Social Influences on Human Capital Investment: Evidence from a Continuing Education Program in the US Army

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Summary

- The random assignment of soldiers to varying levels of peer participation in continuing education offers a unique opportunity to study social influences in human capital investment.
- I find that new soldiers randomly assigned to a high-participation company are far more likely to continue their education.
- I attribute most of the participation effect to common factors in the local education environment that affect all members of the group, rather than to the observed peer behavior.

Introduction

Investments in education are among the most important made in a person’s lifetime. Social influences, such as the neighborhoods in which people live or the peers with whom they interact, may affect people’s educational investment decisions, but we have little rigorous evidence about the magnitude of these social influences. In this paper, I examine a unique setting in which individuals randomly receive exposure to varying levels of peer participation in continuing education and then must make their own education participation decisions.

I study the US Army’s Tuition Assistance (TA) program, which is a voluntary and generous continuing education program available to soldiers in their off-duty time. The Army administers TA through on-base Education Centers and provides subsidies that cover the financial costs of part-time college participation. Given the regimented and interpersonal nature of Army life, I am interested in how new soldiers’ decisions about whether to use TA are influenced by whether a larger or smaller share of their company is also using TA. I find that new soldiers randomly assigned to a high-participation company are far more likely to continue their education. I attribute most of that participation effect to common factors in the local environment affecting all soldiers, rather than to the observed peer behavior alone.

Data & Sample

I focus on new soldiers assigned to US Army brigades that did not deploy to the Middle East in the years 2012-2013; there are 7 such brigades across both continental US and overseas locations. I study about 10,000 new soldiers who joined companies in those brigades during the time period.

I gather rich individual-level data on soldier characteristics and unit of assignment from the US Army’s Office of Economic and Manpower Analysis. I use data on TA participation provided by Headquarters, Army Continuing Education System (ACES), which oversees the TA program.

Analytic Strategy

To estimate a causal effect attributable to social influence, I rely on Army conditional random assignment (CRA) of soldiers to companies. The Army uses established personnel processes that prioritize the “needs of the Army,” and therefore does not consider personal preferences and certainly not differences in TA participation when assigning junior soldiers to companies. For example, the Army may assign two soldiers with tank driver specialty to two different companies, one with a high share of existing company members participating in TA and the other with a low share of company members participating. Those assignments are conditional on the soldiers’ specialties (tank driving) and the companies’ needs (tank drivers), but otherwise arbitrary and therefore uncorrelated with other observed or unobserved characteristics of the new soldiers.
In my main models, I regress the individual’s decision to use TA on the existing company TA participation rate, including variables for the observable conditioning controls – such as career field – in order to account for the Army’s assignment process. In more complex analysis, I additionally control for factors such as the Army location and assigned higher headquarters in order to see if/how these common factors affect the magnitude of social influence.

**Findings**

Figure 1 demonstrates a strong positive relationship between the existing company TA participation rate and the new soldier’s decision to use the education benefit within the first year of assignment. The light brown bars correspond to the horizontal axis and present a histogram of company TA participation rates. In a high (4th quartile) company, more than 10% of incumbent soldiers were current or recent users of TA while that figure is 2% or less in a low (1st quartile) company. The blue bars correspond to the vertical axis and measure the likelihood of new soldier TA use within the year, aggregated by TA-participation-type company to which assigned. In a high company, 22% of new soldiers will use the benefit whereas only 6% will use if assigned to a low company. The 16 percentage point high-low difference indicates significant participation effects due to social influence.

When I control for common factors – such as Army location or the headquarters to which the soldier is assigned – I find that the regression estimate on the peer participation rate diminishes by as much as 80%. What remains is close to a “pure” peer effect, but it is much smaller in magnitude than the overall effect from social influence. I cannot pinpoint what location-based common factors exert impact in this setting, but some potential sources of influence are local Education Centers, course offerings within TA, or command emphasis on continuing education.

**Conclusion**

While many researchers have studied peer effects within educational settings, far less is known about how peers influence education investment decisions. I find that newly-assigned individuals are very responsive to existing group participation behavior. However, it is important to study peer-influenced behavior in the full environmental context in which social interaction occurs, because there are likely common factors that influence all group members.