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HOW TO DEVELOP THE ECONOMY OF AUSTRIA?

An Analysis and Comparison of Austria and the Most Developed Countries

based on Different Development Indicators

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Budapest, 2021

DECLARATION

I, the undersigned KINCSŐ LILLA NAGY aware of my criminal responsibility, I declare that the facts and figures contained in my dissertation correspond to reality and that it describes the results of my own independent work.

The data used in the dissertation were applied taking into account the copyright protection.

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1. INTRODUCTION

Throughout the decades, several indicators and measures have been developed in order to compare and rank the different countries from different aspects. The most well-known indicator is the GDP or Gross Domestic Product which provides an economic snapshot of a chosen country. However, comparing the countries to each other, the GDP per capita is a more accurate version of the index, as it does not take into account the number of populations. In fact, several different "extended" versions of the index have been developed.

The development indicators are connected to each other (built from each other) and that is why with a thorough analysis, through the comparison of the rankings and through the comparison of a specific country to the top countries within a development indicator ranking, the research aims to recommend a country to take certain measures that develop its economy and its rankings. Austria has been chosen as it is more developed than Hungary and Hungary set the economy of Austria as an example for its own development. Moreover, I have acquired my bachelor's degree in Austria which has been conducive to the research.

In the research paper, I have chosen a country as a basis – which is Austria – to analyze the difference between the rankings of development indicators and also to compare the chosen country to the top countries of each indices. Based on the research, this paper aims to seek answers to the central research questions. One of the questions considers discovering what the reasons behind the different rankings in the different development indicators are. Moreover, the main goal is to find the possible measurements that can be applied in order to develop the economy of Austria. For this latter issue, it is essential to analyze the statistical data and economy of the top countries as well.

The purpose of this paper is to provide an answer to the research questions based on reliable information. The sources that were used were mainly the official pages of different statistical and data websites such as OECD, World Bank or IMF. Moreover, several articles were found that were linked to the topic of the research paper. Therefore, for writing the research paper, data options to choose from was available, hence the most accurate data sources and articles were selected.

The paper contains seven main bodies which are the *1. Introduction, 2. Methodology, 3. What is Development?, 4. Analysis of the Main Development Indicators of Austria, 5. Comparison of Rankings of the Top Countries, 6. Possible Actions and Measures Based on the Analysis and 7. Conclusion*. The *What is Development?* part aims to include all the definitions and explanations of the development indices that are relevant to the research. The *Analysis of the Main Development Indicators of Austria* is divided into sub-sections covering the chosen indicators. Firstly, it analyzes the rankings regarding the GDP and more thoroughly the GDP per capita. Using the GDP per capita, I can compare the rankings and analyze the reasons behind why Austria is behind more accurately. The changes in the rankings are evaluated over time. This indicator is the most commonly used index when comparing the countries to each other. However, for a better understanding of a country several other indices should be included.

Secondly, the GNI per capita was chosen as another indicator to analyze. While the GDP is a "product" measurement, the GNI is rather an "income" measurement. It is an extended version of GDP, as GNI includes other factors as well: adding revenues earned by residents abroad and deducting revenues earned by non-residents in the domestic country.

Thirdly, HDI was created in order to prove that individuals and their capabilities should be ultimately taken into account when analyzing the development of an economy. This indicator was chosen to emphasize that even when two countries have the same level of GNI per capita, they still can have different HDI indices. This outcome and the differences can cause a debate about the prioritization of government policies.

Additionally, GCI is an indicator which provides the base for the Global Competitiveness Report. The Global Competitiveness Index contains not only the microeconomic or business aspects, but also the macroeconomic aspects of competitiveness. The paper uses this thorough index - which besides the GDP, GNI and HDI factors also includes innovation - to measure competitiveness.

Moreover, HPI measures the wellbeing for several countries. This indicator is selected, as it provides examines a country from a different aspect. This index "shows" how well different

countries are doing at sustaining happy, long and sustainable lives. Usually, the rankings of this index are very different from the other indices meaning that several Latin American and Asian Pacific countries are on top in achieving wellbeing and high life expectancy with relatively small Ecological Footprints. This is an important index as it shows nations that it is not impossible to live sustainable lives without the exploitation of the Earth.

The *Comparison of Rankings of the Top Countries* part is divided into sub-sections. Those sections examine the rankings of the top countries of each development indicators. Based on the up-to-date data from databases such as the International Monetary Fund or the World Bank database, top countries were chosen for analysis. Moreover, in order to see the whole picture and achieve a more thorough analysis, it is essential to compare those countries with Austria.

In the *Possible Actions and Measures Based on the Analysis* part, I aim to recommend actions and measurements based on the analysis conducted in the previous sections. This part is where the analysis come together, and suggestions are made how can Austria develop its economy and improve its rankings.

Finally, the *Conclusion* summarizes the main ideas of the paper and also aims to answer the research questions based on the sources that were used, the intrastate analysis and the interstate comparison.

2. METHODOLOGY

The purpose of the paper is to provide answers to the research questions based on reliable information. The sources that were used were mainly the official pages of different statistical and data websites such as OECD or Happy Planet Index. Moreover, several articles were found that were linked to the topic of the research paper. Therefore, for writing a research paper a wide range of data options to choose from was available, hence the most adequate data sources and articles were selected.

An applied research method was used, as based on the theories and definitions I aim to examine the rankings and the economy of Austria. Based on the findings, I aim to answer the research questions and provide possible actions and measures how the different rankings can be improved. In addition, the research has an induction type of approach because it aims to move from the specific to the general, I aim to generate conclusions that are untested. With the comparison of rankings and the comparison of the top 3 countries to the chosen country, the research creates a useful analysis for further usage. Data is collected and compared in order to explore a phenomenon and to create a conceptual framework. Moreover, it is a mixed research as the statistical data can be depicted on graphs and can be calculated with, while the thesis also investigates how and why the different decisions are made and it aims to provide an explanation to the differences in the rankings. Furthermore, cross-sectional research was used as most of the rankings are up to date, however, for a more thorough analysis, the development indicators are compared to each other from different years which makes the other half of the research a longitudinal research.

Secondary data collection is used because the data has already been collected from the countries which is available for the research. The rankings were created based on the comparison of the countries. Firstly, I have analyzed the statistical data that is available on websites and based on the analyzed data a case study on Austria was built. With the usage of reliable sources, I will be able to present a valid case.

The research paper starts with the description of the theoretical background, with the explanation of the development indicators so that it clarifies the definitions based on which the

thesis is written. The paper first compares the development indicators to each other within Austria, so that a thorough analysis is presented on the economy of the country. Then, the comparison of Austria with the other countries within the chosen development indicators shows the differences between the measures applied and the systems of the countries. Finally, based on the analysis, the research would also include possible measures, actions and policies for Austria that the top countries have already applied and were successful.

3. WHAT IS DEVELOPMENT?

According to the Cambridge Dictionary[1] development is defined as a process in which something or even someone changes in a positive way, becomes more developed. A specific type of development – which is used by economists – is the economic development. The economic development is simply a process by which the low-income countries are converted into modern economies. The concept is sometimes mistaken by the term economic growth, however, there is a difference as the economic development is aimed to describe the transformation of an economy, regarding both quantitative and qualitative improvements. While the term economic growth is defined as a process which measures a state's increases in wealth over a specific time period (Krueger and Myint, 2016, Cornwall, 2018).

Unfortunately, neither the term developing country, nor the process of the economic development has yet been universally defined. Based on the per capita income criteria, the developing countries usually can be categorized, while the per capita income growth is usually the one that precedes the economic development. However, to use only the per capita income growth as a base for development might present false information about the level of well-being of a country. For example, there are countries which are rich in oil. The per capita incomes of those economies are well above the average, however, when other general economic characteristics are examined, they are regarded as underdeveloped countries. That is why it is essential to examine other indicators and characteristics of the economy to understand what the critical dimensions and factors in an economy are and how can the development be achieved (Krueger and Myint, 2016).

There are several indicators that measure the development of a country from different aspects. In the thesis, five development indexes were chosen, four of them complement each other and built from each other, while the fifth one, the Happy Planet Index (HPI) is separate index. The question might arise why the author have chosen those specific development indicators. The Gross Domestic Product (GDP) is a base indicator which is always used and examined when talking about the "health" of an economy. While the Gross National Income (GNI) is a complement to the GDP. As a consequence, it was essential to use the GDP and the GNI as a base for the analysis. The

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[1] https://dictionary.cambridge.org/dictionary/english/development

Human Development Index (HDI) uses the GNI per capita as one of the dimensions. The other two dimensions consider the health system and the education system of the country. The Global Competitiveness Index includes the dimensions of GDP and HDI, while also adding new pillars such as innovation or Information and Communication Technology. Last but not least, the Happy Planet Index (HPI) has been chosen as the fifth indicator as it measures development without the usage of GDP and GNI and with dimensions such as the ecological footprint.

The definition of Gross Domestic Product or GDP is that it measures the total output that is produced in a certain country. Furthermore, it also includes the total amount that is spent on the final production (less imports) and the income earned from producing the goods and services. The GDP per capita does not take into account the number of the population, as it is calculated by dividing the GDP by the population of that particular country. This per capita index is used to uncover the changes in the standards of living cross-border and over time (Chamberlin, 2011, OECD, 2018).

GDP can be measured in three ways which are the production, the expenditure and the income approach. Firstly, the production approach, at every level of production, the "value-added" is added up. The value-added is calculated by subtracting the value of the intermediate inputs which are included in the production process from the total sales. Secondly, the expenditure approach sums the value of the purchases that are performed by the final consumers. Thirdly, the income approach adds up the incomes created through production. This index is calculated by each country's national statistical agency. The agency, from large number of databases and sources, complies the information gathered. However, through the calculations, the established international standards should be followed which are included in the *System of National Accounts, 1993* (Callen, 2020).

Gross National Income or GNI can be defined by the following equation (Chamberlin, 2011):

"Gross Domestic Product ('money GDP')

+ Net income from the rest of the world (receipts less payments)

+ Subsidies less taxes from/to the rest of the world on products and production

= Gross National Income"

The net receipts that come from the rest of the world are the property income and the compensation of the employees. The compensation of the employees that a country receives from outside of the country are the ones that are earned by employees who are residents in the economic territory, however, work outside of the country. For example, this is the case, when Austrian residents who live next to the border of Switzerland, work in Switzerland. Moreover, the compensation of employees can be earned from the employees who work and also live cross-border for shorter periods. These employees are called seasonal workers. The property income that a country receives from or pays to the other countries covers dividends, interest and the retained earnings coming from the foreign enterprises that are owned by resident companies in part or fully and vice versa. (OECD, 2020b).

While GDP is a product measurement, GNI is rather an income measurement. It covers the income that earned by the business, resident of the economy as well as other earnings that comes from foreign sources. Moreover, the index incorporates the subsidies and taxes on products that have not yet counted. However, this only influence the income earned abroad by the residents of the examined country. It is important to use the GNI as a comparison tool as it also takes into account the income that has been earned abroad. For instance, the residents of Mexico usually move to other countries where they can earn more. These Mexican residents working abroad often send back the income earned abroad to their families. The thesis uses the PPP (Purchasing Power Parity) method when calculating the GNI as this technique converts all the goods and services to U.S. dollar, so that it eliminates the effects of exchange rates. (Amadeo, 2020).

Differences Between GDP, GNI and GNP

Income Earned by:	GDP	GNI	GNP[2]
Residents in the Country	C+I+G+X	C+I+G+X	C+I+G+X
Foreigners in the Country	Includes	Includes If Spent in Country	Excludes All
Residents Abroad	Excludes	Includes If Remitted Back	Includes All
Foreigners Abroad	Excludes	Excludes	Excludes

Source: https://www.thebalance.com/gross-national-income-4020738

Table 1. Differences Between GDP, GNI and GNP shows the differences between the indices. The difference between GDP and GNI is that GDP includes the income earned by both foreigners (in this case the income earned within the country) and residents in the country, as it covers national output, income and expenditure. Regarding the GNI, the income earned by resident in the country is included, while the income earned by foreigners in the country is only included if the earned income is spent within the country. GDP does not, however, GNI includes the income that is earned by the residents abroad. GNI has been selected over the GNP as it is a more specific indicator. Moreover, it is a better comparison tool as the GNP includes earned incomes that are not remitted back to the country. GNP reports and measures the incomes of the residents regardless of where the residents are spending it. While GNI includes also the earnings of the foreigners in the country (if the income earned is spent within the country), however it only includes the earnings of the residents abroad if it is remitted back to the country (Amadeo, 2020).

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[2] Gross National Product
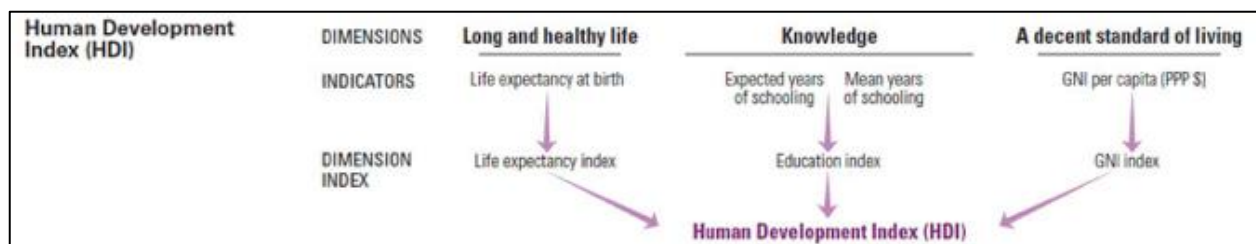
Figure 1.

Components of the Human Development Index[3]

The Human Development Index or HDI was developed by the United Nations in order to point out that for the assessment of the countries the ultimate criteria should be the capabilities and skills of the people. The indicator includes three dimensions which are the healthy and long life, the knowledge and an adequate standard of living. Within the dimensions there are four main areas which are the life expectancy at birth, expected years of schooling, mean years of schooling and gross national income per capita (PPPs). The life expectancy is included in the long and healthy life level, while mean years and the expected years of schooling measure the knowledge and the GNI per capita measure the standards of living. This is seen as the extended and developed version of GNI (and so as GDP). From these four areas, three dimension indexes are developed which can be seen on *Figure 1. Component of the Human Development Index* (UNDP, UNDP, 2019b).

In 2018, the Global Competitiveness Index 4.0 was introduced which includes a detailed description and figures of attributes and pillars that are in connection with the human development, growth and efficiency in the Fourth Industrial Revolution. GCI 4.0 provides organized and thorough economic insights into 141 economies as it covers 103 indicators, and the data of international organizations are combined and organized in different pillars. There are 4 main pillars which are Enabling Environment, Human Capital, Markets and Innovation Ecosystem. These 4 main pillars are also divided into sub-pillars: in the Enabling Environment: Institutions, the Infrastructure, Information and Communication Technology Adoption and Macroeconomic Stability are included, in the Human Capital: Health and Skills are included, in the Markets: Product, Labor Market, Financial System and Market Size are included and in the Innovation Ecosystem: Business Dynamism and the Innovation Capability are included. A country receives

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[3] Data source: http://hdr.undp.org/en/content/human-development-index-hdi

its points at the different sub-pillars on a scale of 0-100 and the combination of these gives the GCI value (Schwab, 2019).

The Report on Global Competitiveness aims to help leaders, policymakers and stakeholders to be able to change and adapt their economic strategies to the Fourth Industrial Revolution. Moreover, it aims to act as a base to be engaged in leadership in order to create an up-to-date economic agenda taking into account sustainability and growth. GCI has been chosen as another indicator as one of the key elements regarding the improvement of the living standards is still the enhancement of competitiveness. The index points out the key areas where competitiveness deficit arise and which need to be addressed urgently in order to re-establish growth and productivity (Schwab, 2019).

The Happy Planet Index is a combination of four elements which aims to show how efficiently individuals living in different nations are using the resources of the environment to live happy and long lives. The index includes four main factors which are: life expectancy, wellbeing, ecological footprint and inequality. Life expectancy indicates the average number of years an individual is expected to live in a country. Wellbeing shows how satisfied are the inhabitants of each country by telling their feelings with the life overall on a scale zero to ten. Ecological footprint is the average effect of each resident of a country on the environment. Last but not least, inequality of outcomes indicates the inequalities between individuals within a country, based on their life satisfaction and wellbeing (nef, 2016, Jeffrey et al., 2016).

The Happy Planet Index is the least used and the least known index, that is why the components, and its system is explained in more details. There are several components and factors of the HPI which contributes to the calculation and the values of the indicator. Unfortunately, the data that is presented in the thesis has been collected in 2012, because the most recent data that is available for the Ecological Footprint is from 2012. That is why the scores, and values should be regarded with care when using them for comparison today (nef, 2016).

Firstly, life expectancy as mentioned above indicates the average number of years an individual is expected to live in a country. The figures of life expectancy use the so-called "life

tables" for the calculations. The "life tables" are measured within countries using the mortality rates categorized in age groups. The data from 2012 which was used for the life expectancy dimension was created by the United Nations[4]. Moreover, the life expectancy is the dimension that is used for measuring the standard health in a country (nef, 2016).

Secondly, the experienced wellbeing was measured by the so-called Gallup World Poll by the average of the answers within a country to the following question (Gallup, 2021):

> Please imagine a ladder with steps numbered from zero at the bottom to 10 at the top. Suppose we say that the top of the ladder represents the best possible life for you; and the bottom of the ladder represents the worst possible life for you. On which step of the ladder do you feel you personally stand at the present time, assuming that the higher the step the better you feel about your life, and the lower the step the worse you feel about it? Which step comes closest to the way you feel?

The survey aimed to measure the life satisfaction and feelings of the individuals within a country. The questions were asked within samples of appr. 1000 individuals per countries who were aged 15 or over. The questions of the Gallup World Poll (2012) have been asked in more than 150 countries. However, for five countries only 500 individuals were surveyed. The responses then weighted for probability measurements and corrections, furthermore, to match the countries' national demographics (nef, 2016, Jeffrey et al., 2016).

Thirdly, the Ecological Footprint is the impact that individuals living in a country pose on the environment. The data on Ecological Footprint was used from 2012 which was published by the Global Footprint Network[5]. When estimating the ecological footprint, a predictive model is used. The model uses several variables such as the population density or the CO_2 emissions per capita. (nef, 2016, Jeffrey et al., 2016).

Last but not least, the inequality of outcomes takes into account, when measuring the inequalities, how happy residents are and how long residents are living within a country based on the data gathered on a country's wellbeing and life expectancy. So when calculating the inequality

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[4] https://population.un.org/wpp/Download/Standard/Population/
[5] http://www.footprintnetwork.org/en/index.php/GFN/page/footprint_data_and_results

of outcomes, this factor measures the difference between the product of the mean of wellbeing, and the mean of life satisfaction and the product of a wellbeing that is adjusted for inequality and a life satisfaction that is adjusted for inequality (nef, 2016, Jeffrey et al., 2016).

Furthermore, a color coding is used to present visually of how well each country is doing regarding the different dimensions and the HPI in general. For each of the dimensions, boundaries were calculated in a way that one third of the examined countries falls in one color. Three colors are used for color coding the world maps which are red, amber and green. For example, the color coding for the ecological footprint is the following: the color green means that the value is 1.73 gha or lower, the color amber means that the value is between 1.73 and 3.46 gha, and the color red means that the value is more than 3.46 gha (nef, 2016).

Consequently, development can be measured in different ways and can be examined from different aspects. The development indicators that are included in the thesis were selected in order to present a thorough analysis, an extensive overview and a proper comparison between the economies.

4. ANALYSIS OF THE MAIN DEVELOPMENT INDICATORS OF AUSTRIA

The accuracy of the different development indicators has always been a debatable topic between economists. In general, GDP is used as the main indicator of development, however this does not mean that it is the only indicator that should be used when talking about the economic development of one country or even when comparing different countries to each other. In this section, the author aims to emphasize the differences between the different indices and how do they complement each other based on the comparison of rankings of Austria.

4.1   GDP – Gross Domestic Product

Without the adjustments for the inflation, one cannot measure two different periods, when GPD indicator is compiled at nominal, or current prices. That is why the real GDP is a more accurate measure, as it takes into account and adjusts for inflation. The growth rate of the GDP at constant prices or the real GDP is usually used for determining the health of a country's economy. For instance, when there is a strong growth in the real GDP, economists imply that the employment is rising as well as companies are employing more people, which results in that the population has more money to spend. When there is a decline in the real GDP, it implies that employment drops as well (this happened during the global economic crisis and also more recently during the pandemic). In other cases, the GDP might be increasing, however, still not enough to create enough jobs for the unemployed. This movements of GDP is cyclical, when economies are experiencing boom or recession (Callen, 2020).
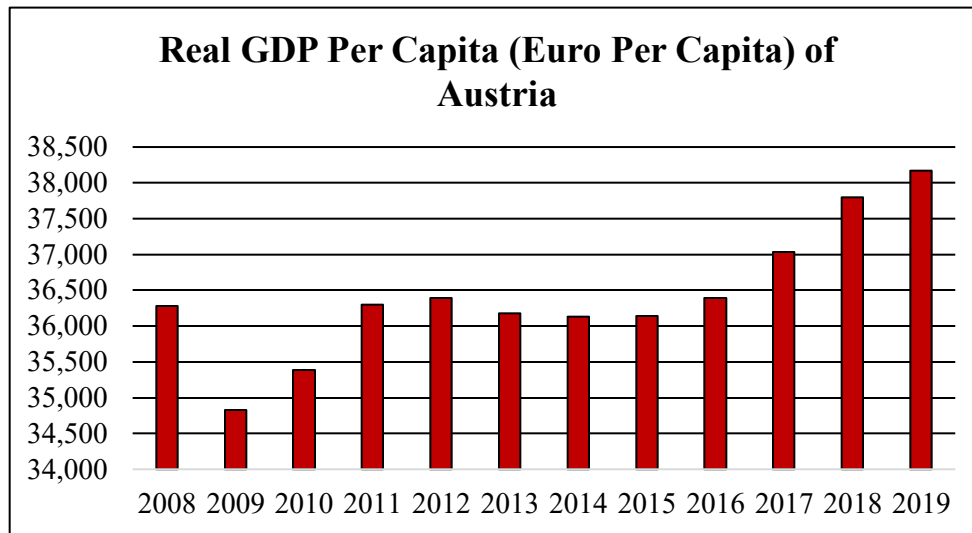
Figure 2.

Real GDP Per Capita (Euro Per Capita) of Austria from 2008 to 2019[6]

The real GDP per capita, as mentioned before, can depict a more accurate picture of the country's economic health. The notation "real" means that this index takes into account the inflation and the notation "per capita" means that it does not take into account the population so that the indicator can be compared easily cross-border. From 2008 to 2009, the real GDP per capita has dropped from 36 280 euro per capita to 34 830 euro per capita which is almost 4% decrease due to the global economic crisis. After 2009, the recovery has started and the real GDP per capita in 2012 with a 36 390 euro per capita has exceeded the pre-crisis 36 280 euro per capita (in 2008) value. From then, there was a slight decrease, however from 2015 there is a rapid growth. As a result of the tax reform that was enacted in 2016, the marginal and the tax rates on the labor income, mostly considering the middle and lower classes has been reduced (OECD, 2017a).

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[6] Data source: https://ec.europa.eu/eurostat/databrowser/view/sdg_08_10/default/table?lang=en

Real GDP Growth of Austria - %

Figure 3.

Real GDP Growth of Austria from 2008 to 2019[7]

As *Figure 3. Real GDP Growth of Austria from 2008 to 2019* shows, in 2009, the real GDP growth was -3,8% due to the global financial crisis and the export demand collapse. The responses and the economic policy were shaped by the financial crisis. One of the most important policy was the automatized anticyclical adjustment which was enacted through the tax transfer system. The way that the transfer and taxation system works is a main determinant of how much it decreases the disposable income of the households' and of how much the employment or income is affected by a negative shock. The tax transfer system of Austria has the strongest effect regarding stabilization in the above-mentioned cases (e.g. when the level of unemployment raises) (Famira-Mühlberger and Leoni, 2013).

Austria ranks as the 13th regarding the GDP per capita indicator according to the website of IMF[8]. After the crisis, due to the policy changes and the recovery of the economy and exports, in 2011, the real GDP growth was 2,9%. In 2010 and 2011, in Austria, the level of unemployment fell back to the level before the global crisis. Unfortunately, from 2012, the level of unemployment

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[7] Data source: https://ec.europa.eu/eurostat/databrowser/view/tec00115/default/table?lang=en
[8] Data source: https://www.imf.org/external/datamapper/NGDPDPC@WEO/OEMDC/ADVEC/WEOWORLD

increased again, as the economic situation weakened. After 2013, the real GDP was growing rapidly, as *Figure 3.* shows, in 2014, the growth is 0,7% while from 2015 to 2016, it has doubled. In 2019, there was again a decline due to the pandemic (Famira-Mühlberger and Leoni, 2013).

Nevertheless, when talking about GDP several factors should be examined. The author will focus mainly on the domestic and external demands, the banking sector, the housing prices, the pension system after the global financial crisis.

Firstly, in 2017 and 2018, both the domestic and external demand has strengthened. In autumn of 2018, there was a negotiation on the wage increases as well which – with the tax reform of 2016 – backed the household consumption. The improvement in the household consumption has also influenced positively the private consumption. The domestic demand was supported by the rise in inward migration. Until the early 2019, there was an increase in total employment and a decrease in unemployment. The majority of the Austrian firms has reported an increase in the investments – because of strong domestic and external conditions – however, they have also reported that there is a shortage of the skilled personnel (which is essential for further investments). The widening skill gap within the population combined with the increasing differences of productivity performance of firms in Austria resulted in the decline in social cohesion. However, there is a 2017-2020 government program enacted which includes objectives of growth-friendly reforms that will stimulate investments in Austria (OECD, 2019e).

Secondly, in Austria, the financial stability is a key factor. The banking sector rehabilitation that has started after the global crisis is almost completed. The related fiscal costs have been recovered, as there is a realization of bad assets which have been previously moved to special government institutions. In the low-interest market, the capital adequacy has significantly improved, and the capitalization is rather above the European Union average, however, there is a room for improvements for a stronger banking system (OECD, 2019e).

Moreover, Austria has high living standards and high well-being. The state is situated in Central Europe, which is a great location, as the country can not only benefit from the international value chains that are Germany-centered and globally competitive, but also from the rapidly

growing economies of Central and Eastern Europe or CEE. There has been a surplus regarding the public finances of Austria, however, to maintain a sustainability and efficiency in spending in the long-run, improvements are essential. The tax reform of the precedent government (elections were held in 2017) should have been – in the long-run – fiscally neutral, however the budget surplus might have been reduced in the short-term. Regardless the automatic stabilizers, other measures should be implemented if the situation turns more severe (OECD, 2019e).

Furthermore, in many countries, the prices of the houses have been increased at a lower rate the valuation – specifically around Vienna – have reached high levels. The yields of gross rental or the return on investment regarding the property before the expenses are no longer acceptable. The rise in the housing price from 2004 to 2014 can be explained by the fact that it is inconvenient to build houses in the center of Vienna which means that the supply is limited. Moreover, after the financial crisis, investors are searching for investments that are more stable, in countries that have stable and strong economy. Another factor can be that in the era of low interest rates, people sought to invest in rental properties and Vienna is offering a relatively simple renting. In addition, other reason can be that most of the Viennese residential real estate is owned by companies and banks. The total housing supply has faced a low elasticity in the long-term to demand conditions. However, there are mixed findings on whether the elasticity is strong or weak which might reflect that in the different regions of the rural vs urban housing markets the conditions are uneven (OECD, 2019e, Specialist, 2019, Geng, 2018, IMF, 2018).

In addition, the average age of retirement is way below compared to the other countries and also compared to the official age of retirement. In Austria, the pension benefits are plentiful, however due to these factors the pension system in the long-term is exposed to challenges and risks. As the population is ageing, it weighs on the supply capacity of the Austrian economy and also on the public finances (OECD, 2019e).

Unfortunately, the index GDP alone cannot determine one country's economic situation, as it does not include all of the productive activity. For instance, the black-market activities or the unpaid or volunteer work is not covered, as it cannot be measured accurately. Moreover, the GDP does not take into account the "wear and tear" on the buildings, machinery etc. which are used for

the production of the outputs. Furthermore, the GDP does not include the population's overall well-being for which other alternative indicators might be more suitable. Although the GDP per capita is often mentioned as an indicator of whether a resident is has a better or worse standard of living, it is flawed. A more accurate indicator of one's well-being would be the HDI or Human Development index which will be examined in the following sections of the paper (Chamberlin, 2011, OECD, 2018, Callen, 2020).

4.2   GNI – Gross National Income

In a global economy, GNI which is the Gross National Income should be used – instead of GDP – as the indicator for overall economic health. In some cases, countries have withdrawn income abroad by foreign individuals and corporations, their GDP trends tend to be much higher than their GNI ones. Austria is the 16th nation regarding GNI per capita according the purchasing power parity – by the World Bank[9] – with a 59 060 USD in 2019 (Chappelow).
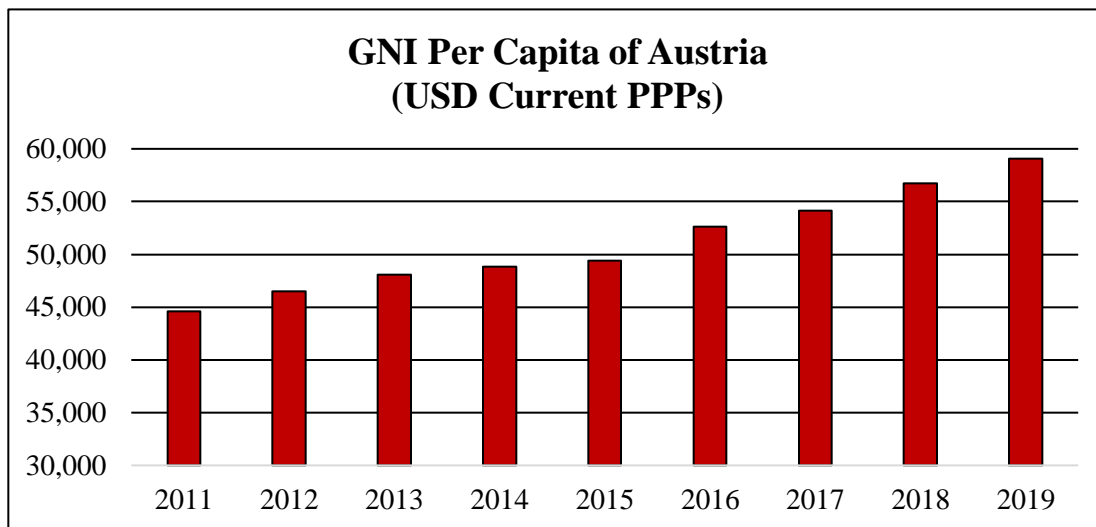

Figure 4.

GNI Per Capita of Austria from 2011 to 2018 (in USD using Current PPPs)[10]

Considering the GNI per capita there is a growth from year to year. During the year 2013-2014, the amount almost stayed constant as in 2013, it was 48 050 USD current PPP, while in 2014,

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the GNI per capita was 48 860 USD current PPP. As mentioned above, the GNI per capita can be affected by several factors. However, if we compare the GNI per capita with the GDP per capita we can see that while in the GDP per capita there was a slight decrease through the years 2013-2015, the GNI per capita was rising. This signs that even if there was a decline in the total output produced by Austria, the net income from the other states evened out, in some cases increased the GNI per capita of the previous years (OECD, 2020a).

Considering the rankings of Austria in the GDP per capita and in the GNI per capita is close to each other which implies that the additions and subtractions of incomes even out in comparison with the other countries. Austria in the recent years have announced tax breaks for foreign corporations and also in May 2019, a consultation draft was issued by the Ministry of Economic Affairs which included points such as creating more certainty and transparency regarding the FDI approval process or offering a sharper approval system for certain transactions. With measures such as the corporate tax cuts, foreign corporations are attracted to the country which would suggest an improvement in the GDP ranking of the country, however the ranking in the GNI index might deteriorate as the income of the foreign corporations would be deducted (Nordea, 2020).

On 1st January 2016, the capital burden was eliminated. Enterprises that are operating within Austria are subjected to a 25% unified corporate tax rate. Wealth tax or trade tax, all in all, taxes that are often levied in other states, do not prevail in Austria. At the business location further tax advantages are available. E.g., in Austria, the income tax on salaries and wages is levied in a progressive tax rate system. For the certain levels of progression the tax percentages are proper, in addition there is a relevant assessment base for determining the adequate amount of income tax to be levied (ABA).

4.3 HDI – Human Development Index

For some economists, the Human Development Index should be used instead of the GNI or GDP indices, as it takes into account the human capital as well. The GDP and the GNI measures only the production and income. The Human Development Index completes the GNI per capita index with 4 more factors which considers knowledge and the long and healthy life (UNDP).

Austria's HDI Trends Between 2005 and 2018

	Life Expectancy at Birth	Expected Years of Schooling	Mean Years of Schooling	GNI per Capita (2011 PPP$)	HDI Value
2005	79.6	15.0	9.9	41,196	0.855
2010	80.6	16.0	11.8	43,700	0.895
2015	81.2	15.9	12.6	43,822	0.906
2016	81.3	16.1	12.6	44,621	0.909
2017	81.3	16.3	12.6	45,371	0.912
2018	81.4	16.3	12.6	46,231	0.914

Source: http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/AUT.pdf

In 2018, the HDI of Austria was 0.914, which means that the country has a very high value of human development index. Austria ranks as the 20th country according to its HDI value. As we can see on Table 1. all of the values that are considered when measuring the HDI value has increased from 2005 to 2018. From year 2005 to 2018, the growth in the life expectancy at birth was 1.8 years, the growth regarding the expected years of schooling was 1.3, the growth considering the mean years of schooling was 2.7 years, and the growth in GNI per capita was 5 035 PPP$. The HDI value has increased almost 0.1 in 13 years (UNDP, 2019b).

Although there were positive changes in the factors that sums the human development index value, the education system should be improved so that the expected years of schooling and the mean years of schooling is extended. This can be increase by the increase in the rates of the tertiary graduation and also the educational outcome should be independent regarding the socio-economic backgrounds. In 2016, the Austrian Higher Education Conference has published several recommendations regarding education. They would like to make education at higher levels more inclusive (OECD, 2017a).

The behavioral risk factors that can affect the life expectancy are smoking, dietary risk, low physical activity and drinking. In Austria, 40% of the deaths (according to the statistics of 2017) is

caused by the above-mentioned risk factors. The highest percentage – 19% of the deaths – is caused by the dietary risks meaning that Austrians are not consuming enough vegetable and fruits however they are consuming too much salt and sugar. 15% of all deaths can be tied to the smoking even it is direct or indirect. Over the past two decades the smoking rate of the adults in Austria has not decreased and smoking in Austria is more prevalent compared to the other EU states. Moreover 6% of all deaths are caused by the alcohol consumption of the Austrian population. Since 2000, the consumption per head has declined however it is still the highest within the EU. And around 3% of the deaths is caused by low physical activity. The rates of obesity and overweight has increased in the past decades. According to the statistics of 2013-14, only 5% of girls who are 15 years old do moderate sports each day. Furthermore, the behavior risk factors are connected to the income and education levels. People with low income and low education levels tend to follow these unhealthy trends more often (OECD, 2019a).

The public health aims to prolong life, prevent any disease and also promote health. Throughout the years, the public health in Austria gained importance as there are more and more people who is engaged in the health system, there is a growing number of institutions that are focusing on the public health, and an increased health awareness. As our society is developing and changing, several public health concerns are arising and because of that there is place for improvement (Dorner, 2014).

4.4 GCI – Global Competitiveness Index

The Global Competitiveness Index presents a detailed overview of a country. It takes into account several different aspects via the pillars. The GCI includes indexes that are used in the thesis such as the GDP or HDI and completes those indexes with the innovation and technology.
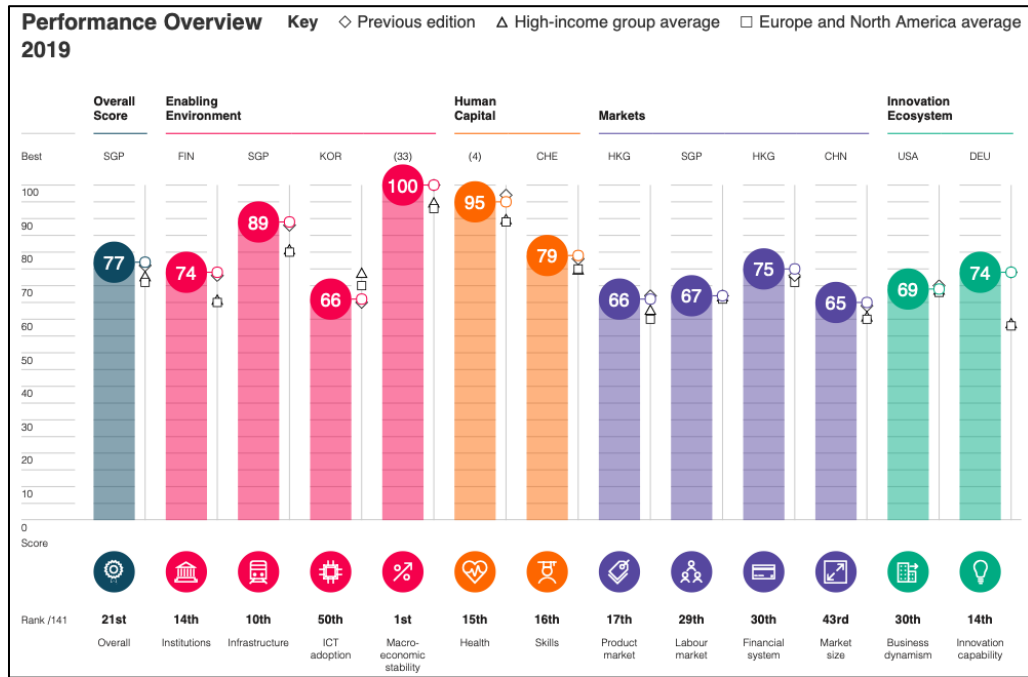
Figure 5.

Performance Overview of Austria in 2019[11]

The overall score is 77 out of 100 regarding the GCI in 2019 which means that Austria ranks as the 21st country out of 141 states. As Figure 4. shows based on the score the market size is the worst value (with a point of 65) that is included, however taking a look at the rankings of Austria of the different pillars the ICT adoption ranks (at the 50th place) at the lowest. The author will consider the rankings of the different sub-pillars and explain what is included and what would be a problematic section.

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[11] Data source: http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf

The author will focus on the ICT adoption, the market size, the business dynamism and the financial system as the lowest ranked sub-pillars of GCI. Firstly, the ICT adoption of Austria is ranked as the 50th of the 140 states. This includes the mobile-cellular phone subscriptions, the mobile-broadband subscriptions, subscriptions of fixed-broadband Internet, fibre Internet subscriptions and the % of Internet users of the adult population. The government should focus on the improvement of the ICT adoption. It is essential to be competitive in the market as in today's world technology is the driving force (Schwab, 2019).

Secondly, the market size of Austria is ranked as the 43rd among the 140 countries. It consists of two factors which are the gross domestic product and the goods and services importation. The analysis of the GDP ranking is extracted in the section 2.1 GDP – Gross Domestic Product (Schwab, 2019).

Thirdly, the business dynamism sub-pillar consists of two main parts which are the administrative requirements and the entrepreneurial culture. In the first part, the factors that are included are the costs and the time to start a business, the insolvency recovery rate and the insolvency regulatory framework. The time of administering a business to start should be lowered as the value of it (21 days) ranks as the 105th among the 140 countries. Moreover, the insolvency framework should be better in order to increase the rankings. In the second part, the factors that are covered are the attributes towards the entrepreneurial risk, growth of innovative companies, willingness to delegate authority and the companies embracing disruptive ideas. Regarding the entrepreneurial culture, the innovators and the entrepreneurs should be supported and encouraged. The government should encourage entrepreneurs or even more business students (the future entrepreneurs) to take risks and present their innovative ideas. The universities should offer help to students who have innovative ideas to achieve them. Moreover, companies should be opened to disruptive ideas as well and embrace them (Schwab, 2019).

Furthermore, the financial system of Austria ranks as the 30th among the 140 countries. This sub-pillar consists of two parts which are the depth and the stability. First, the depth part includes several factors which are financing of SMEs, domestic credit to the private sector, availability of venture capital, insurance premium and market capitalization. The market capitalization value

should be increased as it only covers 30.8% of the GDP. Secondly, the stability part covers the factors which are the soundness of banks, credit gap, non-performing loans and the regulatory capital ratio of the banks. The capital ratio % should be increased as it ranks as the 57th value among the other 140 (Schwab, 2019).

Moreover, regarding the improvement in the ranking of the GCI several other factors should be taken into account. Firstly, the low ranking of digital skills within the active population can be connected to the ICT adoption. The improvement of the digital skills of the population would increase the ICT adoption as the result would be further subscriptions. Secondly, Austria should focus on the trade openness, the ranking of the complexity of the tariffs ranks at the 113th place. The country should also decrease the inequality between the immigrants and the Austrian employees. The ranking of internal labor mobility is 122nd and the ranking regarding the act of hiring of foreign labor is 104th. As well as the diversity among the workers ranks at the 67th place. Furthermore, there should be a labor tax cut as the ranking of the percentage of the tax rate is in the 128th place (Schwab, 2019).

4.5   HPI – Happy Planet Index

In today's world, the few biggest challenges – that are present in the media – are the Covid-19 and its effects on the health and economies, the rising inequalities among the population or the everyday topic of climate change. One reason for these crises is interlinked and can be connected to the centered focus of governments on the economic growth while other factors remain in the background. Both European and U.S. inhabitants have stated that life is not getting better. Populations of one economy is voting for the parties who are able to strengthen the economy and who are focusing on the improvement of GDP. However, this have caused that the social conditions are deteriorating, and we are facing with the challenges of global warming and climate changes (Jeffrey et al., 2016).

Austria's HPI Values in 2016

	Life Expectancy (in years)	**Wellbeing**	**Ecological Footprint (gha/p)**	**Inequality (%)**	**HPI Score**
Values	81	7.4/10	6.1	7%	30.5
Rankings	18th of 140	8th of 140	126th of 140	9th of 140	43rd of 140

Source: http://happyplanetindex.org/countries/austria

Austria ranks as the 43rd country in the world with a score of 30.5. As the index includes other different indexes, it is crucial to analyze those aspects as well. The life expectancy of Austria is 18th out of 140[12] countries with an average 81 years. The wellbeing of the country is 8th out of the 140 with an average of 7.4 out of 10. The ecological footprint is 126th out of 140 with a 6.1 gha[13] per person. The inequality is 9th out of 140 with a 7%. Based on these data, it can be concluded that the biggest problem is with the ecological footprint (HPI).
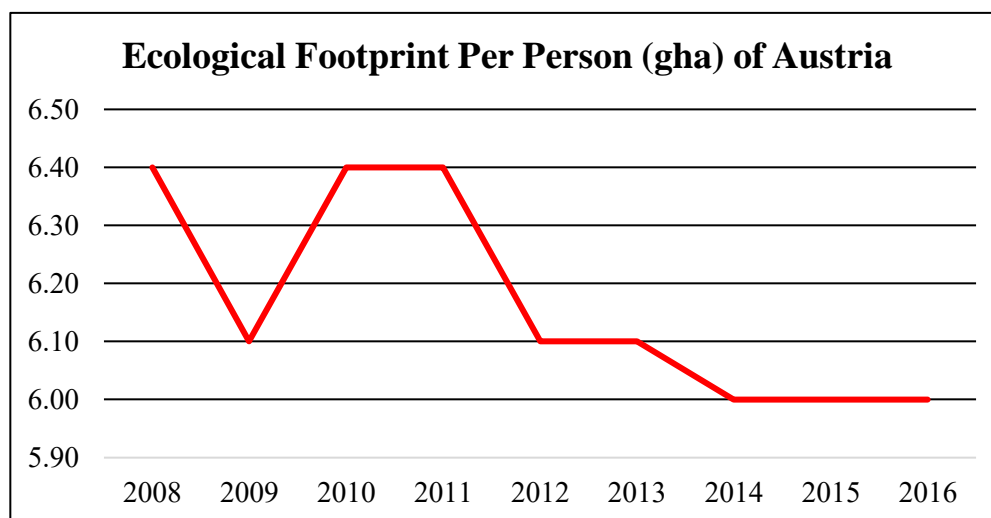

Figure 6.

Ecological Footprint Per Person (gha) of Austria from 2008 to 2016[14]

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[12] Data is not available for every country as there is a limited source that the index is uses.

[13] Gha = global hectare

[14] Data source: http://data.footprintnetwork.org/?_ga=2.22852984.2132436933.1604010674979519999.1604010674#/

According to *Figure 6. Ecological Footprint Per Person (gha) of Austria from 2008 to 2016*, the Ecological Footprint from 2009-2011 was increasing then stagnating. However, from 2011, there is a rapid decrease until 2014, from when there is a constant 6.00 gha. Ecological Footprint includes the land that is needed for renewable resources (e.g. products of wood and food), the territory that is used for infrastructure, and last but not least the land that is needed for the CO_2 emissions to absorb. It is also important to know that the Ecological Footprint does not measure the production, but rather it measures the consumption of the population. This means that in either of the factors or in the factors combined there was a positive change. However, we are still far from sustainability as the adequate value that should be reached would be around 1.73 gha per person (nef, 2016).

4.6   Comparison of Rankings of Austria

Rankings of the Different Development Indicators of Austria

Table 4.

GDP - GDP per capita	GNI per capita	HDI	GCI	HPI
27th[15] – 13th[16]	16th[17]	20th[18]	21st[19]	43rd[20]

Based on the analysis of the different development indicators, the table summarizes the rankings of Austria. The rankings show that Austria, just like other European countries and North America, focuses on the measurements of production, measurements of income and the competitiveness instead of the human capital, and the wellbeing of the individuals.

The Global Competitiveness index as mentioned previously is the combination of the GDI, GNI, HDI with a new indicator which measures innovation within the country. Based on the difference in the rankings of GDP, GNI and HDI, it can be seen that the Human Development

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[15] Data source: https://databank.worldbank.org/data/download/GDP.pdf
[16] Data source: https://www.imf.org/external/datamapper/NGDPDPC@WEO/OEMDC/ADVEC/WEOWORLD
[17] Data source: https://databank.worldbank.org/data/download/GNIPC.pdf
[18] Data source: http://hdr.undp.org/en/content/2019-human-development-index-ranking
[19] Data source: http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf
[20] Data source: http://happyplanetindex.org/countries/austria

Index ranking needs to be improved. The knowledge, health and standards of living have all high rankings within the country, however an improvement in the educational system and also the healthcare system can be developed. Moreover, the low ranking of the GCI can be explained with several different factors. The Austrian government should mainly focus on the adaptation and improvement of the ICT as in the era of digitalization, technology is the driving force (Schwab, 2019).

The difference in the rankings regarding the GDP and GDP per capita implies that the country scores with high levels of output. While the GDP ranking of the country is 27th (according to World Bank), the GDP per capita ranking of the country is 13th (according to IMF) which shows that excluding the number of the countries' populations, the ranking jumps more than 10 places. The high GDP and GNI rankings also imply that the country is mainly focus on the measurement of income and the measurement of output.

The HPI is a separate indicator which also can be seen from the huge difference in the rankings. It does not use the GDP as a basis; however, it rather uses the human population as a base by measuring the wellbeing, life expectancy, inequality within the country and ecological footprints. The low ranking can be in connection with the high ecological footprint. The government should focus on lowering this 6.1 gha per person to approximately 1.73 gha per person (nef, 2016).

The comparison of development indicators within a country is not enough for determining whether a country is developed or not and what kind of improvements are needed. The values of a country might be high however if compared to other countries might be really low and needs an improvement and development. As a consequence, it is essential to analyze the rankings and compare the values of the development indicators to other states. The next part presents the comparison of the rankings of Austria with the chosen top states and the analysis of those countries for recommendations for further development.

5. COMPARISON OF RANKINGS OF THE TOP COUNTRIES

When talking about a country's economic development the above-mentioned main development indicators should be taken into account. However, it is not enough to compare the different development indicators to each other and analyze the values within a country. It is essential to inspect the rankings and the values of other countries as well. Why? The reason is simple. It can happen that the values of the different components of the development indicators measured within a country are low however, when compared to other countries, it is considered as high. In this section, the thesis aims to analyze the values of the top countries of the different development indicators.

5.1   GDP Per Capita: Luxembourg, Switzerland and Ireland

The global financial crisis has caused severe economic damages for all countries. The figures in this section reflect on the real GDP per capita of the top three countries and how those countries have recovered after the crisis of 2008 and what are the main sectors, policies and reforms that keep those countries as the highest-ranking countries in terms of real GDP per capita.
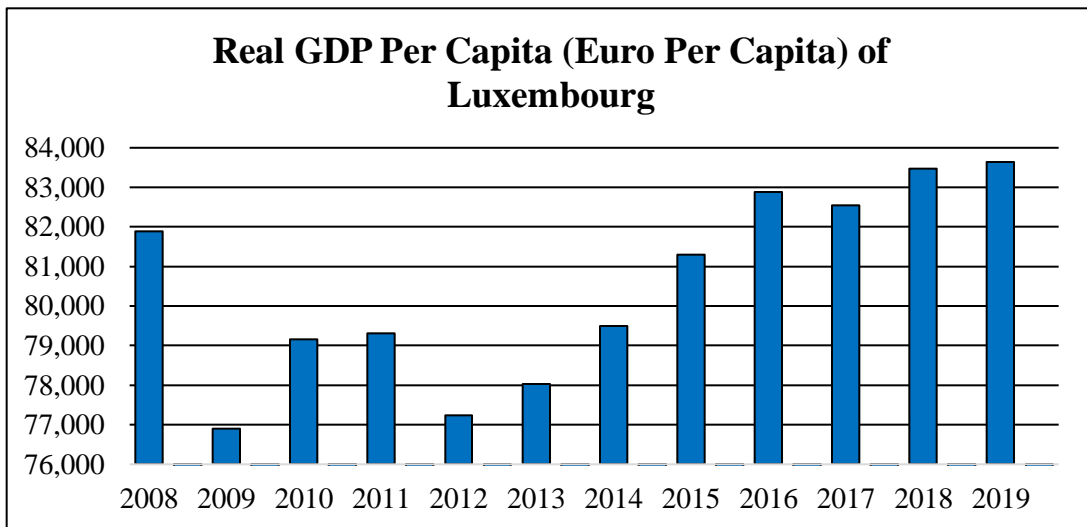

Figure 7.

Real GDP Per Capita (Euro Per Capita) of Luxembourg from 2008 to 2019[21]

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[21] Data source: https://ec.europa.eu/eurostat/databrowser/view/sdg_08_10/default/table?lang=en

Firstly, the highest-ranking country of the GDP per capita index is Luxembourg. The per capita index – as mentioned before – was used because it divides the values by the population so that the small but well operating countries can "compete" as well. The GDP per capita of Luxembourg is exceeding by 50% the OECD average. While labor utilization and growth of productivity have been stable, the structural unemployment have decreased slowly. The income inequality has been below the values of the OECD countries measured by the coefficient called Gini. Nevertheless, for the poorest households, the disposable income has been decreasing over the past years. Even though the emission of greenhouse gas, measured in per capita, is a downward trend, still considered one of the highest among the OECD countries (OECD, 2019b).

Luxembourg has taken actions and enacted policy in order to resolve the issues that affect the economic growth of the country. Firstly, in order to keep up with the future innovative environment and increase labor productivity, in 2017, a law was issued which permit secondary schools to organize their own curriculum. Moreover, in order to improve the digital skills of the job seekers, the Public Employment Service has offered new training programs (OECD, 2019b).

Secondly, in order to increase the share of women and older employees in the labor market, from 2018, according to a tax reform, couples are able to choose individual taxation which aims to reduce the performance disincentives. Moreover, the public investment has increased in the sector of childhood education as well as in the sector of care. Furthermore, in the summer 2018, the early retirement program has been eliminated besides changes in conditions for other programs and schemes (OECD, 2019b).

Thirdly, in order to increase the supply of housing and in order to increase the investment and boost productivity and competition several policies and programs were issued. In 2018, the Omnibus law was issued which included some administrative measures. Furthermore, regarding the retail sector, the restrictive regulations on sales has been decreased. Considering the housing market, social housing programs were stretched as in 2018, the qualification criteria for households were loosened (OECD, 2019b).
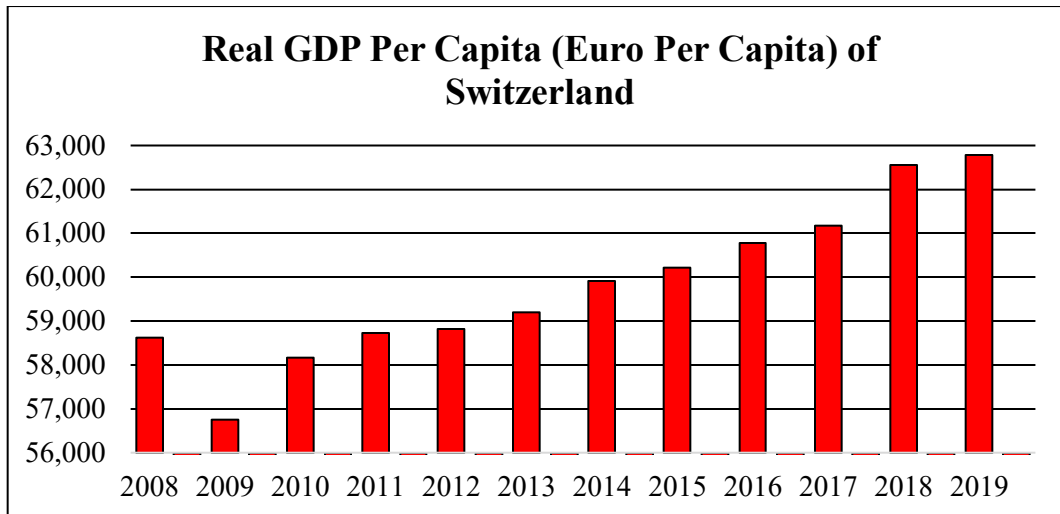
Figure 8.

Real GDP Per Capita (Euro Per Capita) of Switzerland from 2008 to 2019[22]

The second highest ranking country considering the real GDP per capita is Switzerland. Since 2011, the growth has slowed down until 2017 due to the stagnant labor productivity. Firstly, to increase growth and increase enrollment in post-secondary education for students from disadvantages backgrounds such as for migrants, in 2018, there is an opportunity to apply for integration trainings for 1000 migrants annually. Moreover, there is another program as well which motivate companies (by providing grants) to offer skill training for older and low-skilled employees (OECD, 2019b).

Furthermore, Switzerland supports highly agricultural producers which has a negative effect on the price levels, negotiations, productivity, environment and budget. To reduce the agricultural support, in 2018, the government has started negotiation on the agricultural policy, however those policy changes on the environmental protection will be issued from 2022. Unfortunately, until then there were and there are no changes yet (OECD, 2019b).

The predominance of direct taxation in contrast to indirect taxation affect the labor utilization which results in the reduction of productivity. From 2020, a corporate tax reform is enacted which was approved in 2018 by the Swiss Parliament. The main goal of the reform is to

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adjust the Swiss taxation system to the international standards. The tax reform would grant equal treatment to the companies who are resident in the country by the elimination of the special taxation system such as providing further incentives to increase research and development. Moreover, in 2018, the tax on the CO_2 has been increased (OECD, 2019b).

In addition, the participation of women in the labor market as full-time employees is really low in Switzerland. In order to address this issue, in 2017, the Parliament has allocated CHF 100 million for the following five years. This amount is used to decrease the costs connected to childcare and to reorganize the childcare service system. In 2018, the federal program was improved so that more childcare places are offered. Also in 2018, a legislation was passed which includes objectives regarding the female board members of big enterprises that are listed (OECD, 2019b).

Real GDP Per Capita (Euro Per Capita) of Ireland
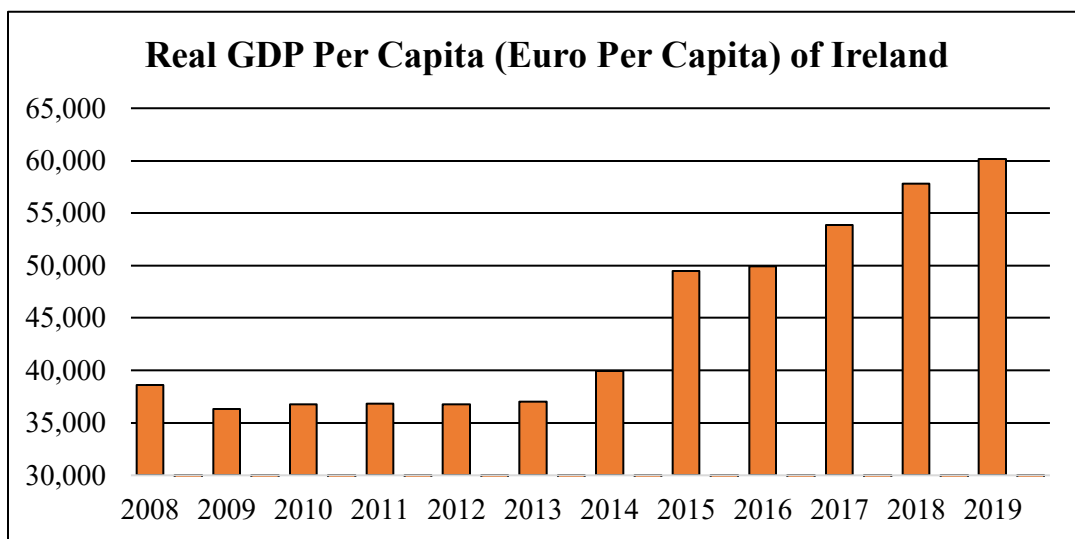
Figure 9.

Real GDP Per Capita (Euro Per Capita) of Ireland from 2008 to 2019[23]

The high GDP per capita ranking and values are the results of the multinational companies' activities. With the exclusion of these activities, the values of the GDP per capita would be still considered high among the OECD countries. The labor productivity growth after the crisis has also risen because of the MNEs. The system of income redistribution of Ireland has made the highest

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[23] Data source: https://ec.europa.eu/eurostat/databrowser/view/sdg_08_10/default/table?lang=en

reduction regarding the income inequality in the OECD, especially the social benefits that has targeted the poorest within the Irish population (OECD, 2019b).

The employment rate of Ireland has been low, especially within the less-educated share of the population. In order to increase the employment rate, SOLAS[24] has been improving the training programs accompanying a so-called Further Education and Training Strategy which is designed for the years 2014-2019. The programs were focusing on the support of hard-to-place unemployed individuals with the access of fundamental skill trainings. Moreover, SOLAS has set up a support system which measure the development of the unemployed persons who have participated in the program (OECD, 2019b).

The high childcare costs and the high tax rates have caused the low-income household to remain inactive. In 2017, the HAP[25] has been developed by favoring the beneficiaries to maintain their housing aid as well as to be full-time employees. The Universal Social Change has been reduced over the past few years which has lessened the marginal tax rates for the employees with low wages (OECD, 2019b).

The non-manufacturing sectors – such as transport, utilities or legal profession – in Ireland were facing weak competition which were setting a burden for growth of the innovative and young companies. In 2018, a so-called Legal Services Regulations Act was approved which e.g. introduced a new form of partnership: the limited liability partnership. Furthermore, to increase the level of innovation within the country, the research and development should be improved and reformed as well. In 2015, a program alleged Innovation 2020 has included several actions which aimed to support the R&D[26] by offering public investment programs. In addition, an online system has been launched in 2016 called ILAS[27] which authorize the application, payments and renewing of licenses of businesses (OECD, 2019b).

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[24] SOLAS: agency who supervises the Further Education and Training Program
[25] HAP: Housing Assistance Payment
[26] R&D: Research and Development
[27] ILAS: Integrated Licence Application Service
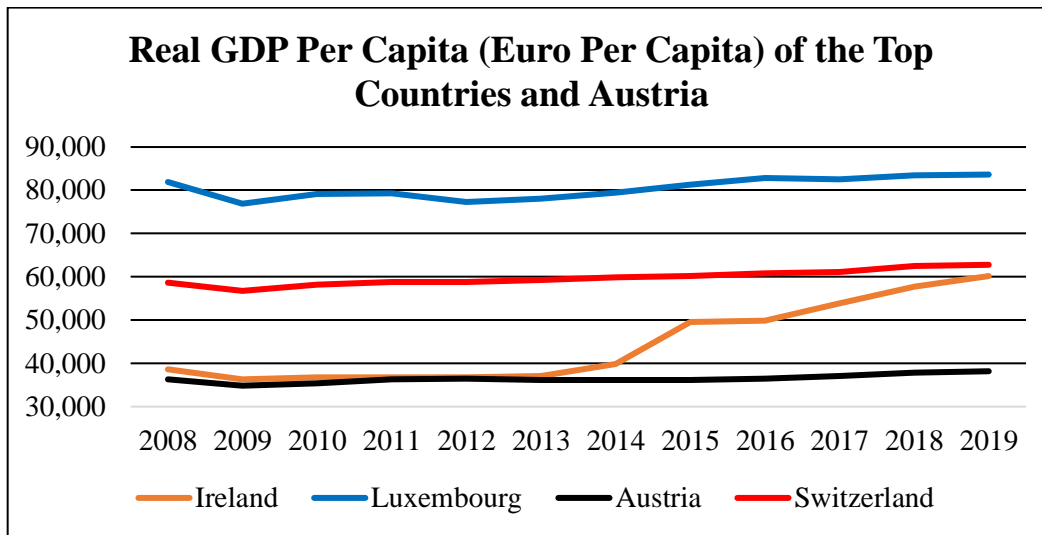
Figure 10.

Real GDP Per Capita (Euro Per Capita) of the Top Countries and Austria from 2008 to 2019[28]

Considering the real GDP per capita of Luxembourg, Switzerland and Ireland, it can be concluded that the top countries are mainly focusing on the increase in the labor productivity and decrease in the unemployment rates with tax reforms, financial aids and trainings. However, Austria has been mainly focusing on attracting the multinational companies to the country as it offers ideal conditions for the foreign investors, while the country according to the majority of the Austrian firms is lacking skilled labor. For example, there has been a government program 2017-2020 which aimed to stimulate the growth of investments in Austria (OECD, 2019e).

As *Figure 10. Real GDP Per Capita (Euro Per Capita) of the Top Countries and Austria from 2008 to 2019* depicts Ireland has been the only economy whose real GDP per capita value has increased significantly. From 2013 to 2015 and from 2016 to 2019, Ireland has been continuously developing when only the real GDP per capita values are examined. Ireland is similar to Austria in that sense that the multinational activities within the country has influenced positively the real GDP per capita values. Nevertheless, in Ireland the labor productivity has increased because of the MNEs, in Austria, the majority of the Austrian firms has reported that there has been a definite

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[28] Data source: https://ec.europa.eu/eurostat/databrowser/view/sdg_08_10/default/table?lang=en

increase in the investments, due to the strong domestic and external conditions, they have also reported that there is a shortage of skilled personnel (OECD, 2019e, OECD, 2019b).

In order to increase the labor employment, the top countries are enacting different policies and actions. In Ireland, SOLAS has improved the training programs which resulted in the support and access to fundamental skill trainings provided for the hard-to-place unemployed individuals. In Luxembourg, in 2017, the Public Employment Service has offered training programs in order to increase the level of digital skills of the unemployed job seekers. In 2018, Switzerland has offered the opportunity to apply for integration trainings for 1000 migrants annually, in order to increase enrollment (growth) in post-secondary education for students from disadvantaged background (OECD, 2019b).

In addition, as majority of the European countries are aging populations, those countries should focus on how the eldest individuals in the population can be employed. The average age of retirement of Austria is way below compared to the other countries and also compared to the official age of retirement. In Austria, the pension benefits are plentiful, however due to these factors the pension system in the long-term is exposed to challenges and risks. Luxembourg, in 2018, has eliminated its early retirement program. Moreover, Switzerland has provided grants to companies so that they offer skills trainings for the older generation (OECD, 2019e, OECD, 2019b).

5.2   GNI Per Capita: Macao SAR, Qatar and Singapore

In case of the GNI per Capita the method that uses the adjustments to the current purchasing power parity is applied instead of the Atlas method. This is important to mention because there is a difference between the rankings. Using the current PPPs method, the highest ranked country is Macao SAR, China, then the second highest is Qatar while the third one is Singapore.
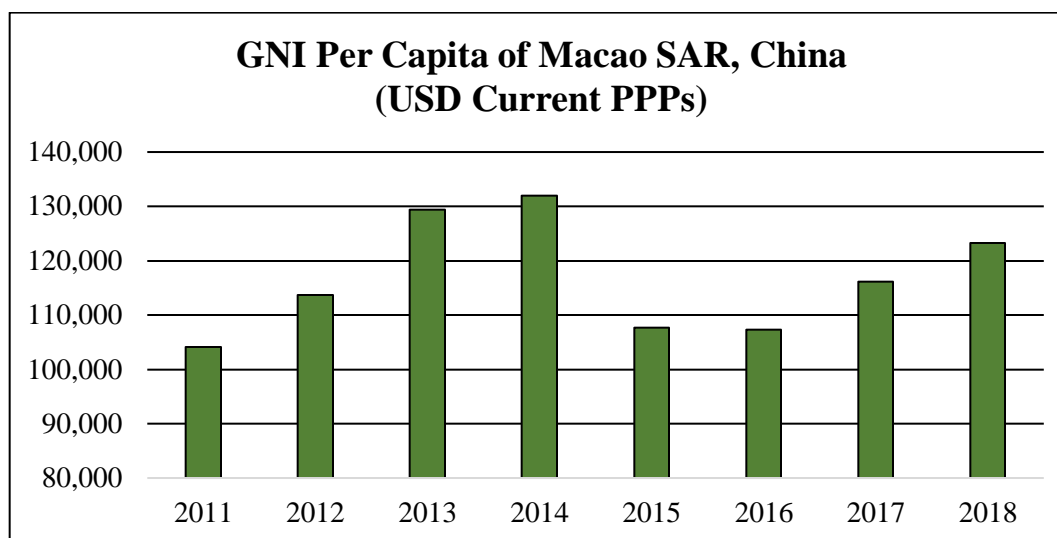
Figure 11.

GNI Per Capita of Macao SAR, China from 2011 to 2018 (in USD using Current PPPs)[29]

Considering the GNI per capita of the highest ranked country which is Macao SAR, China we can see that it has been mildly fluctuating throughout the years. During the years 2011-2014, there has been a growth however, from the year 2013 to 2014 the growth has significantly slowed down. The highest amount of GNI per capita was in 2014 which was 132 020 USD. After that year, there was a huge drop in the GNI per capita value. From 2016, the value of the index has been growing again. Unfortunately, the World Bank has not published the 2019 data on Macao SAR, China, that is why the latest data on this country is the 123 290 USD GNI per Capita in 2018.

The growth that has started in 2016, is the result of the so-called Five-Year Development which was issued by the government of Macao SAR. The main goals, for the following five years, were the maintenance of a stable growth, an increased focus on keeping a balance between the social and economic development and prioritization of employment projects. The main income of the state is from the gaming industry and tourism, that is why it is essential for Macao SAR to endorse a synergy improvement between the industry of non-gaming and gaming (2016).

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[29] Data source: https://data.worldbank.org/indicator/NY.GNP.PCAP.PP.CD?locations=MO
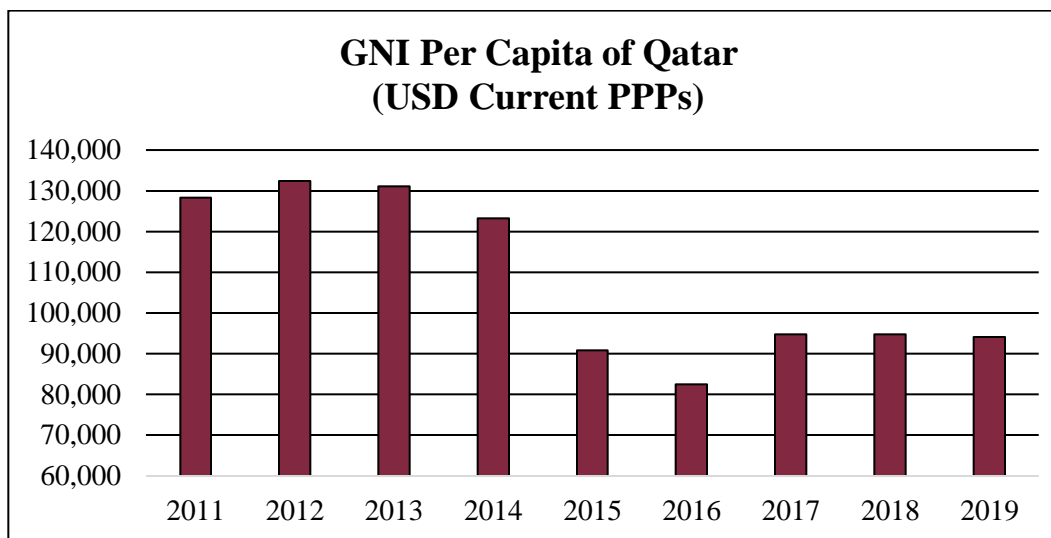
Figure 12.

GNI Per Capita of Qatar from 2011 to 2019 (in USD using Current PPPs)[30]

The GNI per Capita of the second highest ranking country, which is Qatar, has decreased significantly from 2014 to 2015 and has remained low in the following years. From 2011 until 2012, there was a growth in the GNI per capita, however, after that year, there was a decline. In 2016, the GNI per Capita has reached rock bottom with a value of 82 490 USD. Then from 2016, there was a huge growth, unfortunately, it did not last for more years as from 2017, the value has been somewhat stable with small fluctuations.

According to the 2015 Country Report of IMF, there were several policies that were enacted in 2016, and aimed to control the current spending of the country as well as to prioritize the capital expenditure. Firstly, it suggests the containment of the public wage bill. This can be achieved with the help of the authorities by identifying and then continuously erasing the unnecessary positions. With this measure the allocation of those expenses would increase the economy of Qatar. Moreover, the with the suspension of the administrative expenses, further savings would be available in the current expenditure. Secondly, there is a suggestion on the possible reduction of the subsidies, especially for the producers. With the increase in the water, fuel and electricity prices,

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[30] Data source: https://data.worldbank.org/indicator/NY.GNP.PCAP.PP.CD?locations=QA

the modernization of agriculture, the collection of renewable water and the prevention of water losses, the fiscal positions of Qatar would reinforce as well as the health and education system would improve as those sectors are priority expenditure (Behar et al., 2015).

GNI Per Capita of Singapore (USD Current PPPs)
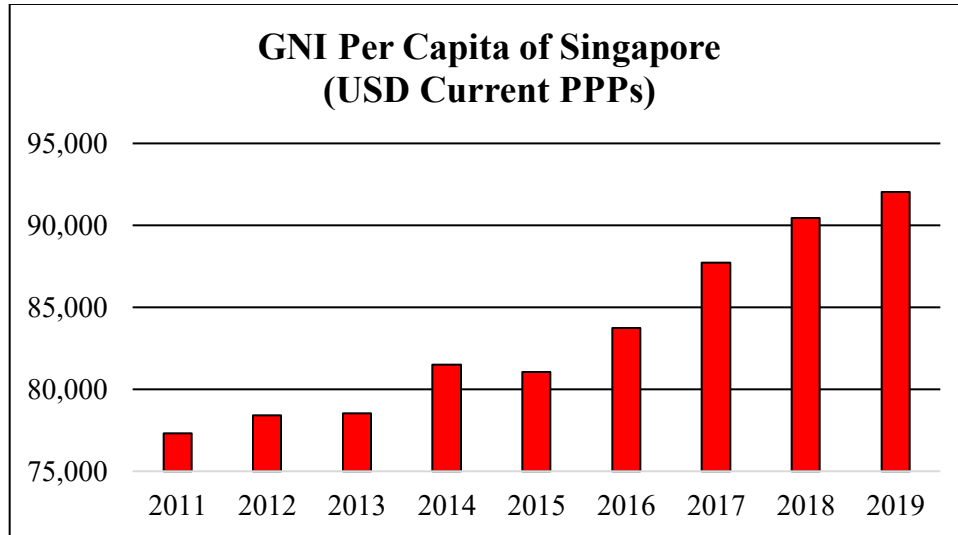
Figure 13.

GNI Per Capita of Singapore from 2011 to 2019 (in USD using Current PPPs)[31]

Singapore is third top-ranked country of the GNI per Capita index. From 2011, the country has been continuously developing in a rapid pace. From 2014 to 2015 there was a small decrease, however that was the only fluctuation over the years 2011-2019.

By the GNI per Capita the true development of Singapore can be measured as if the existence of the MNEs within the country diminishes in the long-term as well as the success of Singaporean companies overseas increases. In spite of the fact that Singapore has been restructuring, the productivity growth has been subtle. The possible measures that can be taken are to undertake the threats of the aging population, to increase the income growth and productivity growth. Moreover, the internationalization of the local enterprises and the expansion to neighboring countries with higher growth would cause further income growth within Singapore (Seah, 2016).

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[31] Data source: https://data.worldbank.org/indicator/NY.GNP.PCAP.PP.CD?locations=SG
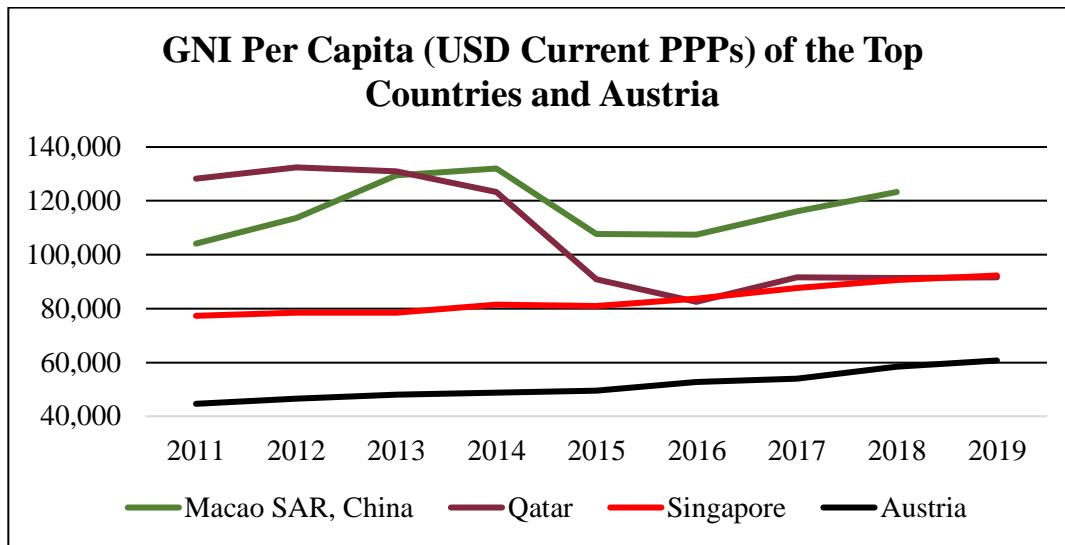
Figure 14.

GNI Per Capita (in USD using Current PPPs) of the Top Countries and Austria from 2011 to
2019[32]

The GNI per capita should be used instead of the GDP per capita as an overall health indicator of
an economy, as when countries withdraw income abroad by foreign individuals, their GDP trends
tend to be much higher than their GNI values. In the recent years, Austria declared tax breaks
available for foreign corporations. Moreover, in 2019, it has announced a consultation draft which
covered different points such as the certainty and transparency concerning the FDI approval
process. However, these measures attract the foreign corporation which means an improvement in
the GDP values, however, the rankings in the GNI index might deteriorate. This happens as the
income of the foreign corporations are deducted (Nordea, 2020).

According to *Figure 14. GNI Per Capita (in USD using Current PPPs) of the Top Countries
and Austria from 2011 to 2019*, the GNI per capita value of Macao SAR and Qatar has been
fluctuating while the GNI per capita value of Singapore and Austria has been slowly but steadily
increasing over the years. Macao SAR has started growing from 2016, which can be the result of

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[32] Data source: https://data.worldbank.org/indicator/NY.GNP.PCAP.PP.CD?locations=SG-MO-QA-
AT&most_recent_value_desc=true

the Five-Year Development Plan. The Plan has determined several goals from which the prioritization of employment could be a solution to the issue in Austria. However, for Macao SAR the main income comes from the gaming industry which is not the case in Austria. According to the 2015 Country Report of the IMF, Qatar has applied several policies in 2016, which resulted in the increase of the value. Most of the measures aimed at controlling the current spending of Qatar, and at prioritizing the capital expenditure. Moreover, Singapore aims to attract the foreign companies to invest in the country by offering ideal conditions. However, Singapore does not only offer the ideal conditions e.g., tax breaks like in Austria but also offers a competitive and ideal environment (2016, Seah, 2016, Behar et al., 2015).

5.3   HDI: Norway, Switzerland and Ireland

The top three countries regarding the rankings of the Human Development index according to UNDP are: Norway (1st), Switzerland (2nd) and Ireland (3rd). In 2019, Norway had 0.954 points, Switzerland had 0.946, while Ireland had 0.942 (UNDP, 2019a).

Norway's HDI Trends Between 2005 and 2018

Table 5.

	Life Expectancy at Birth	Expected Years of Schooling	Mean Years of Schooling	GNI per Capita (2011 PPP$)	HDI Value
2005	80.0	17.5	12.4	61,665	0.931
2010	81.2	17.5	12.7	61,156	0.940
2015	81.9	17.8	12.5	64,683	0.947
2016	82.0	18.0	12.6	64,777	0.950
2017	82.1	18.1	12.8	65,732	0.954
2018	82.3	18.1	12.8	66,180	0.956

Source: http://hdr.undp.org/sites/default/files/Country-Profiles/NOR.pdf

Inhabitants of Norway have a healthier and longer lives then other European countries which can be connected to the effective implementation of the public health policies. The life

expectancy of Norway has been increasing since 2000 and in 2019, has reached 82.3 years. The continuous raise in life expectancy can be explained by the decrease in the death from some of the risk factors, cardiovascular diseases and quality developments regarding the curing of stroke and heart attack. Moreover, the healthier lifestyle of the Norwegians can be connected to the low alcohol consumption as well as to the low rates of obesity. The smoking rates have decreased among the adult population, however a new form of tobacco (snus) has appeared and became popular among the population between the age of 16 to 24 (OECD, 2019d).

Norway is spending the most on health (in per capita ratio) among the EU countries. In 2017, 10.4% of the GDP was spent on health which is the fourth highest share among the EU countries. Long-term care is where most of the health public spending is allocated, this can be explained by the fact the government is considering the population ageing in the coming decades. By the expenditure increase on the long-term care, the government aims to empower family carers to continue to work (OECD, 2019d).

The eHealth in Norway is an online platform where patient can access several information regarding their personal health. This information can be referrals, scheduled appointments or even ePrescriptions. Access to read the medical record and the summary of the care record are offered to individuals who are older than 16 and to the parents of the individuals who under 12. This new innovative way and the usage of the applications are aiming for a mental wellbeing and a healthy lifestyle (OECD, 2019d).

A key factor of the health system of Norway is people-centeredness. In the recent years the Ministry of Health and Care Services started to focus on the performance evaluation from the patients. They use also these patient reports for the improvement of the quality of health care besides the traditional measures of health quality (OECD, 2019d).

Switzerland's HDI Trends Between 2005 and 2018

Table 6.

	Life Expectancy at Birth	**Expected Years of Schooling**	**Mean Years of Schooling**	**GNI per Capita (2011 PPP$)**	**HDI Value**
2005	81.2	15.2	12.0	68,351	0.914
2010	82.3	15.6	13.3	70,348	0.941
2015	83.1	16.2	13.1	69,427	0.947
2016	83.3	16.2	13.0	68,567	0.947
2017	83.5	16.2	13.1	67,888	0.949
2018	83.6	16.3	13.4	69,243	0.955

Source: http://hdr.undp.org/sites/default/files/Country-Profiles/CHE.pdf

Switzerland enjoys a high life expectancy among the OECD countries which can be explained by the fact that its health system is generously supported financially. Some rates of risk factors such as alcohol or smoking are around the OECD average, while the rates of obesity are surprisingly low. Moreover, the rates of vegetable and fruit consumption of children are very high and among the highest regarding the OECD countries. On the other side, the rates of the regular physical activity of individuals at the age of 15 are really low (OECD, 2017b).

The health care system of Switzerland is highly influenced by the cantons and highly decentralized. Taxes, premiums, payments of out-of-pocket and social insurance contributions are funding the Swiss health care system. Health coverage involve hospital care, devices, pharmaceuticals, long-term medical services, physician visits and physiotherapy. Moreover, there is an access to additional private insurance which covers the services that are not included in the mandatory coverage, such as better accommodation at the hospital (Tikkanen et al., 2020).

The electronic health records were adopted in 2015, but it was only enacted in 2017. By spring 2020, it was planned to release the updated version of electronic health records with individual identifiers. This would increase the patient safety, the treatment quality, care

coordination and efficiency. The adoption of the new technologies is still ongoing and in an early stage. Besides the EHR, other reforms and innovations have been introduced. The Health2020 agenda has included four key areas for reforms: 'ensure quality of life, reinforce equality of opportunity and individual responsibility, consolidate and increase the quality of healthcare delivery, create transparency, better control and coordination'(FOPH, 2013). Based on these areas the Health2020 includes 36 measures which will be continuously implemented as a coordinated package (Tikkanen et al., 2020, FOPH, 2013).

Ireland's HDI Trends Between 2005 and 2018

Table 7.

	Life Expectancy at Birth	Expected Years of Schooling	Mean Years of Schooling	GNI per Capita (2011 PPP$)	HDI Value
2005	78.8	17.2	11.7	49,611	0.904
2010	80.2	17.5	11.1	44,852	0.901
2015	81.3	18.7	12.3	54,474	0.935
2016	81.6	18.8	12.5	59,397	0.943
2017	81.9	18.8	12.5	62,043	0.947
2018	82.1	18.8	12.5	65,762	0.951

Source: http://hdr.undp.org/sites/default/files/Country-Profiles/IRL.pdf

Since 2000, the life expectancy of Ireland has been increasing continuously and in 2019, the rate has been above the EU average. The health system of Ireland has been able to tackle the preventable causes to avoid the increase in the death rates. On example can be that in 2018, a policy was enacted that all the tobacco packaging has to be plain, this effort aimed to decrease the number of the individuals who are smoking. Additionally, in 2017, to reduce the obesity and overweight rates, taxes are levied on the sugar-sweetened beverages (OECD, 2019c).

The private health insurance plays a main role in Ireland. Compared to the other EU countries, Ireland spends more on health (in per capita), however considering the public spending,

the share is much less. Among the Western European countries, Ireland is the last one to remain without a common access to the primary health care. This means that for individuals without a coverage need to wait and pay more for treatments at the hospitals. Moreover, the Irish health system is a two-tier health system which means that there is an opportunity to pay for private treatments which means they can access treatments faster. In order to reduce the waiting times at the hospitals, in 2018, actions were taken (OECD, 2019c).

Moreover, Ireland is highly relying on the doctors that have been graduated abroad. Generally, the Irish medical students after the graduation do not stay in the country, but rather work abroad. Irish graduates claim that the reason for their emigration is because the working conditions in the hospitals within Ireland are defined by in an overworked and understaffed working environment and with long working hours. In addition, because of the language, they have advantageous positions in other Anglo-Saxon countries (OECD, 2019c).

The Sláintecare Report includes reforms regarding the health care system; however, the Department of Health has not implemented all of the recommendations yet. The report contains a plan of a new and reformed health care system. It suggests a one-tier and universal health system where patients do not have to pay to access treatment faster. In addition, the report describes the actions and the strategic directions. Firstly, it recommends the strengthening of the primary and the integrated care through the hospital and community services adjustments based on population within geographic regions. Secondly, a more effective resource allocation is suggested through the health regions. Furthermore, the usage of the eHealth infrastructure would ensure the effectiveness of the health care system through technology. Through the Sláintecare Strategy published in 2018, Ireland aims to reform and innovate their health care system during the years 2019-2021 (OECD, 2019c).

HDI: Comparison of Austria and the Top Three Countries (Norway, Switzerland and Ireland) – 2018

	Life Expectancy at Birth	Expected Years of Schooling	Mean Years of Schooling	GNI per Capita (2011 PPP$)	HDI Value
Norway[33]	82.3	18.1	12.8	66,180	0.956
Switzerland[34]	83.6	16.3	13.4	69,243	0.955
Ireland[35]	82.1	18.8	12.5	65,762	0.951
Austria[36]	81.4	16.3	12.6	46,231	0.914

Human Development Index should be considered when talking about the health of an economy, as without the human capital, the economy is not operating either. *Table 8. HDI: Comparison of Austria and the Top Three Countries (Norway, Switzerland and Ireland) – 2018* summarizes the data from 2018. The table shows that Austria is lagging behind in the life expectancy at birth and the GNI per capita when the values are compared to the top countries. The improvement of the GNI per capita is explained in the previous chapters while the improvement of the life expectancy at birth can be achieved by the improvement of the healthcare system of Austria.

Austria as mentioned above is an aging population just like Norway. However, Norway spends the most on health (per capita ratio) among the European Union countries. In 2017, it was measured that Norway spent appr. 10.4% of the GDP on health and most of the spending was allocated to the long-term care. With the long-term care, the government of Norway empowers family carers to continue to work. In addition, for Norway and Switzerland, the quality of the healthcare system is really important. In the recent years, the government of Norway, started to

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[33] Data source: http://hdr.undp.org/sites/default/files/Country-Profiles/NOR.pdf
[34] Data source: http://hdr.undp.org/sites/default/files/Country-Profiles/CHE.pdf
[35] Data source: http://hdr.undp.org/sites/default/files/Country-Profiles/IRL.pdf
[36] Data source: http://hdr.undp.org/sites/all/themes/hdr_theme/country-notes/AUT.pdf

focus on gathering performance valuations from patients. Then the government uses those evaluations from the patients to improve the quality of health besides the traditional means. While in Switzerland, the Health2020 agenda covered areas such as the improvement of the quality of healthcare system. The performance evaluation on the quality of healthcare service from patients should be considered in Austria as well (FOPH, 2013, OECD, 2019a, OECD, 2019d).

Moreover, the behavioral risks factors present in the Austrian economy are the dietary risk, smoking, alcoholism and low physical activity. The populations of the top three countries are having better health when compared to the population of Austria. The healthier lifestyle of Norway can be connected to the low alcohol consumption as well as the low rates of obesity. The low alcohol consumption is the result of the high taxes that are levied on the alcoholic beverages, and as a consequence, the result of the high prices of those beverages. Furthermore, Switzerland is focusing on the elimination of the dietary risks as the consumption of vegetables and fruits is the highest in the country compared to the other OECD countries. Ireland also focusing on the reduction of obesity and overweight rates. In 2017, taxes have been levied on sugar-sweetened beverages. Moreover, in 2018, a policy has been enacted in Ireland that all the tobacco packaging has to be plain. This measure of 2018 reportedly decreased the number of individuals who are smoking (OECD, 2019a, OECD, 2019d, OECD, 2019c, OECD, 2017b).

5.4   GCI: Singapore, United States of America and Hong Kong

The top three countries regarding the rankings of the Global Competitiveness Index according to the World Economic Forum are: Singapore, the United States of America and Hong Kong. Singapore is the 1st country with a score of 84.8, U.S. is the 2nd one with a score of 83.7 and Hong Kong is the 3rd one with a score of 83.1 (Schwab, 2019).
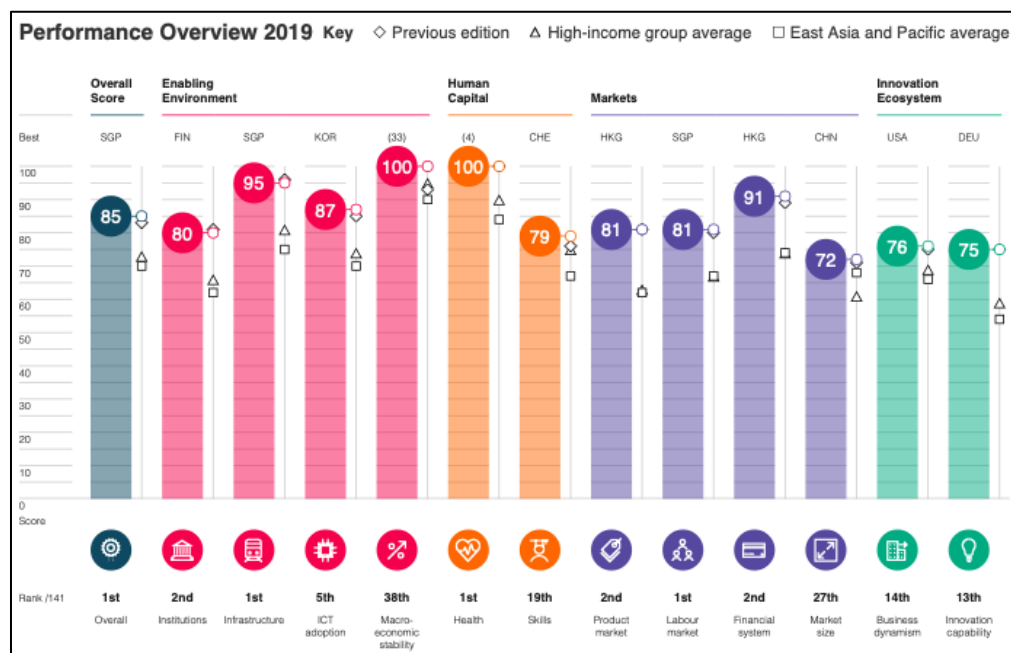
Figure 15.

Performance Overview of Singapore in 2019[37]

From 2018, the score of Singapore has increased by 1.3 points, so the overall score of Singapore is 84.4. With this improvement and the score deterioration of the U.S. (who was the 1st country in 2018) Singapore became the 1st state out of 140. The GCI 4.0 value of Singapore has improved as the country continuously develops, even if it has had high scores and rankings in the sub-pillars (10 out of 12). Moreover, the values on the pillars are much higher than the OECD benchmark. The outstanding sub-pillars are the infrastructure (with a score of 95.4), health (with a score of 100), labor market (with a score of 81.2), institutions (with a score of 80.4), product market (with a score of 81.2), financial system (with a score of 91.3) and ICT adoption (with a score of 87.1) (Schwab, 2019).

Singapore has been developing and improving in the past 50 years and has passed several top economies such as the U.S. or China in the past few years. Just 50 years ago, Singapore has developed from a country with poor infrastructure and a critical unemployment to a number 1 country regarding the infrastructure and also labor market. Today, it is considered to be as one of

[37] Data source: http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf

the most sustainable states. Singapore is considered to be an open economy as well as the best regulatory environment for businesses and entrepreneurs. After the declaration of independence of Singapore, the state has developed rapidly to a high-income state and highly competitive economy. Manufacturing in the sectors of engineering and electronics as well as service sectors such as industries of insurance and finance and information and communications became the main factors that drives the growth of Singapore. In the 1970s, full employment has been achieved and Singapore has reached the rankings and levels of Asia's recently industrializing states (IBRD and IBA, 2019).
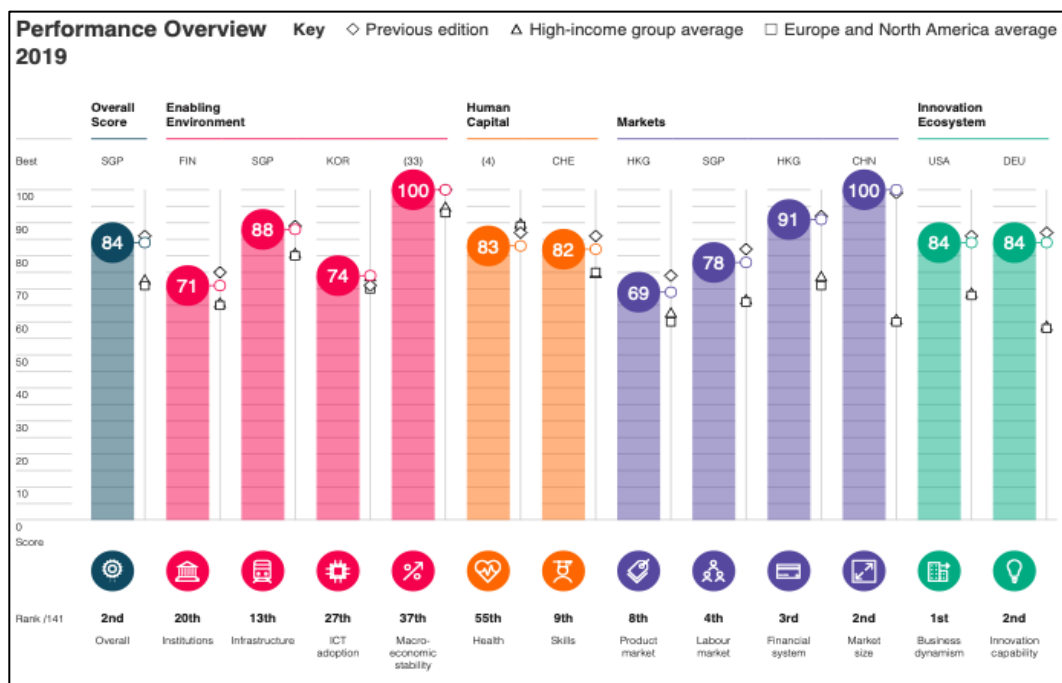
Figure 16.

Performance Overview of the United States of America in 2019[38]

In 2018, the U.S. has been the 1st country regarding the overall score in the GCI 4.0. However, with the rapid development of Singapore and the score deterioration of the U.S., in 2019, the country only ranks as the 2nd most competitive country. The sub-pillars that have lost points and because of that the country has been ranked lower are the product market, health and skills. Regarding product market the trade openness and the domestic competition has decreased 4 and 6

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points from the value in 2018. Moreover, health and skills has decreased 3.5 and 3.8 points. Considering the skills of the graduates, the ranking has stayed competitive with a score of 71.2, however, companies are considering them less sufficient and enough to meet the requirements. In addition, there were further deterioration within the labor market sub-pillar such as the more restrictive regulations of foreign labor hire or the ineffectiveness of the re-skilling programs. However, despite of all deterioration within the different sectors the U.S. stand on top regarding the competitiveness. The country is still one of the most innovative environments around the world. Moreover, the business dynamism of the state remains in the 1st place (Schwab, 2019).
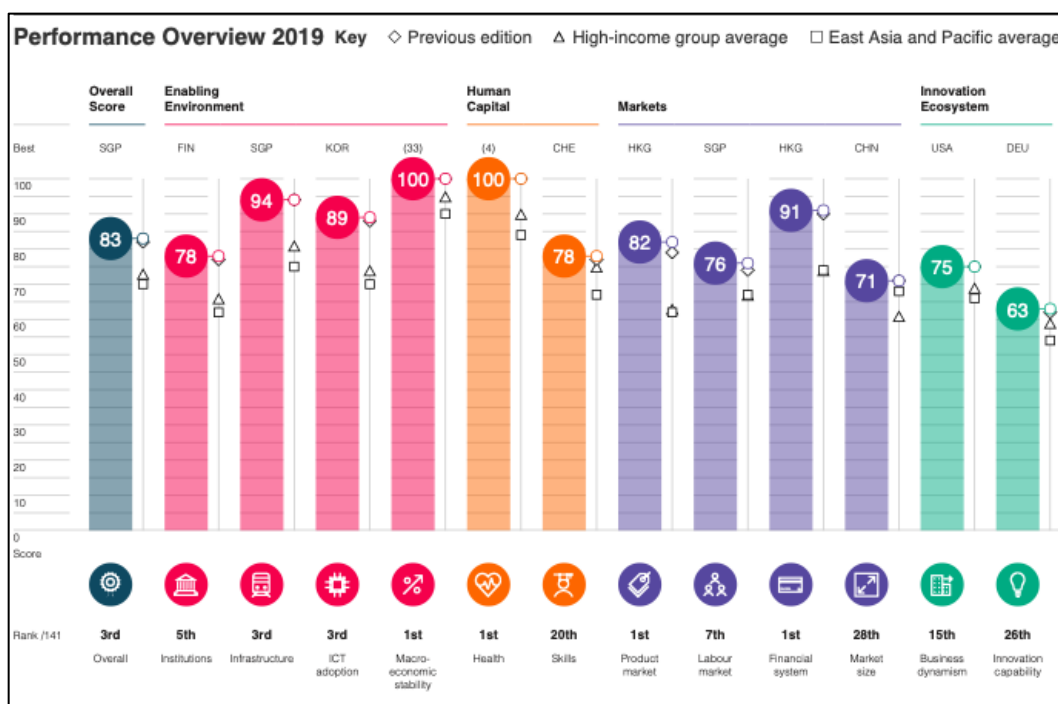
Figure 17.

Performance Overview of Hong Kong SAR in 2019[39]

The third most competitive country among the registered 140 is Hong Kong SAR. The country has been developed rapidly so that from the 7th place (in 2018) it is in the 3rd place in 2019. The country is in the top 10 rankings of eight sub-pillars out of the twelve. Moreover, the values are outperforming the OECD averages on all of the sub-pillars. Hong Kong SAR has the 1st ranking in several sub-pillars which are the macroeconomic stability (with a score of 100), health (with a

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[39] Data source: http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf

score of 100), product market (with a score of 81.6) and financial system (with a score of 91.4). The only problematic sector which should be considered in the case of Hong Kong SAR is the limited capability for innovation (Schwab, 2019).

The financial system of Hong Kong SAR is among the top financial systems in the world. The balance between development and regulation has always been an important aspect for the country. Moreover, country focus on four important sectors which are green finance, technology, talent development and financial connectivity. They are aiming to ensure stability in the long-term, while increasing the competitiveness as an international center of finance (HKMA, 2019).

5.4.1   *GCI: Comparison of Austria and the Top Countries*

GCI: Comparison of Austria and the Top Three Countries (Singapore, the United States of America and Hong Kong) – 2019

<div align="right">

Table 9.

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	ICT Adoption	**Market Size**	**Business Dynamism**	**Financial System**
Singapore[40]	5th out of 140	27th out of 140	14th out of 140	2nd out of 140
U.S.A[41]	27th out of 140	2nd out of 140	1st out of 140	3rd out of 140
Hong Kong SAR[42]	3rd out of 140	28th out of 140	15th out of 140	1st out of 140
Austria[43]	50th out of 140	43rd out of 140	30th out of 140	30th out of 140

The Global Competitiveness Index considers several different factors and dimensions in order to determine the competitiveness and development of a country. *Table 9. GCI: Comparison of Austria and the Top Three Countries (Singapore, the United States of America and Hong Kong) – 2019* summarizes the data from 2019. The table shows those areas in which Austria ranks the lowest and whether those factors have a huge influence on the competitiveness of the country. From the data

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[40] Data source: http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf
[41] Data source: http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf
[42] Data source: http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf
[43] Data source: http://www3.weforum.org/docs/WEF_TheGlobalCompetitivenessReport2019.pdf

presented, the financial system, the business dynamism and the ICT adoption or digitalization plays a key role in the competitiveness.

In the era of digitalization, to remain competitiveness, the ICT adoption plays a key role. With the improvement of mobile-cellular availability and increase of its subscriptions and the improvement of Internet availability and increase of its subscriptions within the population would influence the competitiveness of the country. The development can only be achieved with the digitalization of different sectors such as the financial sector. Without the continuous improvement and adoption to the environment, one country sooner or later will lag behind (Schwab, 2019).

Singapore has been rapidly developing, just 50 years ago, it was a country with poor infrastructure and critical unemployment. Today, it is the most competitive country in the world, just in front of the United States of America. It offers the best regulatory environment for businesses as for a business it takes 1.5 days to start a business, while in Austria it takes 21 days. Moreover, Singapore offers an entrepreneurial culture within the country. There is a chance for innovative companies to grow as well as companies are embracing disruptive ideas (IBA, 2019, Scwab, 2019).

In addition, the financial system of Austria should be improved in order to achieve competitiveness. *Table 9.* shows that the competitiveness and the development of the financial system plays an important role in the competitiveness. The most competitive countries are the ones that ranks as the top countries. Hong Kong SAR has the best financial system which can be explained with the fact that the government focuses on four main ideas which are green finance, technology, talent development and financial connectivity. Austria, as discussed above lacks in the ICT adoption, also the financial system of Austria is not focusing on the long-term sustainability (HKMA, 2019).

5.5   HPI: Latin America

The Happy Planet Index is a measure that ranks the countries from a different aspect, it measures the fundamentals of a country such as the ecological footprint or the wellbeing of a human. It can be seen that the top 3 countries are all Latin American countries – 1st: Costa Rica, 2nd: Mexico and

3rd: Colombia – and not a more "developed" North America, European or Asian country (Jeffrey et al., 2016, Marks et al., 2006).

Costa Rica's HPI values in 2016

	Life Expectancy (in years)	**Wellbeing**	**Ecological Footprint (gha/p)**	**Inequality (%)**	**HPI Score**
Values	79.1	7.3/10	2.8	15%	44.7
Rankings	30th of 140	10th of 140	75th of 140	39th of 140	1st of 140

Source: http://happyplanetindex.org/countries/costa-rica

Costa Rica is often called as the 'Switzerland of Central America' (Marks et al., 2006), as it has been the most peaceful country among the Central American troubled ones. In 1948, the country has eliminated its army which has led to the integration of democratic institutions, as well as to the liberalization of resources in order to fund education, pension and health. In 2012, the country has spent more share of the GDP on health and education than the UK. Moreover, Costa Rica has free press and since the 1950s, there is a strong protection on the political and civil rights. Furthermore, the social indicators of the countries are far the best among the Latin American countries. The solid social connections with the family, neighbors and friends lead to the high wellbeing of the Costa Ricans (Marks et al., 2006, nef).

Costa Rica's high ranking can be explained that the country owns the highest density of species (approximately half a million). Lots of tropical forests offers a whole range of wildlife and also the coastlines of Costa Rica are the most popular destination. The country in order to protect the environment and the biodiversity, enacted an aspiring program of conservation. This program considered to be the most advanced program among the countries owning tropical rainforests. The rainforests are protected in private sanctuaries and national parks. In addition, the government also uses the taxes that are obtained on the sale of crude oil on the protection of the rainforests. Furthermore, in 2015, almost 100% of the electricity was produced from renewable energy. The ultimate goal of Costa Rica is to become a carbon neutral country by 2021 (nef, Marks et al., 2006).

Mexico's HPI values in 2016

Table 11.

	Life Expectancy (in years)	Wellbeing	Ecological Footprint (gha/p)	Inequality (%)	HPI Score
Values	76.4	7.3/10	2.9	19%	40.7
Rankings	39th of 140	11th of 140	77th of 140	60th of 140	2nd of 140

Source: http://happyplanetindex.org/countries/mexico

Mexico's wellbeing compared to the U.S. is higher despite the fact the economy of Mexico is much smaller. The wellbeing and the health improvements can be explained by the lately reformed universal health coverage system which enabled the access of the key health services for the whole population. Furthermore, taxes are levied on the sugar-sweetened drinks in 2014. With this policy the country aims to tackle obesity. This tax imposition has already decreased the consumption of those beverages within one year (nef).

There is a growing political awareness on the environmental sustainability. In a National Development Plan which lasted from 2007-2012, the environmental sustainability was mentioned as one of the five main pillars. Moreover, the long-term climate objectives are included in the national legislation of Mexico. The government also considers the protection of the environment and the conservation of the forests as a main objective (nef).

Colombia's HPI values in 2016

Table 12.

	Life Expectancy (in years)	Wellbeing	Ecological Footprint (gha/p)	Inequality (%)	HPI Score
Values	73.7	6.4/10	1.9	24%	40.7
Rankings	69th of 140	30th of 140	48th of 140	83rd of 140	3rd of 140

Source: http://happyplanetindex.org/countries/colombia

The explanation why Colombia is among the top countries regarding the Happy Planet Index can be explained by the high life satisfaction and high life expectation values. From a European point of view Colombia is like Italy. The country has strong regional presence: it has its own dialect, cuisine, dance and music. Costa Rica has the largest ranges of vegetables and fruits due to the fact that almost all of the climates can be found there (Marks et al., 2006).

Colombia is considered as among the most economically stable and modernized regions in Latin America. It has never had that kind of hyperinflation that is frequent in the other Latin American countries. Moreover, the era of military dictatorship was not long and destructive like in other countries around the area. The main issue can be that the Western media does not focus on the dynamic civil society but rather on the problem of the country. Colombians adore beauty, music and sport. In addition, the country has high standards of healthcare and education. (Marks et al., 2006).

5.5.1   *HPI: Comparison of Austria and the Top Countries*

HPI: Comparison of Austria and the Top Three Countries (Costa Rica, Mexico and Colombia) – 2016

Table 13.

	Life Expectancy (in years)	Wellbeing	Ecological Footprint (gha/p)	Inequality (%)	HPI Score
Costa Rica[44]	79.1	7.3/10	2.8	15%	44.7
Mexico[45]	76.4	7.3/10	2.9	19%	40.7
Colombia[46]	73.7	6.4/10	1.9	24%	40.7
Austria[47]	81	7.4/10	6.1	7%	30.5

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[44] Data source: http://happyplanetindex.org/countries/costa-rica
[45] Data source: http://happyplanetindex.org/countries/mexico
[46] Data source: http://happyplanetindex.org/countries/colombia
[47] Data source: http://happyplanetindex.org/countries/austria

The Happy Planet Index has been chosen in order to present that today's biggest challenges such as the climate change or the inequalities among the population should be considered as factors when talking about one country's development. *Table 13. HPI: Comparison of Austria and the Top Three Countries (Costa Rica, Mexico and Colombia) – 2016* presents data from 2016. The life expectancy (in years), the wellbeing and the inequality is better in Austria than Costa Rica, Mexico and Colombia, however, the ecological footprint (gha/person) is way worse and much higher than the top three countries.

Ecological footprint is the average effect of each individual living in a country on the environment. In case of Austria the value is 6.1 gha which is more than 3 times the recommended value (1.73 gha). Costa Rica in order to preserve its environment, biodiversity and a low ecological footprint, enacted an aspiring program of conservation. The rainforests are also protected in national parks. Additionally, in Costa Rica, the money from taxes that are obtained from the sale on crude oil are transferred to the protection of tropical rainforests. Moreover, in Mexico there has been a growing political awareness on the environmental sustainability. The government of Mexico focuses on the preservation of environment as in the National Development Plan (2007-2012), the environmental sustainability was included as a key topic (nef, Marks et al., 2016, nef, 2016, Jeffrey et al., 2016).

6. POSSIBLE ACTIONS AND MEASURES BASED ON THE ANALYSIS

In the previous chapters, the base country and the top countries of each development indicators have been analyzed. In this section, the possible measures and policies will be mentioned based on the differences in the rankings intrastate and also based on the policies, laws and measures that the different countries have already been enacted throughout the years on different issues.

Comparison of Rankings – Summary of the Analysis

Table 14.

	GDP Per Capita	**GNI Per Capita**	**HDI**	**GCI**	**HPI**
1st	Luxembourg	Macao SAR	Norway	Singapore	Costa Rica
2nd	Switzerland	Qatar	Switzerland	U. S. A	Mexico
3rd	Ireland	Singapore	Ireland	Hong Kong	Colombia
	13th: Austria	*16th: Austria*	*20th: Austria*	*21st: Austria*	*43rd: Austria*

The *Table 14. Comparison of Rankings – Summary of the Analysis* shows that not only Austria, but also other European countries and North America, mainly focuses on economic growth and the increase in competitiveness, instead of the human capital, and the increase in the wellbeing of the individuals. That is why it was important to include the Happy Planet Index, so that it is seen that Austria should increase the focus on the reduction of the ecological footprint and sustainability so the best economies to examine are the Latin American ones.

Based on *Table 14.*, the Global Competitiveness index as mentioned previously is the combination of the GDI, GNI, HDI with an extension of a pillar considering innovation and technology within the country. When regarding the difference in the rankings of GDP, GNI, HDI and GCI, the ranking of the Global Competitiveness Index needs to be improved the most. The top three countries in the rankings are considered the most competitive economies. Each of those countries are different (e.g., culture, work ethic, capability) from Austria, however it is essential to examine those countries and enact the actions, policies and measures that are possible to be applied

in Austria or even modify the extant actions, policies and measures according to the economy of Austria.

The economic growth of a country as it can be seen in the previous chapters depends on several factors. Those economic sectors of Austria can be developed in order to increase the values within the indexes. Firstly, Austria is an aging population as a lot of countries within Europe which in the long-term will result in less workforce. In addition to this, Austria has a low retirement age which means that people can stop working earlier and can start living with a pension earlier. In order to prevent retiring earlier, the incentives should be reduced. Furthermore, the criteria for retirement should be tightened as well as trainings can be offered to seniors so that they are able to remain in the labor force longer (OECD, 2019b).

Secondly, the housing prices in Vienna have been increasing and are already really high. It is difficult to anticipate how much higher will they grow and for how long. The main reason for that is the supply of the housing in the city is restricted as there is not enough place to build houses. As Vienna is often mentioned as "the most livable city", the demand will not decrease. A possible action can be that the government starts to build subsidies houses in the surrounding areas to motivate the individuals to buy houses and move there (Prager, 2018).

The financial system of Austria should be improved as well as a stronger banking system needs to be established. As our population lives in the era of digitalization, technology is a key factor in almost every sector. Hong Kong SAR has the one of the best financial systems in the world and their four key focuses are on the technology, green finance, talent development and financial connectivity. Their aim also to ensure competitiveness in the finance sector around the world. A possible solution for Austria to innovate the finance sector, introduce and promote green financing and make the finance sector sustainable in long-term.

Without the human capital, the whole world would have not improved that is why the health of the individuals plays an important role. The health system of Austria is considered to be strong among the OECD countries. However, the Norway has higher share of individuals who are above the age 65 and still have lower hospital discharges and admissions. In order to lower the costs,

hospitals should cut down the unnecessary admissions that can be treated as primary care. Moreover, Norway is spending one of the highest shares of GDP on health within Europe which ensure the long-term care. One possible solution for Austria would be also to increase the % of GDP that is spent on the health system to ensure the long-term care for the ageing population (OECD, 2017c).

Regarding the risk factors that influence health and reduce the life expectancy of the population of Austria, reforms and restriction should be introduced. One possible measure can be the implementation of pricing and fiscal policies that address the high rates of smoking and high alcohol consumption. Another one is that the sales of the alcoholic drinks are restricted in several places such as the petrol stations. Moreover, policy reforms within the education institutions should be considered in order to increase the low vegetable and fruit consumption and the low physical activity among youngsters. A possible measure can be the introduction of P.E. classes every day to ensure that compulsory regular physical activity. To increase the vegetable and fruit consumption, institutions should reform the lunch menu at the cafeterias (OECD, 2017c).

In today's world, the competitive environment operates the economy. With the low trade openness and low digital skills, it takes just time until Austria would lag behind. A possible measurement can be that the enterprises are offering digital skill trainings for the employees or even for the students for free (in return the students are signing a contract that they will work after graduation at the company for a pre-specified time period. Moreover, with the reduction of time that it takes to administer businesses, the motivation to start a company would be increased as well. Singapore has one of the shortest periods of time of administering businesses and it attracts a lot of businesses and entrepreneurs. Of course, this is not the only reason that companies are operating to Singapore, however it is a factor that is included in the "benefits" of starting a business.

From the Happy Planet Index, the lowest ranking factor of Austria is the ecological footprint. This factor has decreased the rankings of several other European countries and the rankings of the United States as well. These countries are usually focusing on the economic growth in terms of productivity and income while the main goals of the highest-ranking countries of the HPI (mostly Latin American countries) are to protect the environment and the biodiversity of the

country. The first most important measure would be to identify the environmental limits of the country and then to design policies that ensure the restrictions. The ecological footprint measures the biocapacity of the world and if those limits are not complied with, it can lead to the degradation of the environment in the long term. Furthermore, the ecological footprint can be reduced by the creation of an ecological taxation system. This can encourage of the behavioral change and ensure that the full environmental costs are covered (Marks et al., 2006).

For adequate and long-term measures, actions and policies, all of the development indicators should be taken into account, as they are presenting different aspects. Governments should learn from and examine the measures that other, higher ranked countries have taken and are taking and applying. All of the governments know their countries; however, they should know more thoroughly the other countries as well to be able to enact the best measures and policies possible.

7. CONCLUSION

It has become clear that the analysis of the development indicators, even within one country, is very complex and it can be concluded that there are several factors that can influence a country's economy.

Firstly, the thesis starts with the chapter called *3. What is Development?* which explains the definitions of the indices used in the research and the methods that were used in the calculations of the indices. This chapter aims to provide a thorough analysis on the indicators in order to understand better what is behind the different levels of development. It can be concluded that the indicators use different methods and dimensions and combine different factors when they are considering development.

Secondly, the research paper has analyzed the rankings of Austria. It can be seen that the rankings of the development indicators are differing even if they are built up from each other (except for the Happy Planet Index: it does not use the GPD as a basis). In the chapter *4. Analysis of the Main Development Indicators of Austria*, the rankings are examined one-by-one and then in the section *4.6 Comparison of Rankings of Austria*, the rankings are compared to each other to investigate the reasons behind the differences in the rankings. The ranking of GDP per capita and the ranking of GNI per capita of Austria is among the top 20 countries which reflects that the country is highly relying on the productivity and income based economic growth. However, when different other factors are included the rankings of Austria is decreasing. This indicates that the health system, general health conditions or innovation and digital skills are behind of other countries and there is a room for effective measures and actions.

Thirdly, the research paper has also analyzed the top countries of the different indices for a more thorough analysis. The comparison of other countries is important as the paper is focusing on the improvements of the rankings. In the chapter *5. Comparison of Rankings of the Top Countries*, the values of the development indicators are analyzed over different time periods. With this examination through the visualization in diagrams, the years where boosts in the values were achieved can be followed. Moreover, the thesis considers the background information, why did the

boost happened and what policies have been introduced. With the relevant information, the research then compares the top three countries to Austria. These sub-chapters include the related findings and information of Austria and compares the analysis of Austria with the analysis of the top three countries. In this case, the aim is to examine what measures and actions have already been applied in the top countries for the issues that also occurs in Austria.

Furthermore, in the chapter *6. Possible Actions and Measures Based on the Analysis*, the whole analysis comes together as the policies that are recommended are based on the policies that have been introduced and the measures and activities that have been taken. The most problematic sectors are mentioned – according to the previous analysis – in that chapter and relevant suggestions are made.

Unfortunately, there were some limitations. In some cases, the rankings did not consist of all of the countries around the world, as well as there were some data on countries and indices that has not been updated, so that the latest data might be from the previous years. Moreover, it was difficult to find adequate reports on the countries due to language barriers.

All-in-all, the thorough analysis and understanding of the economy of Austria and the examination of the policies and measurements of top countries aims to tackle the different issues and drawbacks that can be regulated in order to achieve development. Every country is different; however, this research aims to provide a method how the analysis of the different development indicators for a country can be carried out and how the rankings of that economy can be improved. This method can be used in other countries as well such as Hungary to develop the rankings so all-in-all the economy.

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