



Roadmaps to Transition: The Case of the Appalachian Coalfields

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The deindustrialisation in U.S. coalfields arose amidst structural changes that call for policies targeting simultaneously key variables affecting the labor market of coal miners.

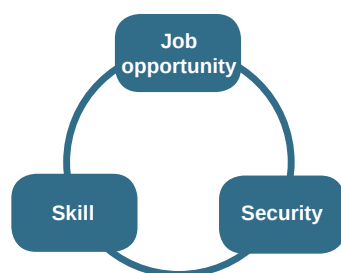
Coal workers represent only a small share of the U.S. labor force¹, but they are emblematic of many changes occurring in the contemporary U.S. economy. During the last presidential election, Republicans presented coal miners as the symbol of a working class in need of a policy shift corresponding to their political agenda. After the election, this agenda led to protectionist measures targeting American staples like wood, steel and aluminium, and to the withdrawal of the U.S. from the Paris Climate agreement by President Trump, both aimed at increasing the profit margins of coal producers. The decline of coal employment was simplistically blamed on environmental policies implemented by the Obama administration and foreign competition by lower-cost countries like China and Australia. The causes of the coal sector's decline are more complex, yet the symbolic power of coal miners is so great that it effectively anchored those simplifying Republican arguments in the public sphere. Without endorsing the Republicans' framing of the coal sector's decline, this policy brief argues that coal workers are indeed emblematic of many economic challenges including the precarization of work and the weak welfare system in the United States.

This policy brief analyses the cases of Emerald Mine (and Dana Mine) in order to understand the job transition of coal miners in Southwestern Pennsylvania, a region highly dependent on the staple. The systemic changes occurring in coalfields due to coal deindustrialization (the major decline in a region's main industry) require a policy approach which simultaneously targets three variables essential to its economic development: job opportunities, skill, and security. For instance, improving the skills of laid-off workers without stimulating higher levels of available employment would not result in upward development in the region. These conclusions are revealing for the discussion about Just Transition² since it details the vulnerability of a community caught in the energy transition. Notably, the need for *security* of the workers will be detailed alongside with its impact on skill acquisition and its specific demand for alternative employment.

REPRESENTING THE INTER-RELATION BETWEEN VARIABLES

Following Myrdal's theory of cumulative causation, it is possible to identify the key variables at the heart of upward and downward movements in economic development. In the case of the coalmines, the study of the Emerald Mine closure in 2015 identified three key variables that played a role in job transition: security, skill, and job opportunity. *Security* refers to the need of workers to secure immediate consumption needs, to meet financial obligations and to provide healthcare for the whole family. Thus, security points to both income and social securities at the household-level. *Skill* underlines the heterogeneity of workers' coping process: for the engineers or the electricians in the coal mine, more employment alternatives are available than for most mine workers. *Job opportunity* focuses on alternative employment positions in the region that were accessible and with wages capable of sustaining relatively equivalent levels of consumption. Alternative high-wage employment opportunities underline the importance of regional economic diversification and the need to counter the rise of precarious low-paid jobs.

FIGURE 1



Key variables of coalfield's job transition,
Southwestern Pennsylvania, 2018

Correct identification of these variables sets the ground for policy intervention and, when simultaneously tackled, they create the necessary "big push" that generates a developmental upward movement. Thus, the key variables are the core of the region's development and must be considered – as argued in the subsequent sections - simultaneously.

POLICY IMPLICATION 1 : RETRAINING WORKERS AFTER THE CLOSURE

Although the variables of *skill* and *security* are both essential, policy approaches that only consider one of them will have limited impact on the region's development. That is because a certain level of financial security and social safety nets are essential for laid-off workers in order for them to engage in training after the mine closure. *Security* enables them to forsake potential income during the training period or, to put in other words, to sustain a basic level of consumption while they acquire new skills. This has been underlined by interviews I conducted while researching this case, especially by the clerks at the local career center. Such capacity to forsake income for a period is linked to many factors including;

1. the health of the workers;
2. the constitution of their family, and age;
3. their savings;
4. previous training;
5. their eligibility for union or welfare coverages;
6. debts and financial obligations.

These different factors can be presented as follows. First, the need for health coverage is a crucial concern for workers seeking employment. Access to good healthcare is especially important in this sector due to the physical intensity of the work in the mine. Many coal miners have profession-related diseases such as black lung and severe back problems. Under the American welfare system, healthcare heavily relies on employment status³. Second, workers who do not have young children have lower household consumption needs, and those with a working spouse are also better able to cope with the mine closure. After the closure, many

workers, often male, who previously asked their spouse to handle most of the housework needed their spouse to look for employment. In a context of deindustrialisation, employment opportunities are scarcer due to the spread effect of the closure on parallel sectors, which affects both the workers and their spouses. Third, the closure of Emerald Mine was announced a few months beforehand. Some workers did overtime and saved money during that period or gradually had saved money throughout their careers. For them, the wage drop after the mine closure was easier to cope with, since they were less vulnerable to transitional poverty. Fourth, laid-off workers with certain skill profiles like electricians and welders could find new employment at the same wage level. However, at Emerald Mine, 80% of the workers were classified as general labor, and for that category of workers, it proved difficult to find alternative high-wage employment. Fifth, union coverage is also pivotal with its pensions, healthcare and panel rights to the workers. The comparison of the case of Emerald Mine closure (2015) and Dana Mine (2018) underlines that. Without a union, Dana's workers had more of an urge to transition into new employment since they were not able to benefit from those protections. Lastly, the provision of loans to mine workers is above average: "You work 12-16 hours a day, you are making good wages, you are living in a nice house, big mortgage. Too much credit is offered to people making that kind of money" (laid-off worker interviewed on March 8, 2018). After the closure workers are at risk of insolvency. The level of consumption is barely supported by state welfare since food stamps and housing assistance are scarcely available for transitional poverty. The latter is due to a system of assistance provision based on previous six months' income.

A combination of these factors prevents most of the workers from engaging in new training, especially those with children, loans or health issues. Even if the retraining programs are subsidized and workers are supported by the career centers' clerks, the participation rates are low. For example, in the region, the federal and state governments sent money for retraining programs after the closure of Hatfield and Michaels, two major power plants, in 2013. This money subsidized training but did not address the short-term consumption problem or the need for *security*. The program had a low participation rate, and most of the money was returned unspent. This indicates that, for a training program to succeed, it is essential to provide transitional financial security to the workers. In summary, even if these programs are essential – they prepare the workers for high-wage jobs –, it is hard for workers to attend if they don't have any security network to bridge the transitional period.

POLICY IMPLICATION 2 : MEETING THE NEW EMPLOYMENT NEEDS

The development of coalfields is, by definition, heavily dependant on one industry: coal. The concentration of power and economic activities within one industrial sector creates vulnerabilities to the boom and bust of such industry. In the context of de-industrialisation, the lack of diversification and the underinvestment in industries unrelated to coal is highly problematic in terms of employment opportunities since it reduces the spectrum of alternative jobs available in the region. If limited investments were made historically in local infrastructures and to develop alternative industries, the initial cost of starting projects are higher, and thus, employment opportunities are lower. In this case study, structural weaknesses of coalfields regarding job opportunities were clear. As a consequence, even as an option of last resort, many families considered moving out of the region. These movements of people further reduce local consumption and development and generate pockets of poverty. Tied to the energetic transition, this problem is likely to become an important issue in the coming years. Additionally, job transition must be considered in the context of rising precarious employment due to outsourcing, subcontracting, and casualization of work. It leads to employment that is increasingly temporary, low paid, part-time and without social benefits. As job opportunities are already scarce due to the weak diversification, the presence of precarious employment further limits the coping capacity of workers and their households.

Our findings imply that even with high levels of *skill* and *security* to the workers, it is essential to invest and plan for the development of *job opportunities* in the coalfield region. For instance, the development of infrastructures could simultaneously compensate for previous underinvestment and respond to the new needs for employment. The electricity infrastructure is highly developed in the region since it is essential to the operation of coal companies. In contrast, road and broadband infrastructures are very weak, and they constitute essential elements to develop further. During an interview, the Executive Director for Greene County at the Department of Economic Development mentioned: "there is a lot of changes going on and the ones who are going to succeed, they are the ones who will utilize the technology. We have to get the broadband here". Roads are also identified: "We need an infrastructure program, the President [Trump] talks about it, but we don't get anything done. We need roads, we need highways and those are good jobs."

CONCLUSION

To summarise, research in the coalfields area shows that it is necessary to simultaneously stimulate *skill*, *security* and *job opportunity* in order to create an upward movement in a given region. This policy brief indicated that stimulating one without the others is likely to be ineffective. It has been concluded that the skill development of the workers cannot operate without a minimum *security* for the workers and their families and that in this mono-industrial region, it is erroneous to assume a supply-side response to the need of *job opportunities*.

If manufacturing projects are to be developed in coalfields, the variable *security* illustrates some challenges they might face. Manufacturing has been increasingly considered as a solution for deindustrialised towns in United States and has the potential to bring job opportunities and investments to the region. On average, manufacturing jobs are less paid than coal employment. Thus, there is a need to tackle the workers' high consumption needs and financial obligations in order to support the transition of the laid-off coal workers into manufacturing employment. The variable of *security* also concerns health coverage and since only 10% of the workers in the manufacturing sectors were represented by a union (BLS, 2017⁴), the probability of having healthcare coverage further decreases. Without *security* being addressed, it is likely that outmigration of laid-off miners will occur, and downward movement will persist. Furthermore, it is likely that deindustrialised regions in which a manufacturing sector will develop are those with a privileged access to infrastructure, especially for the transport of merchandise. Additionally, this example illustrates the impact of trade union representation and the importance of infrastructure investments for the transition process.

This simple illustration of the three variables' interactions provides some grounds to propose policies for these vulnerable regions and even on how to plan the growth of manufacturing more effectively. The analysis points to the need to think about both micro elements at the level of households and structural characteristics of mono-industrial coal economies and investment flows. In this context, such a micro-macro approach is key to constructing successful policies.

¹ In November 2018 about 52.6 thousand workers in the American coal mining sector.

Source: Bureau of Labor Statistics. (December 2018) "All employees, thousands, coal mining, seasonally adjusted" *Employment, Hours, and Earnings from the Current Employment Statistics survey (National)*. Retrieved from <https://data.bls.gov/timeseries/CES1021210001>

² The Just Transition framework starts from a movement that was formalized through the International Labor Organisation that argues that energy transition must consider social sustainability as well as environmental.

³ Esping-Andersen, G. (1990). *The three worlds of welfare capitalism*. Princeton, NJ: Princeton University Press.

⁴ Bureau of Labor Statistics. (January 2018) 'Table 3. Union affiliation of employed wage and salary workers by occupation and industry, 2016-17 annual averages.' *Union Members, 2017*. Retrieved from: <https://www.bls.gov/news.release/pdf/union2.pdf>



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