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Developing the Developmental State: Nigeria, NEEDS, and National Economic Planning

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Abstract

Nigeria's National Economic Empowerment and Development Strategy (NEEDS) was created under the Obasanjo government to propel Nigeria on a path to economic growth and poverty reduction and ran from 2004 to 2007. To assess NEEDS in relation to poverty reduction and growth, I look at the historical context of Nigeria's previous economic development plans. I then analyze NEEDS and its strategy and capacity to reduce poverty. Examining NEEDS provides insight on the prospects of further economic planning in Nigeria. The impact of NEEDS has further implications to Nigeria's Vision 2020, the government's current development strategy. My findings suggest that economic planning has an essential role for the future of Nigeria's economic development.

Introduction

Nigeria is Africa's most populous country with nearly 186 million people. Its GDP of $405 billion makes it Africa's largest economy. Since 2000, life expectancy has increased steadily from 46 to 53 years, and child mortality fell from 187 per 1000 live births to 104 (The World Bank, 2019).

Despite these promising statistics, Nigeria's economic progress has not reached a substantial amount of the population. In 2018, Nigeria surpassed India as the country with the most people living under the $1.90-per-day poverty line (Adebayo, 2018). With a Gini coefficient of .43, Nigeria remains highly unequal (UNDP, 2016).

Proportionally, Nigeria's economy is led by the service sector, which comprises around 30% of its GDP. Next follows the agriculture sector (24%), the oil industry (18%), and then its flailing manufacturing sector (9%). Oil makes up 55% of the country's total export revenues (Kingsley, 2017).

National politics are dominated by the All Progressives Congress (APC) which in 2015 defeated the previously dominant Peoples' Democratic Party (PDP). In 2019, Nigeria will hold its sixth general election since the establishment of the Fourth Republic. Olusegun Obasanjo's presidency, from 1999 to 2007, sought to put Nigeria on a path to stable economic development

after the turmoil of previous decades. An important aspect of his second term as president was the rollout of the National Economic Empowerment and Development Strategy (NEEDS). NEEDS became Nigeria's guide for its economic policies from 2004 to 2007 and suggested to the international community that the state was prepared to play a positive role in the economy.

Since such plans require an extensive amount of time and resources it is important to answer the age-old question: is it worth it?

My findings suggest that even with the shortcomings of past plans, including NEEDS to reduce poverty and develop the country, Nigeria is better off pursuing development plans that serve the interest of the country's poorest. The state should not be afraid to play a larger role in the economy.

Section II explores the historical context of the role Nigeria's state has played in creating national development plans and the lead up to NEEDS. Sections III through V discusses NEEDS, and its impact with special attention given to its role in poverty reduction and national development planning. Section VI summarizes Nigeria's development planning in terms of its historical context, impact, and legacy.

Historical Context of Nigeria and National Economic Planning

The origin of economic planning in Nigeria begins after the Second World War. Colonial administrators strived to make the economic environment more attractive for foreign investment. Thus, in 1946 the government created the Ten-year Development Plan to organize budget allocations over the following decade. The crux of the plan aimed to increase economic infrastructure and improve education (Onitiri, 1971). The colonial administration anticipated that by the end of the plan, transport and communication services would noticeably improve, increasing the production and export viability of the colony's cash crops (Ikeanyibe, 2009).

Though infrastructure and education did see some improvements over the course of the Ten-year Development Plan, it proved to be largely ineffectual at progressing the Nigerian economy to a more productive phase (Onitiri, 1971).

With the independence movement led by the charismatic Nnamdi Azikiwe on the rise, the educated political class demanded a national government that would serve the economic interests of the Nigerian people. In 1960, when the British relinquished their political authority over the country, a national government made up of Nigerians finally had their chance.

Nigeria's First National Development Plan lasted from 1962 to 1968. The goal of the plan was to take the country to a stage where it can self-finance its own development through the

accumulation of national savings (Onitiri, 1971). Though foreign experts participated in the crafting of the First National Development Plan, only a handful of Nigerian administrators were left to put the plan into action, leading to a lack of proper coordination in properly implementing desired projects (Ikeanyibe, 2009).

As the 1960s progressed, Nigeria began to run a balance of payments deficit—draining the much-needed funds for development. On top of that, a military coup in 1966 led to the outbreak of the Nigerian Civil War (1967-1970), bringing the immediate focus on national development to a halt (Onitiri, 1971).

From the chaos of the Civil War emerged the Second National Development Plan of 1970-1974 under the regime of Yakubu Gowon, who took power after the coup in 1966. The Gowon regime sought to have a more aggressive role in developing the economy than did past governments. The Second National Development laid out five goals (Ikeanyibe, 2009, 201):

1. *a united, strong and self-reliant nation;*
2. *a great and dynamic economy;*
3. *a just and egalitarian society;*
4. *a land of bright and full opportunities; and*
5. *a free and democratic society*

Whereas, the creation of the First National Development Plan was closed off to an elite group of administrators, its successor received input from boards consisting of members of academia, business, and other parts of civil society (Ikeanyibe, 2009). Issues pertaining to inequality and promoting the agricultural sector were highlighted much more significantly in the second plan than the first. Another core component of the second plan was the *Nigerianization* of large businesses. Public ownership of financial institutions and insurance companies increased, and dependence foreign investment was to be limited (Ibietan, et al. 2013).

The oil industry was central to this plan, as about half of Nigeria's export revenues at the time came from the exportation of oil (Onitiri, 1971). Yet, the country's reliance on oil as well as systemic corruption engendered the lack of needed funds to finance the newly announced projects from the Second Development Plan.

Nigeria from 1975 to 1980, experienced a series of coups including one by future Fourth Republic president Olusegun Obasanjo. It was also the period of the country's Third Development Plan (Ibietan, et al. 2013). The plan looked to continue the *Nigerianization* of the previous plan as well as economic diversification, agriculture investment intensification and universal primary education. However, even though agriculture was a key component of the

plan, little funds ended up going towards the country's most populated sector. Five percent of the total funds went toward the agrarian sector, and less than twelve percent was spent on social welfare measures. It should be no surprise that during this period agricultural output fell by two percent per year. Thus, though the Third Development Plan saw remarkable advances in the growth in manufacturing and construction, it overall failed to meet its visionary objectives (Ibietan, et al. 2013).

Two years after Shehu Shagari was sworn in as the elected president of the Second Republic in 1979, his government launched Nigeria's Fourth National Development Plan which would be Nigeria's last pre-Fourth Republic grand national planning scheme (Falola et al. 2008). One of the notable aims of the new plan was export promotion. The total cost of planned public and private investment at N82 billion signified that this would be the country's boldest national economic program. For the first time, local governments were given a key role with the implementation of various components of the plan. Though there were noticeable improvements due to increased investments in infrastructure, education and healthcare, many of programs faltered due to a lack of enough funds, drawing from the collapse of oil prices in the 1980s (Ibietan, et al. 2013).

Table 1 in the Appendix compares the economic growth rates during the time when each of the four economic plans were in place. The Second Plan generated the highest annual growth rate at about 8% per year, while the economy during the First and Third plans grew at about 5% per year. Meanwhile, the Fourth plan struggled to create any substantial growth with a yearly rate at a mere 1%.

Additionally, even with the liberalizing of national politics, corruption in Nigeria became more widespread under the Second Republic. Numerous instances of corruption occurred in federal administrations such as the National Youth Service Corps, the Nigerian External Telecommunications, the Federal Mortgage Bank, the Federal Capital Territory Administration, and the Central Bank of Nigeria (Falola et al. 2008).

In 1983, the Second Republic came to a swift end when another future president under the Fourth Republic, Muhammadu Buhari, took power via military coup. Buhari was disposed by Ibrahim Babangida two years later in 1985 (Falola et al. 2008).

Babangida's regime started a period in Nigeria's history where the state took a more hands-off approach to national development. With external debts approaching N22 billon, the Nigerian government engaged in structural adjustment in 1986 (Ikeanyibe, 2009). The structural

adjustment program (SAP) had three core objectives (Ibietan, et al. 2013, 304):

1. *To restructure and diversify the productive base of the economy in order to reduce dependence on the oil sector and on imports;*
2. *to achieve fiscal and balance of payments viability over the period; to lay the basis for a sustainable non-inflationary growth;*
3. *to reduce the dominance of unproductive investments in the public sector by improving public sector efficiency and enhancing the growth potential of the private sector.*

The devaluation of the naira, the removal of subsidies, privatization, and the deregulation of interest rates were the core policies that were enacted during this era. The results were not as remarkable as promised. Along with this, interest rates skyrocketed, making it incredibly difficult for business and individuals to take out loans, the manufacturing sector crumbled, and rural poverty and unemployment grew.

After the failure of structural adjustment, the Nigerian government resorted back to at least some form of national economic planning with the creation of Rolling Plans from 1990 to 1998. The Rolling Plans would indicate short term and medium-term budget allocations. The 1996 perspective plan was created under the military government of Sani Abacha which would set the foundation for Vision 2010. Vision 2010 encompassed short-term, medium-term, and long-term planning that would be initiated over the following fifteen years. However, after Abacha died in 1998, the enthusiasm for Vision 2010 was lost (Ikeanyibe, 2009).

With the creation of the Fourth Republic and the initiation of democratic elections in 1999, former dictator and now democratically elected president Olusegun Obasanjo looked to define a new era for Nigeria's economic development. The National Economic Empowerment and Development Strategy (NEEDS) became the central document for the nation's development.

The National Economic Empowerment and Development Strategy (NEEDS)

Preceding NEEDS was the National Economic Direction (1999-2003). The measure combined sweeping privatization and deregulation with increased spending on social welfare programs. Yet, the enactment of these promised reforms was slow even though the government was receiving new streams of funds from the liquidation of public enterprises, rising oil prices, and the repossession of Abacha's stolen wealth (Ikeanyibe, 2009).

After winning reelection in 2003, Obasanjo and other government officials declared it

was time for a newer, bolder plan to guide Nigeria's development. Thus, came the creation of the National Economic Empowerment and Development Strategy (NEEDS). According to President Obasanjo, the stated goal of NEEDS was to: "… mobilize the resources of Nigeria to make a fundamental break with the failures of the past and bequeath a united and prosperous nation to generations to come (IMF, 2005, iii)." The four priorities of NEEDS focused on (IMF, 2005, iii):

1. *laying a solid foundation for sustainable poverty reduction,*
2. *employment generation,*
3. *wealth creation,*
4. *value reorientation*

NEEDS along with its state version, the State Economic Empowerment and Development Strategy (SEEDS), and localized version, the Local Government Economic Empowerment and Development Strategy (LEEDS) sought to unify the country on a path of inclusive development. On paper, NEEDS strived for a five percent decrease in poverty per year from 2004 to 2007 (IMF, 2005). While NEEDS acknowledged the importance of private sector growth, it also accepted the critical role of the government in tackling poverty and that it is the government's duty to ensure that every Nigerian "has the right to adequate water and sanitation, nutrition, clothing, shelter, basic education, and health care, as well as physical security and the means of making a living" (Ugwu, 2012, 26).

Was NEEDS the key to poverty reduction? Could a second-term democratically elected government finally bring prosperity to country's most unfortunate?

NEEDS and Poverty Reduction

Figure 1 in the Appendix shows Nigeria's relative poverty rates from 1980 to 2010. From 1980 to 2004 the rate of poverty doubled from 27% to 54%. Six years after NEEDS, poverty again increased to 69%. What went wrong with the government's poverty reduction strategy—one of the core focuses of NEEDS?

According to Ugwu (2012), the greatest impediment to poverty reduction was NEEDS' dependence on the private sector. Since the poor are unable to participate in many market activities, the private sector has little incentive to engage with the country's worse off. Instead,

Ugwu argues for a more active developmental state which plays a more direct role in economic affairs than what is prescribed through NEEDS. As Ugwu states:

> *Whether we opt for hard or soft state, the Nigerian state must retain the capacity to choose —winners and allocate resources preferentially according to an overall plan of development that answers to national priority. And in our situation such a priority is drastic reduction of general poverty and class, gender, and region-specific poverty. (p. 47)*

Ugwu also identifies national leadership as a critical component to NEEDS' failure to ameliorate poverty. He identifies the lack of credibility of the Obasanjo government, especially after the "rigged" 2003 election, as the source of the unwillingness of the national government to properly reduce poverty. He cites the failure of the government to effectively engage with civil society and Obasanjo's despotic tendencies as a cause for social and labor unrest against much of the government's agenda (For more on labor mobilization during this period see Eze, 2014). Furthermore, Ugwu sees policies such as land reform, progressive taxation, and providing credit access for the poor as key measures for poverty reduction.

Additionally, Ugoani (2017) indicates that corruption was the most important factor that limited poverty reduction. He describes how billions of naira meant for development projects have been siphoned off by government officials. A strategy of good governance must precede the implementation of pro-poor programs in order to maximize poverty reduction.

Furthermore, Ugoani also presents the shortcomings of the government's education program initiated under NEEDS as an indictment of the government's failure to execute a long-term poverty reduction strategy. He finds that even after the enactment of compulsory education, millions of Nigerians are not in schools and eighty-percent of the teachers do not have the necessary skills. This, along with the failure to supply enough universities for its post-secondary students, were critical for Nigeria to miss the education targets of the Millennium Development Goals.

Similarly, Innocent, et al. (2014) presents the problem of poverty reduction in Nigeria as a problem of poor governance. Just as during NEEDS and past periods, decision making about how to address poverty is left to an elite few. The people who are the targets of the government's new policies are rarely, if ever, consulted. Instead, while ambitious anti-poverty programs are unveiled every so often, they never receive the proper funding nor administration to successfully implement these policies.

NEEDS and National Development Planning

One of the most influential proponents of national planning for developing countries after the Second World War was the Polish economist Paul Rosenstein-Rodan. Why should states engage in economic planning? Rosenstein- Rodan (1963, 123) explains:

> *The free and unimpeded mechanism of market forces would lead to a maximum national income according to the liberal classical doctrine. Any conscious deliberate active economic policy designed to influence the amount and the composition of investment could not, according to this school, raise national income in the long run. It is our contention that the opposite is true, that an economic policy designed to influence the amount and composition of investment can raise the rate of economic growth and increase national income. In addition, it can also aim at realizing other desirable social objectives which market forces alone—even according to liberal doctrine— could not achieve.*

If economic planning provides the answer for developing countries, how come Nigeria failed to see many of the promised benefits? Is this an indictment of planning itself? Or are the shortcomings unique to Nigeria's institutional arrangements?

The latter seems to be a more appropriate answer than the former. As Wade (1989) describes, economic planning was central to the success of the post-war East Asian economies. Clear economic objectives matched with a strong state that will go as far as needed to discipline the private sector is a recipe for grand economic transformation. Also, as Chang (2002) details, developing countries during the pre-1980s planning era grew much faster than the post-1980s when developing plans worldwide were abandoned.

Analyzing the Chilean economy under Allende, Rosenstein-Rodan (1974) designates the poor economic outcomes of the time as a result of the lack of smart, creative planning, not because of planning itself. (For how the economic elites played a decisive role in destabilizing the economy during the Allende government see Girardi and Bowels, 2017).

Ikeanyibe (2009) notes though the past development plans were unsuccessful due to a variety of reasons such as corruption, unpreparedness, and lack of interest, NEEDS failed at sustained development because it was more interested in promoting a model of development that satisfied the desires of the international financial institutions and western developed economies rather than serve the interest of the Nigerian people.

As stated in the previous section, Ugwu (2012) recommends that the Nigerian state should be so committed to national development, that in doing so the state becomes the prime instigator for inclusive economic prosperity. Yes, development planning is still very much practical for Nigeria's future if government officials are willing to apply it in a way that puts poverty reduction and structural transformation at the forefront. Planning can happen without the mass corruption and carelessness of the past plans, and without the rigid ideology that confined foreign imposed policies such as the structural adjustment programs.

Vision 2020, Nigeria's current development initiative, has the admirable goals of a life expectancy of seventy years, a 40% contribution of manufacturing to GDP, among other things (Ibietan, et al. 2013). Is Nigeria currently capable of meeting these goals? Likely not. Though, sometime in the future, Nigeria may one day have the plan-focused developmental state that its people deserve.

Conclusion

Nigeria has had a long history with development planning. The four grand economic planning programs launched in the 1960s, 1970s, and 1980s indicated some level of enthusiasm for state-empowered development. With the introduction of structural adjustment in the 1980s, proactive and extensive planning came to a halt. The Obasanjo's government initiation of the National Economic Empowerment and Development Strategy (NEEDS) brought broad government planning back to the forefront of Nigeria's political economy. However, NEEDS ultimately failed to deliver many of its promised benefits especially its central commitment to poverty reduction. This was due to several factors including NEEDS' conservatism, economic mismanagement, corruption, a lack of communication between the government and civil society, and not including the voices of the poor in public decision making. Though Nigeria has struggled with pursuing economic planning in the past, state-led development planning should still be recognized as a critical aspect of national development for Nigeria. In fact, the state should be more engaged in economic affairs to meet the needs of its people, especially its poorest.

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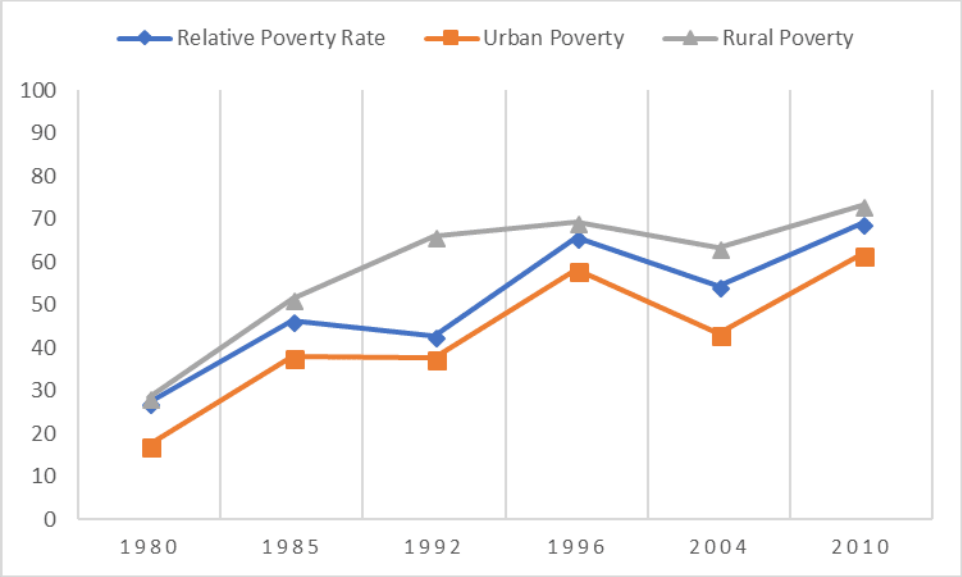
Appendix: Selected Economic Indicators for Nigeria, 1962-2010

Table 1: Growth Rates during the four National Development Plans

National Development Plan	GDP AAGR (%)
First National Development Plan (1962-1968)	5.1
Second National Development Plan (1970-1974)	8.2
Third National Development Plan (1975-1980)	5.0
Fourth National Development Plan (1981-1985)	1.2

Source: Ikeanyibe, 2009

Figure 1: Relative National, Urban, and Rural Poverty in Nigeria, 1980-2010



Source: Dauda, 2017

Depression through Different Lenses: The Schools of Economic Thought Respond to Recession

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Abstract

Different schools of economic thought, such as, the classical, neoclassical, Marxist, Keynesian, American Institutionalist, and Modern Money Theory, differently approach the problem of economic depression in capitalism. I illustrate the differences by describing their alternative responses to a scenario of recessionary crisis.

Periodic, systemwide economic downturns — depressions and recessions — are a regular feature of capitalism, and any explanation or analysis of capitalism has to account for depressions and recessions and to prescribe a response (or non-response). I discuss how the different schools of economic thought such as, the classical, neoclassical, Marxist, Keynesian, American Institutionalist, and Modern Money Theory approach the problem of economic depression in capitalism. I consider the following scenario: the economy has experienced a sudden collapse of asset prices, with the stock, real estate, and commodity market experiencing declines of over 50 percent relative to last year. Data show a loss of nearly 1 million jobs since last month, which brings to year-to-date loss of jobs to nearly 5 million. And, bank lending has slowed sharply, and initial data on investment suggests a sharp decline in new projects. The central bank reports that that bank balance sheets have deteriorated significantly, and it is contemplating emergency monetary actions. The country's Prime Minister claims to be “on top of the situation,” but polls suggest her popularity is falling fast as confidence in the government's economic leadership diminishes. This appears to be the start of a serious recession, with the rate of decline in production rivaling the rapid declines in 2008 and 2009.

Each economic school of thought would approach this recession phenomenon in a different way. What models they use and how they use them are the main differences in their approach to dealing with recessions. The biggest difference between each school’s model is whether they are static or dynamic. Dynamic approaches show how the real world is changing and complex, which makes them hard to model. Most models are static, linear representations of a trend occurring in real life. They often only taking a few variables into account but can be

useful because they can be added and have solutions that can give some answers. Another difference is how they would view equilibrium balance. Do they consider equilibrium to be stable? Do they think that markets will correct themselves when they fall out of equilibrium or will the government need to intervene? Do they think that they are moving towards the optimal outcome or just a circumstantial outcome? These questions are all crucial to understanding how a school of thought would approach an economic recession. Another way the schools differ in their thinking is based on how they view the economy in a historical and institutional context. Some schools will care more about how the economy affects individuals, while some will care about how the economy impacts society as a whole. Some will think that the economy is a separate entity from other aspects of life and will not care to look into other fields such as sociology, psychology, or behavioral sciences to understand what's happening in the economy. Other schools will argue that it is impossible to make sense of the economy without taking these subjects into account. How the schools make sense of recessions such as the one described in the prompt will depend greatly on what they consider important to economic models.

The classical school of economics was divided on how it addressed recessions. Classical economists were heavily influenced by the work of Adam Smith, who concluded that recessions could not occur. Smith, and nearly all of other classical economists, thought that aggregate demand would always rise to meet aggregate supply and that the “invisible hand” that controls and corrects markets would prevent recessions from happening. The only classical economist that challenged this was Thomas Malthus, who put forth his theory of gluts. This theory stated that over-accumulation of capital would lead to a break in the circular flow of money, causing demand to go down because people could not afford to buy the supply of commodities. Although Malthus recognized that people needed more money to purchase the supply, he opposed raising wages, because he saw this as hurting the capitalist class’ profit. His solution to recessions was for landowners to hire more servants. These servants would be unproductive, but they would still consume; therefore, they would increase demand without increasing supply and allow them to meet at equilibrium again. Most classical economists were members of the landowning class and their theories often were biased in favor of this class. The classical approach to solving recessions is very limited in addressing the recession demonstrated in the prompt. The classical all believed in the laissez-faire policies, so they would not advise the government to take steps to intervene in the economy. The modern financial system and all of its complexities did not exist in the 1700s, so their solution would be to wait

out this recession because the “invisible hand” would eventually reverse this recession and growth will start again.

The Marxist models aim to be complex and to analyze change over time. They take history into account and see how capitalism developed over time from feudalism and how the capitalists are those who benefitted from primitive accumulation. The Marxist school of thought would see this recession as an unavoidable part of capitalism. They would say that this recession is an example of why capitalism needs to end. Marxists believe that as capitalism expands, balanced economic growth is impossible. In their models, the capitalist class over accumulate wealth so that the circular flow is broken. This point is expressed in the quote:

> *Capitalism is therefore increasingly prone to crisis. The crisis explodes when production has developed beyond the possibility of profitable realization. This can occur for different reasons, and what matters for the explanation of specific crises is how their underlying cause – the subordination of the production of use values to the production of surplus value – manifests itself through disproportionality, overproduction, under consumption and the falling rate of profit. (Marx’s Capital, 95)*

Here, it is explained how it is impossible for demand for goods to grow at the same pace as production of those goods within a capitalist nation’s economy. Because there was not enough demand for the goods produced, recessions like the ones described in the prompt are inevitable.

Marxists would hope that this recession would spark a revolution led by workers to overthrow capitalism. Recessions affect the livelihood of the poor much more than the rich, and Marxist would hope that the poor living conditions of the proletariat would inspire a communist revolution to take place. They would want the workers to take control of the means of production so that capitalists cannot exploit their labor any longer. They would argue that the country’s prime minister is incapable of saving the economy because she is defending the capitalist class’s interests. The Marxists point out valid flaws in the capitalist system, but communist societies do not have a better quality of life than capitalist ones. Communist revolution is a realistic goal in modern day America, and that trying to fix capitalism is the best chance we have at a fair and relatively equal society.

The Neoclassical school would view this oncoming recession as the market correcting itself. The neoclassical models of the economy are stable, self-correcting, and optimal. This

means that the economy will naturally rebound from a recession like this, and that the government should not intervene. Neoclassical economist would urge the government not to intervene in the economy at a time like this because they would disturb the market from correcting itself naturally. Neoclassical economics also assumes that the economy is perfectly competitive and will operate at full employment. Neoclassical economists would advise the central bank to not interfere in the economy with monetary or fiscal policy. They would also certainly be against the government bailing out certain industries or banks as they did in 2008.

Because of these beliefs, the neoclassical approach to this recession similar to 2008 would be to not interfere and allow the market to correct itself. An important assumption that neoclassical economics makes is that "market adjustments would be fast and effective and should be relied upon completely" (H&L, 270). One of the most famous neoclassical models is that of the Walrasian auctioneer, which demonstrates how prices reach equilibrium by establishing prices that consumers react to in order to get perfect equilibrium. In Walras' model it was assumed that "each consumer acts so as to maximize his utility, each producer acts so as to maximize his profit, and perfect competition prevails, in the sense that each producer and consumer regards the prices paid and received as independent of his own choices" (Arrow-Debreu, 1). Here, it is explained how Walras arrived at this perfect equilibrium. The main features of a neoclassical model are that they are linear, partial, and individualist. This means that their models tend to look at an individual, rather than the society at large. They believe that everyone acting in their own rational self-interest will create perfect competition. They also look at the economy as an entity separate from other institutions; their models of supply and demand do not take historical context and other societal institutions into consideration. While those may be some of the downsides of neoclassical models, their simplicity allows them to be solvable, and can show some information about how prices and utility affect supply and demand.

The American Institutionalist approach to solving this recession would be extremely different from the neoclassical approach. This school of thought was very complex and dynamic, and viewed the economy as being connected to other societal institutions such as the government, culture, and fields. Pierre Bourdieu, an influential Institutionalist, broke culture down into two subcultures: habitus, which is the outward forms of behavior such as dress, body language, and other things that you do and are associated with, and the doxa, which is the common belief within the habitus that brings them all together as one subculture. American Institutionalists believed that our economic system has evolved over time and is a direct result

of history. Therefore, they believe that historical and societal context is absolutely necessary to make sense of and model the economy. In many ways, they incorporate social and behavioral sciences when studying economics. The founder of American Institutionalism is Thorstein Veblen, who showed how informal and formal institutions affected the economy. He believed that firms did not act in a way that is beneficial for communities. In his book, The Theory of Business Enterprise, he states, “Work that is, on the whole, useless or detrimental to the community at large may be as gainful to the business man and to the workmen whom he employs as work that contributes substantially to the aggregate livelihood” (Theory of Business Enterprise, 20).

For example, businesses often exploit natural resources that everyone relies on in order to create more profit. Veblen saw the class struggle between workers and capitalists as one of the biggest problems in a capitalist economy that would lead to depression. He also thought that depressions were a natural part of the business cycle in capitalism. American Institutionalists would advise the government to intervene in a recession to help the economy from failing. However, they believe that the government is doing this in order to help the wealthy capitalist class, and not the working class who are the most hurt by recession. Veblen saw capitalist governments as “the enforcers and guarantors of the profits and privileges of the capitalist class.”

Under their view of the government, the prime minister would probably take action to save large businesses assets, but the working class would be left to fend for themselves during the Recession. The Keynesian school of economics would see this recession as a natural part of the capitalist system. Keynes was not anti-capitalist, he saw flaws in capitalism and wanted to know how to make the capitalist system work. Keynes witnessed the Great Depression and realized that the government could intervene to lessen the effects of the periodic recessions that occurred under the capitalist system. Keynesian economists would advise the central bank to lower interest rates so that people are more inclined to borrow money and invest. They would advise the prime minister to increase government spending on things like infrastructure and investment to stimulate the economy. This approach is diagrammed in the IS-LM model that shows the relationship between the money market and interest rates in an economy. This model is shown below.

Using this model, Keynes’ theory that increasing the money supply and government spending would help to reverse the economic catastrophe of a recession by increasing aggregate output is shown. Modern Money Theory combines Institutionalist and Keynesian

thinking, recognizing the role institutions play in money, the monetary system, and policies. In MMT, money is not only a physical item that can be printed or felt; it can also be created very easily with a computer.

They argue that a dollar is nothing, but a liability issued by the US government, which promises to accept it back in payment of taxes. The dollar in your pocket represents a debt owed to you by the federal government. Money isn't a lump of gold but rather an IOU. The government sets monetary policy; this includes the amount of money in circulation and interest's rates. The government and our institutions are critical to our financial systems and the role of money. Part of the MMT thinking is that because the government can always create the money it needs, it should not worry about things like deficit spending, and should boost the economy whenever it needs to in order to help economic growth. In this theory, the United States government creates the US dollar, therefore, "it can never run out, it can never go broke, and it can never be forced to miss a payment." Because of their unique view of money, MMT would suggest that the central bank take extreme monetary policies to help turn the recession around. They would advise the central bank to lower interest rates and tell the prime minister to lower taxes and fund large projects to promote investment by running up a budget deficit.

In a recession the government should take the steps laid out by the Keynesian and the Modern Money Theory schools. The government should definitely take steps to intervene and turn the economy around when a massive recession comes. I tend to agree with Keynes that there are certain problems with the capitalist system that need to be addressed in order to stop these periodic recessions. Keynes famously said that "in the long run, we're all dead." This is a great way of thinking about how government intervention can help boost the economy in the short term. Short term fixes may not be ideal, but they can help millions of people avoid poverty. The financial crisis in 2008 led to many people losing their homes and jobs, the government should strictly regulate the financial market in order to prevent a crisis like that from happening again. I agree with Epstein and Montecino (2016) when they wrote that a healthy financial system "channels finance to productive investment, helps families save for and finance big expenses such as higher education and retirement, provides products such as insurance to help reduce risk, creates sufficient amounts of useful liquidity, runs an efficient payments mechanism, and generates financial innovations to do all these useful things more cheaply and effectively." (High Cost of Finance). The United States government should regulate the financial market so that it is less speculative and hold Wall Street accountable when they make

disastrous mistakes that throw the entire economy into recession.

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Postal Remittance Services & Regulation As a Policy Tool for Immigration

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Abstract

Remittances have grown in recent years to be a major capital flow, with American outflows more than doubling in inflation-adjusted dollars from 1990 to 2009 (CBO 2011, pg. 5). In 2016, they amounted to nearly 140 billion dollars, with even more sent through informal networks which are hard to measure and track (Wormald 2018). Currently, immigrants in America are overcharged by high fees associated with private banking remittance services, facing an average fee of over seven percent (Beaton et al. 2017, pg. 20). The current remittance market offers a variety of policy solutions to immigration policy, two of which are proposed here. The first policy proposed is for the Postal Service to assuage such overcharging by offering low-fee remittance services to documented immigrants. Additionally, placing the transfer of remittances in public hands offers the opportunity of a policy tool for immigration as a whole. The second policy proposed is to create a remittance cap as a percentage of individual immigrant's income based on local economic factors; the purpose is to regulate remittances to leverage immigration flows to positively affect domestic social welfare.

The topic of immigration has possessed the national mind for years, the economic effects of which have held a foremost position in public anxieties. Yet, one of the most distinctive economic activities of immigrants often goes unmentioned and unconsidered: remittances. Remittances constitute "sending money...[,] making financial investments, or returning to the home country while retaining bank accounts or claims on other financial assets" when in their resident country (CBO 2011, pg. 1) Yet, there is some variety in measures of remittances, such as the World Bank defining remittances largely as the sum of employee's compensation and personal transfers. Personal transfers comprise of in-kind transfers, while employee's compensation defines labor income to temporary employees as remittances ("Migration and Remittances Factbook" 2016, pg. xii). The amount sent under the World Bank definition from the United States alone was 138 billion dollars, a large portion of the 581 billion

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dollars worldwide in 2015 (Wormald 2018). Discussed or not, remittances has swelled to enormous proportions.

The average immigrant sends ten percent of income to their home country (IDB 2006, pg. 4); however, despite the magnitude of the flows there exists no distinct regulatory framework for remittances. This has negative consequences, such as the gouging of immigrants when they send money back to their home country through formal networks. The drive for profit conflicts with immigrants' interests, and this results in a disadvantageous economic equilibrium with high fees and uncertain services. To bring about a better stasis, the United States should offer low-fee, remittance services to legal immigrants through an institution such as the Postal Service. Thereafter, the federal government can use the new service as a policy tool by regulating the percentage of migrant's income going to remittance expenditures as a way to incentivize the most socially beneficial immigration while discouraging the most socially costly immigration.

Remittance Flows: Trends and History

The average immigrant sends around ten percent of their income through remittances, yet the lack of good and consistent data about immigrants' remittances have often proved to be an impediment for definitive research and results. Both how many individuals remit and how much of their income is devoted to remittances are unsure, with surveys yielding significantly different results. On the higher end, one survey estimates sixty percent of immigrants remit, while on the lower end the National Immigration Survey finds only seventeen percent remit. Based on a data set from 2006, current remittance habits were shown to vary significantly by country of origin. That same data set shows that immigrants only remitted about five percent of their income. The data had a negative skew, with the top quartile of remitters accounting for three-fourth of total remittances from the United States. Creating an accurate picture of the current remittance market is difficult, since many data sources rely on unreliable interviews where a fifth of respondents either don't know how much is given or refuse to answer outright (Meckel 2008, pg. 2-15). Additionally, informal networks compose a significant amount of global remittance flows, complicating estimates even further (Freund & Spatafora 2008, pg. 357). These confounding factors blur the potential and impact of remittance regulation.

One of the better data sets for remitters in the United States comes from the Census Bureau in 2008, when a supplemental survey on migration and migration-related matters, such

as money transfers, was conducted The survey had a similar nonresponse rate to other Census surveys, though the nonresponse rate for the money transfers section was higher for foreign-born households in comparison to native households, possibly skewing the data. Additionally, interviewers reported a great degree of hesitation among respondents, especially as questions continued in the amount and frequency of remittances. They surveyed 458 American households, with 84 percent of those reporting money transfers abroad being foreign-born. More than a quarter of foreign-born households had remitted in the last year, while 54 percent reported remitting 1 to 4 times a year. At the higher end, 30 percent reported remitting over 10 times a year. The average family remitts about 6 to 7 times a year, according to their results. Additionally, 71 percent of foreign-born households reported remitting more than 500 dollars, and 11 percent reported remitting 5 thousand dollars or more. Importantly, it was concluded that only about 12 billion dollars were sent in remittances in 2008, even as other third-party estimates routinely delivered results in the range of 30 to 40 or so billion dollars a year. The Census report continues by calling for greater research into the topic to make stronger conclusions (Grieco et al. 2010). Data sources point in a variety of directions, and their disuniformity underscores the importance of greater research.

The result of an uneven American distribution conforms with other migrant groups behavior as well. For example, among Filipino rural-urban migrants:

> *…..the percentage of income remitted varies considerably. Among those reporting income on a monthly basis, the percent of income being remitted ranges from less than 1 percent to over 50 percent. Of the total in this group, 39.6 percent remit less than 10 percent of their income; 28.3 percent remit between 10 and 25 percent of their income; 11 percent remit 26-50 percent of income, and 6 percent remit over 50 percent of their income (Trager 1984, pg. 332).*

There are notable differences between American international immigrants and Filipino internal migrants. That being said, many of those same immigrants were facing similar social pressures (such as familial obligations, origin-country financial responsibilities, etc), except without such a drastic change in other facets of life (such as culture, wage-level, or distance to their family). In previous studies of remittances, such factors as distance from their home-country and time since migration figure greatly into individuals' propensity to remit (Perez-Lopez & Diaz-Briquets 1998, pg. 330). This disclarity underscores the need for greater measurement of such a large capital flow, especially one which is so rapidly growing.

Immigrants of differing countries of origin, gender, age, and income all vary in their remitting behavior. One recent study found that the group most likely to remit is “a male immigrant from a rural background who has been in the US for a longer period of time and is from a higher income group (to some extent.)” Further, the most-intensive remitters have a “higher English proficiency, living apart from their family, and from a lower income category and less developed region” (Trombley 2016, pg. 30). Importantly, this profile is the result of a costly and inconsistent formal remittance service market.

The current remittance service market suffers from unaffordability. Fees for such transfers averaging out across platforms at 7.62 percent. They range from as low as 3.45 percent through mobile remittance providers to a high of 11.18 percent through banks (Beaton et al. 2017, pg. 20). These transfers tend to be relatively costless for providers, yet immigrants are losing significant sums. Further, evidence points to a very elastic relationship between formal channels’ transaction costs and remitted income--with a single percentage point increase in fees reducing remittances by 16 percent. Since informal networks often offer lower costs, that may reflect the degree of substitutability between formal and informal remittance flows (Freund & Spatafora 2008, pg. 358-361). The informal market is unreliable as a mode of exchange, not least since transactions don’t have the same level of security as those covered by contracts. These high fees for the formal market drive a greater share of total remittances through informal channels, decreasing the financial security of remitters and their families as well as obscuring the scale of remittances worldwide.

Method of Administration

The Postal Service may seem like an unlikely agency to conduct such financial dealings as remittances, yet it has both a history of serving immigrants’ financial needs as well as the ability to do so once again. After an act of Congress, the Postal Service offered basic banking services through the Postal Savings System for 55 years. In 1915, immigrants held 70 percent of the bank’s deposits even though they were only 15 percent of the population. Many immigrants distrusted private banking establishments, and felt more comfortable with a public bank. Through an aggressive marketing campaign by the Postal Service to immigrant communities, those communities became natural customers (Baradaran 2014). The issue of affordable financial services is a familiar one for many Americans--more than a quarter of American households were either unbanked or underbanked in 2014, with access to affordable basic financial services beyond reach. As such, this policy change resulted in the proliferation in

underserved areas of predatory payday loan lenders. The current arrangement results in nearly 90 billion dollars devoted solely to interest and fees due the usurious interest rates on loans (Office of the Inspector General 2014, pg. 1). Whether such an open and public venture today would yield a similar success story is an open question. After all, the financial sector has grown to be much larger, both in scale and complexity, since the Postal Banking System ended in the 1960s. However, a low-fee remittance service provided through the Postal Service would provide the government corporation a pilot program of sorts, to see how the dynamics of the modern financial system could combine with the structure and nature of the modern Postal Service, as well as the obvious benefit to immigrants of a more consistent and affordable remittance service.

The choice of the Postal Service rather than another government organization also comes down to its equitably-spaced network of infrastructure, allowing immigrants to easily access personnel in order to set up accounts and conduct account maintenance. Investments in new infrastructure would be minimal in comparison to establishing a brand new government corporation or running it through a public institution with a less widespread national presence. With over 31,000 post offices manned by over 500,000 career employees delivering to over 157 million addresses, the Postal Service of today seems capable of replicating the grand accessibility of the past postal banking system. Another possibility of a vehicle for a remittance service may be Immigration and Customs Enforcement, which has the advantage of being situated around immigrant populations. Yet, due to the reputation of the body, many immigrants will shy away from utilizing its service. If there isn't buy-in, then the program will be hobbled. Regardless of who executes the policy, it must be done hand-in-hand with an extensive, multilingual marketing campaign along the lines of the Postal Service a century ago to build trust among concerned communities.

Further, the Postal Service will be able to provide remittance services less corruptly and criminally than the private sector, while also providing a source of consistency for migrant financial lives. Many banks in recent years have rolled back their remittance services, due to a government crackdown on possible avenues for criminal activity. For that reason, remittance fees have become cheaper and cheaper, yet due to the law enforcement initiatives the trend may reverse (Corkery 2014). In recent years, financial institutions have been cutting ties with money transfer services in an effort to crack down on money laundering and financial crime--a process called de-risking. In 2016 alone, 27 percent of banks worldwide reported closing

relationships with remittance providing partners, presenting barriers to free entry in the industry and to the introduction of new innovative advancements ("Migration and Remittances" 2017, pg. 2, 5-6). Remittance service markets are failing--with fault for both public and private sector actors--and immigrant communities are on the hook.

Importantly, these concerns are not merely the machinations of an overzealous national security state, but due to recent bank behavior in regards to international criminal organizations' financial dealings. This situation occurred in the case of HSBC and its "pervasively polluted" culture which lead to billions of dollars of terrorist and drug trafficker money being transferred through the bank, thus undermining the legitimacy of daily, innocent transactions (Jamieson 2012). It goes without saying that the Postal Service has not been implicated in such wide-ranging scandals as assisting terrorist groups and drug cartels. On the contrary, the worst criminal behavior associated with the Postal Service tends to involve individual workers smuggling drugs or stealing mail, only to be later prosecuted.

The benefits of a postal remittance service do not flow solely to immigrant communities either. The Postal Service's fiscal health has been significantly hampered since 2006, when Congress imposed uniquely draconian standards for the government corporation to pre-fund it pension obligations (Ritholtz 2018). Even modest profits from a postal remittance system would help bolster its balance-books, and could introduce practices potentially useful in a future postal banking system as some have proposed. Securing safe and transparent transnational flows, saving immigrant's wallets from private sector gouging, improving a vital institutional force, and providing an opportunity for experimentation in financial markets and transactions are desired and feasible goals for a postal remittance system.

Such a service would allow for a system of remittance regulation for the maximization of immigration's social good while minimizing its socially disruptive and costly effects. By legislating the work of immigrants' remittance needs from private banking to the publicly-owned Postal Service, many stakeholders are benefited. Immigrants benefit through the elimination of high fees, while the public sector benefits through the diverted revenue. Further, it produces a transparent, formal market for transactions, rather than a hodge-podge of price-gouging and informality. Through these characteristics, policy-space is created, offering a set of opportunities for improvement and efficiency. Postal remittance legislation is a sound policy offering affordability and security to immigrant communities.

Proposal for a Postal Remittance Regulation System

Remittances are counterproductive to the resident country's economy, which in this case the United States. A class of workers reserving ten percent or more of their income in order to enhance the budget of their non-migrating family, later used to fund firms and increase consumption in the immigrant's home country rather than in the United States. Income diverted to foreign consumption and foreign investment has its own costs in the form of reduced domestic aggregate demand, minus the receivers' propensity to import American goods and services. Further, there is evidence to suggest that immigration may lower some Americans' wage potential, specifically those of high school dropouts, who are some of the more unskilled workers of the American economy who often directly compete with unskilled immigrant labor. Thus, immigration does have some costs for some workers, and these costs are possibly outweighed by the benefits of immigration (innovation for example). Regardless of that calculus, it brings a set of costs nonetheless.

These costs, of either reduced wages or reduced domestic aggregate expenditure are localized to the area of the immigrant's migratory destination, meaning the costs of immigration are primarily spatially-oriented. For example, an unskilled migrant's remitting leaves local economies with less demand to be satiated by domestic workers, while potentially undercutting the wages of their similarly skilled counterparts--whether native- or foreign-born. There are other costs as well, like increasing rents; for example, in the period immediately after the Mariel Boatlift during the 1980s, low-quality rentals in minority neighborhoods saw rent increases (Greulich et al. 2004, pg. 151). Alternatively, some of immigration's benefits are regionalized, such as a surge of immigration helping to compensate for recent population declines in that part of the country. In short, remittance policy can help ameliorate the spatial effects of immigration.

In 2015 the United Nations adopted a series of sustainable development goals, among which was to reduce the fees associated with remittances. They recognize the exorbitantly high fees and the negative effects for the immigrants, their families, and their home countries. By 2030, the UN wishes to see remittance fees reduced to three percent, and all corridors charging over five percent eliminated (Galatsidas 2015). If the United States were to establish this postal-remittance service, it could easily effectuate those goals well ahead of schedule in line with the spirit of American inclusion of immigrant communities. Congress could legislate fee levels to compensate for program-related costs while still ensuring affordability and accessibility

to immigrant communities. Importantly, *ceteris paribus*, establishing this scheme of remittance-regulation designed to lead to cheaper and consistent remittance services cultivates a broader and varied appeal in immigrant communities. That broad appeal increases market size, with a resultant decrease in domestic aggregate demand commensurate to the growth in remittance flows. To combat the economic maleffects, it is proposed that a system of regulation according to local factors is proposed.

Level of Policy Execution

Additionally, this system of remittance regulation should be established through the federal authority, especially after the landmark 2012 Supreme Court case Arizona v. United States. The court rebuffed the state's attempt to establish new legislation regarding illegal immigrants, finding the laws in violation of the supremacy clause. The clause empowers the federal authority over state and local ones, and that even "complementary" state legislation encroached on federal immigration powers. Immigration laws are not simply considered an extension of domestic policy, since immigrants come bearing other nation's citizenship. Thus, immigration laws deal with how the United States treats foreign citizens and entities, not a state function but within federal foreign policy power (Guttentag 2013, pg. 11-18; Arizona v. United States, 2012, 567 U.S. 387). A state or another local entity attempting to enact this policy could face a court challenge in the face of a strong headwind of recent precedent.

As such, a system described would require Congressional legislation directing the Postal Service to create the remittance service with fee levels as detailed in the United Nations sustainable development goals, cost providing. Furthermore, Congress should mandate that all legal immigrants establish an account as part of the immigration process to ensure maximum participation among immigrant communities. Citizens should also have access to these remittance accounts, with no cap for anyone not associated with the immigration system. Complementary legislation could require that all remitting for permanent guest workers, permanent residents, etc must occur through the postal system until naturalization, and possibly continuing the mandate for a period of 5 years like the prohibition of public assistance to recently naturalized immigrants (Singer 2004, pg. 26-27). The goal of ensuring universal buy-in and the minimization of private remittance services is necessary for a successful and effective remittance regulation system. To further ensure immigrant community buy-in, any financial services provided should be held secret and anonymous unless account-holders violate the standards of its use and face additional fees and fines.

Proposed Factors

Specifically, I offer a plan to establish an effective system of remittance regulation calibrated on a local level according to three separate factors: the unemployment rate among high school dropouts (for similarly educated immigrants); diversity criterion, with non-white (white) immigrants encouraged to work in white-majority (minority-majority) areas; and local capacity utilization (to be defined later in this article). Potential standards for regions are counties, commuting zones, labor market areas (Tolbert & Sizer 1990 pg. 1-3), or another variant such as mobility zones (Foote et al. pg. 16-23). The idea behind these measures is to create separate and distinct mini-metro areas across the United States in order to sort and categorize local economies more systematically. To consider locally- tuned remittance regulation as through the proposed postal remittance system is then akin to asking what the effects of immigration are to net receiving countries like the United States. Its separate factors then are presented as distinct ways immigration impacts local communities, and further proposes that remittances are important enough to immigrant's destination decision as to merit consideration. A federally-formulated policy according to such local considerations would yield a more exact and distinctive effect.

Depending upon the status of each of these factors, each region would have a remittance cap placed upon resident immigrants. Nationwide there would be a baseline remittance cap, as well as a maximum remittance cap and a minimum remittance cap (covered later in this article). Such a remittance cap would be a proportion of the migrant's total income. Each factor will either raise or lower the remittance cap by region. For example, a place facing low rental occupancy may have a higher remittance cap in order to encourage immigrants to move there, even moreso if low-skilled unemployment was relatively low, or if they helped to diversify the local neighborhoods and workplaces.

Wages of Unskilled Labor

The alleged connection between immigration and native's wages is much discussed, with research mostly rejecting the idea of large-scale and broad wage-effects. Many studies of its effects on wages usually yield negligible effects, if any, and even in some cases the reverse sign. Yet meta-analysis shows significant effects on low-skilled workers--with those effects most heartily felt by similarly-skilled recent immigrants--which in the United States often mean those

without a high school diploma (Longhi et al. 2010, pg. 827-829). George Borjas claims that immigrants, due to their vast numbers, redistribute five-hundred billion dollars every year from the poorest workers in the United States to their employers (Borjas 2016). He also contends that high school dropouts have lost about four and a half percent in earnings due to immigration from 1979 to 1997 (Borjas et al. 1997, pg. 65-66). Evidence from the Norwegian construction sector yields a similar result. Relying upon low- and medium-skilled workers especially, the relationship between immigration share and wages is inverse; foreign- and native-born workers seem to behave as substitutes (Bratsberg et al., pg. 1202). Even if for the average wage-earner in the United States' immigration has little wage effect, there still seems to be a noteworthy effect on unskilled labor's wages.

Lower wages for those with less education and fewer skills is not a positive outcome from the perspective of public policy. This aspect of the remittance regulation proposal entails establishing a remittance cap inversely related to a region's unemployment rate among those without a high school diploma relative to the national unemployment rate for the same group. An area with an overabundance of unskilled labor, as measured through the unemployment of the region relative to the national average, would face lower remittance caps in order to disincentivize new immigrant labor to enter an area already struggling. Collecting unemployment rates for those not holding a high school diploma would have to be done on a regional basis, and then compared with the national average. This factor would only apply to those immigrants who have less than a high school diploma, with all those higher educated exempt--barring a new trend of higher-skill immigrants causing unemployment among their similarly educated peers.

Diversity & Productivity

Further, it is proposed to set the remittance cap based on diversity considerations. There is a public good gained through more racially and ethnically integrated neighborhoods and towns, especially in the face of the recent rise in racial residential segregation (Frey 2018). For example, segregation is presumably at least partially responsible for differences in education, since schooling in the United States often depends on a local areas' socioeconomic makeup, with minority populations such as blacks and hispanics with on average lower household wealth than their white counterparts, a trend set to continue (Sherman 2017). Furthermore, America is suffering from a crisis of so-called 'lost einsteins,' whereby many children from disadvantaged

groups see significantly lower rates of innovative activities (as measured through patent authoring) than otherwise expected. For example, one study notes that “if women, minorities, and children from low- income families were to invent at the same rate as white men from high-income families, the rate of innovation in the economy would quadruple” (Bell et al. 2017, pg. 16). Research increasingly illustrates the lost potential resulting from racial stratification and segregation, costs which can potentially be ameliorated through a more targeted immigration policy.

With demographic trends continuing, the United States will see a lower proportion of the white population than in our recent history. The immigrant population is of differing ethnic and racial stock (Suh 2015), and is one of the factors in the gradually decreasing proportion of the white population. Given the tendency for immigrants to cluster in neighborhoods and specific areas, the risk of increasing segregation is more so heightened. The fear of ethnic enclaves has been a recurring paranoia, with some speculating that the unique factors of American history produced a melting pot of greater assimilatory power to counter the proliferation of enclaves (Borjas 2006, pg. 65-68). Yet these enclaves also provide immigrants a baseline social network and support system. The byproducts include helpful links for employment and housing, and institutional forces like community centers and ethnic churches providing bevies of support (Tsang 2014, pg. 1182-1187). Hopefully by leveraging diversity considerations into the remittance system, more individual migrants will take the step of expanding the spread of foreign-born populations to new places, forming the foundation for the expected future diverse immigrant cohorts. Aside from the phenomenon of ethnic enclaves and their impact on immigrants’ social mobility, there are other compelling reasons to promote the further geographic spread of immigration.

Central to that contention is research concluding that more diverse workplaces tend to be more productive. One study using city-level data found that every standard deviation increase in workplace diversity correlates with a six percent wage increase (with wages being used as a proxy for productivity), even after controlling for a variety of factors advocated generally by skeptical economists (Sparber 2009, pg. 79). A sociological review found that increased diversity in a workforce helps in nearly every area that detractors often point to as the harm of diversity. Even after controlling for a myriad of factors, increased diversity was significantly correlated with increased sales, profitability, market share, and the number of customers (Herring 2009, pg. 218). Furthermore, with the trend of low productivity growth in

recent years (Blinder 2015), systematic attempts to further innovate labor force combinations are well justified. A side note: for administrative or bureaucratic purposes, it may be easiest to use a simplified measure of just non-white to white population--rather than breaking it down by black, hispanic, asian, pacific islander, etc--with immigrants categorized according to how they would answer questions on race from the Census Bureau. To limit the negative effects of racial segregation and to maximize the social good of diverse workplaces, a remittance cap could serve to ameliorate a rising problem and contribute to creating more productive and innovative American firms.

Local Resource Utilization

Immigration's benefits and costs are also related to the capacity utilization of local economies. This is meant to measure public services utilization, such as high school class size or local hospital usage rates. It should also include other possible measures. There seems to be a connection between a higher immigrant population and higher rental prices, although such relationships are highly complex and require more study" (Saiz 2007, pg. 355). It may be beneficial to create some gauge of existing housing utilization (for example, the proportion of unoccupied housing units as a share of total housing), and increase (decrease) the remittance cap the more unoccupied (occupied) the region is relative to the nation overall. For example, a town where much housing goes unused, a hospital wing has just shut down, or classrooms are going empty, would have a higher remittance cap since it has all these facilities, all these unused resources which an increased population can use. By contrast, a region where essentially no housing units go unused, the local hospital is overburdened by a high patient load, and students are sitting on the floor since there aren't enough seats faces a differing physical limitation than a depressed region. Their infrastructure will be less equipped to handle the added stress of additional population. without creating greater overextension and harm.

The basic aim would be to avoid potential overcrowding of public facilities and housing while encouraging stories like that of Schenectady, New York, where a mayor in the mid-2000s was able to attract large numbers of Guyanese immigrants to his city and revitalize the municipality's economy (Kershaw 2002). By including local capacity in the remittance equation, the federal government can utilize external immigration to assuage the social maladies associated with population outflows from a community. Especially in recent years, with the growing trend of internal migration toward the so-called Sun Belt, such an enterprise could yield positive localized results to local economies on the downswing and provide a degree of relief to

overheating regions. In essence, remittance regulation can help leverage external migration to outweigh internal migration patterns, providing stability and security.

Determining Remittance Caps

The importance of the baseline remittance cap cannot be underestimated. A cap that's too high will lead to fewer immigrants considering it in their work-life decisions and render any system of regulation ineffective and pointless. Conversely, if the remittance cap is too low, it could lead to significantly reduced capital flows to many underdeveloped countries. As many families use remittance income to afford food, education, housing, or healthcare, any large-scale effort to reduce these flows could have tremendously negative effects on those already struggling around the world. To accurately assess the most humane yet binding baseline remittance cap requires a better understanding of individual American immigrants' decisions about how much to send in remittances.

Remittance cap minimums and maximums should also be established. If there were areas where immigrants simply weren't allowed to remit any part of their income, that would be unnecessarily cruel, as well as a major impediment to immigration to that region. It thus undercutting the goal of spreading immigrant populations more equally across the country. Similarly, establishing a remittance maximum is very important, since a high cap will weaken the system in its task of accomplishing its policy goals.

Remittance regulation baselines, maximums, and minimums are all mutable; they can be changed through legislative action, executive adjustment, bureaucratic calculation, or any other method as designated through official policy. But in times of economic recession or depression, in order to revitalize aggregate demand and return the economy to producing at its full capacity, the total allowable amount of remittances should be lowered for a period of time. To take such drastic action, policy deciders would have to weigh the good of the resultant new consumer spending with the rights and needs of immigrants themselves, especially for those who remit. For example, remittances tend to be a more consistent source of external financing for many countries, help smooth aggregate consumption over time, facilitate access to credit, and help those in the underdeveloped world gain access to education by letting them offset any lost labor income with remittance income (Beaton et al. 2017, pg. 28-33). Foreign aid flows are often discussed as an important method of assisting underdeveloped world, yet are dwarfed by remittance flows; for example, Guatemala received about 300 million dollars in foreign aid

allotments from the United States (USAID 2018), while also benefiting from over 6.5 billion dollars in remittances, nearly 10 percent of the nation's GDP (Wormald 2018). There is a greater degree of reliability with a financial flow based on individual, microeconomic decisions rooted in family connections, rather than a financial flow determined through political forces and influences unbound by those social factors. All that said, caution must define remittance regulation given how much is on the line for immigrants and their communities.

Lowering the baseline, the maximum, and the minimum all have separate effects. The lowering of the maximum could have the effect of further increasing immigrants response to remittance caps. For example, immigrants who wish to remit the largest amount of their income would need to become even more attuned to local considerations, and thus even more sharply maximize social good and minimize social ill in a well-constructed system. Not all immigrants aim to remit as much, and so its effects could be relatively paltry. A reduction in the minimum might have little actual effect, since many immigrants living in such low-remit regions may simply not remit any income, or so little that it does not factor into their work-life decisions. Lowering the baseline could have large-scale effects on immigrant work-life decisions, and at least until immigrants responded to such changes, could result in significantly fewer total remittance flows.

Furthermore, such a system could prioritize any factor proposed, such as placing the well-being of unskilled laborers first and using that score of the region to determine a great part of the remittance cap. Alternatively, diversity considerations may also be worthy of the most interest, or local capacity utilization if many localities are facing major internal migrations. As aforementioned, to propose a remittance regulation system is akin to asking what immigration's impacts and consequences are for the immigrant's resident country; as such if the phenomenon is shown to have more negative effects (or positive ones for that matter), more factors could included. Such a framework allows for a variety of differing policy priorities, and the addition of other factors would be welcome as long as they assist in the goals of maximizing social good and minimizing social ill.

The Ethics of Remittance Regulation

At the risk of sounding like an alarmist about my own policy proposal, postal-based remittance regulation could have enormously detrimental effects on immigrant and foreign communities if done haphazardly and in an uninformed fashion. The power of politics could

intrude even further into the lives of immigrants, with negative consequences for the developing world as well. One could foresee an immigrant in the United States needing to remit large sums of money in order for that person's mother or father to be able to afford medicine or a life-saving medical procedure. By limiting that immigrant's remitting ability, the family may suffer tremendous loss and trauma. An essential part of maximizing social benefit is preventing the unnecessary burying of innocent people, whether in the United States or overseas. In all of these discussions, keeping an eye to the humane treatment of immigrants is tantamount to establishing a humane society, and of fulfilling America's historical promise of being a welcoming homeland for the world's oppressed.

To create a more humane system, the Postal Service should establish a procedure for the permitting of an unlimited remittance cap for a period of time to individual immigrants so they can assist family overseas in their struggles. If an immigrant needed to remit a larger sum, the Postal Service could establish a system in which they would transfer the funds yet forgo transfers for a certain number of months after. Additionally, if a country such as Mexico or Indonesia were facing a natural disaster, a waiver to all immigrants from those countries could be permitted for a period of several months to partially help with recovery.

Further, it is reasonable to question the merit of regulating remittances on both pragmatic and principled grounds. It could be contended that remittances lack the potential policy prowess as I propose, with neither the necessary consumer base nor an important enough factor for individual immigrants to consider. Yet, if a low-fee and accessible public remittance service were established the market conditions would be drastically different, especially if accompanied by a legal mandate in the immigration system. As discussed previously, remittance incomes are vital for developing economies as well as the workers and families which compose it, including those abroad. Remittances also have an investing angle. Rather than coming purely out of familial altruism, self-interested financial investments are another avenue of remittance income (Meckel 2008, pg. 21-22). Thus, regulation which affects an individual's ability to engage in such an important function would provoke reactions, hopefully in line with combined interests of concerned stakeholders.

Conclusion

Remittances up until this date have been largely neglected within many discussions of immigration policy. Within this paper a sketch of a possible structure which, even if rough,

exemplifies the scope of this policy, as well as an interesting path forward for immigration policy. I contend that postal remittance services can improve the well-being of immigrants, their families, their home countries, as well as a domestic institution in the Postal Service. Furthermore, remittance regulation as detailed above offers the possibility of maximizing immigration's overall effects upon society by correcting its possible negative wage effects, maximizing its potential to diversify workplaces and hence increase productivity growth, fight segregation and racial discrimination, and help struggling towns and cities regain population and a tax base. Immigrants and their families domestic and abroad will benefit from a consistent, accessible, and affordable remittance service stationed as close as the local post office. Although bold or outlandish depending on one's perspective, the task of public policy is to tackle the public's problems with every means necessary and proper. If that means rethinking American immigration and remittance policy, so be it.

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Did World War II Help the US End the Great Depression?

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Abstract

I evaluate whether World War II caused American recovery from the Great Depression and find instead that expansionary monetary policies helped the US emerge from recession. World War II in fact sharmed the US economy at the microeconomic level. I compare US economic performance to predictions from two classical models: a model of the market for loanable funds; and a model of the labor market. I use these two models to test whether monetary expansion or wartime spending fueled the recovery, and find that the increase in the money supply stimulated the US economy and helped end the Great Depression.

Did World War II help end the Great Depression in the United States? The Great Depression is the most well-known recession in the twentieth century; in the US, the GDP did not return to the level before the Great Depression until the US entered World War II, which left major population with the impression that World War II helped to end the recession. Meanwhile, some people believe that the US economy could recover without entering the war, and World War II was accidently happened at the time when the recovery was about to complete. Therefore, whether the war played an important role in helping boost the economy has been a long-lasting debate. I want to figure out whether the US could recover from the Great Depression without entering World War II, and further, if I can generalize this conclusion to answer more widespread problems, like whether entering a war will aid a country in ending a national recession. I plan to approach the topic by trying to answer the following questions: a) Are wars necessary for a country to recover from a recession? b) If a war is not necessary for economic recovery, then what is the main and best source of recovery for a country? And lastly, c) is war positive for the economy? This essay will explore these questions based on five previous pieces of research, and discuss two models that are related to the questions. Even though four of the five research studies focus on the relationship between the Great Depression and World War II, they approach the topic from different viewpoints and hold different perspectives.

A widely accepted idea is that with the huge government spending on World War II armaments, wartime spending fiscally stimulated the economy and was the principal reason for

the end of the Depression. However, Romer (1993) mentions that before the preparation of World War II, the US economy had already begun to recover in 1933 because of the increases in the money supply. Thus, she claims that the war cannot be the main source that moved the US out of the Depression, although she acknowledges that World War II has a positive effect. According to Romer (1993), without entering World War II, the US economy was still able to recover from the economic recession. Comparing the consequences of the war and the fiscal policies adopted by the Federal Reserve in the spring of 1932, Romer (1992) expands her idea and points out that even before the war had a noticeable impact on finance, the recovery was nearly completed by prior fiscal policy and spending. Therefore, fiscal policy rather than World War II was the real main source that helped the US end the Great Depression.

On the other hand, though holding the same conclusion that World War II was not the major force that brought the Great Depression to an end, Steindl (2007) argues against Romer's idea that the main source of recovery was fiscal policy. Steindl (2007) points out that Romer's analysis has ignored the regression which happened in the late 1930s. During the economic recession from 1937 to 1938, prices declined although the money supply continued to increase. Therefore, the growth of the money supply--caused by fiscal policy initiatives beginning in 1933 and gold inflows from Europe--was not the driving force for the end of the Great Depression because the economy did not fully recover until 1942. Instead, Steindl (2007) argues that two forces helped the economy return to an upward trend. The first one was the increase in money demand, and the second one was the inherent upward movement in the economy obscured by Word War II. Steindl provides a lot of graphs to support his viewpoint, and directly claims that the war was not necessary for economic recovery.

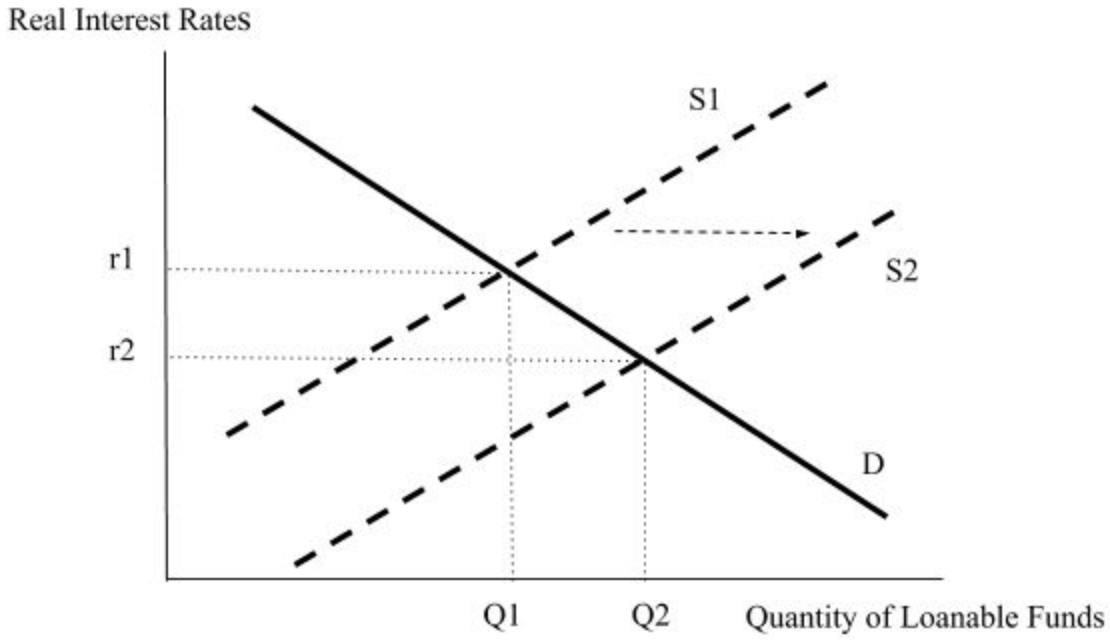
Although Steindl's argument seems reasonable, Irwin (2012) provides another view on the cause of the 1937-38 recession. Irwin (2012) illustrates that the expansionary monetary policy was based on large gold inflows in the mid-1930s as the M2 money supply grew at about 12% per year from 1934 to 1936, but stopped growing in 1937 and even began to decrease. This was because the Treasury Department decided to block all the gold inflows, starting in December 1936 as the administration was worried about inflation. After the Treasury Department ended the policy in April 1938, the economy began to recover from the second recession in June. Thus, the recession of the late 1930s was the result of the shortage of M2 money supply. Based on Irwin's conclusion, I argue that Steindl's view alone is not enough to question the validity of Romer's theory because the recession of 1937 was also caused by a

shortage of money supply. Thus, I use Romer's viewpoint as the basic assumption in the following analysis.

Both Romer and Steindl admit that World War II had a positive economic effect to some extent (Romer, 1993; Steindl, 2007). In contrast, Horwitz and McPhillips (2013) offer a new approach when they only discuss World War II's economic impact on American residents. Collecting a series of advertisements from an electric company, and American households' personal letters during World War II, they draw a conclusion that though the war seemingly led to a boom in macroeconomic aggregates, households' living standards regressed greatly during wartime (Horwitz & McPhillips, 2013). Hence, World War II did not help the US end the Great Depression, and even worsened the economy based on the regression of average households' living standards.

After analyzing the five articles, I conclude that the expansionary monetary policy was the primary source of the US recovery, and World War II had a negative effect at the microeconomic level. To verify the statement and to further explore the economic consequences of World War II, I use two models to examine the historical data: the model that explains the market of loanable funds and the model of the labor market. The Great Depression started in 1929 with the stock market crash. Economists generally consider the Federal Reserve's decision in 1928 to open market sells as the primary source of the recession. During the recession, what worsened the situation was that people did not trust the bank anymore, so they simultaneously drew their money back, which reduced the money supply and caused a higher interest rate. This condition is called a bank panic. Moreover, due to the deflation, the price of goods fell continually, so nationwide consumption also declined because people preferred to put off purchasing goods to the future rather than buying them now. In order to solve the bank panic and stimulate consumption, the Federal Reserve adopted an expansionary monetary policy in 1932, which increased the money supply greatly.

Figure 1: Market for Loanable Funds



Source: Williamson (2014) p. 446-448.

I test and verify whether the increase in money supply was the main source of the recovery by analyzing the market of loanable funds. The model consists of an upward-sloping supply curve and a downward-sloping demand curve, with the quantity of loanable funds on the x-axis and real interest rates on the y-axis. The supply curve is upward sloping and the demand curve is downward-sloping because people are more likely to loan to others but less willing to borrow money with higher real interest rates. Their intersection is the equilibrium point. From the model, I can learn that an increase in the money supply will shift the upward supply curve to the right, which leads to the decrease of real interest rates and the increase of the quantity of loanable funds. If the money supply declines, the real interest rate will rise and the quantity of loanable funds will decline. Therefore, the crash of the stock market and bank panic could be the consequences of the decreasing money supply in 1929 and could be solved by the expansionary fiscal policy that was adopted in 1933.

Table 1: Change in GNP during Two Phases of the Great Depression

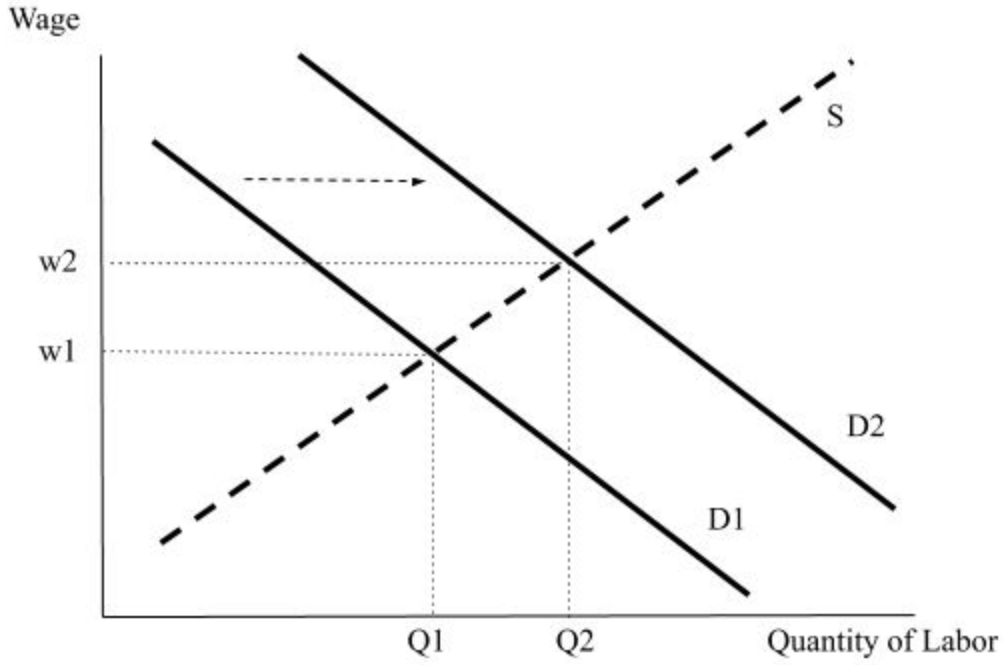
Year	Percent change in GNP
1930	-9.3
1931	-6.2
1932	-15.8
1933	-3.0
1938	-5.5

Source: Romer (1992).

Table 1 lists the years when real GNP decreased in the 1930s; the real GNP had negative changes from 1930 to 1933, but in 1934, it began to increase until 1938. The economic behavior fits the classical model of the loanable funds market when money supply changes. According to Romer (1993), the economy began to recover because of the expansionary policy in 1933, so war was not the main source because the economy began to recover nine years before the war started. If the rise of GNP is considered the beginning of the US recovery, then Romer's theory is supported by the data above.

After figuring out that the increase in money supply was the main force in recovery, I need to answer the second question: did the war have a positive effect on the economy? Although Horwitz and McPhillips (2013) insist that World War II worsened the economy as the average households' living standards regressed, no one can deny that the real GDP increased during wartime because the government spending increased. Moreover, participating in war generally increased the demand for labor because of the preparation for armaments, which solved one of the toughest issues which need to be solved during a recession: high unemployment rate. This seemed to be the case for World War II, as demonstrated by the following model.

Figure 2: Labor Market



Source: Williamson (2014) p. 195-196.

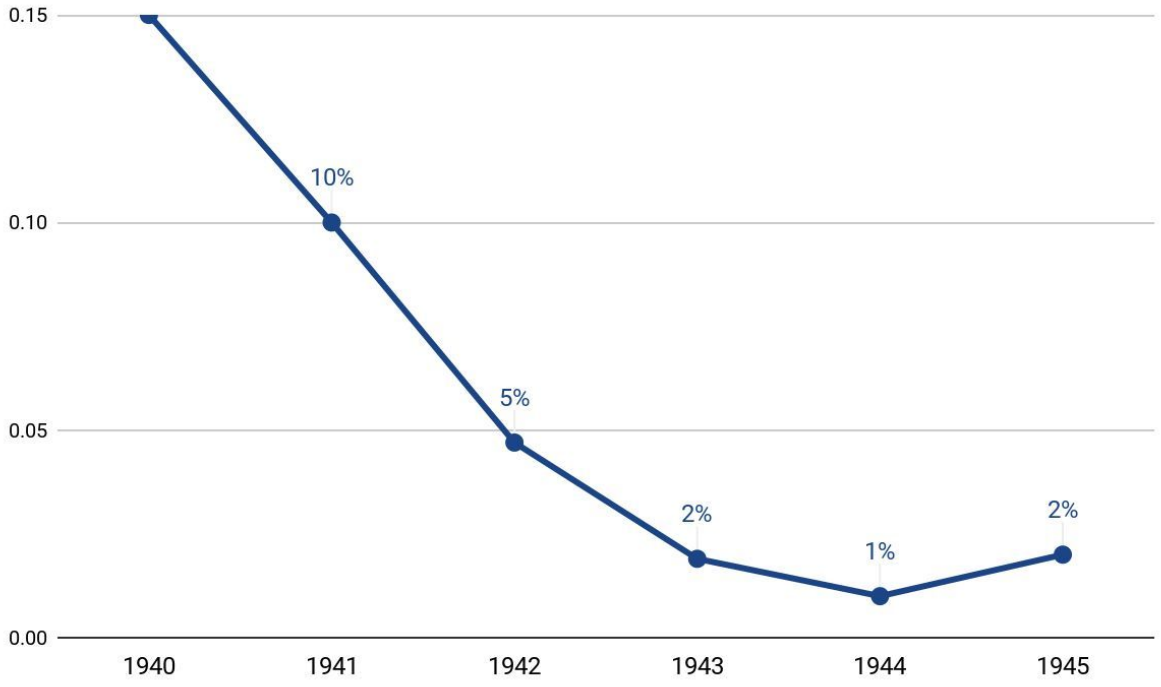
In the model of the labor market, the quantity of labor is on the x-axis and the real wage is on the y-axis. The demand curve is downward sloping because employers tend to hire fewer workers or reduce working hours as real wage rises; otherwise, the cost of production will increase. The supply curve is upward sloping because people tend to work more as the rate of real wages rises. The intersection of the supply curve and the demand curve is the equilibrium point. According to the model, the demand curve will shift to the right due to an increase in labor demand. As a result, the real wage and quantity of labor will also increase. Therefore, the increase of labor demand will cause a decrease in the unemployment rate and an increase in the real wage. From Table 2 and Figure 3, I can deduce that during World War II, the unemployment rate fell from 15% to 2%, and the real wage increased from 0.52 dollars per hour to 0.90 dollars per hour. Economic behavior fits the classical model of the labor market when labor demand increases. This fact supports the assumption that World War II increased the demand for labor, and thereby reduced the unemployment rate, which means it had a positive effect on the US economy.

Table 2: Avg. Hourly Earnings in Manufacturing (Production & Nonsupervisory Workers)

Year	Dollars per hour
1940	0.52
1941	0.60
1942	0.75
1943	0.86
1944	0.91
1945	0.90

Source: Federal Reserve Bank of St. Louis (2018).

Figure 3: US Unemployment Rate, 1940-45



Source: American Social History Project Center for Media and Learning (2018).

From these two models, I can determine that the start and the end of the Great Depression are strongly connected to the market of loanable funds because the recession began as the stock market crashed and recovered as the monetary policy was adopted. Moreover, the unemployment rate, which increases during recessions, is closely related to the labor market. Together with the data and previous studies, the models provide the answer to my question: did World War II helped the US end the Great Depression? I draw the conclusion that to recover from the Great Depression, World War II was not a necessary source. Although it is positive on a macroeconomic level to some extent, its effects on a microeconomic level are negative. Hence, war is not the optimal choice for ending a recession.

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The Federal Reserve System: A Look at Our Country's Premier Financial Institution

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Abstract

The Federal Reserve System (also known as the Federal Reserve or simply the Fed) is the central banking system of the United States of America. Its mandate is to promote a strong U.S. economy, by ensuring maximum sustainable employment, stable prices, and moderate long- term interest rates. The functioning of this institution affects the finances of each and every citizen of this country. This article's main objective is to analyze the working of this prime institution and also argue about whether we need a change in the system, so to confirm its ideal functioning.

Introduction

Before the creation of our country's Federal Reserve, the Congress implemented various short-lived experiments to illustrate the distinct views held by the public, regarding the execution of monetary policy and the working of the financial system. During that time, the outcome of these experiments was considered very alarming as in the background, our economy was facing one serious financial crisis after another. This further resulted in the paralyzing of our entire financial industry and also brought an abrupt stop to our once-booming economy. To counter this, Congress enacted the Federal Reserve Act of 1913. This Act resulted in the formation of the Federal Reserve System in the United States. According to me, the ideal role of the Federal Reserve System is to constantly develop and maintain a healthy and efficient monetary system, with its primary goal of maintaining stable prices and maximum employment. As of today, the Federal Reserve system is divided into four parts: a central authority network termed as the Board of Governors, a decentralized network of twelve Federal Reserve banks, the Federal Open Market Committee (FOMC) and the Federal Advisory Council (FAC).

Branches of The Federal Reserve System

The Board of Governors is the main governing body of the Federal Reserve System. The board comprises seven members. They are generally nominated by the President and are

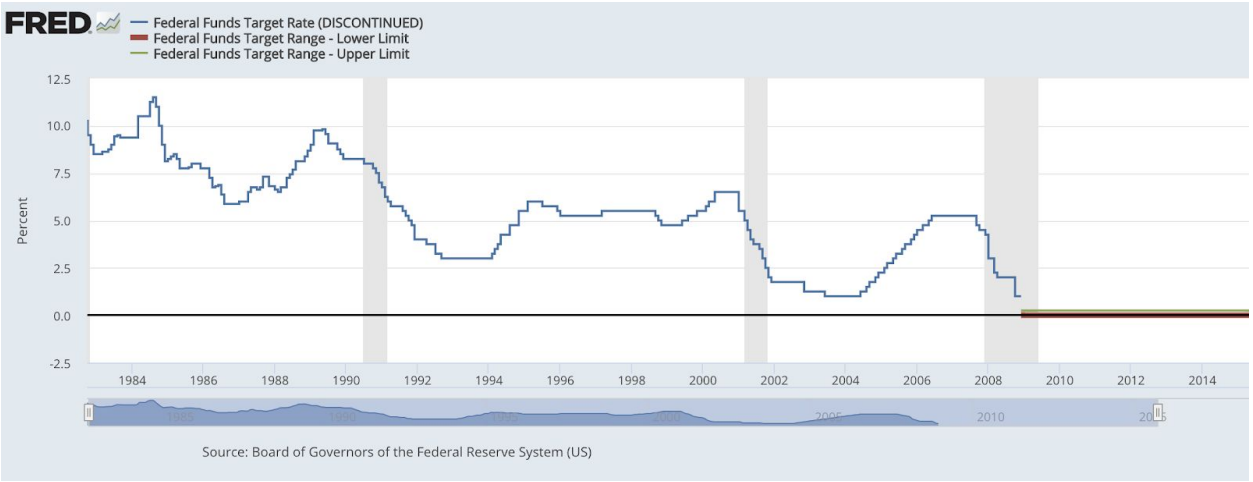
confirmed by the Senate, for a tenure of fourteen years. One term begins every two years, starting on February 1 of even-numbered years. A member who serves an entire tenure cannot get reappointed in the future. Also, a member who completes an unexpired portion of a term can get reappointed. All the terms end on their statutory date, regardless of the date on which the member is sworn in to their respective office. The Board's main aim is to analyze both the domestic and international economic developments and also to align the Federal Funds Rate with the target set up by the FOMC. The Board also supervises and regulates the operations of the Federal Reserve Banks. They are also responsible for our country's payments system and they generally overlook and administer most of the consumer credit protection laws of our country.

The twelve regional Federal Reserve Banks were established by Congress, as the operating arms of the nation's central banking system. They essentially carry out the regular, day to day operations like holding the cash reserves of depository institutions and setting the monetary policy. They move the currency and coin into and out of circulation and further, collect and process millions of checks each day. They provide checking accounts for the Treasury, issue and redeem government securities, and act in other ways as a fiscal agent for the Government. The Reserve Banks participate in literally all of the primary activities responsible for the functioning of the Federal Reserve System. Their board of directors come from various commercial financial organizations, which are also a member of the Fed, and also some certain and proficient individuals who represent each of their very own districts. Each President of these banks is appointed by the Board of Governors. Figure 1 shows the regions.

Figure 1: Regional Federal Reserve Banks

The Federal Open Market Committee (FOMC) is the Fed's monetary policymaking body. It consists of twelve members--the seven members of the Board of Governors of the Federal Reserve System; the president of the Federal Reserve Bank of New York; and four of the remaining eleven Reserve Bank presidents, who serve one-year terms on a rotating basis. It is very much responsible for open market operations. It is scheduled to meet several times a year to discuss whether to maintain or change any current economic policy. Generally, the FOMC sets the targeted Federal Funds Rate. Below is a graph depicting the Federal Funds Rate from the previous years.

Figure 2: Federal Funds Target Rate



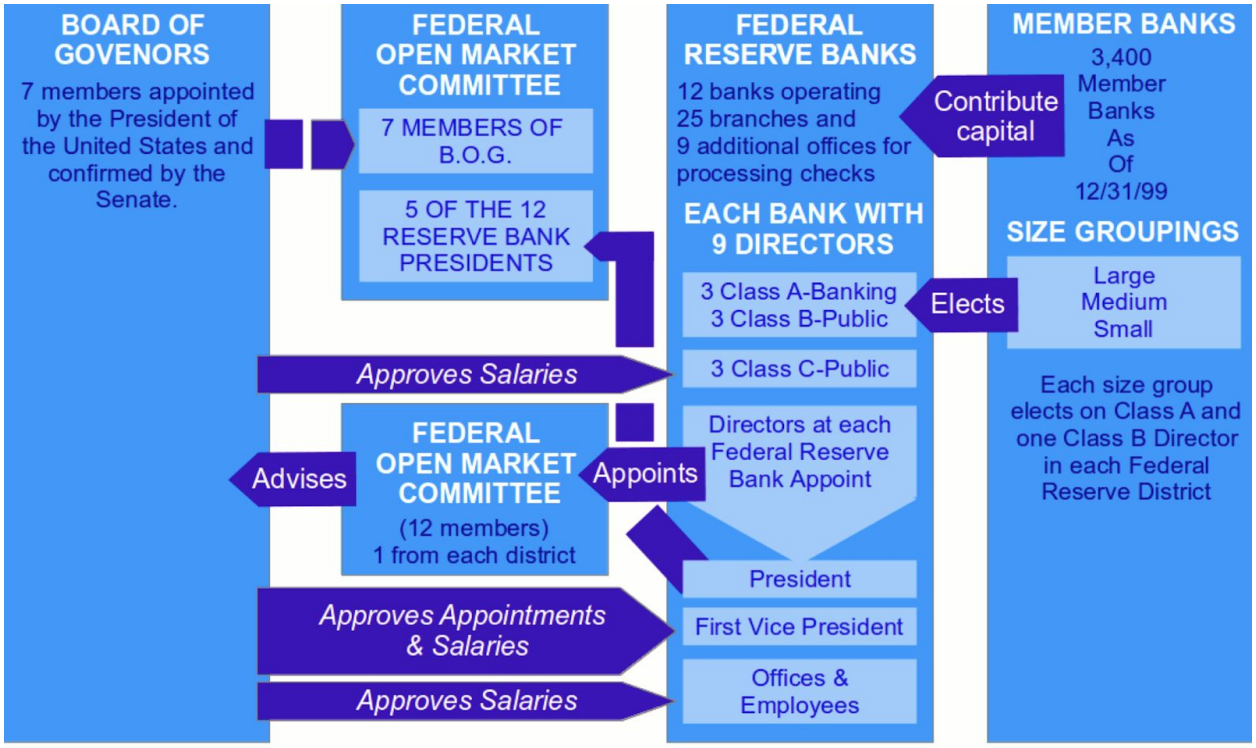
The Federal Advisory Council is an organization composed of the representatives elected by the twelve Federal Reserve Banks. Their aim is to deal with all the matters existing within the board's jurisdiction. The council and the Board of Governors discuss current financial and business conditions and make recommendations for potential policy changes. The council does research for the Board of Governors. The council doesn't have the authority to make policies, but its input and advice do influence matters that are within the Board of Governors' jurisdiction.

Modifications

To begin with, The Fed should possess certain independence as it will result in proper decision making, which is very much essential for the execution of monetary policy. But it also should be constantly regulated by the government. Transparency is vital in ensuring accountability to the public. And for the ideal structure, there are some amendments required in the election procedures. The power of electing individuals to these higher ranks shouldn't be all concentrated at one end only. The term of the Chairman should be conterminous with that of the President's tenure. There should be another district in the western region, to operate a branch of the Federal Reserve Bank like the one in San Francisco is governing the entire western region, even including the states of Alaska and Hawaii. Further, the Fed should develop some conditions to check how big companies and financial institutions adapt and are vulnerable to sudden funding shocks and liquidity shocks. They should further overlook all the assets and capital owned by the U.S branches of the foreign banks. The Fed is way too friendly with the big banks, and that should be seriously regulated. It might be because of the importance of these institutions towards the whole economy. These banks are literally classified as "too big to fail".

The Fed should try to act as ethically as possible, and it should also increase the reserve requirement ratio so that during the crisis, it can easily bail out the commercial banks in trouble.

Figure 3: The Federal Reserve System



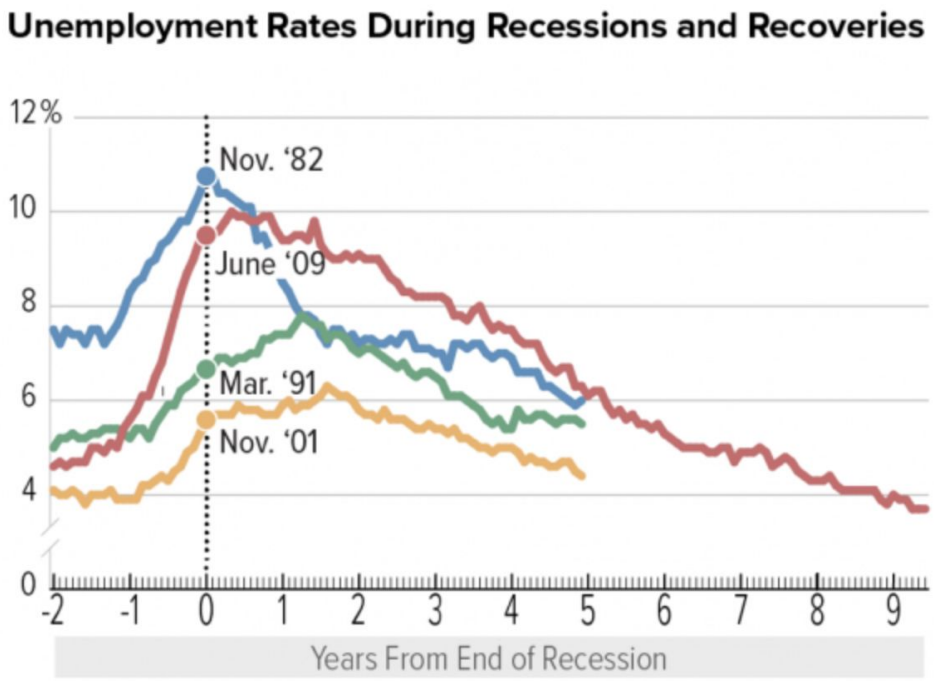
Source: Board of Governors of the Federal Reserve System

Conclusion

My main aim to write this article was to help in explaining the fundamental workings of an institution, as crucial as the Fed, whose decisions impact our daily lives to the very core. With all its arsenal, the Fed was able to combat the aftermath of the financial crisis of 2008. Great efficiency and proper decision making resulted in the lowering of the unemployment rate, which is at a low of around 3.6%. Meanwhile, the inflation rate is stable at around 1.8%. The Fed has more power and influence on financial markets than any other legislative entity. Today, the Fed's prime objective should always be to act ethically and try to steer the economy in the right direction. It should also try to reduce income inequality among the masses. Below are the graphs associated with the inflation rate and the unemployment rate, years from the end of the Recession.

Figure 4: Fed Mandate for Price Stability

Figure 5: Fed Mandate for Maximum Employment



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Decisions in the face of migrant stocks: A disaggregated aid analysis

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Abstract

Poor economic opportunity and stability has created migrant flows -- both forced and voluntary. Consequently, foreign development assistance is an increasingly popular solution to alleviating the increase in global migrant flows. There is no consensus on whether these policies are effective in curtailing migration. A majority of the economic studies that focus on the link between aid and migration use aggregated aid totals, hiding the fact that certain types of aid may be more effective than others. Throughout my paper, I build upon existing literature that explains the link between aid and migration by looking at disaggregated aid types. I examine disaggregated aid by looking at subcategories within aid types. For instance, one such subcategory is Education, which is a form of social infrastructure and services aids. Based on my analysis, Production and Economic sector aid seem to be the most effective in curtailing migration to destination countries. Social sector and Humanitarian aids have mixed effects on migration stock. The relationship of aid on migration can have varying results dependent any many factors such as time period, geopolitical results, origin and destination countries' characteristics. This paper examines how certain types of aid may change individuals' migration decisions.

Introduction

Global human migration has become a particularly salient issue. It was reported in 2017 that due to civil wars, climate change, and political instability, the number of refugees has increased to record highs (UNHCR 2017). The rise in migration has placed increasing pressure on destinations such as the European Union (EU), Japan and the United States to manage their migratory flows. Many see foreign development assistance as the solution to deter migration. The EU's new initiative to draw new private sector funds, in addition to existing public spending, to donate to origin countries to address the drivers of migration, such as poor economic opportunity (Bercetche 2018) is the most recent example of this.

The focus of this paper is on official development assistance (ODA). It is defined as "government aid designed to promote the economic development and welfare of developing countries." Loans and credits for military purposes are excluded (OECD 2018). Developed

countries have been using ODA to curtail migration. This policy tool is predicated on the belief that if developed countries can raise the quality of life of potential migrants in origin countries, then individuals will be less inclined to migrate. Beyond the capital allocation question of whether these billions of dollars in funds are effective, there lies a human motivation. Migration is not easy. Year-to-date in 2018, there have been 2,806 migrant fatalities due to the physical journey alone (International Organization for Migration 2018). Therefore, studying the effectiveness of developmental aid policies can help policy makers to direct funds more efficiently, and improve welfare on a global basis by reducing the percentage of people risking their lives and allowing for greater development in majority sending countries.

Literature review

The relationship between migration and foreign ODA has not been understudied. The existing literature suggests that aid's capacity to deter migration is small at best, and even shows that programs in formerly-poor countries have led to an increase in emigration. One way scholars look at the aid-migration link is through income and budgetary constraint effects. The income channel suggests that higher incomes, through developmental aid, will reduce emigration, since the opportunity cost of moving increases. The budgetary constraint channel builds off the fact that migration is costly and increased wealth from aid would decrease the relative cost of migrating and will encourage movement. Especially because many poor families view migration as an investment in their futures and an insurance policy against unexpected economic events at home and decrease in migration costs would make migration easier (Clemens and Postel 2018). Others point to a network effect resulting from bilateral aid relations, where the existence of aid decreases the information cost about potential destinations -- increasing migration to developed countries (Barthelemy et al. 2009). Studies like these, however, examine this relationship at an aggregate level – lumping all types of aid like humanitarian, social infrastructure, and debt forgiveness together.

The few disaggregated studies have shown a negative relationship between total aid received and migration rates. Studies have focused primarily on the impact of foreign health aid on the emigration rates of physicians (Moullan 2013) and agricultural aids' impact on urban and rural emigration (Gamso & Yuldashev 2018). The most recent study on the aid-migration builds on Barthelemy's gravity model using a disaggregated approach incorporating economic and social infrastructure ODA spending. The results point to "a robust negative relationship between aggregate aid received and emigration rates, which can be attributed to the dominance of the

public-services channel over the budgetary-constraint channel" (Lanati & Thiele 2018). Using the example of infrastructure aid, they explain the public services channel simply: better roads from ODA yield a positive externality of more foreign direct investment. As firms can use the roads for commercial purposes, more jobs can be created. This is evidence that local services are an important factor in developing migration decisions – even more than household wealth.

Based on these studies, there seems to be more to the story than what studies on aggregated development aid data and migration flow show. My analysis will examine the relationship between development aid and migration rates, as an extension of Lanati and Thiele's research. This will include ODA categories: Humanitarian Aid and Production Aid in addition to Social and Economic Infrastructure and Services from Lanati and Thiele's model. I also include subcategories of each category such as Education and Water Supply. The Action related to Debt, Program, Multisector and Other aid categories are left out, because these types of aid are case-by-case and difficult to incorporate such categories and interpret their results through the lens of my research question. This research aims to achieve greater clarity on how different types of developmental aid effect recipient countries' migration flows. I will be using an approach similar to Lanati and Thiele's gravity model to do my analysis.

Data

Below I describe the variables used in this analysis along with their sources and explanations of what each variable measures. To build my dataset, I merge 6 different datasets together, which are explained more in-depth below.

Table 1: Sectors and subsectors examined

- Economic infrastructure and services
  - Transport, communications
  - Energy
  - Banking, business and other services
- Humanitarian
- Production
  - Agriculture, forestry and fishing
  - Industry, mining and construction
  - Trade and tourism
- Social Infrastructure and services
  - Education
  - Water supply and sanitation

Table 2: Variable Sources and Notes

- Development Assistance Committee (DAC) bilateral aid: OECD. This dataset comes from the DAC, the world's richest donor countries from the OECD. The DAC is a forum within the OECD that promotes developmental aid cooperation and other policies to contribute to the Sustainable Development Goals. The countries in the DAC are 30 of the world's wealthiest donor countries in the OECD[2]. Member countries, per the OECD's criteria, need to have existing strategies, policies and institutional frameworks for development cooperation, a history of giving aid and systems that promote accountability for aid given. More importantly, the data are broken out into detailed categories. Data from the Query Wizard for International Statistics (QWIDS), which preselects a general aid dataset to use, are shown below. The query selected the biggest categories and a selection of their subcategories. For example, Education is under the Social Infrastructure and Services umbrella. There are more subcategories of aid, but the QWIDS query only included some selected subcategories. A comprehensive analysis on the remaining subcategories has potential for new research, which will be discussed in the *Further Thoughts* section of this paper. The data spans from 2007 to 2015 and includes only donor country data. Organizations like the UN or the Bill and Melinda Gates Foundation excluded. To merge this dataset with the others, I define the donor country as the destination and the recipient country as the origin country. Due to this definition, the recipients/origin countries are not DAC countries. DAC countries do offer aid to each other and there is a considerable amount of migration within this group of countries, but my dataset does not capture these migration stocks. Omitting this group of data should not sway the results, as the DAC countries are among the wealthiest in the world and often, the most politically stable.
- GDP per capita in 2011 PPP: World Bank. Purchasing power parity is a method of standardizing the cost of goods in each country. It is calculated by examining the price of a similar "basket of goods" and comparing that same basket to another country.
- Migrant Stock by Origin and Destination: UN. The United Nations' Population Division gathers data on the number of migrants in a given country. In some cases, due to missing data, they will project the number of migrants using trends. The UN defines an international migrant stock as people "born in a country other than that in which they reside." They compile these estimates every five years, so this dataset only has information on migrant stock by origin and destination at year 2010 and year 2015.
- Distance between origin and destination, Common language, Colonized by destination country: United States International Trade Commission. This dataset is from the United States International Trade Commission and describes characteristics and relationships between two countries.
- Free, Partly Free, Not Free Status: Freedom House. Freedom House is an independent organization, which is dedicated to the expansion of freedom and

[2] Note that there are fewer than 30 donor countries in this dataset, as some countries elect not to report these figures or only participate in other forms of aid types that are omitted here such as Multi Sector or Program aid.

democracy in the world. They analyze the state of political and civil rights around the world and designate scores to reflect the situation at a given country and construct three measures to score and rate countries and territories in the world to capture the extent of freedom. I use their Status variable, which is a composite of a country's political and civil rights scores. Status has three levels: Free, Partly Free and Not Free. For the purposes of this analysis, I make Status a binary variable in which Free and Partly Free are lumped together under "Free" denoted by 1 and countries that are classified as "Not Free" as denoted by 0.

- Conflict: Uppsala Conflict Data Program (UCDP). I use the UCDP/PRIO Armed Conflict Dataset. I use the incompatibility variable to capture the existence of conflict using a binary variable. An incompatibility is the use of armed force between two parties, with the government of a state being a counterparty, that results in at least 25 battle-related deaths in a calendar year. The existence of a conflict, as defined by UCDP/PRIO is denoted by 1 and no conflict is denoted by 0.

Table 3: Categorized Summary Statistics, by Period

Period 1

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
MigStock	3,235	55,535.210	403,251.200	1.000	495.000	20,630.000	12,168,662.000
distance	3,990	7,339.731	3,546.232	345.373	4,589.460	9,618.853	18,708.700
lnGDPperCap_o	3,904	8.430	0.952	6.487	7.594	9.206	10.728
lnGDPperCap_d	3,990	10.645	0.215	10.194	10.501	10.717	11.491
Bilateral	3,990	48.962	185.723	0.000	1.200	29.457	4,077.910
Economic Infrastructure & Services	821	13.910	104.659	0.000	0.020	2.040	2,387.990
Humanitarian	699	6.293	30.301	0.000	0.130	2.840	446.460
Production Sector	823	3.786	15.218	0.000	0.070	2.195	254.710
Social Infrastructure & Services	1,504	16.366	80.846	0.000	0.140	7.110	1,625.090

Period 2

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
MigStock	3,883	62,699.470	433,066.100	1.000	567.500	21,894.000	12,275,876.000
distance	4,836	7,346.041	3,601.207	345.373	4,582.014	9,737.048	18,708.700
lnGDPperCap_o	16,560	9.025	1.165	6.326	8.107	9.864	11.815
lnGDPperCap_d	8,258	9.992	1.088	6.326	9.469	10.682	11.815
Bilateral	28,084	53.251	185.240	0.000	1.103	33.245	4,862.170
Economic Infrastructure & Services	913	16.361	104.482	0.000	0.010	2.100	2,364.600
Humanitarian	882	7.634	35.289	0.000	0.070	3.558	768.230
Production Sector	1,031	4.643	26.046	0.000	0.050	2.390	642.280
Social Infrastructure & Services	1,916	15.209	73.499	0.000	0.120	7.565	1,865.410

Table 4: Uncategorized Summary Statistics, by Period

Period 1

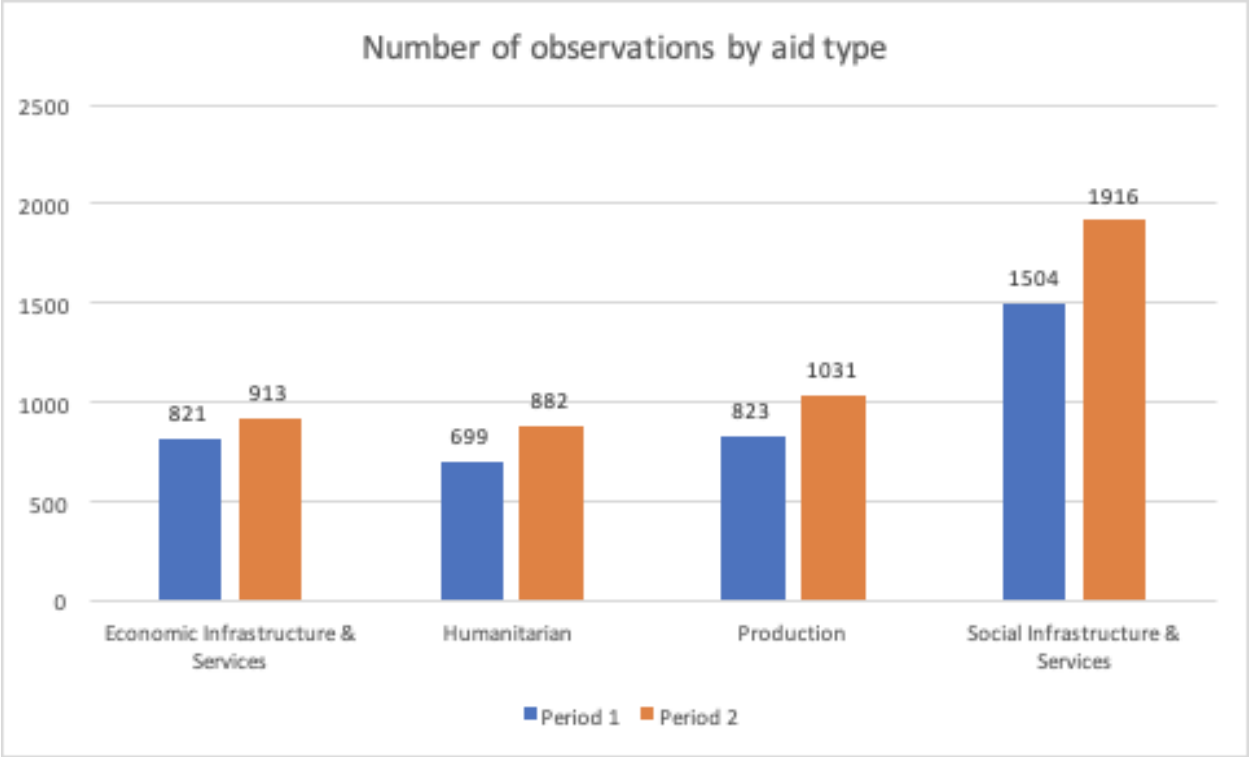
Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
MigStock	9,019	67,395.620	385,492.900	1.000	757.000	31,296.000	12,168,662.000
distance	11,582	7,421.602	3,544.230	345.373	4,666.997	9,845.781	18,215.300
lnGDPperCap_o	11,317	8.233	0.932	6.515	7.386	8.981	10.728
lnGDPperCap_d	11,582	10.610	0.188	10.194	10.497	10.677	11.461
Bilateral	11,582	77.600	243.546	0.000	3.493	55.590	4,077.910
Agriculture, Forestry & Fishing	1,981	4.215	20.074	0.000	0.050	2.020	404.190
Education	3,046	4.907	18.795	0.000	0.060	2.450	307.120
Energy	1,044	9.810	48.366	0.000	0.010	1.320	813.400
Food	615	4.027	7.798	0.000	0.060	4.450	68.460
Industry, Mining and Construction	1,207	1.980	22.074	0.000	0.010	0.520	678.770
Trade & Tourism	957	0.679	3.227	0.000	0.010	0.320	77.080
Transport & Communications	1,149	11.225	57.157	0.000	0.000	0.670	829.650
Water Supply & Sanitation	1,583	5.819	27.407	0.000	0.010	1.320	470.850

Period 2

Statistic	N	Mean	St. Dev.	Min	Pctl(25)	Pctl(75)	Max
MigStock	19,856	91,270.390	599,836.300	1.000	940.000	38,756.000	12,275,876.000
distance	25,720	7,380.477	3,514.563	345.373	4,688.914	9,739.940	19,314.750
lnGDPperCap_o	37,019	8.749	1.064	6.326	7.879	9.513	11.815
lnGDPperCap_d	29,142	10.439	0.667	6.326	10.485	10.696	11.815
Bilateral	44,524	50.761	185.575	0.000	0.510	28.980	4,862.170
Agriculture, Forestry & Fishing	4,403	3.489	12.815	0.000	0.040	1.950	285.860
Education	7,350	4.045	15.971	0.000	0.050	1.990	485.590
Energy	2,418	12.559	63.122	0.000	0.000	1.320	919.590
Food	888	3.720	7.958	0.000	0.060	3.893	94.520
Industry, Mining and Construction	2,758	1.780	16.226	0.000	0.010	0.530	566.820
Trade & Tourism	2,029	0.813	3.314	0.000	0.010	0.320	70.090
Transport & Communications	2,422	12.749	99.906	0.000	0.000	0.610	2,861.340
Water Supply & Sanitation	3,452	5.571	31.167	0.000	0.010	1.240	900.100

From the summary statistics, I observe that the dataset used for Period 1 (2007 - 2010) has a total of 3,990 number of observations with 23 OECD destination countries and 124 origin countries. Period 2 (2011 - 2015) dataset has 3,698 number of observations using 81 countries' data with the categorized aid types (Categorized Summary Statistics). When looking at the data in its selected subcategories or the uncategorized analysis, there is a total of 9,019 observations and the same number of OECD destination and origin countries in Period 1. Period 2 has 19,856 observations in uncategorized analysis (Uncategorized Summary Statistics). In my dataset, there is missing data due to unavailability or conditions that may not apply to the specific country-year-aid pair. In the regressions, I omit the missing data. The data covers three years using the 2010 estimate of migrant stock. This way, I can look at the effects of the various types of aid over a course of three years. The standard deviations of Bilateral Aid and all the aid types (Energy, Food Aid, Industry, Mining and Construction, Trade and Tourism, Transport and Communications and Water Supply and Sanitation) are very high due to the highly variable nature of aid that is dependent on relations between the destination and origin country like distance, migrant stock and population (Gurevich and Herman 2018). Overall, migrant stock is higher in all countries in the second period, which is consistent with the increasing pace of migration globally. There is a considerable amount of focus, measured by number of observations, on Social Infrastructure and Services Aid in both periods. The remaining categories have roughly similar observations.

Figure 1: Number of observations by aid type



The following maps show the top donor countries in this dataset which are the United States, Japan and the United Kingdom. Bilateral aid is a summation of the years covered in each period. The darker the shading, the more bilateral aid donated. The top donors are unchanged over the two periods.

Figure 2: Map of Top Donor Countries, Period 1 (2007-2010)

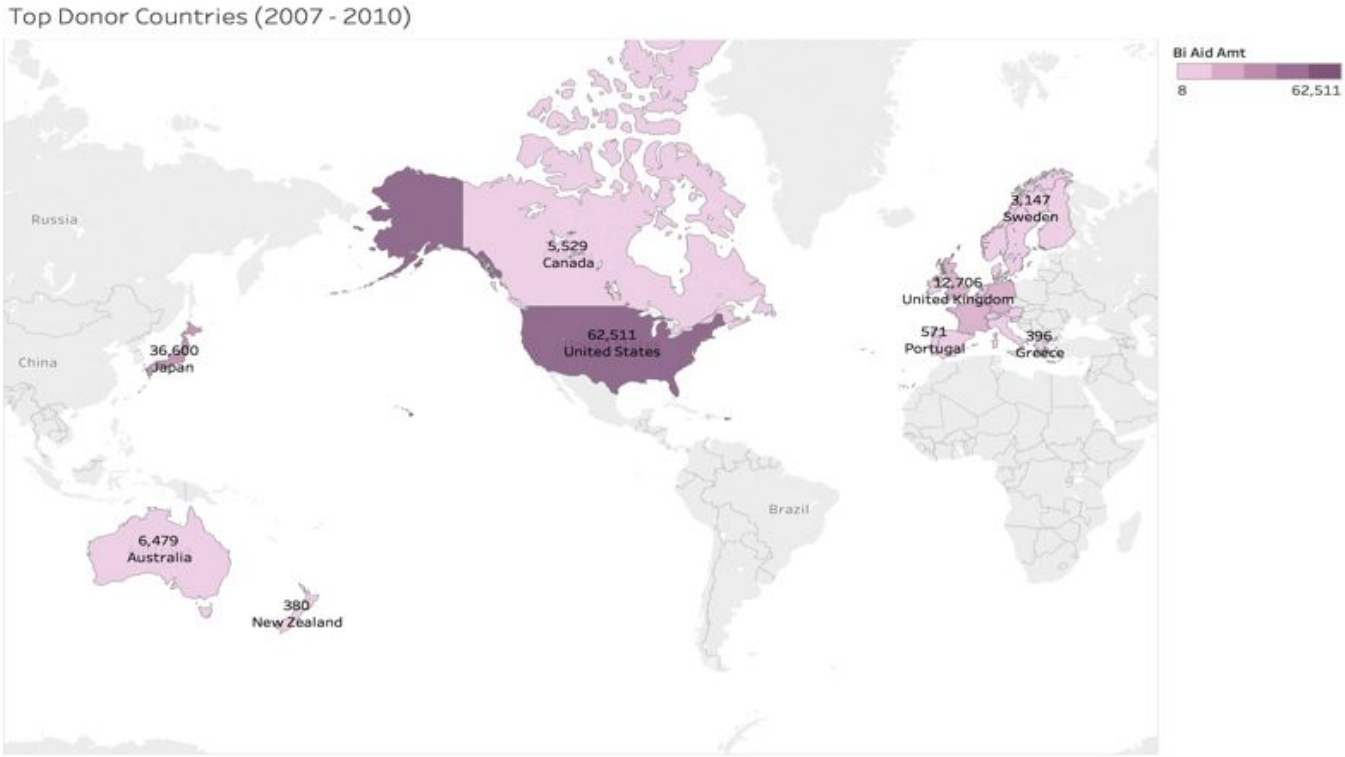


Figure 3: Map of Top Donor Countries, Period 2 (2011-2015)

The following data visualizations provide a more detailed look into the amount of aid received in a specific year during each given time period. Notably, Afghanistan and Iraq show up most frequently in the period from 2007 to 2010. In the second period (2011 to 2015), there does not appear to be any trend in which countries appear in the top 30 recipients by aid type each year. This could be due to factors such as geopolitical events such as Sudan and South Sudan splitting into two countries in 2013 (CIA 2018) and the Crimean Peninsula being annexed from Ukraine by the Russian Federation in 2014 (Treisman 2016).

Figure 4: Top Recipients by Aid Type and Amount

Top 30 Recipients by Aid Type (2007 - 2010)

Gravity Model

I use a gravity model to determine the relationship between migration and development aid. The gravity model looks at the interaction between migration flow and its drivers, in this case, the types of developmental aid. The gravity model is the best choice for this analysis, because the OECD developmental finance dataset reports bilateral net aid, and gravity models can incorporate paired country time and fixed effects into a regression. The time effects will be particularly helpful in this instance because amounts of bilateral aid vary over time as countries' situations change. I estimate the following model:

$$\begin{aligned}\ln Migrant\ Stock_{i,j,t} = {} & \beta_1 \ln\left(GDP\ per\ Capita_{i,t}\right) + \beta_2 \ln\left(GDP\ per\ Capita_{j,t}\right) \\ & + \beta_3\ Conflict_{i,t} + \beta_4\ Free_{i,t} + \beta_5 \ln(Distance)_{i,j} + \beta_6\ Landlocked_i \\ & + \beta_7\ Common\ Language_{i,j} + \beta_8\ i\ Former\ Colony\ of\ j_{i,j} \\ & + \beta_9 \ln(1 + Bilateral\ Aid)_{j\to i,t} + \beta_{10} \ln(1 + Aid\ Type)_{j\to i,t} \\ & + \delta_i + \delta_j + \delta_t + \varepsilon_{i,j,t}\end{aligned}$$

Continuous variables are expressed using natural log to allow for interpretation of the results as percent changes from proportional movements in the explanatory variables (World Bank 2018). The dependent variable is the migrant stock that originated in country i and is resident in country j at time t. I use migrant stock instead of migrant flow, because I can control the unique characteristics of specific time periods, destination and origin. Migrant flow measures the number of individuals entering/leaving a country during a specific period, whereas migrant stock captures the number of migrants at a given point in time. The research question is whether aid is effective in reducing the drivers of migration, but the decision to migrate depends on time, origin and available destination countries. Using migrant flow would wash out these variables in this analysis. This migrant stock data has only 2010 and 2015 estimates and the OECD's aid data covers 2007 to 2015. To extract the most data and acknowledge that some time is needed to see aid's effects, I split the aid data into two periods: 2007 to 2010 and 2011 to 2015 and use corresponding migrant stock from 2010 and 2015 from the UN as the dependent variable. The time periods are unfortunately unevenly split with period 1 having 3

years while period 2 has 4 years. Thus, the time periods are not meant for comparison, but rather additional information to look at the aid-migration link in two time periods.

To control for each years' unique characteristics within each time period such as the presence of more conflict or uneven crop yields, I added a fixed effect δ_t to control for this. I also use fixed effects with origin δ_i and destination δ_j. I add to my regression equation to capture the network effects derived from bilateral aid from one country to another. We add $\ln(1 + Bilateral\ Aid_{j \to i,t})$ to our regression equation to capture the network effects derived from bilateral aid. The terms $\ln(1 + GDP\ per\ Capita_{i,t})$ and $\ln(1 + GDP\ per\ Capita_{j,t})$ are added to reflect the abundant literature which says economic potential is a key driver of migration. GDP per capita is a proxy for potential wages migrants may earn at the destination country and reflects the economic condition of countries. I add a constant of 1 to GDP per Capita, Bilateral Aid and Aid type[3] to work around the small values of these variables which would turn negative when the log is taken. These aid amounts are expressed in 2016 constant USD millions, so a constant of 1 will affect the results negligibly. I also separate my analysis into the categorized aid groups and selected subcategories within the larger category to further examine the differences between aid types. In addition to the aid type as a regressor, I add traditional variables of a gravity model such as distance between countries, the status of political and civil freedoms in a country and dummy variables to capture the following: conflict, landlocked, commonality in language and colonial history to determine the pull factors of migration. These variables have been shown to be strong determinants of migration. This is further evidenced by the regression tables below that show a strong statistical significance of these variables in predicting migration flows.

I use a quasi-poisson model with a log link or Poisson Pseudo Maximum Likelihood (PPML) model. I use PPML as opposed to an ordinary least square model (OLS), based on evidence that OLS overestimates many determinants of migration such as geographic distance between countries (Silva and Tenreyro 2006). OLS exhibits this behavior because migration data often has unequal variability across the range of variables of the predictors. Migration patterns are dependent on many factors and it is often the case that there is zero migration between a specific country pair.

[3] Note that Aid is multiplied by a million to convert it to millions for an apples-to-apples comparison with the rest of aid and population statistics

Regression Results

Bilateral Aid

I ran a regression with the total amount of bilateral aid an origin country receives as a baseline. In this analysis, bilateral aid is the total amount of aid that an origin country receives from all of the OECD countries combined. The results reaffirm the literature's consensus that aid, as a whole, increases migration. In 2007 to 2010, the model estimates that every one percent increase in total aid received results in a 0.106 percent change in migrant stock. The small coefficient confirms that there is an indirect link between aid and migration. From the time period 2011 to 2015, the relationship is the same with a slightly larger magnitude of 0.173. This positive relationship between migrant stock, as a dependent variable, and bilateral aid given is also seen in Barthelemy et al.'s paper in 2009, however their results show a larger coefficient of 0.31. The larger coefficient is due to a different methodology: they separate the data into different country income groups and use a three-stage least squares model using two equations describing wage differentials and one regarding the cost of migration.

Social Infrastructure and Services

The analysis of both periods show that Social Infrastructure and Services aid is not statistically significant. The subcategory data, however, show that there are aid types that fall under Social Infrastructure and Services that are statistically significant. From 2007 to 2010, Education aid is not statistically significant, but Water exhibits a statistically significant negative relationship with a coefficient of 0.014 with migrant stock. From 2011 to 2015, both Education and Water have negative relationships with migrant stock. Holding all other variables constant, a one percent increase in Education aid, on average, would decrease migrant stock by 0.019 percent. For Water aid, a one percent increase in aid would decrease migrant stock by 0.012 percent. Lanati and Thiele's paper argues that better public services may outweigh aid's reduction of migration costs, decreasing migration from the origin country. My analysis shows that this may not be the case, or at least aid directed at building public services has varying impacts. This provides us with mixed initial results of the relationship between public services aid and migrant stock.

Humanitarian Aid

I was curious whether the presence of humanitarian aid in conflict situations makes an impact. In period 1, humanitarian aid and the interaction of conflict and humanitarian aid were not statistically significant. In period 2, both are statistically significant, but show different relationships with migrant stock. Humanitarian aid in a conflict zone increases migrant stock in destination countries by 0.094 percent given a one percent increase in aid. In conflict zones, which are defined to have more than 25 battleground deaths and the state is a counterparty, it decreases migration by 0.092 percent — an opposite effect. In period 1, there were 1773 conflicts during this period, whereas in period 2, there were 361 conflicts. Donor countries gave a total of $4.4 bn of humanitarian aid in period 1, whereas in period 2 they gave $6.6 bn of aid and there were less conflicts. Just an indicator, assuming donors only gave humanitarian aid to conflict zones and donated aid evenly, in period 1 each conflict received roughly $2.48m in aid whereas in period 2 each conflict received almost $18.31mm in aid. Of course, equal distribution of aid is an oversimplifying assumption to have and this does not reflect the severity of conflict, but the existence of conflict. I suspect the differences in geopolitical events in these two periods may explain the relationships but cannot conclude from this data analysis. I suspect that humanitarian aid reduces the cost of migration in non-monetary ways and increases migration. Figure 1 shows that refugees, the subset of migrants that receive the most humanitarian aid, move the least distances to destination countries. Their needs and preferences are more about safety than economic opportunity, unlike high-skilled emigrants (World Bank 2018).

Humanitarian aid like food, emergency response and reconstruction relief decreases the short-term cost of rebuilding after conflict and reduces the cost of migration. In other words, if migrants are provided with basic services and care during instability, then they can pursue safety and a better life elsewhere. In connection with this finding, food aid is estimated to be statistically significant and inversely related to migrant stock in period 1 -- further supporting the hypothesis that aid decreases the cost of migration. In period 2, however, food aid is not statistically significant. This shows that aid can have differing effects on migration depending on factors like time, origin, destination and other factors that may not be shown in my analysis.

Economic Infrastructure and Services

I will discuss Economic and Production Aid together. This is often done when analyzing aid data because these two categories of aid are usually given to well-governed origin countries

(Akramov 2012). In the first period, both Economic and Production sector aid show a negative relationship with migrant stock. A one percent increase in Economic or Production aid, on average, all else held constant, will yield an approximately 0.04 percent decrease in migrant stock. The subcategories in period one loosely affirm this effect as both Transport and Communications and Agriculture, Forestry and Fishery aid show a negative relationship with coefficients of 0.012 and 0.038 respectively. These results are in line with the majority of empirical work that determine that economic opportunity is a large driver of migration (World Bank). Opportunity of more economic activity in origin countries may change individuals' inclinations to migration.

In period 2, both Economic and Production Sector aid are not statistically significant. The majority of sub-categories with the exception of agriculture, forestry and mining aid shows no statistically significance. Agriculture, forestry and mining aid depicts an opposite relationship than expressed in period 1. As this aid type increases by one percent, my model estimates that migrant stock in destination countries increases 0.012 percent, holding all else constant. This estimate of a positive relationship between migrant stock shows an alternative hypothesis. Instead of a decrease in migration when economic opportunities are better at home, individuals may choose to migrate due to a relative decrease in migration cost to find better wages elsewhere. This scenario is what the majority of economists agree with, including Clemens and Postel.

Lanati and Thiele use a similar three stage least squares model as Barthelemy et al. in 2009, but use migrant flow as the dependent variable instead. They find a general negative relationship between emigration rates and each type of aid: Social, Economic and Production with coefficients of -0.119, -0.046, -0.065 respectively. This is not exactly an apples to apples comparison, but the differences estimate the relationship between aid and migration. In my analysis, Economic and Production aid also exhibit a negative relationship with migration, however Social aid's impact is not statistically significant in both periods. In the subcategories of each category, the negative relationship is clearer, as discussed above. The amount of variability explained in their model is very close to mine, at around 90 percent of variability explained. They use residuals squared (r-squared) values to describe the variability explained, while I use deviance squared (d-squared), but the interpretations are the same.

Table 5: Categorized Period 1 Regression Results

	Dependent variable:				
	MigStock				
	(1)	(2)	(3)	(4)	(5)
lnGDPperCap_d	−0.528	−1.147	6.716	−8.543	49.957***
	(2.766)	(5.279)	(6.805)	(7.264)	(10.839)
lnGDPperCap_o	−1.303	−4.816***	−1.882	3.346	−5.115**
	(0.793)	(1.665)	(2.141)	(2.115)	(2.332)
log(distance)	−1.424***	−1.478***	−1.546***	−0.951***	−1.711***
	(0.071)	(0.131)	(0.183)	(0.171)	(0.176)
factor(common_language)1	1.095***	1.061***	1.571***	1.678***	1.294***
	(0.084)	(0.143)	(0.194)	(0.214)	(0.232)
factor(Conflict_1)1	0.138	0.332	0.245	−0.784***	0.518
	(0.114)	(0.244)	(0.967)	(0.302)	(0.347)
log(Humanitarian Aid):factor(Conflict_1)1			−0.015		
			(0.058)		
factor(colony_of_destination_ever)1	1.369***	1.932***	1.036***	1.206***	0.813**
	(0.096)	(0.188)	(0.300)	(0.235)	(0.338)
factor(Free)1	0.173	−0.262	0.295	0.744	0.466
	(0.550)	(0.986)	(1.463)	(2.259)	(1.214)
log(Bilateral Aid)	0.106***	0.005	−0.039	0.233***	0.130**
	(0.019)	(0.049)	(0.045)	(0.064)	(0.051)
log(Social Infrastructure & Services Aid)		0.060			
		(0.042)			
log(Humanitarian Aid)			−0.050***		
			(0.014)		
log(Economic Infrastructure & Services Aid)				−0.045***	
				(0.017)	
log(Production Sector Aid)					−0.043**
					(0.018)
Constant	35.733	70.127	−32.636	81.273	−470.645***
	(29.570)	(54.915)	(74.489)	(77.673)	(118.482)
Observations	1,774	638	344	368	366
D squared	0.858	0.895	0.907	0.949	0.906
Adj D squared	0.849	0.854	0.888	0.929	0.870
Time fixed effects	YES	YES	YES	YES	YES
Country fixed effects	YES	YES	YES	YES	YES
Note:			*p<0.1; **p<0.05; ***p<0.01		

Table 6: Uncategorized Period 1 Regression Results

	Dependent variable:							
	MigStock							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
lnGDPperCap_d	−0.528	−1.822	−3.511	−2.276	3.463	−4.854	0.245	−1.047
	(2.766)	(1.945)	(3.071)	(2.678)	(4.269)	(4.572)	(3.423)	(2.370)
lnGDPperCap_o	−1.303	0.656	0.347	0.692	0.336	0.277	2.132**	0.0004
	(0.793)	(0.623)	(0.793)	(0.778)	(0.928)	(0.843)	(0.875)	(0.673)
log(distance)	−1.424***	−1.515***	−1.542***	−1.646***	−1.569***	−1.618***	−1.505***	−1.454***
	(0.071)	(0.061)	(0.083)	(0.084)	(0.087)	(0.119)	(0.091)	(0.065)
factor(common_language)1	1.095***	1.157***	1.276***	1.133***	0.959***	1.330***	1.157***	1.052***
	(0.084)	(0.071)	(0.097)	(0.100)	(0.124)	(0.111)	(0.110)	(0.079)
factor(Conflict_1)1	0.138	0.004	0.048	−0.015	0.079	0.039	0.033	0.069
	(0.114)	(0.079)	(0.100)	(0.101)	(0.120)	(0.108)	(0.111)	(0.086)
factor(colony_of_destination_ever)1	1.369***	1.183***	1.096***	1.148***	1.601***	0.513***	1.481***	1.269***
	(0.096)	(0.082)	(0.113)	(0.110)	(0.140)	(0.121)	(0.129)	(0.092)
factor(Free)1	0.173	0.058	−0.052	−0.217	−0.010	0.099	0.002	0.083
	(0.550)	(0.432)	(0.532)	(0.891)	(0.880)	(0.887)	(0.649)	(0.516)
log(Bilateral Aid)	0.106***	0.157***	0.158***	0.122***	−0.031	0.049**	0.154***	0.137***
	(0.019)	(0.018)	(0.024)	(0.025)	(0.030)	(0.024)	(0.027)	(0.021)
log(Education Aid)		0.016*						
		(0.009)						
log(Water Supply & Sanitation Aid)			−0.014***					
			(0.005)					
log(Transport & Communications Aid)				−0.012**				
				(0.005)				
log(Trade & Tourism Aid)					−0.005			
					(0.008)			
log(Food Aid)						−0.019**		
						(0.008)		
log(Industry, Mining and Construction Aid)							−0.009	
							(0.006)	
log(Agriculture, Forestry & Fishing Aid)								−0.030***
								(0.005)
Constant	35.733	34.497*	55.223*	41.148	−14.768	73.024	2.062	31.650
	(29.570)	(20.834)	(32.422)	(28.456)	(45.178)	(49.961)	(36.212)	(25.610)
Observations	1,774	2,381	1,215	857	668	446	913	1,526
D squared	0.858	0.890	0.915	0.923	0.915	0.952	0.905	0.905
Adj D squared	0.849	0.884	0.907	0.912	0.901	0.941	0.893	0.897
Time fixed effects	YES	YES	YES	YES	YES	YES	YES	YES
Country fixed effects	YES	YES	YES	YES	YES	YES	YES	YES
Note:								*p<0.1; **p<0.05; ***p<0.01

Table 7: Categorized Period 2 Regression Results

	Dependent variable:				
			MigStock		
	(1)	(2)	(3)	(4)	(5)
lnGDPperCap_d	−0.671	4.115*	−2.169	−9.537**	−2.621
	(1.216)	(2.457)	(3.569)	(4.069)	(4.602)
lnGDPperCap_o	1.567***	−0.787	7.031***	1.455	−0.425
	(0.459)	(1.039)	(1.429)	(1.686)	(1.428)
log(distance)	−1.454***	−1.381***	−1.240***	−1.445***	−1.446***
	(0.047)	(0.094)	(0.116)	(0.114)	(0.115)
factor(common_language)1	1.159***	1.110***	1.110***	1.431***	1.273***
	(0.063)	(0.122)	(0.164)	(0.158)	(0.151)
factor(Conflict_1)1				0.368	0.039
				(0.649)	(0.586)
log(Humanitarian Aid):factor(Conflict_1)1			−0.092***		
			(0.026)		
factor(colony_of_destination_ever)1	1.116***	1.450***	0.741***	0.940***	0.963***
	(0.075)	(0.142)	(0.177)	(0.184)	(0.174)
factor(Free)1	−0.388**	−0.490	−0.716	−0.343	−0.750
	(0.192)	(0.464)	(0.572)	(0.446)	(0.475)
log(Bilateral)	0.173***	0.137***	0.288***	0.229***	0.190***
	(0.015)	(0.043)	(0.048)	(0.044)	(0.047)
log(Social Infrastructure & Services)		0.060*			
		(0.035)			
log(Humanitarian Aid)			0.094***		
			(0.020)		
log(Economic Infrastructure & Services)				0.007	
				(0.012)	
log(Production Sector Aid)					−0.009
					(0.012)
Constant	14.989	−19.360	−13.877	108.581**	50.297
	(13.264)	(26.459)	(37.525)	(41.975)	(49.680)
Observations	2,832	1,104	564	522	583
D squared	0.926	0.922	0.959	0.929	0.936
Adj D squared	0.923	0.913	0.949	0.913	0.919
Time fixed effects	YES	YES	YES	YES	YES
Country fixed effects	YES	YES	YES	YES	YES
Note:					*p<0.1; **p<0.05; ***p<0.01

Table 8: Uncategorized Period 2 Regression Results

	Dependent variable:							
	MigStock							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
lnGDPperCap_d	-0.671	-1.286	0.802	-1.528	2.226	-1.227	-3.873***	-0.409
	(1.216)	(0.850)	(1.151)	(1.416)	(2.037)	(1.959)	(1.442)	(0.994)
lnGDPperCap_o	1.567***	0.590*	0.785*	1.236**	0.280	0.645	0.666	0.772*
	(0.459)	(0.336)	(0.442)	(0.576)	(0.560)	(0.658)	(0.528)	(0.402)
log(distance)	-1.454***	-1.544***	-1.566***	-1.881***	-1.686***	-1.411***	-1.599***	-1.547***
	(0.047)	(0.041)	(0.053)	(0.067)	(0.071)	(0.085)	(0.062)	(0.044)
factor(common_language)1	1.159***	1.218***	1.109***	1.201***	1.053***	1.104***	1.353***	1.121***
	(0.063)	(0.050)	(0.065)	(0.086)	(0.095)	(0.105)	(0.082)	(0.055)
factor(Conflict_1)1		0.074	0.122	0.113	0.922**	0.590***	1.108***	0.445**
		(0.241)	(0.244)	(0.371)	(0.379)	(0.209)	(0.310)	(0.216)
factor(colony_of_destination_ever)1	1.116***	1.253***	1.335***	1.316***	1.141***	0.729***	1.370***	1.228***
	(0.075)	(0.061)	(0.076)	(0.103)	(0.106)	(0.137)	(0.092)	(0.066)
factor(Free)1	-0.388**	-0.016	-0.181	-0.067	-0.064	-0.128	-0.101	-0.026
	(0.192)	(0.165)	(0.207)	(0.249)	(0.255)	(0.229)	(0.265)	(0.181)
log(Bilateral)	0.173***	0.191***	0.170***	0.100***	0.137***	0.107***	0.105***	0.130***
	(0.015)	(0.013)	(0.016)	(0.021)	(0.025)	(0.034)	(0.020)	(0.016)
log(Education)		-0.018***						
		(0.005)						
log(Water supply and santitation))			-0.009***					
			(0.004)					
log(Transport & Communications)				-0.008				
				(0.005)				
log(Trade & Tourism)					-0.006			
					(0.006)			
log(Food Aid)						-0.001		
						(0.006)		
log(Industry, mining and construction)							-0.006	
							(0.005)	
log(Agriculture, forestry and fishing)								0.012***
								(0.004)
Constant	14.989	29.423***	6.110	31.575**	-4.379	28.229	57.425***	19.117*
	(13.264)	(9.327)	(12.475)	(14.915)	(22.060)	(20.980)	(15.903)	(11.043)
Observations	2,832	4,195	1,926	1,249	965	565	1,509	2,503
D squared	0.926	0.938	0.929	0.945	0.955	0.941	0.937	0.921
Adj D squared	0.923	0.847	0.883	0.891	0.941	0.925	0.901	0.893
Time fixed effects	YES	YES	YES	YES	YES	YES	YES	YES
Country fixed effects	YES	YES	YES	YES	YES	YES	YES	YES

Note: *p<0.1; **p<0.05; ***p<0.01

Discussion of Endogeneity

A key assumption in this paper is that aid is given by donor countries completely exogenously, implying that there is nothing that origin countries can do to receive more aid. Immigrants in destination countries can lobby their governments to give out more aid in their origin countries. This presents a reverse causality problem where large migrant stock can actually increase foreign development aid, as opposed to developmental aid increasing migrant stock. My analysis does not control for this, so the results of the analysis may overstate the magnitude of migrant stock in destination countries. Another source of endogeneity are the omitted variables that are related to the error term. My analysis also assumes that the OECD countries allocate aid in countries and sectors where it is most needed. This is not necessarily the case as aid is often used as a foreign policy tool. The underlying incentives of the aid given is an omitted variable and one that is hard to measure. This creates a bias in my analysis by understating the relationship between migration and aid because the allocation of aid is imperfect.

Conclusion

My paper investigates a sample of the disaggregated data on developmental aid from the DAC countries. Adding all of the subcategories to the data analysis may give a better picture of how specific types of aid may change individuals' decisions to migrate. Notice that some of the results in the Categorized and Uncategorized regressions are inconsistent. For example, in period 2, Social Infrastructure and Services aid is not statistically significant. However, its subcategories, Education and Water, depict a statistically significant negative relationship with migrant stock. The incorporation of more subcategories say, Healthcare, may provide more evidence about the most effective types of aid in this category.

My analysis looks at potential factors which can be effective in promoting welfare in origin countries in curtailing migration over many countries and aid types but does not offer evidence on how to tailor solutions to specific situations, an area where more work can be done. A theme throughout my analysis is the heterogeneous nature of aid. All aid does not work the same way in all countries and aid does not necessarily always improve the quality of life in origin countries. An interesting extension of this research could be to continue to investigate specific sectors in the context of geographic regions.

Another avenue of research is examining production and economic sectors more in-depth. These two aid types are similar in that they are often distributed to middle income

countries. The hypothesis being that perhaps aid cannot help low income countries in the long run, but maybe middle-income countries can use aid to stimulate growth and decrease migration.

The effectiveness of recent policies to manage migration flows has been debated and my paper aimed to explore disaggregated aid further in relation to migration. Social aid effectiveness on curtailing migration was mixed in this analysis. The results show only Water aid decreases migration stocks in destination countries, as Lanati and Thiele predicted. Further an investigation into public services should be done, as there seems to be high variability in the social infrastructure and services category. Production and Economic sector aid are estimated to be the best at reducing migration stocks, but the effects seem varied. These two types of aid are often deployed to well-governed origin countries , so the aid may be deployed more effectively. They also directly contribute to economic opportunity in origin countries, tackling one of the main drivers of aid. Humanitarian aid appears to most frequently have a positive effect on migration stock in destination countries and, in one case, does not have a statistically significant effect. This paper has shown the potential for more research into the aid and migration link, especially at the disaggregated level in shaping migration policy decisions.

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