	**5,0**
13	Turkey	4,4	5,1	4,0	**4,5**
1	United Kingdom	5,3	7,4	13,0	**8,6**
8	United States	7,9	3,4	7,4	**6,2**

A.1.2 Results of Trade component

Data of EU countries for the Trade component are for the majority of indicators identical. The only part where EU states differ is EU agricultural subsidy breakout. The Czech Republic figure for the height of payment was taken from the financial report of European Commission to the European Parliament and the Council on the European Agricultural Guarantee Fund. The other values such as the Share of GDP from agriculture were taken from the World Bank database.

Sources

Subsidy payments

European Commission (2012): Commission Staff Working Document Accompanying the Report from the Commission to the European Parliament and the Council on the European Agricultural Guarantee Fund - 2011 Financial Year. Available at: `http://ec.europa.eu/agriculture/fin/finrep11/annexes_en.pdf`[Retrieved May 05, 2012]

Share of GDP from agriculture and others

`http://data.worldbank.org/indicator`

Table A.8: ICEE 2012 Trade Component

Country name	Ad valorem protection	Score	Overall score
Australia	3,2%	8,3	**8,3**
Brazil	12,7%	3,3	**3,3**
Canada	5,5%	7,1	**7,1**
China	16,7%	1,2	**1,2**
Czech Republic	7,2%	6,2	**6,2**
France	7,0%	6,3	**6,3**
Germany	7,2%	6,2	**6,2**
India	24,1%	-2,7	**-2,7**
Indonesia	7,5%	6,1	**6,1**
Italy	6,9%	6,4	**6,4**
Japan	8,8%	5,3	**5,3**
Mexico	8,7%	5,4	**5,4**
Netherlands	6,4%	6,6	**6,6**
Russia	12,2%	3,6	**3,6**
Saudi Arabia	5,1%	7,3	**7,3**
South Korea	15,9%	1,6	**1,6**
Spain	7,1%	6,3	**6,3**
Sweden	6,6%	6,5	**6,5**
Switzerland	16,1%	1,5	**1,5**
Turkey	13,6%	2,8	**2,8**
United Kingdom	7,1%	6,3	**6,3**
United States	3,2%	8,3	**8,3**

Table A.9: ICEE 2011 Trade Component

Country name	Ad valorem protection	Score	Overall score
Australia	3,3%	8,3	**8,3**
Brazil	12,3%	3,5	**3,5**
Canada	5,6%	7,0	**7,0**
China	16,7%	1,2	**1,2**
Czech Republic	7,0%	6,3	**6,3**
France	7,1%	6,3	**6,3**
Germany	7,1%	6,3	**6,3**
India	24,0%	-2,6	**-2,6**
Indonesia	7,4%	6,1	**6,1**
Italy	6,8%	6,4	**6,4**
Japan	8,8%	5,3	**5,3**
Mexico	8,7%	5,4	**5,4**
Netherlands	6,5%	6,6	**6,6**
Russia	11,4%	4,0	**4,0**
Saudi Arabia	5,1%	7,3	**7,3**
South Korea	15,9%	1,6	**1,6**
Spain	7,0%	6,3	**6,3**
Sweden	6,5%	6,6	**6,6**
Switzerland	16,0%	1,5	**1,5**
Turkey	13,6%	2,8	**2,8**
United Kingdom	6,9%	6,4	**6,4**
United States	3,2%	8,3	**8,3**

Table A.10: ICEE 2010 Trade Component

Country name	Ad valorem protection	Score	Overall score
Australia	3,4%	8,2	**8,2**
Brazil	12,1%	3,6	**3,6**
Canada	5,6%	7,0	**7,0**
China	16,7%	1,2	**1,2**
Czech Republic	6,9%	6,4	**6,4**
France	7,1%	6,3	**6,3**
Germany	7,1%	6,3	**6,3**
India	23,9%	-2,6	**-2,6**
Indonesia	7,4%	6,1	**6,1**
Italy	6,9%	6,4	**6,4**
Japan	8,8%	5,3	**5,3**
Mexico	8,7%	5,4	**5,4**
Netherlands	6,5%	6,6	**6,6**
Russia	11,0%	4,2	**4,2**
Saudi Arabia	5,1%	7,3	**7,3**
South Korea	15,9%	1,6	**1,6**
Spain	7,1%	6,3	**6,3**
Sweden	6,6%	6,5	**6,5**
Switzerland	16,0%	1,6	**1,6**
Turkey	13,7%	2,8	**2,8**
United Kingdom	7,0%	6,3	**6,3**
United States	3,2%	8,3	**8,3**

Table A.11: ICEE 2009 Trade Component

Country name	Ad valorem protection	Score	Overall score
Australia	3,4%	8,2	**8,2**
Brazil	11,9%	3,7	**3,7**
Canada	5,6%	7,0	**7,0**
China	16,6%	1,2	**1,2**
Czech Republic	6,9%	6,4	**6,4**
France	7,1%	6,2	**6,2**
Germany	7,1%	6,2	**6,2**
India	24,0%	-2,6	**-2,6**
Indonesia	7,4%	6,1	**6,1**
Italy	6,9%	6,3	**6,3**
Japan	8,8%	5,3	**5,3**
Mexico	8,7%	5,4	**5,4**
Netherlands	6,6%	6,5	**6,5**
Russia	10,7%	4,4	**4,4**
Saudi Arabia	5,1%	7,3	**7,3**
South Korea	15,9%	1,6	**1,6**
Spain	7,1%	6,2	**6,2**
Sweden	6,7%	6,5	**6,5**
Switzerland	16,0%	1,6	**1,6**
Turkey	13,9%	2,7	**2,7**
United Kingdom	7,2%	6,2	**6,2**
United States	3,2%	8,3	**8,3**

Table A.12: ICEE 2008 Trade Component

Country name	Ad valorem protection	Score	Overall score
Australia	6,1%	6,8	**6,8**
Brazil	14,1%	2,6	**2,6**
Canada	4,0%	7,9	**7,9**
China	36,7%	-9,3	**-9,3**
Czech Republic	8,8%	5,4	**5,4**
France	8,9%	5,3	**5,3**
Germany	9,1%	5,2	**5,2**
India	33,0%	-7,4	**-7,4**
Indonesia	8,3%	5,6	**5,6**
Italy	8,6%	5,5	**5,5**
Japan	6,2%	6,7	**6,7**
Mexico	12,3%	3,5	**3,5**
Netherlands	8,1%	5,7	**5,7**
Russia	14,9%	2,2	**2,2**
Saudi Arabia	7,6%	6,0	**6,0**
South Korea	17,1%	1,0	**1,0**
Spain	8,7%	5,4	**5,4**
Sweden	8,4%	5,6	**5,6**
Switzerland	11,4%	4,0	**4,0**
Turkey	11,1%	4,2	**4,2**
United Kingdom	8,9%	5,3	**5,3**
United States	3,9%	7,9	**7,9**

Table A.13: ICEE 2007 Trade Component

Country name	Ad valorem protection	Score	Overall score
Australia	6,0%	6,8	**6,8**
Brazil	14,0%	2,6	**2,6**
Canada	4,1%	7,8	**7,8**
China	36,5%	-9,2	**-9,2**
Czech Republic	8,7%	5,4	**5,4**
France	8,9%	5,3	**5,3**
Germany	9,2%	5,2	**5,2**
India	33,0%	-7,4	**-7,4**
Indonesia	8,3%	5,6	**5,6**
Italy	8,7%	5,4	**5,4**
Japan	6,2%	6,7	**6,7**
Mexico	12,4%	3,5	**3,5**
Netherlands	8,3%	5,6	**5,6**
Russia	15,0%	2,1	**2,1**
Saudi Arabia	7,6%	6,0	**6,0**
South Korea	17,1%	1,0	**1,0**
Spain	8,7%	5,4	**5,4**
Sweden	8,6%	5,5	**5,5**
Switzerland	11,4%	4,0	**4,0**
Turkey	10,6%	4,4	**4,4**
United Kingdom	9,0%	5,3	**5,3**
United States	4,0%	7,9	**7,9**

Table A.14: ICEE 2006 Trade Component

Country name	Ad valorem protection	Score	Overall score
Australia	6,1%	6,8	**6,8**
Brazil	13,9%	2,7	**2,7**
Canada	4,1%	7,8	**7,8**
China	36,4%	-9,2	**-9,2**
Czech Republic	8,3%	5,6	**5,6**
France	9,1%	5,2	**5,2**
Germany	9,2%	5,1	**5,1**
India	33,0%	-7,4	**-7,4**
Indonesia	8,3%	5,6	**5,6**
Italy	8,8%	5,4	**5,4**
Japan	6,2%	6,7	**6,7**
Mexico	12,3%	3,5	**3,5**
Netherlands	8,5%	5,5	**5,5**
Russia	15,0%	2,1	**2,1**
Saudi Arabia	7,6%	6,0	**6,0**
South Korea	17,1%	1,0	**1,0**
Spain	8,9%	5,3	**5,3**
Sweden	8,5%	5,5	**5,5**
Switzerland	11,4%	4,0	**4,0**
Turkey	10,6%	4,4	**4,4**
United Kingdom	9,0%	5,3	**5,3**
United States	4,0%	7,9	**7,9**

A.1.3 Results of Environment component

Data for Population together with PPP GDP, PPP/exchange rate and Gasoline prices were taken from the World Bank Database. Figures for GHG emissions as well as figures for another Emissions indicator come from UNFCC report. Value of Energy production indicator originates in BP statistical review. Points for UN Fisheries Agreement ratification are based on the official list of UN introducing the countries that take part in this treaty. Completeness of required reporting to multilateral treaties relating to biodiversity was drawn from official resources of each of the treaties. The other indicators such as Timber imports are identical for all the EU countries.

Sources

Population, PPP GDP, PPP/exchange rate, Gasoline prices

`http://data.worldbank.org/indicator`

GHG emissions, Emissions

`http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/7383.php`

Energy production

http://www.bp.com/en/global/corporate/about-bp/energy-economics.html

UN Fisheries Agreement

http://www.un.org/Depts/los/reference_files/chronological_lists_of_ratifications.htm

CBD

http://www.cbd.int/reports/search/

CITES

http://cites.org/sites/default/files/annual_reports.pdf

http://www.cites.org/eng/resources/reports/biennial.php

CMS

http://www.cms.int/en/documents/national-reports

Ramsar

http://www.ramsar.org/library

Table A.15: ICEE 2012 Environment Component

Country	Global climate					Biodiversity and global ecosystems			Overall score
	GHG emissions and fuel production per capita (in tons CO2 equivalent)	% change in GHG emissions/ GDP	Gasoline taxes	Consumption of ozone-depleting substances	Kyoto Protocol ratification	Ratification of UN Fisheries Agreement	Biodiversity treaties participation	Tropical wood imports	
Australia	-8,2	6,3	2,7	10,0	10,0	10,0	4,8	-2,6	**3,9**
Brazil	6,1	6,5	5,6	9,3	10,0	10,0	3,9	10,0	**7,4**
Canada	-1,9	3,2	2,7	9,8	0,0	10,0	4,0	6,9	**4,3**
China	6,8	5,0	4,5	8,1	10,0	0,0	4,6	7,6	**5,7**
Czech Republic	5,2	8,5	8,5	10,2	10,0	0,0	6,0	4,8	**6,7**
France	8,2	5,1	6,6	10,2	10,0	10,0	6,3	4,8	**7,3**
Germany	6,7	4,2	6,7	10,2	10,0	10,0	6,6	4,8	**7,0**
India	9,3	7,1	6,9	9,8	10,0	10,0	5,5	9,2	**8,2**
Indonesia	6,9	9,2	1,1	9,8	10,0	10,0	3,8	9,6	**7,2**
Italy	8,2	3,9	6,6	10,2	10,0	10,0	6,3	4,8	**7,1**
Japan	7,8	3,3	4,3	9,4	10,0	10,0	4,6	-7,3	**4,5**
Mexico	7,3	-0,4	1,4	8,3	10,0	0,0	4,2	9,1	**4,7**
Netherlands	5,0	4,8	7,7	10,2	10,0	10,0	6,1	4,8	**7,0**
Russia	1,8	11,1	2,0	9,1	10,0	10,0	3,9	9,9	**7,1**
Saudi Arabia	-9,3	-3,9	-4,2	2,6	10,0	0,0	2,5	1,7	**-0,2**
South Korea	6,6	3,6	7,0	4,8	10,0	10,0	4,0	-1,8	**5,1**
Spain	8,3	6,3	5,5	10,2	10,0	10,0	6,1	4,8	**7,3**
Sweden	9,2	8,2	5,6	10,2	10,0	10,0	6,3	4,8	**7,7**
Switzerland	8,4	4,0	4,0	10,0	10,0	0,0	4,9	4,8	**5,5**
Turkey	8,8	1,2	16,8	9,1	10,0	0,0	4,5	8,7	**7,5**
United Kingdom	6,5	7,0	7,2	10,2	10,0	10,0	6,1	4,8	**7,4**
United States	2,3	5,9	0,6	8,7	0,0	10,0	4,9	5,9	**4,7**
Weight	10%	15%	15%	10%	10%	10%	15%	15%	

Table A.16: ICEE 2011 Environment Component

Country	Global climate					Biodiversity and global ecosystems			Overall score
	GHG emissions and fuel production per capita (in tons CO2 equivalent)	% change in GHG emissions/ GDP	Gasoline taxes	Consumption of ozone-depleting substances	Kyoto Protocol ratification	Ratification of UN Fisheries Agreement	Biodiversity treaties participation	Tropical wood imports	
Australia	-8,2	5,5	2,4	9,7	10,0	10,0	5,0	-1,3	**3,9**
Brazil	6,2	6,1	6,3	9,1	10,0	10,0	4,0	10,0	**7,5**
Canada	-1,3	3,4	2,4	9,0	10,0	10,0	4,3	7,1	**5,4**
China	7,1	5,3	5,2	8,2	10,0	0,0	4,7	8,5	**6,1**
Czech Republic	6,4	8,4	8,0	10,1	10,0	0,0	6,4	5,0	**6,8**
France	8,2	5,6	5,7	10,1	10,0	10,0	5,5	5,0	**7,1**
Germany	6,8	3,8	6,1	10,1	10,0	10,0	6,1	5,0	**6,9**
India	9,3	7,1	9,1	9,9	10,0	10,0	5,1	9,3	**8,5**
Indonesia	7,0	9,0	0,9	9,8	10,0	10,0	3,9	10,0	**7,2**
Italy	8,2	3,5	6,2	10,1	10,0	10,0	5,9	5,0	**6,9**
Japan	7,9	3,4	4,5	9,4	10,0	10,0	4,6	-4,5	**4,9**
Mexico	7,2	-0,3	2,2	8,1	10,0	0,0	4,3	9,1	**4,8**
Netherlands	5,4	5,3	6,7	10,1	10,0	10,0	5,7	5,0	**7,0**
Russia	2,3	12,6	3,9	9,0	10,0	10,0	3,9	9,9	**7,7**
Saudi Arabia	-9,1	-3,2	-3,7	2,3	10,0	0,0	2,5	7,0	**0,7**
South Korea	6,8	4,0	8,8	-0,4	10,0	10,0	4,0	-0,4	**5,1**
Spain	8,2	5,0	4,9	10,1	10,0	10,0	6,7	5,0	**7,1**
Sweden	9,4	9,6	5,3	10,1	10,0	10,0	6,0	5,0	**7,8**
Switzerland	8,4	4,0	3,8	9,9	10,0	0,0	4,4	5,0	**5,4**
Turkey	8,9	1,4	16,1	9,1	10,0	0,0	4,6	8,9	**7,4**
United Kingdom	6,4	7,5	6,4	10,1	10,0	10,0	6,0	5,0	**7,4**
United States	2,5	6,4	0,6	8,3	0,0	10,0	4,9	6,4	**4,8**
Weight	10%	15%	15%	10%	10%	10%	15%	15%	

Table A.17: ICEE 2010 Environment Component

Country	Global climate					Biodiversity and global ecosystems			Overall score
	GHG emissions and fuel production per capita (in tons CO2 equivalent)	% change in GHG emissions/ GDP	Gasoline taxes	Consumption of ozone-depleting substances	Kyoto Protocol ratification	Ratification of UN Fisheries Agreement	Biodiversity treaties participation	Tropical wood imports	
Australia	-7,1	5,8	1,2	9,6	10,0	10,0	5,0	-2,5	**3,7**
Brazil	6,1	5,7	5,6	9,2	10,0	10,0	4,1	9,9	**7,3**
Canada	-1,9	4,1	1,5	8,2	10,0	10,0	4,4	5,9	**5,0**
China	7,2	6,0	5,6	8,5	10,0	0,0	4,7	8,2	**6,3**
Czech Republic	5,1	8,6	6,3	9,5	10,0	0,0	6,4	2,1	**6,0**
France	8,2	6,1	4,8	9,5	10,0	10,0	5,5	2,1	**6,5**
Germany	6,6	3,8	5,4	9,5	10,0	10,0	6,1	2,1	**6,2**
India	9,4	7,0	10,4	9,8	10,0	10,0	5,1	9,2	**8,7**
Indonesia	7,1	8,4	0,4	9,9	10,0	10,0	3,9	10,0	**7,1**
Italy	8,0	2,7	5,6	9,5	10,0	10,0	5,9	2,1	**6,2**
Japan	7,8	2,9	4,9	9,1	10,0	10,0	4,6	-7,9	**4,4**
Mexico	7,1	0,8	2,4	7,9	10,0	0,0	4,1	8,5	**4,9**
Netherlands	5,1	6,0	5,8	9,5	10,0	10,0	5,7	2,1	**6,4**
Russia	1,8	13,4	4,3	8,8	10,0	10,0	3,9	9,8	**7,8**
Saudi Arabia	-10,7	-2,7	-2,1	2,2	10,0	0,0	2,4	7,4	**0,9**
South Korea	6,8	4,1	8,6	0,1	10,0	10,0	4,3	-2,7	**4,8**
Spain	8,0	3,1	4,2	9,5	10,0	10,0	6,7	2,1	**6,2**
Sweden	9,3	9,1	4,0	9,5	10,0	10,0	6,0	2,1	**7,1**
Switzerland	8,4	3,5	3,4	9,9	10,0	0,0	4,2	2,1	**4,8**
Turkey	8,9	1,1	12,0	8,8	10,0	0,0	4,5	7,8	**6,6**
United Kingdom	6,1	8,0	4,8	9,5	10,0	10,0	5,9	2,1	**6,7**
United States	2,0	6,4	0,6	7,4	0,0	10,0	4,8	4,5	**4,4**
Weight	10%	15%	15%	10%	10%	10%	15%	15%	

Table A.18: ICEE 2009 Environment Component

Country	Global climate					Biodiversity and global ecosystems			Overall score
	GHG emissions and fuel production per capita (in tons CO2 equivalent)	% change in GHG emissions/ GDP	Gasoline taxes	Consumption of ozone-depleting substances	Kyoto Protocol ratification	Ratification of UN Fisheries Agreement	Biodiversity treaties participation	Tropical wood imports	
Australia	-8,5	3,8	1,5	9,5	10,0	10,0	4,3	-3,3	**3,0**
Brazil	6,1	4,6	5,4	9,1	10,0	10,0	4,2	10,0	**7,1**
Canada	-2,7	1,8	1,5	8,0	10,0	10,0	4,5	5,1	**4,4**
China	7,3	7,2	3,6	7,7	10,0	0,0	4,1	8,2	**6,0**
Czech Republic	4,7	9,5	7,1	9,8	10,0	0,0	6,4	1,5	**6,1**
France	8,1	6,1	4,5	9,8	10,0	10,0	5,4	1,5	**6,4**
Germany	6,5	3,9	5,2	9,8	10,0	10,0	6,1	1,5	**6,1**
India	9,4	7,0	9,1	9,8	10,0	10,0	5,1	9,3	**8,5**
Indonesia	7,1	6,0	0,4	9,7	10,0	0,0	4,0	10,0	**5,8**
Italy	7,8	2,2	5,4	9,8	10,0	10,0	5,4	1,5	**5,9**
Japan	7,6	2,3	3,9	9,1	10,0	10,0	4,0	-9,5	**3,8**
Mexico	7,0	1,2	2,1	8,0	10,0	0,0	4,1	8,5	**4,9**
Netherlands	5,3	6,4	5,6	9,8	10,0	10,0	5,6	1,5	**6,4**
Russia	1,9	12,9	3,4	8,8	10,0	10,0	4,0	9,9	**7,6**
Saudi Arabia	-10,0	-2,6	-2,4	2,2	10,0	0,0	2,5	5,2	**0,6**
South Korea	6,9	4,4	8,9	-1,1	10,0	10,0	4,4	-2,7	**4,8**
Spain	7,8	1,7	3,8	9,8	10,0	10,0	6,6	1,5	**5,8**
Sweden	9,3	8,2	4,0	9,8	10,0	10,0	6,1	1,5	**6,9**
Switzerland	8,4	2,7	3,2	9,9	10,0	0,0	3,8	1,5	**4,5**
Turkey	8,8	0,4	11,7	8,5	0,0	0,0	4,7	8,3	**5,5**
United Kingdom	5,9	8,6	5,1	9,8	10,0	10,0	6,0	1,5	**6,8**
United States	1,8	6,5	0,6	6,6	0,0	10,0	4,8	2,5	**4,0**
Weight	10%	15%	15%	10%	10%	10%	15%	15%	

Table A.19: ICEE 2008 Environment Component

Country	Global climate					Biodiversity and global ecosystems			Overall score
	GHG emissions and fuel production per capita (in tons CO2 equivalent)	% change in GHG emissions/ GDP	Gasoline taxes	Consumption of ozone-depleting substances	Kyoto Protocol ratification	Ratification of UN Fisheries Agreement	Biodiversity treaties participation	Tropical wood imports	
Australia	-7,4	4,3	2,1	9,6	10,0	10,0	4,7	-0,7	**3,8**
Brazil	6,1	3,7	5,8	9,2	10,0	10,0	4,3	10,0	**7,1**
Canada	-2,7	1,5	1,6	7,9	10,0	10,0	4,6	4,8	**4,4**
China	7,5	8,8	2,0	7,3	10,0	0,0	4,2	8,4	**6,0**
Czech Republic	4,8	11,9	7,2	9,6	10,0	0,0	7,0	2,7	**6,8**
France	8,1	6,0	4,5	9,6	10,0	10,0	4,8	2,7	**6,5**
Germany	6,5	4,1	5,2	9,6	10,0	10,0	6,3	2,7	**6,4**
India	9,4	6,4	7,2	9,6	10,0	10,0	4,0	9,5	**8,0**
Indonesia	7,2	4,1	0,5	9,7	10,0	0,0	4,0	10,0	**5,5**
Italy	7,8	1,8	5,4	9,6	10,0	10,0	5,6	2,7	**6,1**
Japan	7,7	2,1	3,2	9,0	10,0	10,0	4,0	-10,6	**3,5**
Mexico	7,0	1,6	1,8	8,2	10,0	0,0	4,2	8,5	**4,9**
Netherlands	5,2	6,9	5,8	9,6	10,0	10,0	5,4	2,7	**6,6**
Russia	2,0	13,0	2,6	9,0	10,0	10,0	4,0	9,9	**7,5**
Saudi Arabia	-10,7	-1,8	-3,1	2,1	10,0	0,0	2,1	6,2	**0,7**
South Korea	6,9	4,1	7,9	-5,8	10,0	0,0	4,2	-1,3	**3,3**
Spain	7,8	0,7	3,6	9,6	10,0	10,0	6,2	2,7	**5,7**
Sweden	9,2	8,9	4,1	9,6	10,0	10,0	5,9	2,7	**7,1**
Switzerland	8,3	1,7	3,2	9,8	10,0	0,0	4,6	2,7	**4,6**
Turkey	8,9	0,7	11,9	8,6	0,0	0,0	4,6	9,1	**5,7**
United Kingdom	5,8	9,5	5,0	9,6	10,0	10,0	6,2	2,7	**7,0**
United States	1,9	6,7	0,6	5,7	0,0	10,0	4,7	1,1	**3,7**
Weight	10%	15%	15%	10%	10%	10%	15%	15%	

Table A.20: ICEE 2007 Environment Component

Country	Global climate					Biodiversity and global ecosystems			Overall score
	GHG emissions and fuel production per capita (in tons CO2 equivalent)	% change in GHG emissions/ GDP	Gasoline taxes	Consumption of ozone-depleting substances	Kyoto Protocol ratification	Ratification of UN Fisheries Agreement	Biodiversity treaties participation	Tropical wood imports	
Australia	-7,2	3,2	2,2	9,0	0,0	10,0	4,7	-0,2	**2,7**
Brazil	6,1	2,9	5,1	8,7	10,0	10,0	4,6	10,0	**6,9**
Canada	-2,6	4,0	1,5	7,8	10,0	10,0	4,7	5,1	**4,8**
China	7,7	10,8	1,3	7,3	10,0	0,0	4,2	8,5	**6,2**
Czech Republic	4,7	12,3	9,0	10,2	10,0	0,0	7,0	3,0	**7,2**
France	8,0	5,5	5,0	10,2	10,0	10,0	4,8	3,0	**6,6**
Germany	6,4	4,3	5,7	10,2	10,0	10,0	6,3	3,0	**6,6**
India	9,4	5,9	7,9	9,7	10,0	10,0	4,1	9,4	**8,0**
Indonesia	7,2	2,8	-0,8	8,6	10,0	0,0	4,0	10,0	**5,0**
Italy	7,8	1,4	5,9	10,2	10,0	10,0	5,6	3,0	**6,2**
Japan	7,7	1,9	3,7	9,0	10,0	10,0	4,0	-8,3	**3,9**
Mexico	7,0	1,7	1,6	5,8	10,0	0,0	4,2	8,4	**4,7**
Netherlands	5,1	7,1	6,3	10,2	10,0	10,0	5,5	3,0	**6,8**
Russia	2,3	13,2	2,2	9,3	10,0	10,0	4,0	9,9	**7,6**
Saudi Arabia	-11,2	-1,3	-2,4	4,3	10,0	0,0	2,1	5,3	**0,9**
South Korea	7,0	3,7	7,3	-4,3	10,0	0,0	4,1	-0,5	**3,5**
Spain	7,7	0,2	4,4	10,2	10,0	10,0	6,2	3,0	**5,9**
Sweden	9,1	8,8	4,7	10,2	10,0	10,0	5,9	3,0	**7,3**
Switzerland	8,4	1,1	3,5	10,3	10,0	0,0	4,8	3,0	**4,7**
Turkey	9,0	0,1	11,5	8,7	0,0	0,0	4,8	9,2	**5,6**
United Kingdom	5,6	10,0	5,6	10,2	10,0	10,0	6,1	3,0	**7,3**
United States	1,8	6,3	0,6	5,0	0,0	10,0	4,8	0,8	**3,6**
Weight	10%	15%	15%	10%	10%	10%	15%	15%	

Table A.21: ICEE 2006 Environment Component

Country	Global climate					Biodiversity and global ecosystems			Overall score
	GHG emissions and fuel production per capita (in tons CO2 equivalent)	% change in GHG emissions/ GDP	Gasoline taxes	Consumption of ozone-depleting substances	Kyoto Protocol ratification	Ratification of UN Fisheries Agreement	Biodiversity treaties participation	Tropical wood imports	
Australia	-6,5	1,7	2,3	8,9	0,0	10,0	4,8	0,3	**2,6**
Brazil	6,1	2,6	4,2	8,1	10,0	10,0	4,8	10,0	**6,7**
Canada	-3,1	3,1	1,4	7,8	10,0	10,0	4,5	5,6	**4,7**
China	7,9	12,7	0,6	7,1	10,0	0,0	4,3	8,6	**6,4**
Czech Republic	4,7	11,7	6,7	11,2	10,0	0,0	7,0	3,2	**6,9**
France	8,0	5,2	5,0	11,2	10,0	10,0	4,7	3,2	**6,6**
Germany	6,4	4,6	5,5	11,2	10,0	10,0	6,3	3,2	**6,7**
India	9,4	5,3	7,6	9,7	10,0	10,0	4,2	9,5	**7,9**
Indonesia	7,3	2,4	-2,4	7,8	10,0	0,0	4,0	10,0	**4,6**
Italy	7,7	1,2	5,9	11,2	10,0	10,0	5,6	3,2	**6,3**
Japan	7,7	2,2	4,1	8,2	10,0	0,0	4,0	-9,4	**2,7**
Mexico	7,0	1,6	1,3	3,7	10,0	0,0	4,3	8,4	**4,4**
Netherlands	4,9	7,4	6,2	11,2	10,0	10,0	5,4	3,2	**6,9**
Russia	2,4	12,8	1,4	9,1	10,0	10,0	4,0	9,9	**7,4**
Saudi Arabia	-10,7	-1,2	-1,8	1,9	10,0	0,0	2,3	6,3	**1,0**
South Korea	7,0	3,4	6,9	-10,9	10,0	0,0	4,2	0,3	**2,8**
Spain	7,7	0,3	4,7	11,2	10,0	10,0	6,2	3,2	**6,0**
Sweden	9,0	10,5	5,0	11,2	10,0	10,0	5,9	3,2	**7,7**
Switzerland	8,4	0,2	3,5	10,0	10,0	0,0	4,8	3,2	**4,6**
Turkey	9,0	-1,0	9,4	8,5	0,0	0,0	4,7	9,3	**5,1**
United Kingdom	5,3	10,3	5,6	11,2	10,0	10,0	6,0	3,2	**7,4**
United States	1,7	5,7	0,6	4,4	0,0	10,0	4,7	1,0	**3,4**
Weight	10%	15%	15%	10%	10%	10%	15%	15%	

A.1.4 Results of Security component

In Security component we examine two indicators - Contributions to peace-keeping and forcible humanitarian interventions and Participation in security regimes. The first mentioned indicator is computed from the large amount of data on Humanitarian interventions. These figures are included in extra sheet of the official tables of ICEE and they already include the data for the Czech Republic. The second indicator includes information on 8 treaties that were collected from the official web sources as stated in detail below.

Sources

Treaty on the Non-Proliferation of Nuclear Weapons
`http://disarmament.un.org/treaties/t/npt`
Comprehensive Nuclear-Test-Ban Treaty
`http://www.ctbto.org/the-treaty/status-of-signature-and-ratification/`
Chemical Weapons Convention
`https://www.opcw.org/about-opcw/member-states/`
Biological Weapons Convention
`https://www.armscontrol.org/factsheets/bwcsig`
Mine Ban Convention
`http://www.apminebanconvention.org/states-parties-to-the-convention/czech-republic/`
Convention on Certain Conventional Weapons
`https://treaties.un.org/`
Convention on Cluster Munitions
`http://www.stopclustermunitions.org/en-gb/the-treaty/treaty-status.aspx`
International Criminal Court
`http://www.icc-cpi.int/en_menus/asp/states%20parties/Pages/states%20parties%20_%20chronological%20list.aspx`

Table A.22: ICEE 2012 Security component

Country	Military spending (% of GDP)			Participation in security regimes		Overall score
	Peacekeeping & humanitarian interventions	Total	Score	Participation in security regimes	Score	
Australia	0,147%	0,147%	12,5	7	5,4	**10,1**
Brazil	0,018%	0,018%	1,5	7	5,4	**2,8**
Canada	0,079%	0,079%	6,7	7	5,4	**6,3**
China	0,006%	0,006%	0,5	4	3,1	**1,4**
Czech Republic	0,056%	0,056%	4,8	8	6,2	**5,2**
France	0,141%	0,141%	12,0	8	6,2	**10,0**
Germany	0,064%	0,064%	5,5	8	6,2	**5,7**
India	0,029%	0,029%	2,5	3	2,3	**2,4**
Indonesia	0,012%	0,012%	1,0	4	3,1	**1,7**
Italy	0,097%	0,097%	8,3	8	6,2	**7,6**
Japan	0,024%	0,024%	2,1	8	6,2	**3,4**
Mexico	0,005%	0,005%	0,4	8	6,2	**2,3**
Netherlands	0,103%	0,103%	8,7	8	6,2	**7,9**
Russia	0,030%	0,030%	2,6	5	3,8	**3,0**
Saudi Arabia	0,004%	0,004%	0,3	4	3,1	**1,2**
South Korea	0,012%	0,012%	1,0	6	4,6	**2,2**
Spain	0,052%	0,052%	4,4	8	6,2	**5,0**
Sweden	0,092%	0,092%	7,8	7	5,4	**7,0**
Switzerland	0,068%	0,068%	5,7	7	5,4	**5,6**
Turkey	0,036%	0,036%	3,1	6	4,6	**3,6**
United Kingdom	0,140%	0,140%	11,9	8	6,2	**10,0**
United States	0,080%	0,080%	6,8	4	3,1	**5,6**
Weight			66,67%		33,33%	

Table A.23: ICEE 2011 Security component

Country	Military spending (% of GDP)			Participation in security regimes		Overall score
	Peacekeeping & humanitarian interventions	Total	Score	Participation in security regimes	Score	
Australia	0,156%	0,156%	13,3	7	5,4	**10,6**
Brazil	0,011%	0,011%	0,9	7	5,4	**2,4**
Canada	0,082%	0,082%	6,9	7	5,4	**6,4**
China	0,006%	0,006%	0,5	4	3,1	**1,4**
Czech Republic	0,059%	0,059%	5,0	7	5,4	**5,1**
France	0,110%	0,110%	9,3	8	6,2	**8,2**
Germany	0,066%	0,066%	5,6	8	6,2	**5,8**
India	0,028%	0,028%	2,4	3	2,3	**2,3**
Indonesia	0,010%	0,010%	0,8	4	3,1	**1,6**
Italy	0,100%	0,100%	8,5	7	5,4	**7,4**
Japan	0,024%	0,024%	2,0	8	6,2	**3,4**
Mexico	0,004%	0,004%	0,4	8	6,2	**2,3**
Netherlands	0,107%	0,107%	9,1	7	5,4	**7,9**
Russia	0,030%	0,030%	2,6	5	3,8	**3,0**
Saudi Arabia	0,003%	0,003%	0,3	4	3,1	**1,2**
South Korea	0,012%	0,012%	1,0	6	4,6	**2,2**
Spain	0,051%	0,051%	4,4	8	6,2	**5,0**
Sweden	0,095%	0,095%	8,0	7	5,4	**7,2**
Switzerland	0,069%	0,069%	5,9	7	5,4	**5,7**
Turkey	0,037%	0,037%	3,2	6	4,6	**3,6**
United Kingdom	0,145%	0,145%	12,3	8	6,2	**10,3**
United States	0,083%	0,083%	7,1	4	3,1	**5,7**
Weight			66,67%		33,33%	

Table A.24: ICEE 2010 Security component

Country	Military spending (% of GDP)			Participation in security regimes		Overall score
	Peacekeeping & humanitarian interventions	Total	Score	Participation in security regimes	Score	
Australia	0,165%	0,165%	14,0	7	5,4	**11,2**
Brazil	0,010%	0,010%	0,8	7	5,4	**2,3**
Canada	0,085%	0,085%	7,3	7	5,4	**6,6**
China	0,006%	0,006%	0,5	4	3,1	**1,3**
Czech Republic	0,063%	0,063%	5,3	7	5,4	**5,3**
France	0,114%	0,114%	9,7	8	6,2	**8,5**
Germany	0,067%	0,067%	5,7	8	6,2	**5,8**
India	0,028%	0,028%	2,3	3	2,3	**2,3**
Indonesia	0,008%	0,008%	0,7	4	3,1	**1,5**
Italy	0,103%	0,103%	8,8	7	5,4	**7,6**
Japan	0,022%	0,022%	1,9	8	6,2	**3,3**
Mexico	0,004%	0,004%	0,4	8	6,2	**2,3**
Netherlands	0,113%	0,113%	9,6	7	5,4	**8,2**
Russia	0,031%	0,031%	2,7	5	3,8	**3,1**
Saudi Arabia	0,003%	0,003%	0,3	4	3,1	**1,2**
South Korea	0,010%	0,010%	0,8	6	4,6	**2,1**
Spain	0,052%	0,052%	4,4	8	6,2	**5,0**
Sweden	0,100%	0,100%	8,5	7	5,4	**7,4**
Switzerland	0,071%	0,071%	6,0	7	5,4	**5,8**
Turkey	0,039%	0,039%	3,3	6	4,6	**3,7**
United Kingdom	0,154%	0,154%	13,1	7	5,4	**10,5**
United States	0,088%	0,088%	7,4	4	3,1	**6,0**
Weight			66,67%		33,33%	

Table A.25: ICEE 2009 Security component

Country	Military spending (% of GDP)			Participation in security regimes		Overall score
	Peacekeeping & humanitarian interventions	Total	Score	Participation in security regimes	Score	
Australia	0,176%	0,176%	14,9	7	5,4	**11,8**
Brazil	0,010%	0,010%	0,8	7	5,4	**2,3**
Canada	0,091%	0,091%	7,8	7	5,4	**7,0**
China	0,006%	0,006%	0,5	4	3,1	**1,3**
Czech Republic	0,066%	0,066%	5,6	6	4,6	**5,3**
France	0,119%	0,119%	10,1	7	5,4	**8,5**
Germany	0,071%	0,071%	6,0	7	5,4	**5,8**
India	0,026%	0,026%	2,2	3	2,3	**2,2**
Indonesia	0,007%	0,007%	0,6	4	3,1	**1,4**
Italy	0,108%	0,108%	9,1	7	5,4	**7,9**
Japan	0,018%	0,018%	1,6	7	5,4	**2,8**
Mexico	0,004%	0,004%	0,4	7	5,4	**2,0**
Netherlands	0,121%	0,121%	10,3	7	5,4	**8,7**
Russia	0,033%	0,033%	2,8	5	3,8	**3,1**
Saudi Arabia	0,003%	0,003%	0,2	4	3,1	**1,2**
South Korea	0,009%	0,009%	0,8	6	4,6	**2,1**
Spain	0,051%	0,051%	4,3	7	5,4	**4,7**
Sweden	0,106%	0,106%	9,0	7	5,4	**7,8**
Switzerland	0,074%	0,074%	6,3	7	5,4	**6,0**
Turkey	0,041%	0,041%	3,5	6	4,6	**3,8**
United Kingdom	0,164%	0,164%	13,9	7	5,4	**11,1**
United States	0,093%	0,093%	7,9	4	3,1	**6,3**
Weight			66,67%		33,33%	

Table A.26: ICEE 2008 Security component

Country	Military spending (% of GDP)			Participation in security regimes		Overall score
	Peacekeeping & humanitarian interventions	Total	Score	Participation in security regimes	Score	
Australia	0,186%	0,186%	15,8	7	5,4	**12,3**
Brazil	0,010%	0,010%	0,8	7	5,4	**2,3**
Canada	0,097%	0,097%	8,2	7	5,4	**7,3**
China	0,006%	0,006%	0,5	4	3,1	**1,3**
Czech Republic	0,069%	0,069%	5,8	6	4,6	**5,4**
France	0,120%	0,120%	10,2	7	5,4	**8,6**
Germany	0,073%	0,073%	6,2	7	5,4	**5,9**
India	0,025%	0,025%	2,1	3	2,3	**2,2**
Indonesia	0,006%	0,006%	0,5	4	3,1	**1,3**
Italy	0,111%	0,111%	9,4	7	5,4	**8,1**
Japan	0,017%	0,017%	1,4	7	5,4	**2,8**
Mexico	0,004%	0,004%	0,4	7	5,4	**2,0**
Netherlands	0,129%	0,129%	10,9	7	5,4	**9,1**
Russia	0,035%	0,035%	2,9	5	3,8	**3,2**
Saudi Arabia	0,002%	0,002%	0,2	4	3,1	**1,1**
South Korea	0,009%	0,009%	0,8	6	4,6	**2,0**
Spain	0,052%	0,052%	4,4	7	5,4	**4,7**
Sweden	0,111%	0,111%	9,4	7	5,4	**8,1**
Switzerland	0,077%	0,077%	6,5	7	5,4	**6,1**
Turkey	0,042%	0,042%	3,6	6	4,6	**3,9**
United Kingdom	0,174%	0,174%	14,7	7	5,4	**11,6**
United States	0,099%	0,099%	8,4	4	3,1	**6,6**
Weight			66,67%		33,33%	

Table A.27: ICEE 2007 Security component

Country	Military spending (% of GDP)			Participation in security regimes		Overall score
	Peacekeeping & humanitarian interventions	Total	Score	Participation in security regimes	Score	
Australia	0,197%	0,197%	16,7	7	5,4	**12,9**
Brazil	0,009%	0,009%	0,8	7	5,4	**2,3**
Canada	0,103%	0,103%	8,7	7	5,4	**7,6**
China	0,005%	0,005%	0,4	4	3,1	**1,3**
Czech Republic	0,071%	0,071%	6,1	6	4,6	**5,6**
France	0,126%	0,126%	10,7	7	5,4	**8,9**
Germany	0,072%	0,072%	6,1	7	5,4	**5,9**
India	0,024%	0,024%	2,0	3	2,3	**2,1**
Indonesia	0,003%	0,003%	0,2	3	2,3	**0,9**
Italy	0,094%	0,094%	8,0	7	5,4	**7,1**
Japan	0,016%	0,016%	1,3	6	4,6	**2,4**
Mexico	0,004%	0,004%	0,4	7	5,4	**2,0**
Netherlands	0,137%	0,137%	11,6	7	5,4	**9,6**
Russia	0,037%	0,037%	3,1	5	3,8	**3,4**
Saudi Arabia	0,002%	0,002%	0,2	3	2,3	**0,9**
South Korea	0,007%	0,007%	0,6	6	4,6	**1,9**
Spain	0,046%	0,046%	3,9	7	5,4	**4,4**
Sweden	0,109%	0,109%	9,3	7	5,4	**8,0**
Switzerland	0,080%	0,080%	6,8	7	5,4	**6,3**
Turkey	0,042%	0,042%	3,6	6	4,6	**3,9**
United Kingdom	0,185%	0,185%	15,7	7	5,4	**12,3**
United States	0,105%	0,105%	8,9	4	3,1	**7,0**
Weight			66,67%		33,33%	

Table A.28: ICEE 2006 Security component

Country	Military spending (% of GDP)			Participation in security regimes		Overall score
	Peacekeeping & humanitarian interventions	Total	Score	Participation in security regimes	Score	
Australia	0,210%	0,210%	17,8	7	5,4	**13,7**
Brazil	0,009%	0,009%	0,8	7	5,4	**2,3**
Canada	0,110%	0,110%	9,4	7	5,4	**8,0**
China	0,005%	0,005%	0,4	4	3,1	**1,3**
Czech Republic	0,074%	0,074%	6,3	6	4,6	**5,7**
France	0,133%	0,133%	11,3	7	5,4	**9,3**
Germany	0,073%	0,073%	6,2	7	5,4	**5,9**
India	0,018%	0,018%	1,5	3	2,3	**1,8**
Indonesia	0,002%	0,002%	0,2	3	2,3	**0,9**
Italy	0,094%	0,094%	8,0	7	5,4	**7,1**
Japan	0,014%	0,014%	1,2	6	4,6	**2,3**
Mexico	0,005%	0,005%	0,4	7	5,4	**2,1**
Netherlands	0,147%	0,147%	12,5	7	5,4	**10,1**
Russia	0,039%	0,039%	3,3	5	3,8	**3,5**
Saudi Arabia	0,002%	0,002%	0,2	3	2,3	**0,9**
South Korea	0,007%	0,007%	0,6	6	4,6	**1,9**
Spain	0,046%	0,046%	3,9	7	5,4	**4,4**
Sweden	0,115%	0,115%	9,7	7	5,4	**8,3**
Switzerland	0,083%	0,083%	7,0	7	5,4	**6,5**
Turkey	0,044%	0,044%	3,7	6	4,6	**4,0**
United Kingdom	0,198%	0,198%	16,8	7	5,4	**13,0**
United States	0,112%	0,112%	9,5	4	3,1	**7,4**
Weight			66,67%		33,33%	

A.2 Results elaboration

A.2.1 Example rankings

First I verified the result of regression of two same rankings. As expected, the R-square value is equal to one as well as the coefficient of the explanatory variable as visible in Table A.29. Then I created an example ranking with one changed position - the last position taking the first place and others relatively remained. The explanatory variable (that is the second ranking with changed position) appears to be significant (Table A.30), R-squared value equal to 0.5463.

For a better imagination I also created another example ranking where the 10th position took the 1st place and the 19th position took the 10th place, all other positions relatively remaining. Again the explanatory variable is significant (Table A.31) and R-squared value equal to 0.8254. An example of three changed positions was built with assigning the 1st position to the 22nd country from the first ranking, 2nd position to the 15th country of the first ranking and the 3rd position to the 11th country from the first set. The explanatory variable still staying strongly significant and the value of R-squared equal to 0.3246.

After these regressions run for a better imagination of the problem I produced 10 random rankings (Tables A.33 - A.42). At the end I averaged all these results for the purpose of our inquiry. The explanatory variable does not appear to be significant. The averages of the random rankings for the statistical values are then summarized in Table A.43.

Table A.29: Two identical rankings

Variable	**Coefficient** (Std. Err.)
rank	1.000
	(0.000)
Intercept	0.000
	(0.000)
N	22
R^2	01

Table A.30: One changed position

Variable	**Coefficient** (Std. Err.)
rank_1	0.739**
	(0.151)
Intercept	3.000
	(1.978)
N	22
R^2	0.546
$F_{(1,20)}$	24.083

Table A.31: Two changed positions

Variable	**Coefficient** (Std. Err.)
rank_2	0.909** (0.093)
Intercept	1.052 (1.227)
N	22
R^2	0.825
$F_{(1,20)}$	94.561

Table A.32: Three changed positions

Variable	**Coefficient** (Std. Err.)
rank_3	0.570** (0.184)
Intercept	4.948† (2.414)
N	22
R^2	0.325
$F_{(1,20)}$	9.612

Table A.33: 1st random ranking

Variable	**Coefficient** (Std. Err.)
rank_r1	-0.159 (0.221)
Intercept	13.325** (2.900)
N	22
R^2	0.025
$F_{(1,20)}$	.517

Table A.34: 2nd random ranking

Variable	**Coefficient** (Std. Err.)
rank_r2	0.280 (0.215)
Intercept	8.286** (2.820)
N	22
R^2	0.078
$F_{(1,20)}$	1.695

Table A.35: 3rd random ranking

Variable	**Coefficient** (Std. Err.)
rank_r3	-0.019 (0.224)
Intercept	11.714** (2.936)
N	22
R^2	00
$F_{(1,20)}$	.007

Table A.36: 4th random ranking

Variable	**Coefficient** (Std. Err.)
rank_r4	0.090 (0.223)
Intercept	10.468** (2.925)
N	22
R^2	0.008
$F_{(1,20)}$	.163

Table A.37: 5th random ranking

Variable	**Coefficient** (Std. Err.)
rank_r5	0.016
	(0.224)
Intercept	11.312**
	(2.936)
N	22
R^2	00
$F_{(1,20)}$	.005

Table A.38: 6th random ranking

Variable	**Coefficient** (Std. Err.)
rank_r6	0.144
	(0.221)
Intercept	9.843**
	(2.906)
N	22
R^2	0.021
$F_{(1,20)}$	.423

Table A.39: 7th random ranking

Variable	**Coefficient** (Std. Err.)
rank_r7	-0.205
	(0.219)
Intercept	13.857**
	(2.874)
N	22
R^2	0.042
$F_{(1,20)}$	.877

Table A.40: 8th random ranking

Variable	**Coefficient** (Std. Err.)
rank_r8	0.135
	(0.222)
Intercept	9.948**
	(2.910)
N	22
R^2	0.018
$F_{(1,20)}$	.371

Table A.41: 9th random ranking

Variable	**Coefficient** (Std. Err.)
rank_r9	-0.382†
	(0.207)
Intercept	15.896**
	(2.714)
N	22
R^2	0.146
$F_{(1,20)}$	3.423

Table A.42: 10th random ranking

Variable	**Coefficient** (Std. Err.)
rank_r10	-0.007
	(0.224)
Intercept	11.584**
	(2.937)
N	22
R^2	00
$F_{(1,20)}$	.001

Table A.43: The averages of statistical values

Coefficient	**Std. Err.**	**t**	**p >|t|**	**95% coef.**	**interval**	**R-squared**
-0,0107284	0,21972398	-0,059	0,5741	-0,46906458	0,44760778	0,03391

A.2.2 Index rankings

Table A.44: Good Country Index

Variable	**Coefficient** (Std. Err.)
gci_22	0.662**
	(0.168)
Intercept	3.701
	(2.208)
N	22
R^2	0.437
$F_{(1,20)}$	15.529

Table A.45: Legatum Prosperity Index

Variable	**Coefficient** (Std. Err.)
lpi_22	0.616**
	(0.177)
Intercept	4.234†
	(2.320)
N	22
R^2	0.378
$F_{(1,20)}$	12.16

Table A.46: Index of Economic Freedom

Variable	**Coefficient** (Std. Err.)
ief_22	0.512*
	(0.192)
Intercept	5.610*
	(2.522)
N	22
R^2	0.262
$F_{(1,20)}$	7.111

Table A.47: Environmental Performance Index

Variable	**Coefficient** (Std. Err.)
epi_22	0.090
	(0.188)
Intercept	8.922**
	(2.465)
N	22
R^2	0.011
$F_{(1,20)}$	.229

Table A.48: Global Peace Index

Variable	**Coefficient** (Std. Err.)
gpi_22	0.548**
	(0.187)
Intercept	5.195*
	(2.456)
N	22
R^2	0.301
$F_{(1,20)}$	8.596

A.2.3 ICEE and CDI comparison

Table A.49: ICEE and CDI rankings for the year 2012

Variable	**Coefficient** (Std. Err.)
cdi_2012	0.789**
	(0.185)
Intercept	1.408
	(1.281)
N	14
R^2	0.602
$F_{(1,12)}$	18.154

Table A.50: ICEE and CDI ranking created only from CDI components Trade, Environment, Security for the year 2012

Variable	**Coefficient** (Std. Err.)
cdi_tes_2012	0.751**
	(0.153)
Intercept	1.151
	(1.170)
N	14
R^2	0.668
$F_{(1,12)}$	24.182