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# Just Institutions for Deep Decarbonization? Essential Lessons from 20<sup>th</sup> Century Regional Economic and Industrial Transitions in the US

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THEY (WHO) SEEK TO ESTABLISH SYSTEMS OF GOVERNMENT BASED ON THE REGIMENTATION OF ALL HUMAN BEINGS BY A HANDFUL OF INDIVIDUAL RULERS... CALL THIS A NEW ORDER. IT IS NOT NEW AND IT IS NOT ORDER.





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# Just Institutions for Deep Decarbonization? Essential Lessons from 20<sup>th</sup> Century Regional Economic and Industrial Transitions in the United States

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## Abstract

Deep decarbonization of existing economies may still avert the worst of catastrophic global climatic disruption. As political discourse in the United States focuses increasingly on the climate crisis, scholars, activists, and policymakers have framed the crisis as an opportunity for a sustainability transition founded on social justice and equity. Experience, however, suggests that large-scale economic transitions have costs and benefits that fall unevenly on different social groups. We respond to increasing scholarly and public attention on ambitious energy transitions by analyzing documented accounts of major regional economic transition in the U.S. throughout the twentieth century. How have federal and other institutions changed to cushion the disruptions of past regional adjustments to workers, families, and communities? How might past experiences in regional transition illuminate the way forward for more equitable processes of decarbonization? Our analysis finds evidence that past programs designed to offer assistance in transition often struggled to achieve efficacy in benefiting those most in need soon enough, for long enough, or to the degree necessary. If we do not adequately attend to institutional challenges, a transition justified in the name of the climate crisis may reproduce systemic injustices of the past. We conclude with recommendations on institutional design for policymakers and planners seeking to deliver a just transition.

**Keywords:** decarbonization, energy, just transition, institutions, sustainability

## 1. Introduction

It is still possible, within the laws of chemistry and physics, to avoid climatic catastrophe (IPCC 2018). To avoid calamity by limiting global warming to 1.5°C above preindustrial temperatures, however, will require rapid, far-reaching and unprecedented changes in all aspects of society. These transformations will affect the ways that societies manage land, energy, industry, buildings, transport, and cities. As politicians and policymakers continue to contemplate measures to overcome the climate emergency, scholars, activists, and commentators highlight the opportunities that this moment offers us to promote a transformation that centers justice, equity, and ecological sustainability (Aronoff et al. 2019; Climate Justice Alliance 2019; McElwee and NoiseCat 2019; Piggot et al. 2019). Any transition will have winners and losers as the costs and benefits of decarbonization fall unevenly on different communities. New scholarship focuses on how a transformation centered on principles of equity and justice can overcome historical injustices and prevent the formation of new injustices in such a transformation (Eisenberg 2018; Hathaway 2019; Pettifor 2019; Sovacool et al. 2019).

In the United States, recent years have witnessed an increase in demands for urgent action on the global climate emergency. The Fourth National Climate Assessment (USGCRP 2018) made clear that bold actions are needed to avoid the worst impacts of climate change, and there may be as few as 12 years to achieve it (Intergovernmental Panel on Climate Change 2018). In responding to this critical moment in history, starting in late 2018, youth activists have staged massive school strikes demanding that politicians take action in line with the scientific consensus on climate disruption. Staging a well-publicized sit-in protesting fossil fuels in the office of House Speaker Nancy Pelosi (D-CA) succeeded in pushing for the first town hall in history in which presidential candidates were compelled to set forth their plans to confront the climate emergency. These events demonstrate a sustained commitment on behalf of organizers to demand urgent political action on decarbonization. In parallel, congressional efforts on decarbonization have accelerated markedly. Sen. Markey (D-MA) and Rep. Ocasio-Cortez (D-NY) introduced legislation in the Senate and House of Representatives that calls for a shift in the U.S. to 100 percent renewable and zero-emission energy sources. Their proposal calls for a “national, social, industrial, and economic mobilization on a scale not seen since World War II and the New Deal era.” Recalling Franklin Delano Roosevelt’s original New Deal of the 1930s, today politicians and activists are calling for a “Green New Deal” that purposefully, promises to “create millions of good, high-wage jobs... provide unprecedented levels of prosperity, and economic security for Americans, and counteracts systemic injustices – all while addressing the existential challenge of climate change” (Markey and Ocasio-Cortez 2019). Leading presidential candidates have since set forth proposals to decarbonize the U.S. economy while creating between

“several million” (Biden 2019; Warren 2019) and “20 million” (Sanders 2019) well-paying jobs to ensure a “just transition for workers.”

While we do not know what political and social groups may ultimately come together to drive a transition to low carbon economy, we do know that unless change occurs, frontline workers and communities in the fossil fuel economy stand to lose from a transition away from carbon energy sources. As University of Massachusetts economist Robert Pollin (2019) puts it, there is “no guarantee that the jobs being generated through clean-energy investments will provide decent compensation to workers, strengthen workplace conditions or union representation, or expand opportunities for women, minorities, or other underrepresented groups.” Estimates of how many workers may be displaced depend on the level of ambition in decarbonization. As of 2017, 1.1 million Americans worked in traditional coal, oil, and gas-electric power generation while 2.3 million worked in transmission, distribution, and energy storage (Energy Futures Initiative and National Association of State Energy Officials 2018). Despite the recognition of impacts on frontline workers and communities, the knowledge base on how to achieve a “just transition” towards decarbonization remains immature. In line with calls from scholars and the pledges made by leading presidential candidates, we, therefore, propose to deepen the knowledge base on just transitions.

The study of transitions and economic adjustment requires a serious engagement with institutions. By institutions, we refer to the rules of the game that shape human behavior and interaction in society (North 1990). Institutional scholars commonly separate institutions into those that are formal and informal. In the context of economic development, formal institutions relate to the powers, quality and competencies of national, regional, state and local authorities (Rodríguez-Pose 2020). Policies may be considered formal institutions when they stipulate rules that assign rights and responsibilities with the expectation they will be enforced through, e.g., the courts (Streek and Thelen 2005). Informal institutions may relate to the ideas, norms, values and behaviors that also shape economic performance. In this study, we focus on formal institutions, as it is through designing, enacting, and modifying those institutions that political processes and policymaking most directly shape economic performance.

In examining formal institutions, it is processes of institutional *change*—as opposed to the study of institutional character or stability—that we are most interested in. We focus on institutional change as unmitigated economic disruption is shown to leave behind affected workers, families, and communities. Streek and Thelen (2005) highlight three main processes that are helpful to us in understanding institutional change. First, institutions may be reproduced over time by gradual adaptation. Second, institutions may break down and be replaced abruptly, often in response to external disruption. Third,

institutions can endure many small, seemingly insignificant, adjustments that also result in far-reaching change to existing paradigms. We may also categorize institutional change as it relates to intentionality: some institutional change occurs when those who enact the rules (i.e. governments at various scales) undertake deliberate, planned change. Other institutional changes take place beyond the control of rule makers, when actors such as grassroots or community organizations step in to fill voids in policy approaches. Beyond the domain of rule makers, there are many instances where communities have pursued institutional change to protect themselves from policy changes that were destructive to their social and economic wellbeing (Miraftab 2009; Purcell 2009; Yiftachel 1998). To summarize, institutional change in response to economic disruption may take place through a variety of disruptive or incremental forms, is not within the control of any single actor, and is often a messy process with unanticipated outcomes.

With the unpredictability of economic disruption and institutional change in mind, there is no simple institutional road map for transitioning communities away from fossil fuels. To execute effective and just transitions, policymakers must develop an awareness of questions and issues that arise from the historical record of efforts to support workers, families, and communities in major regional transitions of the twentieth century. Thinking about past transitions does not provide a perfect guide of how a planned decarbonization transition could unfold. But historical analysis does provide essential insights into how past efforts to attend to dislocation have fared for affected populations. How have federal, state, and local-level institutions cushioned the disruptions of past territorial adjustments that affected workers, families, communities, firms, and local governments? How can past institutional experiences in regional transition illuminate the way forward for more equitable processes of decarbonization? Through our analysis and discussion, we demonstrate a number of institutional challenges common to the American experience of economic disruption and dislocation. If these challenges are not addressed as we look ahead, there remains a risk that a transition justified in the name of the climate crisis leaves behind workers, families, and communities. Responding to the requirement to build popular support and legitimacy for a planned program that delivers a fair and just decarbonization, we draw on historical lessons to set out principles for institutional design to formulate a just energy transition.

Following this introduction, in Section two we review existing knowledge on institutions in transitions. In Section three we describe the methodological approach we take to respond to our questions of interest. In Section four, we analyze and evaluate the historical record of the federal government and other significant agents that contributed to regional economic transitions in the twentieth century. In Section five, we analyze and synthesize findings from three instances of regional transitions, drawing attention to the performance of institutional responses designed to support workers, families and

communities disrupted when economic change happens and dislocation occurs. Drawing on the lessons of those experiences, we conclude in Section six by setting out principles for institutional design in support of a just transition towards decarbonization.

## **2. The knowledge base on institutions in transitions**

Social scientists put forth several distinct conceptualizations to understand complex processes of transition from one societal state to another. As with societal change more broadly, there is no single definition of what a “just” transition represents. Instead, there are varieties of just transition, reflecting the interests of various advocates. There are many theoretical approaches towards the interpretation of justice in sustainability, from Rawls to Buddhism to indigenous understandings (Köhler et al. 2019). In this section, we review two approaches that aim to understand processes of transition towards sustainability. Each has strengths and weaknesses, both providing a partial picture of the complex processes of economic and social change. The first approach relates to sociotechnical transitions, which combines ideas from evolutionary economics, the sociology of innovation, and institutional theory. The second, on just transitions, has its roots in the U.S. labor movement and has influenced much of the current discussions around energy justice, climate justice, and decarbonization through ambitious policy measures. Each of these fields of scholarship takes a different approach to the role of institutions and organizations in planned processes of transformative change.

### *The socio-technical transitions approach*

A first relevant body of literature relates to the socio-technical transitions approach, which examines transitions to sustainability drawing on science and technology studies, the history of technology, and evolutionary theory (for a review see Grin 2016). Much of the literature on socio-technical transitions adopts the co-evolutionary approach that considers how technology is shaped by (and shaping of) human relations, and social, economic, and political forces. In other words, “technology is shaped by social, economic, and political forces alike; and ... technologies and technology systems shape human relations and societies (Rip and Kemp 1998).” Stemming from studies of how intentional technological change may deal with climate change, relevant literature coalesced around a “multi-level perspective” more generally (Geels 2005), that has become a core notion in transition studies. That approach sets forth a heuristic framework which seeks to explain how transitions unfold, accounting for the role of outsiders, public policy, markets, culture, and competition at three interlinked levels. Scholars adopting the socio-technical transitions approach emphasize transition as unfolding through the role of outsiders from the inherited system, the importance of policy support, the role of market mechanisms, the role of wide cultural visions and promises, and the importance of

strategic games and competition. Elzen et al. (2004) proposed a sociotechnical scenario approach intended to guide the development of experiments based on ongoing change at higher levels to contribute to whole system change.

In the wake of the mainstream sociotechnical transitions approach in sustainability policy discussions, recent critiques focus on an incongruity between the model and the complex reality it is supposed to describe. They highlight the lack of agency it affords to those involved, and the lack of attention to power and politics in what are, in fact, technocratic approaches to social engineering (Genus and Coles 2008; Pel, Avelino, and Jhagroe 2016; Smith, Stirling, and Berkhout 2005). Those critiques helped the field of sustainability transitions develop in new directions that include attention to power and politics (Köhler et al. 2019). They also point to a need to consider approaches in the social sciences that more adequately capture the lived experience, agency, and obligations of the communities that have experienced and will continue to experience planned economic and industrial transitions.

### *The just transitions approach*

A second body of literature focuses around the notion of a “just transition.” Labor activist Tony Mazzocchi first popularized the just transition concept as a “superfund for workers” in the 1970s. Mazzocchi called for “full income and benefits for life” for those who contribute to society through hazardous work (e.g. nuclear and toxic workers) and face the elimination of their jobs on environmental grounds. Mazzocchi, who later reduced his demands to four years of income and education support, commented in 1993: “Paying people to make the transition from one kind of economy to another is not welfare. Those who work with toxic materials on a daily basis in order to provide the world with the energy and the materials it needs deserve a helping hand to make a new start in life” (Pollin and Callaci 2016). More broadly, the framing argues that a transition to a low-carbon society should be just to the most vulnerable populations, which may include workers, their families, and the communities most exposed to the hazards and environmental injustices of the fossil fuel economy. For Eisenberg (2018), the concept of just transition should remain distinct from wider notions of climate or energy justice by referring specifically to assistance provided to fossil fuel workers throughout and beyond the decarbonization process.

The just transition framework provokes us to ask: What programs can be designed, through what means, and with whose concerns reflected, to assist workers and communities facing dislocation resulting from policy choices? Who should benefit directly from those programs, at what cost, paid for by whom, and when? Which organizations are most prepared to lead the planning and implementation of those



programs? What forms of partnership stand the best chance of success? Such a lens, Eisenberg argues, is appropriate and necessary for overcoming longstanding “jobs-versus-environment” tensions in policymaking by promoting “jobs-*and*-environment.” It also continues to advance coalitions between labor and environmental groups for the hard work of policy implementation. Beginning in the 1970s, unions found allies in the environmental movement in support of their struggles to win just transitions for their members who were losing their jobs in hazardous industries. Today, the BlueGreen Alliance exemplifies the power of such coalitions in advocating that decision-makers at all levels tackle the climate emergency in ways that create and maintain quality jobs and build a stronger, fairer and cleaner economy (BlueGreen Alliance 2016). Internationally, many organizations has signaled the need to take fossil fuel workers seriously by adopting the just transition concept, including the International Trade Union Confederation, the United Nations Environment Program, the International Labour Organization, and the World Health Organization (Evans and Phelan 2016).

### **3. Methodology**

In responding to our research questions, we took a two-phase qualitative historical analysis (Thies 2002) approach as shown in Figure 1. In a first phase, we cast a wide net over several dozen major regional disruptions and transitions that historians documented in American economic history. We took note of forces that historians understood as contributors to those disruptions; the spatial reach, duration, and social and economic implications of those disruptions; and public policy or other institutional responses that emerged to address those implications. Taking a closer look at institutions, we undertook a content analysis of those sources in which we sought to identify the organizations and institutions that played significant roles in economic development, the historical context in which they emerged, their original mandate, and factors that resulted in their evolution. In doing so, we triangulated across sources to minimize interpretive and selection bias of historical materials. This first phase allowed us to document the role of various federal agencies in supporting workers and communities in past transitions, the focus of Section 4 below. It also allowed us to develop preliminary responses to the question of what institutional factors appeared to enable, or impinge on, the effectiveness of major programs to deliver economic development for communities across the United States.

In a second phase, we devised criteria that would form the basis for our selection of cases of regional transition through which to study in detail the interplay of several agencies and interests in major transitions. The criteria that we used to identify the presence of a major transition included (i) the disruption of existing ways of life of at least ten years; (ii) the existence of a public policy response to economic disruption; (iii) and significant documentary evidence and evaluations that could form the basis for theory generation.

The first two criteria, in our view, will apply in any planned deep decarbonization of the U.S. economy. The third criteria confirmed that an evidentiary basis existed that would enable us to study the dynamics of each case in depth, the focus of Section 5. Ultimately, we selected three transitions for further study: Appalachia’s restructuring throughout the decline of its coal economy; Worker adjustment in response to foreign competition and depleting resources; and the post-timber transition in the Pacific Northwest. Drawing on documentary accounts and evaluations, we analyzed in depth the institutional, political, and other factors that enabled or constrained the effectiveness of agencies and partners in attending to workers and communities dislocated from economic upheaval. That second phase allowed us to study the efficacy of institutional responses in assisting workers and communities that faced dislocation resulting from policy choices or external forces. The synthesis of the three case analyses formed the basis for our recommendations for how to better plan for a just transition towards deep decarbonization, presented in Section 6.

	<b>Questions</b>	<b>Data sources</b>	<b>Analytical approach</b>
<b>Phase I</b>	<p>How can we characterize the federal institutional experience in American economic development in the 20<sup>th</sup> Century?</p> <p>What context did major federal institutions emerge in? What was their original mandate? What led to their evolution? How did they evolve?</p>	<p>Peer-reviewed articles in economic history, planning, and sociology.</p> <p>Archival materials including personal and formal monographs and video documentaries.</p>	Content analysis
<b>Phase II</b>	<p>What cases of transition exhibit: (i) the disruption of existing ways of life of at least ten years; (ii) the existence of a public policy response to economic disruption; (iii) and significant documentary evidence and evaluations?</p> <p>What institutional, political, and other factors enable, or impinge on, the effectiveness of major programs to deliver economic development for communities across the United States?</p>	<p>Peer-reviewed articles in economic history, planning, and sociology.</p> <p>Archival materials including personal and formal monographs.</p> <p>Program evaluations.</p>	Institutional analysis

**Figure 1 – Methodological Approach**

#### **4. American Economic Development: 20th Century institutions and their legacy in the 2020s**

Throughout the history of America's resource regions, transition has been a way of life. Wars, depressions, international trade disputes, alternative sources of supply, and the continuous effects of technological change are just some of the forces that alter the daily lives of individuals living in the nation's resource regions. Coupled with direct effects, the indirect effects of these forces play out in communities where workers manufacture the inputs—machines, equipment, and other industrial materials—that support resource production. Down the line, changes in natural resource supply and demand touch economic activities in communities that manufacture the goods that utilize these resources. America's natural resource supply chain continually radiates forces of change and redirects growth impulses that diffuse through cities and rural areas around the country. No more obvious examples exist, and that exemplify the system of inter-industry transactions that play out in communities around the country than industries tied to resource extraction, power production, and consumption.

##### **4.1 A Brief History of Federal Involvement in Regional Economic Development**

While transitions are a way of life, they are not without their consequences. The federal economic development policy of the last sixty years recognizes that nation-building industries are markedly susceptible to the effects of transitions. Consequently, a significant portion of twentieth century economic development policy evolved in response to the transformations of resource communities fueling the nation's insatiable hunger for energy resources. Eras of energy transition bring with them changes in institutional practices at all levels. Often, transitions occur in tandem with other defining events, particularly swings in political control. Modern economic development institutions emerged over the entire twentieth century. Reviewing this history grounds our approach in concrete examples of attempts at intentional institutional change in line with transitions of a geographic nature in some of the nation's most challenging regions.

##### *20<sup>th</sup> century formal institutions for economic development*

Economic development institutions emerged in significant form in the United States starting in the 1930s as the nation faced down the worst economic downturn in its history (Long 1999). Unemployment rates of 25 percent plagued cities and towns around the country. No place was immune to the forces of economic crisis. Stalled for going on five years, a new President sustained a belief that to counter the absence of private sector stimulus required national fiscal policy to stimulate the economy in order to generate jobs for the unemployed masses. Public works, farm and rural programs, infrastructure

projects to raise the productivity of national resources, and housing construction were targets of federal investments combined with such additions as a minimum wage under which no employer could pay a working person (Reich 2015).

Twenty years on and a global war later, national investment in people and places once again became the subject of federal concern. While the Second World War made possible the recovery of the nation's industrial heartland and the growth of entirely new regions of the country, places were also left behind. The long-depressed areas of the country where resource-based economies were subject to boom and bust cycles, due to technological change, international competition, and underinvestment, continued to have unemployment rates above national levels. In some instances, places were also left behind lurking in the shadows of the post war boom.

Many organizations—federal, regional, state, and local government agencies, universities and extension services, Tribal Nations, private actors, unions, and grassroots organizations—contributed to social and economic development during the twentieth century. Throughout the nation's fortunes and challenge, groups and organizations working at multiple spatial scales, with distinct mandates and interests, shaped the destinies of regions and communities. In the remainder of this section, we identify some of the most important federal actors that contributed to past regional transitions and examine the institutional forces that enabled (or constrained) their efforts to attend to the needs and interests of dislocated or disadvantaged workers and communities.

Shifts in dominant political ideologies, economic theories, and empirical evidence have seen the federal role in economic development evolve dramatically since the origins of the nation. Federal investment in infrastructure dates from the canals and railroads that began to crisscross the republic in the early nineteenth century as thousands left the eastern states for opportunities in the West (Malone 1998; Rae 1944; Taylor 2015). Federal investment in human capital, meanwhile, dates from at least as far back as the 1862 Morrill Act that established land grant colleges during the American Civil War (Norris 1982; Rogers 1988). Some of the most important federal organizations for economic development that exist today date from the Depression of the 1930s and the period that followed WWII (Markusen and Glasmeier 2008). The Tennessee Valley Authority (TVA) and the Appalachian Regional Commission (ARC), for instance, led to major resource-based and infrastructural transformations of regions of the country. Other major economic development efforts were led by the Economic Development Administration (EDA) of the Department of Commerce (DOC) and the rural development programs of the U.S. Department of Agriculture (USDA).

## *The Tennessee Valley Authority*

In 1933, in the depths of the Great Depression, Congress created the public corporation, the Tennessee Valley Authority (TVA) as part of the New Deal to get the American economy moving again (U.S. Congress 1933). The TVA was a physical landscape resource development program that employed residents of the poverty-stricken and flood-prone region (Schaffer 1990). Reclamation efforts were intended to control floods along the Tennessee River, reclaim lands through reforestation and restitution, and to rehabilitate regional landscapes for agricultural, industrial, and other purposes (Neuse 1983). The project included the construction of dams, reservoirs, transmission lines, and other structures for the generation of power to electrify the region. In that same decade, the federal government conceived of the Interstate Highway System as a means of providing jobs to those in need in the region and throughout the nation (Weber 2012).

Over the life of the TVA, although the original description of the regional project was of a multi-faceted agency, capable of transitioning the region's economy away from a dependence on agriculture toward industry, in the end, the Authority's primary objective centered on providing inexpensive power to energy-hungry industries (Kitchens 2014). Deemphasized were aspects of the initial plans for land reclamation, soil stabilization, and reforestation in service of residents living along the banks of the Tennessee River and its tributaries. Early leadership came under harsh criticism for forcing poor farmers off their land, according to one of the program's many critics, while promulgating the "myth" of the TVA as a "grassroots" democracy (Boyce 2004).

The original vision of the TVA as a regional transformative agent served well the Authority's alternative ambition which was to become a significant multistate power provider. Through its corporate structure—which distinguished it from other development agencies—the TVA had an unprecedented degree of autonomy to operate virtually unregulated, leading to expansion plans, including into nuclear power production that would eventually diminish the public's support of the Authority. To reshape the Authority's mission, in the 1970s, a new leadership team sought to turn the TVA into "an energy lab pursuing such revolutionary ideas as solar power, electric cars, and various conservation strategies, and to find new paths to regional economic development" (Hargrove 2004:587). Although forwarding thinking ideas, the then structure of the TVA was dominated by power distributors that fought against a shift away from power generation and distribution. Public sentiment also had little interest in pursuing revolutionary ideas in the face of high utility prices.

Taking stock of the TVA, a number of questions arise about the effectiveness of an ambitious institutional effort to deliver planned economic development. How were the actions of the government authority perceived from the perspective of the appropriate role for the government? How did the corporatized structure affect the efficacy of the organization as a public agency? How did the structure influence the operational motives of the organization that ultimately put profits ahead of people? To what extent did this early experiment in economic development affect perceptions of the potential efficacy of the federal government as a development agency? How were subsequent economic development efforts shaped by the TVA experience in the eyes of the public, both from those affected by the program and also those convinced one way or the other of what the state could or could not do correctly? Were the original ideals maintained? Or did the overarching goal of power production subordinate the purpose of modernizing rural communities through economic development? Did the TVA treat landowners fairly by utilizing informed assessments of land values when providing monetary compensation for the taking of private property? To what extent were citizens involved during key phases of the project design and execution? As a federal-level institutional response to underdevelopment in an impoverished region, the TVA proved susceptible to capture by market imperatives while delivering economic benefits to a privileged minority. This early experiment in regional economic development demonstrates some of the limitations that institutional efforts at the federal level face in lifting lagging regions of the nation.

#### *The Area Redevelopment Administration*

In 1956, during his quest to become the Democratic vice-presidential candidate, John F. Kennedy traveled through Appalachia. The heart of one of the nation's poorest regions lacked clean water and sanitation, had high rates of infant mortality, a lack of proper housing and schools, and a shortage of medical care (Baum and Southern 1964). In the wake of the mixed outcomes of the TVA experience, the federal government had faced critiques in its approach to economic development in depressed regions of the nation. In 1961, during the Kennedy administration, the Area Redevelopment Administration (ARA) was created by an Act of Congress to establish a demonstration project to provide public support for economic development in communities with relatively high rates of unemployment at a time when the national economy was booming. The nation had come out of the war, and many parts of the country were growing actively, while older industrial cities, rural, and natural resource regions had fallen on hard times (Parr 1966).

Paul Douglas, Senator from Illinois with a PhD in economics, had spent more than a decade proposing and resubmitting legislation to enact a program to help poor, rural coalminers living in abject poverty in the southeastern reaches of the state (Douglas 1971). The ARA legislation specified that to qualify for aid required particular levels of

unemployment. The language also allowed the ARA to grant support to areas with high percentages of low-income families. ARA administrators further specified that these guidelines were supposed to include for assistance for farm areas of low-productivity. Rapidly established, the ARA started with an insufficient organizational infrastructure, a lack of staff experience, and was unprepared for the depth of problems found in the nation's poverty-stricken and slow-growing regions. The ARA quickly burned through its Congressional funding with little more than a small dent made in meeting the needs of target communities (Wilson 2009). Approximately one-third of all U.S. counties were eligible for support under ARA guidelines (Houston and Tiebout 1966). Areas that qualified for ARA assistance were typically rural and generally part of broader distressed regions of the nation (Ruttan, Babb, and Wallace 1963). For example, areas eligible for funding included counties in much of the Appalachian Region, the Mississippi Delta Region, Indian reservations in the Southwest, and the Upper Great Lakes Region.

The ARA was relatively short-lived and beset with administrative, procedural, and public image problems. Criticized for being too piecemeal to be effective, Congress eliminated the ARA mainly for the purposes of political expediency and replaced it with the Economic Development Administration (EDA). The ARA's original charge was all encompassing, forcing the agency to respond to many masters with minimal means. Provided with relatively limited funding, the ARA also had to undertake a wide range of projects that often had conflicting goals (Yoho and Schmid 1965). Originally designed to relieve problems of Northeastern and Midwestern industrial cities, Democratic support required the inclusion of rural areas and declining cities, despite the initial concern being jobs and infrastructure and not the inadequacies of the social conditions of people (Wilson 2009). The requirement that the program match with the objectives of policy members of both Democratic and Republican parties, early investments appeared to exacerbate the relocation of industry from the Northeast and Midwest. Rather than a concentrated attack on the structural problems posed by deindustrialization, the ARA became one component in a poorly focused emphasis on confronting poverty generally.

### *The Economic Development Administration*

The passage of the Public Works and Economic Development Act of 1965 created The Economic Development Administration (EDA) (Lake, Leichenko, and Glasmeier 2004). Utilizing the same tools as its predecessor, the ARA, EDA's mission was to improve the economic conditions in distressed areas of the country. Using a familiar model derived from the experience of the ARA, EDA was able to make loans and grants to support economic development activities in communities around the country. Over its 50-year life span, EDA has been tasked with numerous responsibilities under the guise of increasing economic growth by enhancing the context in which development occurs. The

programmatic history of EDA presents a cautionary tale of the prospects and pitfalls associated with policy interventions that are pulled in opposing directions (Glasmeier and Wood 2005). From the start, tasked with improving the conditions of distressed locations, EDA assumed the responsibility to legitimize the overall effort without the resources needed to accomplish the task given the initial designation criteria was so all encompassing that almost any place in the country qualified as a distressed county.

EDA administrators sought to give highest priority to areas having the worst economic conditions in the nation, as measured by high or sudden unemployment, persistent unemployment, substantial population decline, low median family incomes, and Indian reservations. EDA staff began to question this “worst first” approach within the first few years of programming in the late 1960s due to its limited effectiveness. Staff judged that small rural communities that qualified for assistance lacked initiative and resources and demonstrated limited potential for economic development. Over time, political pressures led to the shift from an almost exclusive rural focus to incorporating distressed urban centers as well as providing relief to areas affected by natural disasters. Owing to an expansion in its already vague eligibility criteria, approximately half of all US counties were eligible for EDA assistance by the mid-1970s, meaning that EDA was no longer an agency primarily focused on areas of acute economic distress (Glasmeier and Wood 2005). Federal allocations to EDA peaked in 1979 and declined dramatically in the early 1980s during the Reagan administration, when the agency became a target for elimination purportedly based on its loss of focus. In its first decade, public works had constituted around three quarters of EDA’s allocations, a proportion that declined to less than half in the 1990s.

The largest recipients of EDA funds over its history have been the nation’s major urban areas of Los Angeles, New York and Chicago (Glasmeier and Wood 2005). Although legislative guidelines clearly defined EDA’s original and continuing focus to be on economically distressed areas, evaluations found that political pressures expanded the agency’s scope, pushed funding towards major urban centers, and led to a decline in funding for the counties and people most in need. Moreover, EDA’s efforts at public works in urban areas to generate much needed employment often started well in project design but failed in implementation due to delays in decision-making when agency partners disagreed on ways forward and created unnecessary administrative processes (Pressman and Wildavsky 1984).

For thirty years, EDA’s efforts remained predominantly focused on providing communities with necessary infrastructure, including water, sewer, and roads. The intent was to improve prospects for creating, attracting, and retaining jobs, especially in manufacturing. A secondary activity that became an important mainstay of EDA’s efforts



was responsibility for providing resources and technical assistance to enable communities to undertake planning efforts, the objective being to move communities away from piecemeal approaches to more systematic economic development practices. Amidst the economic impact of the 1970s oil crisis, EDA assumed another programmatic responsibility, assisting communities experiencing the effects of structural changes in their economies. In response to plant closures, mass layoffs, and significant job shifts, EDA gained added flexibility to work with communities to stave off the worst effects of economic change. As time went on, business formation and support services, and early efforts at small business development occupied more of EDA's efforts (U.S. Department of Commerce 1976). Increasingly spread thin, EDA's funds experiencing continuous cutbacks and were falling behind the demands placed on the agency to conduct business. Another task area allocated to EDA was operating a program to provide Trade Adjustment Assistance for Firms. Support was targeted to lessen the effects of international competition, which was further eroding the economic base of already fragile local economies (Christopher 1988). Research became a more significant part of EDA's billet, faced with growing problems of foreign competition and technological change. As the agency's tasks broadened, partnerships became a more central feature of engagement. EDA was a significant partner of the Defense Department's Base Realignment efforts. To capitalize on the capabilities of sister agencies, EDA also teamed up with the ARC. By the 1980s, the repurposing of the agency without corresponding funding or authority had significantly diluted its effectiveness as an institutional response to addressing poor economic conditions in regions throughout the nation.

Following trends in economic development theory and practice, the 1990s found EDA shifting from a general emphasis on industrial development to a focus specific to industries and firms that encompassed supply-chain links. Today, EDA faces continuous scrutiny as employment levels are at an all-time post-war high. Despite this fact, unemployment and underemployment in many communities in the country remain stubbornly high, suburban poverty is an increasing problem, and small city downtowns are losing their economic base. EDA remains the single agency whose responsibility remains working with communities suffering economic decline and sudden job loss (Hall 2010). EDA's programs are a part of the fabric of economic development planning in the country, and the agency's programs interconnect with those of agencies such as the ARC, the Department of Labor, the Environmental Protection Agency, and the Department of Transportation. The institutional trajectory of EDA provides insights on some of the political and ideological influences that contribute to institutional shifts over time.

## *The Department of Agriculture*

Another federal agency that has contributed significantly to economic transition is the USDA, which was until recently among the largest federal employers with over 100,000 employees and a budget exceeding \$150 billion (USDA 2020). President Lincoln established the USDA in 1862 at a time when the U.S. economy was primarily agrarian, with a mission to collect foreign seeds and distribute them to farmers. In subsequent decades, the size, budget and responsibilities of the USDA would grow significantly as it responded to the crises of the times, taking on rural development, food safety issues and commodity programs, managing forests, grasslands and soil conservation, setting price controls, purchasing crop surpluses, delivering farm subsidies and administering food assistance programs to disperse surplus commodities.

Several programs within the USDA that evolved during the Great Depression were part of an ambitious campaign to reshape rural America. The Farm Security Administration (FSA)—originally established in 1935 as the Resettlement Administration (RA)—was the New Deal’s “most sustained and successful effort to address chronic rural poverty in the United States” (Roberts 2013). The FSA succeeded in improving the social and material conditions for tens of thousands of rural families and helped turn thousands of tenants into farm owners. Its ambitious resettlement program, however—which sought to relocate entire farm communities of some 650,000 people to areas it cleared, leveled and fenced in the hope that farming there could be carried out more profitably—was controversial, expensive, and had ambiguous results. When the Dust Bowl of the Great Plains displaced hundreds of thousands of tenant farmers—as depicted in the songs of Woody Guthrie and photography of Dorothea Lange—the FSA operated migrant resettlement camps in California (Cannon 1996; Gavin 2017). In its anti-poverty efforts, the FSA also promoted cooperatives and provided medical care to rural families. The USDA (n.d.) holds that families who participated in FSA programs saw incomes rise 69 percent between 1937 and 1941. The agency’s effectiveness in tackling rural poverty was limited by a range of external and internal factors (Baldwin 2018; Saloutos 1974). Externally, the enormous poverty of the populations it served, and the ideological hostility from political enemies of the agency’s collectivist ethos (including the Farm Bureau) reduced congressional support and funding for the program. Internally, the inability of FSA leadership to define the organization’s goals and methods, and the failure of its employees to implement the program, also limited its effectiveness.

Other rural economic development programs that operated through the USDA include the Rural Electrification Administration (REA), the Rural Development Assistance (RDA) program, and the Farmers Home Administration (FmHA). These programs were updated in the Rural Development Policy Act of 1980, which required the USDA to develop

national goals and strategies for achieving rural development, offer planning assistance and rural program coordination, and continue to support rural infrastructure for services, housing, and jobs (Markusen and Glasmeier 2008). In another reorganization in 1994, a range of disparate initiatives including REA and FmHA were brought under the newly formed USDA Rural Development. As of 2018, USDA Rural Development had a loan portfolio of \$225 billion and employs some 4000 people (USDA 2018).

One factor that limited success of federal efforts at rural economic development is racial discrimination throughout the USDA's history. African American farmers, in particular, were denied access to federal loans and subsidies, resulting in many losing their farms and homes. Recognizing the USDA's discrimination (in *Pigford v. Glickman*, 1999) a Federal District Court Judge approved a settlement for thousands of farmers in Alabama, Mississippi, Arkansas, and Georgia in one of the largest civil rights class action settlements in the nation's history (Cowan and Feder 2010). Approximately \$1 billion was awarded to over 13,000 black farmers for cash relief, tax payments, and debt relief. In December 2010, Congress appropriated another \$1.2 billion to settle claims from some 70,000 farmers who had filed late or not had their claims heard in the first settlement.

*Summary: A hostile environment for transition and economic development?*

The review that we outline above appears to confirm that federal programs for economic development have proven to be highly susceptible to straying from their original mandates and, in many cases, perpetuating social and economic inequities. Institutional efforts originally designed to transition some of the nation's most economically challenged regions to a qualitatively improved state were eroded, diminished, then appropriated for different purposes. Twentieth century economic development, in the American experience, has been characterized by ambitious institutional designs enacted in a hostile environment. When political and economic conditions are right, the ambition of programs such as those enacted in the New Deal and the Great Society are unparalleled. However, those institutional designs endure antagonism over time from a number of factors that impinge on their efficacy. Institutions such as the TVA, designed to transition a poor region's economy away from agriculture toward industrial modernization, came to force poor farmers off their land and deliver benefits to a privileged elite. Market imperatives and existing patterns of racial discrimination were major factors in preventing the TVA from delivering on its economic development promises. In the ensuing decades, as poverty persisted across many of the nation's slow-growing regions, the ARA and EDA, too, were hindered by ideological hostility and political influences that pulled apart an institutional design aimed at regions in need. New Deal institutions through the USDA, similarly, were designed to transition regions away from chronic poverty—including the RA and FSA—but suffered sustained ideological

attacks despite their efficacy in delivering economic development benefits. Taken together, systemic discrimination, ideological opposition, and political influences that result in poor program administration contribute to a hostile environment for ambitious institutional efforts to support transition. These are some of the major institutional factors that appear to impinge on the effectiveness of federal programs to deliver economic development for communities across the United States throughout the twentieth century.

The aforementioned illustrations of the ways that federal efforts enable or impinge on the effectiveness of transitions leads us to consider three case studies that exemplify the approach to transition in the U.S. during three distinct periods, focused on differing underlying problems. The goal in this next section is to identify the institutional mechanisms that emerge during transition resulting from the broader institutional framework that underpins the American economy. Institutional mechanisms were enacted in each case to respond to economic dislocation, but importantly faced constraints coincidental with temporal circumstances, including the political influences of parties in the White House and Congress, the collective human suffering evident, the economic rationale that can vacillate between the drive for productivity, national pride and moral positioning, fear of lost competitiveness, or obvious market failure. Always present and serving as a damper on policy actions throughout the cases are the extent of the magnitude and geographic extent of the problem and the social group involved.

## **5. Experiences with Regional Transitions in the Twentieth Century**

### **5.1 The Grand Experiment: Fifty-Five Years of the Appalachian Regional Commission**

In preparation for the 1956 presidential campaign, John Kennedy, with aides and his brother Bobby, made several trips to West Virginia to test the waters about a bid for the nomination for vice president against a hometown boy of the state. With help from stalwart friends, Kennedy would become the favorite son of the 1956 county Democratic Committee, eventually winning over the state's twenty-eight delegates displacing Estes Kefauver, the state's beloved home boy. Four years later, in preparation for the presidential election of 1960, Kennedy once again returned to Appalachia, this time seeking the presidential endorsement of the Democrats of one of the nation's poorest states. Behind in April, he won the state promising economic development in West Virginia. Thus, began the story and promise of economic development in the mountains.

### *A region impoverished through resource extractive development*

Conditions in the region were intolerable (Gaventa 1982). More than almost a century of external ownership defined the area (Hansen, Higgins, and Savoie 1990). In the early nineteenth century, externally-owned companies acquired timber rights at low prices and stripped billions of board feet off the hillsides. Then absentee owners purchased unrestricted mineral rights, blasting off the tops of mountains to access coal seams, pouring the overburden into valleys bottoms blocking streams, destroying fish habitat, and causing downstream flooding that left roads impassable (Gaventa 1982). Much of the environmental damage occurred in the interior counties of the region. Their remoteness made coal extraction dependent on trucks to haul the resource to the coal tipples. The human cost of the region's resource development was enormous. Despite the vast resource base extracted from the area, little economic and social progress took hold. Wages in the mines were low, the work was dangerous, and boom and bust cycles were regular occurrences. Owners of company towns tied up entire workforces, renting shacks to families, while creating a dependent population tied to the provision system of company stores, where services and necessities could be purchased at inflated prices (Billings and Blee 2000).

Dominance by outside interests encompassed all aspects of life from local governments to public services. The pathway from the mountains to the state houses of the region meant all influence was directed in service of the mine owners. Companies avoided taxation and made little effort to provide needed resources such as social services, schools, hospitals, or libraries. In these towns there were few places to gather and the lack of appropriate schools provided few options for the children of coal mining families. Keeping the population ignorant meant that mine owners had a ready and captive workforce to change out as workers aged-out or left the mines altogether due to injury. The southern end of the region fared no better in the 1950-1960s as agriculture began dying out (Hansen, Higgins, and Savoie 1990). Small farms were consolidated into large corporate operations ideally designed to produce commodities for exports. The existence of small factories that provided alternative sources of jobs were precarious and many shut down due to international competition. These types of businesses, too, were often non-locally-owned. Disinvestment was evident since the 1920s due to a lack of upgraded equipment needed to compete with the manufacture of low-cost imports. Trade policy kept labor-intensive operations in business. Faced with little pressure to modernize, factories were able to hide behind national quota barriers (Glasmeier, Thompson, and Kays 1993). A similar fate was plaguing the northern edges of the region. Once a site of heavy machinery production, the northern states of Ohio and Pennsylvania were losing jobs to international competition tied in part to an absence of investment by

parent corporations and the continuing shift to imported products displacing domestic supplies of steel fabricated goods.

Those who could leave the region migrated to more favorable labor markets. Few choice destinations existed within the region to attract migrating residents. In the 1950s, net out-migration totaled more than 2.2 million persons (Alexander 2006). Central Appalachia had virtually no substantial or even modest-sized cities. Fewer than one in six persons lived in a town of more than 2500 persons. What made Appalachia unique was its central location amid two large industrialized and urbanized areas: the Midwest and the Northeastern U.S.

### *The making and institutional design of the Appalachian Regional Commission*

Recognizing the region's fate was in the hands of initially ten and eventually twelve states, Governors convened a group to formulate a plan to address the distress of the area. The governor of West Virginia knew of President Kennedy's experience in the region and his self-professed debt to the state for his election. The group approached their representatives in Washington, returning with instructions to formulate a plan to take to the Capitol. While devising a plan that would eventually be acceptable to recalcitrant governors from the north, Kennedy instructed the ARA to make preliminary investments in the region. Lacking substantial grant funds or other cash resources, funding consisted primarily of loans. By 1963, with national exposure to the region's deep problems, the ARA under attack for disorganization and limited impact, and the magnitude of the condition of poverty documented, Kennedy created a joint federal-state committee to prepare legislation to establish the Appalachian Regional Commission (Hodges 1964).

John F. Kennedy convened his President's Appalachian Regional Commission (PARC) on April 9, 1963. He asked the group to study the region and prepare a comprehensive action plan for its economic development. Central to the resultant strategy was a new regional organization, the Appalachian Regional Commission (ARC). Underlying the ARC mission was PARC's clear concept of the Appalachian problem. The opening and closing words of the PARC report to the President come straight to the point:

Appalachia is a region apart—geographically and statistically. The Appalachian program will be many programs, unified only by their singleness of focus: the introduction of Appalachia and its people into fully active membership in the American society (PARC 1964, in Isserman 1997).

Appalachia, the report argued, differed from the rest of the country in the mid-1960s. The supporting statistical analysis showed how Appalachia was a region apart in socio-economic terms because of its low income, lack of urbanization, deficits in education, and deficits in living standards. While recognizing the heterogeneity of Appalachia, the report characterized Appalachia in terms of several gaps between it and the nation and presented supporting statistics that stressed:

Appalachia is more striking in its homogeneity than in its diversity. Unlike though they may be, its subregions share an unhappy distinction: rural Appalachia lags behind rural America; urban Appalachia lags behind urban American neglect, and metropolitan Appalachia lags behind metropolitan America (PARC 1964:1).

The initial drafting of the ARC considered configuring the entity's powers similar to the TVA, especially the ability to raise its own funds. In the end, the Commission took the form of a state-federal partnership in which the federal government would provide matching resources for programs that spanned goals, including housing, transportation access, public services, and human well-being. The structure of the agency included a federal co-chair appointed by the President, a states' co-chair elected from among the member states, and local development districts (LDDs). Referred to as LDDs, these multi-county organizations were tasked with proposing projects that, once formulated, sought state approval, and then applied for federal funding to enable execution.

#### *Appalachian development and change through the decades*

Over the life of the Commission, much has changed. Looking back at 1960, there were in fact at least seven regions of economic distress in the nation. (The formulation of the ARC spawned the interest of other regions of the country suffering from economic problems. None, but the ARC was eventually funded). Of all, Appalachia rose to the top of public observation, thanks to the early and persistent interest in the region by two presidents: John F. Kennedy and Lyndon B. Johnson. After much wrangling, initial funding for the area through the Commission was on the order of \$900,000,000 (Oral Interview Batt 1967;1965 dollars). A remarkable sum, mainly due to the outsized need with a significant share of the funding targeted toward road construction. Impenetrable, the rugged, mountainous landscape and steep narrow flood-prone valleys made hilltops the few places where commerce could operate somewhat efficiently.

In the late 1970s, amid a coal boom marred by growing competition with coal supplies from the Western U.S. and international imports, along with a contentious miners strike for better working conditions, President Carter renewed the nation's commitment to

Appalachia well-beyond the fate of the coal industry. For although over the first twelve years of the Commission's life, improving conditions were evident in the relatively urbanized portions of the region, little progress was experienced in the region's remote areas. As stated in the ARC Magazine of the time: "While much progress has been made in the Region, Appalachia still suffers from environmental pollution, a shortage of community facilities, neglected human services, and a one-industry economic base in many communities (Albers 1978:9)

The ARC originally consisted of 10 states, defined based on geography and economic circumstances. States joining later were initially reluctant to be designated a part of the ARC, resisting an association with poverty and economic isolation. Once a budget for the Commission was made public, presiding governors initially hesitant, signed-on when confronted with a scale of allocated resources unheard of in previous development programs.

Unlike ARA and EDA, the ARC was born under the guise of a recognizable theory of economic development. Fashionable at the time, growth pole, and growth center theory was promulgated by regional and urban economists. The theoretical proposition underpinning investment decisions was that by concentrating resources in selected locations, development would eventually radiate outward as the population grew, and the demand for resources drawn from the hinterland would spread to adjoining areas. This strategy became the underlying justification for the focus of resources, which targeted small and medium-sized cities on the edges of the multistate region. The model focused on the locations with "the greatest potential of future growth." By implication, the places with the least resources, the most inferior prospects, and hardest conditions to correct would inevitably be left behind.

#### *Multi-level governance, federal-state-local partnerships*

The model of LDDs—an institutional innovation unique to the ARC—localized the delivery of resource programming at the scale of multi-county regions. By focusing planning efforts at this scale, states divided their qualifying areas into groupings assumed to be most likely to function as growth nodes (Hansen 1990). Left to set their own criteria, states selected growth centers that were neither comparable nor necessarily based on easily assessed conditions. The inevitable outcome was that the smallest, least urban, and more isolated counties were left behind, a consequence that would come back to haunt the Commission when in the 1980s Ronald Reagan threatened to zero out the Commission in his 1980 presidential budget.



The Appalachian Regional Commission is recognized as a roads program primarily, despite the initial concern that resource development had left the people of the region behind and, in some cases, poorly treated. The motivation for what became known as the Appalachian Development Highway System (ADHS) was, from the beginning, to be part of a multi-pronged ARC-led effort to reduce poverty and enable more significant economic development by improving accessibility, workforce skills, and community infrastructure (including water, sewer, telecom, and industrial park facilities). The intended role of the ADHS was to address the need for accessibility by reducing the isolation of many communities, bringing mobility options and highway connectivity up to levels available elsewhere in the nation.

Although often criticized for a single-minded approach to development based on highway construction, in the early days of the Commission, a surprising amount of funding went to social welfare investments. Through the early 1970s, while 59 percent of the accumulated funds went to highways, the health and education programs together comprised 18.9 percent of the 1974 appropriation. Also, supplemental funding under the Section 214 Supplemental Funds program represented 33.6 percent of total funds.

#### *Threats of termination and the persistence of distress*

Throughout the history of the ARC, the Commission has maintained a research arm, a technical assistance capability, and undertaken periodic evaluations to determine the impact of its programs and initiatives in line with efforts to remediate conditions in the region. In the 1980s, one of Ronald Reagan's first efforts at budget reduction was his attempt to zero out the Appalachian Regional Commission. Fearing the worst, the ARC staff undertook a project to review the distribution of resources across the entire region to identify counties that had been on the losing end of funds receipt (Glasmeyer, Wood, and Fuellhart 2006). Analysis indicated that while positive change was evident on the edges of the region, including counties surrounding metropolitan areas, the core counties of the coal region had made little progress since the program began. Burdened by the effects of this exclusion, the Commission designed a plan that would target resources on what became known as “distressed” counties. With the introduction of the Finish Up program, these small, often isolated, resource-dependent counties—over 100 in number—were targeted to receive resources, in some cases the first time they had received funding.

Reagan was ultimately unsuccessful in his quest to terminate the agency. State governors, Senators, and local political leaders banded together to save the Commission arguing that the organization had done significant work and that the job was incomplete. Out of this moment of reckoning came the distressed county designation, which is now the basis for more and more of the Commission’s resources. A series of studies were done in the late

1990s and early 2000s, examining the conditions of distressed counties relative to the rest of the counties in the region. The central finding of this analysis is that there has been significant improvement in the region since 1960. The number of distressed counties has decreased by more than half during the last 30 years. The number of distressed counties changed over the 60-year history of the region and are subject to increases and decreases based on the business cycle and fate of the coal industry.

Today the ARC region extends from the Southern Tier of New York State to northern Mississippi. It covers 205,000 sq. miles and is home to approximately 25 million people, 42 percent of whom reside in rural areas. In 2020 there are 420 counties in 13 states. When the ARC was established, the region included 360 counties in 11 states (portions of New York and Mississippi joined later). Current evidence indicates that investments made in the region have significantly reduced poverty and economic deprivation in parts of the multi-county area. Still, after 60 years of investments, the most challenging areas remain hampered by tough physical conditions and require continued support by state and federal governments.

### *An Energy Blueprint for Appalachia*

Transition to a post-coal Appalachia came early for the ARC. Most of the coal used to generate electricity in the U.S., historically came from the Appalachian and Illinois basins. Over the last four decades, demand has fallen from a high of 95 percent of all coal consumed to 43 percent of coal used to generate electricity. The decline in demand is attributable to several factors, chief among them the shift from high to low sulfur coal for power generation. In 2009, the United States Geological Survey (USGS) predicted that Appalachian coal would be near depletion by the middle of the twenty-first century (Milici and Dennen 2009; Pierce and Dennen 2009). Recognizing the problem ahead, ARC's research division began to chart a course to transition the region to a future independent of coal (Thompson et al. 2001).

What reset the region's relationship to coal was not a decline in demand for the area's resources. Instead, a far more powerful influence was changes in the global price for oil, a commodity that Appalachians dearly need, given their relative isolation and the necessity to drive long distances to access goods, services, and jobs. Rising prices jumped in large increments from 2003 and US\$ 25/barrel to US\$ 147.30 in 2008. By the end of 2009, prices had declined momentarily to US\$ 32/barrel. Prices finally settled at around US\$ 70/barrel. When once again stable, the price was almost three times the rate it was only five years prior.

For the first time in the history of the Commission, staff in the federal office convened meetings and commissioned studies to address the changing energy environment. Holding town halls, commissioning studies examining alternative sources of energy, exploring strategies for energy efficiency, and conducting research into non-renewable energy innovations, the Commission constructed an Energy Blueprint for the region (Oak Ridge Center for Advanced Studies 2006). A decade prior, the region was flat-footed when energy prices jumped six-fold. Today the area is aware of the challenges of being dependent on a fossil fuel that inevitably will need to phase out if the nation is to pursue a low carbon future. It also now has the baseline studies in hand to chart a path supporting needed change (The Keystone Center 2006).

In 2011, the Commission formulated a strategy to assist communities in the region to reduce their costs of infrastructure by following policies based on efficiency, conservation, and self-assessment. Based on a decade's worth of research and investments in energy security, the region is well-situated to confront future volatility not only in the coal industry but also in reaction to changes in the overall domestic energy industry (The Cadmus Group 2011). Once again, volatility in the coal industry presents the region with new challenges. Unlike in the past, the area is beyond asking fundamental questions about the industry and, therefore, is better able to partner with the key counties that remain coal-dependent to find mechanisms to enable affected communities to respond proactively to decreasing demand for coal (Bowen et al. 2018).

Counties in the region are not out of the woods. Mountaintop mining continues and residents remain subject to environmental hazards such as mine fires, stream flooding, and tailing pond collapses. Changes in leadership at the state level dangle coal development in front of miners, depending on the political party in power. With the prospect of good paying jobs held out for some, conflict around coal exploitation remains a sore issue among residents living in the affected parts of the region.

The continued decline in the demand for coal, due to the growth of shale oil and gas, is forcing the more impacted areas to reach far beyond what might be considered typical responses or solutions to changes in coal demand. As an example, a technology non-profit organization supported by state politicians and funded by the ARC promised to teach West Virginians to write computer code and get them well-paying jobs. The stable and lucrative careers never came to fruition and workers that gave up their jobs for the program had to start over again at the bottom rungs of the jobs they had left behind (Robertson 2019).

Today the region is focused on raising the capabilities of residents to work in twenty-first century jobs. Fighting an opioid epidemic and improving the health of residents by

reducing obesity, smoking, and dangerous behaviors, are what are on the minds of the region's leaders. Amidst these quite distinct challenges, the region has bright spots. High school graduation rates are on par with the nation, and the area is diverse by national standards. Better positioned to embrace the next transition, investments of the ARC are and will continue to be critical contributors to the region's future (Lane et al. 2018). For workers here, and throughout the nation, that have an eye on the decarbonization transition, it serves to revisit a different period and another instance in which the federal government sought to deal with a disruptive transition that it had helped to create.

## **5.2 Worker adjustment in response to foreign competition and depleting resources**

Created in the Trade Expansion Act of 1962, Trade Adjustment Assistance (TAA) was designed to provide recompense for workers and businesses hurt by the nation's policy of lowering trade barriers. According to Norris (1982) and Rogers (1988), TAA may be one of the best laboratories in which to examine governments' ability to compensate those left behind by global integration, owing to its broad scope and long history. Today, TAA assists workers adversely affected by foreign trade and is the biggest domestic trade compensation scheme ever developed. A long record of scholarship demonstrates that, at best, the TAA has had mixed success in cushioning the negative effects of exposure to foreign imports (Decker and Corson 1995; Guth and Lee 2017; Marcal 2001).

### *The making and institutional design of Trade Adjustment Assistance*

On the eve of the 1960 presidential election, President Kennedy yielded to pressures from the textile and apparel industry to create TAA to compensate workers for tariff cuts under multilateral negotiations and other liberalizations (Glasmeier, Thompson, and Kays 1993). TAA was designed to solve two goals: to compensate workers losing their job to trade flows, and to lessen the impact of employment transition by providing income support and retraining benefits to laid-off workers and workers affected by declining sectors. The Department of Labor certifies a firm's eligibility. Workers laid off from firms certified by the Department of Labor are eligible for retraining and cash assistance beyond that provided by the unemployment insurance program. In 1994, an additional program to provide transitional assistance was established in response to the introduction of the North American Free Trade Agreement, with some commitment to assisting secondary workers (upstream suppliers and downstream finishers) through dislocated worker programs in the Workforce Investment Act of 1998.

The primary benefit of the TAA is the income and training support that it offers for intensive worker retraining as workers transition to new industries (U.S. Congress, Office of Technology Assessment 1987). TAA benefits have been underutilized throughout its

lifetime. Over 90 percent of approvals have involved compensation for lost jobs, primarily in the auto manufacturing, steel and textile industries. The support usually arrived long after the employment was lost, labeling TAA “burial insurance” (U.S. Congress Senate Committee on Finance Subcommittee on International Trade 1979). For Magee (2001), there is little evidence supporting the view that the Department of Labor actively uses the certification process as a means to promote distributional equity. The most persuasive argument in favor of such a program is that the government can offer extended unemployment compensation to workers as a payoff in exchange for a reduction in their demands for tariff protection. TAA has long been “unloved by both sides of the political spectrum” and held hostage in partisan negotiations, a factor in its mixed effectiveness (Kim and Pelc 2019). Republican legislators, often opposed to government assistance programs, tended to support TAA programs when a large portion of their constituents stood to gain from trade (Rickard 2015). Democrats, in turn, voted against TAA when trying to derail the delegation of “fast track” trade authority to the President.

#### *Institutional issues constraining the effectiveness of TAA*

Beyond its existence being susceptible to partisanship, several institutional issues have challenged the operational effectiveness of the TAA program in its goal of aiding workers exposed to the unequal gains of international economic integration. First, there is a highly uneven allocation of TAA across regions with similar industry structures. While workers and firms in some trade-exposed areas petition for and obtain, high levels of compensation, other regions of identical levels of trade dislocation are entirely underserved (Kim and Pelc 2019). As a 1987 Congressional report concluded in its assessment of the program, “there is no reason to believe that TAA certifications accurately reflect the geographic or industrial distribution of trade-affected workers” (U.S. Congress, Office of Technology Assessment 1987). Dislocated workers fall prone to the informational and framing effects generated by the political climate they find themselves in (Kim and Pelc 2019). In other words, political elites that are hostile towards TAA are less likely to provide information to displaced workers in a positive light and to guide workers to the administrative support needed to receive assistance. Petitions initiated by unions, which are most likely to be informed about TAA, are the least prone to these elite effects. Petitions initiated by workers and firms are most prone to the influence of political elites. Assistance often does not reach dislocated workers in need due to political influence that may harm their interests, especially in the absence of a role for unions.

Second, TAA had to deal with unexpected non-linear disruptions, for instance, the 1980-81 explosion in displaced autoworkers caused a massive spike in need for assistance. From 1979 to 1980, the number of workers certified increased by almost 500% to 700,000 workers. The following year, support fell back down to lower than the levels

before that spike. A significant challenge, in the future, is the design of institutional support mechanisms that are responsive and adaptable to the unexpected dynamics of transition. These non-linear dynamics in regional economies and labor markets have important implications for human and financial resources in the institutional responses to economic dislocation. The present unemployment crisis associated with the COVID-19 pandemic demonstrates that acting without full knowledge of the eventual severity of the crisis is better than acting late or not acting at all. In a transition to decarbonization, anticipating the possibility of non-linear and rapid changes by design would allow institutional responses to economic dislocation to better serve those affected by transition.

Third, it was not always clear that dislocated workers were informed about the program. Authorities with responsibility for the administration of the program did not have an incentive to notify workers, due to, among other factors, existing mandates, and burdens of work. Future institutional responses to worker dislocation can learn from that experience by examining the most appropriate communication channels to inform displaced workers promptly on the programs that can support their transition and the levels of assistance they may realistically expect. An effective institutional design would also consider how federal agencies with existing mandates can be incentivized adequately to give impartial attention to those new programs. Finally, workers would benefit from adequately resourced technical support in making their applications for assistance.

### **5.3 The post-timber transition in the Pacific Northwest**

For much of the twentieth century, the timber resources of old-growth forests were the driving force of the economy of the Pacific Northwest. In 1915, employment in the lumber industry accounted for 63 percent of all wage earners in Washington state and 52 percent of those in Oregon (Dumont 1996). Following World War II, the Forest Service and private logging companies increased activity, with production reaching average annual levels of about 10 billion board feet (bbf) from the 1960s through the 1980s, peaking at 12.7 bbf in 1987 (Bosworth and Brown 2007). In 1978, by some estimates, the timber industry directly employed some 136,000 workers (Loomis 2019). Timber-dependent communities, however, would soon experience a rapid decline in the industry.

#### *The decline of the timber economy in the Pacific Northwest*

A first contributing factor related to technological advances, with the introduction and increased use of the chainsaw, making large logging crews obsolete (Center for the Study of the Pacific Northwest n.d.). A second factor was the recession of the early 1980s, which hit the wood products and housing construction markets, especially hard. A third significant challenge came from overseas competition. To accommodate the size and

shape of logs used in Japanese home building, for instance, combined with the constraint of needing to utilize their mills efficiently, Japan required raw logs, meaning that the volume of downstream timber processing in U.S. mills was reduced. Further, Canada, and the American southeast was able to produce timber products more economically than the Pacific NW due to plantation efficiencies and labor costs (Miner 2013). Between 1979 and 1989, mill automation, closures, and consolidations resulted in 24,500 jobs lost in the region's timber industry (Loomis 2016). In 1990 alone, approximately 50 mills closed, causing thousands of layoffs (Center for the Study of the Pacific Northwest n.d.). A fourth challenge was that most of the giant old-growth trees had already been cut. The forests renewed at a rate lower than its depletion, and the remaining trees were more economically challenging to extract. A fifth challenge came from the increased influence of the environmental movement, which questioned the ecological effects of harvesting vast swaths of forests (Kusel, Cortner, and Lavigne 2007).

### *An environmental threat?*

Throughout the 1980s, the timber industry and environmental movement contested the impact of old-growth tree removal on the endangered northern spotted owl. In 1990, the U.S. Fish and Wildlife Service listed the owl as threatened under the Endangered Species Act. In 1991 and 1992, U.S. District Judge William Dwyer issued injunctions that halted any new timber sales off trees removed from federally-managed lands where the owl made its habitat (U.S. Department of Justice 2015). That decision effectively brought to a halt all new timber sales on 10 million acres in 17 national forests in Washington, Oregon, and northwest California (Daniels 2005). Concerns around the spotted owl may have taken center stage in many popular and media accounts of the timber industry's demise, but it was the combination of many forces that initiated the industry's decades old decline.

### *The search for a solution to the region's crisis*

Though several forces contributed to the timber industry's decline, the acrimonious legal battles between the environmental movement and the timber industry led to an increasingly prominent resource conflict characterized as "owls vs. jobs." In the late 1980s, well-financed corporate advertising campaigns polarized relationships between environmentalists and workers in the region (Dumont 1996). That struggle became prominent in the 1992 presidential campaign. Candidates sparred around balancing ecological priorities with the prospects of the region's displaced workers and communities. Following his successful campaign, President Clinton hosted a summit in April 1993 in Portland, Oregon, in search of a solution to the region's crisis. That summit would pave the way for the Northwest Forest Plan (NFP), an effort led by the federal

government to overcome the conflict. Starting in 1994, the NFP included \$1.2 billion of community development assistance over five years. The Northwest Economic Adjustment Initiative (NEAI) was intended to enable workers, families, businesses, communities, and tribes in northern California, Oregon, and Washington, to regain or improve their economic and social wellbeing.

### *The institutional design of the Northwest Economic Adjustment Initiative*

The NEAI focused on the need for economic development in four categories: economic assistance for workers and families, development of business and industry, support for communities and infrastructure, and ecosystem investment. In line with the administration's theme of "reinventing government," the initiative also sought to overcome interagency conflicts that had resulted in administrative gridlock in the region, by streamlining service delivery and emphasizing cooperation.

Those responsible for developing the NEAI realized that to make timely progress, they could not wait to form an entirely new program. Further, they could not wait to pass legislation through an unfriendly Congress that could stop a public policy response in its tracks. Instead, and in line with its theme of improving the federal institutions that already existed, the Clinton Administration decided to launch the initiative through existing federal programs. The NEAI involved seven federal departments with 16 different programs financially; three other agencies provided technical assistance (Tuchmann, Brookes, and Daterman 1996). When the administration's national economic stimulus legislation was voted down, the funding for the initiative had to come out of existing funds allocated for federal programs, putting considerable constraints on projects eligible for funding. Some 60 percent of the initiative's funding came from the USDA Rural Development, meaning that the bulk of the funding went to projects such as drinking water and wastewater systems, built in places where little to no similar infrastructure previously existed. Those investments in vital infrastructure had potential long-term gains for human wellbeing and regional ecosystem management, but according to Kusel, Cortner, and Lavigne (2007) failed to provide the immediate economic relief that workers and families needed and hoped for.

The institutional design for management and execution of the NEAI spanned state to federal levels. In California, Oregon, and Washington, State Community Economic Revitalization Teams (SCERT) were established to receive funding proposals and make funding recommendations. Each SCERT was free to determine its organizational structure, which counties within their boundaries would be eligible for assistance, and which procedures and criteria it would use to determine funding priorities. Oregon and Washington opted to include members of the public on their SCERTs, while California's



members were all county or state officials (Kusel, Cortner, and Lavigne 2007). These differences in citizen involvement demonstrate how the NEAI empowered states to take quite different institutional approaches to local-level decision-making and execution.

Regional Community Economic Revitalization Teams (RCERT) were established to discuss and coordinate regional activities and to link each of the SCERTs to each other. The region's Native American tribes, which had nation-to-nation status with each other, selected the Intertribal Timber Council to represent them on the RCERT. At the federal level, a Multi-Agency Command (MAC) served as a link to the White House from which resources were committed. Notably, the SCERTs reflected different states' internal politics in response to the economic effects of timber decline. For instance, Oregon and Washington had well-developed economic development departments that regularly worked with rural communities. The communities of northern and rural California, by contrast, felt ignored politically and economically by the wealthy population centers of their state's major cities and insisted their counties have representation on its SCERT. California placed its SCERT operations in the California Resources Agency, which had little pre-established linkages to the federal agencies that administered NEAI funds.

The major success of the NEAI, according to evaluators, was its achievement in shifting the culture of federal and state agencies in their approach to economic development, from program-driven priorities to a collaborative problem-solving approach for communities (Kusel, Cortner, and Lavigne 2007). The multi-level governance arrangements gave rise to changes in the way that agencies and layers of government networked and partnered to resolve problems for the benefit of communities. The Clinton administration later considered applying the initiative as a model of collaboration in other policy areas, such as fire, though those did not come to pass in significant ways. One institutional legacy of the initiative may be improved coherence in inter-agency economic development efforts in the region, though opinions are divided on how lasting those changes were.

#### *The limits of the institutional response to transition*

Notwithstanding service delivery improvements, major problems characterized the institutional response to the transition associated with the decline of the timber industry. From 1990 to 2000, the number of primary timber manufacturing jobs declined by 30,000 which represented more than a quarter (Charnley 2018). The majority of those losses occurred in the period 1990 to 1994 after injunctions on federal timber harvesting. The NEAI provided some job training and skills development. Retrained workers, however, generally had to move away from their home communities to find employment (Charnley et al. 2006) and the initiative failed to create the vast numbers of new jobs expected from ecosystem management. The NEAI had been expected to provide "predictable levels of

resource outputs and recreation opportunities, which would in turn provide predictable levels of employment” (*Ibid.*). An independent evaluation undertaken for the USDA ten years on from the program’s inception concluded this had not been achieved and adjudged its assistance for workers to be “too little, too late” (Dillingham 2006). Several institutional characteristics may explain how the initiative failed to more effectively address the needs of displaced workers and their families.

The NEAI was deficient in its level of ambition, timeliness, and duration. In essence, the extent of its economic development efforts were too little, too late, and too short in duration to meaningfully support dislocated workers and communities. The scale of the timber industry’s decline is reflected in the Forest Service’s 1988 estimate that 44 percent of Oregon’s economy and 28 percent of Washington’s economy were then dependent on national forest timber (Yaffee 1994). Lost jobs included those in log harvesting, transportation, milling, and service industries that supported timber workers. Estimates of the impact of economic decline varied widely, with predictions of timber jobs lost ranging between 12,000 to 147,000 (Gorman 1989; Sample and Le Master 1992). In the early 1990s, some reporters equated the scale of the timber job losses with the decline of the American auto industry due to the economic cost of putting so many out of work (Rice 1992). In addition to job losses, counties also struggled to provide essential services, including funding for schools, having lost the 25 percent of federal timber sale proceeds they had become accustomed to receiving for the majority of the twentieth century (Dumont 1996; Miner 2013). Timber workers and communities were hard hit, with reports of increased alcoholism, suicides, homelessness, unemployment, and the demise of community cohesion (Dumont 1996; Kusel, Cortner, and Lavigne 2007).

The Clinton administration framed the NEAI as a response to the plight of timber communities suffering from the negative socioeconomic effects of dislocation. Nonetheless, workers and their families felt betrayed or confused when the initiative failed to deliver on their expectations (Kusel, Cortner, and Lavigne 2007). Though the federal government was reportedly preparing for around 40,000 job losses (Dietrich 1992, pg. 229) worker-retraining programs in the initiative paled in comparison to the scale of the challenge. The federally-funded “Jobs in the Woods” program, for instance, were designed to retrain dislocated timber and mill workers in the skills needed to perform ecosystem restoration, but the program did not advance past a pilot stage. Ecosystem management programs across the region led to just 2,200 jobs (equivalent to 600 full-time jobs) in 1994 and 1,500 jobs in 1995 which did little to respond to the employment needs of regions affected by the transition away from the timber economy (Tuchmann, Brookes, and Daterman 1996).

### *Economic dislocation and regional response in retrospect*

Several reasons contributed to the mismatch between the needs of workers and communities and the insufficient support provided through the initiative. First, the demand for services outstripped resources available from the start, as layoffs had been ongoing long before the effort began. As we have discussed, a vast number of timber-related worker and community dislocations occurred years before the NEAI launched. While the conflict in the region was framed in large part as jobs-versus-environment, the economic reality in the region was one of ongoing and longstanding decline decades in the making. Political leaders may be able to seize on opportunities that well publicized conflicts offer, but struggle to mobilize the resources needed to genuinely help workers and communities transition from ongoing industrial decline.

Second, federal funds for retraining programs were limited in a context when Congress had become hostile to economic development throughout the 1980s. Third, limitations on unemployment insurance restricted the time workers could receive support when they were enrolled in retraining programs. Fourth, workers and families lived in remote areas “beyond the reach” of training programs. Fifth, program support was at times based on estimated (not actual) job losses. Estimates were based on large employer trends that ignore smaller operations and migrant workers, which constituted a large proportion of the labor force. Sixth, staffing and support did not match the scale that such a program demanded; the initiative provided little to no additional staffing, meaning that existing staff were stretched and indeed exposed to agency downsizing. That the program was allowed to continue without a course correction can be explained by a failure to build in a learning process, which was also typical of the other adjustment programs we examined above. Despite calls in the initiative’s organizational documents for benchmarking and monitoring, no systematic analysis of the program occurred until an independent evaluation in 2002 (Kusel, Cortner, and Lavigne 2007). The means to undertake mid-course corrections were lacking in the NEAI because Congress and the Administration were hostile to dedicating resources to studies or evaluations that may take resources away from tangible activities. Moreover, record keeping differed from state and federal agencies, making it difficult to examine how well or poorly the initiative was delivering on its goals and deliver on its intended outcomes.

Ultimately, the experience of dislocated timber workers demonstrates that while planning for regional economic transitions is possible, no transition to new a means of employment is painless or straightforward. Depleted financial resources, fears of age discrimination, and apprehensions of returning to school characterized the experience of dislocated timber workers (Sommers 1999). Diverse individuals were touched by the decline of the timber industry and the transition thereafter. Among them, families that had worked in

timber for generations and others that went into forest or mill jobs simply because that was the only employment available. Positive outcomes in the face of a labor market transition can take time to materialize and involve more than quantitative measures of wages or job placement. Detaching a regional economy from resource-dependence—on which community identity and culture are often based—does take a toll on the social, cultural, and emotional wellbeing of individuals and communities long after the institutional response to dislocation is over.

#### **5.4 Synthesis of findings from past regional economic and industrial transitions**

Our analysis reveals several institutional, political, and behavioral factors that enabled or constrained the effectiveness of government agencies and their partners in attending to workers and communities dislocated from economic upheaval in the twentieth century. Influential factors increasing the likelihood that workers and communities receive the support that they need to weather the negative effects of regional economic transitions include: the political ideologies of top level political leaders that shape the form of economic support programs; divided government both within and across states; the inclusiveness and diversity of voices in planning processes that develop, implement and sustain those programs; the efficacy of communication about support programs available to dislocated workers and communities; the amount and source of federal funding; and political influences during operation. In other words, these factors shaped the extent to which past transitions are more, or less, equitable. The commonalities across the cases that we examined lead us to make a number of observations relevant to just transitions.

First, public policy efforts responsive to regional economic dislocation have, in general, over-promised and under-delivered. The extent of funding on offer, and the ways that funds are to be accessed, was often unclear, poorly communicated, and misunderstood. The legislation formulated in anticipation of the shutdown of the timber industry in the Pacific NW in the early 1990s, for instance, failed to receive Congressional approval. As a result, the \$1.2 billion Northwest Economic Adjustment Initiative (NEAI) was, contrary to original plans, funded from existing initiatives. The change in funding source curtailed the scope and ambition of the initiative. Many dislocated communities in the Pacific NW felt betrayed when they had to take on loans, not grants, and when the funding available was less than what they thought they had been promised.

Similarly, communication failures were evident in the lack of clarity on TAA for dislocated workers affected by the opening of the American economy to international competition. Authorities with responsibility for TAA administration did not have the incentive to inform workers due to existing mandates and overload of work. Support may have been available to those dislocated workers in theory, but the record shows that

workers were poorly informed or unaware that support was available or in other cases were discouraged from accessing it.

The historical record illustrates that several main factors led to these distributional inequities. One factor relates to exposure to the ideological leanings of political representatives. In regions that suffer identical levels of trade dislocation, institutions fail to deliver when there is high variability in the number of workers who petition for and receive TAA assistance. Workers are affected by informational and framing effects generated by the political climate they find themselves in. Petitions initiated by workers and firms are most prone to political impacts. Petitions initiated by unions, which are most likely to be informed about TAA, are best insulated from politics. Another factor relates to local-level prior experience with federal programs. In the Pacific NW, communities and tribes that had previously been through strategic planning processes and who had projects ready to be implemented were in a much stronger position to apply for and receive funding and technical assistance in the 1990s. Many who secured funding for their communities through the NEIA attributed their success to earlier experiences in economic planning. An additional factor relates to the perpetuation of structural racism and other forms of exclusion in planned responses through the elite capture of resources.

Second, federal programs designed to support workers and communities in transition were susceptible to stark inequities in the distribution of benefits. A range of social and political factors coalesced to prevent those most in need from accessing resources. In some instances, including the Tennessee Valley Authority, programs primarily benefited large farm operators and were susceptible to cronyism. In the case of the TVA, despite a “grassroots” discourse, appeals to scientific management methods allowed the TVA’s experts to favor powerful local actors at the expense of impoverished, African American, smallholders. When the TVA worked through land-grant colleges in the Tennessee Valley, program benefits were skewed towards existing elites.

In other cases, including the efforts of the Appalachian Regional Commission to overcome persistent poverty, resources were intentionally directed by theoretical claims about the highest likelihood of success by selecting for those “most likely to succeed” rather than those most in need. It was industry that was the primary beneficiary in the early stages of the region’s highway system. In some cases, the most impoverished communities, whose impoverishment provided the initial justification for a suite of social programs, received no resources at all.

A third observation relates to the governance structures that may partially insulate programs from political whims or interference. In the case of the Appalachian Regional Commission, a governance system that spans the local, state, and federal levels gives rise

to a consultative process where bottom-up pressure expressed through local political leaders and local annual budgets acts as a partial check on top-down impulses from Washington. However, regional development programs such as the ARC do remain susceptible to the political winds of the season. Counties that received significant resources had pre-existing concentrations of political influence. The distribution of benefits can be highly dependent on local politics, patronage, and existing institutions. Nevertheless, the ARC's model remains a strong example of a federal-state-local partnership that has proven to help many communities advance development efforts with local support and impact. The institutional design of any regional program to assist workers and communities dislocated through transition is a critical factor in balancing technical and political influences and in determining the extent to which programs support those most in need.

A fourth observation demonstrates the importance of securing federal funding from sources that are not overly constrained by pre-existing mandates. There have been opportunities and pitfalls of funding and delivering assistance through existing federal programs. When the NEIA was, contrary to original plans, funded entirely through existing federal programs, legislative delays were avoided, allowing implementation to respond to immediate needs. However, existing institutional mandates can reduce the ambition of new programs by determining what can be implemented. Unexpected antagonisms can emerge between new funds recipients and localities and programs if forced to share scarce resources. Moreover, lacking unique directives, shared funds are typically governed by pre-existing mandates. The USDA Rural Development, for instance, ultimately funded 60 percent of the NEAI. Improvements in drinking water and wastewater were funded, improving health and quality of life, but doing little to provide much needed economic relief. Funding sources and their original mandate or legislated constraints, and the selection of institutions to implement programs, shape the balance between investing in physical infrastructure and in developing human and social capital.

A fifth observation demonstrates how empowering states and local actors through decentralized management can lead to local-level ownership and improved inter-agency cooperation. In the NEAI, program execution was delegated to the State Community Economic Revitalization Teams (SCERTs). Decision-making authority remained with federal government agencies. Still, these local-level institutions had significant informal sway in determining which counties would be eligible, the procedures they would use to submit projects, and the criteria for prioritizing investments. Oregon and Washington opted to include citizen participation in the CERTs. The use of CERTs forced agencies to examine previously existing barriers to interagency collaboration and to adopt a problem-solving approach instead of program-driven priorities. It also generated opportunities for community empowerment and ownership over their own development. Adopting a

decentralized problem-solving approach may help overcome barriers to interagency cooperation by focusing in a more targeted way on communities in transition.

## **6. Conclusion: Recommendations on Institutional Design for a Just Transition**

In this paper, we analyzed the role of foremost institutions and organizations that have sought to support workers and communities in major regional economic transitions in the United States during the twentieth century. We then examined in detail three previous moments of institutional formation and transformation that responded to either economic dislocation or significant societal disruption, resulting in planned or forced adjustment. Our objective in these analyses was to isolate institutional features and characteristics that accelerated or retarded the pace of change, foreshadowing the prospect of relative success or failure in efforts to support people and communities otherwise left behind. These cases included major technological, environmental, and geopolitical events traversing a mix of rural and urban transitions, with prolonged periods of negative social and economic situations followed by institutional responses. The causes of these transitions are complex and multiple, ranging from external forces (e.g., international trade and global competition) to endogenous forces (e.g., the depletion of finite natural resources critical to a region's economic base). The social effects of the economic dislocations that we examined reflect combinations of large-scale processes, including mass unemployment, resulting interregional migration, and growing mistrust between civil society, government, and business. On a household level, economic dislocation led to decreased value of fixed assets such as housing and increased variable costs associated with a decline in population and reduced demand (public services and property taxes). In addition, households experienced a loss of social networks, diminished access to ecological services associated with the environmental context, and decreased lifestyle choices resulting from the collapse of the primary sector economies. On an individual scale, mental health crises, family dissolution, suicides, substance abuse, and anger between social groups accompany economic insecurity.

Regional transitions demonstrate that widespread social and economic benefits are possible and can alleviate the suffering and poverty of millions of Americans. The majority of these programs reflect the nature of American economic development planning, which has generally exhibited a highly technocratic approach. Few instances reflect civil society engagement in co-determining goals or objectives. Our review of major regional economic transitions during the twentieth century illuminates several ways that federal, state, local, and other institutions took measures to cushion disruptions to workers, families, and communities. Past programs designed to help those groups adjust to changed economic circumstances, however, often struggled to achieve efficacy in benefiting those most in need soon enough, for long enough, or to the degree

necessary. Policymakers too often focused on the “most advantaged of the disadvantaged” who benefited first and to the greatest degree. Those past experiences offer essential lessons on the factors that may circumvent the means of achieving an equitable transition towards decarbonization. In what follows, we delineate five recommendations from our analysis of past transition experiences. There are many factors that government agencies must weigh in putting together effective plans for decarbonization. These recommendations are intended to help policymakers and other stakeholders ensure that—no matter what technical pathways we ultimately pursue in steering us towards a decarbonized future— the transition takes place in a way that is just to workers and communities at the front lines of change.

***1. Policymakers and planners should design adjustment programs that are targeted and tailored to workers, families and communities negatively impacted by transition.***

Policymakers and planners have the power to make decisions early on in the transition planning process that strongly influence which groups will ultimately be targeted to receive much-needed assistance during the transition. Decisions on the eligibility criteria for workers that are considered vulnerable to economic dislocation, the ways that those workers will be informed of support programs, and the timing and means through which workers receive assistance, have significant consequences for distributional equity. In determining the bounds of eligibility, careful attention should be focused on ensuring that all affected fossil fuel industry workers—who bear the health and hazards impacts of the current energy system—are eligible for assistance. Beyond those who directly work in oil, gas and coal production and in traditional power generation, there will be ripple effects on regional economies that will affect other vulnerable workers. Those likely to experience hardship resulting from policy-driven decarbonization include: women, children and the elderly, Native American peoples, immigrants, people of color and other marginalized groups. We know from experience that these underrepresented groups have been most rapidly impacted, and most impacted, by economic change. Similarly, poor, isolated, under-resourced rural and small suburban communities have often lost out on assistance while larger and more accessible communities have benefited. The lack of targeted action for communities in need has been premised on various explanations, including, at times, prevailing economic development theory that privileges places where development assistance is more easily absorbed and likely to have the quickest effect. Learning from the past would mean that policymakers and planners devise institutional characteristics that ensure no community in need is left behind.

In addition to *targeting* assistance in ways that effectively reach all workers, families and communities impacted by the transition, policymakers and planners must also *tailor* support programs to the range of affected groups. One-size-fits-all actions are unlikely to



effectively support the range of dislocated workers. Adjustment programs may involve a combination of: direct financial payments to compensate for lost earnings; payments for relocation; repurchase of fixed assets such as houses, financial and logistical support for retraining; pension bridging for older workers close to retirement; and assurance of retention of benefits that workers have in their existing industries. Different groups will require different types of support as they experience economic change. We know from past experiences, for instance, that older dislocated workers—who are likely to have greater financial responsibilities and may experience discrimination in career transition—have a set of different needs compared with younger workers in the same industry. We also know that immigrant workers have in the past fallen through the cracks when transition assistance has overlooked their needs. Tailoring support programs to the range of people affected gives policymakers and planners the best chance of succeeding in creating the institutional conditions for a just transition.

***2. Policymakers and planners should enact transparent processes that meaningfully empower affected groups to have a voice in transition planning and implementation.***

In past efforts to support regional economies through transitions, politicians and experts in government agencies largely drove decision-making. There are relatively few instances where grassroots organizations have had meaningful involvement. Meaningful inclusion would imply that such organizations have a significant role in collaboratively setting goals for regional planning, defining the scope of planning, and in deliberating on and prioritizing investments based on locally-identified needs informed by locally appropriate knowledge. Emblematic instances of regional planning, such as the TVA, paid lip service to grassroots participation while in actuality doing little to benefit those most in need at the local level. In other instances, such as the NEAI in the Pacific NW, local level organizations in Oregon and Washington had some meaningful participation in goal setting and investment prioritization. A just transition would break from a long record of expert-led centralized planning to allow for a more decentralized planning process. A decentralized process of regional investment planning would be gender-sensitive, ensuring a fair voice for women and minorities who are most likely to be affected. It would also include grassroots and civil society organizations from regions impacted by the transition, who have a deep understanding of the social fabric in local economies. Decentralized planning that includes many perspectives can be complex and time consuming. When done well, however, it improves local support for decarbonization transitions, increases local ownership of investments, delivers fairer outcomes to affected people, and reduces the risk that some workers or communities are left behind. Transparent and inclusive planning processes give the best chance that adjustment support programs deliver a just transition at the local level.

***3. Policymakers and planners should encourage experimentation, learning, and adaptive management throughout all stages of transition.***

Institutional responses to past economic dislocations were not designed to include monitoring and evaluation mechanisms, preventing any systematic effort at learning and adaptive management. The institutional efforts to respond to economic dislocation that we examined did not include comprehensive tools to monitor and evaluate fiscal and socioeconomic outcomes and impacts. The lack of such learning mechanisms makes it challenging for policymakers, planners, and evaluators, to assess the quality of programming and to answer basic questions about the extent to which the responses met the demands of those in need. Any future institutional responses to economic dislocation arising from decarbonization must include specific funding for monitoring and evaluation, with the requirement that results are disseminated, and programs are adapted accordingly. Opportunities exist to continuously learn during program implementation about what works in effectively alleviating economic dislocation, and to change course if necessary. Similarly, digital information sharing mechanisms can ensure that cross-regional learning takes place across different parts of the country, so that programs are implemented in flexible ways to promote success.

***4. Policymakers should legislate to ensure that sustained financial resources match the ambition required to deliver decarbonization over the coming decade.***

It is clear from past experiences that adjustment to large-scale economic change takes significant time. Major regional development initiatives of the original New Deal, including the TVA, took decades to yield outcomes for local people. Similarly, the ARC's effort to assist impoverished communities in Appalachia took decades to deliver meaningful change across the region. Deep decarbonization implies ambitious investments to transform energy, transport, agriculture and infrastructure networks. Financial resources must be committed to match the stated level of ambition required until a new state of equilibrium is reached. The investment in deep decarbonization will require multiple trillions of dollars. The cost of inaction is, of course, far greater. Congress should legislate to ensure that sufficient funding is appropriated and channeled over the coming decade to sustain the ambitious process of decarbonization until decarbonization is fully realized.

***5. Researchers should undertake regional comparative analysis on the mechanisms through which formal and informal institutions are shaping economic outcomes in contexts of dislocation and adjustment resulting from the low carbon transition.***

This paper uncovers some of the mechanisms that were influential in twentieth-century transitions and which operate in the institutional legacy that programs are implemented in today. Researchers have a valuable opportunity to continue to document the American experience of dislocation and adjustment through the ongoing transition to a low carbon economy, providing further lessons for policy and planning as the transition continues.

Many politicians, thought leaders, and communities continue to speak of the need to ensure that decarbonization occurs through a “just transition”. As with societal change more broadly, there is no single definition of what a just transition might look like. There are varieties of just transition, reflecting the politics and positions of different groups. In short, various issues matter to varying degrees to different groups. How much justice is desirable? For whom, and by whom, is justice to be pursued? Is procedural justice (i.e., a fair process), distributive justice (i.e., a fair share of benefits), or another form of justice any more critical than others? Who gets to decide? Even if not addressed explicitly, the very act of planning regional transitions requires a position on such questions. Our recommendations outlined above encourage policymakers and planners to take stock of the legacy of past actors who stood in similar shoes to their own. Our hope is that those who will shape the coming transition learn from the essential lessons from the past to more effectively pursue a just transition towards decarbonization.

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