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# The United States as a Driving Force in Global Economic Recovery: Living Within a Window of Transnational Solidarity During the Great Depression

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The United States as a Driving Force in Global  
Economic Recovery:  
Living Within a Window of Transnational  
Solidarity During the Great Depression

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In 1944, a Brazilian official travelled over 4,250 miles from his home country to the rugged mountains of Eastern Tennessee. The foreign delegate was Dr. Apolonia Sales, Brazilian Minister of Agriculture, whom headed a department charged with the responsibility of encouraging policymakers to promote Brazil's economically essential agricultural production. The Brazilian Minister made the long journey to Tennessee out of industrial and agricultural interests, travelling in order to witness first-hand what he had only been told about: the impressive Tennessee Valley Authority (TVA) agency. The foreign minister of agriculture had heard of the enormous scale of the agency, what it had accomplished throughout the Great Depression, and had begun to take great interest in the agency and how its basic ideals might be transplanted to Brazil. Specifically, Dr. Sales sought information on how Brazil might spur effective agricultural growth via large-scale resource development. In the Brazilian nation, "Until the end of World War II, economic growth was based almost entirely on a few key agricultural export commodities. By 1950, agriculture still accounted for around 60 percent of employment and 25 percent of output." <sup>1</sup> In short, agricultural productivity was the economic backbone of Brazil; a backbone that had been severely fractured during the 1930s Great Depression and its stunning collapse of 1/3 of all international trade. <sup>2</sup> Dr. Apolonia Sales felt that his research at the TVA might help Brazil move towards the creation of more arable land by means of innovative dam construction techniques and better agricultural practices, ultimately leading to economic

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<sup>1</sup> Ian Goldin, *Agriculture and Economic Crisis: Lessons from Brazil* (Paris: OECD, 1990), pg. 23.

<sup>2</sup> Harold James, *The End of Globalization: Lessons from the Great Depression* (Cambridge, Mass: Harvard University Press, 2001), pg. 103.

revitalization for the country. Upon arriving in Knoxville, Dr. Sales issued a statement affirming, "My main purpose in coming to Tennessee was to study TVA's dams and see how they could be applied to Brazil."<sup>3</sup> Without a doubt, the agricultural minister was on a mission of information extraction, visiting the TVA in order to discover how intensive regional resource development might be transplanted to Brazil.

Dr. Apolonia Sales was not the only foreign visitor to the TVA nor was he one of the earliest. Throughout the 1930s, delegates removed themselves from their homeland to visit the TVA and research its various goals and accomplishments. These delegates ranged from a variety of countries, including but not limited to: Japan, Brazil, China, India, and a plethora of European nations.<sup>4</sup> Their visits have generally been encapsulated in Knoxville newspapers, whose readers took delight in hosting the internationally acclaimed politicians and researchers. One might wonder why there were so many foreign delegates coming to visit the Tennessee Valley Authority and question what exactly they hoped to return home with. Indeed, these international visits reveal a great deal about the ways in which the Great Depression was dealt with and how countries looked to one another for support. However, before delving into the historical knowledge that can be gleaned

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<sup>3</sup> "A Digest and Selected Bibliography of Information, TVA -- As a Symbol of Resource Development in Many Countries", (Knoxville, TN: TVA Technical Library, 1952), *pg.* 11. University of Tennessee, Hodges Library, Special Collections, Knoxville, Tennessee. Cited hereafter as TVA Reports. This collection houses reports, summaries, and articles documenting the activities of the TVA between 1933 and 1973. In general, these documents are internal reports detailing the TVA's economic and social impact in the various regions of its service.

<sup>4</sup> "Collection of Newspaper Clippings Relating to Foreign Visitors, 1934-1936". Tennessee Valley Authority Research Library, Knoxville, Tennessee. Cited hereafter as TVA Library. This collection contains a surplus of newspaper clippings, generally restricted to Knoxville newspapers such as the *Knox News Sentinel*. The dates range from 1933 to the end of the 1940s and focus on a wide range of countries, including Britain, India, China, Brazil, France, etc...

from these stories, it is important to understand the previous historiography that this thesis has been built upon. Ultimately, historical scholarship on the Great Depression era can be split into two distinct categories: global and national histories.

The first historical school of thought, bolstered by many Depression era scholars, follows an international approach to the Great Depression. These studies typically deal with the rise of globalization that had occurred in the late nineteenth and early twentieth centuries to help determine how the Great Depression leapfrogged from one national economy to the next. Harold James, whom believes in the fundamentals of globalization, writes that, "At the end of the nineteenth century, the world was highly integrated economically, through mobility of capital, information, goods, and people."<sup>5</sup> Advancements in technology (mobility) were allowing for a freer channel of communication between international communities, a communication which prefaced the expansion of international trade. Via the rising levels of communication and global trade, international monetary relations were becoming a central part of this new 'universal' world. Increasingly, national economies were becoming more and more integrated along the lines of money relations (especially in the realm of financial debt). According to interwar historian Robert Boyce, "Another element in this latest stage of globalization was the huge expansion of international financial activity, both capital investment and short-term credit operations."<sup>6</sup> With this immense level of integration, economic factors in the

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<sup>5</sup> James, *pg.* 10.

<sup>6</sup> Robert Boyce, *The Great Interwar Crisis and the Collapse of Globalization* (London: Palgrave Macmillan, 2009), *pg.* 143.

U.S. could easily disrupt economic factors in other nations, and vice versa. The unfortunate reality lay in the fact that once economic markets had been globalized, there was little to no concrete stability among the financial system, at least any stability which could readily be manipulated. Thus, fluctuations in the system challenged all nations whom actively sought to find their own place in the globalized twentieth century. There was simply no way in which the Great Depression could be curtailed from spreading, due to these international links. It should be noted that these studies do not bestow undue importance on any specific national depression, but rather attempt to bridge the gap between national economies, as integral cogs in a larger machine: the international economy. This established bridge is only possible through the fundamentals of a globalized economic market, the likes of which had clearly been created by the early twentieth century.

The second school of thought found in histories of the Great Depression follows a much more national approach to the issue. Indeed, some historians choose to focus singularly on the U.S. Great Depression, often eliminating any discussion of the depression as a worldwide phenomenon. One such historian whom gives the U.S. depression extra importance is Gottfried Haberler. According to Haberler, the U.S. depression takes precedent because, "The U.S. economy stood in the center of the storm; the depression in the U.S. was deeper and lasted longer than the depressions in most other industrial countries." <sup>7</sup> It is true that the study of the impact of the Great Depression on the U.S. is important, as the U.S. depression was certainly one of the largest and most severe. Yet, can the importance of the U.S.

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<sup>7</sup>Gottfried Haberler, *The World Economy, Money, and the Great Depression, 1919-1939* (Washington: Harvard University Press, 1976), pg. 7.

economy be successfully reconciled with the economically interconnected, globalized picture of the early twentieth century? Haberler continues by writing that, "the American infection clearly was the most virulent and the United States was in the strongest position to stop the slide [in the early 1930s]." <sup>8</sup> Perhaps the depression was the most virulent in the U.S., but the Great Depression's impact was felt in a large variety of ways and in a large variety of places. Consequently, it makes most sense to study the Great Depression as a global economic crisis, highlighting the integrating feature of globalization.

This thesis deviates on two very important points as opposed to the above historiographic materials. Firstly, the majority of histories that investigate the Great Depression from an international point-of-view choose to focus on the negative aspects of globalization, highlighting how it served to exacerbate the worldwide depression. Yet, reality demonstrates that there was a realistic advantage to the novel, globalized world that had arisen in the early twentieth century. In fact, there was one very important advantage: the structural interconnectedness of the world economy allowed for an open interchange of economic ideas and industrial / agricultural advancements. Within this structure of national economies participating on the international level, a global window of solidarity was opened, as people everywhere recognized the severity of the global depression.

As for the second issue, this thesis attempts to bridge the gap between the two prominent historical schools of thought on the Great Depression. It cannot be denied that the Great Depression was a global event, paralyzing economic activity

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<sup>8</sup> Haberler, *pg.* 8.

the world over. Yet, as everyone stood together sinking in the boat of economic collapse, nations looked to *one* specific country for lead in navigating the troubling waters. Consequently, an international study of the Great Depression reveals the underlying reality that, in the end, guidance was sought from the American nation more than any other nation, providing validity to the national school of thought. Ultimately, only the U.S. would take the lead in actively pursuing recovery by means of experimental legislation and nationalized programs. Without these blueprints, nations such as Brazil, Britain, India, and China would have continued to suffer economically far beyond the point of when they saw actual revitalization. Thus, the United States' willingness to experiment via novel legislation and nationalized programs affirmed its lead as a driving force in global economic recovery, while the exigencies of the Great Depression created a limited window of global solidarity that helped other nations pursue and achieve economic revitalization.

The TVA provides a perfect example of the limited window of global solidarity that arose during the Great Depression. However, in order to understand exactly what the TVA experiment represented for the U.S., and why the U.S. government promoted an open-door policy for the agency, it is important to have a basic grasp of the severity of the worldwide economic crisis and the multiplicity of its causes. The Great Depression had near devastating effects in virtually every country around the world; no one could escape the sweeping economic depression, as the downturn rapidly spread across the world. The globalized economic markets of the early twentieth century guaranteed that the suffering would find its way into almost all national economies.

With diminutive faith or confidence that the situation would eventually alleviate itself, it seemed to many that only the most drastic measures could help the economy. Unfortunately, the drastic measures that would eventually be enacted in many countries backfired and served to heighten the international depression. According to Harold James, "A major financial crisis can have systemic effects and catastrophically undermine the stability of the institution that makes global interchange possible."<sup>9</sup> Frantic attempts to spur economic recovery during the 1930s resulted in a variety of national protectionist policies, set up in an array of countries. These policies greatly exacerbated the collapse of global trade as imports and exports were essentially halted by intense trade tariffs. A steady decline among many internationally traded items had already begun by 1925 and drastically sharpened in 1929. James writes that the first three years of the global economic catastrophe saw a decline in capital goods production of 50% and an overall decline in international trade by 30%.<sup>10</sup> The fact that enacting policies in one country could create a rippling effect in another country is certainly evidence to the massive scope of globalization that had occurred pre-Depression. Because far-flung regions of the world were commercially linked prior to the Great Depression, the economic paralysis easily found its way to millions of people around the world. Almost all economic policies enacted by a nation would have subsequent effects on the international market. Consider the U.S. government's action in 1933 to devalue the U.S. dollar in hopes of spurring American economic recovery. According to historian Gottfried Haberler, "The devaluation of the dollar in 1933-1934 put France under

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<sup>9</sup> James, *pg.* 3.

<sup>10</sup> James, *pg.* 103.

strong deflationary pressure and plunged it again into depression."<sup>11</sup> The enactment of national protectionist policies was a major concern throughout the 1930s, oft times plunging outside countries into new cycles of deflation and debt.

Protectionist tariffs are perhaps subsidiary causes of the Great Depression, subsidiary at least in relation to the international gold standard and subsequent enormous deflationary shocks caused by its failure. Holistically, almost all accounts of the Great Depression agree that the ideology of the gold standard during the 1930s sowed the seeds for deflationary shocks domestically and abroad. The international gold standard's theory held that, "If they [precious metals] flowed out of a country they would thereby lower the prices and their inflow would increase the prices elsewhere, which would lead to their flowing back to countries where prices were lower."<sup>12</sup> Thus, the international gold standard worked insofar as to countries upholding these ideals. Unfortunately, the tragedy of the gold standard lay in the fact that the system did not operate automatically and ultimately the U.S. and France began to operate anti-free flow, in direct opposition of the gold standard principles. Dietmar Rothermund articulates this point in his discussion of the gold standard, writing that, "The idea that the currency should have an adequate backing in terms of gold reserves dominates the minds of men and led to sterilisation of these reserves which militates against the original idea of the gold standard."<sup>13</sup> This sterilisation of gold led to the deflationary shocks that ripped apart many of the national economies in some of the hardest hit countries. This 'deflationary bias'

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<sup>11</sup> Haberler, *pg.* 15.

<sup>12</sup> Dietmar Rothermund, *The Global Impact of the Great Depression, 1929-1939* (London: Routledge, 1996), *pg.* 19.

<sup>13</sup> Rothermund, *pg.* 26.

theory has become known as the ET thesis, named after its two proponents, Peter Temin and Barry Eichengreen. Specifically, the ET thesis emphasized, "... that the gold standard system had a 'deflationary bias' -- i.e. that it compelled countries losing gold to deflate but did not compel countries gaining gold to reflate..."<sup>14</sup> The creation of an unequal balance between deflations and inflations throughout the globe brought on the worldwide economic catastrophe and continuously worked as a limiting factor in opportunities for recovery.

Perhaps one of the worst aspects of the Great Depression was the rampant fear and hopelessness that seemed to grip the U.S. and many other foreign countries. Even the U.S. president addressed the shocking paralysis that had found its way into American society and culture. In the inaugural address of Franklin D. Roosevelt, he movingly preached that, "the only thing we have to fear is fear itself".<sup>15</sup> This fear would have enormous cultural ramifications that, in some cases, lasted much longer than the economic ramifications from the collapse. For years afterwards, society felt the grip of fear, wondering if economic catastrophe could be lurking around the next corner, waiting to strike once more. Peter Temin, economist studying the Great Depression era, articulated the grimness of the situation in writing, "Few jobs were secure, and many workers were getting used to unemployment as a way of life. The world seemed to be maladjusted with little hope of repair."<sup>16</sup> The world was falling

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<sup>14</sup> Theo Balderston, "Introduction: The 'Deflationary Bias' of the Interwar Gold Standard" in Theo Balderston, ed., *The World Economy and National Economies in the Interwar Slump* (New York: Palgrave Macmillan, 2003), pg. 2.

<sup>15</sup> Louise Gerdes, *The Great Depression: Great Speeches in History* (San Diego: Greenhaven Press, 2002), pg. 44.

<sup>16</sup> Peter Temin, *Lessons from the Great Depression* (Cambridge, Mass: The MIT Press, 1989), pg. 91.

into acceptance with the idea of a depressionary lifestyle: little to no hope remained for recovery from such an apocalyptic event.

The essential driving force behind the fear and hopelessness that gripped the global populace was the unemployment rate and increasing levels of poverty, as articulated above by Peter Temin. Unemployment had ravaged numerous countries by the beginning years of the 1930s, hitting hardest in the U.S., Canada, Germany and France. According to Dietmar Rothermund, esteemed economic historian of the inter-war period, "Non-farm employment [in the U.S.] dropped from 35.6 million in 1929 to 27.9 million in 1932... Net income from an average American farm amounted to \$945 in 1929 and dropped to \$304 in 1932..."<sup>17</sup> Glance back at those statistics. Nearly 8 million people lost their jobs in the first three years of the depression, while the average salary for farmers dropped by around 66%. Similarly horrifying economic statistics can be found mirrored in the unemployment rates of other countries. Canada saw their rate of unemployment escalate to 20%, while Germany and Great Britain saw similar escalations into the realm of 30% unemployment each.<sup>18</sup> These severe levels of unemployment were disrupting more than individual lives; its toll could be seen within the general public and its increasing amount of defaulters, debtors, and homeless. The very fabric of society was being torn apart for millions of people throughout the world.

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<sup>17</sup> Rothermund, *pg.* 51.

<sup>18</sup> Tejvan Pettinger, *Unemployment in the UK*, <http://econ.economicshelp.org/2008/10/unemployment-in-uk.html> (Feb 2012). & James Struthers, *Canadian Great Depression*, <http://www.thecanadianencyclopedia.com/articles/great-depression> (Feb 2012). & Dieter Petzina, *Germany and the Great Depression*, <http://www.jstor.org.proxy.lib.utk.edu:90/stable/259836?seq=2> (Feb 2012).

As evidenced above, the Great Depression saw nations adversely affected by a number of issues, including the failing international trade, enormous price drops, unemployment, and agricultural inefficiency. In order to restabilize their economies, nations needed to make cuts across the board, they needed to develop their underdeveloped regions, and they needed to know how to educate a populace in the realms of agricultural production and industrial ingenuity. Moreover, it had become clear that only international cooperation could lead to any sort of realistic economic recovery in the globalized market. A lack of international cooperation, whether it be competing protectionist policies or lack of adherence to the gold standard principles, had in large part caused the Great Depression. Moving forward, it would eventually be recognized that the exigencies of the economic catastrophe had opened a limited window of global solidarity, providing an outlet for an international exchange of economic ideas and knowledge.

The man tasked with taking the lead in promoting U.S. economic revitalization was U.S. President Franklin Roosevelt. In 1933, on a cold and dreary March afternoon, Chief Justice Charles Hughes swore in Franklin Delano Roosevelt as President of the United States of America. Per his campaign promises, Roosevelt wasted zero time in assuming his presidential responsibilities and actively pursuing paths toward economic revitalization. Eight days following the presidential inauguration, Roosevelt sat down with the American people for the first of his infamous Fireside Chats. Families huddled around their living room radios, breathlessly awaiting their new president to echo across the frequencies.

For his first fireside chat, the president chose to address America's failing banking system, the depression-fueled fear that had gripped the country, and the necessary steps to restore the U.S. financial system. However, Roosevelt's most telling words came at the conclusion of his nationally broadcast address. Roosevelt ended on a passionate note, calling for "confidence and courage" in the face of economic uncertainty. With his final words, the president told the American populace, "It is your problem no less than it is mine. *Together we can not fail.*"<sup>19</sup> These words unequivocally reveal the underlying realizations by Roosevelt within his first few weeks in office. For one, the U.S. President had verbally acknowledged the enormity of the economic situation -- the depression was a global phenomenon, equally problematic to all peoples. Moreover, the president recognized that the colossal economic catastrophe could only be solved through fundamental togetherness and cooperation. Although in this instance Roosevelt may have only been referencing American cooperation with other Americans, his acknowledgement of the economic benefits of working together would have far reaching implications. As the U.S. president's plea for cooperation filtered across the globe, almost all nations took immediate notice.

The cooperation that Franklin Roosevelt believed in and pushed for was not simply among Americans, but cooperation between various world powers to meet the economic crisis head-on. Roosevelt met with many foreign officials in the early periods of his presidency so as to assess the global depression. Indeed, on April 6th,

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<sup>19</sup> Franklin D. Roosevelt: "Fireside Chat on Banking," March 12, 1933. Online by Gerhard Peters and John T. Woolley, *The American Presidency Project*. <http://www.presidency.ucsb.edu/ws/?pid=14540>. Emphasis added.

1933 the president sent an invitation to the British Prime Minister, Ramsay MacDonald, inviting him to visit the White House to discuss the world economic situation. In the invitation, Roosevelt wrote that, "In my judgment the world situation calls for realistic action; the people themselves in every Nation ask it." <sup>20</sup> While Roosevelt never specifically defined realistic action, it can reasonably be inferred that his continual meetings with foreign delegates reveals his belief that realistic action was a corollary of cooperative action. The president felt that working closely with other nations for realistic action (and realistic results) was a certain offshoot of the global crisis.

Four days after Roosevelt sent his invitation to MacDonald, he recommended to Congress the creation of an agency that would in time prove to be a valuable role model for how nations could participate in an open international exchange of economic / industrial insights. On April 10th, 1933, the recommendation for the creation of the Tennessee Valley Authority was delivered to Congress, an early statement which reveals exactly what Roosevelt had in mind when envisioning the Authority. According to the president, "It [the TVA] should be charged with the broadest duty of planning for the proper use, conservation and development of the natural resources of the Tennessee River drainage basin and its adjoining territory for the general social and economic welfare of the nation." <sup>21</sup> The president saw the agency as a national asset, one which would eventually operate in a broad range of

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<sup>20</sup> Franklin D. Roosevelt: "Invitation to Ramsay MacDonald to Visit and Discuss the World Economic Situation," April 6, 1933. Online by Gerhard Peters and John T. Woolley, *The American Presidency Project*. <http://www.presidency.ucsv.edu/ws/?pid=14612>.

<sup>21</sup> Franklin D. Roosevelt: "Message to Congress Suggesting the Tennessee Valley Authority," April 10, 1933. Online by Gerhard Peters and John T. Woolley, *The American Presidency Project*. <http://www.presidency.ucsb.edu/ws/?pid=14540>.

functions. Yet, the TVA would innovate in the area of regional resource development and provide their innovations *openly*, to all interested foreign delegates. In the end, the agency that was created was an exact reflection of what Roosevelt, and by extension the U.S. government, desired from their newfound agency.

Eighteen days after Roosevelt's suggestion of the TVA was transmitted to Congress, Roosevelt released a very telling joint statement alongside French politician M. Herriot. In reference to the questions that were currently "before the world" on April 28th, 1933, the statement reads, "They constitute *the separate elements of a single problem*, the sound and permanent solution of which should be sought *in an international collaboration* supplementing the indispensable domestic efforts of each country." <sup>22</sup> Here, without a doubt, the U.S. president is acknowledging the global severity of the problem and advocating for an American policy of international cooperation in search for a common solution. The issues at hand on that day were the intangible pieces of a much greater problem, one which would only be solved by working together on a global level. The fact that Roosevelt requested the creation of the TVA during a milieu of international visits and meetings, at which he directly called for international cooperation, is not incidental. To a certain degree, Roosevelt's desires for people to come together in unison against the depression had tipped over into New Deal legislation.

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<sup>22</sup> Franklin D. Roosevelt: "Second Joint Statement with M. Herriot of France," April 28, 1933. Online by Gerhard Peters and John T. Woolley, *The American Presidency Project*. <http://www.presidency.ucsb.edu/ws/?pid=14632>. Emphasis added.

The United States' willingness to experiment and share its discoveries with other countries should be recognized as an extreme action, occurring during a very desperate economic period. Countries rarely agree to allow foreign countries in-depth insights into their industrial / agricultural secrets. A nation with better technology or more advanced industrial equipment would certainly have a quantifiable economic advantage over other countries within the global market. Moreover, the power produced by the TVA (in the last stages of the Great Depression) was beginning to be funneled towards the Oak Ridge nuclear facility and its nuclear research / engineering projects. Indeed, the TVA's website tells us that, "During WWII, the U.S. needed aluminum to build bombs and airplanes, and aluminum plants required electricity. To provide power for such critical war industries, TVA engaged in one of the largest hydropower construction programs ever..."<sup>23</sup> It should seem striking that the U.S. government would allow researchers access to the TVA's industrial secrets when this industrial prowess was being used to engineer nuclear weaponry a mere 25 miles away, especially considering the fact that nuclear energy was cutting edge weaponry in the 1930s and 40s. Thus, the sharing of any component of the production of this energy was both remarkable and a testament to the depths of the Great Depression and the leading role that the U.S. took in facilitating global economic recovery.

Despite the above risks, the U.S. government willingly allowed foreign delegates to come and tour the TVA agency, to take notes, and to return home with an idea of how such a massive regional development program might properly

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<sup>23</sup> *Tennessee Valley Authority: From the New Deal to a New Century*, [www.tva.com/abouttva/history.htm](http://www.tva.com/abouttva/history.htm) (March 2012).

operate. Unfortunately, the TVA did not keep an extensive record of their foreign visitors until the end of the 1940s. By this time, thousands of foreign visitors were visiting the TVA annually, representing a myriad of private and governmental organizations throughout the world.<sup>24</sup> These 'tour groups' intended to study and learn from the TVA idea, most times specifically in hopes of transplanting the idea to their respective homelands. Even the TVA itself recognized its worldwide influence, composing a pamphlet in 1952 & again in 1961 entitled, "TVA as a Symbol of Resource Development in many Countries," succinctly summarizing nearly forty projects across the world that had in some respect mirrored the TVA ideal.<sup>25</sup>

Up to this point, we have discussed a variety of issues about the world in the early twentieth century during the Great Depression. A globalized economy had been partially paralyzed, leaving millions unemployed, poverty-stricken, and basically hopeless. However, the U.S. took the lead as a driving force of international recovery within a limited window of solidarity, conversely helping other nations pursue economic revitalization. The greatest example of this global solidarity comes in the form of the work generated by the Tennessee Valley Authority agency and its dissemination to other nations.

In time, the industrial undertakings of the TVA filtered across the globe as increasing numbers of foreign visitors arrived to bear witness to the TVA's dam construction projects. Indeed, in August of 1941 a Chinese research committee arrived in Tennessee to study the Norris and Fontana dams. As recorded in the

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<sup>24</sup> "The Tennessee Valley Authority Handbook", July 1974, Knoxville TN, *pg.* 423, accessed via TVA Library.

<sup>25</sup> "As a Symbol of Resource Development in Many Countries", (Knoxville, TN: TVA Technical Library, 1952), accessed via TVA Reports.

*Knoxville Journal*, "Mao [head of the research committee] said members of his part are very impressed with the size of the TVA and that they hope to be able to carry many valuable ideas back to China." <sup>26</sup> This was not the only exploratory committee sent by China, but it does serve as a highlighting example of the TVA idea finding its way into the Chinese homeland. The information garnered by these foreign delegates was extrapolated during the 1940s by means of a massive project entitled YVA (Yangtze River Authority). <sup>27</sup> This project was directed towards consolidating flood control and increasing navigability of China's largest river, the 3,988 mile Yangtze River. According to information on the project, "Hundreds of miles of canals could be excavated. Ten million acres could reap irrigation benefits. Floods in the 700,000 square miles drained by the stream could be minimized." <sup>28</sup> The geophysical relations between the Tennessee River Valley and the Yangtze River Valley, such as large amounts of flood plains, provided a direct link in sharing development plans between the two. Ultimately, the YVA project would culminate in the 820 foot high Yangtze Gorge Dam, commonly known today as one of the world's largest dam projects.

Although the YVA was a colossal experiment, far larger in scope than even the TVA, Chinese delegates began preliminary studies by visiting the Tennessee Valley Authority. But why exactly did Chinese delegates study the dams of the TVA? Consider the fact that, "The integrated system of 28 dams which controls the flow of

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<sup>26</sup> "Chinese Gather Data on Electricity", *Knoxville Journal*, August 8th, 1941, accessed via TVA Library.

<sup>27</sup> "As a Symbol of Resource Development in Many Countries", (Knoxville, TN: TVA Technical Library, Jan. 1952), *pg.* 24-25, accessed via TVA Reports.

<sup>28</sup> "As a Symbol of Resource Development in Many Countries", (Knoxville, TN: TVA Technical Library, Jan. 1952), *pg.* 24-25, accessed via TVA Reports.

the Tennessee River system provides nearly 12 million acre-feet of storage for the reduction of floods." <sup>29</sup> Flooding of the Yangtze River was a major problem for China during the Great Depression, as it had been throughout most of the country's history. If the TVA could provide twelve *million* acres of land for flood control, surely the Yangtze River could be similarly manipulated. China was also facing other serious problems during the 1930s and 1940s, most directly linked to the faltering success of the agricultural industry and the lack of intraregional commerce. According to Chinese historian Andrew Marton, "The success of agriculture in the lower Yangtze delta required vigorous efforts to precisely control and manage water. Moreover, the structure and intensity of intraregional transactional activities historically depended upon an intricate network of waterways and canals for transportation." <sup>30</sup> For China, economic stimulation would necessitate much of what the TVA had already accomplished in the southern U.S. and along the Tennessee River waterway. Based off the TVA idea, Chinese delegates learned the most applicable and efficient means of flood control and how to maximize water systems' navigability.

The apocalyptic nature of the Great Depression pushed even the most conservative governments into a position where they needed to enact large-scale governmental projects. According to Peter Temin, "Governments tried to take control of their economies at the same time as they tried to resuscitate them. Having seen the chaos generated by orthodox finance and relatively unfettered

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<sup>29</sup> "TVA: Its work and Accomplishments", 1940, *pg. 6*, accessed via TVA Pamphlets.

<sup>30</sup> Andrew Marton, *China's Spatial Economic Development: Restless landscapes in the Lower Yangzi Delta* (New York: Routledge, 2000), *pg. 60*.

markets, they opted for more planning and control." <sup>31</sup> As Temin discusses, the reality of the situation was that countries were essentially required to partake in this newfound wave of collectivism. In fact, the first aspect of the TVA that many foreign representatives took interest in was how the agency operated effectively via government-issued regional planning and development. Understandably, an undertaking such as the TVA, with its immense goals and ambitions, initially needed to devote ample time to planning and scouting out the Tennessee River area. This planning was studied extensively, generating documentation of over thirty full-scale government expenditures that arose during the Great Depression, all of which mirrored the functioning of the TVA in some aspect. <sup>32</sup> Without the TVA's example of resource development planning and economic forecasting, the outlook for recovery would have been horribly dire for many countries.

While leading the way in exemplifying how to micromanage such an extensive economic-planning institution as the TVA, all eyes were firmly set on the U.S. and how its great experiment would proceed. Indeed, foreign visitors took note of how easily one could study the structural aspects of the Authority and what the agency may have meant on the global scale. In October of 1934, the *Knoxville News Sentinel* documented one such visitor, Dr. Heimann, a former German professor of social research. After spending time visiting with the TVA Dr. Heimann was quoted as saying, "In my opinion the TVA is the greatest contribution yet made in America

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<sup>31</sup> Peter Temin, *Lessons From the Great Depression: The Lionel Robbins Lectures for 1989* (Cambridge: Massachusetts Institute of Technology, 1989), pg. 108.

<sup>32</sup> "As a Symbol of Resource Development in Many Countries", TVA Technical Library, Knoxville, 1952 January, pg. 24-25, accessed via TVA Reports.

toward the reconstruction of the world." <sup>33</sup> It can reasonably be inferred that Dr. Heimann was acknowledging, at least, the ability of America to provide a model for the economic resurrection of the *world*. Yet, this was only made possible via an understanding of the structural components involved in managing an economic planning agency the likes of the TVA.

A departmental division was created within the TVA specifically for the purpose of planning and scouting out development opportunities within the Tennessee River area. The department was established in 1934, named the Agricultural-Industrial Survey, and put under the direct control of W.E. Woolrich. <sup>34</sup> The A-I Survey division was tasked with the responsibility of conducting and cataloging enormous socioeconomic surveys in a variety of locales which the TVA planned to manage. As it were, statistics revealing the resources, industrial activities, leading incoming commodities and outgoing agricultural/industrial products, populations, numbers of schools and churches, and geographical/geological data was accumulated for every major town within a generalized region. <sup>35</sup> Once these surveys were completed, the statistics were encapsulated in a series of thousand page volumes, each volume representing a different area of the Tennessee River region. According to these volumes, the official objective of the surveys was the, "Gathering of information and collecting data in a thorough and accurate manner regarding the agricultural and industrial

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<sup>33</sup> "Professor Asserts Germany is not Ready for Democracy", *Knoxville News Sentinel*, Oct. 28, 1944, accessed via TVA Library.

<sup>34</sup> "Agricultural - Industrial Survey for Marshall County", Woolrich, W.R., 1934, accessed via TVA Library.

<sup>35</sup> "A-I Survey", pg. 1-375.

resources, activities, known possibilities and probable developments of the counties in the Tennessee Valley Area." <sup>36</sup> Ultimately, the end product of these surveys amounted to some of the most thorough and complex socioeconomic surveys ever created by any governmental agency.

The rising levels of economic collectivism that grew during the Great Depression would eventually lead countries to look towards the TVA and its A-I Survey division as a blueprint for resource allocation and economic planning. Foreign countries sought to understand how the TVA operated at the local level despite a federal background, a feature that would be necessary to appropriately guide recovery during the depressionary years. Gordon Clapp, former board chairman for the authority articulated this point during an interview with *The Nashville Tennessean* in the mid 1930s. According to Clapp, "Foreign countries are especially eager to learn how TVA handles the extremely delicate problem of the relationship between a strong central government and the state and local governments from which so much initiative must come..." <sup>37</sup> For non-socialist countries, this political lesson was crucial for economic recovery. It would take the manifestation of a strong central government, backed by lower-level government initiative, to ultimately pursue economic revitalization. Thus, reviewing the early organizational work of the TVA and its A-I Survey division proved an invaluable experience for many national economies pursuing collectivism policies.

While the general economic planning of the TVA was a significant lesson for the world during the Great Depression, there are more specific TVA actions that

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<sup>36</sup> "A-I Survey", pg. 1.

<sup>37</sup> "TVA and Crisis", *The Nashville Tennessean*, 1935, pg. 7, accessed via TVA Reports.

were studied and manifested abroad. Once the Tennessee Valley Authority completed its socioeconomic surveys, it began massive industrial projects revolving around the construction of hydroelectric power plants and dams. These undertakings facilitated some of the most rapid job creation of anywhere, at any point during the global depression. As we have seen previously, unemployment was a commonplace feature of life during the Great Depression, ultimately peaking at twenty to thirty percent in many nations. Three of the hardest hit countries -- Germany, Britain, and China -- would eventually send delegates to the TVA to learn about the agency and how their own countries might reproduce the TVA's levels of economic growth.

The statistics on job creation and economic recovery of the Valley region provided by internal TVA documents are stunning, albeit possibly artificially inflated. According to an address given by David E. Lilienthal (director of the TVA) to the Southern Newspaper Publishers Association, "[The TVA]... and its service to industry have helped to make it possible for the people to increase their per capita income more than 400 percent since TVA began; in the nation the increase has been 290 percent."<sup>38</sup> According to this statistic, growth in the Valley region outpaced other areas of the U.S. by more than one hundred percent. This level of job / income growth was exactly what economically desperate countries yearned for. As it were, the yearning for job growth, or at least some sort of economic improvement, manifested itself from the horrors of the Great Depression. The global window of solidarity was beginning to open, prominently highlighted by G. H. Dempster,

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<sup>38</sup> "The Restoration of Economic Equality Among the Regions of the United States", Lilienthal, David E., May 21 1940, *pg.* 312, accessed via TVA Pamphlets.

foreign representative of Egypt, during his visit to the TVA. According to Dempster, "Considering the multitude of international problems involved, the appointment of a Nile Waters Authority, somewhat on the lines of that of the TVA but preferably international, appears to be obligatory."<sup>39</sup> Ultimately, by visiting and studying the TVA, international delegates were provided with a blueprint of how to best go about stimulating high levels of job creation via power production, dam construction, and the promotion of agricultural efficiency.

One of the principal areas of job creation and industrial growth that the TVA spurred, domestically and abroad, was in the power production sector. Although it is hard to imagine by today's standards, most of Eastern Tennessee was blanketed in darkness at the outset of the Great Depression. Private electric companies did provide some electricity to the major communities; yet, this power production was severely limited and extremely expensive. The average East Tennessean simply did not have the economic opportunity to have a reasonably priced power provider. That is, until the Tennessee Valley Authority began producing electric power in 1934.

Foreign power experts were extremely interested in learning how the TVA wielded the Tennessee River to generate extensive amounts of hydroelectricity. Throughout the 1930s several of these power experts visited the TVA, as told to us via Tennessee-based newspapers. One such visit occurred on September 9th, 1936 when Harold Hobson arrived in Tennessee. According to the *Florence Times*, Mr. Hobson was the British, "general manager of England's Central Electricity Board,"

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<sup>39</sup> "As a Symbol of Resource Development in many Countries", (Knoxville, TN: TVA Technical Library, Jan. 1961), *pg.* 68, accessed via TVA Reports.

and came solely to inspect the TVA's power operations.<sup>40</sup> It should be considered stunning that a member of the Central Electricity Board, whose job entailed standardizing the British nation's electricity supply, would be visiting a regional power producer in the Southeastern U.S. In only its first three years, the TVA's global significance had reached a peak at which the national power policies of entire *nations* were being influenced by the agency. Another country sending foreign delegates to research the TVA's power production was Japan, an event recorded on March 20th, 1934. Shizo Abe, a Japanese hydraulic engineer, visited with TVA officials and confirmed that the TVA idea would be well suited for his homeland. According to Mr. Abe, "...Japan, because of its heavy rainfall and high mountains, is ideally suited for hydro-electric power..."<sup>41</sup> Mr. Abe also expressed his feelings that Japanese plants had a minimal output capacity, as compared to the TVA's yearly output. Undoubtedly, the geographically constrained island nation of Japan was very interested by a large quantity of cheaply supplied energy, as Mr. Abe expressed when criticizing his homeland's comparative output capacity. The high level of power production coming from the TVA was worthy of the closest inspection by Japanese and British power experts in representation of countries looking for guidance on how to cut costs and produce more power.

The TVA's direct influence on electric rates represents a drastic economic turnaround for the southern U.S. According to a TVA pamphlet authored in 1957..."as a pebble dropped in a pond causes ripples to flow outward to the

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<sup>40</sup> "Englishmen to Visit TVA Work Tomorrow", *Florence Times*, Sept. 14, 1936, accessed via TVA Library.

<sup>41</sup> "Japanese Visits TVA", *Knoxville News Sentinel*, Mar. 20, 1934, accessed via TVA Library.

surrounding shores, the influence of TVA's low rates flows outward to surrounding areas..."<sup>42</sup> As the TVA began providing low-rate electricity in compliance with its mission statement, the benefits were almost immediately evident. In 1932, the year before the TVA's establishment, the average electric rate for a Tennessee resident was \$5.26 for 100 kWh of power. This represented the absolute highest dollar-to-electricity ratio anywhere throughout the United States. Twenty years after the TVA began operating, this electric rate had been reduced to \$2.50 per 100 kWh of power, the second lowest national average.<sup>43</sup> More surprisingly, however, is the fact that the rates steadily increased in a circular rhythm outward from the main areas of TVA operation. How was the TVA affecting the electric rates in such a large region, spanning from Minnesota to Florida? The question of how the Tennessee Valley Authority generated electric power affecting such a large territory from its central base was the main power question foreign delegates wanted answered when visiting the TVA.

In essence, there is a singular TVA policy which had a tremendous impact on national power rates, and eventually, how other nations began to see nationally mandated power production. Specifically stated, this policy was to distribute as much power as possible, as cheaply as possible, to as many people as possible. While this may not seem like an innovative policy, its effects certainly innovated the electric power market. Indeed, the policy, "influenced rate-making and, consequently, power use and costs in other [locales]." <sup>44</sup> With the TVA providing

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<sup>42</sup> "TVA's Influence on Electric Rates", 1957, accessed via TVA Pamphlets.

<sup>43</sup> "TVA's Influence on Electric Rates", 1957, *pg.* 3-4, accessed via TVA Pamphlets.

<sup>44</sup> "TVA's Influence on Electric Rates", 1957, *pg.* 2, accessed via TVA Pamphlets.

low-rate electricity, private enterprises had to reevaluate their company actions, and more often than not, these companies were pressured into lowering their rates to semi-competitive prices. This reevaluation of power production costs was not constricted to the U.S., but rather, many countries sought to refine their national power production. In fact, in July of 1936, "The Tennessee Valley Authority [was] selected as one of the great American developments to be visited by the Third World Power Conference." This entailed over 200 distinguished engineers and power experts visiting the TVA to participate in an international forum on questions of public and private power policies.<sup>45</sup> By establishing and securing adoption of a mass-consumption pricing policy for electricity, the TVA had forever changed electric power consumption in the U.S. and in other countries abroad.

In order to harness the vast hydroelectric power potential of the Tennessee River, the TVA needed to construct a series of enormous dams along the waterway, coming into fruition over the course of the 1930s and 1940s. These industrial undertakings were a major point of interest for foreign visitors, many of whom sought to manipulate their homeland rivers in a similar way as to the operations of the Authority. In fact, it seems extremely probable that Shizo Abe (the Japanese hydraulic engineer) would have been fascinated by the engineering accomplishments of the TVA's dam system. With little arable land available on the island of Japan, controlling waterways to maximize farmland was commonplace for the nation. According to Japanese historian Gil Latz, "For the period 1910 to 1940, for example, between 65 and 71 percent of Japan's approximately 15 million

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<sup>45</sup> "World Power Visitors Will Inspect TVA", *Florence Times*, Jul. 13, 1936, accessed via TVA Library.

farmers operated holdings less than or equal to one hectare in size." <sup>46</sup> For Japan, land constraints were felt at an all time high during the collapse of agricultural prices and trade throughout the Great Depression. However, the TVA's model of river and agricultural management provided the method by which Japan could increase arable land, reduce transportation costs, and better control its waterways.

The Tennessee River and its various tributaries span across an area over forty thousand square miles wide, affecting the lives of millions of Valley residents. As it were, the challenge to tame the almighty river system was perhaps the greatest of the many obstacles faced by the TVA. According to author John Gunther, in his short piece entitled, 'The Story of TVA', "The Tennessee [River] is, or was, an obstreperous, angry river with an angry history; it was long called America's worst river." <sup>47</sup> Indeed, before the TVA began operation, the river was known for its frequent flooding and long stretches of non-navigable waterways.

In order to limit this flooding and increase navigability, the TVA first began construction of Norris Dam, a hydroelectric and flood control dam established along the Clinch River in Anderson County, Tennessee. The dam was not completed until the mid-1930s, but is largely considered one of the first definitive stepping-stones in the TVA's pursuit of controlling the Tennessee River. The Norris Dam construction sparked off a series of dam constructions along the river and its tributary system that eventuated in a navigable stretch of waterway throughout much of the interior United States. This immense waterway was possible via, "TVA multi-purpose dams

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<sup>46</sup> Gil Latz, *Agricultural Development in Japan: The Land Improvement District in Concept and Practice* (Chicago: Committee on Geographical Studies, 1989), pg. 24.

<sup>47</sup> "The Story of TVA", Gunther, John, accessed via TVA Reports.

providing a modern channel linking the Tennessee Valley with the 8,000-mile Inland Waterway system of the U.S." <sup>48</sup> The interconnected Inland Waterway, which extends from the Great Lakes to the Gulf of Mexico, was an extreme stimulant for interstate commerce (as well as for decreased trade costs). According to William C. Fitts, JR. in his report entitled 'TVA's Accomplishments', "[Navigational] improvement will result in an annual saving in transportation costs of \$10,000,000." <sup>49</sup> The industrial work of the TVA definitively helped lower transportation costs by an outstanding ten million dollar mark, spurring internal national trade and making it easier for foreign imports to find their way to the heart of the U.S.

A clear pattern exists which involves delegates visiting the TVA, and ultimately several years later, their respective home countries recovering economically through regional resource development. The open-door policy of the TVA effectively allowed other countries to develop a plan for structured economic revival. In 1936, a delegation of Indian industrialists arrived in Knoxville, hoping to tour the TVA and learn about its regional development programs. According to the *Knoxville News-Sentinel*, "The men were expressly interested in the construction of dams as a means of controlling floods, preventing soil erosion and aiding in reclaiming of soil. In certain areas of India irrigation is of utmost importance..." <sup>50</sup> Robert Chambers articulates this importance in his study of canal irrigation in South Asia, telling the reader that proper irrigation brings in employment, income, security, and quality of life. Chambers writes that, "Irrigation means more

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<sup>48</sup> "TVA: Its work and Accomplishments", 1940, *pg.* 7, accessed via TVA Pamphlets.

<sup>49</sup> "TVA's Accomplishments", Fitts, William C., 1944, *pg.* 14, accessed via TVA Pamphlets.

<sup>50</sup> "Indians Say TVA Good Example for Homeland", *Knoxville News Sentinel*, July 14, 1936, accessed via TVA Library.

productive work on their [the Indians'] land, and increased intensities mean productive work on more days of the year." <sup>51</sup> This increased agricultural productivity, so needed during the Great Depression, was ushered in a decade later following the Indian delegation's visit. In 1936, one finds India beginning work on its Damodar Valley Corporation, modeled a great deal off of what the Indian delegates had witnessed in 1936. Amazingly, the DVC project actually hired former TVA Construction Engineer, A.M. Komora, as the project's Chief Engineer. <sup>52</sup> Not only did the open-door policy of the TVA involve an invitation for the open exchange of idea, but also in some circumstances, TVA ideas were disseminated through the infusion of TVA employees around the world.

Beyond the industrial work of the TVA, foreign delegates were also interested in the agency's research into new fertilizers and new methods of agriculture. The thought lay along the lines that a cheap, effective, and easily manufactured chemical fertilizer would help agricultural production across the globe and act to stymie the global economic crisis. This may have been somewhat shortsighted as it did not successfully deal with the larger, long-term issues. However, the severity of the Great Depression and the era's rampant poverty levels left many believing that their only chance for survival was to drastically increase productivity. Think back to the Brazilian minister, Dr. Apolonia Sales, whom travelled to Knoxville in 1944 to visit the TVA. As minister of agriculture, Dr. Sales sought information as to how agricultural efficiency could be maximized within

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<sup>51</sup> Robert Chambers, *Managing Canal Irrigation: practical Analysis from South Asia* (Cambridge: Press Syndicate, 1988), pg. 11.

<sup>52</sup> "As a Symbol of Resource Development in many Countries", (Knoxville, TN: TVA Technical Library, Jan. 1952), pg. 4-5, accessed via TVA Reports.

Brazil, based on the TVA's work. Agricultural inefficiency was not a problem solely constricted to the U.S., but rather many countries dealt with similar circumstances during the global economic depression. As documented by Brazilian economist Edward Schuh, statistics show that in 1940, only twenty-three percent of the Brazilian arable land was farmland; yet, this sector accounted for the largest industry in Brazil.<sup>53</sup> Unfortunately, agricultural production profit dropped off by more than 50% during the Great Depression as money supplies ran short across the board.<sup>54</sup> In this whirlwind of agricultural inefficiency and reduced prices, agriculturalists needed to know how to produce more and more, in the most efficient means available, before even beginning to think about real economic revitalization.

Fertilizer production was only one of many ways in which the TVA desired to bolster agricultural vitality in the Valley Region. Part of this process involved developing and distributing a stable and efficient agricultural pattern for the farmers of the region. According to one TVA authored report, "Valley soils, once eroding and dwindling in fertility, are being restored through the use of new and improved soil minerals and shift toward more diverse and stable agricultural patters."<sup>55</sup> Rather than solely focusing on how to produce vital fertilizers, the agency attempted to micro-manage the farming patterns of the entire Valley region. For far too long, the region's resources had been over farmed and over stripped, a pattern the TVA actively pursued to reverse. In fact, on May 21, 1934 chairmen

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<sup>53</sup> Edward Schuh, *The Agricultural Development of Brazil* (New York: Praeger Publishers, 1970), pg. 125.

<sup>54</sup> Rothermund, pg. 51.

<sup>55</sup> "TVA, Progress in the Tennessee Valley (1933-1052)", 1952, accessed via TVA Reports.

Arthur E. Morgan pinpointed this fact when speaking over NBC affiliated radio stations. Morgan revealed to the listening nation that, "In parts of the Tennessee River area, and in the adjoining mountain region, 'rugged individualism; had stripped the country of its resources, and then had departed, leaving behind a stranded population in poverty and despair.'" <sup>56</sup> Essentially, the land had been stripped of all nutritional resources by decades of individual farmers whom had plowed the land for all its worth. The TVA quickly recognized this as an immense problem for any agriculturally based region and advised its A-I Survey team to collect geological data, including soil erosion information and chemical analysis of the soil to determine its vitality.

Foreign representatives examined the agricultural and chemical responsibilities of the TVA closely during the early decades of the agency's establishment. One intriguing example of this comes in a 1948 extensive tour of the TVA by a technical mission of the Uganda Protectorate Government. The Uganda commission was working to strengthen an African reclamation project, one that would see the construction of The Owen Falls Dam in Uganda. The visitors came to study TVA dam construction, power production, and perhaps most interestingly, to "discover from the experience of TVA how best the rock phosphates in the neighborhood of Owen Falls could be processed." <sup>57</sup> The ability to effectively process the rock phosphates would greatly reduce the physical and environmental costs of the reclamation project. Clearly, the TVA's work in chemical engineering and proper

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<sup>56</sup> "Text of Addresses Delivered by Directors of the Tennessee Valley Authority over NBC Stations", Morgan, Arthur E., May 21 1934, *pg.* 2, accessed via TVA Pamphlets.

<sup>57</sup> "As a Symbol of Resource Development in many Countries", (Knoxville, TN: TVA Technical Library, Jan. 1952), *pg.* 25, accessed via TVA Reports.

resource utilization was well known and well respected, influencing projects well outside the boundaries of the U.S.

The aforementioned TVA activities all served as models for Depression-stricken countries around the world, as evidenced by the thirty-six TVA-like international projects underway by the mid 1940s. However, the TVA also created a division specifically-orientated to provide educational opportunities on how to appropriately pursue regional resource development. This division was titled the Training and Educational Relations Branch, and worked to arrange programs for foreign students whom would be visiting the TVA for a period of more than two weeks. The programs that were developed involved the TVA Information Staff teaching students the intricacies of a number of TVA corporate divisions.<sup>58</sup> Unfortunately, the T&E Relations Branch was not fully maximized until the mid 1940s, although it did exist during the 1930s and should be recognized as a major factor in the TVA's open-door policy, particularly due to its role as a definitive example of the TVA facilitating educational aid to underdeveloped regions around the world. In 1950, Austin Acly, American Foreign Service Officer, was assigned to research the T&E Relations Branch and report his findings and various recommendations. After an intensive report, Acly concluded that, "there is extensive interest in the TVA program abroad, [and] that foreigners tend to look upon TVA as one of the most important developments in the United States..."<sup>59</sup> Acly describes how in his talks with foreign visitors he could not find anyone that was

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<sup>58</sup> "The Training of Foreign Students by the TVA", Acly, Austin, July 20, 1950, accessed via TVA Pamphlets.

<sup>59</sup> "The Training of Foreign Students by the TVA", Acly, Austin, July 20, 1950, *pg.* 11, accessed via TVA Pamphlets.

not fully enthusiastic about the TVA and not one that did not feel fulfilled in their purposes of learning about the TVA. The T&E Relations Branch was facilitating the open-exchange of ideas that the TVA had allowed since its establishment in 1933.

The TVA was not alone when working to promote education, but instead, the agency partnered with other public and private agencies in research activities. Indeed, the agency often partnered with the University of Tennessee, Knoxville in efforts to increase industrial and agricultural knowledge of East Tennessee residents. According to the papers of Ira Chiles, Area Education Officer for the TVA, the TVA often formulated contracts with various secondary institutions to visit the schools and teach about proper resource development and usage.<sup>60</sup> However, the TVA was not singularly teaching at these institutions, but rather, working with the institutions in the joint product of private and public research. The fact that the TVA was working with public and private research institutions was typically played-up by the Board of Directors of the TVA. Indeed, in one speech David. E. Lilienthal applauded the successes of the TVA partnership with the Texas Industrial Research Council and its efforts, "...directed toward removing the South's industrial handicaps..."<sup>61</sup> Educational and research cooperation were a must for the Valley Authority to be a success, precluding any sort of economic revitalization. In the end, the TVA recognized itself as a national and international asset and actively sought to educate people about the program in the hope that TVA ideals could be widely disseminated via an open-door policy.

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<sup>60</sup> Ira Chiles Papers, MS. 1019. University of Tennessee, Hodges Library, Special Collections, Knoxville, Tennessee.

<sup>61</sup> "The Restoration of Economic Equality Among the Regions of the United States", Lilienthal, David E., May 21 1940, *pg.* 321, accessed via TVA Pamphlets.

While all the above shines a bright light on the TVA and its many accomplishments, it should be noted that the agency was far from perfect. True, the TVA's open-door policy ultimately benefited a variety of multi-national interests, but at times, it seems the agency was operating at less than 100% efficiency. The TVA was under continuous surveillance by the U.S. government, and indeed, Congressional Joint Committees were established to decide whether the TVA had been economical and efficient. One such committee, formed in 1939, found that the TVA was operating effectively by a 6-3 vote. The three minority voters condemned the TVA and recommended its immediate reorganization. According to a 1939 issue of *The Journal of Land & Public Utility Economics*, "The minority report finds that the power program under present rates does not pay its way now and will not pay its way in the future."<sup>62</sup> Was the TVA actually losing money through its power investments in 1939? This is certainly possible, although as we have seen, by 1952 the power production of the TVA was bringing in lots of revenue via its extensive hydroelectric facilities. Perhaps foreign delegates recognized these power limitations and believed that they could extrapolate the TVA idea to their homeland, albeit in a new and improved version. Whatever the case, delegates were not deterred from praising the TVA for its accomplishments and were definitely not deterred from trying to copy the TVA idea in pursuit of economic stabilization. Whether the minority findings were completely accurate or not does not diminish the TVA's worldly significance.

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<sup>62</sup> "The TVA Investigation: Minority Views", Marlett, D.L., *The Journal of Land & Public Utility Economics*, Vol. 15, No. 3 (Aug., 1939), pg. 360.

In the end, the TVA should continue to be recognized for its enormous industrial and agricultural successes, as well as for its enormous significance to the U.S. and other international communities, despite the above congressional findings. With the outstanding number of international projects reportedly acting in accordance with TVA ideals, it should be no surprise that the TVA helped to stymie the global economic depression. Foreign delegates were continually impressed with the TVA's work in the field of regional development, including: regional industrial/agricultural planning, job creation, power production, flood control, fertilizer production, and the provision of educational/research opportunities. To an exceptional extent the Tennessee Valley Authority has been a vehicle and a catalyst for the interchange of ideas on resource development and economic improvement. Without this open-door policy catalyst, the global economic catastrophe of the 1930s may have festered even longer than it did. The globalized economy prefaced the necessity for a window of transnational solidarity as nations came together in pursuit of recovery and revitalization, led by the example of U.S. legislation and experimentation.

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