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## Article

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IZA World of Labor

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*Suggested Citation:* Kosteas, Vasilios D. (2022) : Youth extracurricular activities and the importance of social skills for supervisors, IZA World of Labor, ISSN 2054-9571, Institute of Labor Economics (IZA), Bonn,  
<https://doi.org/10.15185/izawol.491>

This Version is available at:

<https://hdl.handle.net/10419/260725>

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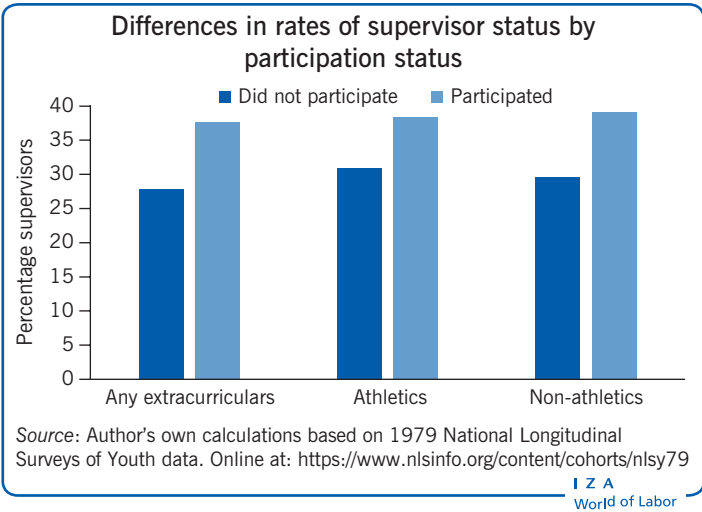
# Youth extracurricular activities and the importance of social skills for supervisors

Social skills developed during extracurricular activities in adolescence can be highly valuable in managerial occupations

Keywords: noncognitive skills, extracurricular activities, supervisors

## ELEVATOR PITCH

Youth participation in extracurricular activities is associated with a variety of benefits, ranging from higher concurrent academic performance to better labor market outcomes. In particular, these activities provide avenues through which youth can develop the interpersonal and leadership skills that are crucial to succeed as a manager. A lack of opportunity to participate in extracurricular activities for many youths, particularly those from lower-income backgrounds, may have negative consequences for developing the next generation of managers and business leaders.



## KEY FINDINGS

Pros	Cons
<ul style="list-style-type: none"><li>+ Developing social skills during youth can pay dividends later during an individual's career.</li><li>+ Strong social skills are important for performing in managerial occupations.</li><li>+ Participation in extracurricular activities during secondary school is associated with greater sociability and leads to a higher likelihood of holding supervisory responsibilities later in life.</li></ul>	<ul style="list-style-type: none"><li>- Research has not clearly established a causal link between extracurricular activities and development of social skills.</li><li>- It is not clear which activities best develop social skills.</li><li>- Little is known about the relative impact of participation in extracurricular activities at different ages.</li></ul>

## AUTHOR'S MAIN MESSAGE

Participation in extracurricular activities during youth provides individuals an opportunity to build the social and leadership skills required to become successful managers later in life. Research indicates participation leads to a greater likelihood of becoming a supervisor during adulthood, though it is unclear if this is indeed due to development of social skills, nor which activities best develop these skills. Policymakers should include support for youth extracurricular activities as part of their education and workforce development plans. Employers can also help by increasing sponsorship of these activities and providing incentives for employees to volunteer.

## MOTIVATION

Research has shown a positive relationship between participation in athletics during secondary school and educational attainment in the US, Germany, and Ireland [1], [2], [3]. Using data from two different longitudinal databases for the US, one study finds that participation in high school athletics as a youth resulted in greater educational attainment and higher wages for men later in life, but also finds evidence that some of the correlation between these outcomes and athletics participation is due to greater rates of sports participation by higher ability individuals [1]. Using data on Irish secondary school students, another study finds that students who continued to participate in sports were more likely to continue their academic pursuits after completing secondary school [2]. These results persist even after using matching techniques in an attempt to control for the possibility that higher ability individuals are more likely to play sports. Finally, a third study shows positive educational impacts of sports participation for German youths, even after attempting to control for potential sorting into such activities [3]. Similar results have also been found for participation in other types of extracurricular activities, such as music and non-athletic clubs [3], [4]. Participation in athletics has also been shown to result in higher wages and fringe benefits later in life for workers in the US [1], [5]. All of these studies indicate that participation in extracurricular activities during adolescence may be viewed as another form of human capital investment and not just as a consumption good.

Of particular interest are a pair of studies based on US data which show that participation in extracurricular activities increases the likelihood an individual will become a supervisor later in life [6], [7]. The first study finds that participation in high school extracurricular activities in general leads to a greater probability of being a supervisor and holding responsibilities such as setting pay [6]. The second study focuses specifically on the relationship between participation in high school athletics and future supervisory responsibility, finding a positive effect on managerial responsibility and autonomy at work later in life [7]. Both studies attempt to address the potential sorting of children with greater social skills and managerial potential into these activities through the use of different statistical techniques. To the extent that these techniques adequately address the sorting issue, they indicate the observed relationship between youth extracurricular activities and future supervisor status is indeed causal and not merely correlational.

Whether the statistical techniques employed in these two US studies adequately address the sorting issue depends on a variety of factors, which may not apply equally in all settings and which depend on the data source. In particular, these studies must address the potential impact of household/parental factors and unobserved individual characteristics on both the decision to participate in clubs and on the outcomes in question. For example, the first study employs multiple statistical techniques and uses the fact that the data include observations on siblings from the same household, often with different club participation and outcomes, in an effort to account for sorting due to differences in household characteristics [6]. However, this approach cannot account for differences in unobservable, individual characteristics that may differ between siblings, requiring an additional estimation routine. The result is a series of estimates that are fairly consistent in magnitude despite the fact that each uses different statistical techniques. This consistency provides researchers with a fair degree of confidence that the estimates do indeed reflect an underlying causal effect. The second study takes a similar approach to account for family characteristics, with an additional focus specifically on twins,

allowing the authors to eliminate genetic differences as a driver of their key outcomes. That study, however, is limited by a small sample size [7].

While these findings provide further evidence of personal benefit to the participants, they also indicate a benefit to employers in both the private and public sector that rely on able managers to help their organizations run efficiently.

One explanation for the observed link between participation in extracurricular activities during secondary school and future supervisory status is that participation in these activities provides an avenue through which adolescents can develop the non-cognitive skills that are required to perform in managerial positions. To that end, research has shown that holding leadership roles during secondary school leads to a higher likelihood of becoming a supervisor [8]. While research is consistent with the hypothesis that participation in extracurricular activities helps build non-cognitive skills, in particular social skills, it has not been clearly established that this is indeed taking place. However, it can be shown that social skills are important for managerial positions, that youths who participate in extracurricular activities are more likely to become supervisors, and that these individuals also report a more social orientation. This article explores each of these connections in greater detail and discusses how the pieces fit together.

## DISCUSSION OF PROS AND CONS

### The importance of social skills for managers

Studies in the labor economics literature support the importance of non-cognitive skills in predicting the likelihood an individual becomes a supervisor. Using data from six former Soviet Bloc countries, researchers have shown that other non-cognitive skills, such as locus of control (the degree to which people believe that they, as opposed to external forces, have control over the outcome of events in their lives), are strong predictors of the likelihood of being a supervisor and the span of supervision [9]. The authors also find that differences in these skills can explain part of the gender management gap. Other research has shown that officer training in the Swedish military raises the likelihood of becoming a manager in the civilian workforce by 75% [10]. Given the draft process employed in Sweden, the authors do not have to account for sorting into the military as they would with data from a country where voluntary enlistment is the norm. The authors argue that the training impacts future managerial status through the development of leadership skills and provide some evidence against alternative mechanisms such as network effects and ability signaling. While these studies demonstrate the importance of non-cognitive skills more broadly, it can further be shown that social skills in particular are salient for managerial occupations.

While social skills are arguably important in most jobs, they are especially important in managerial occupations. This can be illustrated using information on job skills from the US-based Occupation Information Network (O\*NET). For the skills data, O\*NET collects ratings from occupational analysts on 35 different job skills, including six social skills. For each skill, the analysts rate both the importance and level of each skill, where level measures the degree of the skill that is required. Responses are averaged into a scale ranging from 0 to 100 for nearly 900 occupations. Figure 1 shows the average reported importance of six social skills for managerial versus non-managerial occupations, where managerial occupations are determined by whether the words executive, manager, or

supervisor appear in the occupation title. This leads to 68 occupations being classified as managerial and 805 occupations classified as non-managerial. The first three social skills (coordination, negotiation, and persuasion) can be viewed as core social skills for managers. Figure 1 clearly shows that these skills are more important for managers than for non-managers (these differences are statistically significant). In particular, negotiation skills are nearly 50% more important in managerial occupations. While these patterns are not surprising for the skills most associated with managerial duties, they also appear for social skills such as “service orientation” and “social perceptiveness.” Similar patterns are found when looking at the specific skill proficiency levels required for such occupations.

Large differences are observed in the lowest importance ratings within the two groups of occupations. For managerial occupations, the lowest ratings on coordination, persuasion, and negotiation are 53, 47, and 47, out of 100, respectively, on a scale of 1 to 100. For the non-managerial occupations, the corresponding values are 25, 16, and 16. According to the survey instrument, values around 50 represent an average response that the skill is important. On the other hand, ratings below 25 reflect an average rating between “not important” and “somewhat important.” These comparisons provide further evidence that social skills are of greater importance in managerial occupations. Further analysis shows that individuals who participated in extracurricular activities during adolescence are more likely to be supervisors and hold key managerial responsibilities.

Figure 1. Average level of importance of social skills for managerial and non-managerial occupations



Source: Author's own calculations based on O\*NET data. Online at: <https://www.onetonline.org/>

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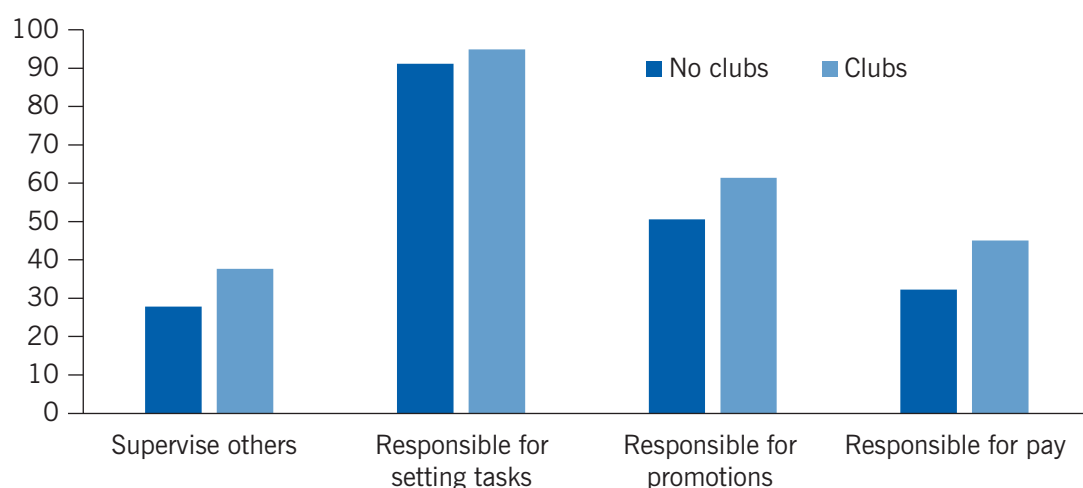
### Supervisor status and participation in extracurricular activities

The 1998 wave of the National Longitudinal Surveys of Youth 1979 cohort (NLSY79) is used to examine the relationship between participation in extracurricular activities during high school and supervisor status and responsibilities later in life. The NLSY79 is a

longitudinal data set that started following a sample of over 12,000 Americans between 14 and 21 years of age in 1979, following up with surveys annually until the early 2000s and in even numbered years thereafter. In 1998, the respondents in this survey were between 33 and 41 years of age. Thus, their supervisor status could be observed as they were in the early to mid-career stage. Focusing on those individuals who were employed in 1998, it can be seen that participation in clubs or athletics during youth is associated with a higher probability of being a supervisor. To examine the relationship between participation in extracurricular activities and supervisory responsibilities, focus is placed on those individuals who report being supervisors, specifically those with responsibility for assigning tasks, determining promotions, or setting pay.

The results are displayed in Figure 2. Participants in secondary school extracurricular activities are nearly 10 percentage points (35.6%) more likely to be supervisors. The results for different responsibilities are mixed. Given that nearly all supervisors are responsible for setting tasks, it is unsurprising that there is little difference between participants and non-participants in this managerial responsibility. However, individuals who participated in clubs in high school are more than 10 percentage points more likely to be responsible for determining promotions and nearly 13 percentage points more likely to have some responsibility for pay setting. Qualitatively similar results are obtained when examining athletics and non-athletic activities separately, indicating that both types of activities yield similar benefits. From the employee's perspective, these distinctions are important given the wage return associated with specific supervisor responsibilities [11]. From a societal perspective, this finding indicates that allocating resources to either athletics or non-athletics clubs would yield a similar return, at least in terms of developing future managerial talent.

Figure 2. Supervisory outcomes by clubs status



Source: Author's own calculations based on O\*NET data. Online at: <https://www.onetonline.org/>

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The statistics presented in Figure 2 merely reflect raw differences in rates of these outcomes for participants and non-participants. Previously published research has shown that these differences persist even after controlling for a variety of individual and

employer characteristics [6]. Basic results show that even after accounting for these factors, participants are 2.3 percentage points more likely to be supervisors. Supervisors who participated in extracurricular activities are 1.2 percentage points more likely to be responsible for pay setting and 1.1 percentage points more likely to hold responsibility for determining promotions. All of these estimated effects are highly statistically significant. The main result for supervisor status persists even after including variables reflecting different aspects of the respondents' high school quality and using statistical techniques to account for the aforementioned sorting issues. The consistency of the estimates across models and estimation techniques strongly suggest these effects are indeed causal. While the size of the estimated effects is relatively small, it is important to bear in mind that these are average effects. Additionally, these estimates are obtained for a sample of individuals who have yet to reach the peak of their careers. The effects may be larger for individuals in their 40s and 50s.

### Extracurricular activities and social skills

So far, evidence has been presented showing that social skills are more important in managerial occupations and that individuals who participated in extracurricular activities during childhood are more likely to hold a supervisor role. What about the hypothesis that participating in these activities helps individuals develop social skills? That connection is more difficult to establish. To do so, one of three things is required: (i) random sorting of individuals with different initial levels of social skills into the treatment (participation) and control groups (non-participation), (ii) observations on individuals' social skills both before and after participation, or (iii) a statistical technique that allows the fact that neither of the first two conditions hold to be addressed. Past research supports the supposition that the first condition does not hold, hence sorting is non-random. Similarly, while some data sets collect data that would allow researchers to construct valid metrics for social skills, they typically do not do so multiple times over a very long timeframe so that skills cannot be observed before and after participation. That leaves the third option: looking for statistical techniques that can account for the lack of (i) and (ii). Unfortunately, the inability to build models that can explain a large fraction of the variation in social skills across individuals casts doubt on the plausibility of these techniques. It is for these reasons that there have been so few attempts to estimate the causal effect of participation in extracurricular activities on the development of social skills.

Despite these methodological limitations, the NLSY79 does contain the necessary information to at least take a cursory look at the relationship between extracurricular activities and the development of social skills, using the second approach outlined above. The data set asks individuals to report their social orientation at age 18 on a four-point scale ranging from extremely shy to extremely outgoing. It also asks the respondents to reflect on their social orientation at age six and respond using the same scale. Asking respondents to think back to when they were that young clearly has some significant limitations. At the same time, it is not unreasonable to assume people have at least a decent sense of whether they were shy or outgoing when younger. An additional limitation is the fact that there is only a single item measure for social orientation. This prohibits the use of standard metrics to assess the validity of this measure as a proxy for social skills. With these limitations in mind, it is found that individuals who participated



in extracurricular activities also report a more outgoing social orientation at age 18. This holds true even when controlling for demographics, a measure of cognitive ability, and social orientation at age six. Additionally, athletics and non-athletics activities have similar effects on social orientation.

### **Access to extracurricular activities**

The lower rates of participation in extracurricular activities by youths growing up in lower-income households observed in the US and Canada indicate that a lack of opportunities for these activities further perpetuates inter-generational inequality gaps [12], [13]. A lack of opportunities to participate in extracurricular activities for youths in lower-income households also serves to restrict the future pool of managerial talent. In the US, Hispanic and black youths are less likely to participate in extracurricular activities. However, the larger participation gap is between youths living in high- versus low-income households. This lack of access for youths from lower-income households is especially concerning since evidence suggests they may benefit even more from participation relative to higher-income youths [13]. A less pronounced income gradient is observed for Canadian secondary school aged children, with a larger gap for younger ones [12]. Even absent differential impacts of participation by income or race, differences in access to these opportunities can exacerbate inequalities in labor market outcomes. Given the evidence provided in the previous sections, a lack of opportunity to participate in extracurricular activities means that society misses yet another opportunity to develop the pool of managerial talent. In order to build the broadest talent pool possible, all youths should have access to both quality formal education and extracurricular activities.

## **LIMITATIONS AND GAPS**

The statistics and research discussed in this article clearly point to a positive association between youth participation in extracurricular activities and future employment outcomes, including holding a position with supervisory responsibilities. Additional research is needed to more clearly establish a causal link between the two. Researchers must still contend with the possibility that more sociable or higher ability adolescents are more likely to participate in extracurricular activities. Indeed, while some studies indicate positive effects of extracurricular activities on labor market outcomes, other studies provide more mixed evidence.

Using the same data source analyzed in this article and previously published research, one study fails to find a statistically significant, positive effect of athletics participation on future supervisory status [1]. However, it should also be noted that the study focuses specifically on men and actually finds estimated effects similar to or larger than those found in [6]. The lack of statistical significance can be attributed, at least in part, to much smaller sample sizes. Data limitations play a significant role in the difficulties of establishing clear causal connections between youth activities and future supervisor status. In particular, it is not clear whether participation in extracurricular activities builds non-cognitive skills, or whether individuals with a greater endowment of these skills sort into these activities. Dealing with the potential for non-random sorting requires longitudinal data where individuals are observed repeatedly over the course of several



years. These data must contain information on both participation in extracurricular activities during youth and subsequent labor market outcomes. In order to show that participation affects future labor market outcomes by increasing social skills, repeated and reliable measures of social skills taken before and after participation are needed. There do not currently seem to be any data sets that meet all of these criteria. This leaves researchers to employ sophisticated statistical techniques in order to assess whether any part of the observed correlations between participation, social skills, and future labor market outcomes reflect causal relationships. While the availability of these techniques can generate useful insights, they also have their limitations. They may not always be appropriate to study the issues in question and can lead to erroneous findings. Newer studies that corroborate the existing research will go a long way to establishing whether participation in extracurricular activities does indeed build the skills that are highly valued in managerial roles.

## SUMMARY AND POLICY ADVICE

Research has established a positive connection between participation in extracurricular activities during adolescence and future labor market outcomes, notably whether an individual holds supervisory responsibilities. The non-cognitive skills developed through participation in these activities play a central role in managerial occupations. Ensuring access to such activities for youth regardless of socioeconomic status is vital to establishing and maintaining the broad-based managerial talent pool needed by both private sector firms and public institutions. Combined with the other benefits of extracurricular participation, including greater educational attainment and higher earnings, these findings indicate that governments should include such programs in their workforce development and education policies. In the US and other countries, these activities are typically organized and funded at the local level. There is also a tradition where local businesses will sponsor local youth sports teams and associations, although large, national (or even multinational) corporations, especially those in sports and fitness-related industries such as Nike, support youth sports. Given that more affluent communities are also more likely to have local business leaders who are able to support local youth activities, large firms with an international presence can play an important role in supporting extracurricular youth activities in underserved communities. Aside from donating money and equipment, firms can also help by providing incentives for employees to volunteer in these organizations, such as paid volunteer time. Such personnel policies follow in the tradition of law firms that give associates time off for, or even mandate, a certain amount of pro bono work each year. Some companies incentivize volunteering by matching volunteer hours with financial donations.

However, given the evidence that it is quite difficult to change long-term behavior in areas such as exercise and sports participation, policymakers must be mindful that increased efforts to ensure access to extracurricular activities is unlikely to convince adolescents to participate in activities when they are not inclined to do so. Rather, the goal of providing access is to provide opportunities for those who lack them but are inclined to participate.

### **Acknowledgments**

The author thanks an anonymous referee and the IZA World of Labor editors for many helpful suggestions on earlier drafts. Previous work of the author contains a larger number of background references for the material presented here and has been used intensively in all major parts of this article [6].

### **Competing interests**

The IZA World of Labor project is committed to the IZA Code of Conduct. The author declares to have observed the principles outlined in the code.

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### Further Reading

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