Unity may be in short supply in America right now, but there is one topic on which people from across the political spectrum seem to agree: the nation faces a serious skills gap. From liberal mayors to conservative senators, from business leaders to professional educators, from conservative media to the pages of The New York Times, the message is clear: American workers don’t have the skills necessary to get good jobs and earn decent wages in the twenty-first century.

Some proponents of this view place the blame on the public school system, while others fault the diligence or work ethic of workers themselves. In either case, assertions about skill shortages often go unchallenged. This is unfortunate, not only because many skills-gap claims are wrong, but also because focusing on supply-side shortages of skills diverts attention and resources from more productive approaches to skills training and worker advancement.

One of the first reasons for skepticism about a skills gap is the concept’s shape-shifting adaptability to ever-changing circumstances. In 2010, when unemployment neared double digits, many commentators and politicians—and a few academics—declared that these record-high rates were not merely the product of falling demand, but rather reflected a structural mismatch between employers’ high-tech demands and workers’ insufficient skills. And, indeed, there was some initial evidence from online job boards that employers raised their skill requirements. However, as Alicia Modestino and others have shown, much of this upskilling was in fact opportunistic cherry-picking by employers in a slack labor market (Modestino et al. 2016). As the economy improved and labor demand picked up, employers dropped their skill requirements. Steven Davis and others have likewise shown that employers lower their search intensity in recessions, meaning that a vacancy in a recession is much less likely to imply an urgent attempt to hire than a vacancy in a boom time does (Davis et al. 2012).

The skills-gap narrative persists at the other extreme of the business cycle as well. Despite the unemployment rate having fallen to less than 5 percent—implying that previously under-skilled, mismatched workers have in
fact been matched somewhere—claims of a skills gap continue unabated. The tight labor market version of the skills-mismatch story points to rising vacancies due to increased demand and labels this phenomenon a skills gap. It goes without saying that rising vacancies are what we expect in a growing economy. The “solution” to this problem involves paying workers higher wages in order to send a signal about the desirability of acquiring the particular set of skills that the occupation in question requires.

Of course, a more sophisticated version of this structural argument exists in the form of Beveridge-Curve analysis. The general argument is that today’s economy has more vacancies for a given level of unemployment (a proxy for demand conditions) than existed in the past. The implication is that some structural problem, such as inadequate worker skills, is impeding the match between supply and demand in the labor market. Beveridge-Curve analysis is a worthwhile exercise, but, due to its highly aggregate and abstract nature, making sense of it requires a lot of tea-leaf reading.

Peter Diamond has noted in several articles that Beveridge Curves—and the search/matching models that theoretically underlie them—are conditional on the state of demand (and thus do not reflect purely structural factors) and are very sensitive to shifts in composition (Diamond 2010). The latter point implies that if an industry characterized by quick hiring and low job posting, such as construction, experiences a bust, it will create the false appearance of structural mismatch in the economy.

The biggest problem with interpreting Beveridge Curves is that their aggregate nature obscures any mechanisms that might be operating below them. I have conducted a series of nationally representative surveys on skill demands and mismatch for precise occupations at the establishment level in order to test for skills gaps using a “bottom-up” approach. I specifically measure what skills employers demand and whether the employers who have high skills requirements in fact have trouble hiring.

These surveys—which cover manufacturing production workers, computer help desk technicians, and laboratory technologists—all show that the incidence of hiring difficulties is much lower than industry representatives, politicians, and pundits claim. Furthermore, high-tech employers and employers demanding higher-level computer skills generally have no greater hiring problems than do other employers (Weaver and Osterman 2017). This last finding brings up the principal source of the enduring attraction of the skills-gap story: technology.

The basic claim of many skills-gap proponents is intuitively appealing: computer and information technologies have diffused throughout U.S. industries over the past few decades, causing skill demands to spike out of the reach of unprepared American workers. This framing of labor market challenges has gained legitimacy because it is similar on the surface to much more carefully constructed theories of skills-biased technical change, such as those put forth by Acemoglu and Autor (2011). However, the conventional wisdom can be misleading.

Paul Beaudry and coauthors have demonstrated that cognitive-skill demands for U.S. workers have actually declined since 2000 (Beaudry et al. 2016). Technology’s effect on skill requirements is complex and multifaceted. In 1975, an individual who could debug a network or fix a software conflict would likely have had to know computer programming as well. The relevant computer occupation bundled these skills together at the time.

By contrast, as computers have diffused through society, computer-related occupations have become more specialized, and higher-level programming skills are no longer necessarily combined with trouble-shooting or systems-repair capabilities. My research shows that the percentage of computer help desk technicians who need to know programming is smaller than the equivalent percentage of manufacturing production workers who have to have this capability.

The skills-gap framework misleads us because it directs our attention primarily to workers’ supply of skills. The demand side of the market—employer choices about job design and skill requirements—matters as well. These employer choices, along with labor laws, tax policies, financial investments, and a host of other factors that go beyond technological imperatives shape how tasks are distributed and how they are compensated. The resulting distribution of occupations and compensation directly influences the behavior of educational institutions and workers.

The skills-gap framing assumes that the supply of skills is an exogenous resource—like an oil reserve—and that the principal strategy to stimulate economic growth and improve worker outcomes is to unilaterally raise the quality of this supply-side resource. However, labor markets don’t work like this. The feedback runs the other way as well.

For example, if a firm creates two medium-skilled jobs instead of one high-skilled job and one low-skilled assistant position, local educational institutions and intermediaries will
change their offerings over time. Unilateral supply-side strategies that depend on students’ and workers’ making trend-increasing educational investments with often uncertain pathways in an environment of asymmetric information are unlikely to be sustainable over time. And indeed we have seen a slowing of educational attainment rates over the past few decades (despite an uptick during the Great Recession).

None of this is to say that skills are not important; indeed, they are critical. Ultimately, to improve worker outcomes and spur faster economic growth, what is needed is not hand wringing about the inadequate supply of skills, but coordination between the supply and demand sides of the labor market. Whether in the form of apprenticeships, labor market intermediaries, or other employer-involvement mechanisms, such coordination holds forth the potential to sustainably ratchet up employee skills and employer requirements, via job design, in a way that works for everyone.

References


