

# Academic Attractiveness of Countries to Students

*Explaining and Measuring a Countries' Academic X Factor*

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## Abstract

Throughout history the epicentre of intellectual culture has always been dynamic. In modern history we see this trend continuing with the move from the scientific hegemony of Germany to the USA. In the contemporary globalised world we see these dynamics also reflected in the mobility patterns of international students around the world. A closer look shows that some countries are attracting more students to their higher education systems than other, which means that some countries are comparatively more academically attractive to students. As not much is known about what it is that makes these countries academically attractive, the aim of this thesis is to explore this topic and by doing so contribute to the understanding of the academic attractiveness of countries on a global level.

To find a theoretical explanation for what it is that makes countries academically attractive, first the concept of academic attractiveness is discussed. In this discussion the academic attractiveness of countries is connected to the overarching concept of “civilization attraction”. From this the basic characteristics of academically attractive countries are deduced. It is also argued that countries can have a political, cultural and economical approach to their academic attractiveness. To explain what it is that makes countries academically attractive, two theories that try to explain the globalising world in general, are used. The world-systems theory suggests economical and political factors that make countries academically attractive. In addition to these factors, the world-polity theory suggests sociological factors, which relate to a country’s participation in the (science) world culture, that contribute to the academic attractiveness of a country.

Based on the explanations suggested by the two theories, a model has been constructed, operationalised and measured. This model consists of five pillars (economical, political, leading role, world culture and perception) and 13 factors. For these factors, 11 (quantitative) indicators have been selected. The model has been tested on a sample of 22 high income countries (all members of the OECD) by using 10-point scales and statistical tests. For the statistical tests the inbound foreign students have been used as the outcome of academic attractiveness, and thus as dependent variable. The model suggests that the USA is the academically the most attractive country. The statistical tests show that the model as a whole has a high correlation to the number of inbound foreign students. The tests also show that the included factors (and indicators) are not equally correlating to the dependent variable. For this reason it has been concluded that the model needs additional data to be tested to its fullest extent.

**Keywords:** Academic attractiveness countries, international student mobility, global higher education market.

## **Preface**

In the past two years many different aspects of the world of higher education have been brought to my attention. Lectures and discussion went from pedagogy to the cybernetics of academic organisations. When it came to choosing a topic to focus on in a thesis I decided to use these different insides and combine them with my personal experience with studying in five different countries. This ultimately led me to the topic of academic attractiveness of countries.

Besides this master program being an invaluable academic experience, it was also in many ways a very valuable personal experience. This thesis symbolizes the end of this very exciting stage in my life. Therefore, I would like to use this opportunity to thank the organizations and people who made this possible.

To start I would like to thank the Higher Education Development Association (HEDDA) first of all for providing the European Master in Higher Education and secondly for awarding me with the James Taylor scholarship. I am equally grateful to the VSB foundation in the Netherlands for their contribution in making this experience possible.

Next, I want to express my appreciation to Leon Cremonini and Dominik Antonowicz for their valuable comments in the very early stages of this thesis. I am also grateful to Professor Peter Maassen for allowing me to take a slightly different path in the location in which I wrote my thesis. In this respect I especially would like to thank the School of Management of the University of Bath for accepting me as a visiting student. However, all this would not have become if it was not for the willingness, for which I am especially grateful, of Professor Jeroen Huisman to supervise my thesis. It is because of his willingness and very valuable as well as capable supervision that allowed me to conclude this master program with a thesis of which I am proud. In this regard I would also like to thank Mari Elken for her important share in the supervision of my thesis.

On a more personal note I would like to thank my classmates of the HEEM 2010 class. In particular I would like to thank Felipe and Jelena for the time spend together which resulted in all those many 'wonderful-wonderful' memories. I sincerely hope there are many more to come. As always I also would like to thank Tom, my sister, my brother and my parents for their unconditional and never-ending support in all my endeavours.

Thanks!

Renze Kolster

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## **Chapter 1: Introduction**

In this chapter I will introduce the topic of this thesis in more detail. To do so, I will begin with the background and the context of the study. This is followed by the rationale to undertake this study, the academic and practical relevance, the research problem and questions, and finally the research design and limitations. To conclude this chapter I will give an overview of the content of this thesis and the subsequent chapters.

### **1.1 Background and context of the study**

Amongst scholars in the field of higher education there seems to be a widespread understanding that higher education has increasingly become a global market. In this global market there is an increase in competition for students and academics. As an observer of this phenomenon, my proposition is that this competition used to be primarily between higher education institutions (HEIs), but has now entered a stage in which nation-states are increasingly becoming active promoters, or perhaps better marketers, to attract many and/or the best students and academics to their higher education systems. This proposition has guided my initial thought process, which led to the topic of this thesis.

Given that the international mobility patterns are far from equally divided between all the universities in the world, there can be no doubt that some universities are perceived as more attractive than other universities. The attractiveness is perhaps a reflection of the supposed prestige, traditional setting (i.e. long institutional history), a long list of famous alumni and surely also of (educational and research) quality. The institutions which come to mind in this respect are for example Harvard, Oxford, Cambridge and so on. It could be assumed that these institutions (amongst other factors) have a significant impact on how the academic systems, in which these institutions function, are perceived. Assuming that this spillover effect influences the perception, it can be hypothesised that in the eyes of the (prospective, domestic and/or international) students, the United States of America (USA) and the United Kingdom (UK) are likely to be regarded as the most attractive study destinations. Looking exclusively at the contemporary mobility figures we have evidence that seems to support this hypothesis. However, as I will argue, academic attractiveness is a much broader concept that goes beyond mere perception and simple indicators (e.g. just mobility figures). The aim of

this thesis is to take the first steps towards the development of a comprehensive model that can help us understand, explain and measure the academic attractiveness of countries.

Although the above summary of the initial thought process is not exhaustive, it does show the direction of the thesis and context it will be set in. Moreover, in this thesis the focus is on the student perspective of the academic attractiveness of countries. This means that the attractiveness of countries to (international) scholars is not the main interest of this study. The decision to exclude academics from the analysis was made due to constraints in available time and length of this thesis. Academic attractiveness of countries will be analysed at the level of the nation-states themselves<sup>1</sup>. This consequently places the topic in a broader context, which is characterised by concepts and paradigms such as globalisation, internationalisation, marketisation, knowledge economy/society, rankings, academic capitalism and so on. This conceptual context will be elaborated on in Chapter Two.

## **1.2 Rationale and relevance**

As a broad rationale, this thesis tries to increase our general understanding of the (emerging) global higher education dynamics. To be more specific, I have chosen this topic because it offers an opportunity to discuss a wide variety of relevant aspects, most of which are very present in the contemporary debates in the field of higher education. Some of these aspects are: globalisation in relation to higher education, internationalisation of higher education systems and international mobility of students. As these aspects are relatively new in research in the context of higher education, it is certainly of academic interest to further scrutinize them. This is also the case for the specific topic of this thesis. To be more precise, there are few studies that take the academic attractiveness of countries as their focal point. To my knowledge this is also the first study that tries to explain academic attractiveness of countries from a theoretical point of view. This country perspective and theoretical orientation are the main differences with the already established (international) student choice models.

Henceforth, the aim of this thesis is to contribute to the knowledge and understanding of academic attractiveness of countries and does so by exploring this topic. The exploratory nature of this study is reflected in the theoretical model and the way it is operationalised. Both are not to be seen as complete and final measurements of academic attractiveness, but rather

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<sup>1</sup> In contrast to the individual (i.e. student) level.

as a first attempt to explore the academic attractiveness of countries from a theoretical as well as empirical perspective. Since this is an exploratory study, I have chosen to include a relatively large sample of countries. This is in contrast to the existing studies on the same subject which have focussed mainly on a small sample of countries from the same region.

To contribute to academic knowledge is the main aim of this thesis. The study, however, also offers insight in more practical matters. For example, countries might be interested in the outcomes of the study, if they are intending to (for example):

- Internationalise their higher education system
- Influence the outflow of students (i.e. the so-called “brain drain”)
- Influence the inflow of students (i.e. the so-called “brain gain”)
- Regulate mobility patterns (i.e. the so-called “brain circulation”)

### **1.3 Research problem and questions**

The topic as described in the beginning of this chapter is very broad. This research is, however, bound to a time frame and has size limitations. For this reason, several choices have been made to limit the scope. These choices are reflected in the research problem and the related research questions.

The research problem is:

- How can we better understand the academic attractiveness of countries to students?

The research questions are:

1. What is the contextual background of academic attractiveness of countries to students?
2. What is academic attractiveness of countries to students and why do countries want to be this?
3. What makes a country academically attractive to students and how can this be explained?
4. How can academic attractiveness of countries to students be measured?

The research problem indicates that a substantial theoretical underpinning is needed to tackle the problem and to answer the research questions. This will be done by using two theories

related to globalisation, namely: world-systems theory and world-polity theory. These theories will be discussed in Chapter Three.

#### **1.4 Research design and limitations**

The ontological position found in this research is based on foundationalism, while the epistemology used is the critical realist approach (Grix, 2004). These approaches allow for the academic attractiveness of countries to be measured in a quantitative way. The unit of analysis for this thesis are countries, or better “nation-states”. For the measurement of academic attractiveness 22 nation-states have been included in the sample. For empirical data, existing database sources, such as those from the OECD, are used. The limitations of this research are related to the exploratory nature, in terms of the used theoretical model and the operationalisation, of this study. For this reason the research outcomes should be seen as a step towards a complete model and measurement of academic attractiveness. The methodological considerations are discussed in full in Chapter Four.

#### **1.5 Overview of the thesis**

This thesis has, including this introduction, six chapters. The first research question is answered in Chapter Two. It does so by discussing the contextual background and relevant literature of this thesis. This sets the stage for the following chapters, in which the remaining research questions are answered. In Chapter Three the theoretical model will be developed and the second and third research questions will be answered. As said, this model builds upon two theories in globalisation. Based on this discussion a model to measure academic attractiveness is developed. Next, in Chapter Four, the fourth research question is answered by the translation of the theoretical model in a research design. The research design includes the methodological considerations, the sample selection, the operationalisation of the theoretical model, the conceptualisation, method of analysis, and the limitations of the research. In the conclusion of this chapter the theoretical model will be compared with two existing models to measure academic attractiveness. Using the research design the academic attractiveness will be measured for the selected countries in Chapter Five. This leaves Chapter Six for the conclusions. In this conclusion the four research questions, and by doing so the initial research problem will be summarised and reflected upon. The same will be done for the outcomes of the measurement and the used theories. To conclude this thesis research aspects which need and can be further researched are identified.

## Chapter 2: Contextual background

A country is academically attractive if it is successful in attracting the brightest and a large number of international and domestic academics, as well as international and domestic students, to their national higher education system<sup>2</sup> (based on Cremonini & Antonowicz, 2009). Moreover, academic attractiveness of countries relates to various aspects. Not only do contemporary influences, such as globalisation and, in the case of European universities, the so-called Bologna process, play a role, academic attractiveness is also related to the academic history and tradition of a country. Therefore, to sketch a complete contextual background, this chapter has been divided in three broad areas of interest. These areas are: (1) the history, (2) the global and supra-national levels and (3) the national, institutional and individual levels. It should be noted that most attention is given to aspects directly related to the academic attractiveness of countries.

### 2.1 The history

Universities and churches are the oldest surviving societal institutions in the world (Wittrock, 1993). This means that some universities were around before the establishment of, what we now know as, (modern) nation-states (Scott, 1998). Universities have, nonetheless, been in close connection with the church and the host state (Rüegg, 1992). For both authorities the universities provided human capital (e.g. the bishops and the administrative elites). It must be stressed, though, that the medieval universities were in principal and to a certain degree autonomous institutions, which were not explicitly connected to a nation. It can therefore be argued that seeing universities as intrinsically tied to a country is something relatively new in the long history of universities. This process, in which nation-states became increasingly important for universities and vice versa, will be discussed in this section.

In the 18<sup>th</sup> century, under influence of the Enlightenment, universities were drastically reformed (Ben-David, 1971a). In Prussia, new meaning was given to the university by changing the role they were to play in and for the society. Moreover, after Prussia was defeated by Napoleon, it decided to compensate for its apparent lack of military power, by an increase in spiritual strength. This made the university an instrument of cultural renewal (Anderson, 2004). The role the university was to play in Prussia was: training of bureaucrats

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<sup>2</sup> The concept of academic attractiveness will be elaborated on in Chapter Three.

and professionals, generate revenue for the state and, indeed, show off Prussian intellect (Turner, 1971). In this context reference must be made to Wilhelm von Humboldt, because it is claimed that his ideas changed the universities and made science as the profession as we now know it to be<sup>3</sup>. Hence, the modern university was created.

This early modern university, as implemented in 19<sup>th</sup> century Germany, had several quintessential features: autonomy from the state (and church), faculty/chair structure, academic self governance, and academic freedom. Furthermore, Humboldt argued that: “the state must understand that intellectual work will go on infinitely better if it does not intrude” (Humboldt, 1970: 244). In this setting, Germany became the world centre for advancements in philosophy and research (Ben-David, 1971a).

It is also at this point in history that Germany became an attractive country to study in. This is illustrated by the inflow of around 10,000 American students between 1815 and 1914 (most of them between 1870 and 1895) (Turner, 2001: 293). In 1920, 44% of the publications in natural science were published in German. This can be seen as an indication that German became the *lingua franca* of the scientific world (Darquennes & Nelde, 2006; Altbach, 2004). The successful German model also spread to other countries, where the model was fitted into the national context (Anderson, 2004; Shils & Roberts, 2004).

Amongst these followers was the USA. With many American students returning home from studying in Germany, some set out to change the higher education system in the USA. Even though, the reformers in the USA thought they were following the German model closely, the undergraduate degree remained to be based on the tradition of liberal arts education<sup>4</sup>. It was the graduate degree that became to resemble the German model (Ben-David, 1971b; Kerr, 1995).

This two-tier system is just one of the differences between the German and the American model. Other difference in the American system are: the department structure (vis-à-vis the chair structure), mixture of applied and basic research, stricter focus on utility of the university as a whole, stronger connection to the (local) society, and strengthened role for

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<sup>3</sup> Although Humboldt is usually named in the this context, his actually influence is to some extend a myth (Anderson, 2004 & Turner, 2001)

<sup>4</sup> Which in turn is said to be based on the ideas of John Henry Newman (Ben-David, 1971b, Kerr, 1995)

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administrators (Ben-David, 1971b; Shils & Roberts, 2004). As a result of these differences scientists in the USA had more career opportunities, allowed the incorporation of more specialisations (also more soft and applied fields of research), and students were not exclusively educated to become researchers, but also professionals (Geiger, 1985).

These differences and especially the department structure caused the USA to overtake Germany's scientific hegemony (Geiger, 1985; Ben-David, 1971a). To be more precise, Ben-David (1971b: 159) argues that: "By the thirties and perhaps even before, the difference reached a stage where in some fields some European scientists were no longer able to compete effectively with their American counterparts".

From 1930 onwards, the position of the USA as the world leader in science increased. Firstly, this was triggered by the Second World War and the need for technological advancement in science useful for the military. Secondly, it were the above mentioned organisational structures that allowed the higher education system of the USA to absorb the increased demand of students in higher education (i.e. the massification) with more ease than their European counterparts (Turner, 2001). Thirdly, the universities in the USA were, because of their relative distance of the state, more used and inclined to seek funding from private sources (as compared to continental European universities). This allowed the system not only to be maintained but also to expand in ways which were not (financially) possible for continental European universities.

It is thus clear that the USA took over the dominant position of Germany in science. The success of the American model contributed also to the switch in the *lingua franca* of the scientific world from German to English<sup>5</sup>. As an overall result of this is that the USA was and still is able to attract more foreign students than any other country (see Section 2.2.2). This brief overview of academic history shows that scientific hegemony is not static, but rather dynamic. This also means that the contemporary scientific hegemony of the USA can be bypassed by some other country (or region)<sup>6</sup>.

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<sup>5</sup> In 1996 the share of the English in publications in the natural sciences was 90.7%. By this time the share of German had decreased to a marginal 1.2% (Darquennes & Nelde, 2006).

<sup>6</sup> This, of course, depends on which indicators (e.g. total number of graduates and scientific output) are used to determine scientific hegemony.

## **2.2 The global and supra-national**

In this section attention is given to the global and supra-national arena in which higher education has an increasing presence. This is shown by the organisations on both levels that are influencing higher education. As a result the global education market is becoming more institutionalised. What can also be witnessed is the internationalisation of elements of higher education systems that in the previous era were solely of national concern. On a global level this shows in the international ranking of (world class) universities. On a more supra-national level this is reflected in *inter alia* the cross-border accreditation of programmes and HEIs as well as in the cross-border recognition of degrees. This section will elaborate on these influences and discourses on the global and supra-national levels.

### **2.2.1 The global organisations**

From a global governance perspective there are three organisations which can be seen as actors in the realm of the global higher education. These organisations are: the World Trade Organization and its General Agreement on Trade in Services (WTO/GATS), the Organisation for Economic Co-operation and Development (OECD) and the Nations Educational, Scientific and Cultural Organization (UNESCO). It should be noted that for the actual academic attractiveness of a country only the WTO/GATS has a distinct impact. In this respect the OECD can be seen as a facilitator, whereas the UNESCO has mainly a supporting role.

The very basic of the WTO is to regulate and enhance the tariffs and trade between its member countries. The GATS does the same by offering guidelines that govern the international trade and investment in the services sectors (Barrow et al., 2003: ch. 1). Amongst these services education is recognized as an internationally tradable sector, and it has higher education as one of its sub-sectors (De Prado Yepe, 2006). Although controversial, this consequently makes higher education a tradable and thus commercial service (*vis-à-vis* a public service) (see e.g.: Clift, 1999). In addition, neither higher education institutions nor (higher) education ministries were represented in the negotiations that lead to the agreement (Pillay et al., 2003).

The OECD currently has 30 member states. These member states are the leading economical powers in the world. They have organised themselves in the OECD to: support sustainable



economic growth, boost employment, raise living standards, maintain financial stability, assist other countries' economic development, and contribute to growth in world trade<sup>7</sup>. The OECD also provides and collects comparable data on its member states. In this role it also publishes reports on higher education (i.e. the Education at a Glance series) and organises higher education reviews in countries.

UNESCO is an agency of the United Nations and was created in 1945. Its mission is: “to contribute to the building of peace, the eradication of poverty, sustainable development and intercultural dialogue through education, the sciences, culture, communication and information”<sup>8</sup>. The influence of UNESCO on higher education worldwide is, however, rather limited. This is due to its limited resources (budget & human resources) and the concentration of attention on primary and secondary education (De Prado Yepe, 2006). UNESCO has, on the other hand, organized several conferences in which global issues in higher education have been discussed. This includes issues such as: consumer protection in cross-border higher education, quality assurance, accreditation and the recognition of qualifications in higher education (Vlk, 2006). Furthermore, UNESCO publishes the annual Global Education Digest, in which global statistics on education are gathered and analysed.

### **2.2.2 Global statistics and rankings**

In this subsection the global higher education market shall be visualized with the help of statistics. Firstly, I will elaborate on the global higher education market, secondly I will give an overview of the international student mobility, lastly I will elaborate on the world-wide league tables and ranking of universities.

In 1995 the value of the global tertiary education market was estimated around \$27 billion, in 1999 around \$30 billion, in 2002 at more than \$35 billion, and in 2004 at \$60 billion (Pillay et al., 2003; Larsen et al, 2002; Barrow et al., 2003: ch. 1; and Naidoo, 2009). Trade in the global tertiary education market is not exclusively made up by students travelling abroad for education (i.e. consumption abroad), but also by cross-border supply, commercial presence, and presence of natural persons<sup>9</sup>. Although these statistics are perhaps not fully reliable, they do show that the global education market is a multi-billion industry. In fact, it is estimated

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<sup>7</sup> For a full discussion see the mission statement on [www.oecd.org](http://www.oecd.org) (accessed on 12-04-2010)

<sup>8</sup> <http://www.unesco.org/new/en/unesco/about-us/introducing-unesco/> (accessed on 23-02-2010)

<sup>9</sup> These four modes of delivery/supply in education services are defined by the GATS (Vlk, 2006; Naidoo, 2009)

that education services in Australia, New Zealand and the USA are respectively the third, fourth and fifth largest service sector export (Vincent-Lancrin, 2004; Naidoo, 2009).

The statistics above suggest that the international student mobility must have grown exponentially over the last decade. Statistics indeed show just that: in 1955 around 150.000 students were studying abroad, in 1990 more than 990,000, in 1995, 1.5 million and in 2004 2.7 million (Naidoo, 2009). The latest statistics indicate that worldwide there are now 3 million student enrolled in tertiary education abroad (OECD, 2009: 312). Quintessential for this thesis is the fact that international student mobility is not equally distributed among countries. The countries that are receiving more international students can be considered more academically attractive than other countries. To look at one indicator of this attractiveness we see that in 2007 the USA was, in absolute numbers, attracting the largest share, i.e. 20%, of these 3 million students. The USA was respectively followed by the United Kingdom (12%), Germany (9%) and France (8%) (OECD, 2009: 313). Another vital aspect with regard to this thesis is that the segmentation is not constant. It is as, described in Section 2.1, dynamic. For example, the share of the USA in the international education market was in 2000, 25%, vis-à-vis 20% in 2007 (OECD, 2009: 314). This consequently means that some countries were able to attract more students than they did in the previous period (e.g. New Zealand from a 0.4% to a 2.1% market share).

There are two global university rankings which have the most influence (Van der Wende, 2008). These are the: “The Academic Ranking of World Universities” established by the Shanghai Jiao Tong University (SJTU) in 2003 and “Times Higher Education - QS World University Rankings” established by the Times Higher Education Supplement (THE) in 2004. Both rankings differ with respect to their methodology and the use of indicators, i.e. the former stresses research output while the latter stresses institutional reputation (Fowler, 2009; Thakur, 2007). Also in terms of their outcomes they differ. If we take, for example, the top 500 ranking from the 2008 SJTU and the THE rankings, we see that the SJTU ranked 503 institutions<sup>10</sup> from 39 countries whereas the THE ranked 500 institutions from 51 countries. Both rankings have received much criticism. This criticism was directed at the usage of disputed indicators and methodology, the scale on which the rankings assume homogeneity within HEIs themselves as well the homogeneity of HEIs in a global scale, and the bias

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<sup>10</sup> Three extra institutions were ranked because they scored the same.

towards research performances (leaving out teaching) (Van der Wende, 2008). Despite these very valid critical notes, the global rankings do have an impact on (international [post] graduate) students and policy makers at all levels (Fowler, 2009; Van der Wende, 2008). In Table 2.1 an overview is given of countries with 10 or more ranked institutions. Also shown is the market share of these countries in hosting foreign students in their tertiary education system<sup>11</sup>.

**Table 2.1: Number of ranked HEIs per country and their foreign students market share**

	<b>SJTU 2008 (1)</b>	<b>THE 2008 (1)</b>	<b>Market share 2000 (in %) (2)</b>	<b>Market share 2007 (in %) (2)</b>
Australia	15	22	5.6	7.0
Canada	21	20	5.0	4.4
China	18	12	n/a	n/a
France	23	23	7.2	8.2
Germany	40	42	9.8	8.6
Italy	22	14	1.3	1.9
Japan	31	30	3.5	4.2
Korea	8	10	0.2	1.1
Netherlands	12	11	0.7	1.3
Sweden	11	9	1.3	1.4
UK	42	50	11.7	11.6
USA	159	106	25.0	19.7
<b>TOTAL</b>	<b>402</b>	<b>349</b>	<b>71.3</b>	<b>69.4</b>
1: 2008 rankings of SJTU and THE. Included are country with $\geq 10$ ranked HEIs				
2: Market share of foreign students in tertiary education. Source: OECD, 2009: 314/Table C2.7				

The simple analysis in Table 2.1, firstly, shows that both global league tables obviously make use of different indicators and methods and thus are arriving at dissimilar outcomes. The largest discrepancy is in the amount of ranked universities from the USA. Secondly, the table shows the market share of the listed countries. From this we can conclude that there seems to be a correlation between the number of ranked institutions and the market share of a country. However, the correlation is far from equally divided. Australia, for example, had in 2007 a market share of 7% and 15/22 institutions ranked, whereas Canada had 21/20 institutions ranked but only a market share of 4.4%. These disparities between countries suggest that the number of ranked institutions in a country do not explain the whole attraction. This is thus a strong argument to include more indicators to explain and measure the academic attractiveness of countries.

<sup>11</sup> The market share is the amount of foreign students hosted by a country compared to the total population of foreign students in the world.

### 2.2.3 The supra-national level

On a supra-national level and in a European context the organisation which has a growing influence on higher education is the European Union (EU). This influence is largely based on the Lisbon strategy. This strategy has implications for the economy and the knowledge society of the EU as a whole. The influence of the EU also shows in the Bologna process<sup>12</sup>. It should, however, be stressed that the Bologna process goes beyond the member states of the EU. Furthermore, the Bologna process was initiated in 1999 without the inclusion of the EU as a participating party<sup>13</sup>.

The Bologna process aims “to construct a single European Higher Education Area (EHEA) by 2010 through increased compatibility and comparability of higher education systems, in order to facilitate internal mobility for students, graduates and higher education institution staff members, but also to make European higher education more recognisable and attractive to students and scholars from outside Europe” (Westerheiden et al, 2008: 53). In this process the cross-border accreditation of programmes and HEIs is also supported and stimulated. Because this will have an influence on the recognition of foreign degrees, the mobility of (European) students is also likely to be facilitated better.

With respect to the academic attractiveness of European countries reference need to be made to the aim to promote the attractiveness of the EHEA as a whole<sup>14</sup>. This suggests that being attractive to international students and academics is an issue for countries. Of special influence of this goal is the EU, which has set up programs to support the attraction and promotion of the EHEA. Prime example of this is the Erasmus Mundus program which offers scholarships to students from in and outside the EU<sup>15</sup>.

### 2.3 The national, institutional and individual

We now turn our attention away from the global and supra-national level and focus on the levels below, i.e. the national, institutional and the individual. The developments on these

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<sup>12</sup> Similar processes across the world are: ENLACES in Latin America, development of a harmonization strategy in the African Union, and the Brisbane Communiqué initiative in the Asia-Pacific region (Altbach et al, 2009)

<sup>13</sup> Currently there are 47 countries in Europe which are participating in this process.

<sup>14</sup> This “9<sup>th</sup> action” was added to the Bologna process, as a result of the Prague conference in 2001.

<sup>15</sup> To stimulate the short-term mobility of students within the EU there is also the Erasmus programme. Because of the short term nature and the limits in the available HEIs for students to choose from, this form of (short term) mobility has a limited correlation to the concept of academic attractiveness of countries.

levels can be seen (to some extent) as the more practical reflections of the dynamics on the global and supra-national levels. Of relevance in this section are also the research insights on these analytical levels that relate to the topic of this thesis.

### **2.3.1 National**

In this subsection the general trends on national levels will be described. Focal points are the developed countries in the Western world. The first trend to be discussed is the change in governance of the higher education systems. Secondly, the internationalisation of higher education is discussed. Next will be (a selection of) national initiatives to improve their academic attractiveness. To conclude this subsection I will elaborate on the research insights on countries' academic attractiveness.

Over the course of the last decades, higher education systems worldwide have been going through substantial changes. Most important in this respect are the massification, the decline of public funding and the expectation of increased contribution of higher education to the national economies (i.e. the knowledge economy) (Slaughter & Leslie, 1997). Consequently, the HEIs became too important to have self-governance (Maassen & Cloete, 2002; Slaughter & Leslie, 1997). As a result new modes of governance were introduced in the sector, which gave either the state and/or the institutional management more power. Henceforth, the state steering in the Western world can be qualified as either the “corporate-pluralist state” or as the “supermarket state” (Olsen, 1998; Gornitzka, 1999; Gornitzka & Maassen, 2000). To be complete, this governance switch made higher education resemble an industry (Gumport, 2000). As in an industry, higher education is expected to produce outputs (i.e. in education, research and service) and do so on a competitive basis. It is in light of these changes that the trends presented in this section need to be seen.

Following Altbach (1994), internationalisation refers here to the acts of nation-states to equip their higher education system with the tools (i.e. policies) to act in a world in which the global dimension has become of increased importance. Countries have set up policies to stimulate institutions to internationalise their curriculum and research, attract foreign students and academics, improve their international reputation and visibility, and commence cooperation and competition with foreign counterparts (Altbach et al, 2009; Onderwijsraad, 2005). This,

of course, relates to the discussion on brain gain, brain drain and brain circulation (see e.g. Teichler & Yagci, 2009).

In addition to these policies, many countries have set up support agencies. These agencies are, for example, the British council, The German Academic Exchange Service (DAAD), Netherlands Organization for International Cooperation in Higher Education (NUFFIC) and National Agency for Promoting French Higher Education Abroad (Campusfrance.org). These agencies are actively promoting the higher education system of their home countries abroad. To do so, branch offices have been set up in key areas abroad (i.e. places with a high potential of international students). These agencies are effectively involved in making their national higher education system (and also their country) into a recognisable brand. These activities, which remind us of common practices in the private market, can indeed be related to the concept of “academic capitalism” (Slaughter & Leslie, 1997).

Other initiatives where countries are trying to make their higher education system more attractive can (for example) be found in China, Germany, and Finland. In China the government has two key initiatives called the “211 Project” and “985 Project”. The former aims to make about 100 universities to excel in key disciplines. The latter is set up to help Chinese HEIs attain world class status. Germany has the excellence initiative, which aims to make Germany an attractive destination for research. It does so by promoting German research and improving the quality of German universities<sup>16</sup>. Finland is trying to create world class universities by merging several smaller (regional) universities into more comprehensive universities (Dobson, 2008). These examples indicate that countries are indeed trying to find ways to make their HEIs be among the world class and by doing so make their HEIs more attractive towards (world class) international students.

The research related to academic attractiveness of countries is mostly related to so called push and pull factors (McMahon, 1992). These factors predict how “unattractive” (push) and how “attractive” (pull) a country is for (international) students. Established (i.e. found to be of significant influence) push factors are: economic weakness, level of involvement in global economic, level of emphasis on education, level of available education, and level of political

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<sup>16</sup> See: [http://www.dfg.de/en/research\\_funding/programmes/excellence\\_initiative/index.html](http://www.dfg.de/en/research_funding/programmes/excellence_initiative/index.html) (accessed on 01-03-2010)

stability (positive relationship). On the pull side the following factors have been found to be significant: level on international trade (with sending country), level of economic power, and level of tuition fee (as compared to other countries) (Naidoo, 2007). Other findings are that foreign aid and colonial ties (and consequently often linguistic ties) are respectively not and have become less significant pull factors (McMahon, 1992; Chen & Barnett, 2000). Even though these are the factors which are proved to be of influence, it can be assumed there are many more factors of significant influence. These can be factors like, for example, the perceived reputation and perceived quality (see Section 2.3.3). A framework in which many push and pull factors are included for a European context can be found in De Wit et. al, 2008 (referenced in Fowler, 2009). Another model to measure the academic attractiveness of countries is developed by Cremonini and Antonowicz (2009). This model uses (short and long term) mobility figures from both students and scholars to measure which country is academically most popular/attractive. Their research, in which five countries were included, concludes that in terms of academic attractiveness Germany and Italy seem relatively behind, the Netherlands is mid-way and that France and the UK are leading.

### **2.3.2 Institutional**

Academic attractiveness of countries cannot be seen outside the context of the HEIs that make up the higher education system. Therefore, issues on the national level reflect or are based on the institutional level. The contemporary pressures that HEIs (in the Western-world) face are related to globalisation, internationalisation, declining public funding, changed institutional governance, and increased diversity of student population (Maassen & Cloete, 2002; Scott, 1998). It can be claimed that these pressures are interrelated. For example: the decline in public funding can be a reason for HEIs to internationalise their academic programmes. On institutional level this would have consequences for the institutional governance and the overall student population. These two aspects will be discussed in this section.

As said earlier, in a Western context, higher education can be seen as a market and in this market HEIs are vital actors. This situation was, however, in the time that higher education was exclusively for an elite few, quite different. In this period the academics had the dominating power in the HEIs. However, due to the many changes in the higher education landscape, the institutional management, the government and the stakeholders from the market gained in influence and power. These changes triggered the institutional governance

structures within universities to be altered (De Boer et al., 2005). It is from this that the concept of how the modern university is to perform well in the market situation has emerged. A key concept of this is the idea of an “entrepreneurial university” and is described by Clark (1998: 4) as: “An entrepreneurial university, on its own, actively seeks to innovate in how it goes about its business. It seeks to work out a substantial shift in organizational character so as to arrive at a more promising posture for the future. Entrepreneurial universities seek to become “stand-up” universities that are significant actors on their own terms. Institutional entrepreneurship can be seen as both process and outcome.”

Although, some characteristics of the “entrepreneurial university” are likely to be found in most universities it would go too far to call every university entrepreneurial (Shattock, 2005). It does, however, imply that universities are facing similar pressures (i.e. globalisation, marketisation, etc.) and that universities have a choice in how to cope. This reasoning also applies to the extent to which universities are “international” (Scott, 1998: 122).

Moreover, internationalisation does not only mean a change in the strategic governance of the university, it should also mean a change in the daily operations to account for the increased diversity of the student population. The massification of higher education brought more non-traditional student cohorts to the HEIs, and now internationalisation is doing the same. More specifically, international students have different academic / non-Western intellectual traditions, learning attitudes, and academic expectations (Scott, 1998; Kemper, 2000).

### **2.3.3 Individual**

What is of essence at the individual level are the motivations and reasons of students to (want to) attain a study outside of the home country. Several scholars have tried to make student choice models for this particular group, however these models are seldom empirically tested<sup>17</sup>. This makes these student choice models less relevant for this thesis and are therefore also not discussed in depth. Nonetheless, what most of these student choice models for international students have in common is their usage (to some extent of) of the push and pull concept. This concept can therefore not only be applied to countries (see also Section 2.3.1) but also to individuals. Mazzarol and Soutar (2002) constructed and empirically tested such a push and pull model for international students. They propose that international students make

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<sup>17</sup> See Fowler (2009) for an extensive discussion on these particular student choice models.



three subsequent choices: decide to study abroad, select a host country, and select a host institution. Their research shows that the most important motivation, in the first step, was that a study abroad was considered better than a local one, and secondly students believed they would gain a better understanding of Western culture. In the second step, it was found that “the host country must have a reputation for quality education services, its qualifications must be recognised by the source countries and the host country must have a high international profile and make it easy for student to find out about its education services.” (Mazzarol and Soutar, 2002: 84-85). Other factors that were found to be important for the choice of country were: the reputation of the institutions (this proves that the reputation of institutions can have a spillover effect on the overall attractiveness of a country), job opportunities, safe environment, established population of overseas students, and an attractive learning environment. The factors that were found most important in the choice for institutions are: recognition of prior qualifications, the quality and reputation of the institution, the recognition of the institution’s qualifications in their own country, the international strategic alliances the institutions had, the quality of the institution’s staff, its alumni base and its existing international student population (Mazzarol and Soutar, 2002: 87). Another finding of the study by Mazzarol and Soutar (2002) is that students from different countries have different preferences, motivations and reasons to, firstly, choose to study aboard, secondly, select a particular country, and thirdly select a particular institution. In reflection on this research it must be noted that this study had a limited sample which consisted of students from four countries that all choose to study in Australia. As a result, the research outcomes cannot be, with scientific certainty, generalised to students from other countries.

## **2.4 Conclusion**

This chapter discussed many and different aspects of academic attractiveness of countries, by doing so it has clarified the contextual background and has given a literature review on the relevant aspects. The intention of this conclusion is to bring these aspects together and reflect on their implications for this thesis.

For this thesis the single most important development in higher education on all the described levels is the increased focus on internationalisation. Examples of this focus we see reflected in the efforts of the actors (i.e. nation-states and HEIs) to cope with the resulting challenges, such as increased competition for (the brightest) international students. Since these

international students (in many cases) are or have become full-fee-paying students, it can indeed be said that attracting international student has become 'more trade than aid' in most host countries (Van Damme, 2001).

This development does not stand on its own, as it has a historical path and more importantly it can be placed in a wider context of increasing interconnectedness of countries worldwide at many, if not all, levels. This process is indeed what we came to know as globalisation. As this is the overarching processes, globalisation theories shall be used to try to explain academic attractiveness (see Chapter Three). By doing so the intention is to come to a model to explain and measure the academic attractiveness of countries to students.

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## **Chapter 3: The theory behind academic attractiveness**

In this chapter the theoretical context of academic attractiveness will be discussed in depth. To be more precise, this chapter will firstly try to find, from a theoretical point of view, what an academic attractive country is and what characteristics a country should, hypothetically, have for it to be academically attractive. Secondly, again from a theoretical perspective, it will discuss why countries want to be attractive. Thirdly, it will go on to the question how the attractiveness can be explained. To do so, two theories that try to explain globalisation are used. The conclusion is used to discuss the aspects of countries that make them academically attractive. From these aspects a theoretical model to explain and measure academic attractiveness is developed.

### **3.1 What is an academically attractive country and what are its characteristics**

Collins (2001) argues that in history some civilizations have been very successful in attracting intellectuals, philosophers, artists, musicians, students, sojourners and visitors. This notion of civilizational attraction relates to and incorporates the concept of academic attractiveness (Cremonini & Antonowicz, 2009). The extent to which a country is capable of being attractive is determined by what Collins (2001) calls “civilization’s magnetism”. This magnetism is triggered by attention receiving, culturally and socially impressive activities and focuses in one or more centres of prestige, which in turn creates a network of culturally and socially impressive activities. This, sequentially, attracts students and tourists inwards from other civilizations, and propagates the civilization by sending teachers and missionaries outward. Now the question is: what are the conditions to become such a magnet? To answer this question, Collins (2001: 423) argues: “the main ingredients are the intersection of several competing positions or schools of thought, meeting at a common centre or at a few such centres linked to each other”. Moreover, he argues, that “civilizational creativity is not produced in uniformity but in diversity” (Ibid: 424). Civilizations of prestige are, as we have also seen with scientific hegemony of countries (see Section 2.1), neither fixed nor stable. This means that the civilizations of prestige can change geographically and/or can alter in content. The latter happens when the peripheral zones create their own social structures for local cultural creativity networks. Collins (2001) also finds that civilization of prestige goes along, but is not intrinsically intertwined, with geopolitical imperialism and economic hegemony. This implies that civilizations can have geopolitical and economical hegemony

over other civilizations, but this does not necessarily mean that they are also hegemons in (the production of) intellectual culture.

Henceforth, if we are to connect Collins' concept of civilizational attraction with the concept of academic attractiveness as proposed here, we can define the latter concept further. Based on the discussion on civilizational prestige we can derive that the basic ingredients for countries to be academically attractive are, on an abstract level, related to: promoting, stimulating and organising intellectual creativity, having the (political) capacity to host different schools of thought, having common and diverse centres for intellectuals to interact, and having social structures in place to foster the interaction. Translating this into more practical terms, we can hypothesise that the characteristics of an academically attractive country are: higher learning is stimulated, promoted, organised and valued (intrinsically and extrinsically), it is open to different schools of thoughts (i.e. ideologies) and cultures, it allows the interaction to take place openly (i.e. freedom of speech and academic freedom), it has a network of diverse institutions for higher learning (i.e. universities) where academics as well as students meet, and the institutional infrastructure is flexible, yet strong enough to, when needed, allow for interaction and resists pressures from within the economical and political environment. It is assumed that from this position countries can become academically attractive and thus successful in attracting, the brightest and a large number of, foreign and domestic academics as well as foreign and domestic students, to their national higher education system.

What is constructed above is, so to say, the fundament of what academic attraction to students is. It should nonetheless be noted that students can value the characteristics of a country in different ways. For example, a student from a country that does not have a tradition of academic freedom is less likely to choose a country to study in on the basis of it having academic freedom. This also explains why there can be student mobility between countries (i.e. the South-South mobility) that do not have the described characteristics (Fowler, 2009). Furthermore, students can have different preferences and intentioned when it comes to them studying abroad (see Section 2.3.3). However, in this thesis it is assumed that students go abroad for academic reasons (i.e. degree mobility). This is in contrast to mobility on basis of academic tourism (i.e. credit mobility) (Cremonini & Antonowicz, 2009).

The described country characteristics are a good starting point from where we can try to determine the (theoretical) factors that make potential academic attractive countries truly attractive. But before going to this an equally important question needs to be addressed, namely: why do countries want to be academically attractive?

### **3.2 Raisons d'être academically attractive**

In the previous section we have seen that several characteristics of a country can make a country potentially academically attractive. With certainty we can say that some of these characteristics (e.g. network of institutions and academic freedom) are (in some cases by no means) attained in every country (Altbach, 2004b; Altbach, 2003). On the other hand, it is assumed that not every country that has the described characteristics is to the same extent academically attractive. In this thesis it is argued that this has to do with certain factors, but, of course, it also had to do with the intentions of the country. In other words the question is: why do countries want to be academically attractive?

Based on the previous section and the discussions in Chapter Two we can assume it has to do with three broad rationales. Firstly, we have seen that it was important for Prussia to gain in spiritual strength what is had lost in military power (see Section 2.1). In this way a reason for a country to be academically attractive is to "boast" its cultural advancements. This can be seen as a political and a cultural rationale. Secondly, Prussia also had an economic motive to become superior in intellectual culture. This rationale is reflected in the contemporary world where, again, countries are trying to influence their level of academic attractiveness for economical reasons. This can be seen in the background of the international student market which is a growing multi-billion industry (see Section 2.3). Considering this in the context of declining public funding for higher education, and it is no surprise that HEIs are trying to increase their share and that countries are stimulating and assisting the internationalisation of their higher education systems. The latter holds true, because the domestic economies are also benefiting from the spending of foreign students (Vincent-Lancrin, 2004). Moreover, it is not only the direct spending but also the contribution to knowledge production by international (post-graduate) students, from which countries are profiting (Cremonini & Antonowicz, 2009).

The political, cultural and economical reasons we also see reflected in the work of Vincent-Lancrin (2004). He suggests that country can basically take four (not mutually exclusive) rationales to the internationalisation of their higher education systems. These rationales are expressed in the following approaches: the mutual understanding approach, the skilled migration approach, the revenue-generating approach, and the capacity-building approach. These approaches are summarised by Cremonini & Antonowicz (2009: 54) as follows:

“The mutual understanding approach encompasses political, cultural, academic, and development aid goals. The skilled migration approach tries to attract talented students to work in the host country’s knowledge economy or render its higher education and research sectors more competitive. To do so, countries such as Germany and France promote their national higher education and tend to ease relevant immigration regulations. The revenue-generating approach offers higher education services on a full-fee basis without public subsidies. Hence, compared to domestic students, foreign students generate additional income for institutions that are encouraged to become entrepreneurial in the international education market. The United Kingdom is the prime example of this approach in Europe (for non-EU students). Finally, the capacity-building approach encourages the use of foreign postsecondary education, however delivered, as a quick way to build an emerging country’s capacity.”

These approaches to being international match the rationales for being academically attractive to some extent. The political and cultural rationales correlate to the mutual understanding approach and the economic rationale is reflected in the revenue-generating approach. The other two approaches (skilled migration & capacity building) relate more to the context of a country in terms of its demographic and economic characters as well as to its higher education capacity. This context approach should also be reflected in our analysis of reasons for countries for being academically attractive. From this follows that, the contextual situation of a country determines the degree to which a country wants or needs to be academically attractive.

This level of dependence can be explained by the resource dependency theory (Pfeffer & Salancik, 1978). Academic attractiveness for students consists of two types of resources: the domestic and foreign students. In terms of resource dependence any country with its own higher education system will want to be academically attractive to its domestic students. This is thought to be so because domestic students are needed to attain a stable labour force and

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(consequently) a stable national economy. In this respect domestic students are a very valuable resource for countries. Hence, if a country is academically unattractive to its domestic students brain drain can be expected. Turning to being academically attractive to foreign students, we see that for some countries this also is a must. This necessity is determined by the degree to which the export of higher education services is a vital part of a country's economy (see Section 2.2.2). Looking at this from a resource dependence perspective it means that for some countries, if they are to sustain their higher education system and indirectly their economies, being academically attractive (to both domestic and foreign students) is thus a must. Arguably, for countries which do not (yet) have the same dependence on export of higher education services for their higher education system (and national economy) being academically attractive to foreign students is more a need. If these countries are successful in attaining this need, it can, indeed, make it into a must. Key aspect in this discussion is the higher education capacity of a country and the degree to which the country relies on domestic and foreign students to use this capacity.

### **3.3 Explaining academic attractiveness**

Based on the previous discussions it can be argued that academic attractiveness does not stand on its own. First it is part of internationalisation in higher education, and secondly it can be placed in the overall globalisation of the world. Hence, following Scott (1998), globalisation of higher education can be seen as the force and internationalisation of higher education as the resulting policy. The previous sections, including Chapter Two, have mostly been written in the perspective of the internationalisation of higher education. In this section, the discussion is taken to the more theoretical (and abstract) level of globalisation. Hence, to begin the general concept of globalisation is discussed. This is followed by the discussion of the two established theories that try to explain globalisation, namely world-systems theory and world-polity theory. These theories explain globalisation from different, although related, perspectives. Each theory shall be used to reflect on why countries want to be academically attractive and what these theories suggest makes them academically attractive.

#### **3.3.1 Globalisation in general**

Hitherto this thesis has conceptualised globalisation as a process that puts pressure on countries to act in a certain way. This conceptualisation is rather vague and is in need of further operationalisation. This is, however, a somewhat slippery slope, simply because so

much has been said about globalisation that one definition cannot possibly cover all the implications attached to the concept. So, rather than giving a single definition, it is perhaps better to sum up the aspects generally associated with globalisation. These aspects are: the increased (economical, financial, commercial, organisational, and political) interconnectedness as well as interdependence of nation-states and other actors, increased mobility options (i.e. air travel), and modern communication technologies (i.e. Internet). Also the cognitive processes, which make individuals more conscious of the world as a whole, can be included as an aspect of globalisation (Robertson, 1992). These aspects and processes also influence the scope of issues taken and looked upon from a global perspective. Examples of these (previously considered, primarily, national affairs) are development aid, economical cooperation, environmental issues, and, indeed, higher education and science. However, all this does not imply that borders will stop to exist and thus that 'geography is dead' (Morgan, 2001: 3). Also, it is very likely that nation-states will remain the central actors in the world.

### **3.3.2 World-systems theory**

Immanuel Wallerstein (1974) sought to find an explanation for the state of the world at that stage in time. He did so by creating a theory which was capable of analysing the economical and political diversity, and therefore different power relations, between countries. This theory relies heavily on historical patterns, since the early 16<sup>th</sup> century, of economical domination of certain countries/regions over others. Wallerstein argues that ever since this period the world had one social system, which he calls the "world-system". Furthermore, he argues, that the world system can only have two varieties: "one with a common political system and one without" (Wallerstein, 1974: 390). Hence, the former can be qualified as a "world-empire" and the latter as "world-economies". Currently we live in a world economy which Wallerstein (1974) qualifies as "capitalist". Essential features of this capitalist world economy are: "production for sale in a market in which the object is to realize the maximum profit [...], production is constantly expanded as long as further production is profitable, and men constantly innovates new ways of producing things that will expand the profit margin" (Ibid: 398). Moreover, in the world-economy there are three structural positions: the core, the periphery and the semi-periphery. These positions are taken by different areas in the world. A key characteristic of countries in the core area is that they have, in comparison to the other two positions, a relatively strong (i.e. powerful) state. If we are to translate this to the contemporary environment, we can assume that a strong state, is a state that is able to exert



influence over other states. For this countries will need, economical and technological dominance, effective diplomacy, and (or) military power. Moreover, the core countries will try to maintain their status, and do so by accumulating the wealth in the core areas. These core countries thus serve the interest of the economically powerful classes. Other structural elements of the system are that peripheral areas need to depend on the core areas and to some extent on the semi-peripheral areas. The semi-peripheral areas serve as a buffer between the other two areas. Again this is in place for the survival of the core.

In the light of the world-systems theory, globalisation is not a recent phenomenon. In fact, the process of globalisation has been active even since the capitalists world economy slowly became the world system from the 16<sup>th</sup> century onwards. From this point in history, mainly the core countries have been very successful in including, to their economical and political benefit, other areas in this world system. Hence, the contemporary situation of the world can be seen as the result of ongoing and lengthy processes.

The relation of the world-systems theory to academic attractiveness is best reflected in the classification of countries in three positions: core, semi-peripheral, and peripheral. This classification has been used to describe the mobility patterns of students across the world (see e.g. McMahon, 1992). This means, that the core area consists of countries that attract the largest share of international students and that the majority of these students come from peripheral areas. Hence, in these terms it can be said that the core countries are, amongst others, the USA, UK, Germany and France (see Section 2.2.2). However, the leading countries in the core are not necessarily attracting the most international students, from a relative point of view. In fact, it can be assumed that the two, if we account for the relative sizes of the core countries (i.e. geographical size, domestic GDP, total and student population, etc), might be fairly different.

Based on the mobility patterns (i.e. from the periphery to the core) we assume that the countries in the core of the world system are academically most attractive. Therefore, what makes a country academically attractive is their position in the core. This means that the countries that are economically and politically most powerful are, based on this theory, academically most attractive. Furthermore, the theory predicts that countries will attempt to remain in the core area for economical and political reasons. Hence, the ability of a country to

stay in the core is also of relevance to academic attractiveness. The theory also suggests that countries in the core area, will try to keep countries in the peripheral area, and thus not allow them to become semi-peripheral. The core countries want this because, a smaller peripheral area, consequently means less income and control for the core countries. Seeing that several peripheral countries are developing their own higher education system (and do so with support of world organisations), this part of the theory seems fairly improbable, and can indeed be falsified. Developed countries in the “semi-peripheral” area are also setting up policies to attract more foreign students. So now the question is if peripheral countries and semi-peripheral can ever make it in to, respectively, the semi-peripheral and the core area. Based on the ever changing mobility pattern to countries the answer to this question is positive (again see Section 2.2.2).

In conclusion, it can be said that the world-systems theory offers a functionalist approach to explain why countries want to be academically attractive. The same approach is used to explain what it is that makes countries academically attractive. It is, however, apparent that other factors also contribute to a countries level of academic attractiveness. Therefore, another theoretical explanation is given.

### **3.3.3 World-polity theory**

The world-polity theory offers additional insight in the process of globalisation. To some extent it does so by building upon the theoretical foundations of the world-systems theory. By doing so the world-polity theory fills many of the voids left by the world-systems theory.

Meyer (1980: 111-112) defines a polity as a “system of creating value through the collective conferral of authority”. In this sense, polity means that multiple actors create and give meaning to values as well as to certain discourses. This gives the values and discourses authority and thus legitimacy. If we take this concept to the global level, we arrive at “world polity”. In this model, the actors are individual sovereign nation-states, global (governmental) organisations (e.g. the United Nations), and nongovernmental organisations (i.e. social movement groups), and scientists and professionals. In the world society there is (similar to the capitalist world economy) not one dominant central actor. There is, however, a shared world culture, that dictates that nation-states are rational, responsible and authoritative actors (Meyer et al, 1997).

It is the development of (modern) world culture that is the link to the notion of globalisation. This world culture developed out of medieval Western Christendom and made individuals the ultimate carriers of “responsible purposive action” (Ibid: 168). Hence, rather than being spiritually inspired, individuals let their actions be guided by their pursuit of rationalized progress. It is also in this context that social life became demystified, lawful, and universalistic. This can, indeed, be seen as an effect of the enlightenment, which includes scientific as well as philosophical progress. The ultimate result was the construction of rationalised structures, of which the nation-state is a key example.

In fact, rationalization meant that the concept of a sovereign nation-state quickly spread across the world<sup>18</sup>. From this common and very legitimate framework, world culture was able to spread fast. Via this process nation-states came to construct their society in very similar (although context bounded) ways. Hence, this is seen as an explanation for the witnessed homogeneity between nation-states worldwide. Meyer et al. (1997) argue that the spread of world culture intensified, in the period after World War II, with the creation of inclusive global organisation as the United Nations and related bodies (such as the World Bank and the WTO). It is in this global context that Meyer et al. (1997) explain the increasing similarities amongst nation-states, as isomorphic behaviour.

In this perspective, globalisation can be seen as the process in which nation-states are increasingly becoming more homogeneous. This does not imply that the sovereignty of the states is declining. In fact, world-polity theory, argues that nation-states are seen as the primary actors charged with identifying and managing the contemporary problems (e.g. the environment and global terrorism). By doing so states are even accumulating the authorities over subjects on which they previously did not have authority (Ibid: 157).

Before applying the world-polity theory to the two central questions of this section (why do countries want to be academically attractive and what makes them academically attractive?), we need to elaborate on one of the principal assumptions of the world-polity theory. This assumption states that science has become the leading rationale in contemporary world polity and its implications can be seen in every global discourse. It is from this perspective that

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<sup>18</sup> Since 1945 more than 130 new nation-states have formed (Meyer et al, 1997: 158)

Drori et al. (2003) argue that the institutionalised cultural authority of science can be seen as the new world religion which is reflected in the world culture.

Drori et al. (2003) suggest that science is spreading around the world and is the cause and effect of the globalisation of higher education. Furthermore, they see science as the rationale for (social) action and change. As an example of this they mention, *inter alia*, the spread of and value attached to human rights, gay rights, and environmental changes. This is all made possible by the rationalisation of science not only in the west but throughout the world. Assuming this institutionalisation of science has been and is (through globalisation) taking place, then we should also view the internationalisation of higher education in this perspective. Hence, the world-polity theory suggests that because science is in the contemporary society: highly institutionalised, highly rationalised, highly valued, and in high demand, young people around the world want (and are also expected) to study (Drori et al., 2003: 8). Since, higher education is less developed and less available in peripheral states, it is reasonable to assume that students from these countries go abroad to study.

The theory, on the other hand, also suggests that nation-states take action to comply with global pressures and trends. A good example of this is the global diffusion of ministries of science and technology (Jang, 2003). This is, indeed, explained by the isomorphic behaviour of states, which are in search of legitimacy, and base their action on rationalised myths (e.g. science for development) (Jang, 2003). Furthermore, it is suggested that: “nation-states with perceived success (in terms of their economy, military, politics, or other social aspects) also occupy a higher stratum in the world system and exert greater influence on other nation-states by providing global models and examples” (Ibid: 125). Therefore, aspects of well performing countries are more likely to be copied in to countries that also strive to perform well on that aspect.

This notion offers answers to the questions why countries want to be academically attractive and what they can do to attain this. In doing so, the world-polity theory departs from the more economical inclined incentives that we came across in the world-systems theory. Instead, the world-polity theory manoeuvres in the realm of sociology and has a high correlation with the neo-institutional theory (Scott, 1995). In sum, the answer to why countries want to be academically attractive is not sought in a functionalist approach but rather in the institutional

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approach. Following this approach there are basically two subsequent answers. Firstly, being academically attractive is considered necessary for national states if they are to act consistent with the science as a religion discourse. And, secondly, from this follows that nation-states want to be academically attractive because this gives them legitimacy in the world system. Hence, what Ramirez (2003: 241) argued with respect to education expansion: “To be taken seriously as a nation-state, countries had to expand schooling or at the very least embrace educational expansion as a natural goal”, is also likely to apply to nation-states having to be academically attractive.

Henceforth, to answer the what makes countries academically attractive question, we should take what has been discussed above in to account, and realize that what nation-states have been trying to do to become academically attractive is related to the notion of isomorphism. Moreover, because science is the global world culture this isomorphic behaviour is on a global level legitimized. This also means that the isomorphic behaviour itself makes countries, even though it might be symbolic, more academically attractive. Although not empirically researched, it seems that clear examples of this isomorphic behaviour can be seen in how countries are trying to promote their national higher education system, through e.g. support agencies such as DAAD (Germany), NUFFIC (Netherlands) and Campusfrance.org (France) (see Section 2.3.1). This notion suggests that what is important is the extent to which nation-states are conforming and promoting their conformation to world culture. These actions from nation-states will affect how their higher education systems are perceived by other nation-states as well as by individuals.

### **3.4 Conclusion**

The previous section used two theories, the world-systems theory and the world-polity theory to explain academic attractiveness from a theoretical point of view. Even though both theories use different perspectives to explain academic attractiveness, they can be linked to each other. It is also in combination that both theories offer a fuller and thus more useful explanation. To be more precise, the world-systems theory gives a more functional macro realist explanation (Meyer, et al., 1997) whereas the world-polity theory explains academic attractiveness from a more neo-institutional (i.e. sociological) perspective (Drori et al., 2003). In other words, the world-polity theory builds upon the world-systems theory and gives a more sociological meaning to academic attractiveness. From the world-systems theory we can derive that what

makes countries academically attractive is their economic and political leading role and their ability to sustain this position. The world-polity theory accepts these explanations and places them in the world culture framework. Hence, a countries level of conformation to the world culture and the recognitions of this are also of importance to their level of academic attractiveness.

These theoretical perspectives make it possible to construct a model that explains and measures academic attractiveness. Firstly, the theory suggests that a countries' economical position, in comparison to other countries, is of important. Here the underlining principal is that students are drawn to countries with an advanced economic position. Secondly, and in the same line of reasoning, a country that has a leading political role in world society is, from a theoretical perspective, likely to be regarded as more academically attractive by students. Thirdly, it is the ability of a country to maintain their leading economical and political position that works as a mechanism for academic attraction as well. A theoretical explanation for this is that the academic standing of a country, and thus of their education, correlates to their position in the world system. Fourthly, a country must be actively engage and express their involvement and recognition of world culture to be academically attractive. This suggests that the uniformity (i.e. its commitment to isomorphic behaviour) of a country to other countries is increasing its academic attractiveness. Fifthly, the efforts by countries to be following the world culture must also be recognized by other actors in the world system. This makes how a country and how its higher education system is perceived also of importance to the level of academic attractiveness.

Henceforth, in the model to explain and measure academic attractiveness the five classifications can be used as pillars. In Chapter Four these pillars are translated in to factors, which in turn are operationalised by indicators. The basic theoretical model is given in Table 3.1.

**Table 3.1: Theoretical model for measuring academic attractiveness**

<b>Academic attractiveness of countries to students</b>				
<b>Economic</b>	<b>Political</b>	<b>Leading role</b>	<b>World culture</b>	<b>Perception</b>

In conclusion we can say that the constructed model is inherently a pull model that assumes a high degree of homogeneity between countries (i.e. geographical advantages in for example the climate are not accounted for) and in the motivation of (domestic and international) students (i.e. studying abroad for an academic degree and the value they attach to e.g. reputation of a higher education system). It should also be noted that this model used the countries that meet the characteristics that make them potentially academically attractive (i.e. mostly Western countries with a long academic tradition) as a frame of reference. Furthermore, both theories and thus the model assume that there is one main world system. It can, however, be argued that there are smaller subsystems based on culture and language (e.g. Spanish), around the world as well. Although these subsystems can explain the mobility patterns of students between some countries (e.g. Brazil and Portugal), they are not included in this model. This is done because it is hard to account for every subsystem.

The model also assumes that countries can have three broad rationales to be academically attractive. These rationales relate to political, cultural and economical incentives. The degree to which a country puts more emphasis on a certain incentives depends on their contextual situation. It is assumed that countries which depend to a large extent on foreign students to fill their higher education capacity, and thus for which being academic attractive is a must, are more likely for give higher priority to the economical rational. Hypothetically, these countries will also have a more aggressive approach towards promoting/marketing their higher education system. Nonetheless, whichever rationale is most important for a country, they all subscribe to the world culture and thus value science. This is indeed the dominant rationalizing factor for countries to justifying spending on science. It is also this world culture that justifies students seeking (the best) higher education.

## **Chapter 4: Research design and Methodology**

In this chapter I will describe the considered and used research design and methodology to answer the fourth research question: how can academic of academic attractiveness be measured? Hence, the theoretical model as developed in the previous chapter will be translated into a research design. To be able to come to such a research design several methodological aspects need to be discussed. These aspects are the methodological foundation, research methods, unit of analysis, and sample selection. After this discussion, attention is given to the operationalisation of the theoretical model. Central point of discussion will be the discrepancy between the ideal data and the available data. After the operationalisation, attention is given to the conceptualisation and method of analysis. In the fourth section the limitations and validity aspects of the research design are discussed. In the conclusion a general reflection on this chapter is provided. In addition to this the theoretical model as proposed in this study is compared to two already existing models to measure academic attractiveness of countries.

### **4.1 Methodological deliberations**

The guiding principle for the methodological aspects has been to aim for a high degree of validity, reliability and generalisability of the research outcomes. These principles are nonetheless constrained by the available time, limited length of this thesis, and by the availability of data. Therefore, the methodological choices discussed in this section should be understood with these three principles and limitations in mind.

#### **4.1.1 Methodological foundations**

The ontological position found in this research is based on foundationalism<sup>19</sup>. Therefore, the assumption is that the real world exists independently of our knowledge of it. The ontological position is thus “objective” rather than “constructive”. This means that the world is treated as consisting of observable objects (Grix, 2004). Having determined the framework in which to see reality, we can now determine which epistemological position best fits this ontology and this particular research. In this respect two positions are considered: the “positivist” and the “critical realist”/“post-positivist” (Grix, 2004). Chosen is for a “critical realist” approach because this (in comparison) allows for a broader set of explanatory variables (i.e. it allows

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<sup>19</sup> The ontological position is determined by the persons believe in the nature of social and political reality or in other words the perception of what is out there to know (Grix, 2004: ch. 4).



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“interpretivist” explanations) and because it is assumed that the academic attractiveness of countries changes over time and is thus context bound (see Section 2.1).

#### **4.1.2 Research methods**

A systematic cross-case analysis is used to measure the academic attractiveness. To do so, chosen is for a quantitative rather than a qualitative approach. The reason for this is the explanatory power and the availability of empirical data (i.a. from the OECD). The latter is important because the aim of this thesis is to include a large enough sample of countries to be able to generalise and compare the research outcomes. This also reflects the exploratory nature of this study. Hence, this is a justification for the scale (i.e. global rather than regional) of the study as well as for the used operationalisations and data. The point of departure for selecting data and databases has been the homogeneity. In most cases recent and comparable data of countries is not available for the most recent years. For this reason 2007/2008 are used as reference years. This consequently entails that recent developments in, for example, the world economy are not taken in to account.

#### **4.1.3 Unit of analysis**

The unit of analysis for this thesis are countries, or to be more precise nation-states. This means that the analysis will be on country level, consequently the outcome of the analysis will reflect on countries as well. For a definition of nation-states we turn to Meyer, et al. (1997). They argue that the world culture made the nation-state the primary rationalised structure and that legitimate actors can act on behave of this structure. Therefore, nation-states are in a global context seen as rational, responsible and authoritative actors. It is in this role that nation-states are seen as the primary actors charged with identifying and managing the contemporary (global) problems and challenges. Furthermore, it are the nation-states that translate world polity in to their national context. This sovereignty is based on the shared world culture amongst nation-states.

#### **4.1.4 Sample selection**

For the validity of the study it will be necessary that the research outcomes are generalisable. Hence, the sample of nation-states needs to be sufficiently large to allow for this. The whole population of nation-states is around 200<sup>20</sup>. Of this total population, 66 countries are by the

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<sup>20</sup> The United Nations has 192 member states

World Bank recognized as being high income countries<sup>21</sup>. In terms of the world-systems theory it can be said that these countries are the core of the capitalist world system (see Section 3.2). Of these 66 countries, 27 are members of the OECD<sup>22</sup>.

With a fair amount of certainty it can also be assumed that the 27 high income countries in the OECD have the characteristics to potentially be academically attractive (see Section 3.1). Without empirical evidence we cannot conclude whether these countries also need or want to be academically attractive. It can, nonetheless, be assumed that countries with a strong economical dependence on the export of higher education services need to be academically attractive. These countries are also more likely to have an economical rationale for doing so. On the other side are countries that are in the early stages of developing their higher education system as an export service. Since the resource dependence is less, it is more likely that these countries have a more cultural approach to being academically attractive.

Of the 27 OECD countries, 21 are in Europe, 2 in Asia, 2 in North America and 2 in Oceania. From a methodological perspective this seems to provide sufficient variance in the unit of analysis (i.e. in terms of geographical location and country characteristics). More specifically these countries also seem to have enough variance in their higher education system, incoming and outgoing mobility, academic history/tradition, number and diversity of institutions, ranking of institutions, reputation, funding mechanisms (i.a. tuition fee, scholarship, student financing, etc.), higher education expenditure, and language. Even though a high degree of variance is aimed for in the sample of nation-states, it is quite apparent that European countries, due to their relative small size, are over represented in the high income member states of the OECD. Hence, taking the limited timeframe of this thesis in to account, the countries that joined the EU in 2004 (Czech Republic, Hungary, and Slovakia) as well as countries with a population of less than 4 million (Iceland, and Luxembourg) are, presumably without significant loss in variance, omitted from the research sample. This consequently leaves 16 European countries in a total of 22 countries. The final sample of selected countries, and an overview of their key statistics, is given in Table 4.1. This table is discussed in Section 5.1.

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<sup>21</sup> See: World Bank list of economies (July 2009) available at <http://siteresources.worldbank.org/DATASTATISTICS/Resources/CLASS.XLS> (accessed on 08-04-2010)

<sup>22</sup> Currently the OECD has a total 30 members (on 08-04-2010)

**Table 4.1: Overview of key statistics of selected countries**

Country	Region	Population	Student population in tertiary education	Inbound foreign students	Outbound foreign students	Market share (in %)	SJTU	THE	Number of HEIs
		2009 (1)	2007 (2)	2007 (3)	2007 (3)	2007 (3)	2008	2008	2010 (4)
Australia	Oceania	21,262,641	1,083,715	211,526	10,008	7.0	15	22	41-50 (5)
Austria	Europe	8,210,281	260,975	43,572	12,874	1.4	7	5	61-70
Belgium	Europe	10,414,336	393,687	41,351	11,371	1.4	7	7	81-90
Canada	NA	33,487,208	893,094	132,246	44,371	4.4	21	20	101-150
Denmark	Europe	5,500,510	232,194	20,850	6,201	0.7	4	4	61-70
Finland	Europe	5,250,275	309,163	10,066	9,520	0.3	6	7	41-50
France	Europe	64,057,792	2,179,505	246,612	63,025	8.2	23	23	501-550
Germany	Europe	82,329,758	2,278,897	258,513	85,963	8.6	40	42	301-350
Greece	Europe	10,737,428	602,858	21,160	38,042	0.7	2	5	< 41
Ireland	Europe	4,203,200	190,349	16,758	19,597	0.6	3	7	< 41
Italy	Europe	58,126,212	2,033,642	57,271	41,394	1.9	22	14	151-200
Japan	Asia	127,078,679	4,032,625	125,877	56,060	4.2	31	30	101-150 (5)
Korea	Asia	48,508,972	3,208,591	31,943	107,141	1.1	8	10	51-60 (5)
Netherlands	Europe	16,715,999	590,121	37,815	13,274	1.3	12	11	61-70
New Zealand	Oceania	4,213,418	242,651	64,951	4,096	2.1	5	6	< 41 (5)
Norway	Europe	4,660,539	215,237	15,618	13,729	0.5	4	4	51-60
Portugal	Europe	10,707,924	366,729	17,950	14,485	0.6	2	3	91-100
Spain	Europe	40,525,002	1,777,498	59,814	26,748	2.0	9	8	101-150
Sweden	Europe	9,059,651	413,710	42,769	14,732	1.4	11	9	41-50
Switzerland	Europe	7,604,467	213,112	41,058	11,028	1.4	8	8	< 41
UK	Europe	61,113,205	2,362,815	351,470	26,136	11.6	42	50	151-200
USA	NA	307,212,123	17,758,870	595,874	52,085	19.7	159	106	651-700

Source 1: CIA, The world factbook 2009 (CIA, 2010)  
Source 2: OECD.stat (<http://stats.oecd.org/> accessed on 16-04-2010)  
Source 3: OECD (2009) Table C2.7  
Source 4: estimation of HEIs largely based on database of moveonnet - Higher Education Worldwide (<http://www.moveonnet.eu/directory> accessed on 16-04-2010)  
Note 5: a large amount of smaller/local HEIs are omitted

## 4.2 Operationalisation of the theoretical model

In this section the theoretical model will be operationalised. To do so factors will be attached to the five pillars we found in the theoretical analysis. All of the factors have been selected for their theoretical connection to the pillar. Empirical evidence of the importance of the factors to the academic attractiveness, as shown in previous research<sup>23</sup>, is also considered (see Section 2.3). Hence, this gives the factors theoretical as well as empirical relevance. To operationalise the factors indicators have been used. Key aspect in this discussion is the

<sup>23</sup> This includes macro level studies on student mobility patterns and international student choice models.

discrepancy between the ideal indicators and the actual availability of these indicators. Point of departure is that an indicator needs to be able to be comparable across nations. An overview of the pillars, factors and indicators is given in Table 4.2.

#### **4.2.1 Economical pillar**

This pillar measures the economical position of a country. To measure this three factors are suggested. The first is economical power. The economical standing of a country is expressed in the gross domestic product (GDP) of a country. The GDP should however also be seen relative to the number of inhabitant of the nation. Therefore, this factor will consist of two indicators: the GDP and GDP per capita. Data for these indicators are collected by the OECD data (Annual GDP, in millions of Current Prices and Current PPPs, in United States Dollar (USD) over 2007).

The second factor is the investment in the higher education system. The rationale behind this factor is that the economical power of a country is expressed in the amount of money spend on its higher education system. To measure this we can see what percentage of the GDP is allocated by the government to higher education. This indicator can be subtracted from OECD data from the year 2006, on public spending on tertiary education, as a percentage of the GDP.

The third factor is the costs of higher education. This indicator can be measured in the private contribution of student to higher education and thus places the previous indicator in perspective. The cost of higher education is expressed in the average level of tuition fee. To measure this we would ideally have that countries charge the same tuition fee to domestic and foreign students. The reality is however different, i.e. many countries (and effectively HEIs) have a lower tuition fee for domestic students and a higher tuition fee for foreign students<sup>24</sup>. Furthermore, in many countries there is a difference between the tuition fee charged by public and private institutions and this difference can be quite substantial (OECD, 2009: 245). For this reason trying to find an average in tuition fee charged to students is when there is diversity in the student population (which is the case in this research) not possible. We therefore need to look to the indicator which is close to our ideal indicator. This can be done

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<sup>24</sup> In the EU, international students from within the EU pay the same amount of tuition as the domestic students of the country in which they choose to study.

by taking the average charged tuition fee to domestic students by public institutions. The assumption is that the tuition fee charged to domestic students reflects the charged tuition fee to foreign students to some extent. To measure this we can, again, use OECD data. This data shows the estimated annual average tuition fees charged by tertiary-type A educational institutions for national students over the academic year 2006/2007 in USD.<sup>25</sup> It should be noted that many countries are compensating students for the tuition fee by means of public funded scholarships or loans. Ideally we would deduct the amount of support given from the average tuition fee and use the outcome as the true cost of higher education. Comprehensive data on the amount of support given by all the countries is not widely available. Therefore, the indicator is not adjusted to the level of support given. It should be noted that, just like the level of tuition fee, the financial support for foreign students is in many countries not the same as for domestic students.

#### **4.2.2 Political pillar**

In this pillar the extent to which a country has a political leading role is measured. It is assumed that countries with a leading political role on the world society have a higher degree of attractiveness. To operationalise this two factors have been proposed. The first factor is political influence. The political influence of countries can be measured by their participation in the United Nations, the World Bank, the International Monetary Fund (IMF), and the OECD. However, all the countries in the sample of this research are members of these organisations, therefore we need to take a closer look into these organisation and see if some countries have more influence than others. This influence is most clearly expressed in the voting power of countries in the IMF<sup>26</sup>. The voting power is based on the 'quotas' that countries pay to the IMF<sup>27</sup>. Hence, the voting power is a reflection of their level of participation in world society and also an expression of the political power of a country. It should also be noted that this indicator has an overlap with the economical power of a country.

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<sup>25</sup> Tertiary-type A programmes (ISCED 5A) are largely theory-based and are designed to provide sufficient qualifications for entry to advanced research programmes and professions with high skill requirements, such as medicine, dentistry or architecture (see: <http://stats.oecd.org/glossary/detail.asp?ID=5440> accessed on 16-04-2010)

<sup>26</sup> See: <http://www.imf.org/external/np/sec/memdir/members.htm#2> (accessed on 20-04-2010)

<sup>27</sup> For more information see: <http://www.imf.org/external/np/exr/facts/finfac.htm> (accessed on 20-04-2010)

The second factor is the level of internationalisation of the higher education systems of countries. The level of internationalisation of the higher education system is a policy choice, and thus reflects the political willingness to have an internationalised higher education system. To operationalise this we ideally would have information on all the different policies countries have implemented to support the internationalisation. Important aspects of these policies are the openness of and accesses (i.e. the visa/immigration policies) to a country. Ideally information on the opportunities for foreign students to work in the host country (after they have finished their studies) would also be included. Comparable data on these migration policies are however, on a large scale, not available. As an alternative, an indicator that relates to and can be seen as a measure of political willingness to internationalise the higher education system, is found in a countries' commitment to the WTO/GATS trade agreement in higher education. Here the assumption is that the more a country liberalised its higher education system, the more it is committed to internationalisation. The degree to which a country has liberalised its higher education in terms of GATS can be measured by the EduGATS index developed by Verger (2009).

#### **4.2.3 Leading role pillar**

This pillar described the efforts of countries to retain their economical and political leading role in the world society. It is assumed that countries which are able to stay in the leading position are found to be more academically attractive. Hence, to operationalise this pillar, factors need to be found that reflect the efforts of countries to stay and strengthen their leading position. In this respect three factors are relevant. These are: promotion, social environment and diversity of student population. Countries can retain and strengthen their economical and political position by promoting their higher education system. As we have seen in Chapter Two (Section 2.3.1) countries have set up agencies to promote their higher education system abroad. With respect to this it can be reasonably assumed that countries differ with respect to the aim and strategies of these agencies as well as the budget allocated to their operations. Hence, ideally we would have data on the budget allocated to these agencies by each government. This data is, however, not available. What we do know is that Australia and New Zealand have a proactive marketing approach whereas the "traditionally dominant" USA has a more passive approach (OECD, 2009: 314). These observation are however too scanty to be included on our measurement of academic attractiveness. Hence,

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even though, promotion seems to be an important aspect of academic attractiveness no comparable and reliable data were found.

The next factor of this pillar is the social environment. This factor describes the stability of a country. It is assumed is that a stable social environment is needed to be able to remain in a leading position. This makes the political stability of a country of importance. Another aspect of this factor is the treatment of foreign students by the society as a whole. An indication of the importance of this factor we find in the recent decline in applications of Indian students in Australia, after racial incidents<sup>28</sup>. However, to find a recent and reliable indicator to measure the stability of the social environment proves to be challenging. Ideally we would use an indicator that measures the stability of the social environment in terms of ethnic related incidents as well as the political stability of a country. An index that comes close to this ideal indicator is found in Jong-A-Pin (2006). In this research the political instability of countries is measured on the basis of four factors consisting of a total of 24 indicators. One of the factors is the instability within the political regime. This factor consists of indicators such as government crises, cabinet changes and the number of elections. The shortcoming of the data is that it is only available for the period 1994 – 2003.

The last factor in this pillar is the diversity of student population. This factor is based on previous research that found that students are attracted to countries which have an established population of students from the same country (Mazzarol and Soutar, 2002). Hence, countries that are hosting and able to maintain a diverse student population are likely to be found more attractive. A country's ability to maintain a diverse student population is also a reflection of the perceived quality of its higher education system and working of the notion of 'word of mouth'. To measure the diversity of the student population we would ideally have data on the diversity, in the selected countries, over multiple years. However, reliable data over multiple years is not available. Nonetheless, there is data from 2007 on the student mobility between countries (OECD, 2009). From this we can subtract which nationalities and in what quantities were studying in the selected countries. This data will be used to measure the diversity of the student population. It should be noted that the diversity of the student population, as it is

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<sup>28</sup> See e.g.: "46% drop in Indian students' applications: Australia" on zeenews.com (<http://www.zeenews.com/news593414.html> accessed on 20-04-2010)

measured here, is logically intertwined with the total number of foreign students in a country. This correlation should, thus, be treated with caution.

#### **4.2.4 World culture pillar**

The fourth pillar in the theoretical model describes the level of engagement of a country in world culture. For a country it is important to express this engagement because, firstly, this gives it legitimacy in the world society and, secondly, it makes the countries recognised by others actors (i.e. individuals and nation-states) as a supporter of world culture. To operationalise this pillar we have to include factors that measure the extent to which a country's higher education system is recognised by students. Here the assumption is that the higher the recognisability is, the higher a country is following and expressing the world culture, which in turn makes the country more attractive. In this respect there are three factors of relevance. The first is the recognisability of degrees. This factor includes the recognisability of a higher education degree of a particular country abroad and the extent to which a country recognises (secondary education and bachelor) degrees from other countries. To measure both aspects we would need information from each individual country and very likely also of every individual HEI on how they value degrees from abroad. Therefore, it would be nearly impossible to research this aspect on a large scale. Hence, no suitable indicator was found to measure the recognisability of degrees to the full extent.

The second factor is the recognisability of the academic system. Here the assumption is that students are better able to recognise an academic system if it resembles the academic system of the dominant countries. In the contemporary situation it seems reasonably safe to assume that this is the bachelor/master structure which is based on the Anglo-Saxon tradition. Perhaps the best indicator for this is the Bologna Declaration in which 47 European countries have pledged to uniform their academic systems into a bachelor/master structure. Consequently, this will also have an effect on the recognisability of their degrees (labelled as bachelor or master). To measure the extent to which a country has a bachelor/master structure we can use the 2009 stocktaking report (Rauhvargers, et al., 2009). In this report, countries in the Bologna process state to what extent the bachelor/master structure has been implemented. Here it should be noted that the two Asian countries in our sample already have implemented the bachelor/master structure. Furthermore, it can be assumed that even if countries have implemented the bachelor/master structure, the original Anglo-Saxon countries, maintain an



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advantage in recognisability of their higher education system. On basis if these categories a six-point scale, ranging from the original Anglo-Saxon countries to less than 25% of the students enrolled in a bachelor/master structured program, can be developed.

As a third factor we assume that the world culture is also reflected in the language of instruction. This works in two ways. Firstly, as we have seen in Section 2.1, the shared *lingua franca* in science is English. Secondly, as a result countries are transforming to English as their language of instruction. The extent to which countries offer higher education programmes in English is reported on by the OECD (2009: 316) and can thus be used as an indicator. This indicator uses a four point scale, ranging from nearly all programmes in English to no or nearly no programmes in English. This factor assumes that students want to study in English. This assumption does not account for the mobility between countries that share a language other than English (e.g. student mobility from Brazil to Portugal) and also not for students that learn the language of the host country (e.g. Chinese students in Japan). To adjust for this shortcoming, data on the percentage of foreign students which do not study in English could be used. This data is, however, not available. For this reason this indicator is not measuring the factor to its fullest extent and is biased towards English speaking countries.

#### **4.2.5 Perception pillar**

The efforts of countries to be following the world culture can, as discussed in the previous pillar, be expressed in the efforts to be recognised as following world culture. This pillar turns to results of the countries efforts and tries to see if these efforts have influenced the perceptions of a country by individual actors (i.e. students). To operationalise this pillar two factors are of relevance. These are the perceived quality and the reputation of a countries' higher education system. Both factors determine, to some extent, how the education is valued by the students, their parents, and also by businesses in their home countries. Logically, the higher the quality and the reputation of a higher education system, the higher the attraction. It should be noted that, although quality is linked to reputation, both aspects are not necessarily the same. From a student perspective a perception of quality can only be proved to be right or wrong if the students actually decided to experience the quality. This is in contrast to the perceived reputation, which is in essence a cognitive value that cannot be experienced. Furthermore, both the perceived quality and the reputation are unlikely to be uniformly shared across the world. They are therefore subjective factors. Which means to empirically research

the perceived quality and reputation a large scale sample of (prospective) students from a wide variety of countries would be needed. This is beyond the scope of this research and thus to measure the perceived quality and reputation of the higher education systems of the countries in our sample we have to use another indicator. Here the global rankings of universities can be used. To be more precise, it is because the rankings (particularly the THE ranking) are measuring the reputation of a higher education system (see Section 2.2.2), that they can be seen as a reflection of the perceived reputation by (prospective) students<sup>29</sup>. Hence, to measure the perceived reputation two global rankings are used, the SJTU and the THE. Of both rankings the ranked institutions in a country are added up. Therefore, the more ranked institutions the higher the reputation and thus the attraction. Since this is a subjective indicator the result is not made relative to the size of a countries higher education system. In this respect the larger countries have compared to smaller countries an advantage.

#### 4.2.6 Overview and reflection

In Table 4.2 the pillars, factors and the indicators are summarised. As a reflection on this model it should be stressed that between some of the aspects there is an overlap. This overlap is expressed most clearly in the indicators. The voting power in the IMF is for example also an indication of the economical power. Furthermore, the level of internationalisation is perhaps also a predictor for the extent to which a country promotes its higher education system. As mentioned, between the recognisability of degrees and the higher education system there is also an overlap. The same can be said for the perceived quality and reputation. As also mentioned before the diversity of the student population, as measured here, is intertwined with the total number of foreign students in a country. It should also be noted that for three factors (promotion, recognisability of degrees and perceived quality of the higher education system) no indicators could be found. This makes the model less valid. This will be discussed in Section 4.4.

**Table 4.2: Overview of the operationalised theoretical model**

Pillar	Factors	Indicators	Source
Economical	Economical power	Total GDP	OECD
		GDP per capita	OECD
	Investment in the higher	% of the GDP is allocated	OECD

<sup>29</sup> Although reputation and quality are correlated, the rankings are solely used as an indication for the perceived reputation of a higher education system. This is done because it would go too far to assume that the global rankings are also an indication of the quality of a higher education system.

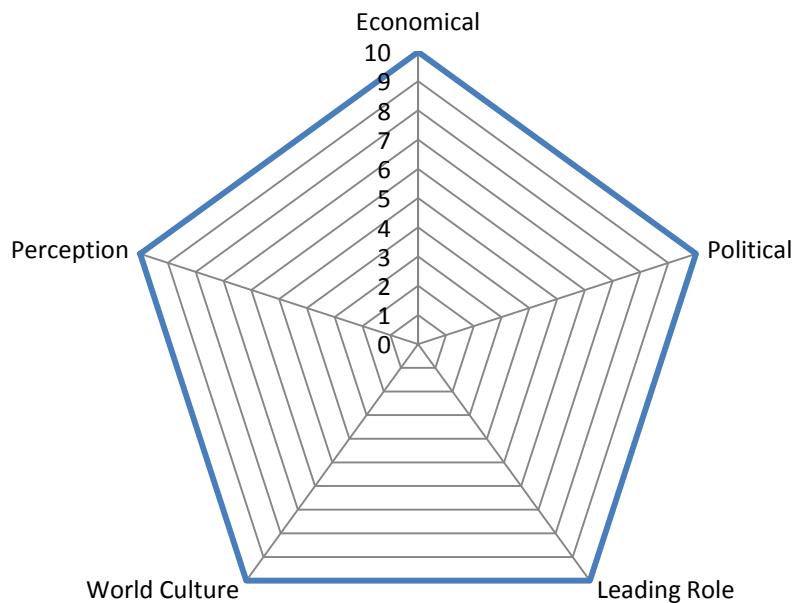
	education system	to higher education	
	Costs of higher education	Estimated annual average tuition fees	OECD
Political	Political influence	The voting power of countries in the IMF	IMF
	Level of internationalisation	EduGATS index	Verger, 2009
Leading role	Promotion	None	
	Social environment	Political instability	Jong-A-Pin, 2006
	Diversity of student population	Number of nationalities represented in higher education systems	OECD
World culture	Recognisability of degrees	None	
	Recognisability of HE system	Implementation of Bachelor/master structure	Rauhvargers, et al., 2009
	Language of instruction	Amount of programmes taught in English	OECD
Perception	Perceived quality of HE system	None	
	Perceived reputation of HE system	Numbers of ranked HEIs	SJTU & THE rankings

### 4.3 Conceptualisation and method of analysis

To conceptualise the scores of each country in the sample, the results of the pillars are indexed on a 10-point scale. This scale shows how much a country scored on a particular pillar. The overall score on the pillars is the average score of the factors. Three methods are used to scale the indicators on a 10-point scale. The first uses the highest found score as 10. This method has been used for the factors: economical power and political influence. The second method uses the maximum possible score as 10. This method is used for the factors: level of internationalisation, social environment, recognisability of higher education system, and language of instruction. The third method uses ranges to place the indicators on a 10-point scale. The method is used for the factors: investment in higher education, cost of higher education, diversity student population, and perceived reputation higher education system. The nature of the indicator (scale: method 1, ordinal: method 2, or nominal: method 3) was leading in determining the method of scaling. Although part of the operationalisation, the actual scaling of the indicators is presented together with the outcomes in Chapter Five.

Since, from a theoretical point of view, it is not clear which pillars have more influence on the academic attractiveness of countries, the pillars have an equally weight of 20%. The outcomes of the measurement can be conceptualised as shown in Figure 4.1. In this conceptualisation a country is, in theory, most attractive if it scores 10 on all the five pillars.

**Figure 4.1: Conceptualisation of the academic attractiveness of a country**



Besides the conceptualisation on basis of the theoretical model as proposed in this thesis, the theoretical model is statistically tested for its explanatory power. To do so, the amount of the inbound foreign students is used as dependent variable and the pillars and factors (indicators) in the theoretical model as independent variables. To statistically analyse the correlation a multiple linear regression analysis is applied. This test will also show which pillars (and factors) have a significant influence on the inbound student mobility. The Cronbach Alpha is calculated to measure the internal consistency of the used pillars.

The scaled method of analysis shows the theoretical academic attractiveness of a country, whereas the statistical correlation test of the whole model shows the connection of the model to the empirical reality (i.e. in the mobility figures).

#### **4.4 Limitations and validity**

This section will discuss the limitations of the research design and the overall validity. A limitation of this research is the usage of pre-existing data. This affects the fit between the factor and the available indicator. This means that the indicator might not measure the factor to its fullest effect. Although the retrieved data is mostly for a single source (OECD) there are

inconsistencies in the year of measurement. This means that the variables are less comparable. The data provided by the OECD is perhaps the most reliable and comparable data for the countries in this study. Nonetheless, this data does have its internal inconsistencies. These inconsistencies are mostly due to the usage of differing definitions by countries (which provide their country data to the OECD). Moreover, another limitation in the data of this research is that for some countries no reliable data was found. This explains why some countries have missing data in the indicators. To cope with the limitations of the data any exemption relevant to the validity of the indicator is reported on. In addition, z-scores are used to calculate the overall score on the pillars and are used for the statistical analysis. For the general limitations of the data I refer to the original source. Another limitation in the research design is that there is a limited variety in the selected sample. Selected are only high income countries in the OECD. Hence, the research outcomes can only be generalised to other high income countries and not to other (developing) countries.

Since the operationalisation of the theoretical model makes many assumptions in correlations between factors and indicators it is relevant to discuss the construct validity. Of importance in this respect is also that some factors have not been operationalised, and are thus not measured. Hence, in this situation there is by default a discrepancy between the theoretical model and the operationalised model. Furthermore, without statistical testing of the correlation between the individual factors and their operationalisation we cannot be sure about their relation to each other and academic attractiveness of countries in general. Many factors are, nonetheless, based on existing research on push and pull models. Therefore, we can assume there is a relationship between these factors (and their operationalisations) and academic attractiveness. Simple face validity also plays a role in this. Hence, it should be clear that the theoretical model as proposed here can only be seen as a first attempt to measure academic attractiveness of countries on a global level and that there are aspects that require more attention in terms of their validity and reliability. The discussed shortcomings of the model reflect, nonetheless, the exploratory nature of this study.

#### **4.5 Conclusion**

In this chapter the theoretical model has been developed further. To be more precise, in this chapter the pillars have been operationalised by the construction of factors. In turn these factors have been operationalised by selecting indicators. This has resulted in the creation of a

testable model. This model is tested and the outcomes are analysed in Chapter Five. But before turning to this, our operationalised model is, firstly, compared to two existing models to measure the academic attractiveness of countries and, secondly, analysed in general.

The outbound (push)/inbound (pull) model by McMahon (1992) differs from our model in three aspects. The first aspect is the inclusion of push factors. Secondly, the factors included in McMahon's model seem to be largely based on the world-systems theory (although this theory is not explicitly mentioned). Therefore, the factors included in the study are based on economical and political indicators. The third difference is that the model only included a sample of third world countries as sending countries and only the USA as the study destination. Therefore, the factors included in the pull model were only tested on the USA. Although this means that the results cannot easily be generalised, it does give a more focused explanation of what it is that make the USA academically attractive to peripheral countries (i.e. the concentration of trade with the USA). In comparison the model proposed in this thesis has a broader scope and also includes factors from a more sociological perspective.

The model to measure academic attractiveness created by Cremonini and Antonowicz (2009) also differs from our model in several aspects. Firstly, the model by Cremonini and Antonowicz measures both the academic attraction of a country towards both students and scholars. Secondly, their model can exclusively be applied to European countries that are participating in the Erasmus scheme of the EU. Thirdly, this model does not include factors that can explain the witnessed variation in academic attraction among countries. Therefore, in comparison the model proposed in this thesis has a more global approach and uses more theory based explanatory variables to measure academic attractiveness.

In general it can be said that the model as proposed in this study has some features not seen in existing models. These novelties are, firstly, reflected in the global approach and scope. Secondly, this model employs a country perspective rather than the more used student perspective. Lastly, this model has a theoretical foundation which is grounded on an economical/political theory and a sociological theory. These features offer a unique (but also experimental) approach to understanding the academic attractiveness of countries.

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## Chapter 5: Measuring the academic attractiveness of countries

In this chapter the model which was developed to explain and measure the academic attractiveness of countries from a student perspective will be applied and analysed. The results of the application of the model will be discussed for each pillar. From this discussion we can conclude which country is from a theoretical perspective most attractive. This analysis is followed up by several statistical tests which analyse the correlation of the model to the number of inbound foreign students. In addition the model itself will be statistically analysed. In the conclusion of this chapter the discrepancy in outcomes of both methods of analysis will be discussed.

### 5.1 Country description

In Chapter Four the key statistics of the 22 selected countries were given in Table 4.1. These statistics will be summaries in this section. To begin, the countries vary with respect to the total population. The country in the sample with the lowest population is Ireland with 4.2 million people. The largest country, in the sample, is by far the USA with 307 million people. The population size is also reflected in the total student population; Ireland 190.000 students and the USA 17.8 million students. The country with the lowest inbound foreign students is Finland with 10.000 students. The USA is the country with the largest amount of foreign students (596.000). The countries with the highest number of outbound students are Korea (107.000), followed by Germany (86.000) and France (63.000). The country with the lowest amount of outbound students is New Zealand (4.000). There are three countries which have more outbound than inbound students. These countries are Korea (-75.000), Greece (-17.000) and Ireland (-3.000). Using the total amount of students and the inbound and outbound figures it is possible to see which countries are from a relative point of view attracting and sending the largest amount of students. By far the country with the most foreign students, compared to the total amount of students, is New Zealand (26.8%). New Zealand is followed by Australia (19.5%) and Switzerland (19.3%). In relative terms Korea is attracting the lowest amount of foreign students (1%). In this respect, Italy (2.8%) and Finland (3.3%) are second and third. The country with the most outbound students, compared to the total amount of students, is Ireland (10.3%). Norway comes second with 6.4% and Greece third with 6.3%. The USA and Australia are in relative terms sending the lowest amount of students (0.3% and 0.9%). In both the SJTU and THE rankings, the countries with the most institutions in the top 500 are:

the USA (159/106), the UK (42/50) and Germany (40/42). The countries with lowest amount are Portugal (2/3), Greece (2/5), Ireland (3/7) and Norway and Denmark (both 4/4). From a relative perspective the country with the most ranked institutions for its student population are in the SJTU ranking: Switzerland, Austria, and Sweden. In the THE ranking the first three countries are: Switzerland, Ireland and New Zealand. In the SJTU rankings the countries which have the least ranked institutions per student are: Korea, Greece and Spain. In the THE ranking these are: Korea, Spain and the USA.

From the above presented data it is clear that there is a substantial difference between the overall data and the data made relative to the total student population in a country. Moreover, given the very large students population in the USA it is no surprise that, in the relative outcomes the USA is scoring below average. It is also surprising that Ireland has a negative mobility balance, but nonetheless is, in the relative scores, the second most ranked country in the THE ranking. This can however also be an indication of a bias in the THE ranking itself.

## 5.2 Applying the model

In this section the outcomes of the empirical analysed model will be presented per pillar. In these subsections I will discuss the used scales and outcomes in general. In the last subsection an overall view of all the countries is presented. In appendix II, the conceptualised outcomes for the individual countries can be found.

### 5.2.1 Economic pillar

In this pillar the economical power of the countries is measured. To do so, three factors were used. The scores on each of the factors and the average score on the pillar are presented in Table 5.1.

**Table 5.1: Outcomes of the economic pillar**

	Economical power		Investment in education	Cost of higher education	Average
	GDP	GDP capita			
Australia	0.59	7.29	5	6	4.72
Austria	0.22	6.86	8	9	6.02
Belgium	0.26	6.46	8	9	5.93
Canada	0.90	7.17	9	6	5.77
Denmark	0.14	6.77	10	10	6.73
Finland	0.13	6.58	10	10	6.68
France	1.48	6.05	7	9	5.88



Germany	2.04	6.46	6	m	<b>3.62</b>
Greece	0.22	5.18	m	m	<b>1.35</b>
Ireland	0.14	8.25	7	10	6.35
Italy	1.31	5.78	5	9	5.27
Japan	3.07	6.27	4	6	4.83
Korea	0.92	4.95	5	6	4.22
Netherlands	0.46	7.38	7	8	5.71
New Zealand	0.08	5.11	6	8	4.80
Norway	0.18	10.00	8	10	7.05
Portugal	0.17	4.22	6	9	4.85
Spain	1.01	5.86	6	9	5.47
Sweden	0.24	6.85	9	10	6.52
Switzerland	0.23	7.79	9	m	<b>4.25</b>
UK	1.52	6.51	6	6	5.01
USA	10.00	8.65	6	5	7.41

The scale used to index the GDP's of the countries is based on the GDP on the USA. From this the scores of the other countries are calculated. The same approach is taken to calculate the GDP per capita. Here the GDP per capita of Norway is taken as score 10. For the measurement of the investment in education and cost of higher education scales are constructed. If a government invested more than 1.60% of its GDP in education the score 10 was given. The score of 1 was given is the investment was between 0.05% and 0.09% of the GDP. For the cost of higher education the average tuition fee charged by public institutions was used. The scale for this was based on the highest found average tuition fee charged by both public and private institutions. Hence, a tuition fee of more than \$ 14.000 USD is taken as score 0. Countries that charge no tuition fee for their public institutions have a score of 10. Using these scales, the country with the highest average score is the USA followed by Norway. The two lowest scoring countries are Greece and Germany. It should be noted that data for Greece is missing on the investment in education factor and on the costs of higher education factor. For Germany and Switzerland data on the latter is missing. The missing data for these countries have affected the performance of these countries on this pillar. Hence, the outcomes with respect to these countries are biased.

### 5.2.2 Political pillar

This pillar represents the political power of countries. It is measured in two factors: the political influence on basis of the voting power within the IMF and the level of internationalisation on basis of the EduGATS index (Verger, 2009). The outcomes are presented in Table 5.2.

**Table 5.2: Outcomes of the political pillar**

	Political Influence	Level of internationalisation	Average
Australia	0.88	5	2.94
Austria	0.51	0	0.26
Belgium	1.25	6	3.62
Canada	1.72	m	<b>1.72</b>
Denmark	0.45	6	3.22
Finland	0.35	m	<b>0.35</b>
France	2.90	5	3.95
Germany	3.51	6	4.75
Greece	0.23	5	2.61
Ireland	0.23	6	3.12
Italy	1.90	5	3.45
Japan	3.59	2	2.79
Korea	0.79	m	<b>0.79</b>
Netherlands	1.40	6	3.70
New Zealand	0.25	6	3.12
Norway	0.46	5	2.73
Portugal	0.24	6	3.12
Spain	0.83	6	3.41
Sweden	0.65	m	<b>0.65</b>
Switzerland	0.94	7	3.97
UK	2.90	6	4.45
USA	10.00	0	5.00

To put the outcomes on the political influence factor on a 10-point scale the voting power of the USA is taken as score 10. From this the scores of the other countries are calculated. The results show that in term of political influence the USA is leading. The USA is followed by Japan and Germany. The countries with the lowest influence are Greece, Ireland and Belgium. For the level of internationalisation a scale is used were score 1 in the EduGATS index is given the score 10. The outcomes revile that Switzerland is leading in term of the EduGATS index and thus also in the level of internationalisation. Both Austria and the USA appear not be involved in WTO/GATS and score because of this exceptionally low. For Canada, Finland, Korea and Sweden data was missing. This influences the average score of these countries.

### 5.2.3 Leading role pillar

In this pillar the ability of a country to stay in a leading role in the world society is measured. To do so two factors are used: the social environment and the diversity of the student population. The results are presented in Table 5.3.

**Table 5.3: Outcomes of the leading role pillar**

	Social environment	Diversity student population	Average
Australia	8	5	6.5
Austria	6	2	4
Belgium	7	1	4
Canada	8	5	6.5
Denmark	7	1	4
Finland	8	0	4
France	4	9	6.5
Germany	8	9	8.5
Greece	7	0	3.5
Ireland	7	0	3.5
Italy	1	3	2
Japan	2	1	1.5
Korea	5	0	2.5
Netherlands	6	0	3
New Zealand	6	1	3.5
Norway	5	0	2.5
Portugal	6	0	3
Spain	4	3	3.5
Sweden	6	1	3.5
Switzerland	9	1	5
UK	5	10	7.5
USA	7	10	8.5

The social environment factor is measured by the political instability index of Jong-A-Pin (2006). This index gives results between -3 (very stable) and +2 (very unstable). This range has been used to place the outcomes on a 10-point scale. On this scale Switzerland scores the highest and Italy the lowest. The diversity of the student population is calculated on basis of the presence of more than 1000 students from a single nation. If a country has more than 50 nationalities with more than 1000 students represented in their higher education system, 10 points are awarded. Using steps of 5, 1 is awarded if a country has between 5 and 9 nationalities with more than 1000 students represented. On this scale both the UK and the USA score 10. As expected, the advantage of largest countries clearly shows in this factor. Hence, the smaller countries, mostly in continental Europe, score low.

#### **5.2.4 World culture pillar**

The pillar world culture represents the efforts of countries to act according to the dominant world culture. These efforts are measured by two factors: the recognisability of the higher education system and the language of instruction in higher education programmes. The outcomes on both factors are presented in Table 5.4.

**Table 5.4: Outcomes of world culture pillar**

	Recognisability HE system	Language of instruction	Average
Australia	10	10	10
Austria	4	2	3
Belgium	8	3	5.5
Canada	10	10	10
Denmark	8	7	7.5
Finland	8	7	7.5
France	6	5	5.5
Germany	2	5	3.5
Greece	8	2	5
Ireland	10	10	10
Italy	8	2	5
Japan	8	5	6.5
Korea	8	5	6.5
Netherlands	8	7	7.5
New Zealand	10	10	10
Norway	8	5	6.5
Portugal	8	2	5
Spain	8	2	5
Sweden	8	7	7.5
Switzerland	6	5	5.5
UK	10	10	10
USA	10	10	10

Both factors are measured on basis of constructed scales. For the recognisability of the higher education system the countries which have an Anglo-Saxon tradition all score 10. The score of 1 is assigned to countries which have less than 25% of their students enrolled in a bachelor/master structured programme. With 25% - 49% of its students enrolled in a bachelor/master structured programme Germany scores lowest on this factor. The language of instruction is to a large extent determined by the language spoken in a country. It is nonetheless for countries that do not have English as their mother tongue a way to become more attractive. To measure this, four qualifications (all or nearly all, most, some and none or nearly no programmes offered in English) are used to place countries on a 10-point scale. As a result the English speaking countries in our sample have the highest possible scores. The country with the least amount of programmes offered in English are: Austria, Greece, Italy, Portugal, and Spain. As an overall result on this pillar it can be said that the English speaking countries are, comparatively, acting most in line with the world culture. This outcome offers an (theoretical) explanation for the high percentage of foreign students in the higher education systems of *inter alia* New Zealand and Australia.

### 5.2.5 Perception pillar

The last pillar of the theoretical model is perception. For this pillar only one factor was operationalised. This was the perceived reputation of the higher education system. This was measured by the number of ranked institutions in both the SJTU and THE rankings. The results of this are presented in Table 5.5.

**Table 5.5: Outcomes of perception pillar**

	Perceived reputation HE system
Australia	4
Austria	3
Belgium	3
Canada	5
Denmark	2
Finland	3
France	5
Germany	7
Greece	2
Ireland	3
Italy	4
Japan	6
Korea	3
Netherlands	4
New Zealand	3
Norway	2
Portugal	2
Spain	3
Sweden	4
Switzerland	3
UK	7
USA	10

The scale to measure the perceived reputation is based on the average number of institutions the countries have in the SJTU and THE ranking of 2008. To place these outcomes on a 10-point scale the following distribution is used: 10=  $\geq 100$ , 9=  $\geq 75$  -  $< 100$ , 8=  $\geq 50$  -  $< 75$ , 7=  $\geq 40$  -  $< 50$ , 6=  $\geq 30$  -  $< 40$ , 5=  $\geq 20$  -  $< 30$ , 4=  $\geq 10$  -  $< 20$ , 3=  $\geq 5$  -  $< 10$ , 2=  $\geq 2$  -  $< 5$ , 1=  $\geq 1$  -  $< 5$ , and 0= 0. Using this scale the countries that score highest are the USA, Germany and the UK. Of the countries in the sample Denmark, Greece, Norway and Portugal score the lowest.

### 5.2.6 Overall

The average results on the pillars are used to conceptualise the outcomes in Figure 5.1 (see Appendix I). It should be noted that these outcomes are skewed by missing data. Hence to

calculate the overall results, the z-scores (of the unscaled variables) are used. The z-scores give the factors a standardised value and therefore, as compared to the scaled outcomes, a more balanced overall result. This is because the averages on the pillars are less influenced by missing data. To calculate to overall result of the countries the z-scores on the pillars are added up. These results are presented in Table 5.6.

**Table 5.6: Outcomes on all pillars**

	Economical	Political	Leading role	World Culture	Perception	TOTAL
Australia	0.093	-0.020	-0.286	1.180	-0.023	0.944
Austria	-0.096	-1.473	-0.207	-1.615	-0.468	-3.860
Belgium	-0.200	0.182	-0.470	-0.399	-0.433	-1.319
Canada	0.606	0.020	-0.282	1.180	0.049	1.573
Denmark	0.065	-0.073	-0.595	0.248	-0.540	-0.894
Finland	0.052	-0.298	-0.795	0.248	-0.450	-1.244
France	-0.121	0.356	1.347	-0.684	0.138	1.035
Germany	-0.067	0.659	0.358	-1.685	0.779	0.046
Greece	-0.393	-0.193	-0.538	-0.614	-0.557	-2.296
Ireland	-0.128	-0.100	-0.598	1.180	-0.504	-0.150
Italy	-0.534	0.195	1.205	-0.614	-0.041	0.212
Japan	-0.026	-0.272	0.943	-0.183	0.405	0.867
Korea	-0.348	-0.195	-0.065	-0.183	-0.361	-1.152
Netherlands	0.033	0.217	-0.390	0.248	-0.272	-0.164
New Zealand	-0.429	-0.003	-0.180	1.180	-0.486	0.082
Norway	0.379	-0.210	-0.209	-0.183	-0.540	-0.763
Portugal	-0.802	-0.098	-0.438	-0.614	-0.593	-2.545
Spain	-0.455	-0.008	0.391	-0.614	-0.379	-1.065
Sweden	-0.035	-0.228	-0.290	0.248	-0.326	-0.630
Switzerland	0.388	0.249	-1.073	-0.684	-0.397	-1.517
UK	0.186	0.564	1.117	1.180	0.958	4.006
USA	1.833	0.727	1.053	1.180	4.041	8.835

From these results it can be concluded that according to the model to measure the academic attractiveness of countries, the USA is the most academic attractive country. The USA is respectively followed by: the UK, Canada, French, Australia, Japan, Italy, New Zealand, Germany, Ireland, the Netherlands, Sweden, Norway, Denmark, Spain, Korea, Finland, Belgium, Switzerland, Greece, Portugal, and Austria.

### 5.3 Testing the model

In this section several statistical tests have been used to scrutinize the outcomes of the theoretical model. Goal of this is to test the explanatory power of the model and the pillars. From this we can see if the model is actually explaining the variance found on the inbound

student mobility across countries. The overall inbound foreign students in to a country is used as an indication of the level of academic attractiveness and thus used as dependent variable. The pillars and factors (indicators) of the theoretical model are used as independent variables. The z-score on the 11 indicators are used for these analyses.

To start the theoretical model is reviewed. This analysis shows that there is a significant correlation between the overall outcome of the model and the number of inbound foreign students (0.899 at  $\alpha = .001$ ). By using a multiple linear regression analysis it is determined to what extent the model explains the variation in the dependent variable. With a coefficient of determination of 0.809 it can be said that the overall model is a good predictor for the variance found in the academic attractiveness of countries in terms of their inbound student mobility.

Next in the analysis we go deeper in to the model by analysing the used pillars and factors<sup>30</sup>. To test the pillars and factors again a multiple linear regression analysis is used. The reliability is also calculated. From this we see which factors correlate the most to the inbound student mobility. This also gives an impression of explanatory power of the pillars in the model. The combined pillars have a coefficient of determination of 0.905. This means that together they explain the variance in the dependent variable very well. However, the correlation of the economical, political, leading role, world culture, and perception pillars themselves to the dependant variable is, with the exemption of the latter, quite weak (subsequently: .049, .101, .185, .052 and .722). Only the perception pillar is significant (at  $\alpha = .05$ ). The Cronbach Alpha's which measures the extent to which the pillars measure the same aspects reflects this outcome<sup>31</sup>. Hence, the constructed pillars on their own, with the exception of the perception pillar, no not explain the found variation in academic attractiveness. An explanation for this is that the used factors in the pillars have a lower correlation than theoretically assumed. It can also mean that the operationalisation of the factors have let to the inclusion of indicators that are not correlated to each other. With limit data available and only 11 indicators included this is also likely to have happened. Furthermore, the outcome also suggests that there is an overlap in what the indicators from

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<sup>30</sup> Note that all factors, except the economical power, consist of one indicator.

<sup>31</sup> The outcomes are for the economical pillar  $\alpha = 0.173$ , the leading role pillar  $\alpha = 0.002$ , and the world culture pillar  $\alpha = 0.746$ . Outcomes for the political pillar were due to the missing data in the EduGATS data not available. Since the perception pillar has only one indicator the  $\alpha$  is not relevant.

different pillars are measuring. An example of this is the voting power within the IMF which is also a reflection of economical power. Another factor that can explain the outcome is the relatively small sample. Hence, it can be concluded that the overall model is measuring the academic attractiveness of countries (as measured by the inbound foreign students), but that the constructed pillars have a limited capacity to do so. As explained this is likely to be due to the overlap between the included indicators and the relatively small sample included in this research. Hence, with the used data and missing operationalisations on three of the thirteen factors, the theoretical model cannot be sufficiently tested.

Evidence of the overlap between factors is visible in the weak correlation between factors in the same pillar and stronger correlation to factors in other pillars. In this respect the indicators that have a significant correlation ( $> 0.7$ ) to each other can be divided in to two groups: (1) the GDP, average tuition fee (not to the GDP), the voting power in the IMF, the diversity in the student population and the perceived reputation, and (2) the bachelor/master structure with the amount of programmes taught in English. The indicators in the first group also have a strong and significant (at  $\alpha = .001$ ) correlation ( $> 0.8$ ) to the inbound foreign students. These indicators combined have a coefficient of determination of 0.984. This means that these indicators together explain the variance in the inbound foreign students very well<sup>32</sup>. From this it can be conclude that these five factors are capable of explaining the variance found in the number of inbound foreign students.

Although not included as an indicator, the number of ranked institutions made relative to the total student population of a country was also tested for its correlation to the number of foreign students. In this test no correlation was found. This implies that what counts in the attractiveness of a country is the total amount of ranked institutions, rather than the number of ranked institutions per student.

The indicators that do not have a significant correlation to the inbound foreign students are: the GDP per capita, GDP spend on education, the EduGATS index, political instability, having a bachelor/master structure and the amount of programmes offered in English. These indicators are therefore seemingly weak predictors of the inbound foreign student mobility. With respect to the last two indicators it should be noted that the data had a low variance with

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<sup>32</sup> This also shows in the Cronbach Alpha of these combined factor, which is  $\alpha = 0.946$ .



most countries scoring comparatively high. This means, as the correlation data indicates, there is a strong coherence between the sample. Hence, it can be said that the included countries all subscribe to the world culture. Because of this the pillar seems to be unrelated to the amount of inbound foreign students. If data was included for countries not in the OECD the results might have been different. From the data it can also be concluded that the social environment and level of internationalisation, as measured by the political instability and the EduGATS index, have a low correlation to the inbound foreign students. These factors seem for this reason not to be capable of explaining the variance found in the inbound foreign students<sup>33</sup>. The same can be said for the investment in the higher education system (as measured by the GDP spend on education) and the GDP per capita.

Using scatter plots we see that some indicators seem to be screwed by outliers. Closer inspection reveals that this is due to the large size of the USA as compared to the other countries in the sample. To see if this has an influence on the statistical analysis, the USA has been removed and the above described tests have been done again. The result is that, although the correlations are slightly weaker, there is no loss or gain in significance.

## **5.4 Conclusion**

In this chapter the theoretical model has been applied and analysed. The outcomes show as, an overall result, that the country with the highest score on the model is the USA, followed by the UK and Canada. The countries with the lowest scores were Greece, Portugal and Austria. These outcomes are based on the theoretical assumption that there is a correlation between the pillars (and factors) to the academic attractiveness of countries. To test this assumption statistical tests have been used which take the model as the independent variable and as dependent variable the amount of inbound foreign students. The results show there is a high correlation between the entire model and the academic attractiveness of countries. This means that the overall outcome on the model is a good predictor for the amount of inbound foreign students. From this it is also possible to determine which countries should, on basis of the theoretical model, have a higher number of inbound foreign students than they actually have. These countries are: Finland, Denmark, Norway, the Netherlands, Ireland, Italy, Japan, and Canada. Countries that, based on their score on the theoretical model, receive a larger number

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<sup>33</sup> This suggests that political stability is foremost a “push” factor (see Section 2.3.1)

of foreign students than account for are: Austria, Portugal, Greece, Switzerland, Belgium, Spain and Germany.

From a closer look into the theoretical model it became clear that five indicators were explaining the found variance the most. Amongst other things these results suggest that a countries academic attractiveness does not increase by having lower tuition fees and that the number of institutions in the global university rankings (the perception factor) does have a significant influence on the attractiveness. This is evidence for the spillover effect world class universities can have on the academic attractiveness of countries. The other implication from this analysis was that the used factors have a low correlation to the constructed pillars of the theoretical model. This implies that with the factors/indicators used, the model was not tested to its fullest extent. To do this would require the inclusion of more (accurate and comparable) data. With this the operationalisations of the factors could perhaps also be improved. Given that countries are increasingly sharing data and new academic research on the internationalisation of higher education systems becomes more available, this might be possible to do in future research.

## **Chapter 6: Conclusion, summary and reflection**

In this conclusion the four research questions, and by doing so the initial research problem, will be discussed and reflected upon. In addition to this, the research outcomes of the measurement of academic attractiveness will also be discussed. This discussion is used to reflect upon the used theories to come to the theoretical model. In the concluding remarks of this thesis, I identify aspects of this research which are in need of more attention and give suggestion for possible future research related to the topic of academic attractiveness.

### **6.1 Reflection on the research problem and questions**

To recap the research problem was: how can we better understand the academic attractiveness of countries to students? The research questions were: (1) what is the contextual background of academic attractiveness of countries to students?, (2) what is academic attractiveness of countries to students and why do countries want to be this?, (3) what makes a country academically attractive to students and how can this be explained?, and (4) how can academic attractiveness of countries to students be measured?

To answer the first research question the contextual background of academic attractiveness was discussed. In this discussion, the historical background revealed that the academic attractiveness of countries is rather dynamic. Thus the attractiveness of countries can vary over time. The contextual background also indicated that in the contemporary society higher education has become a significant global market. This implies and is in line with the WTO/GATS, that education is a service that can be traded. This perspective seems to be confirmed by the high percentage of foreign students in some countries' higher education systems (most noticeably in New Zealand and Australia). An important finding in the contextual background was as well that countries are trying to increase their attractiveness to (foreign) students. This shows in efforts to increase the excellence of institutions (in e.g. China, Germany, and Finland). Evidence of an intensified focus on the promotion of a countries' higher education system is also visible in the creation of support agencies, such as the British council and the NUFFIC in the Netherlands.

In a nutshell, the contextual background found that countries are trying to increase their academic attractiveness. The second research question was posted to firstly understand what

this academic attractiveness actually is, and secondly why countries want to be it. Academic attractiveness of countries is essentially the capacity of a country to be able to attract the brightest and a large number of international and domestic academics, as well as international and domestic students, to their national higher education system. For this reason it are the countries with the largest number of foreign students that are seen as attractive. Academic attractiveness can also be seen as an aspect of the broader concept of “civilization attraction” (Collins, 2001). From this concept, it can also be deduced that academic attractive countries have certain basic characteristics that allows them to be academically attractive. These characteristics are related to the stimulation, promotion, organisation and appreciation of higher learning, openness to different schools of thoughts and includes the freedom of expression, having a network of diverse institutions for higher learning where academics as well as students meet, and ensuring that the institutional infrastructure is flexible, yet strong enough to, when needed, allow for interaction and resists pressures from within the economical and political environment. This, however, does not give an answer to the question why countries want to be academically attractive to students. To answer this, three broad rationales were found. The first is that countries can have a political rationale for being academically attractive. This can be to “boast” their intellectual capacity. Secondly, there is the cultural approach which is supposed to increase the mutual understanding between cultures. Thirdly, countries can have an economical rationale. In this respect countries want to be academically attractive for economical reasons. It is assumed that countries, from a resource dependence point of view, want to be attractive to their domestic students by default. This is because of their importance to maintain a stable national labour force. Using the resource dependence point of view it can also be argued that for countries that rely on the (financial) contribution of foreign students to their national higher education systems being academically attractive to this segment is a must. This means that countries that do not (yet) have the same resource dependence, being academically attractive to foreign students can be seen as more of a need.

As determined by the contextual background, academic attractiveness can be seen in the context of a globalised world. Hence, it was assumed that theories that try to explain globalisation as a whole will also have implication for what it is that makes countries academically attractive. Two theories, the world-systems theory and the world-polity theory, were used to explain this. The world-systems theory places the countries in the world in three

categories: the core, the periphery and the semi-periphery. It assumes that the core countries have a strong state and are able to exert influence over other states. To be able to do so, the core countries need, economical and technological dominance, effective diplomacy, and (or) military power. The classification of countries in three positions (the core, semi-peripheral, and peripheral) is also visible in the global mobility patterns. From this follows that the countries in the core are academically most attractive. The world-systems theory explains that this is because of their economical and political dominance as well as their ability to stay in the core position. Hence, to explain the academic attractiveness of countries means that economical and political power as well as the ability of a country to retaining its position in the core area needs to be measured.

The world-polity theory uses the more functional approach of the world-systems theory and gives globalisation a more sociological explanation. In a nutshell, the theory holds that the world-polity spreads across the world and that this is expressed in a shared world culture. The spread of the world culture can be seen as a cause and effect of globalisation. Important is as well that science is seen as the overarching rationale in the world culture. This has two implications for our understanding of academic attractiveness. Firstly, it means that the spread of the “scientific” world culture is an explanation for the increased demand for higher education and thus for the increased study mobility from students all around the world. Since, higher education is most developed in the western world, this also explains the mobility patterns across the world. Secondly, it means that if a country wants to be academically attractive it needs to comply with the world culture and it will also need to be perceived as such. This notion can indeed also be used to explain the increased isomorphism across countries.

From the theoretical explanations of what it is that makes countries academically attractive a theoretical model was constructed. This model consists of five pillars. In the first the economical standing of a country is measured, in the second the political standing, in the third the efforts of a country to stay in the leading position, in the fourth the extent to which a country is engaged and involved in the world culture, and in the fifth how the country is perceived. To these pillars a total of 13 factors were attached. This theoretical model is how the academic attractiveness of a country can be explained and measured. This is thus the answer to the fourth research question.

## **6.2 Reflection on the measurement of academic attractiveness**

The theoretical model which was developed in the theoretical chapter of this thesis was operationalised in the methodological chapter (four) and measured in Chapter Five. This section will discuss and reflect upon the last two aspects. As said earlier the theoretical model consists of 5 pillars and 13 factors. These 13 factors were operationalised by 11 indicators. Ideally more indicators would have been used, but as most researches on macro level, it was difficult to find sufficient and comparable data. In addition, for three factors no usable indicators were found. This means that the operationalised model, as reported on in the methodological chapter, is lacking (construct) validity. Moreover, some indicators did not provide data for all the countries in the sample. With these limitations in mind the academic attractiveness was measured. This was firstly done by constructing 10-point scales so that the selected countries could be compared. Secondly, the outcomes of the model, and the model itself, were scrutinized using statistical tests. The outcomes of the overall model suggest that the USA is the most academically attractive country. Next came: the UK, Canada, French, Australia, Japan, Italy, New Zealand, Germany, Ireland, the Netherlands, Sweden, Norway, Denmark, Spain, Korea, Finland, Belgium, Switzerland, Greece, Portugal, and Austria. By using the inbound foreign students as the outcome of academic attractiveness, and thus as dependent variable, the model was tested. This test showed that there is a high correlation to the model and the amount of inbound foreign students in a country. On closer inspection it became clear that five indicators were contributing the most to the academic attractiveness. These indicators are: the GDP, average tuition fee, the voting power in the IMF, the diversity in the student population and the perceived reputation. The correlation of factors (the indicators) to the other factors in their pillars were (with two exemption) weak. In reflection this can be seen as a result of the described limitations. This is also the reason why it was concluded that the model was not tested to its fullest extent. To be able to do so would require more (comparable and accurate) data. Given that new research on internationalisation of higher education becomes available and that countries are sharing more data, this might be possible to do in future research.

### **6.3 Reflection on the used theories**

In the previous section it was concluded that the theoretical model was not tested to its fullest extent. Because of this the theoretical assumption could not be tested. Based on the five indicators that contributing the most to the academic attractiveness it can however be concluded that the economical and political pillars seem to describe the variation in the academic attractiveness of the 22 countries in the sample the best. An explanation for this is the wide variance of scores between countries. This indeed means that on an economical and political level the 22 countries are heterogeneous. This is in contrast to the world culture pillar where less variance was found. This consequently means that the countries in the sample are on this aspect far more homogeneous.

The theoretical implications of this outcome are twofold. Firstly, this implies that the economical and political factors, and thus the world-systems theory, explain the academic attractiveness of countries to a fuller extent than the world-polity theory. Secondly, the outcomes also suggest that the world-polity theory is rightfully claiming that the core countries are becoming more homogeneous through isomorphic behaviour. Moreover, it is thought that if more countries were included in the sample the importance of the factors related to the world-polity theory would grow in importance.

On basis of this analysis it can be concluded that, although the theoretical assumption were not tested to their fullest extent (in terms of indicators and size of sample), both theories do seem to have a relation to the academic attractiveness of countries. However, to claim that the theoretical model and its five pillars are sufficiently explaining the variance is premature. To be able to do this would require the inclusion of more indicators, a larger sample and a factor analysis.

### **6.4 Concluding remarks**

This research has shown that the academic attractiveness of countries has many different aspects. It can also be said that the academic attractiveness has a long history and is increasingly becoming an issue for countries. This means that developing countries will try to become attractive to their domestic students and that developed countries will try to market their higher education services to foreign students. Hence, the countries with an Anglo-Saxon tradition and market oriented higher education system that seems to flourish the best in the

current world culture are to expect increased competition and a decline in their market share of foreign students. For this reason it is likely that the current mobility patterns are going to change over the coming years. The direction in which this mobility will change is hard to predict. However, based on the theoretical model it can be said that countries such as Canada, Finland, Norway and the Netherlands are not utilising their potential degree of academic attractiveness. If this will affect the number of foreign students studying in these countries remains to be seen.

Since this research was a first step in improving the understanding of the academic attractiveness of countries, many more can be taken. In this respect future research can focus on the efforts of countries to become academically attractive and elaborate on the reasons for the countries to do so. In this respect a logical next step is to improve this research by overcoming the limitations of the theoretical model and the used operationalisations. Another aspect, not included in this research but also interesting, is the attractiveness of countries to academics. What with respect to both students and academics can also be researched is the academic unattractiveness (i.e. the push factors) of countries. Other possible research topics are, *inter alia*, the resource dependence on foreign students of countries and the academic reputation of countries. As comparable data on countries and their higher education systems becomes more available, this might be doable in the future.



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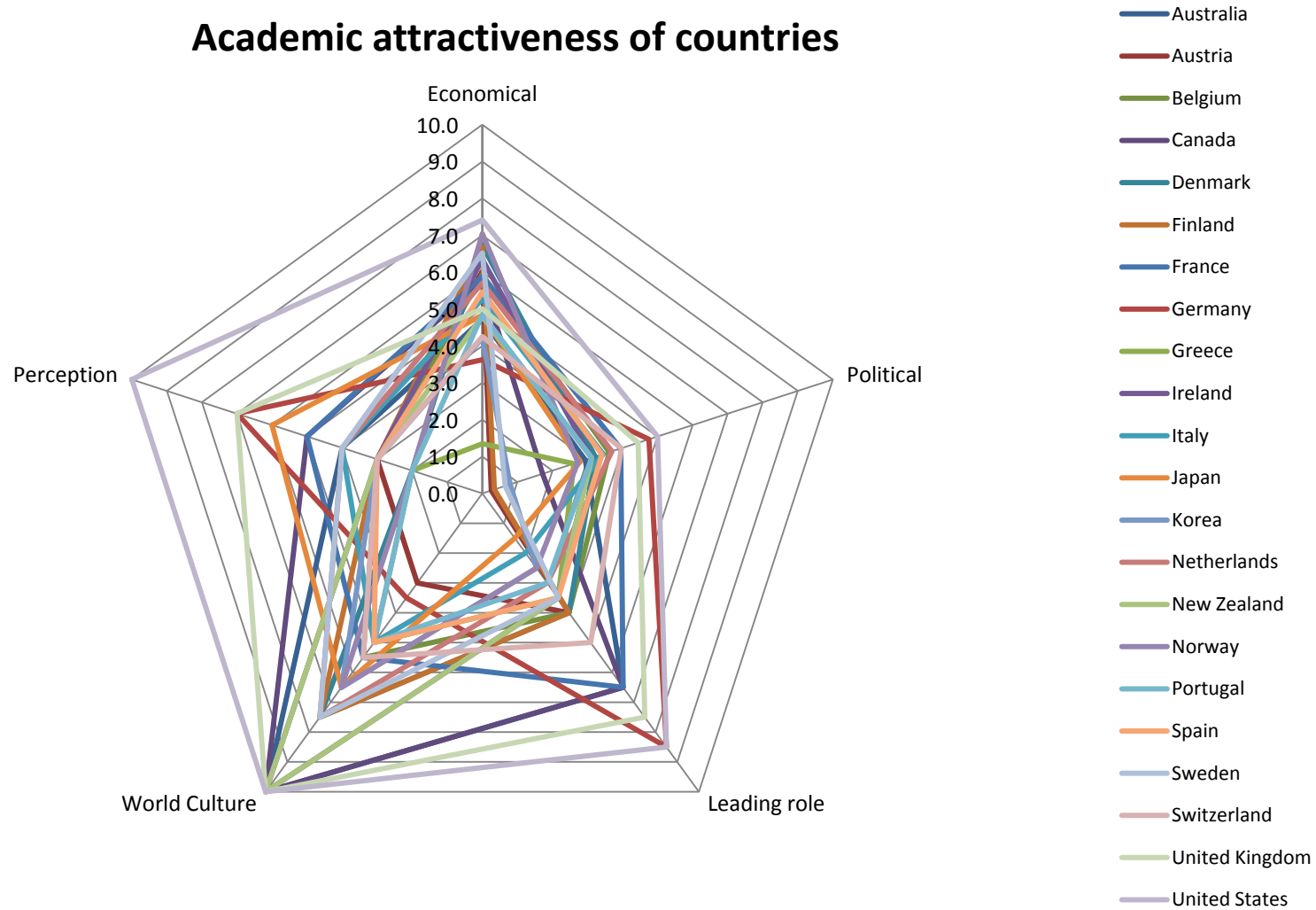
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## Appendix I: Outcomes on the theoretical model

Figure 5.1: Conceptualisation of outcomes theoretical model



## Appendix II: Outcomes of individual countries on the theoretical model

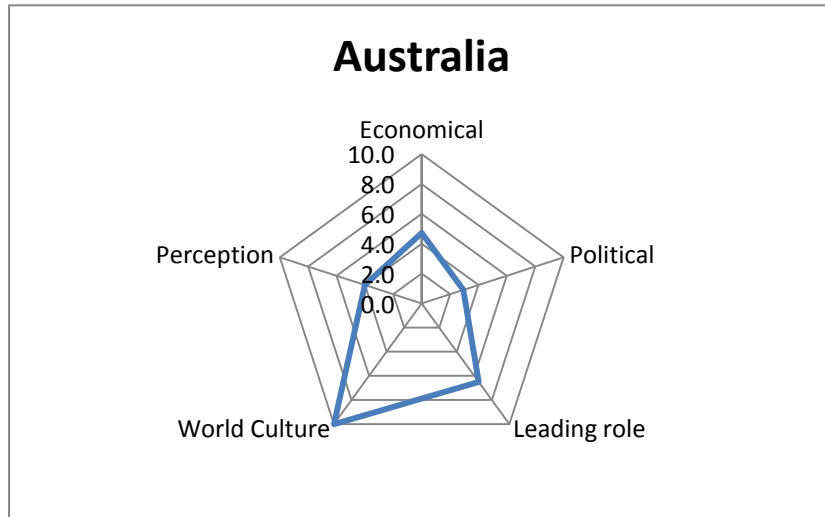


Figure 5.2: Outcome theoretical model Australia

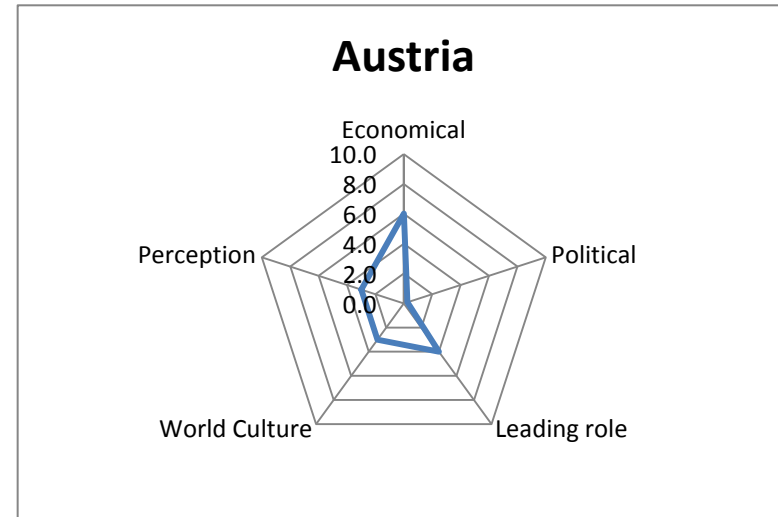


Figure 5.3: Outcome theoretical model Austria

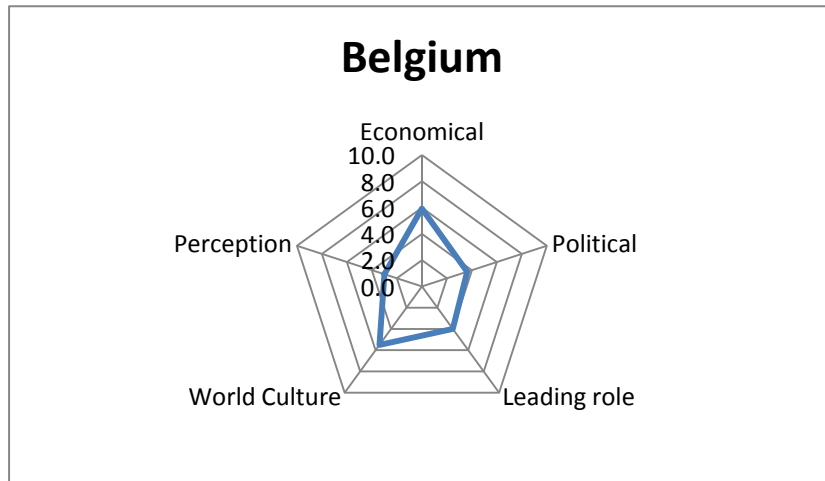


Figure 5.4: Outcome theoretical model Belgium

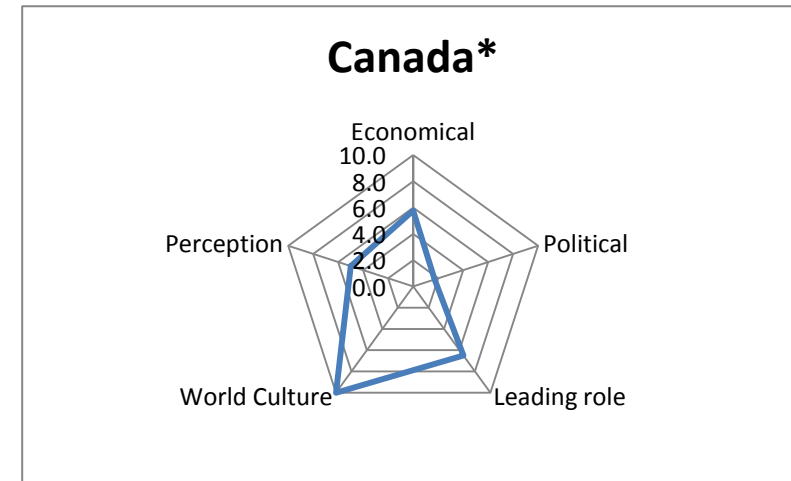


Figure 5.5: Outcome theoretical model Canada (\*=missing data)

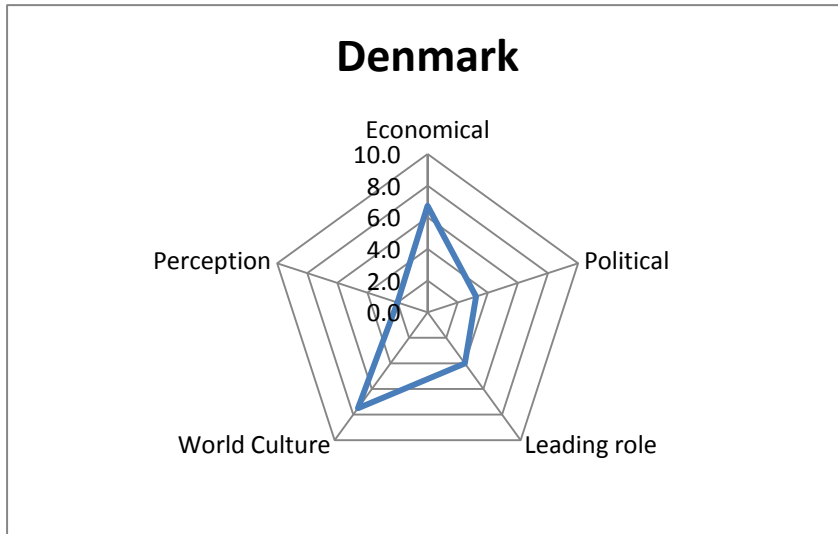


Figure 5.6: Outcome theoretical model Denmark



Figure 5.7: Outcome theoretical model Finland (\*=missing data)

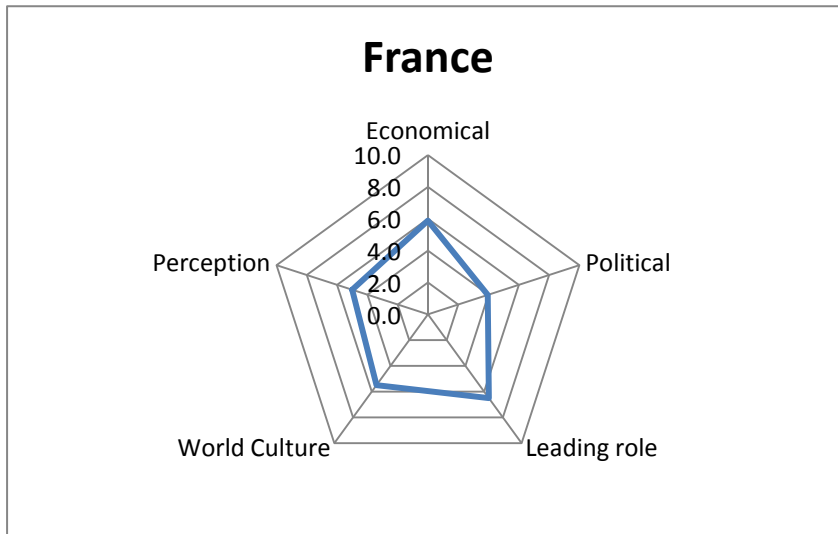


Figure 5.8: Outcome theoretical model France

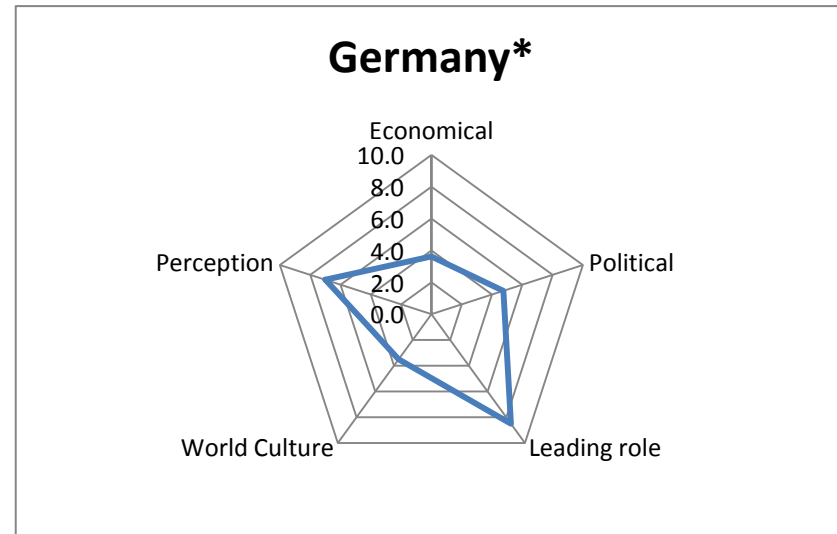


Figure 5.9: Outcome theoretical model Germany (\*=missing data)



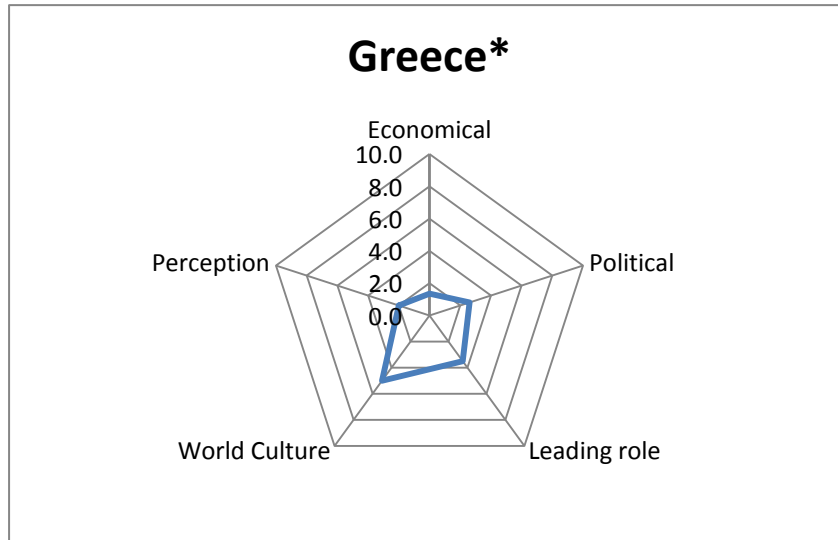


Figure 5.10: Outcome theoretical model Greece (\*=missing data)

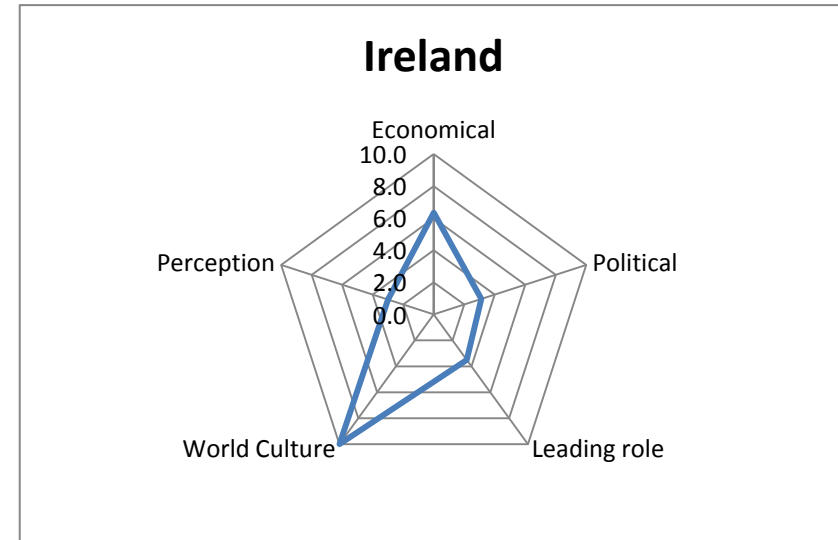


Figure 5.11: Outcome theoretical model Ireland

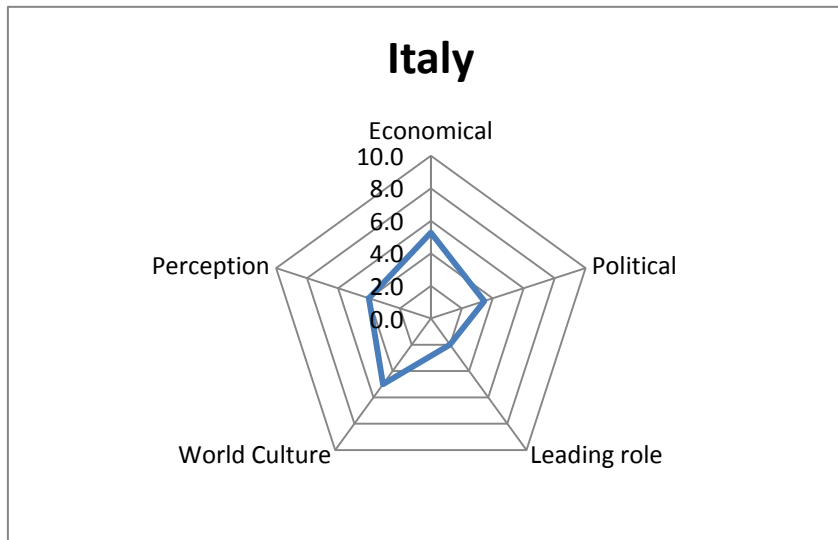


Figure 5.12: Outcome theoretical model Italy

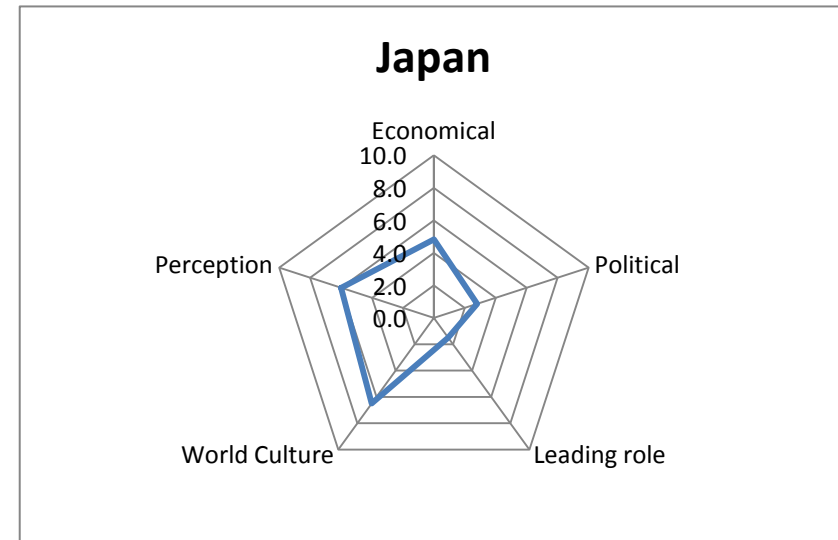


Figure 5.13: Outcome theoretical model Japan

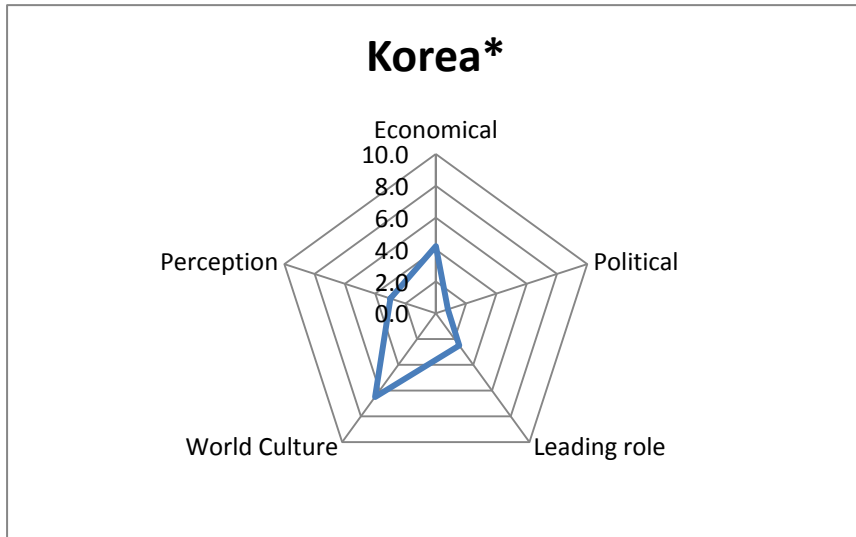


Figure 5.14: Outcome theoretical model Korea (\*=missing data)

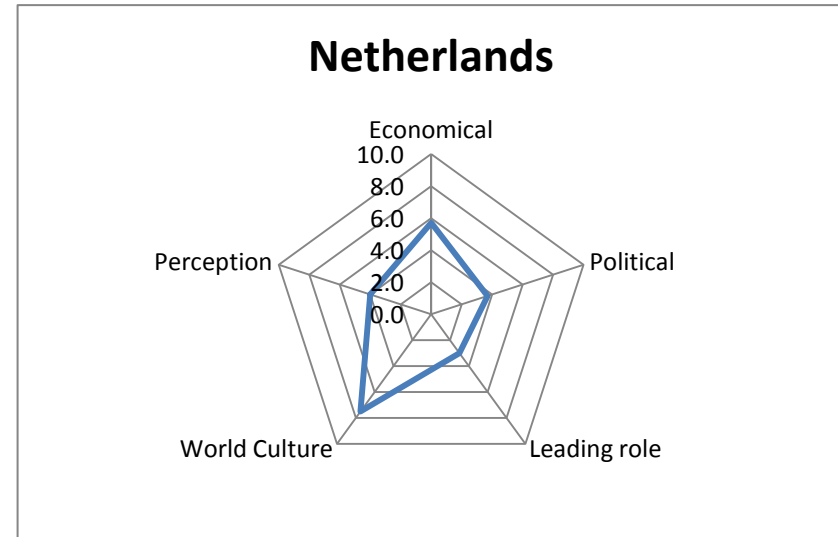


Figure 5.15: Outcome theoretical model Netherlands

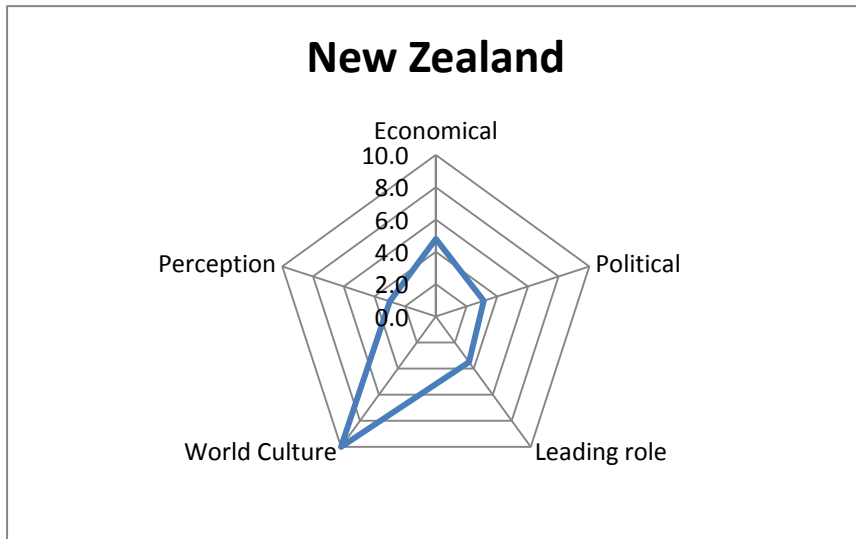


Figure 5.16: Outcome theoretical model New Zealand

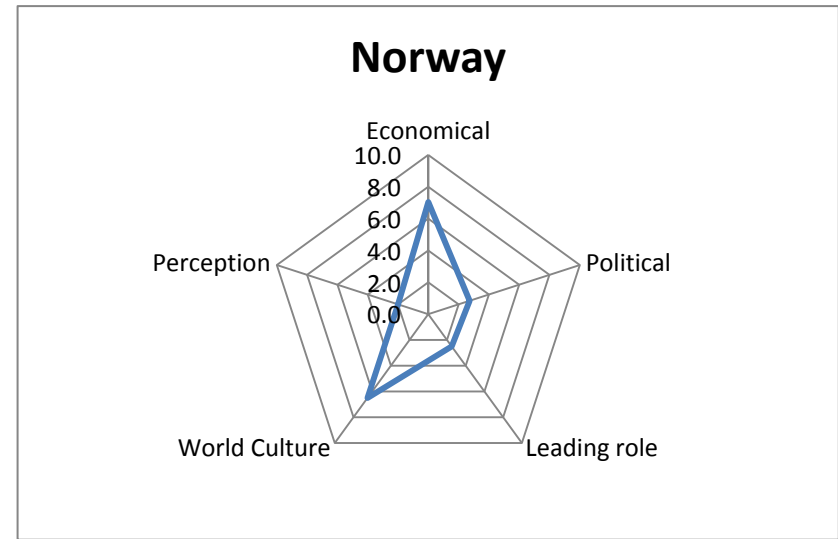


Figure 5.17: Outcome theoretical model Norway

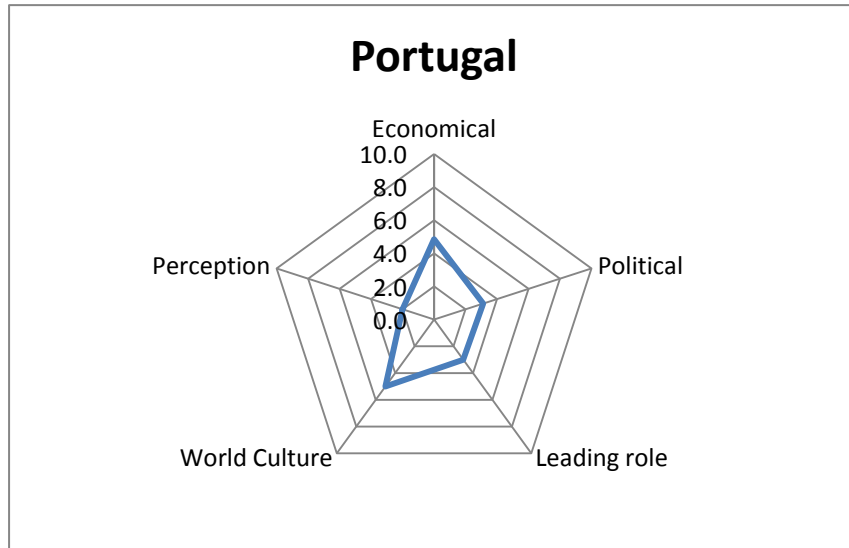


Figure 5.18: Outcome theoretical model Portugal

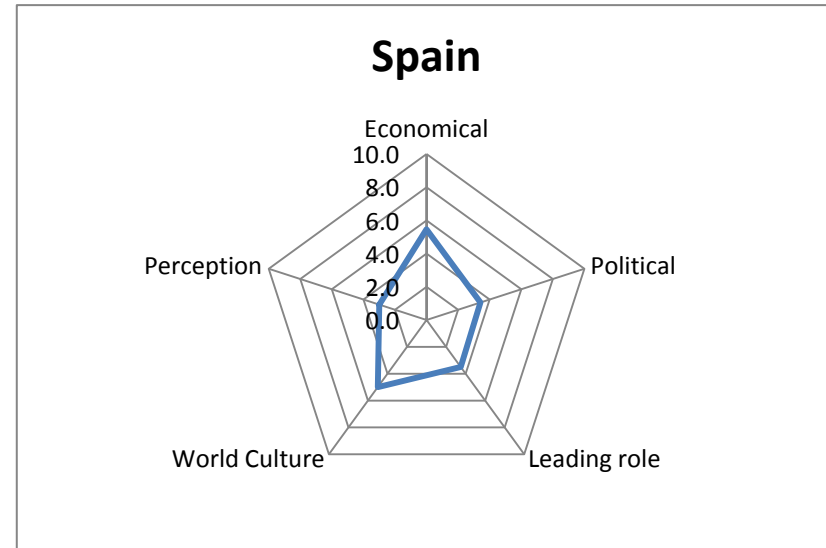


Figure 5.19: Outcome theoretical model Spain

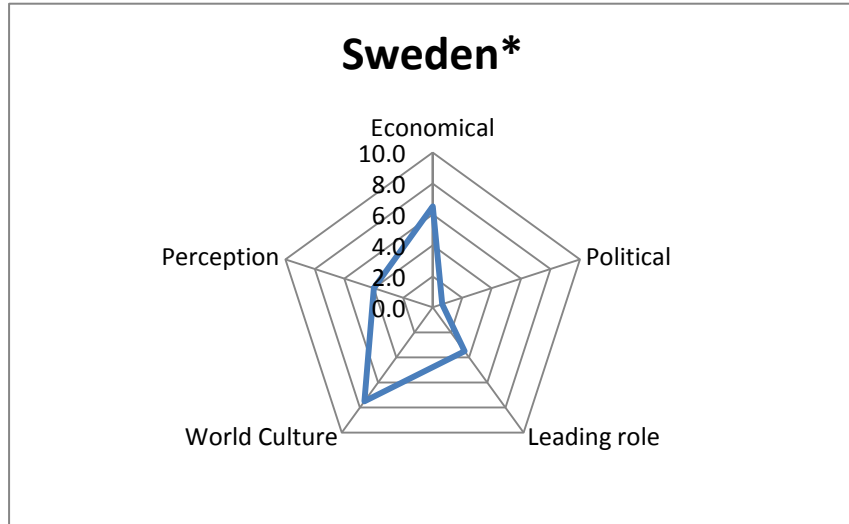


Figure 5.20: Outcome theoretical model Sweden (\*=missing data)

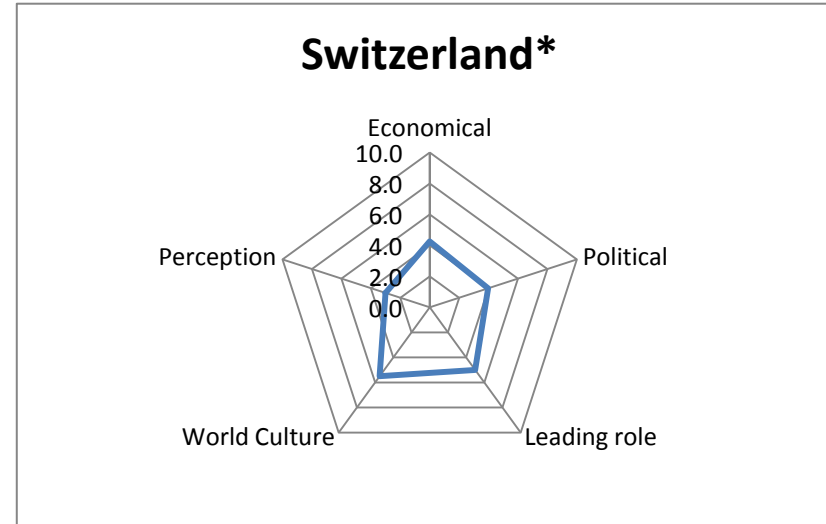


Figure 5.21: Outcome theoretical model Switzerland (\*=missing data)

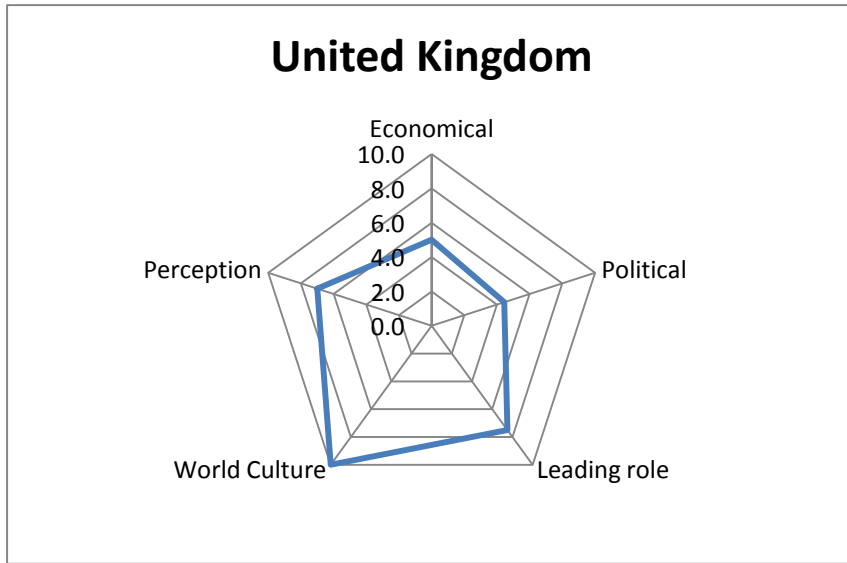


Figure 5.22: Outcome theoretical model United Kingdom

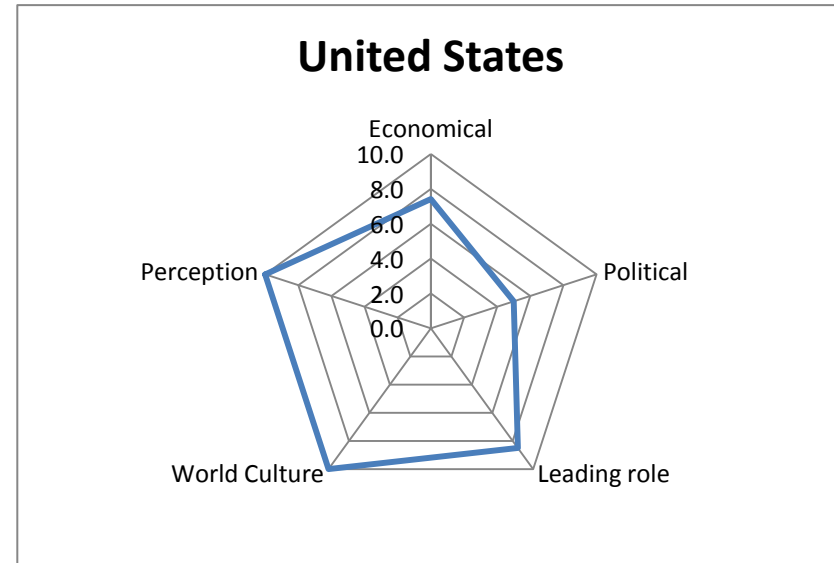


Figure 5.23: Outcome theoretical model United States