

## **Contract Work at Older Ages<sup>\*</sup>**

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### **ABSTRACT**

The share of workers who are self-employed rises markedly with age. Given policy concerns about inadequate retirement savings, especially among those with lower education, and the resulting interest in encouraging employment at older ages, it is important to understand the role that self-employment arrangements play in facilitating work among seniors. New data from a survey module fielded on a Gallup telephone survey distinguish independent contractor work from other self-employment and provide information on informal and online platform work. The Gallup data show that, especially after accounting for individuals who are miscoded as employees, self-employment is even more prevalent at older ages than suggested by existing data. Work as an independent contractor is the most common type of self-employment. Roughly one-quarter of independent contractors age 50 and older work for a former employer. At older ages, self-employment generally—and work as an independent contractor specifically—is more common among the highly educated, accounting for much of the difference in employment rates across education groups. We provide suggestive evidence that differences in opportunities for independent contract work play an important role in the lower employment rates of less educated older adults.

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The self-employment rate—the share of employed persons who are self-employed—rises markedly with age. Americans are living longer, but many lack sufficient savings for retirement. This has raised interest in policies that facilitate work at older ages. In considering such policies, it is important to understand the role that self-employment may play in facilitating continued attachment to the labor market. As individuals approach the traditional age of retirement, they may have financial or personal reasons for wanting to continue to work. At the same time, they may need or wish to reduce their work hours or change their type of work. For a variety of reasons, it may be difficult for older workers to find suitable wage and salary work. The greater flexibility afforded by self-employment has been advanced as an important part of the explanation for the higher rates of self-employment at older ages.

Owing to data limitations, research and policy discussions typically have treated self-employment as a homogeneous category or made only the crude distinction between incorporated and unincorporated self-employment. Yet, self-employment may take a variety of forms, including owning a business that involves a significant capital investment and managing a payroll; working as an independent contractor, independent consultant, or freelancer for one or more clients; and doing occasional informal tasks or work through a mobile app or online platform for businesses or consumers.

These diverse types of self-employment, in turn, may vary in the flexibility in hours worked, the type of work performed, and the ease of transitioning into the arrangement. For example, for someone who has been working in a wage and salary job, work as an independent consultant, independent contractor, or freelancer (possibly including work via a mobile app or online platform) may offer a way to control work hours or the types of tasks performed. In some cases, this may involve working for a former employer as part of a gradual, or phased,

retirement. Someone who already has an established business may find it easier than other workers to reduce work hours. In contrast, starting a new business may well require a significant upfront investment and involve an *increase*, not a decrease, in work effort.

The reasons for self-employment at older ages also are diverse. In some cases, financial necessity is the primary driver; in other cases, motivations such as the desire to stay active, connect with others, or pursue a hobby may be more important. Understanding self-employment at older ages thus requires more detailed information than typically is available in standard data sets such as the Current Population Survey (CPS).

This study uses data from a module we developed for inclusion on the Gallup Education Consumer Pulse Survey to examine self-employment arrangements among older Americans. The module, designed to capture all work for pay, comprises 14 questions on respondents' employment and the nature of their work arrangements, including contract and informal work. For independent contractors age 50 and older, we asked additional questions about that work, including whether respondents were working for a former employer and their primary motivations for being in an independent contractor arrangement. The survey module was fielded during four month-long periods, spaced at three-month intervals, during 2018 and early 2019. It yielded responses from approximately 61,000 adults, of whom approximately 40,000 were age 50 and older.

The paper begins with a brief overview of the existing literature on the desire for employment at older ages and the role of self-employment in obtaining that work. Next, we describe the Gallup module on contract work. Our analysis of the Gallup data provides new evidence on the prevalence of different types of self-employment at older ages, the characteristics of those working under different arrangements, and, for independent contractors,

their motivations for engaging in this work. Our analysis points to the importance of independent contractor work at older ages and suggests that differences in opportunities for such work help to explain the lower employment rates of the less educated at older ages.

## **BACKGROUND**

Self-employment historically has offered some workers an attractive alternative to wage and salary employment. Many entrepreneurs appear to value being their own boss and prefer self-employment to a wage and salary job, even if they could earn more in the latter (Hamilton 2000, Hurst and Pugsley 2011). Similarly, data from the 2017 Contingent Worker Supplement (CWS) to the CPS show that nearly 80 percent of those categorized as independent contractors said that they preferred that arrangement to a conventional wage-and-salary job (Bureau of Labor Statistics 2018a).

In other cases, however, poor opportunities in the wage and salary market may drive the decision to become self-employed. Studies using individual-level data have found that individuals who were unemployed, earned low wages, changed jobs frequently, or had been unemployed for a longer period were more likely to become self-employed (Evans and Leighton 1989, Alba-Ramirez 1994). Whereas self-employment that takes the form of an incorporated business is pro-cyclical, unincorporated self-employment is counter-cyclical, with larger numbers of people entering into unincorporated self-employment when the labor market is weak (Levine and Rubinstein 2018). For many, then, self-employment may be a fallback option rather than a preferred work arrangement.

These findings point to the importance of recognizing the considerable heterogeneity among the self-employed. They include not only business owners who may employ others to

work for them, but also independent contractors operating as sole proprietors as well as day laborers, online platform workers, and others who do informal work for pay (see, e.g., Abraham et al. 2018a). In some of these cases, self-employment is a full-time job; in other cases, it is part-time, casual, or intermittent. Evidence based on surveys designed specifically to capture informal work suggests that a significant share of the population engages in such activity (see, e.g., Robles and McGee 2016, Bracha and Burke 2019, Abraham and Houseman 2019). Other research has shown that self-employment often supplements income from a primary wage and salary job (see, e.g., Koustas 2018; Farrell, Greig and Hamoudi 2018; Abraham et al. 2018a, 2018b; and Collins et al. 2019).

Life-cycle considerations suggest that the motivations for employment and the forms of employment chosen may vary with age. Based on a finding that many older workers earn comparatively low wages, Haider and Loughran (2010) suggest that financial considerations are not the only motivation for continuing to work at older ages. There is also ample evidence, however, that many older adults lack adequate savings for retirement, meaning that it may be important for them to continue to work. The exact numbers vary depending on researchers' specific modeling assumptions, but a reasonable estimate is that 40 to 50 percent of those in their early 60s have not saved enough to maintain their standard of living in retirement without running out of money (see, e.g., Pang and Warshawsky 2013, Munnell, Hou and Sanzenbacher 2018, and VanDerhei 2019). Further, the share in this situation appears to be higher among those with lower levels of education (Pang and Warshawsky 2013) and lower pre-retirement incomes (Munnell, Hou and Sanzenbacher 2018, VanDerhei 2019). Working even a short number of extra years could go a long ways towards closing the identified retirement savings gaps, but even after controlling for health and other factors that might affect work behavior, those with lower

education levels are significantly less likely to anticipate working long enough to reach the necessary target savings level (Munnell, Webb and Chen 2016).

An extensive literature on “partial retirement” or “bridge jobs” has found that it is common for older adults to transition from full-time work to part-time work before retiring fully (see, for example, Gustman and Steinmeier 1984; Ruhm 1990; and Giandrea, Cahill, and Quinn 2009). Similarly, a significant share of retirees later “unretire” and move back into the labor force, frequently taking part-time rather than full-time jobs (Maestas 2010).

Many employers do not offer employees nearing retirement age the option to reduce their hours on their current job. Citing data from the first five waves of the Health and Retirement Study (HRS), Abraham and Houseman (2005) report that few older employees believe that their employer would allow them to reduce their hours on their current job. Data collected more recently by the Society for Human Resource Management show that, as of 2018, only about 5 percent of those responding to their annual member survey reported that their firm had a formal phased retirement program. Even counting those who say their firm may offer phased retirement on an informal basis, that share rises to only about 20 percent (Society for Human Resource Management 2018).

When phased retirement on an older worker’s current job is not an option, it also may be difficult for her to find another suitable job that offers part-time hours. Many employers appear to be generally reluctant to hire older workers, whether because of concerns about high health insurance costs, unwarranted stereotyping, or more legitimate concerns related to these workers’ skills and low perceived returns to training (Abraham and Houseman 2005, 2008). In audit studies that involved sending pairs of résumés to employers recruiting for entry-level positions, both Bendick, Jackson, and Romero (1997) and Lahey (2008) found that, all else the same, older

applicants were less likely to receive favorable responses from employers; using a similar strategy, Neumark, Burn, and Button (2019) found that older female applicants were particularly disadvantaged. In another study, Maestas and Li (2006) found that fewer than half of non-working HRS respondents who reported that they were searching for work were employed two years later. Interestingly, those searching for part-time work were more than 15 percentage points less likely to be working two years later than those seeking or willing to accept full-time work.

Self-employment at older ages is of particular interest because it may provide a viable path for older workers to keep working but cut back on their hours rather than continue with full-time work or withdraw entirely from the labor force (see, e.g., Fuchs 1982 and Quinn 1980). Using HRS data, Zissimopoulos and Karoly (2007) find far higher rates of transition from full-time work to part-time work among individuals who were initially self-employed than among those who initially held a wage and salary job. Ameriks et al. (2018) report that, among those in their sample who took a bridge job at the end of their careers, self-employment was substantially more common on the bridge job than on the career job. Consistent with the idea that older workers use self-employment as a way to keep working but cut back on their hours, Ramnath, Shoven, and Slavov (2017) find that late-career transitions to self-employment observed in tax data are associated with significantly larger earnings reductions than mid-career transitions.

Recent years have seen growing discussion of the so-called gig economy, including the emergence of mobile apps and online platforms, such as Uber, Lyft, TaskRabbit, and Upwork, that match workers to customers with a need to have a specific task performed (see, e.g., Abraham, et al. 2018a, 2018b, 2019; Farrell, Greig, and Hamoudi 2018; and Collins et al. 2019). Prior research has found that older adults are less likely than younger adults to participate in

work mediated through mobile apps and online platforms (Farrell, Greig, and Hamoudi 2018; Collins et al. 2019). At least in principle, however, gig employment could be particularly attractive to older workers who do not require employer-provided health insurance or other employee benefits and who place a particularly high value on flexibility in their hours of work. If so, their participation rate may grow over time.

## **GALLUP CONTRACT WORK MODULE**

To learn more about self-employment among older Americans, we have collected new data on a module fielded as part of the Gallup Education Consumer Pulse Survey, a large, nationally representative telephone survey. The target population for the Gallup Education Consumer Pulse survey is adults age 18 to 64, but during the periods that our survey module was in the field, Gallup also administered the employment and core demographic questions to individuals ages 65 to 80.

Similar to the CPS, the Gallup Education Consumer Pulse Survey collects employment information for a specified week (the seven days preceding the interview). It includes a standard battery of questions on respondents' employment status used in other Gallup surveys. This battery begins by asking respondents if they do any work for an employer. If the respondent answers in the affirmative, she is asked the number of hours worked for an employer during a typical week (across all employers if more than one). Respondents then are asked about self-employment work activities and, if applicable, usual hours worked per week in self-employment.

Our Contract Work module consists of 14 questions about respondents' employment and work arrangements that were interspersed, as appropriate, among the standard employment questions in the Gallup survey. We randomly varied the wording for selected questions in order to test how



alternative phrasings affected responses; Abraham, Hershbein and Houseman (2019) discusses the process of developing the survey questionnaire and our findings with regard to the effects of question wording. The text of questions relevant for this paper can be found in Online Appendix A. In most cases, the responses to the two question versions we tested were similar and the estimates reported here are pooled responses.

The standard question about work for an employer on the Gallup survey reads as follows:

Thinking about your WORK SITUATION over the past 7 days, have you been employed by an employer—even minimally like for an hour or more—from whom you receive money or goods? (This could be for one or more employers.)

Someone doing work for a company on contract basis might reasonably answer “yes” to this question. To learn whether miscoding of workers as employees is a significant problem in the Gallup survey, we asked everyone answering “yes” one of two follow-up questions that further probed whether the person was in fact an independent contractor, independent consultant or freelance worker rather than an employee. The first version asked about this directly; the other identified independent contractors by asking whether the employer took any taxes out of the respondent’s pay.

The standard Gallup question about self-employment asks:

Again, thinking about the last 7 days, were you self-employed, even minimally like for an hour or more? This means working for yourself, freelancing, or doing contract work, OR working for your own or your family’s business.

Self-employment also includes fishing, doing farm work, or raising livestock for either your own or your family’s ranch.

Although it normally is not asked of respondents who report working for an employer 30 or more hours per week, we asked it of all respondents in our module sample. The emphasis on reporting work of as little as an hour during the reference week and explicit mention of freelance and contract work likely mean this question captures self-employment work more fully than, for

example, the standard CPS employment questions. We also asked everyone reporting self-employment activity whether any of that work was done as an independent contractor, independent consultant, or freelance worker. This allowed us to distinguish those workers from other self-employed workers. To avoid possible double counting of contract work done by those who initially said they had worked for an employer, we asked relevant respondents whether any of the self-employment work they had done in the last seven days was work they had already reported and analyzed the data accordingly.

The questions about both work for an employer and self-employment were followed by questions about hours devoted to that work. Then, to ensure that we had not missed informal work that might not have been captured by the standard employment questions, we asked all respondents whether there was anything else they had done in the last seven days for which they had received or expected to receive payment. The two versions of this question differed with regard to whether the basic question was augmented with specific examples.<sup>1</sup> If respondents reported doing additional work for pay, they were asked the number of hours spent on such activities in a typical week.

The last general questions about work activity on the survey module pertained to work obtained through online intermediaries, intended to capture the use of mobile apps and websites such as Uber, Lyft, TaskRabbit, and Upwork. In the first two waves of the Gallup survey, we asked whether the person had connected directly with new customers or clients through a mobile app or online platform, with examples of the types of work someone might have obtained through these channels provided to half of respondents. In reviewing the data from these first two

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<sup>1</sup> Findings in the survey methodology literature suggest that adding examples to questions encourages more accurate reporting, possibly because the examples clarify for respondents what they should be reporting or because the examples remind them of things they might otherwise have forgotten (see, e.g., Tourangeau et al. 2014).

waves, we noticed that positive responses to this question were much higher than existing estimates of online platform work (Farrell, Greig, and Hamoudi 2018; Bureau of Labor Statistics 2018b)—indeed, too high to be plausible. This raised a question about whether respondents had understood what we were asking.<sup>2</sup> To reduce possible confusion, for the third and fourth waves we added a question that asked whether the respondent was paid through the mobile app or online platform. For this paper, we measure mobile app or platform work based on respondents who said both that they connected with new customers or clients through a mobile app or online platform and that they were paid through the app or platform.

All questions just described, together with some additional questions designed to identify individuals whose employers contracted their services out to other companies, were asked of all respondents. The module also included questions designed to provide a more comprehensive picture of independent contract work at older ages. These questions were asked of workers age 50 and older identified as independent contractors, independent consultants, or freelancers, whether they originally reported themselves as employed by an employer or as self-employed. First, we asked (through one of two question versions) whether that work was being done for a business or organization for which the person had previously been an employee. Second, we asked the respondent's main reason for doing independent contractor work. Possible reasons were that the work was a main source of income, was a supplement to retirement income, was a supplement to income from another job, was the only type of work the person could get, allowed the person to stay active and connect with others, or allowed the person to pursue an interest or hobby.

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<sup>2</sup> Staff at the Bureau of Labor Statistics reported similar concerns in their report on the responses to questions about the use of online intermediaries added to the 2017 CWS (Bureau of Labor Statistics 2018b).

Gallup administered the Contract Work module in four waves spread evenly across the year. The first wave was administered from mid-May through mid-June 2018, the second wave from mid-August through mid-September 2018, the third wave from mid-November through mid-December 2018, and the fourth and final wave from late February through late March 2019. The survey response rates varied from about 8 percent to about 10 percent, depending on the wave.<sup>3</sup> Altogether, Gallup collected approximately 500 completed responses per day, about 15,000 in each wave, and about 61,000 in total.

The core Gallup survey also collects detailed demographic information (including age, gender, race, ethnicity, and education) and data on the respondent's annual income and geography down to the ZIP code.<sup>4</sup> Gallup supplied survey weights constructed to match the demographic characteristics of the adult population in the relevant age range, as recorded in the most recent Annual Social and Economic Supplement to the CPS. We use the survey weights for all tabulations with the data, but not in the reported regression results.

## **FINDINGS FROM THE GALLUP SURVEY MODULE**

As just discussed, the Gallup survey module was designed to capture all work activities done by respondents during the preceding seven days and to provide more detail on various types of self-employment than is found in the CPS and other widely-used surveys. We are able to identify not only self-employed people who report themselves as such but also people who reported themselves as employees but indicated when probed that they in fact were self-

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<sup>3</sup> Because it was fielded on a survey that continuously interviewed throughout the year, it is not possible to calculate a precise response rate for the Contract Work module. The reported response rates were computed by isolating the days on which the module was in the field and calculating a response rate for those days. Sample records that were first dialed on days prior to when a new Contract Work Module wave started, or that were first dialed during the Contract Work field period but not fully resolved until after it finished, are not included in the computations.

<sup>4</sup> Because the item non-response rate was high for income, we do not use this variable in the analysis presented below; rather we impute neighborhood income measures based on ZIP code.

employed (as an independent contractor) as well as people doing other work that they did not think to report in response to the standard Gallup employment questions. In addition, among the self-employed, we are able to distinguish independent contractors, independent consultants, and freelancers from other self-employed individuals. We also discuss the subset of independent contract work obtained through a mobile app or online platform.

### *Prevalence of Self-Employment Arrangements by Age*

Table 1 provides a summary of the prevalence of various work activities among Gallup respondents by age group. The first column shows the percent who engaged in any work activity (including work for an employer, in self-employment, or informal work) during the preceding week.<sup>5</sup> In these data, the employment rate is close to 80 percent for age groups 18–29 and 30–49, but then begins to drop with age, falling to 69.1 percent among those age 55–59 and to 55.8 percent among those age 60–64. Although the employment rate declines further at older ages, even among the oldest respondents, a significant fraction did some work for pay in the preceding week—37.1 percent of those age 65–69, 26.0 percent of those age 70–74 and 18.6 percent of those age 75–79.

The next two columns show the shares of people whose main job or work activity is work as an employee or self-employment, expressed as a percent of those with any work activity in the preceding week and summing to 100 percent. For those with more than one job, the main job is defined based on hours worked. Conditional on working, the share whose main job is self-employment rises sharply with age, especially after age 65. The self-employment share is just

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<sup>5</sup> We define informal work as work that was not reported in answering the questions about work for an employer or self-employment, but mentioned only when we asked “Did you do anything else in the last 7 days that you have not already mentioned for which you received (or expect to receive) payment?” We assume that informal work is self-employment rather than employee work.

under 20 percent for those age 18–29 and 30–49; it rises to 25.2 percent for those age 55–59, 45.5 percent for those age 65–69, and 67.5 percent for those age 75–79.

The employment arrangements shown in the final four columns are different types of self-employment—independent contractors who initially were miscoded as employees, people who said they were self-employed but not independent contractors, people who said they were self-employed independent contractors, and people who did only informal work. These breakouts provide a more detailed picture of the variety of self-employment arrangements than is available from other sources. The share of workers in each type of self-employment arrangement generally rises with age. Between the ages of 30 and 64, independent contractors miscoded as employees make up an estimated 5 to 6 percent of the employed. That share rises to about 9 percent for those age 65–75 and 11 percent for those age 75–79. The share of working respondents who answered “yes” to the question about self-employment also rises steadily with age. This is true both for those who are independent contractors, independent consultants, and freelancers and for those in other types of self-employment. Among workers in their 70s, the share reporting that they are a self-employed independent contractor exceeds 20 percent, and the share reporting that they are self-employed but not an independent contractor ranges between 25 and 30 percent. Few workers between the ages of 30 and 64—under one percent—report their only employment is other informal activities. Perhaps not surprisingly, starting at the traditional retirement age of 65, that share begins to rise, to 1.9 percent for those age 65–69, 3.6 percent for those age 70–74 and 5.8 percent for those age 75–79.

The first three columns of Table 2 display the share of workers who are part-time, defined as working less than 30 hours per week on all jobs during a usual week. This is reported for all workers and then separately for employees and the self-employed. As expected, the share

working part-time rises with age, particularly after age 64. At every age, part-time work is considerably more common among the self-employed, though the gap is smaller for workers in the two oldest age groups.<sup>6</sup>

The next two columns of Table 2 show the share of workers who hold multiple jobs, defined as having more than one employer, combining work for an employer with self-employment, or combining work for an employer and/or self-employment with informal work activities. Multiple job holding declines with age, but is quite prevalent in the Gallup data, even among older workers. More than 10 percent of those still working in their 60s and 70s report combining work for employers with self-employment. These rates are notably higher than the multiple job holding rates in the CPS.<sup>7</sup> Although the high rates in the Gallup data may partly reflect unobserved differences between those who responded to the Gallup survey and those responding to the CPS, other factors also likely contribute to this result. First, we ask even those who had reported work as an employee explicitly about self-employment, and second, the wording of the Gallup employment questions encourages people to report even small amounts of work activity.

The growth of mobile apps and online platforms such as Uber, Lyft, and Upwork has garnered much attention in recent years. Some have speculated that these platforms may help older individuals connect with employment and remain in the workforce longer. The final column in Table 2 shows the share of workers obtaining self-employment work through mobile apps or online platforms and being paid through those apps or platforms. The share of workers

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<sup>6</sup> The information on hours used to categorize whether workers are part-time or full-time is categorical, creating ambiguity about the status of 457 respondents (1.3 percent of workers) who reported hours for more than one type of work. The percentages reported in Table 2 assume that all of these workers were part-time; the numbers are little affected if we assume that all of them were full-time.

<sup>7</sup> The overall multiple-job-holding rate in the CPS is roughly 5 percent and it declines only slightly with age. See <https://www.bls.gov/cps/cpsaat36.htm>.

reporting work through a platform or mobile app averages 3.1 percent; it is highest, at 3.8 percent, among workers under age 30, and falls somewhat with age, to between 2.0 and 2.6 percent for workers age 65 to 79.<sup>8</sup>

Although we have defined participation in platform work similarly to the 2017 CWS, our estimates are notably higher than the CWS estimates. The CWS found 1.0 percent of all workers to have participated in electronically mediated work, with estimated participation rates of 0.9 percent for workers age 16 to 24 and 0.8 percent for workers age 65 and older. The prevalence of platform work may in fact have grown between the fielding of the CWS in May 2017 and the fielding of the relevant waves of the Gallup survey in late 2018 and early 2019. Another factor contributing to the differences between the two sets of estimates, however, may have been that the CWS questions about platform work were asked only of those identified as employed in the basic monthly CPS. To the extent that the Gallup employment questions identify more low-hours and casual workers than the basic monthly CPS, they may have captured more of those involved in platform work.

To put our Gallup estimates into context more broadly, we have compared them to estimates based on CPS data for the months that the Gallup survey was in the field.<sup>9</sup> These estimates are available in Online Appendix B. Employment rates in the Gallup data are very similar to those in the CPS for ages 30–64, but they are about 10 percentage points higher for those age 18–29 and 4–7 percentage points higher for those age 65–79. The Gallup questions about work for an employer and self-employment ask specifically whether the respondent

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<sup>8</sup> The share of workers answering yes to the initial question about connecting directly with new customers or clients through a mobile app or online platform was substantially higher, especially among older workers, with 10.0 percent of workers age 65–69, 11.8 percent of workers age 70–74, and 13.5 percent of workers age 75–79 giving an affirmative answer. This may suggest high rates of internet usage to engage with customers and clients.

<sup>9</sup> More specifically, the CPS estimates were calculated using data for May and June 2018, August and September 2018, November and December 2018, and February and March 2019.



worked “even minimally like for an hour or more” and thus seem likely to have captured casual work activity more fully than the corresponding CPS questions. In addition, our Gallup module asks explicitly about any informal work that the respondent may not have reported in response to the standard employment questions. The Gallup and CPS employment rates for the youngest and oldest age groups are more similar when we exclude those who report working less than 15 hours per week.<sup>10</sup>

Another difference between the Gallup and CPS estimates is the higher prevalence of self-employment in the Gallup data. In part, this is because the Gallup data include both miscoded employees and individuals doing only informal work as self-employed. As shown in Online Appendix B, when we exclude these groups the Gallup self-employment estimates become closer to the CPS estimates. When we further restrict to individuals working 15 or more hours per week, the self-employment prevalence rates in the two surveys become even more similar.<sup>11</sup>

#### *Age patterns of work under various alternative arrangements*

To explore the age patterns of working for pay under various employment arrangements, we next estimate linear probability models of these outcomes. We are particularly interested in the role that education plays in the age gradient for the different types of self-employment discussed above, as well as in the prevalence of informal or online platform work. In each model, the dependent variable takes the value of one if the person belongs to the indicated employment

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<sup>10</sup> Another contributing factor to the differences between the Gallup and the CPS estimates may be that Gallup survey respondents answer only for themselves whereas CPS respondents may give proxy responses (Abraham and Amaya 2019).

<sup>11</sup> The CPS data distinguish between the unincorporated and the incorporated self-employed (Hipple and Hammond 2016). Given the wording of the Gallup self-employment question, we would expect both groups to be counted and therefore include both in the CPS estimates used for these comparisons.

arrangement group and zero otherwise. We regress these outcomes on interactions of the same age group indicators as in the previous tables (18–29, 30–49, and subsequent five-year ranges) with education indicators (high school or less, some college, bachelor’s, and graduate degree), as well as controls for race, gender, and wave, and quintiles of ZIP-code level household poverty rates.<sup>12</sup> To create age profiles for the different education groups, we plot fitted values from these regressions.<sup>13</sup>

The four panels of Figure 1 show the shares of the population among those with given levels of education who are in each of four mutually exclusive employment groups. The four employment groups are defined based on the arrangement on the respondent’s main job—employee, excluding those who subsequently report being an independent contractor (top left); self-employed but not an independent contractor (top right); independent contractor, whether a miscoded employee or self-reported as self-employed (bottom left); and doing only informal work (bottom right). Each panel shows four age profiles, one for each of the four education categories. Online Appendix C shows these same four age profiles for the outcome of any employment at all—the vertical sum of the values from the other four outcomes.

The profiles shown in the panel for “true” employees are unsurprising—in every education group, the share of the population working as an employee declines with age, most sharply in the late 60s, and, until the oldest ages, more educated individuals are more likely to be working as employees. The more interesting trends are those shown in the next three panels,

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<sup>12</sup> We obtain poverty rate estimates by ZIP Code Tabulation Area (ZCTA) from the 2012–2017 American Community Survey and merge these via the ZIP code in the Gallup data. We have matches for about 95 percent of individual observations and include an indicator variable for the remaining 5 percent of observations that could not be matched.

<sup>13</sup> We use the Stata `-margins-` command, so our fitted values preserve the underlying distribution of the other control variables. While due to space constraints we do not report the full set of model coefficients, they are available from the authors upon request.

which examine different types of self-employment. Note that these three panels use a different scale than that used for the employee panel in the upper left. The panel for non-independent-contractor self-employed (upper right) shows that the share of people in this type of arrangement grows slightly until middle age and is then relatively flat at 5–8 percent of the population through age 75-79. Those with higher education are less likely to be in this arrangement at younger ages but more likely in their 60s and 70s. The panel for independent contractors (lower left) displays a qualitatively similar pattern, but the differentials across age groups are greater. Among those with no more than a high school diploma, the share of people working as independent contractors declines monotonically with age from about 11 percent at age 18–29 to about 4 percent at age 75–79. For those with a graduate degree, in contrast, the share working as independent contractors *rises* from 6 percent at age 18-29 to 11 percent at age 75-79. Independent contract work is a substantial share of self-employment at all ages and education levels—almost always more than 50 percent—but the patterns in these two panels imply that it becomes disproportionately more prevalent at older ages among those with greater education. The last panel in Figure 1 shows the trends in the share of individuals engaged only in informal work. These rates are consistently low, on the order of 1 percent, but slightly higher at the youngest and oldest ages, reflecting higher rates for the less-educated at younger ages and the more-educated at older ages.

Figure 1 displays work activity as a share of the population, but we also are interested in how the distribution of work arrangements varies, conditional on being employed. Figure 2 repeats the analysis just described but with the sample restricted to those who are working. The first panel reports the share of workers who are employees; the profiles displayed are qualitatively similar to those in the corresponding panel in Figure 1 in showing steep declines

after the traditional retirement age. Conditional on being employed, however, the more highly educated are 5 to 10 percentage points less likely to be employees at older ages than their less-educated peers. Rates of non-independent-contractor self-employment, shown in the upper right panel, rise with age and are relatively tightly clustered across education groups at most ages. Among those in their 70s, these rates are higher for those in the high school group (about one-third) than for those in the graduate degree group (about one-quarter). As shown in the lower-left panel, older workers also are more likely than younger workers to be independent contractors. Independent contractors constitute between 10 and 15 percent of all employment for workers in their 30s, 40s, and 50s, but this share rises rapidly for workers in their 60s and 70s. In this case, however, the growth is especially marked among more-educated older workers as compared to those who did not attend college. Non-independent-contractor self-employment is the larger component of overall self-employment at older ages only for those with just a high school education; for those with at least some college, independent contract work plays the larger role.

These results support two stylized facts about self-employment at older ages. First, more educated older adults are considerably more likely to be in self-employment arrangements than older adults with less education. Second, and something it is not typically possible to observe in survey data, more educated older workers' self-employment is especially likely to take the form of working as an independent contractor, whereas less educated older workers' self-employment is more concentrated in traditional business ownership.

The higher incidence of independent contractor work among the highly educated relative to the less educated also accounts for much of the difference in employment rates by education at older ages. Online Appendix C, which shows the age profile of the overall employment-to-population ratios for each education level, displays the well-known fact that overall employment

declines with age. It also reveals the strict ordering of employment rates by education; at every age, those with higher education levels have a higher employment rate than those with lower education levels. For younger and middle-aged workers, the differences in wage and salary employment shown in Figure 1 account for most or all of the differences in overall employment rates across education groups.<sup>14</sup> Starting at age 65, however, differences in independent contractor employment account for a large and growing share of the employment gap between highly educated and less educated workers. For example, the higher rate of independent contractor work among graduate-degree holders accounts for more than half of the difference between that group's (higher) overall employment rate compared to the employment rate among those with no more than a high school education or even those with just a bachelor's degree.

The large differences in independent contractor employment across education groups at older ages may reflect differences in the types of work done by more versus less educated workers and associated differences in the opportunities to work as an independent contractor. Figure 3 shows how the age profiles of the share of employed persons in different employment arrangements vary by broad occupation (professional-managerial; sales and office; blue-collar; services; and farming, forestry, and fishing). In this figure, the age profiles are shown for three types of employment on the main job—employee, not miscoded; self-employed, not an independent contractor; and independent contractor.<sup>15</sup> Aside from farming, forestry, and fishing, which is heavily comprised of owner-operators, other occupations have a larger share of self-employment in independent contractor arrangements. The age profiles for independent contractor

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<sup>14</sup> The numbers underlying Online Appendix C and Figure 1 can be used to decompose the differences at a particular age in the in aggregate employment rates for the different education groups into the part due to each employment type.

<sup>15</sup> These profiles are derived similarly to those for age-education but using age-occupation interactions instead and also controlling for education in levels. The note to the figure describes the occupations in each group. Because occupation was not collected for those who reported only informal work, they are excluded from this analysis.

work, however, differ considerably across occupations. Among professional workers, who are generally highly educated, the share in independent contractor arrangements is relatively low through age 65, but then rises sharply with age. By age 70, 40 percent or more of professional workers are in an independent contractor arrangement. Although the share of blue-collar workers who are in independent contractor arrangements also rises sharply starting at age 65, the overall number of people still working in blue-collar occupations at these older ages is small, likely reflecting the physical demands of many blue-collar jobs. For workers in services, sales, and office occupations, all of whom have relatively low educational attainment, the share who are independent contractors remains low at older ages, possibly reflecting few opportunities for workers in these occupations to transition to that more flexible work arrangement.

Figures 1 through 3 illustrate age trends for arrangements on the main job, but they do not provide insights regarding the characteristics associated with participation in informal work (either as a person's main job or as a supplement to other work activity) or in work through an online platform. The first column of Table 3 reports results from a linear probability model for whether respondents engaged in any informal work in the prior seven days. As just 2.4 percent of the (unweighted) sample did so, we include a slightly more limited set of covariates in these models than were used to estimate the earlier age profiles. In addition to race, gender, and wave indicators, the model includes age group indicators, education indicators, interactions of broad age group (50–64 and 65–79) with education, and controls for type of main employment arrangement if any (miscoded employee, self-employed but not an independent contractor, self-employed independent contractor, or no other job, with true employees the omitted group). For the less educated, there is a distinct negative age gradient to the reporting of informal work. More-educated individuals are somewhat less likely to report such work, at least at younger ages,

but the negative age gradient is much flatter for them. Consequently, older, more-educated individuals are significantly more likely to have informal work than less-educated older individuals, a reversal of the pattern at younger ages. Interestingly, there is a strong positive association between being in a non-employee arrangement on the main job and reporting informal work. Those whose main job is some form of self-employment are 3 to 6 percentage points more likely than those who are employees, conditional on other covariates, to report informal work in the prior week.<sup>16</sup> These findings suggest that many of the self-employed engage in multiple work activities to earn money.

In the remaining columns of Table 3, we examine the factors associated with online platform work. The sample for the second column is all respondents and that for the third column is restricted to those with work activity in the preceding week. As with informal work, there is a negative age gradient in platform work participation that is especially pronounced when the sample is restricted to workers. As with informal work, rates of participation in platform work are higher among those in employment statuses other than a traditional employee arrangement. Conditional on other covariates, those whose main job involves independent contract work are 7 percentage points more likely to use an online platform or app than are employees and even the self-employed who are not independent contractors are 5–6 percentage points more likely to do so.

### *Why Older Workers are in Independent Contractor Arrangements*

As noted earlier, respondents to the Gallup module may indicate that they are independent contractors via either of two paths. First, they may report working for an employer,

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<sup>16</sup> For context, the unconditional means are roughly 2 percentage points for employees and 5–8 percentage points for the self-employed, so the covariates do not alter the simple differences.

but with further probing indicate that they are actually independent contractors, not employees. Second, they may report being self-employed and indicate that they are an independent contractor, independent consultant, or freelance worker. To learn more about older workers' motivations for being in these arrangements, we asked independent contractors age 50 and above several additional questions.

Table 4 summarizes information from these questions by 5-year age group. The first column shows the percentage of respondents who report any work as an independent contractor, either as a main job or as a secondary work activity. This rate falls steadily with age from 14.7 percent among those age 50–54 to 6.5 percent among those age 75–79. For most of these independent contractors, that work is the respondent's main job. As shown in the second column, independent contractor work is a secondary activity for 27.5 percent of those in their early 50s, declining to just 6.9 percent for those with such work in their late 70s.

A sizable share of those with independent contractor work—between 23 and 25 percent for all age groups—report working for a former employer. In some cases, this may represent an employer seeking to shed the responsibilities associated with having an employee. In other cases, this may be a way to accommodate an employee's desire for a more flexible work schedule.

The last four columns of Table 4 report information on the reasons these workers are in independent contractor arrangements. Given policy interest in independent contractor work as a mechanism for helping older individuals meet financial needs late in life, it is striking how the share of independent contractors who report earning income as the main reason for this work declines with age. As shown in the fourth column, about two-thirds of those ages 50–54 who are doing independent contractor work report earning income as the main reason, but this share falls to under half for those ages 65–69 and to about one-third for those ages 70–79. Instead, for these



older workers, connecting with others or pursuing a hobby are more important reasons for independent contractor work. As would be expected, the share who indicate that independent contractor work is their main source of income or supplements income from a main job falls with age, and the share indicating that independent contractor work supplements retirement income rises with age.

In Table 5, to better understand the circumstances and motivations of older independent contractors, we estimate a linear probability model to explore the factors associated with working for a former employer and working primarily to earn income. Perhaps not surprisingly, as shown in the first column, independent contractors who initially reported working for an employer (and so were miscoded as employees) are about 15 percentage points more likely than those who reported being self-employed to work for a former employer. As can be seen in the second column, miscoded employees also are significantly more likely (6 percentage points) to report earning income as their main reason for being in an independent contractor arrangement. As suggested by the tabulations in the prior table, conditional on having independent contractor work, there is no association between age and working for a prior employer, and the probability of reporting income as the main reason for this work declines with age. Interestingly, there is no apparent association between education and the probability of working for a former employer or working as an independent contractor to earn money.

## **DISCUSSION**

The rate of self-employment among those who are working rises sharply with age. Given considerable concerns among policymakers about the adequacy of retirement savings and the resulting policy interest in increasing employment among older Americans, it is important to

understand the incidence of various types of self-employment work and the factors that influence seniors' engagement in them. Analyses of the Gallup module data provide several insights into these issues and suggest areas for future research.

First, our data suggest that the incidence of self-employment may be even higher than is measured in standard household surveys. While it is possible that the respondents to the Gallup survey are unrepresentative of the population in unobserved ways such that they are more likely to be self-employed, there are at least two other reasons to expect higher self-employment rates in the Gallup module. First, our data suggest that a sizable share of workers at all ages are independent contractors but miscoded as employees. Second, the questions in the Gallup module are designed to capture low-hours work that may be missed in other surveys such as the CPS. To the extent that standard surveys are miscoding independent contractors as wage and salary workers or are missing some low-hours work, the resulting estimates of the prevalence of and trends in self-employment could be misleading, especially for older workers.

Additionally, our data point to the importance of independent contracting among older workers. Even without accounting for independent contractors who are miscoded as employees, they indicate that independent contractor work is as prevalent as other types of self-employment; with the inclusion of miscoded employees, independent contractor work is considerably more prevalent than other types of self-employment. Work for a former employer is an important component of independent contractor work among older workers; about one-quarter of independent contractors age 50 and older report previously working for their client as an employee. Whether the implied change in employment arrangement from employee to independent contractor is driven primarily by employers' preferences or by workers' desire for greater flexibility warrants further exploration. Additionally, a significant minority of those age

65 and older (2 to 6 percent) reports informal work as their only form of employment. Informal work tends to be associated with low and sporadic hours and so is especially apt to be missed in other surveys.

The data from the Gallup module also underscore the importance of self-employment as a secondary work activity among older workers. Although highest at younger ages, multiple-job-holding rates remain quite high among workers age 50 and older (between 15 and 20 percent of workers). The high rate of multiple-job holding in the Gallup data likely reflects, at least in part, the survey's ability to capture all types of work activity, including activities that involve low hours. A majority of multiple-job holders combine wage and salary work with various forms of self-employment, a phenomenon we will explore in future work.

Online platform work has garnered considerable attention in recent years as a potential source of work for older Americans. Although the incidence of online platform work in the Gallup data is higher than that found in the 2017 CWS fielded by BLS, is is nonetheless low, and lower still among older workers. The prevalence of platform work at older ages may grow over time and will be important to monitor.

Among the most robust findings from our analysis is the strong positive association at older ages between education and self-employment, particularly independent contractor work. At all ages, the highly educated are more likely than the less educated to be employed. At older ages, differences in the prevalence of independent contractor work account for a large share of that differential. Our analysis provides suggestive evidence that, among seniors, the differential rates of independent contracting across education groups may reflect differential access to this type of work. Professional and managerial workers have high levels of educational attainment compared to other occupational groups, and the share of those in this occupational category in

independent contractor arrangements rises sharply starting at age 65. In contrast, for lower-education occupations such as sales, office, and services, the share in independent contractor arrangements remains flat at older ages. To the degree that Americans, particularly the less-educated, need to work later in life for financial reasons, any impediments to independent contractor work they face—and whether these might be addressed with training or improved access to computers and other technology—warrant further study.

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**Table 1: Share of Population with Any Work, Distribution by Employment Arrangement on Main Job**

Age Group	Share of population with any work	Employment arrangement on main job among those with any work					
		Employee	Self-employed	Specific self-employment arrangement			
				IC, miscoded as employee	SE, not IC	SE, IC	Other work only
18–29	77.9 (0.6)	81.2 (0.6)	18.8 (0.6)	8.3 (0.4)	4.5 (0.3)	4.6 (0.3)	1.4 (0.2)
30–49	81.5 (0.4)	80.4 (0.4)	19.6 (0.4)	5.7 (0.3)	6.1 (0.3)	7.1 (0.3)	0.7 (0.1)
50–54	74.8 (0.8)	77.6 (0.8)	22.4 (0.8)	5.4 (0.4)	7.8 (0.5)	8.9 (0.5)	0.4 (0.1)
55–59	69.1 (0.8)	74.8 (0.8)	25.2 (0.8)	5.8 (0.4)	9.5 (0.6)	8.9 (0.5)	1.0 (0.2)
60–64	55.8 (0.7)	70.4 (0.8)	29.6 (0.8)	6.0 (0.4)	10.6 (0.5)	12.1 (0.6)	0.9 (0.2)
65–69	37.1 (0.6)	54.5 (1.1)	45.5 (1.1)	9.0 (0.7)	18.2 (0.8)	16.4 (0.8)	1.9 (0.3)
70–74	26.0 (0.6)	40.3 (1.2)	59.7 (1.2)	9.1 (0.7)	25.7 (1.1)	21.3 (1.0)	3.6 (0.5)
75–79	18.6 (0.6)	32.5 (1.8)	67.5 (1.8)	11.4 (1.1)	29.1 (1.7)	21.2 (1.5)	5.8 (0.9)
<b>Total</b>	<b>67.0 (0.2)</b>	<b>76.4 (0.3)</b>	<b>23.6 (0.3)</b>	<b>6.6 (0.2)</b>	<b>7.8 (0.2)</b>	<b>8.1 (0.2)</b>	<b>1.1 (0.1)</b>
N	59,593	35,477	35,477	35,477	35,477	35,477	35,477

SOURCE: Authors' tabulations, Gallup Contract Work Module.

NOTE: Shares expressed as percentages, with standard errors below shares in parentheses and smaller font. SE is self-employed; IC is independent contractor. Tabulations are weighted.

**Table 2: Distribution of Employment by Selected Job Characteristics**

Age Group	Part-time (<30 hours/week)			Multiple jobholding		Online platform work
	All	Employees	Self-employed	Multiple jobs (any combo)	Both employee and SE work	
18–29	25.0 (0.7)	19.4 (0.7)	49.3 (1.8)	24.7 (0.6)	14.8 (0.5)	3.8 (0.4)
30–49	12.5 (0.4)	7.3 (0.3)	33.4 (1.2)	20.2 (0.4)	14.5 (0.4)	3.4 (0.3)
50–54	12.3 (0.6)	7.2 (0.6)	30.3 (1.8)	19.5 (0.8)	14.8 (0.7)	2.1 (0.4)
55–59	15.8 (0.7)	8.5 (0.6)	37.3 (1.8)	20.2 (0.7)	14.7 (0.6)	2.7 (0.4)
60–64	23.7 (0.8)	14.0 (0.8)	46.7 (1.7)	17.9 (0.7)	12.7 (0.6)	1.6 (0.4)
65–69	42.8 (1.1)	29.3 (1.4)	59.0 (1.6)	16.4 (0.8)	12.7 (0.7)	2.6 (0.5)
70–74	58.0 (1.2)	45.6 (2.0)	66.4 (1.5)	15.8 (0.9)	11.4 (0.8)	2.1 (0.5)
75–79	66.0 (1.8)	57.0 (3.6)	70.4 (2.0)	17.6 (1.4)	11.2 (1.1)	2.0 (0.7)
<b>Total</b>	<b>19.7 (0.3)</b>	<b>12.4 (0.3)</b>	<b>43.2 (0.6)</b>	<b>20.8 (0.3)</b>	<b>14.3 (0.2)</b>	<b>3.1 (0.2)</b>
N	35,477	25,778	9,699	35,477	35,477	17,531

SOURCE: Authors' tabulations, Gallup Contract Work Module.

NOTE: Shares expressed as percentages of employed, with standard errors below shares in parentheses and smaller font. SE is self-employed; IC is independent contractor. The last column for online platform work is based on the Gallup module's third and fourth waves only. Tabulations are weighted.

**Table 3: Correlates of Having Informal Work or Platform Work**

	Among population:		Among those with any work activity:
	Informal work	Online platform work	Platform work
18–30	0.011*** (0.003)	0.005 (0.003)	0.007 (0.004)
50–54	–0.012** (0.004)	–0.005 (0.004)	–0.009 (0.006)
55–59	–0.010* (0.004)	–0.005 (0.004)	–0.007 (0.006)
60–64	–0.014*** (0.004)	–0.014*** (0.004)	–0.022*** (0.006)
65–69	–0.021*** (0.004)	–0.007* (0.003)	–0.024*** (0.007)
70–74	–0.021*** (0.004)	–0.010** (0.003)	–0.037*** (0.008)
75–79	–0.017*** (0.004)	–0.009** (0.003)	–0.037*** (0.008)
Some college	0.000 (0.003)	0.009* (0.004)	0.011* (0.005)
Bachelor's	–0.008* (0.003)	0.020*** (0.005)	0.022*** (0.006)
Graduate deg	–0.003 (0.004)	0.021*** (0.006)	0.021*** (0.006)
50–64*Some college	0.000 (0.004)	–0.004 (0.005)	–0.001 (0.007)
50–64*Bachelor's	0.010* (0.005)	–0.005 (0.006)	0.001 (0.008)
50–64*Graduate deg	0.011* (0.005)	–0.014* (0.007)	–0.010 (0.008)
65–79*Some college	0.006 (0.004)	–0.006 (0.004)	0.005 (0.008)
65–79*Bachelor's	0.016*** (0.004)	–0.014** (0.005)	0.002 (0.010)
65–79*Graduate deg	0.011* (0.005)	–0.019** (0.006)	–0.007 (0.009)
Miscoded as employee	0.033*** (0.005)	0.067*** (0.008)	0.069*** (0.008)
Self-employed, not IC	0.030*** (0.004)	0.052*** (0.006)	0.057*** (0.006)
Self-employed, IC	0.060*** (0.005)	0.067*** (0.007)	0.070*** (0.007)
Not otherwise employed	0.005** (0.002)	–0.003* (0.001)	–
R <sup>2</sup>	0.013	0.038	0.031
N	59,593	29,323	17,356

SOURCE: Authors' estimates, Gallup Contract Work Module.

NOTE: Each column represents a separate regression with the indicated dependent variable; the last two columns for online platform work are based on the Gallup module's third and fourth waves only. The respective sample means are: 0.024, 0.017, and 0.029. Regressions also include controls for race, gender, and wave. Standard errors robust to heteroskedasticity in parentheses. Statistical significance: \*p<0.05, \*\*p<0.01, \*\*\*p<0.001.

**Table 4: Incidence of and Reasons for Independent Contractor Work, by Age**

Population		Among those with IC work:					
	Have any independent contractor work	IC work a secondary job	Work for prior employer	Main reason for IC work to earn income	IC work main source of income	IC work supplements retirement income	IC work supplements income from main job
50–54	14.7 (0.6)	27.5 (1.9)	24.8 (1.9)	65.3 (2.0)	41.3 (2.1)	2.7 (0.8)	14.7 (1.5)
55–59	13.9 (0.5)	27.1 (1.8)	24.2 (1.8)	59.7 (2.0)	39.0 (2.0)	5.4 (0.9)	9.7 (1.1)
60–64	12.3 (0.5)	18.3 (1.5)	22.6 (1.7)	54.9 (2.0)	34.6 (1.9)	10.8 (1.3)	7.4 (0.9)
65–69	10.6 (0.4)	11.0 (1.2)	23.8 (1.8)	45.6 (2.1)	18.2 (1.6)	20.1 (1.6)	4.6 (0.9)
70–74	8.6 (0.4)	8.5 (1.1)	24.0 (1.9)	37.8 (2.1)	10.7 (1.2)	22.7 (1.9)	2.1 (0.5)
75–79	6.5 (0.4)	6.9 (1.5)	24.1 (2.6)	33.6 (2.9)	8.3 (1.7)	22.6 (2.6)	0.9 (0.5)
<b>Total</b>	<b>11.7 (0.2)</b>	<b>19.9 (0.8)</b>	<b>23.9 (0.8)</b>	<b>54.4 (0.9)</b>	<b>31.0 (0.9)</b>	<b>10.7 (0.5)</b>	<b>8.5 (0.5)</b>
N	38,602	4,414	4,414	4,414	4,414	4,414	4,414

SOURCE: Authors' tabulations, Gallup Contract Work Module.

NOTE: Sample persons age 50 to 79. Shares expressed as percentages, with standard errors below shares in parentheses and smaller font. IC is independent contractor. Tabulations are weighted.

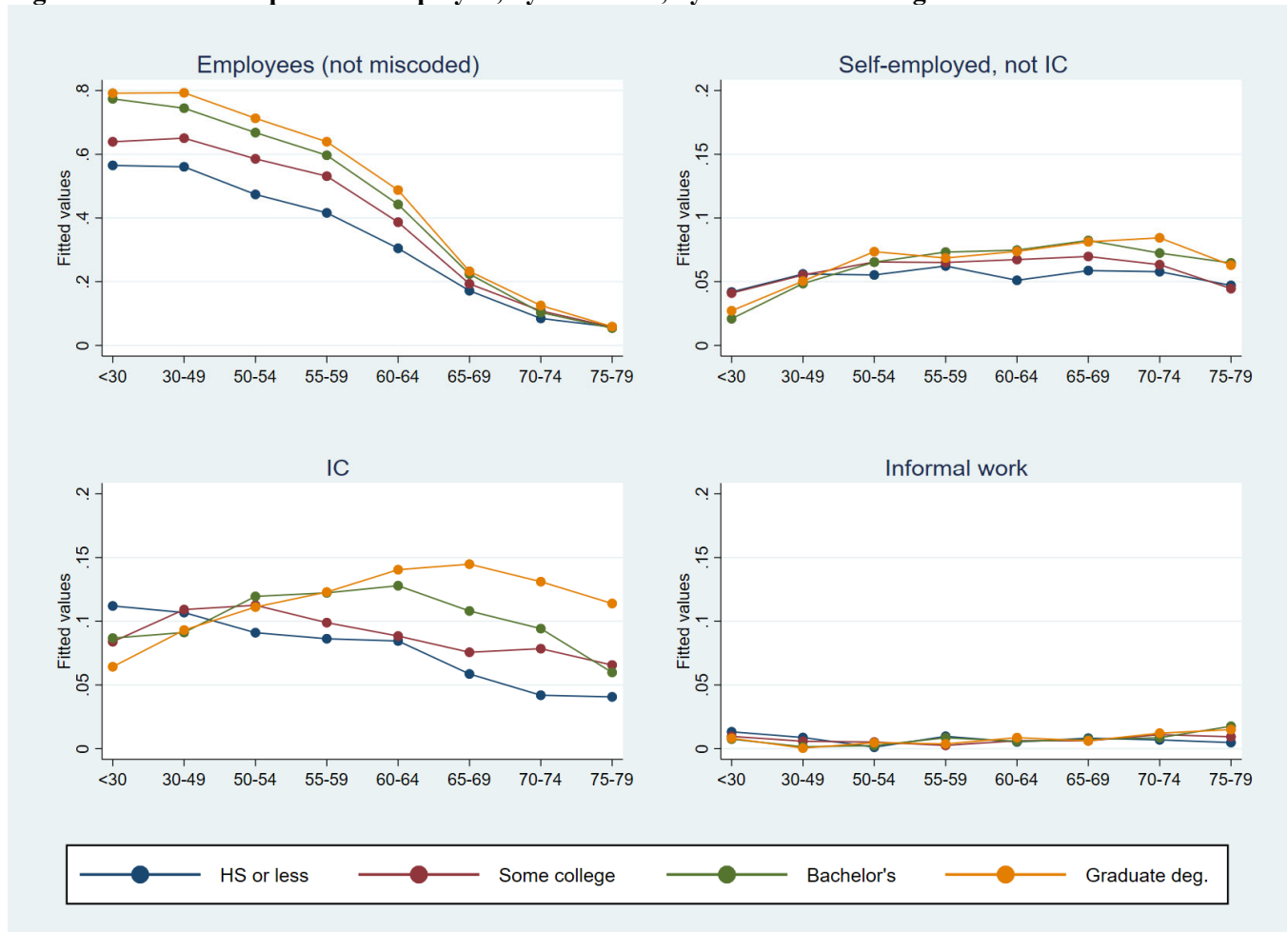
**Table 5: Correlates of ICs Working for Prior Employer or Working Primarily to Earn Money**

	Work for prior employer	Main reason of IC work to earn income
55–59	–0.010 (0.021)	–0.047 (0.024)
60–64	–0.004 (0.020)	–0.088*** (0.024)
65–69	–0.004 (0.038)	–0.193*** (0.045)
70–74	–0.001 (0.039)	–0.260*** (0.046)
75–79	–0.006 (0.041)	–0.333*** (0.048)
Some college	–0.004 (0.025)	–0.010 (0.029)
Bachelor's	–0.038 (0.026)	0.002 (0.030)
Graduate deg	–0.034 (0.026)	–0.049 (0.031)
65–79*Some college	–0.027 (0.042)	–0.011 (0.049)
65–79*Bachelor's	0.052 (0.043)	0.002 (0.051)
65–79*Graduate deg	0.028 (0.041)	–0.027 (0.049)
Miscoded as employee	0.149*** (0.013)	0.060*** (0.016)
R <sup>2</sup>	0.041	0.070
N	4,414	4,414

SOURCE: Authors' estimates, Gallup Contract Work Module.

NOTE: Each column represents a separate regression with the indicated dependent variable. Regressions also include controls for race, gender and wave. Standard errors in parentheses. Sample persons age 50 to 79 reporting independent contract work. Statistical significance: \*p<0.05, \*\*p<0.01, \*\*\*p<0.001.

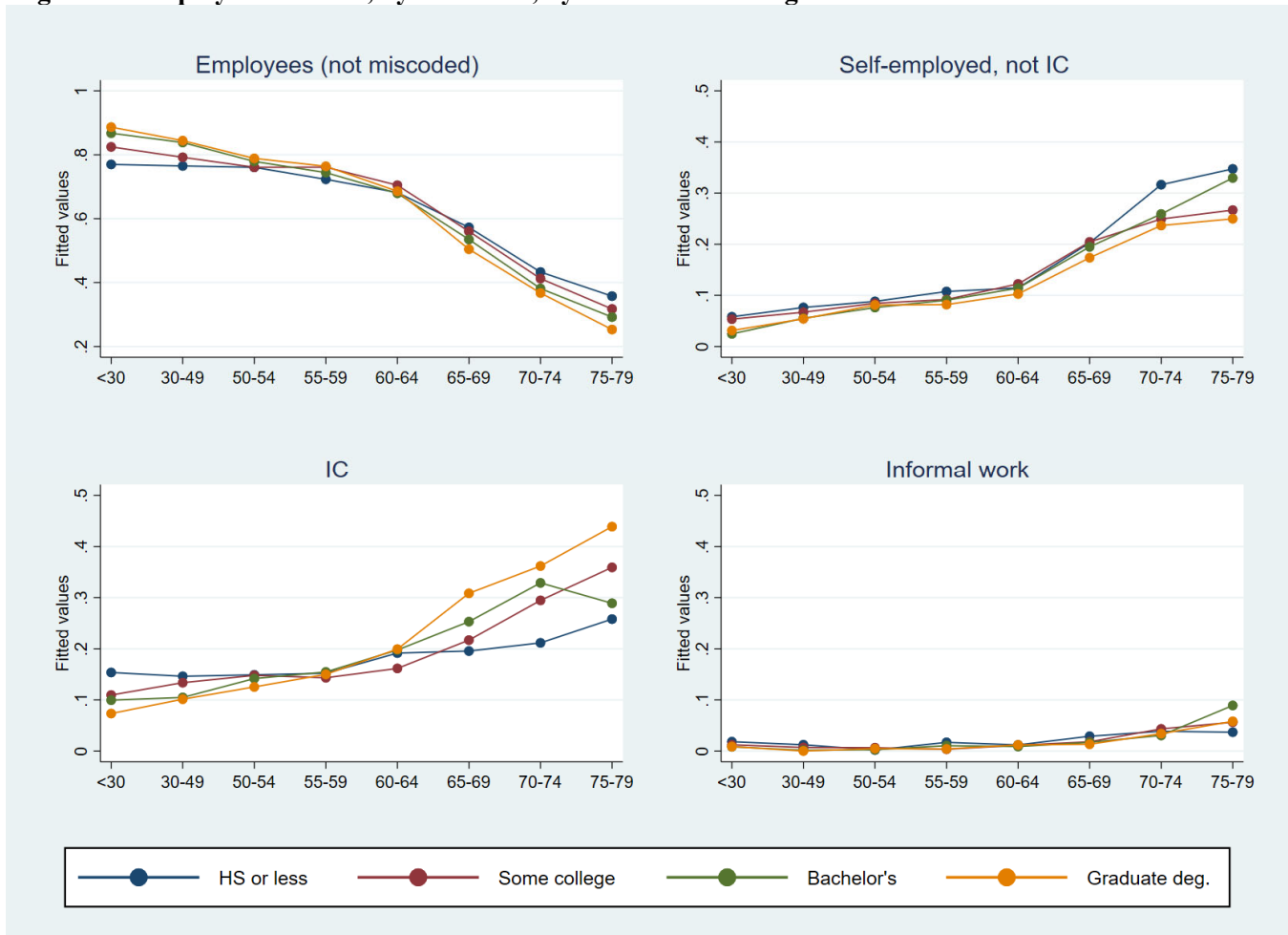
**Figure 1: Share of Population Employed, by Main Job, by Education and Age**



SOURCE: Authors' calculations, Gallup Contract Work Module.

NOTE: Figure shows fitted values from regressions of the dependent variable—an indicator variable of mutually exclusive employment status as shown in each panel—on age-education interactions and controls for race, gender, wave, and poverty quintile. The values capture the share of the population in each status, by age group and education. IC is independent contractor. Informal work pertains to individuals who reported *only* informal work not captured by the standard employment and self-employment questions. See text for details.

**Figure 2: Employment Share, by Main Job, by Education and Age**



SOURCE: Authors' calculations, Gallup Contract Work Module.

NOTE: Figure shows fitted values from regressions of the dependent variable—an indicator variable of mutually exclusive employment status as shown in each panel, *among those with some form of employment*—on age-education interactions and controls for race, gender, wave, and poverty quintile. The values capture the share of *employment* in each status, by age group and education. IC is independent contractor. Informal work pertains to individuals who reported *only* informal work not captured by the standard employment and self-employment questions. See text for details.

**Figure 3: Employment Share, by Main Job, by Occupation and Age**



SOURCE: Authors' calculations, Gallup Contract Work Module.

NOTE: Figure shows fitted values from regressions of the dependent variable—an indicator variable of mutually exclusive employment status as shown in each panel, *among those with some form of employment other than informal work*—on age-occupation group interactions and controls for race, gender, wave, education, and poverty quintile. The values capture the share of *employment other than informal work* in each status, by age group and occupation group. Prof/Mngr corresponds to professionals and managers (SOC codes 11–29); Services corresponds to SOC codes 31–39; Sales/Office corresponds to SOC codes 41–43; Farm corresponds to SOC codes 45; and Blue collar corresponds to SOC codes 47–53. IC is independent contractor. Informal work pertains to individuals who reported *only* informal work not captured by the standard employment and self-employment questions. See text for details.



Appendix A: Wording of Selected Questions on Gallup Education Consumer Pulse Survey and Contract Work Module

Question ID	Waves	Wording
WP10200	All	Thinking about your WORK SITUATION over the past seven days, have you been employed by an employer — even minimally, like for an hour or more — from whom you receive money or goods? (This could be for one or more employers.)
U2	All	How many employers did you work for in the last seven days?
U3A_1	All	<i>(Asked of random half of sample who worked for one employer)</i> Were you an employee on this job or were you an independent contractor, independent consultant or freelance worker?
U3A_2	All	<i>(Asked of random half of sample who worked for one employer)</i> Did this employer take any taxes out of your pay?
U3B_1	All	<i>(Asked of random half of sample who worked for two+ employers)</i> Were you an employee on each of your jobs; an independent contractor, independent consultant, or freelance worker on each of your jobs; or did the arrangement vary across jobs?
U3B_2	All	<i>(Asked of random half of sample who worked for two+ employers)</i> Did all of your employers take out taxes from your pay, did none of them take out taxes from your pay, or did it vary across employers?
QA_1	All	<i>(Asked of 50- to 80-year-olds who were asked U3A_1 or U3B_1 and were independent contractors, independent consultants or freelance workers)</i> Still thinking about your work situation over the past seven days, were you working as an independent contractor, independent consultant or freelance worker for a business or organization where you previously were an employee?
QA_2	1,2,4	<i>(Asked of 50- to 80-year-olds who were asked U3A_2 or U3B_2 and whose employer(s) did not take taxes out of their pay)</i> Still thinking about your work situation over the past seven days, were you working on a cash or contract basis for an employer who previously took taxes out of your pay?
QA_2A	3	<i>(Asked of 50- to 80-year-olds who were asked U3A_2 or U3B_2 and whose employer(s) did not take taxes out of their pay)</i> Thinking about the [employer/employers] who currently [does/do] not take taxes out of your pay, did they used to take taxes out of your pay?
QB	All	<i>(Asked of 50- to 80-year-olds who said they were independent contractors, independent consultants or freelance workers or that their employer did not take taxes out of their pay)</i> What was your MAIN REASON for doing this work? Was it to earn income, to stay active and connect with others, to pursue an interest or hobby, because it was the only type of work you could get or was there some other reason?
QC	All	<i>(Asked of 50- to 80-year-olds who said they were independent contractors, independent consultants or freelance workers or that their employer did not take taxes out of their pay, whose main reason for doing the work was to earn income)</i> Would you describe this work as your main source of income, a supplement to the income you earn in your main job, a supplement to your retirement income, or something else?
WP102152	All	<i>(Asked of those who work for an employer)</i> In a typical week (seven days), how many hours do you work for an employer?
U5_1	All	<i>(Asked of those who worked for two+ employers who were asked U3B_1 and whose employment situation varied across jobs)</i> Did you work as an independent contractor, independent consultant or freelance worker for more than half of these hours?

Question ID	Waves	Wording
U5_2	All	<i>(Asked of those who worked for two+ employers who were asked U3B_2 and whose employment situation varied across jobs)</i> Did the job where taxes were taken out of your pay account for more than half of these hours?
WP10202	All	Again, thinking about the last seven days, were you self-employed, even minimally, like for an hour or more? This means working for yourself, freelancing or doing contract work, OR working for your own or your family's business? Self-employment also includes fishing, doing farm work or raising livestock for either your own or your family's farm or ranch.
WP102162	All	<i>(Asked of those who are self-employed)</i> In a typical week (seven days), how many hours do you work as a self-employed individual?
U12	All	<i>(Asked of those who are self-employed who previously indicated they were independent contractors, independent consultants, freelances workers or whose employer did not take taxes out of their pay)</i> Just to check, was all or was some of the self-employment work you did in the last seven days work you already told me about, or not?
U13	All	<i>(Asked of those who did additional self-employment work not previously indicated)</i> Excluding the work you already told me about, in a typical week (seven days), how many additional hours do you work as a self-employed individual?
U14	All	<i>(Asked of those who did additional self-employment work not previously indicated)</i> Was any of this self-employment work done as an independent contractor, independent consultant or freelance worker?
QD	All	<i>(Asked of those 50-80 years old who did self-employment work not previously indicated)</i> Still thinking about the self-employment work you did over the past seven days, were you working as an independent contractor, independent consultant, or freelance worker for a business or organization where you previously were an employee?
QE	All	<i>(Asked of those 50-80 years old who did self-employment work not previously indicated)</i> What was your MAIN REASON for doing this work as an independent contractor, independent consultant or freelance worker? Was it to earn income, to stay active and connect with others, to pursue an interest or hobby, because it was the only type of work you could get, or was there some other reason?
QF	All	<i>(Asked of those 50-80 years old who did self-employment work not previously indicated whose main reason for doing the work was to earn income)</i> Would you describe what you earn from this work as your main source of income, a supplement to the income you earn in your main job, a supplement to your retirement income, or something else?
U17_1	All	<i>(Asked of a random half of the sample)</i> Did you do anything else in the last seven days that you have not already mentioned for which you received (or expect to receive) payment?
U17_2	All	<i>(Asked of a random half of the sample)</i> Did you do anything else in the last seven days that you have not already mentioned for which you received (or expect to receive) payment? Examples might include babysitting or eldercare, cleaning, maintenance work, data entry tasks, driving for a car service or making and selling handicrafts.

Question ID	Waves	Wording
U18	All	<i>(Asked of those who did any other activities for which they expect to receive payment)</i> How many hours did you spend on these activities in the last seven days?
U19_1	All	<i>(Asked of a random half of the sample who were self-employed, worked as an independent consultant, independent contractor or freelancer, worked for an employer who did not take taxes out of their pay, or did work outside of an employer-paid job for which they expected to be paid)</i> For any of the work you did in the past seven days, did you connect directly with new customers or clients through a mobile app or online platform?
U19_2	All	<i>(Asked of a random half of the sample who were self-employed, worked as an independent consultant, independent contractor or freelancer, worked for an employer who did not take taxes out of their pay, or did work outside of an employer-paid job for which they expected to be paid)</i> For any of the work you did in the past seven days, did you connect directly with new customers or clients through a mobile app or online platform? For example, you might have given rides to people using a ridesharing app; used an app to find people looking for cleaning, delivery or handyman services; or used an online platform where people can bid on data entry or other tasks.
U20	3,4	<i>(Asked of those who connected with new customers through a mobile app or online platform)</i> Did the customers pay you directly, or did they pay the mobile app or online platform which then pays you?

## Appendix B: Employment and Self-employment Rates, Gallup versus Current Population Survey

### B1: All Work Activity

Age group	Employment rate		Self-employment rate (in population)			
	Gallup	CPS	Gallup	Gallup w/o miscoded employees	Gallup w/o miscoded emp. or informal work	CPS
18–29	77.9	68.2	14.6	8.2	7.1	2.3
30–34	82.6	80.3	15.9	11.0	10.2	5.6
35–39	82.2	80.4	16.1	11.2	10.5	7.5
40–44	80.7	80.7	15.9	11.3	10.9	8.3
45–49	80.4	80.7	16.1	12.0	11.6	9.4
50–54	74.8	77.4	16.8	12.8	12.4	9.4
55–59	69.1	70.7	17.4	13.4	12.7	9.2
60–64	55.8	56.4	16.5	13.2	12.7	8.3
65–69	37.1	33.0	16.9	13.5	12.8	6.8
70–74	26.0	19.4	15.5	13.1	12.2	5.1
75–79	18.6	11.9	12.6	10.4	9.4	3.5
<b>Total</b>	<b>67.0</b>	<b>65.0</b>	<b>15.8</b>	<b>11.4</b>	<b>10.7</b>	<b>6.5</b>
N	59,593	715,693	59,593	59,593	59,593	715,693

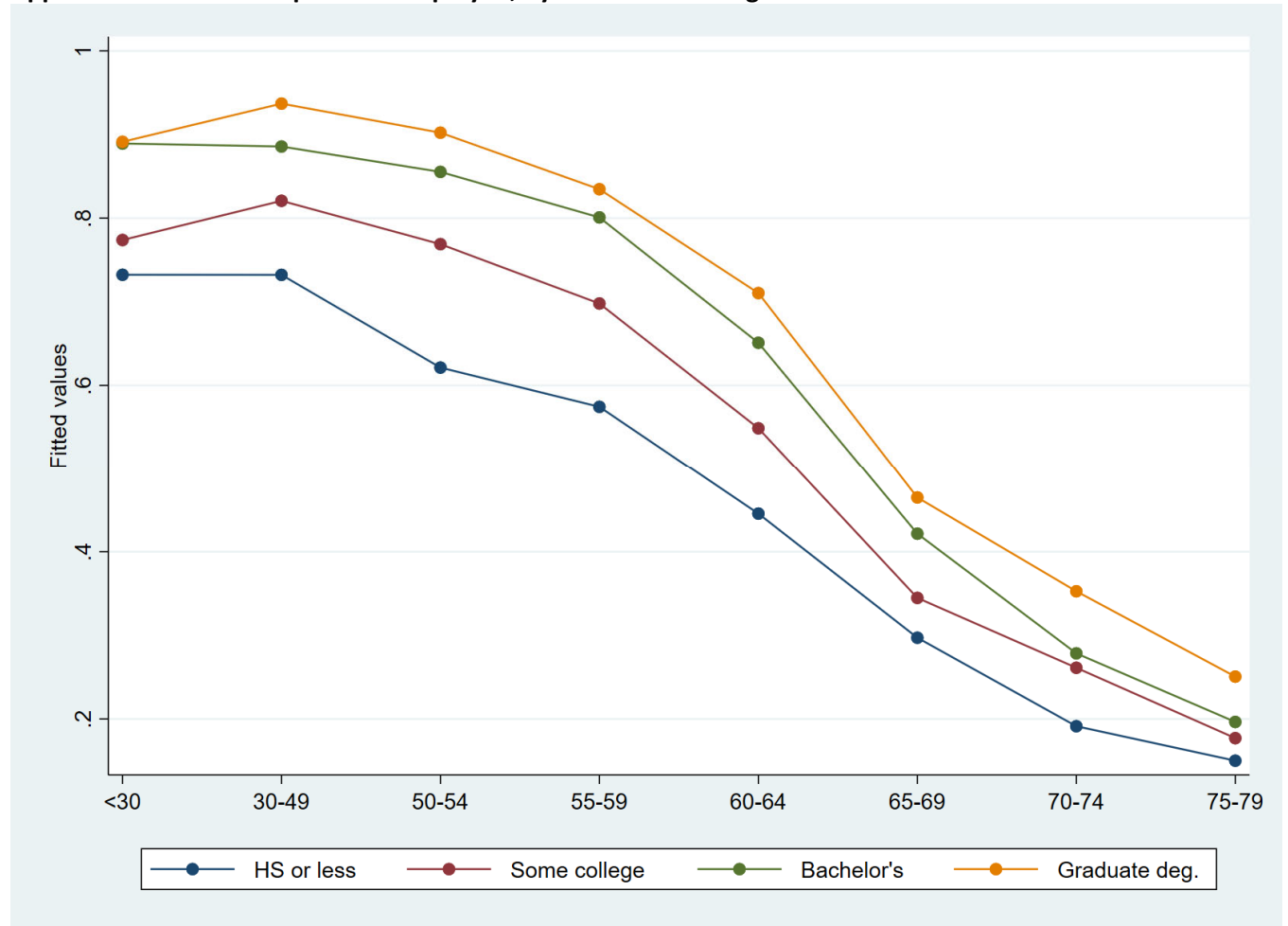
### B2: Work Activity Based on Working 15-plus Hours per Week

Age group	Employment rate		Self-employment rate (in population)			
	Gallup	CPS	Gallup	Gallup w/o miscoded employees	Gallup w/o miscoded emp. or informal work	CPS
18–29	69.9	64.0	10.3	4.9	4.5	2.1
30–34	78.0	78.4	12.8	8.4	8.1	5.2
35–39	78.1	78.5	13.3	9.2	8.9	6.9
40–44	76.8	78.8	13.5	9.3	9.2	7.8
45–49	76.4	79.0	13.5	9.9	9.8	8.9
50–54	70.8	75.7	14.1	10.7	10.5	8.9
55–59	64.2	68.5	13.8	10.5	10.2	8.5
60–64	49.7	53.6	12.1	9.7	9.6	7.4
65–69	29.1	29.1	10.7	8.7	8.4	5.4
70–74	17.5	16.0	8.8	7.4	7.2	3.8
75–79	11.4	9.1	6.8	5.6	5.3	2.5
<b>Total</b>	<b>61.2</b>	<b>62.3</b>	<b>11.9</b>	<b>8.3</b>	<b>8.0</b>	<b>5.8</b>
N	59,593	715,693	59,593	59,593	59,593	715,693

SOURCE: Authors' tabulations, Gallup Contract Work Module and Current Population Survey, May-June 2018, August-September 2018, November-December 2018 and February-March 2019.

NOTE: Gallup employment includes all individuals reporting work for an employer, self-employment or any other work for pay. Self-employment rate as share of population. Main job defined based on hours worked.

**Appendix C: Share of Population Employed, by Education and Age**



SOURCE: Authors' calculations, Gallup Contract Work Module.

NOTE: Figure shows fitted values from regressions of the dependent variable—an indicator variable of any form of employment—on age-education interactions and controls for race, gender, wave, and poverty quintile. The values capture the share of the population with any form of employment, by age group and education. See text for details.