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One of the first opinions I received from a friend in response to the idea of my book was that the Olympic Games are generally negative because of the notion that “Olympic athletes all ruin their health.” Although this opinion might stem from a general bias against sport, I had to admit it might still be a valid question worth studying. However, such normative discussion is not the center of focus for this book. Rather than discussing whether elite sport is good or bad, I seek to analyze why winning medals at the Olympic Games has become a priority around the world. As a political science professor, I find it interesting to analyze this phenomenon because Olympic success has become an area of increased government involvement in many countries, with considerable resources from state budgets being channeled into policies that promote national success at the greatest international sporting event.

This book seeks to answer the following questions: how “Olympic success” is defined differently around the globe, why countries are aiming for success at the Games and its Winter and Summer editions, and which policy instruments are countries utilizing to achieve their sporting goals.

During the last decade I have worked as a professor in Lebanon and the United States, however my childhood in Germany played an important role for my interest in the topic of this book. After telling my father about plans to write a book on success and failure of countries at the Olympics, he was adamant that I discuss the role of the German Democratic Republic (GDR). The GDR, better known internationally as East Germany, was a sporting power despite its short period of existence. “We” in West Germany, the Federal Republic of Germany (FRG), had to acknowledge that our East German “brothers and sisters” outperformed us at the Olympic Games. Although there were severe travel restrictions from the West to the East (and even more restrictions vice versa), it remained possible to access East German TV in the northern German city of Hanover where I grew up. I can still remember East German commentators enthusiastically celebrating the successes of their athletes.

Despite being on paper dissolved in 1990, the GDR still ranks historically as a leading sporting power, ranked in the top 10 of the all-time Olympic medal rankings. This is a remarkable feat considering that the country participated in only six Winter and five Summer Olympics over a period of 20 years, from 1968 until

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1988. While the GDR outperformed West Germany at the Olympic Games, it could not win against the “class enemy” (“Klassenfeind”) beyond the sports field. The GDR only existed from 1949 until 1990, when the Berlin Wall fell, and the GDR’s success as a major sporting power could not prevent its political downfall.

While the GDR was more successful overall than the FRG at the Olympics, it was unable to compete with West Germany in soccer, the sport most popular in both German countries. The GDR did have success by beating the FRG at the 1974 World Cup in the group stage. However, West Germany would later go on to win the world championship at the tournament, and the GDR’s early win would become a marginalia in soccer history. Despite competition between East and West, when West German soccer clubs such as Bayern Munich had to play in European competitions in the GDR, many East Germans came to the stadium to cheer for the West German players. While this was in part a form of protest against the dictatorship in their country and a demonstration of their desire for German reunification, it also proved that sporting success is not that always easy to define: There are not only medal rankings, there are also the hearts and minds of the people, and for them a victory in a popular sport such as soccer often means much more than several medals in niche sports.

One scholar at Harvard University’s Institute for Quantitative Social Science (IQSS) suggested in a discussion with me that there might be a simple answer to explain the success or failure of countries, simply by measuring the different number of a country’s athletes in a particular sport. There might be cases that do prove this assumption. For example, Germany has the largest soccer association in the world (the German Football Association, DFB), and the men’s team won the soccer world championship in Brazil in 2014. The German women’s team is successful as well; winning two out of seven World Cups that took place from 1991 until 2015. However, when looking at the men’s World Cups, there are also examples of small countries that have few athletes, but also have tremendous success: Costa Rica, a country with a population of less than five million people, made it to the quarter-finals in Brazil in 2014.

Still, there could be another simple explanation that the population size matters at the Olympics. In the recent history of the Olympic Games, China and the United States have been the most successful countries. Thus are more populated countries more successful at the Games than less populated countries? However, there are numerous exceptions such as the GDR with its 16 million people, which was more successful than more populated countries (such as West Germany). Cuba, for example, is still outperforming other far more populated Latin American countries such as Argentina, Brazil, and Mexico. China, the largest populated country in the world, has recently become an Olympic superpower, but why does India, a country with also more than one billion people, fail at the Games? Uruguay, a country with less than four million people, has won the men’s soccer World Cup and Olympics each twice, as well as a record 15 wins at the prestigious South American Championship, the Copa America. Uruguay has achieved all of this success despite being surrounded by large soccer powerhouses such as Brazil and Argentina.

When discussing other macro variables such as GDP, the same pattern as in the case of population size can be observed: one finds some confirmations but also many deviations. For example, Saudi Arabia's per capita GDP is more than 17 times higher than Kenya's per capita GDP, but Kenya has won more than 17 times more medals than Saudi Arabia at the Olympic Games.

These examples show that explaining success and failure at the Olympic Games is a complex challenge, and while it might be helpful in many cases to study macro variables such as population size and GDP, they do not (1) explain outliers such as Uruguay in soccer, and Cuba and Kenya at the Olympics or (2) explain the less successful performance of similar countries (such as India and China, that have a similar population size). While in the cases of India and China one could argue that China has become economically more powerful than India, there are also cases of countries with similar population size and GDP but completely different performances at the Olympic Games, such as Bulgaria and Hungary, with the latter having won more than double the number of Olympic medals.

There are two bodies of literature on Olympic success. Whereas the first generation of studies have focused on general independent variables such as GDP, geography, and population size, the second generation of research has shifted toward investigating the policy level. One could argue that research has shifted away from quantitative measurement toward qualitative explanations of Olympic success. The problem with many studies of the first generation was that they investigated only a small number of explanatory variables such as GDP, and were not able to explain success cases of low-income countries like Cuba, Ethiopia, and Kenya. In this book I will attempt to explain the whole picture by discussing both the macro as well as the policy factors. By providing examples of outliers in the discussion of the macro variables, I attempt to prove that explanations relying only on macro variables are insufficient, and that it is necessary to study the policy level as well. Without investigating the policy level, success and failure of countries at the Olympics cannot be understood. If there exist favorable macro variables but insufficient sport policies there will be no Olympic success. However, Olympic success is still possible without favorable macro variables if there are effective policies. Thus, any country, whether small or large, economically strong or weak, can enjoy Olympic success to a certain extent.

According to De Bosscher et al., the impact of macro-level factors on elite sporting success remains high: "Macro-level determinants still account for more than 50% of Olympic success and this may be even higher in developing countries" (De Bosscher et al. 2006, 210). However, no evidence is given in the respective work for the ratio of "more than 50%," and I think one should be careful when introducing such numbers that give the impression that Olympic success is the result of a mathematical model that just needs to be applied.

I will introduce in this book what I call the "WISE formula," WISE standing for the promotion of women in sport (W), the institutionalization of the promotion of Olympic sports (I), the specialization in medal-promising sports (S) and the early adoption of trends such as sports newly added to the Olympic program

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(E). The WISE formula is not meant as an accurate formula for precisely planning and calculating success and failure of countries at the Games. I agree that

Uncertainties over the relationship between policies and international sporting success will always remain. The reason for this is that it is impossible to set up an experiment trying to explain a causal correlation of one factor leading to success while other factors are controlled.

(De Bosscher et al. 2006, 209)

My work aims to contribute to a better understanding of forces impacting medal results that can be influenced by governments, with the WISE formula at the center of the analysis.

According to Pfau, the “inconsistency of country performances makes the use of simple econometric models more challenging.” For the fluctuating share of medals by single countries he gives the following examples:

Norway won 5 medals in 1988 and 20 medals in 1992, the United States went from 13 medals in 1998 to 34 medals in 2002 to 25 medals in 2006, Austria had 21 medals in 1992, 9 medals in 1994, and 17 medals in 1998, and so on.

(Pfau 2006, 13)

Pfau made forecasts in his work for the 2006 Winter Olympics in Turin and compared them with the actual results. In his econometrics model he used data from the 1960 to the 2002 Winter Olympics to predict the medal ranking at the 2006 Games. His model was based on five explanatory variables: GDP per capita; population; serving as the host; number of medals won by each country in previous Olympics; and belonging to subsets of countries (such as Scandinavia) that have performed unusually well in the past and won more medals than would otherwise be justified by their economic and demographic characteristics.

While Germany and the United States did finish in the top two places in Turin, as predicted in Pfau’s model, there were some surprises as Canada, Austria, and Russia performed better than expected, while Norway and Italy did not live up to expectations. The prediction that the 2006 Winter Olympics could be the most inclusive of all did not come to fruition, as of the 11 countries Pfau expected to win one medal, only Belarus succeeded.

Andreff aimed to predict in his work the number of medals Russia and China would win at the 2014 Sochi Games, but he failed to accurately predict those results. For China, Andreff expected the country to win at least 11 medals (China ended up with nine medals won in Sochi). Russia was the most successful country in Sochi according to all different rankings (more gold medals than any other country and more medals in total than any other nation-state), but Andreff predicted that Russia was “not likely to win the biggest number of medals at Sochi Winter Games” (Andreff 2013, 338). I agree with Andreff when he states, “Fortunately, economists are not capable to predict all the detailed Olympics results, otherwise why still convene the Games?” (Andreff 2013, 323).

The WISE formula is not a tool for predictions. It should be understood as a simple model with few explanatory variables that presents general guidelines for governments on how to develop elite sport policies. While detailed policies need to be adjusted to the country-specific context, it provides a framework for how a country can succeed at the Games. I will later explain that certain macro variables might apply to single sports (for example the wealth of a country in expensive sports such as sailing) but have only a limited explanatory power when the Olympics as a whole, with all its sports and events, are discussed. I do not claim that the variables represented in the WISE formula are the only factors that help to explain sporting success, but they certainly represent a substantial proportion of Olympic success. Applying the WISE formula is a precondition for overall success at the Summer and Winter Games. Countries that do not promote women in elite sports, which do not have institutions that support the elite sport sector, do not specialize in medal-promising sports and are not flexible to adopt new trends in global elite sport policies, fail at the Olympic Games.

Most research on Olympic success has focused on best practice cases such as Australia, Canada, the Netherlands, Norway, and the United Kingdom, among others. These countries share, apart from being successful at the Olympic Games, general characteristics such as being well-developed market economies and democracies. While reviewing research on these countries was beneficial for my own work, I am aiming to provide the reader with a more holistic picture that is also including success cases from developing countries such as Cuba, Ethiopia, and Kenya. Eighty-five nation-states (41.5% of all participating countries) won medals at the Summer Olympics in 2012. Before focusing on success factors in the second part of the book, I examine the motives for participation of countries, such as Lebanon and Syria, which belong to the majority of countries that did not win any medals in London (120, 48.5%) but still consistently send delegations to the Games. Most research has ignored cases of countries that mainly aim to raise the flag at the opening and closing ceremonies, despite the fact that these countries comprise the majority of countries at the Games.

When discussing Olympic success, I focus only on the output, the medals won. I am aware that this perspective ignores the input, meaning the processes that lead to the successes. I will argue later in the book that there is a global trend toward homogenization of elite sport policies; however, it is important to mention that the Olympic successes are reached in different environments under diverging conditions. In Western societies, everybody is free to choose a sport of his/her choice, while in more authoritarian countries such as China there is more pressure on children to practice sports for which they have favorable characteristics. While in Norway, for example, there are usually restrictions on talent identification concerning children under 13 years of age and rules aiming to prevent children from specializing in one particular sport too early, in China athletes leave their families at the age of 10 to live in specialized sport academies (Augestad et al. 2006, 293–313; Beech 2012). I am also ignoring the societal effects of Olympic success: does Olympic success go along with more activity at the grassroots sports level, preventing obesity and contributing to other health

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benefits? While I discuss in detail the motives of countries to invest in Olympic success, I do not make any statement on whether objectives such as improving health, societal cohesion, national pride, and gaining soft power are met.

My analysis helps to better understand why countries invest in elite sport but does not answer the question of whether it is worth the investment. However, from an overall perspective, it is certainly better to aim for outperforming other countries on the sports field than beating them on the battlefield. I would make the case that at the end of the day the Olympics help to bring people together and contribute to a more peaceful world, despite the prevalence of nationalism at the Games, a point that I will discuss later in the book.

I only look at the Summer and Winter Olympic Games and do not discuss other Games such as the Paralympic Games, the Youth Olympics or regional versions of the Olympics such as the very popular Asian Games. I do not limit my analysis to single Olympics such as Beijing 2008 and Vancouver 2010: fluctuating performances of countries at the Games would deform the results. There were also Games that were boycotted by some countries, for example the 1976 Summer Olympics in Montreal by African countries, the 1980 Games in Moscow by the United States and many of its allies, and the 1984 Summer Olympics in Los Angeles by the Soviet Union and many of its allies. Australia, France, UK, Greece, and Switzerland are, according to D'Agati's book on the Cold War and the Olympics, the only countries that never joined any boycott and participated in all Olympic Games (D'Agati 2013).

Therefore, I refer throughout the book to all-time statistics to be able to identify broader patterns and to make generalizations. The data in this book, such as medal statistics, covers all Olympic Games including the Summer Games in London 2012 and the Winter Games in Sochi in 2014. While I only look at the Olympics, the findings of this work might be transferable to other mega sporting events, particularly World Championships. Usain Bolt, for example, won six gold medals at the Summer Olympics and finished in first place at eight World Championships. There are only a few competitions at the Olympics where the results of the Games do not reflect those from World Championships, one of which is soccer. For example, Germany won the last World Cup in 2014 but did not even qualify for the London 2012 soccer tournament. That tournament was won by Mexico, a country with zero FIFA World Cup victories. Brazil has won the most FIFA World Cups but has never won the gold medal at the Olympics. Pele, considered by many people to be the greatest soccer player of all time, once joked that it is his fault that Brazil never won the Olympics since he never participated in the Games. This might be true, since FIFA has always restricted the eligibility for participation at the Olympics with frequently changing rules. Currently, there is an age limit with only three players older than 23 allowed on the team. However, in most sports, the best athletes compete in the World Championships as well as the Olympics, and international federations such as FIFA that restrict the access to the Olympics are in the minority.

As briefly mentioned above, I do not look at the individual success level. I understand the admiration for Olympic superstars such as sprinter Usain Bolt,

and swimmer Michael Phelps who has won 22 Olympic medals, more than any other athlete in the history of the Games. While it might be certainly worth studying how those athletes became so successful, at the end of the day, I see their accomplishments as a result of an environment that recognized and promoted their talents from early on. Living in Lebanon, I personally see many athletes with passion and talent but none of them reach the top level. For example, there was a female student from the American University of Beirut who competed in table tennis for Lebanon at the London 2012 Olympics. Due to the absence of any state help, her father privately financed a coach from China who came every summer to practice with her. If this student, with her tremendous talent, had grown up in a country with a better sporting support structure instead of in a weak state such as Lebanon that lacks any strategic planning for elite sport success, she might have had much greater success at the Olympic Games.

An article in the *New York Times* published during the soccer Women's World Cup 2015 in Canada, reported that within the US team (which later won the tournament) 17 of the 23 players have older siblings. Research from the United States Soccer Federation reveals that 74% of the players on its women's youth national teams — from ages 13 to 23 — have at least one older sibling. The article also refers to a study involving 229 athletes and 33 sports in Canada and Australia that found that top athletes tended to be later-born children (Longman 2015). While such findings are interesting and help to better understand which athletes are representing a country at international sporting events, they do not provide relevant information for the comparative perspective of this book and do not help answer the question of why some countries are more successful than others.

The knowledge that this book provides is for the country level, explaining differences of Olympic success *between* countries. The book does not provide in-depth knowledge for success phenomena *within* countries. For example, in the United Kingdom, athletes from private schools — one-fifth of team GB and winners of one-third of the medals — are more successful at the Olympic Games than athletes from public schools. For Tozer, this is “one of the worst statistics of British sports” (Tozer 2013, 1436). In other countries such as China, it's the other way around, with athletes from a lower-class background being more likely to succeed. For example, when women's weightlifting became an Olympic sport, “scouts had been dispatched to the countryside, where parents were more likely than their urban counterparts to release their daughters into state care” (Beech 2012).

While in-depth research on a limited number of case studies can generate detailed information such as the different class and schooling background of Olympic athletes, the broader cross-country approach chosen in this work aims to contribute to a better understanding of success and failure at the Olympics. I aim to provide a blueprint for policy makers and contribute to the diffusion of best practices by providing information that better explains the elite sport policies of other nations. This will be accomplished by identifying patterns and making generalizations from country comparisons, by analyzing changes in countries over time, and by introducing the WISE formula.

The book proceeds in following order: In Chapter 2, the term success is discussed as it relates to the Olympic Games. There are different ways of counting medals, with the total medal count (AP method) and the gold first approach (IOC method), which uses silver and bronze medals only as a tiebreaker, as the most popular methods. While the first method is mainly used in the United States, the latter one is preferred in the rest of the world and by the International Olympic Committee. The *New York Times* has developed a compromise between both methods, by assigning points for different medals. While the AP, IOC, and NYT medal counts have relatively similar results, the outcome of two other ways of counting medals – medals per capita and medals by GDP – favor small countries (medals per capita) and nation-states with weak economies (medals by GDP). In the chapter I also present alternative suggestions for measuring Olympic success such as the market share model, looking at the costs of Olympic medals, or non-medal based measures of performance such as winning top eight places. Finally, I discuss weaknesses of medal rankings such as favoring individual over team sports, not taking the different popularity of sports into account, and ignoring the fact that not all sports popular in a country are part of the Olympic program. While the Olympic Games have become more inclusive, with more countries winning medals, the majority of medals are still concentrated among few countries, and most participating nation-states are unable to win medals at the Games.

Based on a case study of the upcoming Rio 2016 Olympics, Chapter 3 discusses the objectives of countries at the Olympics. While some countries such as China and Russia generally state that they want to be “sports superpowers,” other countries have defined precise medal targets, either winning more medals than at the previous Summer Games in London 2012, or achieving a certain rank in the medal count. For example, Germany wants to exceed the number of medals won in London (44) and Great Britain wants to take home from Brazil at least one more medal than British athletes won in 2012, a remarkable objective given that the 2012 Games took place on Britain’s home soil. Australia aims for a top five rank in the medal count, and Japan even wants to finish in the top three in Rio 2016. The analysis of Olympic objectives shows that countries have mainly quantitative medals targets (number of medals, rank in medal count), and there are only few cases of qualitative targets: Brazil and Nigeria are particularly aiming for success in soccer, the most popular sport in both countries. Kenya and Thailand want to achieve an increased number of participants and a stronger representation in some sports (and not only be successful in a particular sport, as is the case with Kenya and running).

After discussing the different definitions of Olympic success in Chapter 2 and the objectives of countries for Rio 2016 in Chapter 3, Chapter 4 analyzes the motivation of countries to participate in the Olympic Games and to aim for success in the largest sporting event in the world. The Olympics bring people from all over the world together, and the International Olympic Committee aims to contribute to a more peaceful world. While there are certainly some internationalist rituals at the Games, I argue that they are mainly a contest between nation-states. After the bloody wars of the nineteenth and twentieth centuries,

the Olympic Games offer countries a nonviolent alternative to express nationalism. For this nationalism without war, I see four main drivers: First, the Olympic Games are a tool of legitimacy for countries. For example, for postcolonial or smaller countries participation in the Olympics offers a highly visible opportunity for recognition on the global stage, and is considered as a “sign of statehood” like a national currency or a national anthem. For countries such as Germany and Japan, the Olympic Games after World War II offered an opportunity to reintegrate into the international community. However, the goal of seeking legitimacy is something that applies to any country. All nation-states are witnessing external threats from cultural and economic globalization. Participating in the Olympics (and, if everything works well, outperforming other countries) proves to the domestic audience the capability of the national government.

My second argument is that Olympic success can unify divided countries. While this might hardly apply to relatively homogenous nation-states such as Japan and Norway, it can be important for more diverse countries such as Canada and Belgium, where people speak different languages, or Lebanon, a country without any single predominant religion like most other countries. For multinational countries like Spain, with regions such as Catalonia aiming for independence, the Olympic Games provide an opportunity to develop a common identity.

My third argument is that the Olympic Games are a tool for achieving statehood. The International Olympic Committee has more members than the United Nations (206 compared with 193 as of mid-2015). The five largest nations with a recognized National Olympic Committee by the IOC but without acceptance by the UN are Chinese Taipei (Taiwan), Hong Kong, Kosovo (the last recognized NOC in 2014), Palestine, and Puerto Rico. There were 51 UN members in 1945 and 193 in 2014. Given the ongoing desire of many nations to become sovereign states, the IOC might continue to be a popular tool for achieving statehood, and might be used by (so far) unrecognized National Olympic Committees such as Catalonia and Kurdistan.

My fourth argument is the power perspective. After World War II, the Olympics became a battleground for Cold War politics, and part of the competition for the supremacy of communism and accordingly capitalism. However, since the fall of the Berlin Wall, there are now for the first time more democratic than non-democratic countries in the world. According to the “democratic peace” theory, democracies are less likely to be at war with each other. However, their political weight in world affairs varies. Sport offers an arena to compete with each other and gain soft power. Small countries such as Norway and New Zealand have successfully used the Olympics to reach above their weight in global affairs, while the United States aims to showcase its dominance in the world, and Russia hopes to demonstrate its return to great power status. For others such as Brazil, the Olympics provide a chance to emerge on the global stage. I argue that “the new gold war” is certainly better than a military war where opponents meet on the battlefield rather than on the sports field.

In Chapter 5 I begin to discuss the factors explaining success and failure of countries at the Olympic Games. Figure 1.1 summarizes the original model that I present in this book: I am differentiating between general characteristics and the policy level, introducing for the latter what I call the WISE formula. Chapters 5, 6, and 7 discuss the importance of wealth, population size, and geography of countries for their success and failure at the Olympics. The fourth general characteristic I discuss in Chapter 8, ideology, is printed in the figure in italic because this macro variable has become more of a historic than a contemporary explanation since the end of the Cold War and the fall of the Berlin Wall in 1989.

After discussing the importance of four macro variables in Chapters 5–8, in Chapter 9 I discuss the policy level and introduce in Chapters 9, 10, 11, and 12 the WISE formula, WISE standing for the promotion of women in sport (W, Chapter 9), the institutionalization of the support of Olympic sports (I, Chapter 10), the strategic specialization on medal-promising sports (S, Chapter 11) and the ability to early adopt new trends in elite sport policies and be a pioneer in promoting sports newly added to the Olympic program (E, Chapter 12). Chapters 13 and 14 discuss two other policies, the naturalization of foreign-born athletes (Chapter 13), and hosting the Olympic Games to benefit from the home advantage (Chapter 14). Different from the policies summarized in the WISE formula in Chapters 9–12, these approaches are not accessible for all countries, and are therefore discussed separately. While in some cases the naturalization of foreign-born athletes and hosting

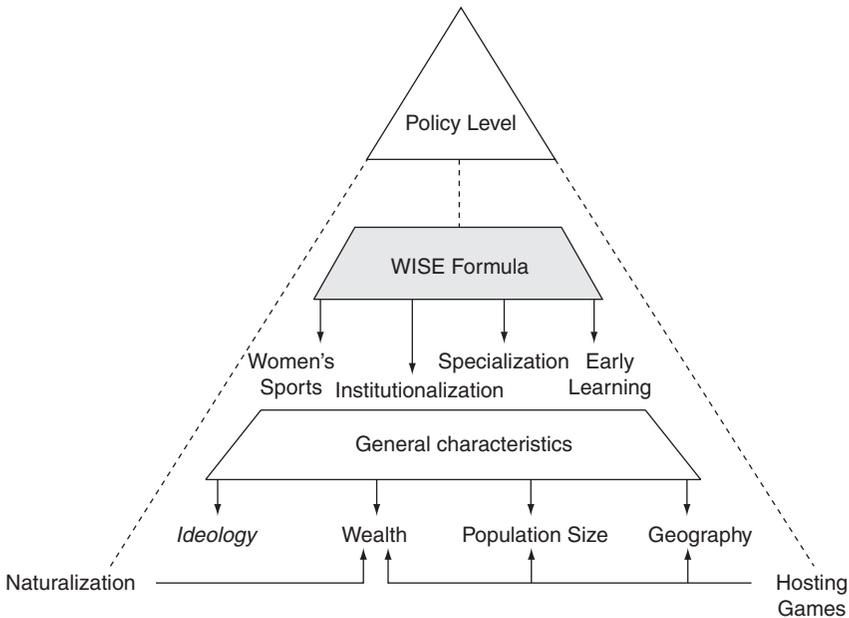


Figure 1.1 Success of Countries at the Olympic Games: The WISE Formula.

the Olympic Games contribute to Olympic success, these explanations for success and failure at the Games apply to only a limited number of countries and are therefore not included in the WISE formula.

In Chapter 5, the first macro variable I discuss is wealth. Many studies emphasize the correlation of GDP and Olympic success. I argue that the importance of wealth depends on the type of sport and Games. The wealth of a country matters more at the Winter than at the Summer Games because the Winter Olympics are more dependent on costly infrastructure. Presenting the cases of equestrian and marathon, I show the advantage of wealthier countries in sports that require expensive equipment. No country with a GDP below US\$12,000 has ever won a medal in equestrian, while there are seven countries with a GDP below US\$12,000 that have won marathon medals. While countries with a higher GDP are generally more likely than poor nation-states to have Olympic success, just looking at this variable does not explain outliers defined as unsuccessful wealthy countries such as Israel, and successful poor countries like Kenya.

Chapter 6 discusses another popular explanation for Olympic success, population size. Population size matters more at the Summer than at the Winter Games where sparsely populated Scandinavian countries belong to the most successful nation-states. It is evident that small countries have a disadvantage at the Olympic Games. For example, in London 2012 countries with a population below one million won only three medals, and the 102 countries with the smallest population accounted for just 11% of medals won (Houlihan and Zheng 2014, 1). However, this does not necessarily mean that there is a correlation between population size and Olympic success. There are only two countries in the world with more than one billion people, India and China. India has won only 26 Olympic medals at the Summer Games, while the largest nation-state China won 473 medals. Cuba has only the 10th largest population in Latin America, but has won more Olympic medals than any other Latin American country, including Argentina, Brazil, and Mexico. In Africa, Kenya has won almost four times more Olympic medals than the most populated African country Nigeria.

Chapter 7 discusses to what extent the geography of a country influences Olympic success. This factor is more influential for Winter Games and is only important for some sports in the Summer Games. While colder countries outperform warmer ones at the Winter Games, snow coverage is not a sufficient explanation for winter sport success. Without enough ski resorts and winter sport facilities even countries with high snow coverage fail, as the examples of Tajikistan and Kyrgyzstan demonstrate. For sports such as curling, ice hockey, and skating, the necessary infrastructure can be established even in countries without favorable winter sport conditions. One example is the Netherlands, where the highest “mountain” in the country is a hill with a height of 322.7 meters. However, the country is the leading skating nation at the Winter Olympics. For summer sports, sailing is an example of a sport where favorable geography is a precondition for Olympic success, as the 12 most successful sailing countries at the Games all have access to the sea.

Chapter 8 discusses ideology as an explanatory variable for Olympic success. Before the Cold War ended and the Berlin Wall fell in 1989, communist countries were very successful at the Games. For example, the GDR is still ranked in the top 10 of the all-time Olympic medal ranking, despite only participating in the Olympics from 1968 until 1988. Cuba, like East Germany, is a country with a small population base (11 million, compared with 16 million in the GDR). Cuba has remained successful even after the Cold War, while at the same time the performance of most other former allies of the Soviet Union has declined. China, a country that can maybe be best described as socialist market economy, has dominated recent editions of the Summer Olympics along with the United States. In academic literature, there are different explanations for the communist successes, among them are materialistic, capitalistic incentives for athletes, doping, providing women with equal access to sporting activities, and an early institutionalization of the promotion of elite sport. However, there were also differences in the performance of communist countries and some capitalist countries, such as Norway at the Winter Games, and West Germany, Great Britain, and others at the Summer Games, were able to compete with the leading communist countries.

After the relevance of general characteristics of countries such as wealth, population size, geography, and ideology have been discussed in Chapters 5–8, Chapters 9–12 introduce the WISE formula. Chapter 9 explains the first letter of the WISE formula: I argue that without the promotion of women in sport (W), a country cannot excel at the Olympics. China, which is the most successful country at recent Summer Olympics apart from the United States, has one of the highest female participation rates among all countries in the world. In contrast is the percentage of female athletes from Islamic countries. Brunei, Qatar, and Saudi Arabia included women in their Olympic squads for the first time at London 2012. Six of the nine countries with the lowest all-time women's participation at the Olympic Games are Muslim-majority countries. Before 1984, no Muslim women won an Olympic gold medal, and medals won by Muslim women are still an exception. For example, Iran has 60 medals in the history of the Olympic Games, all of them won by men. Muslim women face many major cultural obstacles, such as the dress codes required by the International Sport Federation. In beach volleyball female players are required to wear shorts of a maximum length above the knee. Given the new trend of mixed-gender events at the Olympics, the disadvantage for countries that do not promote women in sport might further increase.

Chapter 10 is about the second letter in my WISE formula: I argue that the institutionalization (I) of the elite sport sector is a precondition for Olympic success. Best practice cases of administrative capacities for Olympic sports are the Australian Institute of Sport (AIS), founded in 1981, and the Norwegian Olympiatoppen (OT), founded in 1988, both of which are classified by some authors as “medal factories.” These institutions have served as blueprints for high performance policies around the world. However, pioneers for the institutionalization of Olympic sports were Soviet bloc countries in the 1960s and

1970s. Case studies on AIS and OT emphasize that the Australian and Norwegian institutions were particularly inspired by the systematic institutional framework in the GDR, among them a centralization of elite sport support, a highly scientific and professional elite sport regime with close links to the education system (and in some countries to the army), development of athletes of medal-winning potential, top-class facilities, and high-quality coaching. Many elite sport institutions (i.e. in China, Germany, Norway, Sweden, Switzerland, the Netherlands, and the United Kingdom) are funded by public lotteries to be independent from state budget up- and downturns. A recent trend is the promotion of sport in specific government departments. South Korea established a “Ministry of Sports” in 1983, and in the United Kingdom, “Sport” has been featured in the title of a government department since 1997.

Chapter 11 treats the third letter of my WISE formula: Specialization (S). Focusing on medal-promising sports has become a key strategy in Olympic policies around the world, and countries that have not introduced such a targeted approach are left behind in the medal rankings. A pioneer in specialization was the GDR, which had already introduced a respective policy in 1969 (“high-performance directive”). Countries usually specialize either by promoting sports where they have a historical comparative advantage or by heavily supporting new sports that were recently added to the Olympic program. An example for the latter is women’s weightlifting that was added to the Olympic program in the year 2000. China has so far won half of all gold medals since the sport’s introduction. Another example is South Korea’s successful promotion of speed skating, winning 21 out of 48 gold medals since the sport was added to the program of the Winter Games in 1992. Good examples of focusing on historic strengths are Australia, which has won more than one-third of all its Olympic medals in swimming, and Austria, which has won more than one-third in alpine skiing. A targeted approach has become a key strategy adopted by different types of countries: from low-income countries such as Kenya and Ethiopia who invest in running, to communist countries such as Cuba (boxing) to the best developed countries in the world such as Denmark (track cycling) and Germany (luge at the Winter Games). Some individuals can win numerous medals for their countries such as the American Michael Phelps in swimming (22 medals) and the Norwegian Ole Einar Bjørndalen in biathlon (13).

Specialization is no coincidence, but is the result of a strategic approach by governments. A recent example is the United Kingdom that introduced a “no compromise system,” concentrating public funding on the most medal-promising sports. Since moving to this “all or nothing” approach, the UK improved from rank 36 in the medal count in 1996 to a top five ranking at the 2008 and 2012 Summer Olympics. The United States has increased its overall lead in the Olympic medal count since moving to a performance-based funding system in 2000. In contrast, the examples of Sweden and Finland show what happens when countries do not specialize: Both countries have won a majority of their Olympic medals in the first half of the twentieth century, but have seen a decline since that time. Deeply rooted in the ideal of equality, they failed to make strategic

choices in their funding systems in the second half of the twentieth century. However, more and more countries are joining the specialization trend. India, for example, introduced the “Target Olympic Podium Scheme” (TOPS) for the 2016 Olympics to support athletes who are medal prospects.

Chapter 12 explains the last letter of the WISE formula: E for early learning. Early learning has two dimensions: the first is the flexibility to quickly react to changes in the Olympic program, being an early adopter of sports that were newly added to the Olympic program. For example, South Korea and China have dominated short-track and won more than 60% of all gold medals since the sport was added to the program of the Winter Games in 1992. China’s dominance of women’s weightlifting is another example. After the decision was made to add rugby to the Olympic program starting in 2016 in Rio, Russia and China quickly made rugby part of the physical education curriculum in schools.

There is a trend toward homogeneity of elite sport policies that does not only apply to Western developed countries. China has introduced a lottery, and uses the revenues to promote Olympic athletes, taking after countries like Norway that have been successful with such policies at the Olympics long before China began to participate. This is the second dimension of early learning: the willingness to imitate the most successful elite sport regimes around the world, and a steady commitment to reforms. While there is little variation among the leading Olympic countries (all of them promote women’s sports (W), have established institutions for the promotion of Olympic athletes (I), and are specializing in their most promising sports (S)), the challenge is to develop domestically slightly improved versions of the best practice cases that served as a model (E).

Chapters 13 and 14 discuss the naturalization of foreign-born athletes and the advantage of hosting the Olympic Games. Different to the policies summarized in the WISE formula in Chapters 9–12, these approaches are not accessible for all countries and therefore are discussed separately.

Chapter 13 focuses on the naturalization of foreign-born talents, a phenomenon at the Olympic Games that mainly occurs in countries with higher GDP levels. At the London 2012 Summer Games, 6.8% of all medals were won by immigrants, a statistically significant number higher than the general world’s migrant population of 2.9% (Horowitz and McDaniel 2015, 19). There are some sports with above average numbers of migrant athletes: in table tennis, one-fifth of all players that participated from 1988 to 2012 at the Games were of Chinese origin (Heijmans 2015b). Similar to Chinese athletes in table tennis, the migration of runners from Kenya is a widespread phenomenon in track and field, with a recent trend of migrations toward the Middle East. While the main motivation for migrating athletes might be escaping poverty, another incentive is being eligible for the Olympics (and other mega sporting events such as World Championships) where usually only three athletes from one country can compete. This leaves out many world-class athletes such as Chinese table tennis players and Kenyan runners who are first class but not one of the three best in their countries. While some countries have transparent naturalization policies, such as Singapore’s “Foreign Sports Talent Scheme,” others such as Qatar try to hide

their efforts, for example by giving Christian athletes from Kenya Arabic names. The IOC has introduced a three-year waiting period before athletes can compete for other countries.

Chapter 14 deals with the home advantage at the Olympic Games. Only 23 countries have ever hosted either the Summer and/or the Winter Olympics, and only a limited number of countries are even capable of hosting the largest sporting event in the world. Countries that host the Summer and Winter Olympic Games usually win more medals than at previous Games abroad. For example, Great Britain improved from 47 medals in 2008 in Beijing, to 65 in 2012 in London. In Sochi 2014, Russia won 33 medals, and was the most successful nation in the medal rankings. Four years earlier at the 2010 Games in Vancouver, Canada, Russia only won 15 medals and was 11th in the medal ranking. I argue based on previous research that I have conducted with Stephen Pettigrew (Pettigrew and Reiche 2016), that the academic literature largely ignores the importance of participation rates in explaining the home advantage. The qualification rules for athletes from host countries are significantly less strict, resulting in more medal opportunities for the host country. For example, Great Britain had 530 athletes competing at the London Games in 2012, compared to 304 in Beijing in 2008. Russia had 215 athletes in Sochi 2014, compared to 175 four years earlier in Vancouver. Looking at the Olympic Games from 1952 to 2014, in Summer Games the host country's team is on average 162.2 athletes larger than in the previous Summer Games. In Winter Games, the difference is 28.1 athletes. When we account for increased participation by looking at the ratio of medals to athlete, we find that the home advantage decays to almost zero.

In the conclusion (Chapter 15), I present an alternative model for measuring Olympic success by arguing that countries should evaluate the success of their Olympic programs not only in terms of the outcome (number of medals won, position in the medal count) but also in terms of the quality of the medals (popularity of the sport), and the social acceptance of elite sport policies which depends, among others, on the absence of doping. I proceed by discussing whether the desire for elite sport success around the world is good or bad for human development. I discuss the questions of whether governments should invest on the domestic level in areas such as education and health, rather than in elite sport policies, and whether, internationally, "the new gold war" contradicts Olympic objectives of peace and global harmony. To promote internationalism and cosmopolitanism, I suggest introducing events at the Olympic Games that allow for teams composed of athletes from different countries.