

# Steel in the Steel City

by

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## Part I: Looking back to look forward

### 1. Introduction

Pittsburgh is now widely recognized as a city transformed. This popular image is incomplete, however, unless one understands the continuing importance of the steel industry in the “Steel City”. The great events that reshaped the Pittsburgh economy in recent decades have root in competitive forces that emerged after victory in World War II – victory forged in no small part by Pittsburgh steel. Those forces converged in upheaval that closed many Pittsburgh steel mills in the 1980’s, and resulted in economic changes that now help to define the character of Pittsburgh’s transformation.

This book revisits steel in the Steel City in the sense of examining how responses to economic change in the steel industry in recent decades created opportunity for the renewal of firms and the region. We use history to provide context, but we use the personal experience of industry leaders to help understand the cause and consequences of business investments that have helped to create the Pittsburgh we know today. By drawing on the experience of steel firms, their suppliers, and steel processors in the Pittsburgh region, we see forces of change from their different perspectives, and we find that steel remains tightly woven in the fabric of Pittsburgh’s economy.

### 2. Pittsburgh: Cradle and crucible

This chapter steps back in history to link the creation of great firms (Pittsburgh as a “cradle”) with the creation of a mighty industrial center that helped shape the modern America economy (Pittsburgh as a “crucible”).

### 3. Industry restructuring: Forces of change

In the post-WW II era, traditional steel firms witnessed the advent of competition from foreign suppliers and from American minimills, and inevitably the industry’s established order was challenged. The restructuring that led to plant closures in Pittsburgh has root in these developments.

## Part II: Pittsburgh steelmakers remake the firm

### 4. Firms strengthening Pittsburgh operations while not acquiring new plants in the region

This chapter describes firms that made significant acquisitions outside the region while foregoing new plants in Western Pennsylvania yet realizing crucial benefits to continuing operations in and around Pittsburgh.

Best demonstrated in the case of US Steel, a bold series of plant purchases in Eastern Europe and expansion of its Great Lakes operations through bankruptcy buys secured the future of the firm's Mon Valley operations within a more evenly balanced, worldwide operation. Collaterally, the company also realized a significant internationalization of its workforce and the tightening of Pittsburgh headquarters ties to global operations. This firm change has made a significant if not well recognized contribution to the internationalization of the region's skilled workforce.

The firm's outward orientation has also given rise to a global network of research support for all of US Steel's far-flung plants. It is directed from the US Steel Research Center, situated on the site of the former US Steel Homestead Works. There the firm maintains a real-time, big-screen view of the operating status of every US Steel furnace on two continents, instantly linking the center's research scientists to any metallurgical event that may call for their attention.

The firm's global interests have also opened enterprising paths for other Pittsburgh firms to pursue, significantly playing Big Steel's strengths toward the overall interest of a realigning region turning outward to find new opportunities. Similarly, other firms have shaped their own version of growing the metals business from the Pittsburgh region, deepening roots here without acquiring plants or new operations. Electralloy, Blair Strip Steel, Latrobe Specialty Steel, Berry Metals, PLS Logistics, AK-Steel-Butler Works, and TMK-IPSCO offer their own examples of firms that adopted this approach following the crisis years for Pittsburgh steelmakers at the end of the 20<sup>th</sup> century.

### 5. Firms taking advantage of market trends

Pittsburgh firms also grew operations in the region by exercising the advantages they recognized in existing plant and an expert workforce to win the race for markets that demand new and higher grades of metal alloys. ATI Allegheny Ludlum exemplifies this approach in the transformation of its primary foothold in stainless steel into the operations of a diversified metals manufacturer expanding operations in the region with more than \$1 billion in new plant and purchased assets. ATI-Allegheny Ludlum's only North American competitor in the market for grain-oriented electrical steel, AK Steel-Butler has also grown with market trends that have enabled it to increase overseas sales of a unique, widely needed product that requires extraordinary knowledge and control of its manufacturing. This regional trend in pursuing global markets has also proved to be a powerful friend to firms that serve and support steelmakers such as Universal Refractories, Resco, Lane Steel, Vesuvius, Orbital Engineering and Songer Construction.

## 6. Firms expanding in the region through purchase of the bankrupt assets of other firms

This chapter explores the return to service of plants in the region that created many of the headlines for shuttered mills and massive layoffs at the end of the 20<sup>th</sup> century. Pittsburgh steelmaking has recovered momentum with the economic recycling of capital facilities whose service lives in the 21<sup>st</sup> century promise to extend well beyond the collapse of their preexisting cost structures at the end of the last century. These acquisitions of assets in bankruptcies have produced stories of remarkable returns on investment as well as the return to work for skilled workers in towns where steelmaking seemed to be doomed during the shakeout that caused such a dramatic drop in the tonnage of carbon steel produced in the region and loss of steelworker employment. Companies such as the Ellwood Group, ATI Allegheny Ludlum, Universal Stainless, The Techs, and Duferco Farrell have pursued this strategy. As one result, they have dramatically increased their firms' capacities for competing on product costs while also absorbing processes, customer accounts, and niche opportunities that have accelerated growth.

## 7. Firms developing global markets

This chapter echoes a key element of the overall strategy pursued by US Steel in going into Eastern Europe to buy unique assets that came to the market with the realignment of the world's ideological map. Tube City Metals, a modest supplier of scrap metal charges to US Steel before the fall of the Berlin Wall, hustled to organize and provide its biggest client's need for scrap in Slovakia and grew with the opportunity into one of the world's larger suppliers of scrap to steel plants worldwide. Union Electric Steel, a century-old firm rooted in Carnegie, PA, followed a cold-call from a Korean steel producer to a 21<sup>st</sup>-century growth path in Asia for forged steel rolls produced at its plants in Pittsburgh. Vesuvius, a century-old supplier of refractories founded in Swissvale, PA, has been transformed into a multinational firm supplying the metals industry worldwide. And ELG Metals, another story of scrap-metal success, has jumped from its site on the Youghiogheny River in McKeesport, PA, into the top ranks of scrap-charge suppliers to the furnaces of specialty steelmakers.

## Part III: Regional linkages, global scope

### 8. Making steel in the Steel City today

The current map of steelmaking and its supply chain presents a perspective on the value of an embedded industrial culture that few people recognize for its role in the Pittsburgh region's recent economic transformation. Pittsburgh steel firms have adapted to the worldwide industry's restructuring. In the process they have transformed not only their own operations but also relationships among firms in the regional industry while stabilizing the industry's relation to the region along a path of growth. This chapter describes Pittsburgh's steel industry "cluster" and highlights the important linkages among firms and other institutions that make steel vital to the Pittsburgh economy today and for the foreseeable future.

## 9. A legacy of regional resilience

Pittsburgh's steel makers and the industry's related firms have boosted the region's transition to a 21<sup>st</sup> century economy that has become integrated with the global economy more successfully than many other regions that have confronted dramatic changes in the world market for manufacturing. This story of regional integration into a worldwide realignment of industrial economies offers a unique look at the durability of a region's signature industry and suggests various paths of opportunity that can open for enterprises and their regions when global markets realign.