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A Case Study Analysis of the International Monetary Fund's Effect on Low-Income Residents of Eastern and Southern European Nations

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ABSTRACT

This paper analyzes whether the International Monetary Fund actually harms lower-income residents of a nation receiving IMF balance of payment support. It uses a social and economics rights report card to assess the impact of IMF assistance in four Southern and Eastern European nations: Bosnia & Herzegovina, Serbia, Romania, and Ukraine. The analysis focuses on the time period 2007 to 2017, largely characterized by the 2008 Financial Crisis and the related shocks following it. This analysis found that there is no evidence that restrictions influenced by the International Monetary Fund actually harm social metrics in supported nations in the short-term using a two-year lag implementation basis.

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Chapter 1

Introduction

This paper seeks to analyze the impact of the International Monetary Fund on those that are often left behind: lower income residents of nations with balance of payment issues. Specifically, this analysis compares how well an IMF-supported nation performs in certain social indices across time periods. IMF programs tend to impose fiscal restrictions, and using an index on economic and social rights can help indicate if fiscal restrictions actually impact the well-being of residents. This analysis considers basic health, nutrition, sanitation, education as the key economic and social variables. There are plenty of other variables that affect the macroeconomic health of a nation, and this analysis has no intention of being completely comprehensive. When measuring the health of a nation through a social index perspective, it appears that IMF programs do not harm the residents of a nation.

The International Monetary Fund offers lending and technical expertise to nations that request assistance typically due to deficit gaps between projected spending and actually available funds. To receive financial assistance in the form of generous loans, nations must provide a plan stating what they aim to do fiscally and monetarily to continue to receive support. Additionally, the IMF imposes specific conditionality agreements to tighten fiscal and monetary variance. A central part of this thesis is to analyze if the conditions to agreement are harmful to lower-income residents. Aid is often distributed between 1.5 and 4 years after each quarterly check of progress. In addition, repayment schedules afterwards are typically 3.25 to 5 years in length.

The International Monetary Fund receives its funding through three ways: quotas from member countries, multilateral borrowing, and bilateral borrowing. The three sources of funding work in that order where countries directly contribute if needed, then if quotas are exhausted selected member nations are ready to provide additional lending. Lastly, the IMF has entered agreements with individual countries where they are able to lend additional funds if necessary (IMF, 2021, Where the IMF Gets its Money). The United States participates in all agreements at a much higher contribution level than any other country (Amr, 2021, Table 1).

The United States' overweight status in decision-making is often referred to as the "Washington Consensus." This term refers to the idea that policies originate in the US and conform to a "one size fits all" approach. The primary motivation for this analysis is that the similar policies enacted across different countries in different time periods may actually be harming the residents of nations, while attempting to improve the nation's balance of payment issues. It is possible to consider whether the Washington Consensus is still applicable today.

Weak feedback sensitivity is also reflected in the actual collection of metrics during an IMF proposal. When nations craft proposals and the IMF generates annual reports, significant metrics to the social well-being of a country are overlooked. The IMF only lists social indicators as per capita GDP and poverty rate in some of its main reports. Sometimes the fundamental tradeoff between social assistance and fiscal discipline is recognized and other times nations with massive balance of payment issues will directly increase support for programs that help their neediest residents. The IMF has changed immensely over time, but some things remain the same.

The IMF has a leading lending tool that has changed slightly over decades. Stand-By Arrangements date back to 1952, and are the oldest form of IMF assistance still in practice today. Their purpose is to offer medium-term assistance to nations with balance of payment issues "of a

short-term character" (International Monetary Fund, 2008, Table 4.1). Disbursements are quarterly and contingent upon nations following restrictive policies that provide confidence of repayment to the IMF. The IMF will impose broad conditions, such as limiting debt to GDP, and nations will craft fiscal and monetary policies to provide evidence that they will follow through and meet the restrictions.

The International Monetary Fund has provided support to countries in all major continents. This analysis focuses on southern and eastern European nations: Bosnia and Herzegovina, Romania, Serbia, and Ukraine. These nations were selected due to their close geographic proximity, similar economic structures, and similar receipts of IMF support. The four nations were formerly part of the Eastern Bloc and all share similarities in having outstanding exposure to public sector wages and pensions. The four nations received three rounds of IMF assistance from 2007 to 2017 in varying amounts. Each country's GDP is largely made up of their public sector workers, and each nation tried to transition away from this model throughout the three assistance periods. Additionally, each country enjoyed economic growth up until the 2008 global financial crisis which negatively impacted all to a varying degree. All of the following support rounds involved improving the financial situation that countries entered after the global financial crisis.

The time period 2007 to 2017 is especially interesting because it covers the very beginning of the financial crisis (with some of the early 2000s boom) until the end of recovery for the nations presented. Despite falling populations for all nations, GDP growth occurred impressively in Bosnia & Herzegovina and Romania, and less impressively in Serbia. All but Ukraine experienced positive GDP growth over the time period. Overall, the trend is falling population with increases in GDP, possibly indicating that despite balance of payment issues,

residents of the nations are left better off at the end of the observed time period than at the beginning.

Table 1: Historical Population (thousands)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	% Change
B & H	3763	3754	3736	3705	3661	3605	3543	3482	3429	3386	3352	-10.9
Romania	20883	20538	20367	20247	20148	20058	19984	19909	19816	19702	19587	-6.2
Serbia	7382	7350	7321	7291	7234	7199	7164	7131	7095	7058	7021	-4.9
Ukraine	46509	46258	46053	45871	45706	45593	45490	45272	45154	45005	44831	-3.6

(World Bank, 2021, Population)

Table 2: Historical GDP (billions) (current US$)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	% Change
B & H	15.8	19.1	17.6	17.2	18.6	17.2	18.2	18.6	16.2	16.9	18.1	14.6
Romania	174.6	214.3	174.1	166.3	183.3	170.6	190.8	200.0	177.7	188.1	211.7	21.3
Serbia	43.2	52.2	45.2	41.8	49.3	43.3	48.4	47.1	39.7	40.7	44.2	2.3
Ukraine	142.6	179.8	117.1	136.0	163.2	175.8	183.3	133.5	91.0	93.4	112.2	-21.3

(World Bank, 2021, GDP)

Figure 1: Map of Selected Nations and Neighboring Country Kosovo

Chapter 2

Review of the Literature

The International Monetary Fund (IMF) consists of 190 member countries that maintain global financial stability and trade, while also attempting to improve employment, sustainable economic growth and poverty rates. My thesis will focus on the second half of the IMF's goals, primarily relating to the social well-being of low-income individuals within IMF-supported nations. Particularly, the IMF's standards of conditionality including quantitative performance criteria (QPC) and indicative targets (IT) are problematic for the worse-off of a nation. QPC's contain ceilings on government borrowing and IT's limit levels of social assistance spending.

Despite imposing conditionality agreements, the general consensus of academics is that the IMF consistently fails to reach the goals above. Using before and after analysis (BA), with-without analysis (WW), and the generalized evaluation estimator model (GEE), Eke and Kutan (2009) find that IMF programs were largely ineffective through high recidivism rates, low completion rates, and minimal effects on the growth of gross domestic product and the stabilization of inflation in Eastern European countries. The generalized evaluation estimator, created by Goldstein and Montiel (1986), is one of the primary methods for analyzing IMF effectiveness. This model is described as a policy response function to determine policies that would have been used in the absence of an IMF program.

Many researchers point out that the IMF uses a one size fits all approach and that is typically true, although the IMF has been leaning towards greater power for countries in recent years. Despite openness, it is still important to consider how IMF loans can vary on the limitations that they offer borrowers. In an analysis of IMF loans, Rickard and Caraway (2018) highlight the significance of the IMF forcing restrictions on public sector spending in the wage

bill. Compared to general restrictions on funding, countries that were required to reduce their public sector workers' wage bill did so at much higher amounts than the comparison group. The wage bill is a contentious political decision, and Rickard and Caraway (2018) found nations to backslide on their cuts in the long-run, possibly due to political pressure. The specific nations in this study dealt with massive reductions in their public sector wage bill. While research indicates that narrowed IMF tools are unable to maintain long-term economic policy reforms, they still leave open the question of other effects of narrow policy-making.

Academics have also been very critical of the validity of austerity measures to cut spending. Moosa & Moosa (2019). recognize the adverse impacts on health and education spending that led to brain drain of talented health professionals. The scale of this study would not reflect the longer-term results of brain drain in the healthcare field. Conditionality used to enforce austerity is believed to be ineffective by increasing unemployment and not supporting the idea that repayment will be more successful.

Hajro and Joyce (2009) find mixed results on an assessment of IMF programs specifically on the poor. Stating that the generalized evaluation estimator (GEE) method did not respond well to actual changes in policy variables, these researchers chose to use a fixed-effects estimator that assumes the existence of country-specific, unobservable characteristics, allowing for time-specific events (Hajro & Joyce, 2009). Their distinctions are largely based on the difference in performance between the IMF's non-concessional and concessional loan programs. Hajro and Joyce found that concessional programs improved infant mortality rates and the HDI. However, the researchers did find that concessionary and non-concessionary programs had different impacts on the poor, indicating that non-concessionary programs have not contributed to an improvement in conditions for the poor, but concessionary could have. They found that

despite improvements in HDI and infant mortality, there was no relationship with poverty. Hajro and Joyce are also among the proponents that emphasize the importance of institutional quality in economic recovery, noted by other researchers in this review. Hajro and Joyce use 82 across various regions and make no consideration for potential differences in plan implementation across different countries.

Using a System-GMM approach, Javed (2016) links negative and neutral GDP growth to the strength of institutions in recipient-nations. IMF programs have a tendency to limit monetary and investment freedoms which result in positive institutional quality. In addition to contributing to GDP growth, quality institutions also reduce macroeconomic instability within a nation. The importance of institutional quality is a recurring trend in many research papers. Private sector institutional quality was a key goal of all of the four nations in this study because nations wanted to steer toward strong private investment, as opposed to public organizations.

Oberdabernig (2013) analyzed the number of people living at or below poverty and income inequality before and after IMF aid in 86 low to middle-income countries from 1982 to 2009, and discovered that lower income classes experienced larger costs from conditionality, increasing poverty and income inequality. Oberdabernig acknowledges that poverty and income distribution problems are greatly alleviated two years lagged. This same study conducted in the period 2000 to 2009 reveals poverty reduction and inequality reduction, as well. A recurring trend between leading academics includes the focus on short-term effects only reaching out to two years lagged.

While general opinion on IMF success appears to be mostly critical, the discussion between the effects on health and education spending is fairly balanced. Using data from 140 countries, the IMF insists that education and health spending have risen much faster in IMF-

supported nations than in developing countries as a whole (Nozaki, Clements, & Gupta, 2011). However, the IMF's findings were heavily criticized, especially in an analysis of IMF effects in 16 West African nations. Researchers investigated conditionality effects on health spending per capita and as a percentage of GDP, and found that each additional conditionality agreement led to a reduction in government spending in health (Stubbs et al., 2017). Conditionality agreements cause recipient nations to limit the fiscal space for health investments, health sector wages, and the health system budget execution.

Overall, most studies imply that the IMF is not effective in carrying out its primary goals of alleviating balance of payment issues in the long-term. Additionally, wider-scale research conducted by Oberdabernig and Hajro and Joyce analyze programs across regions which may not reflect the differences in implementation across structures and cultures. The literature indicates that there is a weak relationship on general programs and their secondary goals of reducing poverty, and that there is minimal evidence that programs directly harm the poor of a nation.

Chapter 3

Methodology

Following the global financial crisis, the economies of the four European nations entered recession: Bosnia and Herzegovina, Romania, Serbia, and Ukraine. Over the next six years, the nations would face unique fiscal and monetary challenges that would prompt them to request support from the International Monetary Fund. These countries are all applicants of three rounds of Stand-By Arrangements or adjustments from the IMF. All nations spent over 50 months in program periods, and all received at least SDR billions in aid. The earliest receipt of aid was January 16, 2009 to Serbia and the final receipt analyzed in this thesis is the February 23, 2015 distribution to Serbia, as well.

In this case-study analysis, I provide the situation that prompted IMF support, the specific limitations that countries impose on themselves to achieve IMF approval, and the comparative macroeconomic and social index figures before and after the program period begins. I note the time period two years after the program as most likely to have a significant effect on the fiscal status of a nation. Two years was selected because it falls between Evrensel's (2002) estimated impact lag of three years and Eke and Kutan's (2009) estimated impact lag of one year.

This analysis will not focus on the direct IMF requirement such as limitations on debt as a percentage of GDP, but will instead focus on the subsequent fiscal policy changes, such as limitations on public sector wages and pensions. The IMF makes quarterly reviews of participating nations and would withdraw aid in the event that a nation does not follow through with the agreed-upon limitations so the focus should not matter. Conditionality requirements are pulled from the official request and approval document to the IMF.

The primary tool in this analysis for describing the performance of nations after agreeing to IMF support is the Social and Economic Rights Fulfillment Index, also known as the SERF Index. The SERF Index does the difficult task of collecting significant social metrics from across organizations to create a meaningful picture of opportunity offered to individuals in a certain nation. I have selected four of their grading criteria to compare performance between nations. The performance of each nation will be compared over time. A score of 100 would imply that a country is using the maximum ability of its resources to deliver "full realization" of each right in the index (Randolph et al., 2020).

The four areas of the SERF Index included in this analysis are the Right to Food, the Right to Education, the Right to Health, and the Right to Housing. The Right to Food is defined as the percentage of children under 5 that are not stunted (being at least two standard deviations under the median height). A nation with proper food access is able to provide the correct nutrients to its youth. The Right to Education averages out the net primary school and net secondary school enrollment rate within a nation. In addition to displaying priorities placed in education by a nation, it also shows if youth need to work to provide for their family. The Right to Health is comprised of the percentage of children surviving to age 5 and the survival rate for adults aged 15 to 60 years. It also includes the percentage of couples that use modern contraceptives. Lastly, the Right to Housing is the percentage of the population with access to basic sanitation and the percentage of the population with access to basic water on premises. Collectively, the SERF Index paints a detailed picture of social conditions for a nation's population. The nature of an index allows for the adjustment of global macroeconomic trends because the benchmark is based on the achievable performance of similar nations.

Due to unavailability of data and the small sample size of Eastern and Southern European nations that received Standby Arrangements (SBA's), the most meaningful analysis is case study with emphasis on before and after analysis. Data for many metrics that relate to social spending are not consistently collected on a national level. When available, comparison between the region can be used. Often a metric will be collected every five years which significantly hinders the usefulness of a short-term analysis.

This time period was selected because of its relevance to today's society and the availability of data that was not available before the 2000s. In addition, funding was requested not exclusively for the 2008 Global Financial Crisis, but for other purposes in 2013, 2014, and 2015 from the selected nations. Because acceptance does not have an immediate effect on economy, time is considered 1 to 2 years after the approval of funding. The IMF performs quarterly reviews to ensure promised policies are being implemented and enforced.

Total program duration in the time period for each nation is substantial with a minimum of sixty-nine months. In addition, most programs are at least 1.5 years long with many being at least two years. With longer program durations and longer total duration, nations spend more time implementing fiscal changes that indicate greater causation from IMF restrictions on social policies.

Table 3: Program Start Times and Durations (months)

	Bosnia & Herzegovina	Romania	Serbia	Ukraine
2008				24
2009	36	24	15	
2010				29
2011		24	18	
2012	24			
2013		24		
2014	9			24
2015			36	
Total (months)	69	72	69	77

(IMF Annual Reports, 2008-2016, "Arrangements Under Main Facilities Approved")

Table 4: Loan Approval Amount as a Percentage of GDP

	Bosnia & Herzegovina	Romania	Serbia	Ukraine
2008				8.62%
2009	8.19%	9.34%	8.24%	
2010				10.45%
2011		2.39%	2.70%	
2012	4.61%			
2013		1.30%		
2014	0.65%			11.95%
2015			3.35%	

(IMF Annual Reports, 2008-2016, "Arrangements Under Main Facilities Approved")

Chapter 4

Limitations

The most significant limitation is that there are many events, decisions, and implications that affect the social condition of the residents of a nation. Previous and current political structures, natural disasters, and recessionary tides all impact a nation. Ideally, the effects from exterior changes are mitigated by analyzing metrics for five nations across time period of 2007 to 2017. The nations experienced recessions for different reasons and implemented different conditions to close deficit gaps.

Informal Economies

Another limitation of this analysis is the impact of informal economies, commonly referred to as grey economies. This type of economy includes work that goes unreported to the government, and makes tax collection especially difficult. Bosnia and Herzegovina and Serbia are estimated to have about 27% of their GDP as grey (Dizdarevic, 2021, para. 3). This includes all workers that do not declare income for various tasks, and could be much higher as residents do not openly admit to undeclared income. There are enormous tax implications in a nation's fiscal income statement and there is also the understatement of where workers are working in the economy.

Limited Sample Size

Due to the limited sample size and unavailability of data, no statistical methods were used to possibly extrapolate and expand findings to other areas. This analysis is on a case-by-case standard because other measures of comparison would not be meaningful. This also relates to the fact that nations are experiencing wildly different events over the time period.

External Influence

The very nature of standby arrangements is to provide funding to finance fiscal deficits in the short or medium term. Nations receiving support are already experiencing issues with balance of payments, economic structure, or other issues. We can expect to see low employment, lagging GDP, and poor social indicators around the same time of IMF support by nature. By looking at the before and after of each support period, this limitation can be mitigated.

Just like we can expect to see poor economic performance at the timing of IMF support due to its nature, we should also expect to see the gradual increase of index figures for social performance. Through information sharing and the efforts of global organizations, nations can quickly narrow the gap in survival rates and access to food and sanitation, among other things. We would expect to see all nations to improve gradually over time in their index standing. Additionally, the IMF is able to provide technical expertise and advice to nations that are attempting to improve fiscal responsibility, taxation efficiency, and other fundamental structures.

Limited Time Scope

Other literature has explored the long-term effects of support. Rickard and Caraway (2018) find that officials tend to backslide on wage cuts in the public sector in the long-term. Leading evidence implies that nations are able to adjust their economies over time after the heavy and sometimes disastrous effects of IMF lending. This analysis will exclusively look at the short-term performance of a nation after IMF support. There is no basis to expand short-term findings to the long-term.

Chapter 5

Analysis

The analysis will provide background on each of the four nations Standby Arrangements, including macroeconomic background. It will further identify the fiscal restrictions that each nation agreed to self-impose to be in accordance with IMF conditionality. Lastly, it will compare the four key metrics from the SERF Index for each support round: Right to Education, Right to Housing, Right to Health, and Right to Food. These four areas should provide a picture of the status of lower-income life for residents of an IMF-supported nation. Results are based on a two-year lag after initial reception of IMF assistance. Data is pulled directly from the Request for Standby Arrangement Reports that are crafted by individual nations, then curated by the IMF.

Republic of Serbia

In an attempt to stave off the incoming spillovers from the global financial crisis, the Republic of Serbia requested a SDR 350.8 billion Stand-By Arrangement in December of 2008. As the financial crisis worsened, especially in Eastern Europe, the Republic of Serbia then increased their request to SDR 2,619.12 million (about $3.9 billion USD in 2009) in May of 2009. The IMF approved the 15-month arrangement, and Serbia would only draw on SDR 1,367.74 million. Serbia requested assistance during all three of the nation's recessions that decade: 2009, 2012, and 2015.

In both 2012 and 2015, the IMF approved Serbia's next two requests for precautionary Stand-By Arrangements. The nation would never actually draw upon the two SBA's, but it would still follow monetary and fiscal restrictions to have access to the support if it needed. The

2012 Serbian Request focused on the nation's external trade imbalance, driven by a dominance in the non-tradable sector. Specifically, Serbia was seeking to create a more competitive economy by structurally shifting investment from the public sector to the private sector. The Republic of Serbia was unable to properly implement its structural changes. Lack of strong public institutions, followed by exogenous shocks, such as extreme winters, droughts, and floods over the 2012-2014 period plunged Serbia into another recession, leading to the 2015 request.

Table 5: Standby Arrangements for the Republic of Serbia (thousands of SDRs)

Date of Arrangement	Date of Expiration	Amount Agreed	Amount Drawn
23-Feb-15	22-Feb-18	935,400	0
29-Sep-11	28-Mar-13	935,400	0
16-Jan-09	15-Apr-11	2,619,120	1,367,743
Total		4,489,920	1,367,743

(IMF Data, 2021, Latest Financial Commitment for Serbia).

Fiscal Conditionality

In its augmented 2009 arrangement, Serbia limited its fiscal deficit to 3% of GDP in 2009 and 2.5% in 2010. At the time of request, fiscal deficit would have risen to 6.25% by the end of 2009 without policy changes. Serbia opted to cut discretionary spending, while also protecting some social spending facilities. Specifically, the government decided to limit its public sector worker's wage bill and cut spending on goods and services by 0.5% and 1.0% of GDP, respectively. From the revenue side, Serbia planned to raise personal income tax and excises additional taxes on utilities and automobile providers to an increase of 0.9% of GDP.

In 2011, the Republic of Serbia agreed to a 1% of GDP fiscal deficit gap accompanied by a 2.5% gap in 2012. Without adjustment, the fiscal deficit gap would be on projection to reach about 4.0% GDP. In this expenditure cut, Serbia would only reduce goods and service expenditures by 0.1% and 0.3% in 2011 and 2012 respectively. However, the nation would engage in massive cuts to capital outlays in local projects (0.5% and 0.8%), reduction in mining and railway subsidies (0.3% in 2012, and devolution of road maintenance to local levels (0.3% in 2012).

Over the period 2015 to 2017, the Republic of Serbia planned to reduce the fiscal budget deficit balance by about 3.5% GDP. This figure was led by a 10% reduction in across-the-board nominal wages for the broad category of public sector employees. At the end of 2014, nearly 20% of Serbia's total employment was composed of public sector workers. Cuts appear to be more applicable to ordinary people in this request for SBA. To improve the fiscal deficit by 0.42%, the Republic of Serbia planned to raise electricity prices over the 2015-2017 period. Over the same period, the deficit would be lowered by reducing or freezing public wages and pensions by 2.34% of GDP. Lastly, the nation would remove 0.45% GDP of subsidies to agriculture, railways, and the SOE, Srbijagas, that provides most of the nation's natural gas.

Results

Serbia's major cuts in the three time periods involve a heavy cut to public worker employment which makes up a substantial part of their economy. These cuts would be expected to have an impact on all aspects of social metrics because they are directly reducing the income of workers. In addition, reduced subsidies or tax penalties were applied to transportation or utilities in every time period.

Of the four nations analyzed, Serbia had the largest variability in its two-year changes. The nation was able to lower the number of children stunted in development, but showed a negative trend in each three time periods for access to sanitation and water. The nation had very mixed results in education where it became stronger in primary and secondary enrollment two years after the first IMF support round, but much weaker in the third round. Notably, the first and third rounds had the greatest cuts to public worker wages and pensions, but the results are significantly different. Health saw growth in each interval where the survival rate increased for all groups in the category. Overall, the impact of conditionality on the SERF index is very mixed for Serbia.

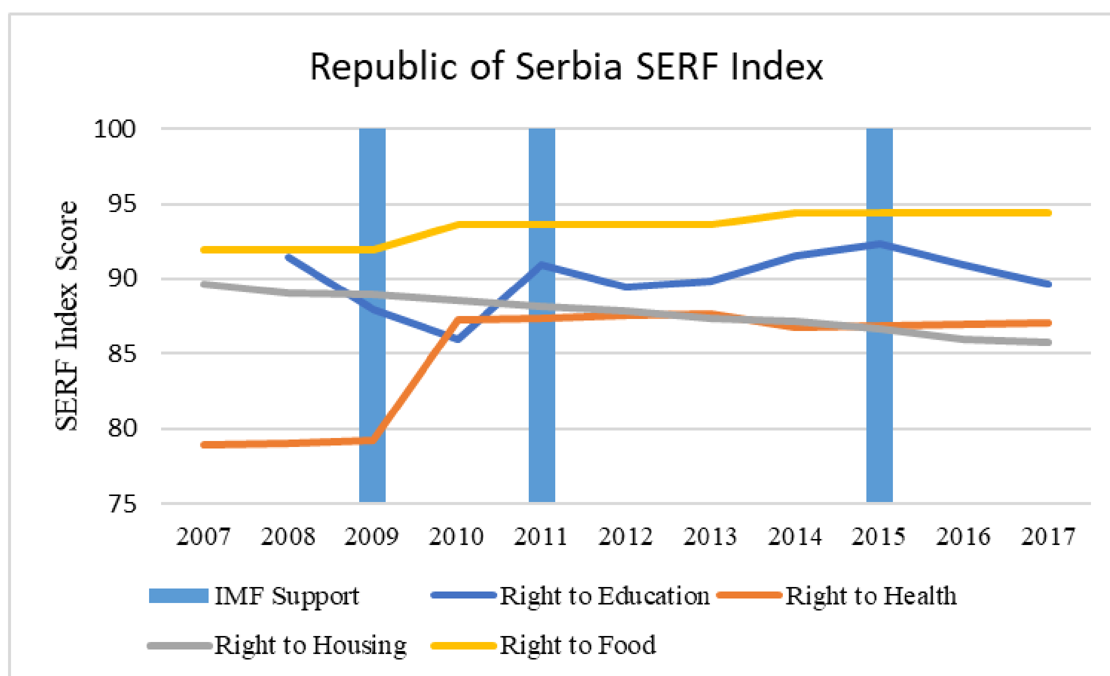

Figure 2: Republic of Serbia SERF Index Chart

Table 6: Republic of Serbia SERF Index

IMF Support			X1		X2				X3		
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Right to Education		91.39	88.00	85.95	90.97	89.41	89.81	91.49	92.28	90.93	89.66
Right to Health	78.92	79.00	79.21	87.21	87.35	87.55	87.62	86.81	86.90	86.96	87.03
Right to Housing	89.68	89.09	88.92	88.56	88.12	87.83	87.35	87.12	86.66	85.95	85.77
Right to Food	91.95	91.95	91.95	93.61	93.61	93.61	93.61	94.37	94.37	94.37	94.37

(SERF Index, 2020, Republic of Serbia)

Table 7: Republic of Serbia Two-Year Change

	X1	X2	X3
Right to Education	2.97	-1.16	-2.62
Right to Health	8.14	0.26	0.13
Right to Housing	-0.80	-0.77	-0.89
Right to Food	1.66	0.00	0.00

Bosnia & Herzegovina

At the beginning of this analysis' timeframe, Bosnia and Herzegovina (B&H) experienced rapid growth in domestic output with real GDP growth reaching nearly 7% in 2006 and 2007. Accompanying this growth was an immense growth of bank credit and lax fiscal and income policies which led to an overheating of the Bosnian economy. The global financial crisis also impacted the nation at around the same time of the overheat. The nation would be approved for a 36-month SDR 1,014.60 million standby arrangement with goals of maintaining bank liquidity, secure external financing, and reel in public finances. External financing was proposed to be achieved by reforming nontargeted social benefits, public administration, and the fiscal budgeting process.

The 2009 SBA allowed Bosnia to curtail its dependence on foreign economies and maintain macroeconomic stability. However, Bosnia was unable to adjust its fiscal deficit and in 2009 the gap increased to 8.75% of GDP. The gap would lower in the two years following. In 2012, the nation has still not been able to return to 2008's level of domestic output and are seeking funds to improve the economic system that is in place. After natural disaster, including torrential downpour that caused massive damage to agriculture and infrastructure, Bosnia and Herzegovina would request an additional 9-month SDR 84.55 million to their previous SBA. The damage was estimated to impact between 5-10% of GDP, with a disproportionately large impact on unemployment in youth.

Table 8: Standby Arrangements for B&H (thousands of SDRs)

Date of Arrangement	Date of Expiration	Amount Agreed	Amount Drawn
1-Jul-14	1-Apr-15	85,000	0
26-Sep-12	30-Jun-15	558,030	422,750
8-Jul-09	7-Jul-12	1,014,600	338,200
Total		1,657,630	760,950

(IMF Data, 2021, Latest Financial Commitment for Bosnia and Herzegovina).

Fiscal Conditionality

In 2009, Bosnia and Herzegovina were on track toward a 7.75% fiscal deficit in 2009 and 2010. Authorities desired to reign this level into a more manageable 4.75% in 2009 and 4% in 2010. The level at the time of application was a 4.5% deficit. Similar to Serbia, Bosnia cut public sector wage expenditure by 0.8% and also cut goods and services spending by 0.9%. In addition, Bosnia also decided to lower transfer payments to individuals by 0.7%.

In the 2012 request officials specifically focused on improving their export-led economic growth, while adjusting public expenditure composition to a more sustainable level. This will partly be completed by reducing the fiscal deficit to 3% in 2012 and 2.33% in 2013 (as opposed to a predicted 3.5% GDP in 2012). The tool to achieve this drop is a 0.5% reduction in the public wage sector bill, advanced by a complete hiring freeze for the central government.

The augmented SBA from natural disaster kept most of the specific targets from the original. At the timing of the augmentation, officials directly state that the fiscal deficit will continue to get worse, rising from 2% to 4% due to revenues falling from direct tax collection

and spending needs from natural disaster. This was planned to be achieved by restructuring social benefits to avoid double-dipping and once again limiting wage and pension growth in the public sector.

Results

Bosnia and Herzegovina pose a challenge where primary and secondary enrollment is inaccessible and access to early development is only collected every 4 to 6 years. The nation has seen improvement in the number of children stunted at birth, but we are unable to determine if it has anything to do with the involvement of the IMF due to the infrequent collection. In addition, the survival rate has very slowly risen for the nation, but the changes after two years of implementation are very low. Lastly, access to basic water and basic sanitation has slowly declined over the time period. Natural disaster certainly impacts the Right to Housing as hundreds of thousands were forced out of their homes in Southeast Europe. The scope of the effect is not reflected in the data because this information was not collected during and after the year of the flooding. The strength of change is probably not enough to indicate any adverse impacts of the IMF. Although, the restricting of social programs and the decline of public sector employment could contribute to this.

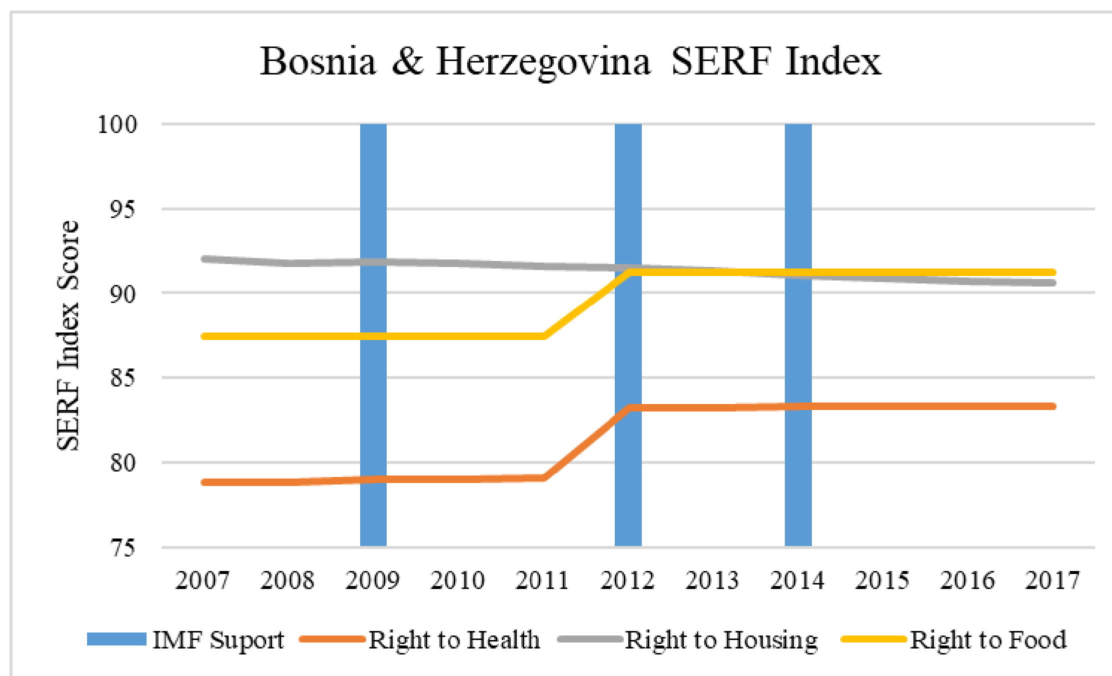

Figure 3: B&H SERF Index Chart

Table 9: B&H SERF Index

IMF Support			X1			X2		X3			
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Right to Health	78.77	78.79	78.94	79.02	79.08	83.20	83.22	83.26	83.29	83.30	83.34
Right to Housing	91.98	91.74	91.82	91.73	91.61	91.50	91.29	91.06	90.88	90.70	90.57
Right to Food	87.40	87.40	87.40	87.40	87.40	91.21	91.21	91.21	91.21	91.21	91.21

(SERF Index, 2020, Bosnia and Herzegovina)

Table 10: B&H Two-Year Change

	X1	X2	X3
Right to Health	0.14	0.07	0.04
Right to Housing	-0.21	-0.44	-0.37
Right to Food	0.00	0.00	0.00

Romania

The immediate difference in nation size and population in this analysis is reflected in the magnitude of Romania's 2009 SBA request of SDR 11.443 billion. Similar to Bosnia and Herzegovina, Romania experienced an overheating period prior to the global financial crisis. The nation also took on too much dependence from external financing and investments, and was severely impacted when the flows stopped due to global economic collapse. Romania experienced the greatest deceleration in output annual growth of any Eastern European country. Domestic demand growth was significantly larger than export growth to EU countries, and this is believed to be caused primarily by wage and pension growth for public workers. The objective for this SBA is to prevent failure after a massive withdrawal from capital inflows and to limit the fiscal deficit imbalance.

Unlike 2009, in 2011 the Romanian economy was in the process of stabilizing and growth began. A resurgence in the automobile industry allowed for exports to increase

substantially. However, there were balance of payment issues due to lax tax collection, leading to many local governments and state-owned enterprises to fall in arrears. Due to the less-pressing economic situation, Romania would only request this SBA of SDR 3.09 billion as "precautionary." Another precautionary SBA of SDR 1.75 billion would be requested in 2013 to maintain stability during Romania's continued vulnerability to external heavy shocks from their dependence on external capital inflows. The key objective for this SBA is to act as a buffer in the event of external shocks while the nation improves its current bottleneck financing system.

Table 11: Standby Arrangements for Romania (thousands of SDRs)

Date of Arrangement	Date of Expiration	Amount Agreed	Amount Drawn
27-Sep-13	26-Sep-15	1,751,340	0
31-Mar-11	30-Jun-13	3,090,600	0
4-May-09	30-Mar-11	11,443,000	10,569,000
Total		16,284,940	10,569,000

(IMF Data, 2021, Latest Financial Commitment for Romania)

Fiscal Conditionality

The primary limitation that Romania has agreed to impose is a 3% fiscal deficit figure by 2011, down from a 5% figure in 2008. Like the first two nations in this analysis, a heavy governmental sector contribution to GDP coupled with high public sector wages and pensions are the main target for fiscal restraint. Unlike other nations in this analysis, Romania's first fiscal policy actually increased social contributions by 3.3%. This is partly offset by excise taxes on tobacco and alcohol and new property taxes after revaluation. Lastly, the nation planned massive cuts to bonuses, wages, positions, and vacancies in the public sector.

To maintain the proper fiscal deficit in 2011, Romania embarked on a healthcare system reform that was believed to have immediate upfront costs with long-term gains. The nation's largest cut was to transfers payments which include social assistance to a degree of about 3% of expenditures. Additionally, subsidies to state-owned enterprises were reduced by a marginal percentage. Romania planned to reduce fiscal deficit from 2.5% to 2.0% from 2013 to the end of 2014. Romania altered their Gross Minimum Income program by increasing the minimum payouts, but increasing the eligibility threshold for somewhat of a breakeven on deficit. To offset some expenditure, the nation continued to pose excise taxes on alcohol and tobacco (and now on luxury cars and goods). Romania also lowered its allocation funds to the EU.

Results

Primary and secondary school enrollment was not collected during the global financial crisis and recovery time period meaning the impact of support is difficult to reason. However, Romania has seen a massive decrease in educational enrollment relative to the benchmark over the ten-year period. The right to health has seen small upward trends after each period. This could be expected considering the new investments in the nation's healthcare system that were part of each SBA request. The right to housing score could reflect the planned fiscal contributions to social spending after the 2009 assistance. In all requests, public worker wages and pensions were reduced by similar degrees so the impact should be similar for each assistance change. 2009 was the only period with generous contributions to social transfer payments and that was the period that saw the biggest growth in the right to housing, comprised of access to water and sanitation. Figures on stunted growth were only collected once and were extrapolated to other time periods. The right to food does not provide any meaningful results.

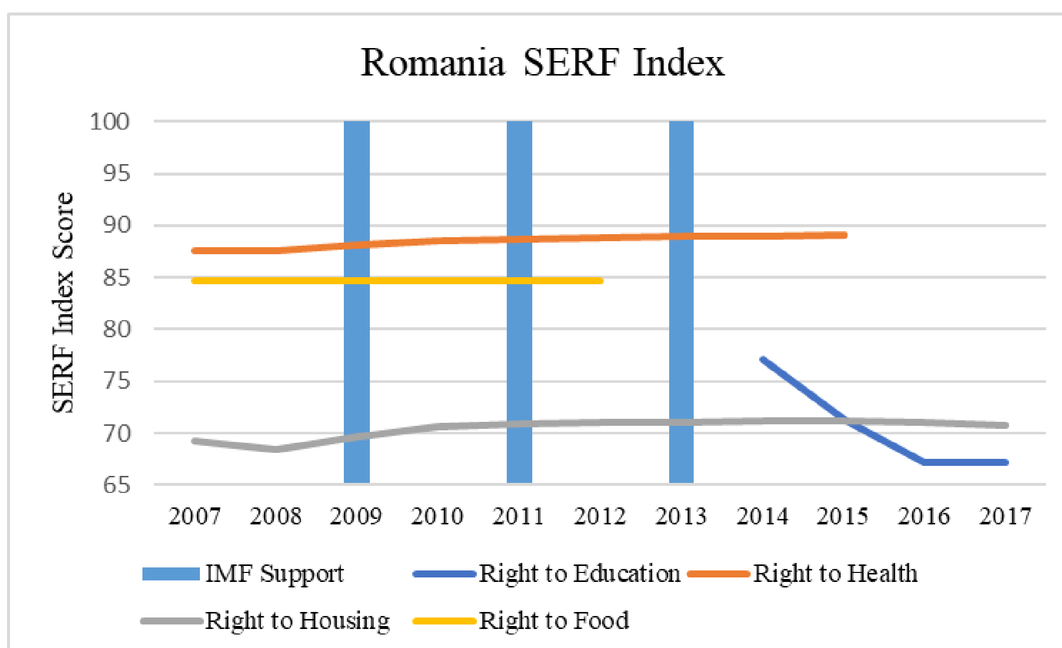

Figure 4: Romania SERF Index Chart

Table 12: Romania SERF Index

IMF Support			X1		X2		X3				
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Right to Education	76.93							77.08	71.26	67.22	67.22
Right to Health	87.57	87.56	88.13	88.56	88.71	88.86	88.92	89.02	89.13		
Right to Housing	69.23	68.42	69.60	70.57	70.82	71.03	71.06	71.11	71.12	71.03	70.70
Right to Food	84.66	84.66	84.66	84.66	84.66	84.66					

(SERF Index, 2020, Romania)

Table 13: Romania Two-Year Change

	X1	X2	X3
Right to Health	0.57	0.22	0.21
Right to Housing	1.22	0.23	0.06
Right to Food	0.00	N/A	N/A

Ukraine

In 2008, Ukraine requested an SBA similar in size to Romania: SDR 11 billion. Also similar to Romania, Ukraine experienced rapid GDP growth through 2000 to 2008, averaging over 7%. However, unlike the Romanian growth, the Ukrainian economy was much more explosive. Overheating fueled by credit growth exceeding 70% and wage growth reaching 40% pushed their currency to extreme overvaluation. Ukraine's heavy exposure to large capital inflows and its main exporting industry of steel led to a further deterioration which eventually weakened confidence in domestic banks. 40% of Ukraine's exports were steel and it suffered a 65% drop in price during 2008. The primary objectives for Ukraine's recovery are to expand liquidity by establishing deposit guarantees and to create a strong framework for public and private debt.

In 2010, Ukraine would request a similarly substantial SDR 10 billion. This time the nation is in a better position to implement sweeping efficiency gains and sharp fiscal cuts. Ukraine fared less well in a return to growth compared to the other nations in this analysis and is

requesting again to create a better framework for their economic system going forward. The banking system and financial system are still under immense pressure.

Unfortunately, Ukraine would need to request support once again in 2014 under exceptional access, differing greatly from some of the precautionary SBAs. Ukraine had been in recession since 2012 with their exchange rate never fully recovering from 2008. Culminating with the banking crisis, Ukraine was never fully able to create solid private industries to allow for investments and the production to increase. In addition, officials went against a commitment in energy prices by offering the lowest energy prices for domestic use in Europe. It is estimated that misplaced energy subsidies and a failure to curtail public sector wage and pensions contributed to a fiscal deficit widening of 4.75% GDP.

Table 14: Standby Arrangements for Ukraine (thousands of SDRs)

Date of Arrangement	Date of Expiration	Amount Agreed	Amount Drawn
30-Apr-14	10-Mar-15	10,976,000	2,972,670
28-Jul-10	27-Dec-12	10,000,000	2,250,000
5-Nov-08	28-Jul-10	11,000,000	7,000,000
Total		31,976,000	12,222,670

(IMF, 2021, Latest Financial Commitment for Ukraine)

Fiscal Conditionality

In Ukraine's 2008 request, authorities acknowledge the tradeoff between prudent fiscal restrictions and recession-related social expenditures. Officials agreed upon a large 0.8% of GDP increase in social expenditures. The World Bank regards Ukraine's targeted policies as some of the best in the world because they specifically target support in housing and utilities for lower-

income residents. To offset this gain, Ukraine planned a three-year increase of energy prices. The nation is among the least-energy efficient countries due to heavy subsidization of fuel imports. This expenditure decrease will lead to a 0.4% of GDP reduction on the fiscal balance.

In 2009, the fiscal deficit figure reached 8.7% and officials agreed to target 5.3% in 2010 to corral rampant expenditure and income deficits. Revenue was increased through taxes that were predicted to decrease the deficit by 0.5% of GDP. Cuts were made on government spending to goods and services, subsidies, and administrative budget to the effect of a fiscal deficit improvement of 1.5%. Social support in housing and utilities will exacerbate the deficit by 0.2%, but provide a much-needed boon to lower-income residents.

Ukraine reached a modest 6.75% of GDP in fiscal deficit in 2013, but future spending put them on track to reach 12% in 2014. Out of the four nations in this analysis, Ukraine appears to have enacted the most vigorous tax collection improvements. Over a four-month period, the nation reduced its fiscal deficit by 0.4% GDP through more efficient collection efforts to stamp out tax evasion. Ukraine would eliminate 1% of GDP fiscal imbalance by limiting public sector wage and pension growth and another 0.5% by imposing more excise taxes. Notably, the nation will actually reduce social assistance in this program by 0.2% of GDP.

Results

Ukraine saw massive gains in the three of the four social index measures, excluding the right to food (due to lack of information) in its first assistance period. The nation implemented a stringent social protection net that shows the largest gains in each metric. The nation directly provided the most to housing rights and health rights which are accurately reflected. The second assistance period provided much less in terms of social support, but the rights to education and housing still grew substantially. The right to health remained about the same, as anticipated with

very marginal changes in social policy. By the third period, gains were much less pronounced as I expect because this is the only period where social support was actually reduced. The lack of available information for education makes that set meaningless, but improvements in access to water and sanitation still continued to improve. The right to health is limited in this period, but the gains were still somewhat minimalized.

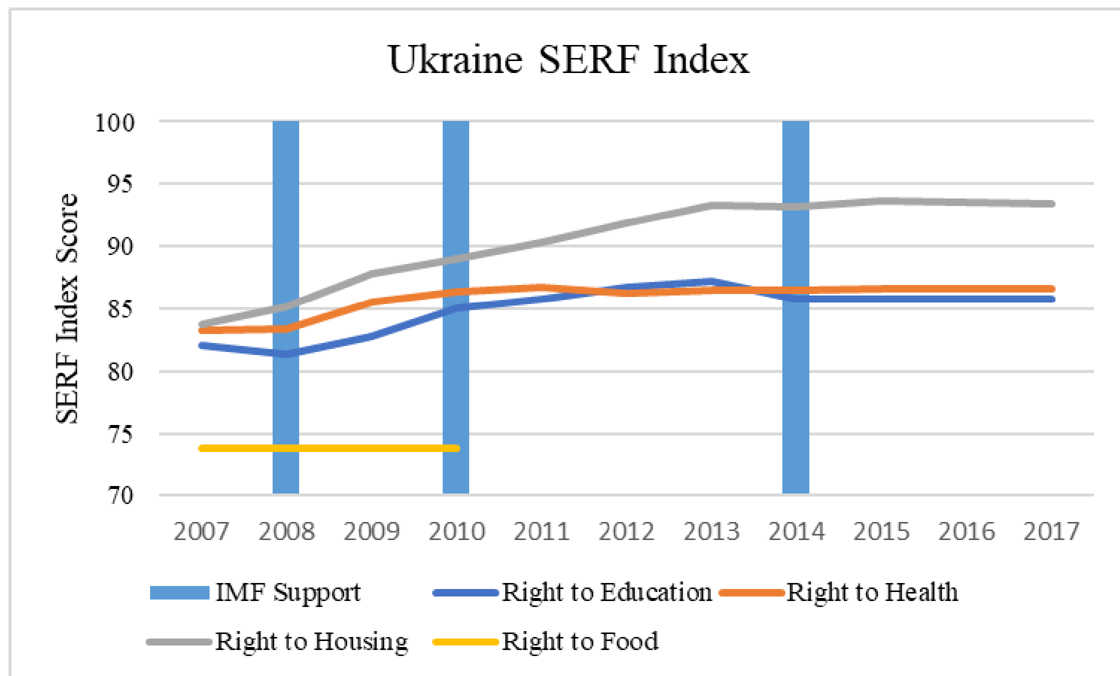

Figure 5: Ukraine SERF Index Chart

Table 15: Ukraine SERF Index

IMF Support		X1		X2			X3				
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Right to Education	82.00	81.36	82.79	85.02	85.74	86.70	87.17	85.74	85.74	85.74	85.74
Right to Health	83.20	83.34	85.50	86.31	86.73	86.28	86.43	86.48	86.61	86.61	86.61
Right to Housing	83.78	85.19	87.75	89.00	90.28	91.83	93.29	93.21	93.63	93.55	93.47
Right to Food	73.79	73.79	73.79	73.79							

Table 16: Ukraine Two-Year Change

	X1	X2	X3
Right to Education	3.66	1.68	0.00
Right to Health	2.97	-0.02	0.13
Right to Housing	3.81	2.83	0.34
Right to Food	0.00	N/A	N/A

Comparison and Trends

Each nation and nearly every SBA had a substantial cut to the public sector wage and pension payroll, which makes a significant portion of their GDP. This large impact would be expected to be substantial on the well-being of residents. Notably, youth could be forced to unenroll from school to support family members that make less or families are unable to provide more food leading to stunted growth. However, this did not occur. After many nations cut the public sector wage bill substantially, people are living just as long or longer.

There does seem to be a relationship in terms of utilities. When Serbia cut off subsidies for utility companies in each SBA round, the nation witnessed a drop in the right to housing performance. Additionally, Ukraine continued to make energy and utilities as cheap as possible, despite recommendation from the IMF, and the nation continued to perform in the right to housing. Ukraine's emphasis and financial support of continuing social programs in the first round but not in the second or third round of support is reflected in the data by massive improvements in all three areas of available information in the first round, but reduced improvements in the next two rounds.

Bosnia and Herzegovina had the most insignificant results throughout all three periods. Only the final round involved direct cuts to social spending, and there was no indication that the final round performed worse in the limited analysis of two areas.

Romania had mixed plans throughout the series, similar to Ukraine. The nation dedicated the most amount of support to social spending in the first period and saw the biggest gains in housing and health during that period, compared to the other periods. However, the nation also saw a plummet in education enrollment throughout the series as well. Despite a substantial

healthcare reform in the second and third rounds, survivability rate did not improve as much compared to the first round.

The IMF has made strides in the consideration for social aspects. After reviewing reports from a span of a decade, less direct conditions were proposed and more consideration for social well-being was implemented. Conditionality has been relaxed over time, and more decisions were left up to a nation's officials in each country's third support round compared to their first support round. There is no evidence in the European examples that the IMF was leaving lower-income residents behind in the given social metrics.

Overall, IMF support for these nations improved their balance of payment issues without indicating an adverse effect on key social performance metrics. A trim of the public sector does not appear to impact the social well-being of a nation, but specific subsidies in utilities and social programs have shown to impact people directly in most of the countries analyzed. Over time, the IMF has allowed for greater control over policies for nations to pursue, and the effects on social metrics are typically not impacted without direct intervention on social and utilities spending.

Chapter 6

Conclusion

This case study analysis looked at the social performance metrics for four countries in eastern and southern Europe. Each country received substantial support from the IMF to handle balance of payment issues that arose from the global financial crisis and the subsequent recovery years and interlinked recessions. Overall, the evidence does not indicate that IMF programs are likely to harm lower-income residents of a nation in the selected European countries. The observed social metrics act independently of involvement and external factors likely influenced their gradual improvement throughout the time period.

Over time, most nations saw general improvement in social standards across the board. This could involve improvements in healthcare, a resurgence in the global economy, or growth in the establishment of market-based economies from the former Eastern Bloc nations. A two-year lag analysis was unable to indicate if there were any direct improvements or adverse impacts primarily as a result of IMF assistance.

Future Study

This analysis focused on the short-term, but a longer-term analysis involving the recent support rounds would be beneficial to this field of study. Specifically, all of the nations choose to limit their public sector wage bill which made up significant portions of GDP. It would be meaningful to find if these policies were continued into the longer term, and if the IMF's restrictions were able to make a lasting impact on the divide between public and private sector in

the analyzed nations. It is tempting for new decisionmakers in office to revert some of the momentous fiscal changes that were implemented in the previous administration.

It was beneficial to compare nations in the lens of geography, but there are many other nations, mostly in South America and Africa, that are receiving Standby Arrangements. Their economies are structured differently and policymakers create different fiscal policies to tackle change, but it could be meaningful to create a broad-based analysis on all nations receiving standby arrangements. Data unavailability would still occur, especially for nations with the least income, but international bodies are making more efforts to collect statistics on basic education, water access, food availability, and overall poverty.

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The Pennsylvania State University- *Schreyer Honors College* **University Park, PA**
B.S. in Finance | B.S. in Economics Aug 2017 – *May 2021*
University College London- *Spring Semester Affiliate* **London, UK**
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PROFESSIONAL EXPERIENCE

PepsiCo, Inc. **White Plains, NY**
Incoming Strategic Finance Associate Analyst *Aug 2020 – Present*
Strategic Finance Intern *Jun 2020 – Aug 2020*

- Investigated market share underperformance of a region and identified product and channel drivers using quarterly sales and share performance on Excel to present to leadership using representative tables and graphs
- Analyzed channel and pack performance to create a commentary complementing beverage performance
- Collaborated with a cross-functional team to build a consumer-centric expansion plan for PEP's nonprofit arm

Communications Test Design, Inc. **West Chester, PA**
Finance and Accounting Intern *May 2019 – Aug 2019*

- Designed Microsoft Excel models using several formulas that pulled data from various sources to consolidate intercompany receivable and payable figures from over 20 international company locations
- Identified unmatched accrual items and prevented them from appearing on the balance sheet by utilizing Oracle reports to write off over $100,000 in accounts payable on a weekly basis
- Examined purchase orders, invoices, and receipts on OnBase to inquire buyers about mismatched purchases

Brennan and Company CPA, PC **Philadelphia, PA**
Accounting Intern *Jun 2018 – Aug 2018*

- Compiled client information from bank statements to conduct monthly reconciliations using QuickBooks
- Reviewed and input several customer client data into Drake Software for annual tax returns
- Increased website traffic by over 200% through content and keyword optimization for search engines

EXTRACURRICULAR EXPERIENCE

Penn State Dance Marathon **University Park, PA**
Donor and Alumni Relations – Donor Relations Captain *Aug 2020 – May 2021*

- Composed professional correspondence including facts and figures sheets, benefits packets, and funding usage reports to continue relationships with over 20 of THON's stakeholders and donors
- Initiated contact with over 100 corporations by locating partnership opportunities or through grant applications
- Managed donor solicitation requests for businesses from all of Penn State's on-campus organizations

Leveraged Lion Capital **University Park, PA**
Lead Analyst – Materials Sector *Nov 2018 – Aug 2019*

- Conducted credit, covenant, and comparable analyses using Bloomberg, FactSet, and the LSTA to propose high yield bonds and leveraged loans for the nation's first student-run syndicated paper loan portfolio
- Created pitchbooks and monthly reports of the $14.67 million Materials Sector with the team using Microsoft PowerPoint to present findings to the general body with realistic market conditions and specific credit drivers

Wall Street Boot Camp **University Park, PA**
Graduate *Aug 2018 – Dec 2018*

- Broadened professional knowledge of Wall Street careers including investment banking, sales and trading, M&A, asset management, and equity research by attending sessions focused on each career path
- Interviewed with program leadership to be evaluated on industry mastery and competency of soft skills

Phi Beta Lambda Professional Co-Ed Business Fraternity | ***Mu Alpha Rho Chapter*** **University Park, PA**
Brother | THON Committee Member *Sep 2018 – Sep 2020*

- Developed professional skills through 80 mock interviews, case studies, and information sessions
- Collaborated with a class of 27 to host philanthropic and social events that generated over $500 for THON