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ECONOMIC ADVANCEMENT ACROSS THE EUROPEAN PLAYING FIELD

By: Zachary Herring

A thesis presented in partial fulfillment of the requirements for completion
Of the Bachelor of Arts degree in International Studies
Croft Institute for International Studies
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“Sport has become a world language, a common denominator that breaks down all the walls, all the barriers. It is a worldwide industry whose practices can have a widespread impact. Most of all, it is a powerful tool for progress and development”. (Ban Ki-moon, United Nations Secretary-General, 11 May 2011, Geneva, Switzerland.)

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Abstract

This project seeks to examine the relationship between economic history, soccer, and economic institutions in countries who have attained varying levels of success on the soccer field and economically. The work of several influential scholars in recent decades has drawn attention to the need for a shift in the goal for economic achievement from industrialization to institutional effectiveness. This study develops a model to further understand the relationship between economic achievement and soccer success. It then includes case studies of three countries from the model in order to further understand the impact of the institutions that have a significant presence in the model's most successful country. This study finds a noteworthy correlation between soccer performance and national GDP and population. Furthermore, case studies of Germany, Croatia, and Serbia reaffirm the importance of economic institutions and their contribution to economic success and soccer success.

CHAPTER 1: Introduction

Inspiration for this thesis began with the second day in my International Studies 101 class, where Dr. Frago-Gonzalez began his first lecture with a simple question: “Is it better to be a rich person in a poor country or a poor person in a rich country?” Since then the relationship between poor and rich countries has been at the forefront of my mind throughout my studies, including my time abroad. My courses in Cologne were about European Development Policy, Economic Geography, and Europe’s place in a globalized world. Two major events during both of my study abroad trips were especially impactful. The summer before my sophomore year, I was in Berlin for the 2016 European Championships, and the 2018 FIFA World Cup fell right in the middle of my five-month semester in Cologne. Watching Germany’s national team at public viewings in the city center was an incredible cultural experience that I’ll never forget. It left me curious to investigate the relationship between the ideas of economic development from my courses and the events that left the biggest impression of German culture.

Research Question and Rationale:

What factors are most important in helping a country to achieve economic success? Are the same institutions that make up the model of a successful economy present in those with success in national soccer competition?

Further study of the relationship between economic history, sport, and institutions in Europe has potential to be significant beyond this case. Economic studies cannot make use of a true control group or introduce perfect conditions to study the relationships

between economic actions and the results. Consequently, the study of economic history provides a next-best way to evaluate economic actions and the outcomes that follow. A brief overview of overarching theories of economic development is therefore necessary in order to understand complex economies in the modern framework. The second chapter of this thesis provides this context by reviewing a major shift in the way that scholars have perceived development and the path to economic success. Though it cannot provide a simple and effective blueprint for economic progress, it does discuss essential factors for economic growth.

Soccer is a sport with unique potential to serve as a way of comparing nations to each other. It is both the most played and most viewed sport in the world, and national competitions provide a distinctive way to understand the countries that are represented. Few activities can bear the same cultural and economic significance consistently across nations with highly divergent pasts. Several scholars in recent years have studied the relationship between economic factors and sports, and while some have found that economic success contributes to sporting success, others dispute the existence of any correlation at all. These conflicting reports indicate the need for greater study.

If the correlation between economic performance and soccer performance at the national level is determined to be statistically significant, then further evaluation of fundamental structures of these economies is also warranted. If countries that have been successful economically have similar institutions that contribute to this success, it is possible that these institutions have also contributed to success in international soccer competition.

Theoretical Framework:

This project investigates several topics in economic history, such as the Industrial Revolution, the Age of Development, and the recent ideas in Institutional Economics.

Lee T. Wyatt III's *The Industrial Revolution* discusses the early impacts of the Industrial Revolution and how it affected the national power of the British economy. Several others attest to the overall increase in wealth as an eventual result of the Industrial Revolution as its effects spread throughout Europe and North America. In 1960, Walt Whitman Rostow published his book *The Stages of Economic Growth: a Non-Communist Manifesto*, which was extremely influential in the way that rich and poor countries understood their differences and relationships to one another. Rostow's theories popularized the concept of deliberate, structured development, which was attempted in many different countries globally. Amartya Sen and Arturo Escobar later discuss the shortcomings of development policy, and argue that too narrow a focus has largely resulted in its failure. They claim that many countries have prioritized growth of economic power over growth of individual power and have forfeited both by doing so. In 1990, Economist Douglass North authored a book about the importance of institutions in economic growth, and was awarded a Nobel Prize in Economics for his prior research on economic history a year later. North's work discusses economic transactions to show how institutions can decrease transaction costs and improve economic efficiency. He also postulates that economic success can best be understood through evaluation of economic history. Several other authors have worked to identify specific types of institutions that are essential for growth, and the positive implications of such. The final chapter examines three distinct institutions in Germany, Croatia, and Serbia to examine their impact on each country's economy and

soccer results in order to better understand the way that the institutions contribute to success both economically and in soccer.

The relationship between success in sports and success in economics is well documented, but scholars disagree with the levels to which that success in the world's most popular sport, soccer, can be indicative of developmental success. Intuitively, it would seem that a country with more resources would be able to devote more of these resources to the development of more skilled players. This causative assumption classifies soccer as what is known in Economics as a normal good: one for which demand increases as income increases. Several scholars conducting research for the Plekhanov Russian University of Economics; however, found no significant correlation between FIFA rankings and socio-economic development indicators for over 200 FIFA member countries. Conversely, Gasquez and Royuela take a strong stance that soccer can be a strong indicator of development. Kuper and Szymanski analyzed the relationship between a country's national team performance and its GDP per capita. They were able to classify countries into overperformers and underperformers based on their soccer/GDP ratio. This project examines factors like GDP, GDP per capita, population, wealth inequality (via GINI coefficient), and economic freedom in order to determine their ability to explain national soccer team performance in the European Championships.

Research Design:

This study concentrates on Europe, which is not only the continent where the Industrial Revolution began, but also the continent that has been on the forefront of economic development ever since. Economic and developmental data are more easily obtained for European countries, and limiting geographic, political, and cultural diversity allows for more accurate comparison. More parity in European soccer relative to other continents greatly bolsters the ability to quantify and interpret results of international matches.

Case Selection:

This project includes case studies on Germany, Croatia, and Serbia. Germany was chosen because of the size, success, and uniqueness of their economy. Analysis of the German economy reveals several institutions that appear to have contributed to their success. Croatia and Serbia are neighboring European countries who have a similar economic history as part of Yugoslavia, but have pursued divergent paths since the dissolution of Yugoslavia in the early 1990s, during which the two countries warred against each other. Croatia has pursued economic advancement in a way that imitates the institutions largely responsible for Germany's success while Serbia has been more reluctant to follow suit. All three countries also play a significant role in the soccer success model, as Germany has exceeded the model's already-lofty performance expectations, Croatia overperformed by a larger metric than any other country, and Serbia underperformed slightly relative to expectations.

Data:

I used economic data from a number of sources in the review of economic development to help summarize aspects of developmental periods throughout time. The comparison of economic indicators with soccer performance utilizes data on economic indicators like GDP, GDP per-capita, Population, the GINI Coefficient, and the Economic Freedom Index score for the years 2008, 2012, and 2016.. The first three of those indicators are obtained from World Bank Open Data. The GINI Coefficient is used to measure wealth inequality, and an estimate for this coefficient is provided by World Bank. The Economic Freedom Index is a score provided by the Heritage Foundation which ranks 186 countries based on assessments of the rule of law, government size, regulatory efficiency, and open markets.

Method:

Soccer score was determined by awarding each country 3 points for a win in the European Championship tournament, 1 point for a draw, and 0 points for a loss. The average number of points for each country in all three tournaments were added up and contrasted to the average number for all of the indicators. All factors were evaluated with a multivariate regression test using Stata Data Analytics software to determine correlation with total soccer score.

CHAPTER 2: Literature Review of Economic Success

Introduction:

At the national level, economies that have become more prosperous are considered to have achieved success, whereas economies that struggle with poverty are seen as abject failures. For the vast majority of human history, the greatest difference between economies in Asia, Western Europe, and Africa were small, and nearly everyone lived just above subsistence. Just before the Industrial Revolution, the gap in per-capita income between these areas was likely no more than 30 percent, but by 1870 the per capita income of the world's wealthiest countries had already become 11 times larger than the poorest (Cohen 37). The Industrial Revolution acted as a springboard, causing never before seen levels of economic growth. For many years after, it was believed that economic success was an inevitable outcome of industrialization. Scholars in the modern context have identified the shortcomings of this assumption and point to examples in which industrialization has failed to create the widespread prosperity that was promised. Authors like North identified that the structure of economies was essential in cultivating national growth and other authors pointed to the specific ways in which countries may establish strong roots for economic growth. This chapter serves to frame the rest of this study by providing a brief overview of economic history. Additionally, it provides a justification for the case studies in chapter 4 by addressing the importance of institutions in advanced, western post-industrial economies.

Industrial Revolution:

The Industrial Revolution served as a massive boost to national income which sparked responses that forever altered the economic, social, and political institutions of the time. The ability to use coal, steam, and eventually electricity allowed for the production of advanced machinery, which increased productivity. Increased productivity in agriculture meant that a single farm could produce more food more cheaply with less labor. With the rise of employment in factories and the decrease in agricultural employment, waves of urbanization occurred that entailed a new set of challenges. Despite these challenges, the dramatic increase in economic power is widely understood to be the cause for the rise in national power of Great Britain and nearby countries that soon followed.

Great Britain was the first country to experience the effects of the Industrial Revolution, and used it as a springboard to become an international superpower. The unique endowments of the island nation entitled them to significant advantages that explain why they instigated the revolution. Isolation from the rest of Europe meant that Britain needed to establish strong ports to foster trade, and made it more difficult to adhere to the Mercantilist policies that were common in France and across the rest of the continent. The country's obvious vested interest in trade was protected by powerful naval forces, which disincentivized conflict since conventional warfare tactics could only become effective after traveling across the English Channel.

The Industrial Revolution was greatly bolstered by Adam Smith, who was a professor at Glasgow University in Scotland and is considered to be the founder of Economics. In his most prominent work, *The Wealth of Nations*, Smith wrote about the

benefits from the specialization of labor and free trade. The concept of free trade was a radical departure from Mercantilist thought, which would soon become powerless against the lower cost of factory-produced British goods. The frequency of trade with other nations helped to hasten the Industrial Revolution as other countries became intrigued with Britain's progress and hastened to catch up.

The progress was not without a price; however, as factory labor was famously difficult and quality of life was notoriously poor. While national wealth was quick to increase and average wages rose significantly, the benefits of the Industrial Revolution in Britain were not immediately forthcoming to the common man. Population growth and urbanization led to never-before seen concentration of poverty, where the poor lived in highly visible slums that made up a large portion of the city, no longer hidden away on struggling rural farms. Continuous pressure from working groups led Parliament to pass the Reform Bill of 1832, the Factory Act of 1833, Ten Hours Act of 1847, and the Factory Act of 1850 (Wyatt, 73-75). In 1832, the London Working Men's Group authored the People's Charter, which included six demands: the right for all meant to vote; annual elections and sessions for Parliament; revision of electoral districts; elimination of property ownership as a voting prerequisite; payment for those elected to Parliament so that all classes might be able to run for office. These stipulations were met with harsh opposition by Parliament and were not adopted until reform bills in 1867 and 1884.

While the economic gains of the Industrial Revolution were significant, these gains were slow to reach many in Britain. It was indicative that Industrialization can make a nation powerful, it also can become untenable without fundamental rights and

institutions to protect those rights. Nevertheless, few scholars would deny that the Industrial Revolution quickly transformed Britain into an economic superpower, and after other countries attempted to catch up by following suit, it was clear how effective the process of industrialization could become. Advanced industrialized economies soon became shining examples for economic advancement across the globe.

The Age of Development:

A century after the Industrial Revolution had made its impact, United States President John F. Kennedy asserted that the path to economic success could be followed globally, saying: “We can assist the developing nations to throw off the yoke of poverty... And ultimately we can help to achieve a world of law and free choice, banishing the world of war and coercion” (Siracusa and Nguyen 2018, 22). The development dream of President Kennedy was already familiar to the world in 1962 when he brought it further into national prominence. Two years earlier, Walt Whitman Rostow had first published *The Stages of Economic Growth: a Non-Communist Manifesto*. The immediate popularity of Rostow’s ideas was a driving force in his selection by Kennedy to serve as an assistant to the national security advisor. At the height of the Cold War, security was of utmost importance to governments everywhere, and the path to security for the West was economic development. Aided in part by an influx of Marshall Plan dollars, Western Europe was already well on its way to becoming a success story of recovery, and the European example was paramount to Rostow’s conjecture. *The Stages* provided a sequence of categories for different levels of economic progression with a clear beginning and a clear end. According to Rostow, the biggest threat to world order was poverty, a problem that Western Europe had largely solved. Just

as Western European economies were beginning to rise up from the ashes of World War II as a result of intense concentration on economic advancement, Rostow presumed that the rest of the world could do the same.

W. W. Rostow's codification of the process of modernization was viewed as a blueprint to success, and became the underlying strategy of development policy for the latter half of the 20th century. *The Stages of Economic Growth* is responsible in a large part for how the "developed" and "underdeveloped" nations have understood themselves and each other for many decades. Rostow traces the historical progression of several western democracies that were on the forefront of the industrial revolution through four steps, called stages of economic growth. The first stage is a traditional society, where the family works together in agricultural production for subsistence, as had existed since the Neolithic Revolution. Then the "preconditions for takeoff" begin to establish themselves, in which new technology is developed which leads to increased specialization. The next phase, predictably labeled "take off," is "the achievement of rapid growth in a limited group of sectors, where modern industrial techniques are applied" (Rostow 1967, 16). The Drive to Maturity occurs next, where Rostow defines economic maturity as, where gains from modern technology have been applied to the vast majority of its resources. Finally, mature economies transition to the "Age of Mass Consumption" in which they have a significant affluent population capable of frequently and consistently consuming goods in a stable society. Rostow intended for his theory to serve as a correction to Marxist thought, as a "non-communist manifesto." The various stages of development provide a path to mass consumption that assures that economic achievement is more effective route to success than revolution. While Marx viewed unencumbered market

development as a problem leading to enslavement by the bourgeoisie, Rostow sees market development as the path to the prosperity that many developed nations had already achieved. History has demonstrated that the answer lies neither in the Communist Manifesto, nor the Non-Communist Manifesto, but both theories have provided valuable insights. Marx predicted what would happen if market forces went unchecked for too long, while Rostow demonstrated what could happen if industrialization was effective in bringing a country out of destitution.

Throwing off the yoke of poverty proved to be more onerous than Kennedy and Rostow anticipated. The stages of economic growth that Western Europe followed into development did not end up being a model that countries with radically different resources, cultures, and geopolitical environments could easily follow. The modern world bears the scars of a half century of attempted development, and the dream of a world without poverty and war remains distant today. Several scholars have critiqued the fundamental presuppositions upon which Western development policies have built their foundations. They examine the issues of the developing world more thoroughly and propose that placing economic growth as the paramount objective can be counterproductive. They emphasize different needs within these communities that appear promising, even if they do represent a radical departure for traditional development as it has been practiced in recent decades. These scholars provide meaningful assessment of the historical problems, offer new perspectives that promise to shape the future of development in a more positive, holistic manner. The following authors explore questions of why development has not gone the way Rostow anticipated.

In *Development as Freedom*, Indian Economist and Philosopher Amartya Sen presents a radical departure from the idea of development posited by Rostow. Instead of a five-stage plan that reduces the vast cultural diversity and unique history of regions to a cookie cutter process stemming from a Euro-centric paradigm, Sen understands the process of development as the expansion of freedom. While it might be more difficult to quantify than GDP per capita, it is more sensitive to an issue that Rostow himself acknowledged: “There are and there are likely to be technologically mature societies that are, so to speak, both rich and poor” (Rostow 1967, 69). What Sen emphasizes is that there is not only a great deal of difference between the freedoms to which a rich person is entitled compared to those of a poor person, but also that one can have vast material assets, but these assets end up being worthless when they exist without basic freedoms.

Sen differentiates his method of development measurement and argues for its superiority by asserting that pursuing development as the extension of human freedom is a more effective way to bring about economic progress as well. Instead of five stages of development, he emphasizes five freedoms of development: political freedoms, economic facilities, social opportunities, transparency guarantees, and protective securities (Sen 1999, 38-40) . Sen claims that these five freedoms work together to produce not only social gains, but economic gains as well. He suggests that the creation and reinforcement of social programs like public education and healthcare can be vastly beneficial, increase average worker productivity, and helps solve societal ills that might significantly impair growth by doing things like curbing preventable diseases and reducing birth rates.

Sen uses the cases of India and China to illustrate how differences in freedoms can affect growth. While China had many of the freedoms listed, they lacked basic

political freedoms, which Sen indicates may have had a role in the monumental famine following the failure of the great leap forward. India on the other hand, embraced western style economic growth, but was unable to do so effectively because of their weak education system that saw their average productivity remain largely untouched by the southeast Asian economic boom. India's "social backwardness" proved to be a massive handicap and an explicit reminder that Rostow's theory inaccurately predicts economic progression in both the case of India and China.

Anthropologist Arturo Escobar emphasizes the need for development to take on a new meaning and a new direction in *Imagining a Post-Development Era*. The modern world has found itself an impasse, where ideas of improving development are no longer considered to be significant enough to address the problems in traditional development policy. Escobar also gives importance to the legacy of development in the marginalization of people groups in so-called "underdeveloped" countries. These "Third World" countries came to see themselves as such only following intervention from the hegemonic First World. He draws attention to the different ways in which development was an extension of colonial authority and utilized the Third World as a production engine for the First World.

As an extension of the development process, Escobar shows how the "previous knowledge production system was replaced by a new one patterned after North American institutions and styles" (Escobar 1992, 24). All the effort by the Western First World to aid in the development of the Third World simply imposed Western power structures into societies without much thought to the effectiveness of so doing. "Seeking to eradicate all problems, it actually ended up multiplying them to infinity" (Escobar 1992, 25). In the

future, Escobar sees a departure from traditional development to be redefined with social movements. This new direction emphasizes the fulfillment of needs like economic and social justice, human rights, class, gender, and ethnic equality. His vision prioritizes the right to self-determination through various movements like anti-imperialism, and challenges the European ethnocentrism that has led to revisionist history. Escobar summarized his hope for the future: “Perhaps social movements, as symbols of resistance to the dominant politics of knowledge and organization of the world, provide some paths in the direction of this calling, that is, for the reimagining of the ‘Third World’ and a post-development era” (Escobar 1992, 49)

The dream of a world without poverty has not yet come to fruition. After a half century of development policy that has often failed, it's clear that though there might have been stages of development for some Western nations, the conditions that were necessary for their success have not been as easy to replicate as Rostow expected. Traditional development misses the mark, and by focusing on economic growth, can expose developing nations to far more problems than they began with. It confers a hegemonic sense of inferiority that is at odds with the liberation of people groups worldwide. Without a commitment to the expansion of freedom, progress is destined to be limited, and though quantifiable GDP numbers might look better on paper, the promised results often don't show up in the lives of people who might need it most. The impasse identified by Escobar is capable of being surpassed and the future of development shows promise, but the focus of development must shift from industrialization to the expansion of human freedom. Social movements can bolster this effort and help bring us into the post-development world, where freedom and basic needs

are paramount, without forcing developing nations into a patronizing relationship akin to that of traditional development. There are many different pictures of what the future will be, but those pictures are still developing.

Institutional Economics:

While industrialization has proven to be a major driver of economic growth with long lasting impacts on economic development, it is also evident that the model established by advanced industrial economies in the West has not been easily replicated elsewhere. Economists have sought to understand the unique conditions present in Europe that allowed for the progression through stages of development as presented by Rostow. Escobar and Sen identified other aspects of social development, and further inquiry reveals how important these factors can also be. Major progress in understanding the successes and failures of national attempts to industrialize has occurred in the study of Institutional Economics, which looks at how economic progress is affected by the local, national, or supranational institutions which govern economic exchange. Economics is most simply defined as the efficient allocation of scarce resources, and institutional economics recognizes that asset allocation occurs not only between individuals, but also through institutions under the constraints of a set of regulations in order to lower transaction costs. Economist Douglass North defines institutions as “the humanly devised constraints that structure political, economic and social interaction.” North’s work to explain economic change from the perspective of institutions led him to conclude that the story of economic history is one riddled with nations who were unable to produce a set of enforced rules to induce sustained economic growth. Rules are understandably necessary to make cooperation beneficial when examined through a game theoretic context, in

which transactions are not repeated, information about products and sellers is incomplete, and there are many buyers and sellers. Further examination of institutions can help explain the success and failure of national economies.

Rodrik argues that the approach to economic growth in the latter 20th century emphasized price reforms too heavily, and faulty assumptions about the institutional underpinnings of market economies in the developing world. He goes on to claim that “Markets require institutions because they are not self-creating, self-regulating, self-stabilizing, or self-legitimizing” (Rodrik 2007, 154). He identifies five key areas in which institutions are able to help correct for these market failures: property rights; regulatory institutions; institutions for macroeconomic stabilization; institutions for social insurance; and institutions of conflict management. Property rights are necessary so that entrepreneurs may be assured that they can maintain sufficient control over the return on the assets that their work produces. Although property rights are almost never absolute, they must be adequate to incentivize innovation. Rodrik argues that fraudulent or anticompetitive behavior increases transaction costs and impose negative externalities. Thus, regulatory institutions are needed to counter these market failures.

Keynes was the first and most prominent proponent of using institutions to provide macroeconomic stabilization, and Rodrik points to the situations in many Latin American countries as examples of economic consequences when institutions actually destabilize macroeconomic conditions. The famous “economic miracle” in post-World War II Europe serve as an example of how social insurance promotes economic growth by increasing social stability and cohesion. Though social insurance policies that established welfare states in western Europe have received criticism for having high

economic costs, the absence of such policies have been met with severe backlash in Latin America. Finally, institutions of conflict management “increase the incentives for social groups to cooperate by reducing the payoff to socially uncooperative strategies.”

Nelson further attests to the value of institutions through an example of how Germany came to dominate the market for synthetic dyestuffs, which he considers to be the “first science based industry” (Nelson 1999, 228). Universities funded by national governments helped to establish a new social technology in the form of a system of training chemists to understand and effectively research organic chemistry. These chemists utilized a newly developed social technology, the modern industrial research laboratory. This allowed them to develop a new physical technology, artificial dyestuffs. The political strength of the national industry for chemical products was able to lobby for more government funding of university chemistry programs, which in turn produced more chemists, who worked for firms within the national industry, resulting in more political strength of the national industry. This cycle perpetuated itself, and even though the market for artificial dyestuffs was much larger in Britain, stronger institutions in Germany allowed them to create important technologies to gain power within the industry.

Haraguchi, Martorano, and Sanfilippo also supported industrialization as a means for growth, and concluded high levels of institutional stability are strongly correlated with successful industrialization, creating a reliable investment climate. They believe that the manufacturing sector has a unique ability to absorb the workforce, enhance diversification and structural transformations while spurring the growth of other sectors

(Haaguchi 2018, 9). Rodrik explains the spillover effects of the expansion of manufacturing activities:

Entrepreneurs who make investments in non-traditional economic activities provide valuable demonstration effects for prospective entrants, they train workers and managers who can be employed in other firms, they generate technological learning which they cannot fully appropriate, and they provide inputs (and demand) for other activities which may not have started up otherwise.

(Rodrik 2007, 9)

While objective measures of the five key institutional factors identified by Rodrik are difficult to construct, Haraguchi, Martorano, and Sanfilippoc utilize a more simplified measure of how stable institutions are in a given country. They utilized a multivariate regression analysis to identify factors unique to successful industrializers who had the highest growth rates. Countries with more periods and longer consecutive years of control by a particular regime were determined to be better able to facilitate long term growth and attract foreign investment. They cite Newman, who used a case study contrasting weak manufacturing development in Africa with successful industrializers in Southeast Asia. Their work served to reveal how institutional regulation in areas such as trade selectivity and capital flows are immensely impactful in developing countries. They found that public investment helped to “crowd-in” private investments, and investments in education and the creation of a skilled labor force are crucial in maintaining sustainable industrialization.

The changing narrative of economic history demonstrates a newfound importance on national strategy to achieve economic success. The Industrial Revolution has no equal

in terms of national economic growth throughout all of human history. Although It created the first significant gap in regional wealth, many nations have found tremendous success through industrializing. While the European model of development proved to be inspirational for much of the world, the failure of some to replicate the success of several European countries is evidence that traditional development strategy that lacks emphasis in the correct areas. It is important not to pursue economic growth purely for its own sake, but development must occur alongside a commitment to advance freedom within society. Several influential economists have attested to the importance of the institutions that facilitate exchange, and how the effectiveness of these institutions in promoting low transaction costs can be the difference in successful or failed industrialization. The increase in manufacturing technology can be effective in raising a nation out of poverty, but the soil must be fertile for the process to take root and grow. A proper climate is essential to foster healthy and sustainable growth in a way that increases both the economic power of a country and also the individual power of its citizens. An understanding of the changed blueprint for economic success provides necessary context so that the next section may examine the effects of economic success on a playing field that has recently gathered more attention.

CHAPTER 3: The European Playing Field

Introduction:

In recent years, the growing economic role of sport in the EU has garnered increasing attention from governing bodies. In a 2007 White Paper on sport, the European Commission asserted that “Sport is an area of human activity that greatly interests citizens of the European Union and has enormous potential for bringing them together, reaching out to all, regardless of age or social origin” (European Commission, 2007). They cite a November 2004 Eurobarometer survey, which found that approximately 60 percent of European citizens participate in sporting activities on a regular basis. Several authors utilized by the report have made efforts to quantify these impacts. One 2006 estimate found that the sports industry accounted for 3.7 percent of total GDP in the European Union and 5.4 percent of total employment (Dimitrov 2006, 16). The dominant sport in this industry is soccer, which is referred to as football universally throughout Europe. Soccer is widely considered to be the most popular sport throughout the world, an assertion that was widely reaffirmed by the fact that roughly half the world (3.57 billion people) are estimated to have viewed the 2019 FIFA World Cup (Reed 2018). Europe had higher ratings than any other continent, and both of the teams in the final were European. If soccer is this popular and is a growing economic sector, it is reasonable to assume that there could be a strong correlation between a country’s economic development and their performance in international competition?

Szymanski and Kuper found such a correlation in performance across sports in general, and presumed that soccer was the same (Szymanski, 359). He devoted an entire chapter of his book, *Soccernomics*, to discussing how poorer countries have a hard time winning sports championships, whereas rich countries tend to do well. Several scholars from the Plekhanov Russian University of Economics, conducted a study that contradicted this assumption. They found that “The weak dependency levels between sports and non-sports indicators argue that a country’s socioeconomic environment does not have a significant role in sport results (particularly for football)” (Vorobyev 2016, 403). Gasquez and Royuela; however, found evidence to support Szymanski assumption that wealth is as relevant in soccer as many studies have demonstrated wealth is in sports more generally (Gasquez 2014, 828). This project constructs a new model for understanding success in soccer, and contrasts it to a number of different economic indicators to determine if a significant correlation can be found between sporting success and economic factors.

Each of the world’s six populated continents possesses an international association that operates under the jurisdiction of the world’s largest soccer organization, FIFA. Each of these umbrella organizations hosts their own championship tournament, as well as qualifiers for the FIFA World Cup, which occurs every four years. Given the 200+ member nations in FIFA, the annual number of international matches is quite significant. The range of teams competing is also diverse, as highly populated soccer powerhouses are sometime matched up against much smaller countries with fewer people to play the sport and with fewer resources to develop talent.

This project deals solely with European teams competing in the UEFA championship (often referred to as the Euros), and the economies of the country each represents. The Euros consist of a tournament held every four years that splits its cycle with the FIFA World Cup. Concentrating on a single tournament serves multiple purposes, the first of which is limiting scope. While it is a common assumption in academic research that more data is usually better, the restriction to Europe helps limit potential confounding variables and breaks down the data into more manageable sections. Determining a country's success from the result of a match is simpler when the countries are less diverse rather than more diverse. For instance, it is erroneous to assume that Egypt is a better team than Brazil if Egypt beats Trinidad and Tobago by six goals, while Brazil beats France by a single goal. Additionally, economic and cultural differences between countries are mitigated when concentrated within a smaller geographic region. While Europe has its powerhouse teams from large nations with strong economies and perennial underdogs from smaller countries with less relative wealth, Europe arguably has the smallest disparity on average between these two. In the context of a tournament, teams that win are eventually forced to play against each other, meaning that while a team may be able to "steal" a few points against weaker competition, they cannot coast through the entire tournament without playing another winning team. This helps preserve the integrity and accuracy of the points system, which is discussed in the following section.

Assigning Points:

To determine which economic factors might contribute to success in international competition, it is essential to first understand what soccer success is. In its most simple

form, success could mean winning a championship, but for each European Championship, there can only be one champion. Theoretically, a country could win a plurality of games, yet never win any championships. Clearly, a count of championships is too simplistic to determine success, and leaves too many countries out. A more complex method was undertaken by Szymanski and Kuper, who attempted to gauge success by using goal differential as a measure. They argue that this method is superior since wins against stronger teams are more telling of ability than wins against weaker teams, and a good team playing a weak team should win by more goals. Szymanski assumed that differences in competition would even out when goals against and goals for were aggregated with enough data. He obtained goal differential statistics from a database on the results of international matches by Russell Gerrard, a professor of mathematics at the Cass Business School in London. The database contained information on the result of every single international match from 1872 through 2001 and was recently updated to include results up to 2012. Szymanski then used multiple regression to examine how population, per capita income, and country experience (how many national games the country has played) translate to an expected goal differential in a given match from 1990 to 2010.

While the methodology employed by Szymanski is doubtlessly reliable, this project takes a different direction as it seeks to answer a different question. Since analysis is limited to Europe and the matches being examined are limited to the performance of European national teams at the UEFA European Championship, a more simplistic method can be used. This limits both the number of countries being compared and the number of matches that are played. Szymanski's problem of unfair competition is thereby solved, as

the seeding format of the tournament ensures that no team may win for too long without facing a strong team, and lends itself to creating a performance gap by placing high seeded teams in groups with medium and lower seeded teams. Additionally, since the pool of teams is much smaller, there is less disparity in competition, since the best performing national teams throughout history are highly concentrated in Europe.

To determine scores for these countries, they were each assigned 3 points for a win, 1 point for a draw, and 0 points for a loss. This is standard practice in all major professional soccer leagues over the course of the season. Point totals are used for qualification to the tournament, as well as in the opening round to determine which teams advance from their groups. By awarding points to teams past group stages, it gives a greater opportunity for teams that excel to earn extra points and further differentiate themselves from teams that do not advance. I assigned point totals for each of the 2016, 2012, and 2008 European Championships to each of the 39 teams in each of their matches. The sum of points for a single tournament represents a team's success at that tournament, and the grand sum of all three tournaments is their success for the period.

Adjustments:

To maintain consistency and preserve the accuracy of predictions, I did not include the point totals of several countries who competed in the Euros for various reasons. I limited the range by removing countries like Andorra, Azerbaijan, Faroe Islands, Georgia, Israel, Kazakhstan, San Marino, and others that compete in European Championship qualification but differ significantly from other European nations in geographic, cultural, or economic factors that could confound results. Additionally, the World Bank did not record separate macroeconomic data for England, Scotland, Wales,

and Northern Ireland, who all field their own national teams. Obtaining this information from a different source could lead to inconsistency in the calculation of the data, and therefore were excluded from evaluation. The total number of countries included for the most recent 2016 Euros totaled 39. Furthermore, countries automatically qualify when they host the tournament, so they do not play in qualification matches. In this model, fewer matches translates to fewer opportunities to gain points. To amend for this flaw, I automatically add the average point total for all teams to the score of the host nation. It is impossible to perfectly account for this problem, since one cannot know what match results would have been, but averaging scores and placing host nations in the middle of point totals ensures that they are the minimum distance from what their actual point total would have been.

Economic Indicators:

I collected data from the World Bank for GDP per capita adjusted for purchasing power parity (PPP) in USD of each nation, because of the notion from Szymanski's research that relative wealth would be important. I also collected population data for each country for the same reason. As a simple way to combine these two effects is the use of GDP in PPP adjusted USD, but the scale of such was much larger than the total score, and for ease of comparison I took the log of GDP, which also accounts for a logarithmic function, implying diminishing marginal returns. Marginal returns would be expected in both the wealth effect and the population effect, since a slight increase in population or wealth is less impactful in a large or wealthy country than in a small or poor one. Since I wanted to consider the institutional effects that might be otherwise impactful, I also chose to consider wealth inequality by recording data for each country's GINI coefficient

(World Bank) and score on the Index of Economic Freedom (Heritage Foundation and Wall St. Journal) for the years of each tournament.

Results:

I conducted a multivariate regression test using Stata Data Analytics Software, and the results were significant. The test revealed a correlation coefficient of 0.668, indicating that 66 percent of a team's performance in the European Championships is explained by the selected economic factors. Table 1 shows the specifics of the test and gives additional insight to the impact of each of the factors individually.

Table 1: Correlates of European Championship Score

	Corr. Coef.	Std. Error	P > t
Avg. Gini Coefficient	-0.0329	0.1174	0.781
Avg. Economic Freedom Score	0.0372	0.1561	0.813
Log of Population	11.3506	1.6648	0.000
GDP Per Capita Log	9.4482	4.339	0.036

R-squared is 0.6680

Table 1 implies that there is a significant correlation observable between success at the European Championships, the log of a country's population, and the log of a country's GDP per capita. Population is likely important because a larger population will have a larger pool of individuals from which to draw soccer talent. Multivariate regression shows that after accounting for wealth, larger countries tend to outperform smaller countries, indicating the presence of a population effect. Likewise, the relationship between GDP per capita and performance indicates that richer countries

perform better than poorer countries: a wealth effect. This is likely because richer countries have more resources that they can use to devote to developing better soccer players. GINI Coefficient and Economic Freedom Index score were both inconclusively linked because they did not demonstrate a statistically significant relationship.

Since GDP is the combination of the population and the GDP per person for every person in the population, a similar correlation between GDP and soccer performance would be expected.

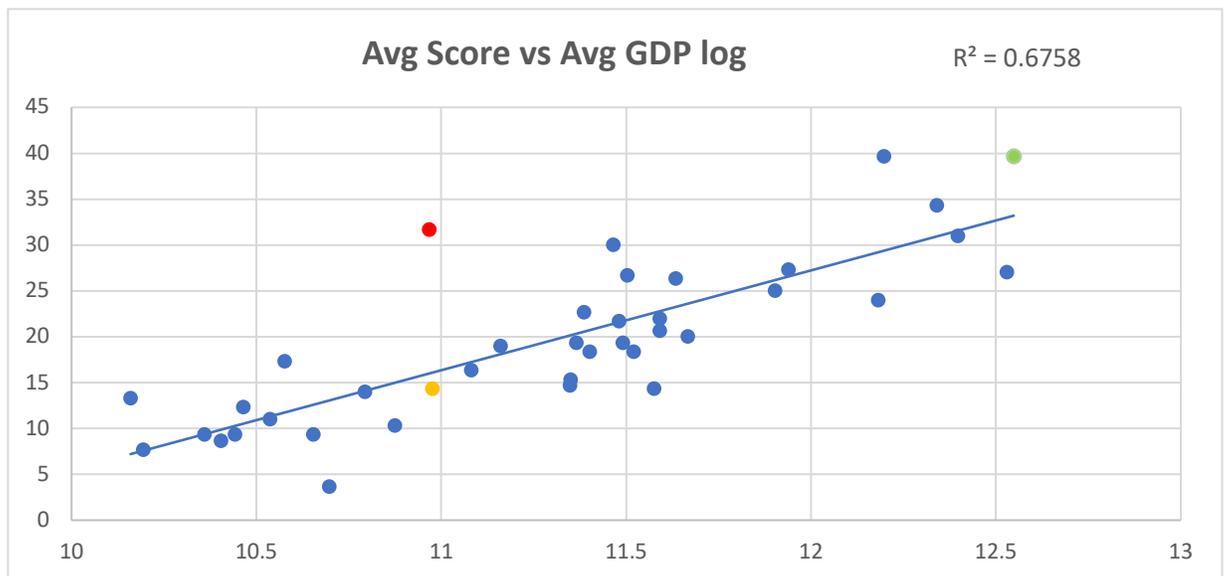


Figure 1: The Relationship Between GDP log and Score (Germany in green, Croatia in red, and Serbia in yellow)

Figure 1 contains a scatterplot graph comparing the average log of national GDP to the average point total from the years 2008, 2012, and 2016. The R^2 value shown on the graph of 0.676 is less than a single percentage point different from the multivariate regression test, and the lack of a significant change helps to confirm the lack of an impact from GINI Coefficient and Economic Freedom.

Conclusion:

The results of this study help confirm the position of Szymanski, Gasquez, and Royuela, while contradicting the positions of Vorobyev. There is clearly a very strong correlation between the population size of a country and the wealth of a country with their performance at the European Championships from 2008 to 2016. More than two-thirds of a country's success is explained by the population effect and the wealth effect. The amount of wealth within a country (GDP) proved to be more impactful than the dispersion of wealth in a country and the political restrictions on national economies.

Germany was selected for further study because it has the largest economy in Europe and was expected to have the most successful team in the tournament. Germany not only had the highest average score, but also overachieved relative to their predicted success. Croatia was chosen because their performance was the greatest instance of overachievement in the entire model. The model strongly suggests that a country like Croatia should have low expectations due to their small pool of potential athletes and relatively small wealth with which to support the development of successful athletes. Croatia's point total over the 12-year span was nearly *twice* as large as would be expected. They exceeded expectations by one and half times more than the next greatest overachiever in the model. Serbia was the final choice because their predicted outcome was almost exactly the same as Croatia. Serbia's predicted outcome in the model is more than 10 times closer to Croatia's than any other country: Serbia's average GDP log (10.975) is only 0.007 points different from the average of Croatia (10.968) for all of the years coinciding with the European Championships. Despite the similarity in predicted outcomes, their performance at the Euros could not be more different. While Croatia

nearly doubled their expected outcome, finishing with the 4th highest point total, Serbia finished 29th, nearly 6 points *lower* than their expected point total. While Croatia might be expected to be more successful because of the wealth effect on soccer performance, Serbia should be close because of their much larger population. Because of that population, Serbia's GDP is actually \$5 billion *higher* than Croatia, indicating that they would be expected to be more successful.

CHAPTER 4: Case Studies

Table 2: Difference between expected and actual soccer performance

	Germany	Croatia	Serbia
Expected Point Total	100	48	48
Actual Point Total	119	95	43
Difference	19	47	-5

The second chapter identified scholars like Rodrik, who claimed in 2007 that free markets alone could not establish the institutions needed for economic success. Economic success, as measured by GDP, was demonstrated in the following chapter to have a significant correlation with the outcome of international soccer matches. This leads to the expectation that a country with effective institutions will be able to “win” both economically and in soccer.

This requires further consideration of the types of institutions that dominate countries that have been successful in both. In order to do this, this chapter contains a case study of three countries that emphasize different levels of success establishing certain institutions that have contributed to economic success. It begins with Germany, the largest economy in Europe and therefore the country with the highest level of predicted success in the model. Croatia is a much smaller country that has made a demonstrated effort to foster the same kinds of institutions that have been critical to Germany’s success. Croatia is

much smaller, with a lower GDP per-capita than Germany, but have shown a commitment to the German model that has propelled them far above a neighbor with a similar institutional history. Serbia has a much larger population than Croatia, but a slightly lower GDP per capita. They have not followed the German model nearly as quickly or as closely, and have had less success economically.

Remarkably, these tendencies have also shown up on the soccer pitch. Germany has attained their high level of economic success, but in soccer has achieved even *more* success than they were expected to, despite having the highest expectations. Likewise, Croatia has made remarkable advances in the last 30 years, no area as observable as in soccer competition. They were the largest overperformer, nearly doubling their expected point total over the course of the three tournaments. Despite being nearly identical to Croatia in total economic power and geographic location, Serbia actually underperformed in the model, similarly to how they have lacked a commitment to major institutional reform.

Germany:*Table 4: Summary of Factors in German Economy*

Codetermination:	SME's	Vocational Edu	Population	GDP per capita
Practiced in Germany for almost 150 years, modern workers councils see 70% voter participation.	Small to Medium-Sized Enterprises make up 70% of all employment, distinct and unique model.	Three-level secondary education system, nearly 70% of workers operate in companies with vocational training.	80.5 million	\$50,000

With a (purchase power parity) GDP totaling \$4.2 trillion in 2017, Germany boasts the 5th largest economy in the world and the largest in Europe (CIA World Factbook). They are major exporters of motor vehicles, machinery, chemicals, computer and electronic products, electrical equipment, pharmaceuticals, metals, transport equipment, foodstuffs, textiles, rubber and plastic products. Their largest export partner is the United States (8.8%), and they import the most from the Netherlands (13.8%). Like many Western European nations, Germany is advantaged by their highly skilled workforce whose productivity is reflected in the Per Capita GDP of \$50,000 in 2017. Their population is behind only Russia in terms of size, with nearly 80.5 million people.

With the preceding information, it is easy to understand why Germany is the country with the highest level of predicted soccer achievement. They are the economic powerhouse of Europe, and their expertise in machinery and strong exports are well known across the globe. Their large population lends itself to a large talent pool, and their high GDP per capita indicated that they have the potential to dedicate a large amount of resources to participation in and consumption of sport. Even with the high expectations that would be expected from such a large economy, Germany is even more successful in

international soccer than they are economically, relative to other European states. The structural conditions and institutions that are fundamental to their unique economy have been dubbed by many to be the “German” economic model. This model depends on three aspects for which the German economy is famous: the *Mitbestimmung*, *Mittelstand*, and the *Ausbildung*.

Mitbestimmung:

German *Mitbestimmung* (co-determination) in its modern practice began with the 1976 *Mitbestimmungsgesetz*, which mandates that German workers have the right to elect representatives that make up almost half of the supervisory board of directors of the company (McGaughey 2016, 171). These codetermination bargains have a long history of tradition in Germany, dating back all the way to Otto Von Bismarck’s *Krankenversicherungsgesetz 1883* (Health Insurance Act of 1883). This act mandated that a vote must be taken to elect the manager of new company health schemes where workers had two thirds of all votes and employers only a third. Even though it only encompassed health care rights, this was likely the first statute requiring codetermination in the entire world. It continued as a popular statute, until it was abolished by the Nazi party, and then reinstated following World War 2. Although they were not required by law in these early stages, they were an important aspect of negotiations between labor and business interests. From 1883 until 1890, over 6,000 new corporate health insurance schemes were created. Bismarck’s successor, Kaiser Wilhelm II, famously said that it is the natural course of events that reasonable demands by the workers, when ignored, quickly become unreasonable demands encouraged by socialists and anarchists (McGaughey, 152).

Wilhelm II attempted to pass a number of reforms to strengthen codetermination, but they were largely ineffective, and his most sweeping reform came on the eve of his departure from power and the beginning of the Weimar Republic in 1918.

Wilhelm's vision was replaced by the codetermination bargains, a series of collective agreements that took place between businesses and trade unions following the end of the first World War, and continued until they were halted by Adolf Hitler's Nazi regime before World War II. While membership in these unions was not necessarily mandatory, the vast popularity and success of collective bargaining agreements in early years stands as a testament to their importance to the German people and in the German economy.

Codetermination rights made a slow comeback in West Germany after the war, but made significant progress by the late 1960s. The first SPD-headed government in 1969 made codetermination progress a major priority, which culminated with the passing of the Mitbestimmungsgesetz 1976 by all major parties. Though it was initially met with opposition from major corporations and banks, the immense popular support it received was clear: the work council elections held every four years saw turnouts of greater than 70 percent (McGaughey , 171). The greatest challenge since then to German codetermination has ironically not come from Germany, but rather from the European Union's freedom of establishment provision. Companies headquartered in countries without codetermination laws, such as the United Kingdom, often hope to avoid German codetermination requirements, and the challenge for the European Court of Justice is determining which side to take. They will be the responsible for using the freedom of establishment principle as a vehicle for the multi-jurisdictional spread of codetermination

or as a method by which to block the spread of transnational codetermination. German proponents continue to argue that the Mitbestimmung helps mitigate inequality between management and labor, and in so doing fosters a better partnership between the two. They suppose that labor interests align more effectively with the company's interests than do shareholders, because gainful employment is more valuable than a stock, and employees depend upon the company far more than shareholders.

Mittelstand:

The German Mittelstand is another deeply rooted facet of the German economic model that has been characterized their people for more than a century. The word Mittelstand is a German komposita, a combination of two words into one that adopts aspects of its meaning from each. Mittel means middle and Stand has the same meaning in English, but together the term refers to the unique middle class and medium sized businesses in Germany. The Mittelstand has withstood numerous predictions of its impending extinction, and its proponents could make a comment similar to Twain's famous quip: "Reports of my death have been greatly exaggerated." Promptly before moving to the German city of Cologne, Karl Marx famously foretold of the doom of small businesses (kleine Mittelstände) at the hands of massive industrial powerhouses commanding industrial armies (Kommandanten der Industrie Armeen). Nearly a hundred and fifty years later, *The Economist* published a 1995 article titled "The Mittelstand meets the Grim Reaper" that praised the Mittelstand's role in the Wirtschaftswunder (the "Economic Miracle" of Germany's rapid postwar growth), but claims that "now they are dying or retiring" (*The Economist*). At the turn of the century; however, nearly 99 percent of all German businesses were either small or medium sized. These firms, none

of which exceeded annual revenues of 100 million Deutsche Marks or had more than 500 employees, employed 70 percent of the workforce, were responsible for nearly half of all sales, and represented 57 percent of all value added (Pahnke 2018, 351).

The typical model for a Mittelstand firm entails six preeminent characteristics: family firms, long term strategies, emotional attachment, continuity, patriarchal informal culture, and independence (Audretsch 2017, 127). They are usually run and managed by the founder and a few close family members. They tend to concentrate their efforts on a single product line or specialty, rather than diversifying, and seek to achieve long term, steady growth. The founders and employees have a strong sense of emotional attachment to the company and the mission, and they see the companies as instruments of personal fulfillment rather than just a personal investment. The craft industry is especially defined by generational continuity, in which a father seeks to one day pass on the family business to his son or another close relative. The Meister, which is the famous German term for a skilled craftsman, obtains the title after years of vocational training, usually after working with his father or a close friend of his father in the industry. The familial and patriarchal nature of the Mittelstand also indicates a great deal of social trust that management shares with loyal labor. This also results in longer careers within the same firms and strong job security in times of trouble that is reciprocated by workers refusing to be poached by competitors, even with the promise of higher salaries.

This loyalty pays off in other ways as well. After the 2008 financial crisis for example, the German economy experienced the fastest recovery compared to other similar European nations, due in large part to the stability provided by the Mittelstand (Audretsch, 133). Despite the global financial collapse causing severe decreases in the

exports upon which the German economy is especially dependent, a reluctance to lay off workers and a generous federal stimulus package afforded these middle sized companies a chance to mitigate the negative demand shock and continue production in the expectation of recovery. Mittelstand firms were forced to reduce hours worked, but were largely able to reduce layoffs, especially to workers that had been with the same company for a long time. This is a major factor in explaining why Germany's economy only saw an increase in unemployment of 0.5 percent from 2008-2010 (Audretsch, 135). Despite the fact that Germany's GDP experienced a greater decline than the OECD average, the increase German unemployment was the lowest percentage of all OECD countries, where many other nations saw an unemployment increase that was more than six times greater. Retained employment translated to more stable domestic demand, which also helped to bolster recovery in Germany. Compared to Italy, France, and Spain from 2008-2010, Germany was the only nation to have a positive contribution of domestic demand to GDP growth (relative to the average contribution of the Eurozone) for each year. Hassel remarked that the hours reduction without layoffs "was by far the most important adjustment mechanism" in the financial crisis.

Ausbildung:

The word Ausbildung (meaning internship or vocational training) is not necessarily as widely used a term for the systemic aspects of the German apprenticeship model as Mitbestimmung or Mittelstand for their respective areas. The importance of internships and apprenticeships; however, are just as important to the German economic model. Usually around age 10 or 11, German students enter into a three-tier education system that divides them into different kinds of schools. Gymnasium is the most academically rigorous, and is usually intended for students that have a desire to continue into higher education. The next level is Realschule, which usually encompasses a more balanced distribution between students pursuing higher education and students who seek a more vocational path. The lowest academic level are Hauptschule, which sees the majority of its students go into an apprenticeship upon completion, though a few do eventually go on to higher education. Though this system may be labeled as classist or elitist, the truth is quite the opposite: public expenditure per student for Hauptschule is greater than both Realschule and Gymnasium. Of the three different school types, 14 percent of students that finished Gymnasium went on to an apprenticeship program, 32 percent of Realschule graduates did the same, and Hauptschule finishers had the highest rate of entry at 35 percent.

The process of apprenticeship in Germany is highly developed, and it is often referred to as the “dual system” because apprentices usually split time between training within the company and going to publicly-run vocational schools once or twice a week. Vocational schools teach a number of the more abstract concepts, while large companies often educate apprentices from within training workshops rather than strictly on the job

training. Much like the *Mitbestimmung*, tenants of the apprenticeship system are built into German law. For example, there exist numerous legal requirements for what material must be taught by vocational schools, and an external actor gives an examination to all workers who complete their training. As many as 10% of those who take the exam fail, and those who pass obtain a skilled workers certification. Companies must provide means for adequate training, and are held legally responsible for proper training conditions and adequate teaching professionals.

Virtually all large companies and most of the *Mittelstand* train early employees through apprenticeship programs. These programs are so pervasive, that nearly 70 percent of the German workforce is employed by companies that take part in these kinds of training programs. The maintenance of these programs is upheld by a complex network of institutions, starting with the workers unions within each company. They work together with employer associations to develop and modify internships to better keep pace with changing industry demands and technological advancements. Regional governments are ultimately held responsible for the vocational schools, but the curriculum and topics of instruction are largely dictated by the unions and associations. At the highest level, the federal government oversees vocational training through the *Bundesinstitut für Berufsbildung* (Federal Institute for Vocational and Educational Training), which utilizes its resources to conduct research on the effectiveness of the current system and on ways to improve vocational training in Germany.

The Western Balkan States:

The breakup of Yugoslavia left the Western Balkans in dire economic conditions in the early 1990's. As the formerly socialist countries attempted to follow the Washington Consensus and enact Neoliberal market reforms, they found that quick liberalization and market deregulation, rapid privatization, and deregulation of economic flows was more difficult to implement than it had been in the model set forth by many Central European countries (Zeneli 2014, 57). Growth in the region is significantly lacking in improvement of the enterprise sector and the creation of competitive markets. Labor has demonstrated low productivity, and growth has largely stemmed from increases in efficiency. Innovation and business sophistication are of particular concern, as “. With the exception of Croatia—which is a member of the group of the countries transitioning between efficiency and innovation-driven economies—all other countries have reached the second stage of economic development based on efficiency, according to World Economic Forum indicators” (Zeneli, 57). The Global Competitive index ranks Serbia as the worst in the region and in the bottom third of the world, 101st out of the 148 countries considered in the index. Zeneli also characterizes the region as having an unfriendly business environment characterized by weak institutions and rule of law. Of the several different countries in the regions, one consistently overachieves and characterizes itself as dynamic and promising. Croatia has consistently led the area in a number of economic measures, a testament to the impact of reforms and the increasing strength of institutions in the country. Serbia, which shares a 241 kilometer border with Croatia, has not shown the same kind of progress and instead routinely finishes near the bottom of the region in economic performance in a number of metrics.

Croatia:*Table 4: Summary of Factors in Croatian Economy*

Codetermination	SME's	Vocational Edu	Population	GDP per capita
Labor Law in 1996 created to emulate the German model.	66% of workers are employed in SMEs, 60% of value added, both are above EU averages.	Three-level secondary education system, 70% of students participate in form of vocational training.	4.7 million	\$23,000

Croatia has performed remarkably well in soccer. The success of Croatia's national team is the single greatest instance of overachievement in the entire model. The model strongly suggests that a country like Croatia should have low expectations due to their small pool of potential athletes and relatively small wealth with which to support the development of successful athletes. Croatia's point total over the 12-year span was nearly *twice* as large as would be expected by this study's model. They exceeded expectations by one and half times more than the next greatest overachiever in the model. They serve as a convincing example that soccer success can be seen as indicative of economic success.

The Republic of Croatia was established after a bitter war for independence from Yugoslavia (including modern day Serbia) that wreaked havoc on the nation's resources and infrastructure from 1991-1995. Not only did this cause a great deal of destruction, but it also exempted Croatia from the influx of foreign investment that poured into much of Eastern Europe following the fall of the Berlin Wall. Only 4.27 million people

populate the coastal nation, most of whom reside near the national capital of Zagreb (CIA World Factbook). The Croatian economy has accumulated an adjusted GDP of \$100 billion; roughly the 25th largest in Europe. They do not have the incredible export capacity that Germany boasts, but their workforce of only 1.6 million people manages to export an adjusted \$13 billion of goods, mostly to Italy and Germany. German machinery, transport equipment, and chemicals make up a large percentage of Croatian imports, despite their relatively large exports in similar goods.

A thorough economic analysis shows that Croatia has economic foundations that are very similar to, and in some cases modeled directly after, that of Germany. Croatia has emphasized a top-down approach to institute codetermination based on the German model. Not only has Croatia attempted to institute a *Mitbestimmung*, but also has attracted significant efforts to create and support a Croatian *Mittelstand*. Organizations like the United States Agency for International Development (USAID), the United Nations Development Programme (UNDP), the United Nations Office for Project Services (UNOPS), and the European Bank for Reconstruction and Development (EBRD) have flooded enormous sums into the establishment and support of small-to-medium sized enterprises (SMEs). Finally, Croatia also provides an example of a vocational education system that mirrors the German model. In 2014, more than 70% of Croatian secondary education students were engaged in vocational education and training.

At the conclusion of their war for independence, the Croatian economy was in dire condition. Franicevic and Kraft authored a 1997 article on the economic conditions in Croatia following stabilization, finding that “in the five years since Croatia declared

independence, the country has experienced war, an approximate one-third drop in GDP, high inflation, and economic crisis.” (Franicevic 1997, 699). They found that the primary commitment of Croatian authorities at this point was economic stabilization, starting with the inflation rate. This process was extremely successful, as it put an end to the inflation crisis that plagues their first several years. In 1993, the inflation rate was an astonishing 1616 percent, but following the implementation of the stabilization plan that began in October of the same year, inflation was significantly reduced. The November inflation rate fell to 1.4 percent, and December actually saw small negative inflation. Privatization efforts; however, had largely failed, as the state still controlled many large industries, especially the large banks in 1995. The economy was still very much in transition, and though Franicevic and Kraft thought that high growth was a possibility for Croatia, it would “be highly dependent on the 'institutional/social structures of accumulation” that emerged (Franicevic, 686).

In order to make these institutional changes, Croatia enacted the new Labor Law, which came into effect on January 1, 1996. It was intended to follow the German model very closely, and the main advisor for those who drafted the law was Dr. Kreuder, a professor of law at the University of Frankfurt/Main (Milićević-Pezelj 1998, 41). A major component of the law was establishing a codetermination system similar to Germany. It contained provisions about workers’ participation in decision-making through works councils, the establishment and activity of trade unions, collective agreements, the peaceful settlement of collective labor disputes, strikes and lock-outs, and the establishment and activity of the Economic and Social Council (40). The Croatian Trade Union of Manufacturing and Administrative Workers in the Private Sector quickly

became one of the most influential and successful in promoting worker rights in small and medium sized enterprises.

Efforts have also been made in Croatia to create the equivalent of the German *Mittelstand*, as SMEs have attained an important status in Croatia. According to a European Commission Report, 99.7 percent of all enterprises in Croatia are SMEs (European Commission 2017, 2). Additionally, 71 percent of the labor force in Croatia is employed in SMEs, which is markedly above the EU-28 average of 66.6 percent. Not only do SMEs make up a large portion of employment, but they also contribute significantly to productivity, adding 13 billion Euros of value added, which is neatly 60 percent of all value added. Much like Germany, a vast portion of all SMEs comes from the manufacturing sector: in Croatia, 1 in 4 SMEs are part of the manufacturing sector.

Croatia has also gone to great lengths to establish a strong system for vocational training, becoming a leader in Europe in many different aspects. Secondary education, like in Germany, has three separate tracks, but these divisions are slightly different than in Germany. The general education track is similar to the American high school, the vocational track is most similar to the German *Hauptschule*, and the last track is artistic school for those interested in the arts. The vocational track is much larger than the other two tracks: there are 300 vocational schools in Croatia compared to 90 general education schools (European Commission 2016, 74). Postsecondary students in Croatia may receive a professional degree after 2 years of study and a vocational Bachelor's degree after 3. The average vocational program participation for upper secondary students in Croatia is much higher than the European average, as more than 70 percent participate in Croatia versus the EU average of 48 percent (EC, 82).

The preceding information makes it evident that Croatia has attempted to emulate the German model and structure their economic reforms in a similar fashion. Though it was clear that the economy was struggling beforehand, the impact of these reforms is evident with macroeconomic indicators. Located in an area that has been among the slowest in Europe to develop, Croatia consistently leads in a plethora of evaluations. The simplest measure of economic success is GDP per capita, and Croatia has a strong edge within the region. GDP per capita is not reflective of the dispersion of income, but further analysis shows that wealth in Croatia is not withheld from the lowest earners. Zeneli found that “The best performing economy in the region is Croatia, with only 0.6 % of the population living under the poverty line” (Zeneli 2014, 55). The World Bank’s Knowledge Economy Index (KEI) provides a measure of a country’s ability to generate growth, based on a metric involving economic incentives and institutional regimes, innovation and technology, education and training, and ICT infrastructure (World Bank 2012). In this assessment, Croatia finished first among West Balkan nations, at 39th place in the world. Croatia also led the region in controlling corruption, attractiveness for foreign investment, quality of education, and local ability of specialized research and training services.

Serbia:*Table 4: Summary of Factors in Serbian Economy*

Codetermination	SME's	Vocational Ed.	Population	GDP per capita
No specific laws protecting codetermination rights among workers.	Large percentage of companies, but underperform EU averages in workers employed and value added.	High historic participation but lack of strong oversight. New regulations will attempt to solve this problem in 2019.	~7 million	\$14,514

While Germany and Croatia have found success economically and in international soccer competition, Serbia has disappointed in both respects. Serbia's predicted outcome in the model is more than 10 times closer to Croatia's than any other country: Serbia's average GDP log (10.975) is only 0.007 points different from the average of Croatia (10.968) for all of the years coinciding with the European Championships. Despite the similarity in predicted outcomes, their performance at the Euros could not be more different. While Croatia nearly doubled their expected outcome, finishing with the 4th highest point total, Serbia finished 29th, nearly 6 points *lower* than their expected point total. While Croatia might be expected to be more successful because of the wealth effect on soccer performance, Serbia should be close because of their much larger population.

Perhaps no Balkan country has been impacted more by Yugoslavian influence than the Republic of Serbia, which became all that was left of Yugoslavia after Croatia, Slovenia, Macedonia, Bosnia, and eventually Kosovo declared independence. The secession of these countries is largely blamed on Slobodan Milošević, who became

president of Serbia in 1989. Milošević's ultra-nationalist campaign allegedly led to the "violent breakup of Yugoslavia along ethnic lines." This civil war led to major economic sanctions as well as significant damage to Serbian infrastructure and industry, especially following NATO airstrikes in 1999. Since Milošević was ousted in 2000, Serbia has been rebuilding their economy, although progress has been slow. In 2014, GDP was still 27.5% lower than it was before Milošević. Though their population of 7 million is approaching nearly twice that of Croatia's 4 million, their GDP is only an adjusted \$105 billion, which is only slightly larger than Croatia's \$100 billion. Though industry is far more liberalized in the present day, the state still owns many large enterprises in power utilities, telecommunications, natural gas, and others.

Despite being on opposite sides of the Yugoslav wars, both Croatia and Serbia experienced similar problems from the violence and uncertainty that wracked the region for more than a decade. Contrarily to what one might expect from their economic, geographic, and historic similarities, their economic outcomes have been very different. Rather than seeking to emulate economic success of Western European countries like Germany, Serbia's continuous conflict with former Yugoslavian countries left its economy with a radically different institutional framework than Croatia or Germany. Serbia has been demonstrated to have significant lingering beliefs from the Yugoslav model of self-management, and these beliefs explain the lack of codetermination laws in Serbia. Further examination reveals Serbia's absence of a significant commitment to the other main tenants of the German model until recently. The number of individuals employed by SMEs and the value added by SMEs had taken a sharp decline following the 2008 financial crisis and left them far below EU averages. Government attention to

vocational education in Serbia was also remarkably low until 2016. Although it is clear that Serbia had fallen far behind on these initiatives, recent changes bring forth promise of advancement in all three areas.

The lackluster economic performance coincides with a lack of strong reinforcement of the institutions that have made Germany and Croatia successful. “Among all the successor states of former Yugoslavia, Serbia preserved certain institutions of the former self-management system for the longest... due to the ideological continuity of Milosevic’s Socialist Party” (Cerović 2015, 13). Although there was less of a need for German-style codetermination, the first of Rodrik’s institutional requirement for economic success, property rights, was prevented by the system of self-management. The Serbian government continued its commitment to reinforcing social property as the dominant form of property ownership until 2001 and involved an increased level of state control. Social property continued to hold an important role in Serbian institutional organization until the new Serbian Constitution was ratified in 2006. Although privatization was doubtlessly beneficial, it also seemed to entail an overcorrection in terms of codetermination. In an effort to depart from collective ownership, Serbia has also abandoned collective decision making, which has translated to less worker satisfaction and less company loyalty within the country.

Although 99.9 percent of all companies in Serbia are small to middle sized, the macroeconomic role of these SMEs is significantly less in Serbia than in Croatia or Germany (European Commission 2017, 2). Serbia also ranks slightly below the EU averages for number of workers employed by SMEs and value added by SMEs. The biggest difficulty for SMEs in Serbia is access to finance, state aid, and public

procurement. While some action has been taken to correct this problem, the majority of SMEs still remain dependent on their own resources to expand operations. The role of SMEs in the economy has expanded with recovery from the 2008 financial crisis, and recent increases in the productivity and efficiency of SMEs in Serbia provide evidence to expect significant progress over the next few years.

Though participation in vocational programs in Serbia has been historically high, government involvement, regulation and support have not seen substantial levels until fairly recently. Though the history of vocational education might appear bleak, recent efforts bring forth more promising expectations of a brighter future. In 2017, the National Assembly passed the Law on Dual Education, which seeks to reconcile the academic requirements of the classroom with the technical needs of the labor force (European Commission 2019). This new law was passed specifically in order to increase the competitiveness of the Serbian labor force and to better equip graduates to fill labor market needs. It also solves the problem of lack of oversight, as the Law regulates content and methods of implementation for the new dual education system. The standards of the curriculum must be evaluated every three years and revised every five when it is deemed to need better alignment with technological advancements. The Law will be enacted at the beginning of the 2019/2020 school year in Serbia, and development from this project seems especially promising.

Conclusion:

This study found a strong correlation between economic success and success in the European Championships. Countries with a high GDP regularly had better match results than countries with smaller economies, indicating the presence of a wealth effect and a population effect on soccer performance within Europe. Germany demonstrated high achievement economically and in soccer and further study of the fundamental institutions that make up the German economy reveals their significance in economic achievement and therefore soccer performance. Croatia has emphasized the importance of establishing similar institutions. Croatia has since seen remarkable economic growth and also drastically outperformed their modest expectations for soccer success. Serbia shares a common history with Croatia, but has not made the same sort of institutional reforms and lags behind their neighbor in many economic categories. Fittingly, Serbia also has been unable to meet their humble expectations for soccer performance, despite having a much larger population than Croatia.

The results of this study indicate that sport is heavily influenced by macroeconomic factors, and that soccer might be used to help provide a deeper understanding of national economies. This study also identifies several commonalities between Germany and Croatia, countries with institutions that have facilitated significant economic progress and who have performed very well in soccer competition. This study also discovered the absence of these commonalities in Serbia, a country that was otherwise similar to Croatia. This study has wide ranging implications for a number of individuals from economic experts to sport enthusiasts. This project provides a new way to view international matches of the world's most popular sport as a function of each

country's economic prowess, and highlights important aspects of economies that have helped Germany and Croatia attain remarkable growth and resiliency.

This study also calls for further research into several of the conclusions reached. This study includes an in-depth analysis on the importance of codetermination, SMEs, and vocational education in Germany and Croatia. Future research in Economics might attempt to establish a causative relationship between these institutions and economic growth by comparing them over time. Research in Sports Management may attempt to determine other factors that might be relevant in achieving athletic success, such as nationwide popularity of the sport, total national revenue of professional sport leagues, or number of migrants participating in the sport. The institutions mentioned in this study could also potentially be used to examine for associative relationships with soccer performance. Nations who emphasize vocational education might also place a great deal of importance on the professional academies responsible for training eventual national team players. A country with a national economy more dependent upon SMEs for growth might also have a national team dependent upon many small or medium-sized professional clubs for the players that make up the roster. The national protection of codetermination could likely translate to professional clubs having more a more decentralized decision making process that could benefit the club in many different ways. Future research on those possibilities is likely to yield impactful results.

Bibliography

- Addison, John T., Paulino Teixeira, Alex Bryson, and André Pahnke. 2013. Collective agreement status and survivability: Change and persistence in the German model. *Labour : Review of Labour Economics and Industrial Relations* 27 (3): 309;288;-309.
- Central Intelligence Agency World Factbook. 2018.
<https://www.cia.gov/library/publications/the-world-factbook/>
- Cerovic, Bozidar, Jan Svejnar, and Milica Uvalic. 2015. Workers' participation in a former labour-managed economy: The case of Serbian transition. *Economic Annals* 60 (205): 7-29.
- Cohen, Daniel. *The Wealth of the World and the Poverty of Nations*. Boulder, CO: NetLibrary, 1999. 37-40
- De Massis, Alfredo, David Audretsch, Lorraine Uhlaner, and Nadine Kammerlander. 2018. Innovation with limited resources: Management lessons from the German Mittelstand. *Journal of Product Innovation Management* 35 (1): 125-46.
- Dimitrov, D., C. Helmenstein, A. Kleissner, B. Moser, J. Schindler. 2006 *Die makroökonomischen Effekte des Sports in Europa, Studie im Auftrag* The Austrian Chancellery, Section Sport, Vienna.
- Escobar, Arturo. 1992. Imagining a post-development era? Critical Thought, Development and Social Movements. *Social Text* 31-32 (31/32): 20-56.
- European Commission. 2016. "Study on higher Vocational Education and Training in the EU" Luxembourg: Publications Office of the European Union: 70-115
- European Commission. 2017. "SBA Fact Sheet." https://ec.europa.eu/neighbourhood-enlargement/sites/near/files/serbia_sba_fs_2017.pdf
- European Commission. 2007. White Paper - White Paper on Sport {SEC(2007) 932} {SEC(2007) 934} {SEC(2007) 935} {SEC(2007) 936}
- Franicevic, Vojmir, and Evan Kraft. "Croatia's Economy after Stabilisation." *Europe-Asia Studies* 49, no. 4 (1997): 669-91. <http://www.jstor.org/stable/153719>.
- Gásquez, Roberto, and Vicente Royuela. 2014. Is football an indicator of development at the international level? *Social Indicators Research* 117 (3): 827-848.
- Haraguchi, N., Martorano, B., Sanfilippo M. 2018. What factors drive successful industrialization? Evidence and implications for developing countries. *Structural Change and Economic Dynamics*. Elsevier.

- Kuper, Simon, and Stefan Szymanski. 2012. *Soccernomics: Why England loses, why Spain, Germany and Brazil win, and why the US, Japan, Australia, Turkey--and even Iraq--are destined to become the kings of the world's most popular sport.* Rev. and expand ed. New York: Nation Books.
- McGaughey, Ewan. 2016. The Codetermination Bargains: The History of German Corporate and Labor Law. *Columbia Journal of European Law* 23 (1): 135.
- Milićević-Pezelj, Ana. "From Self-Management to Co-Determination – The Croatian Experience." *SEER: Journal for Labour and Social Affairs in Eastern Europe* 1, no. 2 (1998): 37-45. <http://www.jstor.org/stable/44627793>.
- Mowery, David C., and Richard R. Nelson. 1999. *Sources of industrial leadership: Studies of seven industries.* Cambridge, UK New York;: Cambridge University Press.
- Nguyen, Hang Thi Thuy. Siracusa, Joseph. 2018. *Richard M. Nixon and European Integration.* Palgrave Macmillan
- Reed, Adam 2018. *Half the world's population tuned in to this year's soccer World Cup.* <https://www.cnbc.com/2018/12/21/world-cup-2018-half-the-worlds-population-tuned-in-to-this-years-soccer-tournament.html>
- Rodrik, Dani. 2007. *One economics, many Recipes: Globalization, Institutions, and Economic Growth.* Princeton: Princeton University Press.
- Rodrik, 2007 *Industrial Development for the 21st Century : Sustainable Development Perspectives.* United Nations Department of Economic and Social Affairs. New York. United Nations.
- Rostow, W. W. 1967. *The Stages of Economic Growth: A non-communist manifesto.* Cambridge [Eng.]: University Press.
- Sen, Amartya. 1999. *Development as Freedom.* 1st. ed. New York: Knopf.
- UEFA Tournament Results <http://www.rsssf.com/tablese/euro-alltime.html#qualres>
- UEFA Qualifier Results <https://www.uefa.com/european-qualifiers/season=2018/statistics/-round=2000717/teams/index.html>
- Vorobyev, A., E. Zarova, I. Solntsev, N. Osokin, and V. Zhulevich. 2016. Statistical evaluation of football performance depending on the socio-economic development of countries. *Statistical Journal of the IAOS* 32 (3): 403-411.
- World Bank Open Data <https://data.worldbank.org/>

Wyatt, Lee T., Gale Group, and Gale Virtual Reference Library. 2008;. *The Industrial Revolution*. Vol. 1. Westport, Conn: Greenwood Press.

Zeneli, Valbona. 2014. Economic development in the Western Balkans: On the road to competitive market economies? *Connections* 13 (4): 53-64.