



CHATTANOOGA REGION TALENT DIVIDEND INITIATIVE

College Completion: Firm-Level Productivity

Supplement 1 to Infogram 9, College Completion: Fiscal and Societal Impact

Does the educational attainment-level of a firm's employees make a difference in the firm's productivity? Infogram 9, produced by the Chattanooga Region Talent Dividend Initiative (CRTDI), addressed "College Completion: Fiscal and Societal Impact." Research and references cited in that report confirm a positive return-on-investment (ROI) regarding college completion – that is, that educational attainment is associated with economic prosperity at the local, state, regional, national, and global socioeconomic levels. A better-educated workforce has several benefits, including an increase in real domestic product; increases in wages and in lifetime earnings; and reductions in unemployment rate. Businesses are "engines," not only for jobs but also for social and community improvements and for sustainable economic development.

Aggregated macro-data reveal that the currency of a college degree is strong. By examining the empirical evidence about the collective educational attainment of employees at the firm level, researchers in the United States as well as from other countries have discovered that a "deep-dive" into impact of degree-holders on employees at the firm level yields compelling information relative to productivity. Moretti (1999), for example, reports that the "productivity of plants in cities that experience large increases in the share of college graduates rises more than the productivity of similar plants in cities that experience small increases in the share of college graduates. . . . According to the

most robust estimates, a 1% increase in the city share of college graduates is associated with a 0.5 to 0.6% increase in output” (p. 657). And when addressing labor diversity and productivity, Navon (2010) suggests that “hiring workers who are diversified in their specific knowledge [university degrees] is beneficial for plants’ productivity. . . and that the benefit of knowledge-diversity increase with the size of the plant. . . . [For] each allocation of labor in the production process it is beneficial for plants to diversify their skilled labor. . . .” (p. 69).

Other research also indicates that the relationship between education and wages is positively linked with the relationship between education and firm-level productivity. Lebedinski and Vandenberghe (2013), for example, state that “the gradual rise of the educational attainment of the workforce, in particular, the rise of the number of university graduates, is good for the productivity of Belgian firms” (p. 27). In addition, Galinda-Rueda and Haskel (2005) conducted research about workforce characteristics and firm-level productivity in Germany. Their data, collected through the Institute for the Study of Labor (IZA), indicates that “firms with a higher share of college-educated, full-time and male workers also tend to be more productive, with considerable variation across sectors” (p. 23). The aforementioned citations validate that, with regard to productivity, higher education is crucial. In addition, according to Bartel (2000), the return on investment regarding training undertaken by employers indicates that specific skill-training provided by the firm also is important.

When taking into account the impact of education on firm-level long-term economic competitiveness, Blundell, Dearden, Meghir, and Sianesi (1999) found that more-highly-educated and more-highly-skilled workers adapt more rapidly and efficiently to new tasks and technological processes. More-educated workers also provide direct source of new ideas. “In fact,” they assert, “education and even previous informal training have been found to increase substantially a worker’s ability to be innovative on the job” (p. 14).

Kampelmann and Rycx (2012) report results that indicate that “over-educated workers are more productive all over their career due to additional skills and capabilities acquired through schooling and . . . [that] . . . under-educated workers either succeed to compensate their lack of productivity by additional work experience and training or end up in less demanding jobs as they get older” (p. 21). Kampelmann and Rycx also state that “additional years of over-education (both among young and older workers) are beneficial for firm productivity, and . . . [that] . . . additional years of under-education (among young workers) are detrimental to firm productivity” (p.21).

Research that clearly reveals that ongoing employee learning is the “life blood” of firm productivity. Learning is a tripartite function that includes (a) education (off-the-job supplied by higher education), (b) training (firm-specific knowledge and skills), and (c) experience (accumulation of workplace knowledge/skills and other life experiences). Learning-attainment levels minimize skill bottlenecks; increase productivity, innovation, and competitiveness; and advance smart sustainable growth. Learning that is continuous is imperative in order effect adaptation to changes in fast-paced technological processes in the workplace and to support a knowledge-intensive global economy. Only when we take advantage of developing the type of robust, sustainable talent pool promoted by the Chattanooga Region Talent Dividend Initiative will we reap the fiscal and societal impact of the tripartite functions of learning and assure firm-level productivity and a vital regional economy.

Some individuals argue that owing to the many different reasons why would-be graduates drop out of college, higher education cannot solve the degree-completion dilemma. But potential graduates do share one common attribute: They all dream of completing a degree. When every adult with some college credit completes a degree, the nation will succeed, employer needs will be met, and everyone – including respective organizations – will benefit from the return on investment.

The Chattanooga Region Talent Dividend Initiative’s goal is 8,171 additional post-secondary degree graduates by 2015. (The regional goals are reset every three years.) The Lumina Foundation’s

goal is for 60% of the nation's adults to be adequately educated by 2025. The first step in reaching these goals is to remain committed to them. Together, higher education and business and industry can make reaching goals possible and will, continuously develop untapped talent. Consequently, a sustainable quality workforce will strengthen communities and the nation — because talent changes everything.

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