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WHAT DO IMPACT INVESTORS DO DIFFERENTLY?

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ABSTRACT

In recent years, impact investors – private investors who seek to generate simultaneously financial and social returns – have attracted intense interest and controversy. We analyze a novel, comprehensive data set of impact and traditional investors to assess how the non-financial characteristics of impact portfolios differ from their traditional counterparts. First, we document that they are more likely to invest in disadvantaged areas and nascent industries and exhibit more risk tolerance and patience. We then examine the degree to which impact investors expand the financing frontier, versus investing in companies that could have attracted traditional private financing. Utilizing a variety of network theoretic and event study analyses, we find limited support for the assertion that impact investors expand the financing frontier, either in the deal-selection stage or the post-investment stage.

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1 Introduction

In recent years, impact investors – private fund managers who seek to generate both financial and social returns – have attracted intense interest. Established alternative investment groups, such as Bain Capital, KKR, and TPG, have raised substantial funds seeking to accomplish these twin goals. Meanwhile, dedicated impact-focused groups have proliferated.

This boom in activity has proven controversial. In a high-profile illustration, Florida’s state pension fund announced in August 2022 its intention to eliminate from consideration any funds that use environmental, social, and governance (ESG) considerations when making investment decisions, arguing that maximizing returns for shareholders should be their primary focus (Ramkumar 2022). Conservative observers have argued that targeting social goals is likely to lead to lower returns and limited societal benefits (Ramaswamy 2021). Meanwhile, liberal critics have wondered whether these funds can achieve desirable social goals in the absence of government regulations (e.g. Fancy 2021), or even whether their presence actually slows social progress (Giridharadas 2019). Academic research has suggested that the financial returns of impact funds have substantially underperformed private market benchmarks (Barber et al. 2021; Kovner and Lerner 2015), though Jeffers et al. (2021), whose sample of impact funds excludes concessionary funds, finds more positive results.

While the bulk of the literature has focused on the financial performance of these funds, much less is known about the social impact of impact investing. Geczy et al. (2021) studies how contracting choices in impact investing relate to measures of social impact, and finds that while impact investors rarely tie compensation to social impact, they nevertheless incorporate impact goals in other ways into both LP agreements and governance contracts. Social outcomes are more difficult to assess, which might explain the absence of attention here. But this omission is surprising, given the extensive focus in

the literature about traditional private equity on both financial returns (e.g. Kaplan and Schoar 2005; Harris et al. 2014) and social impact. Examples of the latter include studies of employment and productivity (Davis et al. 2014), innovation (Lerner et al. 2011), and numerous industry-specific studies beginning with Bernstein and Sheen (2016).

This paper seeks to characterize the non-financial characteristics of impact investments to shed light on several core mechanisms by which impact investors may create impact. We compare the investment behavior of impact investors with that of traditional venture and growth equity investors, to understand the role that impact investors play in the financing landscape.

To perform this analysis, we construct a new comprehensive dataset covering a broad spectrum of impact funds. To identify the impact funds, we combine a wide variety of data from impact organizations, investment group websites, and commercial databases. Together, this information gives us an exhaustive view of impact-focused private capital groups. In order to contrast the investment activity of impact and non-impact investors, we use activity as recorded in PitchBook. This approach facilitates an “apples-to-apples” comparison of activity.

Our analysis proceeds along two lines. First, we characterize the differences between the portfolios of impact investors and traditional investors. We find that impact investors prioritize poorer or otherwise disadvantaged regions in the U.S. and the world. They are more likely to invest in new and emerging industries. Using deal outcomes as a proxy, we find that impact investors are more patient and risk tolerant. Many (though not all) of these patterns are stronger amongst impact investors that self-identify as concessionary (i.e., willing to accept below market risk-adjusted financial returns) and non-profit impact investors. Each of these findings confirms common narratives about impact investors (see, for instance Zhang (2023)).

Our second line of inquiry examines the extent to which impact investors prioritize portfolio companies that would have trouble attracting traditional financing – i.e., whether

or not impact investors are *additional*. A growing body of theoretical work argues that additionality is a promising way to create impact (Brest and Born 2013; Oehmke and Opp 2020; Green and Roth 2021). In these models, if impact investors are not additional and simply finance socially beneficial enterprises that would have attracted traditional private capital anyway, then the net effect of the investment is simply to displace socially neutral investors. By contrast, if impact investors explicitly seek out high-impact companies that could not attract traditional capital, then the impact investing industry collectively expands the set of impactful firms that can attract capital.¹ While our analysis is nuanced, on balance we find little evidence of additionality amongst impact investors.

As a first step in this analysis we utilize a revealed preference approach, exploring how frequently impact investors co-invest (in the same round of investment) with traditional investors. We argue that in any investment round where traditional investors co-invest with impact investors, the investment is unlikely to be additional, as traditional investors have demonstrated their willingness to support the deal on its financial merits alone. Perhaps surprisingly, we find that 60% of all rounds that involve an impact investor also include traditional private investors, indicating that these deals would likely have occurred in the absence of investors who prioritize impact.

There is also a considerable degree of heterogeneity across impact investors in terms of the frequency with which they co-invest with traditional investors. We utilize a network theoretic approach to identify additional impact investors. Specifically, we use a minimum cut algorithm, which partitions investors into two distinct sets. It does so by minimizing the number of “links” (pairs of investors who co-invest) that cross the partition. This approach identifies impact investors who do not co-invest with traditional investors, those who do not co-invest with impact investors who co-invest with traditional investors, and so on. Using this approach, we find that only 12% of impact investors are additional,

¹To be sure, impact investors can add value at the post-investment stage, such as by providing advice or introductions to other investors and corporations. We return to this point later.

and that the average additional impact investor has a portfolio that is about 10% of the size of the portfolio of the average non-additional impact investor. We describe the characteristics of additional and non-additional investors. For instance, relative to non-additional impact investors, additional impact investors prioritize poorer regions of the U.S. and are more risk tolerant.

One concern with the above approach is that impact investors could identify portfolio companies that are financially attractive, yet were overlooked to date by traditional investors. Having identified these impactful and financially attractive companies, impact investors could assemble a coalition of traditional investors to provide the bulk of the financing. In this scenario, impact and traditional investors would co-invest in the same firms in the same rounds, yet the impact investor would still be additional. To investigate this possibility, we examine the investment behavior of traditional investors who have at one point co-invested with an impact investor. If impact investors are leading traditional investors to impactful portfolio companies, then shortly after an impact investor raises a new fund, the investments of their prior (traditional) co-investors should shift in the direction of becoming more impactful. By contrast, if impact investors are not leading traditional investors to impactful portfolio companies, and instead are merely choosing to co-invest with traditional investors in the subset of portfolio companies that meet the impact investors' theses, then we should observe no change in the traditional investors' investment strategies following an impact investor's fundraising event.

The evidence strongly conforms to the latter story. We can rule out even small shifts in traditional investors' investment strategies following the fundraising events of impact investors with whom they have previously co-invested. Hence we find no evidence that impact investors lead traditional investors to impactful portfolio companies that would have otherwise been overlooked.

Finally, we consider an alternative form of investor additionality, operating at the post-investment stage. Even if impact investors mostly invest in firms that could have

attracted traditional financing, impact investors may subsequently push their portfolio companies in more impactful directions than traditional investors would have. This could occur if impact investors provide advice or connections to their portfolio companies, or if they impose their preferences through board seats. To investigate this possibility, we utilize data on a variety of metrics of employee satisfaction at portfolio companies. Consistent with Gornall et al. (2022), we find that employee satisfaction tends to drop after a company raises capital from traditional private investors. Surprisingly, we find that employee satisfaction drops about twice as much when a company raises capital from impact investors. Thus, insofar as impact reflects employee welfare, we find no evidence that impact investors are additional at the post-investment stage.

This analysis suggests several take-aways. First, our analysis corroborates many impact investors' stated goal of financing firms in disadvantaged areas, pioneering industries, and with riskier approaches. Second, while a minority of impact investors appear to be additional, we find little evidence of widespread additionality in the impact investing industry, either when selecting portfolio companies or after the investments. Thus, while the portfolios of impact investors differ markedly from traditional investors, we do not find strong evidence that impact investors facilitate new and more impactful investments than would have been achieved by traditional private investors alone.

The rest of the paper proceeds as follows. Section 2 describes our data and key descriptive statistics. Section 3 presents our analysis of the characteristics of impact investments. Section 4 presents our analysis of the extent to which impact investors are additional. Section 5 concludes the paper.

2 Data and Descriptive Statistics

2.1 Data Construction

This paper is the first to use a newly created data set, which we believe is the most comprehensive data set on impact investors and their portfolio companies. An accompanying technical paper (Burton et al. 2021) describes the data construction process in detail. Here we focus on the key elements. Online Appendix A provides more details on the data set construction.

We define impact investors to be investors with the explicit dual objective of generating social good and financial returns.² To compile our catalog of impact investors and portfolio companies, we draw upon information in multiple financial databases, performing extensive matching and data quality checks. We then compare our results with expert judgments, published reports, and other independent research to remove firms that do not target both social good and financial returns.

We identify impact investors using nine established resources on impact investing³: 1) ImpactBase, the global directory of impact investment funds from the Global Impact Investing Network (GIIN), 2) the Community Development Venture Capital Association (CDVCA) website, 3) the Impact Assets website, 4) Preqin’s alternative assets database, 5) Impact Capital Managers (“ICM”) members, a consortium of general partners, 6) the list of asset managers who are GIIN members, 7) GIIN’s Investors’ Council members, 8) the signatories to the Operating Principles for Impact Management originated by the International Finance Corporation, and 9) the Private Equity International (“PEI”) “Impact Investment Firm of the Year” top three honorees for the years from 2017 onward.

²We note there is not yet a single widely adopted definition of impact investing.

³The version of the databases that we used were as follows: ImpactBase as of January 15, 2018, Community Development Venture Capital Association (CDVCA) as of May 2019, Impact Assets for the period 2011-2019, Preqin’s alternative assets database as of June 30, 2018, Impact Capital Managers members as of May 2020, list of asset managers who are GIIN members as of May 2020, GIIN’s Investors’ Council members as of May 2020, and signatories to the Operating Principles for Impact Management originated by the IFA as of May 2020.

Aside from Preqin, all of these are special compilations that focus specifically on impact investors. In Preqin, the “fund ethos” variable allows investors to self-identify as having a focus on at least one of the following five categories: “Microfinance,” “Economic Development,” “Socially Responsible,” “Environmentally Responsible,” and “Sharia Compliant.” We expand this preliminary list by adding investment firms whose stated industry focus corresponds with so-called impact sectors. In particular, we add investment firms that primarily invest in “Clean Technology,” “Education/Training,” and “Environmental Services.” Finally, we add investment firms that primarily invest in low-income countries, identified as those countries with a GDP per capita of less than U.S. \$1,400.⁴ This process results in a total of 2,747 potential impact investors for further investigation.

We then narrow this set by eliminating those that do not align with our definition of impact investors. We manually search their websites, if available, to see if they make any mention of a dual aim of generating social and financial returns.⁵ In addition, we eliminate development finance institutions such as the International Finance Corporation (a subsidiary of the World Bank). We combine the information from all of the above listed sources to create a list of 445 unique impact investors, which includes some stand-alone impact funds and traditional private equity firms that have large impact investment

⁴World Bank estimates of the typical poverty line in middle-income developing nations—which are more likely to be the focus of impact investors than the very poorest nations—range between \$3.65 and \$4.00 per day (in PPP-adjusted dollars). See, for instance, <https://www.worldbank.org/en/topic/poverty/brief/global-poverty-line-faq#:~:targetText=As%20of%20October%202015%2C%20the,at%20%241.90%20using%202011%20prices> and <https://pipmaps.worldbank.org/en/data/datatopics/poverty-portal/poverty-geospatial?dataset=PovertyRate2.15-gsap&zoomLevel=3&lat=19.53676432208408&lng=15.02343750000001>.

⁵We accomplish this by using Amazon’s crowdsourcing marketplace, Mechanical Turk (“MTurk”) and their online workforce of “MTurkers.” We asked the MTurkers to collect the description, stated mission, and investment strategy as listed on the potential impact investor’s website, and to identify whether or not they make mention of the dual aim of generating both financial and social returns. For each potential impact investor, we asked three MTurkers to review its website. If two of three MTurkers voted to exclude an investor, it was excluded. Using this approach, we narrow the list of 2,747 to 624 potential impact investors. Again, following Barber et al. (2021), the remaining 624 were then manually verified by a member of the Project on Impact Investments team, through a careful review of the background and strategy on the impact investor’s website to identify any mention of the dual objectives of social impact and financial returns. Only those investment managers who make explicit statements that signal a dual objective were classified as impact investors.

funds.⁶

In Online Appendix Table A.I, we summarize how we create our final set of impact investors used in our analyses. First, we review the 445 impact investors’ websites and exclude 46 impact investors whose strategies do not focus exclusively on impact investing and groups that were launched without an impact mandate but subsequently added one. Here, we looked for language that was more specific than “do good” or “make the world a better place.” We included all funds that articulate a goal of promoting economic growth in a specific region, alleviating poverty, or benefiting disadvantaged individuals. However, investors with a focus on specific industries (EdTech, or healthcare, for example) were not automatically categorized as impact, unless they articulated a social mission. For instance, we only include investors in biotech firms that have a target objective beyond the financial returns in the development of a drug, such as helping disadvantaged persons gain access to life-saving medication. Lastly, we eliminate three foundations.

Our initial screen of investors solely identified standalone impact investors. However, this screening would have eliminated a set of 13 investors we thought appropriate to include: traditional private equity firms with significant funds dedicated to impact investing. We identified through the extensive media coverage on impact investing these dedicated funds. Our research uncovered four funds with investments in the PitchBook database: Bain Double Impact, TPG Alternative & Renewable Technologies, The Rise Fund (also a TPG affiliate), and PG Impact Investments (an affiliate of Partners group). The other groups, such as Black Rock and KKR, had raised capital for impact funds in 2020 or 2021, but had no transactions by these units in the PitchBook database as of the May 2021 version of the database we used.⁷ We are left us with 396 impact investors.

We match the 396 impact investors to the May 2021 PitchBook universes of pre-

⁶Through this process, we identify 199 impact investors from Preqin, compared to the 159 identified by Barber et al. (2021) in the period from 1995 to 2014.

⁷Some absences may reflect difficulties in identifying transactions made by the impact affiliates of these large groups, rather than those by their main funds.

venture, venture capital, growth equity, and private equity investors (203,898 entities). 291 of the 396 impact investors match to the PitchBook data feed ⁸. We drop one investor because it does not have any deal information and nine investors because they do not have any venture capital or growth equity investments. Finally, after additional data cleaning comprised of removing subsidiaries (with the exception of the dedicated impact groups of generalist organizations) and groups with only failed transactions, we are left with 277 impact investors in our study (two of which are affiliated with the same GP, TPG). Online Appendix Table A.III provides a complete list of the 277 impact investors included in the analysis.

An important contribution of our efforts is a recognition of the significant and material heterogeneity within the impact investing sector, as noted above. We identify and analyze differences along several dimensions: legal form (profit or non-profit), co-investor network, and financial objective (targeting competitive market-rate returns or promising concessionary returns). Both legal form and financial objective are inferred from investors' websites.

Having created this list of impact firms, we wish to compare their investment activity to other private equity groups. The source of our data on portfolio companies of both impact and traditional investors is the complete database of PitchBook, one of the most comprehensive databases which links investors to investments. We did not use any data set that lists only impact-specific investments, as we wanted an equivalent level of comprehensiveness for both impact and traditional firms. We detail our sample inclusion criteria in Online Appendix A; the following paragraphs provide an overview.

To create a comparable set of traditional non-impact investors, we use the PitchBook datafeed as of May 2021 and extract all investors in the Venture Capital and Private Equity universes, identifying over 200,000 investors. We remove the 445 impact investors and investor categories which do not have venture capital or growth equity as a main part

⁸There are 291 GP-level investors, and TPG has 2 separate funds.

of their overall investment strategy.⁹ Of the remaining investors, we further restrict our sample to focus on investors that have at least four private capital portfolio companies, thus removing investors that may only have one-off venture capital or growth equity investments (e.g., we do not want to include a mutual fund that has a few private equity investments, where private equity is not a main part of its investment strategy).¹⁰ In addition, as in the case of the impact investors, we drop groups with only failed deals and those with no venture or growth equity rounds in the PitchBook database.

For both the portfolio companies of impact and non-impact investors, we eliminate duplicate entries and firms in which all financing rounds have missing information (in particular, the date of investment, the number and identity of co-investors, and the total size of each round of funding).

At the end of the process, the 277 impact investors in the database have made investments in a total of 6,066 portfolio companies. The comparable set of non-impact investors includes about 20,000 traditional investors, which have invested in approximately 205,000 companies. Like most data sources derived from securities filings such as U.S. Securities and Exchange Commission Form D, PitchBook does not typically identify the amount of capital or ownership stake of each individual investor in each investment round, just the aggregate amount in the round.

To conduct our study of the demographic determinants of impact investments in Sec-

⁹We exclude the following PitchBook categories of investors: Angel (individual), Business Development Company, Corporate Development, Corporate Venture Capital, Corporation, Family Office, Fund of Funds, Fundless Sponsor, Government, Hedge Fund, Holding Company, Investment Bank, Limited Partner, Merchant Banking Firm, Mutual Fund, Other, Private Equity-Backed Company, Secondary Buyer, Sovereign Wealth Fund, Special Purpose Acquisition Company, University, and Venture Capital-Backed Company.

¹⁰Given the comparatively smaller number of impact investors in our data set, we were able to manually assess each investor to ensure that venture capital and growth equity investing are a core part of their strategy. Thus we do not apply the criterion that impact investors have at least four venture capital or private equity deals. Such an effort was not really feasible for the tens of thousands of small non-impact investors. In many cases, family offices have names that resemble those of formal investment groups. Efforts to research family offices with little investment activity frequently are fruitless, as they typically attract little media attention and aggressively use Delaware and Cayman Island shell companies to obscure their ownership. For a discussion of these issues in the context of Chinese family offices, see Akcigit et al. (2024)

tion 3.1, we match our portfolio companies – based on the zipcode of their headquarters – to the Census demographic data. To do this, we first match the portfolio companies’ zip codes to the Federal Information Processing System (FIPS) codes for counties. The FIPS codes are numbers which uniquely identify geographic areas. The match rate between the zip codes and the FIPS codes is 94.4%. Next, we match the portfolio companies’ FIPS codes and deal year to the Census data. Here the match rate is 84.3%.¹¹

To conduct our study of how impact investors affect firms after investments in Section 4.4, we gather data on the workforce from Revelio Labs. Revelio Labs is a human resource database that provides an overview of companies’ workforce dynamics, including the stock and flows of workers. In addition, it provides ratings on human capital metrics at the company level. These include metrics such as compensation and benefits, diversity and inclusion, work-life balance, business outlook, and culture and values. These data are compiled from sources such as LinkedIn and GlassDoor.

Online Appendix Table A.XI shows the dataset construction procedure for this analysis. We focus on the 3,108 of our impact portfolio companies (“IPC”) that are based in the US. We match the U.S. IPCs to Revelio data. This match yields 2,600 matches (83%) to Revelio data.

Next, we created a sample of non-impact portfolio companies (“NIPC”)s that were comparable to the IPCs. To achieve this, we divided the 2,600 impact portfolio companies into bins based on location, industry, deal round, and deal type. We then identified traditional investors’ portfolio companies that fell into the same bins.¹² Using this methodology, 2,520 out of the 2,600 IPCs found in Revelio had at least one matching NIPC. After

¹¹Prior to 2009, the Census demographic data are only available each decade. After that, the data are available on an annual basis. Thus, we have data for the years 1999 and 2009-2020. We match deals made in the years 1990-1999 to the census data from 1999, and we match deals made in the years 2000 - 2009 to the census data from 2009.

¹²The location was categorized on a regional level (Northeast, Southeast, Midwest, and West). The industry was defined by PitchBook’s 41 major industry groups. The deal round referred to the round number of a given deal. If a deal was the first round, the deal type was labeled as “first round”; otherwise, the deal type was classified as “VC” or “Growth equity.”

the IPC-NIPC matching process, we obtained a list of 52,784 NIPCs. Subsequently, we matched these 52,784 NIPCs to Revelio data, resulting in 38,461 NIPCs being successfully matched (the matching rate was 73%).

Being matched to the Revelio database only means Revelio has the basic information for the companies. In many case, the employee satisfaction metrics are missing. To conduct a difference-in-difference estimation, we need both IPC and their matched NIPC to have Revelio ratings. These criteria reduce the sample to 1,580 IPCs and 18,587 NIPCs.

2.2 Descriptive Statistics

Table I provides basic descriptive statistics about the investors in our sample. Column 1 presents statistics about traditional private investors. Column 2 presents the difference between impact and traditional investors for each outcome. Panel A of Table I shows that on average, traditional investors and impact investors have similar portfolio sizes, having supported approximately 24 companies with 31 investments. The average traditional and the average impact investor have been in operation for approximately 10 years. However, there are substantial differences in average deal size: the average for traditional investors is \$8.7 million, as against \$5.0 million for impact investors.

In Panel B of Table I, we also see significant differences in investment location. Relative to traditional investors, impact investors are more likely to invest in low income regions of the world: Sub-Saharan Africa, South Asia, and Latin America and the Caribbean, and less likely to invest in Canada, East Asia, Europe, Middle East, North Africa, Russia, and Central Asia. We also see differences in sector allocation (Panel C in Table I): impact investors are more likely to invest in consumer staples, energy, financials, industrials, materials, real estate, and utilities, and less likely to operate in communication services, discretionary consumer goods, healthcare, and information technology. The latter set of sectors has been the focus of many traditional venture capital and growth equity investors.

There are few significant differences on these metrics between impact investors who designate themselves as concessionary (those willing to accept below-market financial returns) and those that do not, as we see in Columns (3) and (4). We defer the discussion of the differences between additional and non-additional impact investors until Section 4.

In Figure 1, we document the growth of the impact investment sector, plotting over time the number of impact deals, the number of impact investors, and an estimate of the total dollar value of impact financing over time.¹³ To our knowledge, these are the first comprehensive data on the size of the impact investing sector. Thirty years after the birth of impact investing, we see that 6,066 firms have received funding from impact investors, in 8,125 investment rounds. These represent approximately 2% of all venture capital and growth equity rounds and 3% of all venture capital and growth equity enterprises.

3 The Portfolio Allocations of Impact Investors

We now turn to the key characteristics of impact investors’ portfolio allocations, and how they differ from traditional private investors. For each analysis, we will investigate differences between investments at the portfolio-company level and at the investor level.

At the portfolio-company level, we will differentiate between companies that have ever had a financing round comprised only of impact investors, what we term *impact-only* firms, companies that have had an impact investor but never an impact-only round (an *impact-present* firm), and companies that have only had traditional investors (*traditional-only* companies).¹⁴

¹³PitchBook provides the dollar amount of each investment round, but does not identify how much each participating investor contributed; we impute the amount invested by an impact investor by dividing the total amount invested in the round by the number of investors.

¹⁴In Online Appendix Section C, we also differentiate amongst portfolio companies that received an impact investment in their first round of financing, and those that received an impact investment only in subsequent rounds of financing. Our goal here is to investigate whether portfolio companies that required an impact investment in their earliest stages systematically differ from those companies in which impact investors merely “tag along” once they have gained momentum. However, for the most part, we do not find significant differences along these lines.

At the investor level, we compare both the aggregate portfolios of impact investors to traditional investors and the portfolios of different kinds of impact investors. Our areas of focus are concessionary impact investors and additional impact investors, though we defer discussion of the latter category until the following section. We also investigate heterogeneity by whether impact investors are for-profit or nonprofit. The supplemental table at the very end of the paper, Variable Description, defines the key independent and dependent variables we will use throughout the analysis to follow, at both the portfolio and investment round level.

A consistent finding throughout is that there is a great deal of heterogeneity among impact investors and impact deals. Impact-only companies appear more oriented towards social impact than impact-present companies. At the investor level, concessionary impact investors and nonprofit impact investors appear more socially oriented than other impact investors and traditional private investors.

3.1 Geographic Drivers of Impact Investments

What characteristics of a geography do impact investors prioritize? Panel A of Table II reports results from the following regression:

$$y_i = \alpha + \beta_1 \text{ImpactOnly}_i + \beta_2 \text{ImpactPresent}_i + \gamma_s + \delta_t + \varepsilon_i \quad (1)$$

where y_i is the outcome of interest for company i , ImpactOnly_i is a dummy taking a value of 1 if company i is an impact-only company (i.e., ever had an impact-only round) and ImpactPresent_i is a dummy taking a value of 1 if company i was ever supported by impact investors but never had an impact-only round. The omitted group is companies exclusively financed by traditional investors. γ_s is a fixed effect for the sector of company i ,¹⁵ and δ_t is the fixed effect for the year in which company i received its first investment.

¹⁵We use the industry group defined by PitchBook, including 41 major industry groups.

Relative to traditional investor-only companies, impact-only companies are more likely to operate in poorer areas. Restricting the sample to investments within the U.S., Column 1 shows that impact-only companies on average operate in counties with median household income \$3,604 lower than traditional-only companies. This is about 5% lower than the median household income in the counties of the average traditional-only portfolio company. We see a similar pattern when looking at the country level (Column 7), which demonstrates that impact-only companies on average operate in countries with \$9,391 lower GDP per capita relative to traditional-only companies, a roughly 23% difference.

Relative to traditional-only companies, impact-only companies in the U.S. operate in areas that are 32% less densely populated (Column 2), with 5% smaller Black and Hispanic populations (Column 3), and 4% higher per capita deaths from drugs and alcohol (Column 4). Impact-only companies also appear to operate in “middle education” areas, in the sense that on average there are more people with a high school education but fewer with a college degree (Columns 5 and 6) though the latter pattern is not statistically significant.

Turning our attention to impact-present companies, all of these patterns either disappear or reverse, except the Black and Hispanic populations. Compared with traditional-only companies, impact-present companies operate in areas with higher median household income, more population, and in areas with more college graduates.

In Online Appendix Table C.I Panel A, we investigate the same outcomes, but differentiate portfolio companies based on whether impact investors were present in the first round or only in later rounds. The results strongly mirror the analysis based on impact-only vs. impact-present companies. Relative to traditional-only companies, first-round impact companies lean towards investments in regions that are less dense, poorer, and more prone to deaths from alcohol and drugs. Later-round impact companies by and large have less strong patterns, though the differences may have modest significance due to the small samples of first-round impact investments. The results in regard to education here are less clear.

Thus far, we have established that impact-only deals appear more social impact-oriented than impact-present deals. To what extent do these differences reflect the willingness of impact investors as a whole to prioritize social objectives, or the behavior of a relatively small group? Moreover, to what extent does the behavior of different well-defined classes of impact investors differ?

To shed light on this question, we directly investigate investor-level heterogeneity in Panel B of Table II. In this analysis, the outcomes are averaged for each investor over their portfolio company-investment rounds. While the results in these analyses are not totally independent of those in Panel A, they provide another way to structure and analyze the data.

Panel B1 compares traditional investors to concessionary impact investors and non-concessionary impact investors using the following specification:

$$y_i = \alpha + \beta_1 \text{ConcessionaryImpact}_i + \beta_2 \text{NonConcessionaryImpact}_i + \gamma_s + \delta_t + \varepsilon_i \quad (2)$$

where y_i is the outcome of interest, $\text{ConcessionaryImpact}_i$ is a dummy variable taking a value of 1 if investor i is a concessionary impact investor, $\text{NonConcessionaryImpact}_i$ is a dummy taking a value of 1 if investor i is a non-concessionary impact investor, and the omitted group is traditional investors. γ_s is a fixed effect for the preferred sector of investment for investor i ¹⁶ and δ_t is the fixed effect for the year in which investor i conducted its first investment.

The patterns for concessionary impact investors closely parallel those of the impact-only companies. Concessionary investors focus on significantly poorer areas globally, regions with significantly less population density, and those with significantly higher deaths from drugs and alcohol. On average, the areas they invest in have significantly higher

¹⁶To define the preferred sector of investment for investor i , we summarize the portfolio companies of each investor and identify the most frequently occurring industry group. We use the industry group defined by PitchBook, including 41 major industry groups.

high school graduation rates and lower college graduation rates (though the latter pattern is not statistically significant).

The differences between non-concessionary impact investors and traditional investors are much more muted. Within the U.S., there is no statistically significant difference between the incomes or population densities of areas that receive investments from traditional investors versus non-concessionary impact investors. Non-concessionary impact investors invest in areas with higher rates of death from drugs and alcohol, though to a smaller degree than concessionary impact investors ($p=.102$). Globally, non-concessionary impact investors do invest in poorer regions of the world.¹⁷

Together, these results demonstrate that there is important heterogeneity in the interests and strategies of impact investors – a lesson that will be reinforced in each of our subsequent analyses.

3.2 Do Impact Investors Help Create New Industries?

Impact investors often argue that part of their strategy is to support companies in markets and industries that have not yet proven sufficiently profitable to attract traditional investors. For instance, many early debt and equity impact investing funds were created to finance companies in the newly emerging sector of micro-finance, which focuses on making small loans to poor women in developing countries. The early support of impact investors might allow companies and industries to develop the business models with demonstrated profitability necessary to attract traditional investors. In this section, we investigate this claim by measuring whether impact investors, relative to traditional investors, are more likely to support companies in nascent industries, using the 215 PitchBook-identified sectors.

¹⁷Online Appendix Table C.I Panel B1 investigates investor heterogeneity based on nonprofit status and reaches similar conclusions. Nonprofit impact investors invest in poorer and less densely populated areas, and areas with more deaths from drugs and alcohol. By contrast, the differences between for-profit impact investors and traditional investors are more muted.

Table III presents results similar to specifications (1) and (2), focusing on whether investors support *pioneer* companies. In Column 1, a company is defined to be a pioneer if it is among the first ten companies within its PitchBook industry to be financed in our data. In Column 2, a company is defined to be a pioneer if it is within the first twenty companies to be financed within its industry; in Column 3, a company is a pioneer if it is within the first thirty companies; and in Column 4, a company is a pioneer if it is within the first forty companies. On the company level, the outcome variable is a dummy indicating whether a company is a pioneer or not; on the investor level, the outcome variable is the fraction of the investor’s portfolio companies that are pioneers with a financing round in our dataset.

Looking at the company level (Panel A), we see that relative to traditional-only companies, impact-only companies are more likely to be pioneers, regardless of the definition of an industry pioneer. Relative to traditional-only companies, impact-present companies are also more likely to be pioneers, except when a pioneer is defined to be in the first ten companies within its industry. The effects are stronger for impact-only groups.¹⁸

At the investor level, there are no significant differences between the concessionary and non-concessionary impact investors in terms of the likelihood of supporting pioneers, though there is evidence that both groups are more likely to support pioneers relative to

¹⁸The reader may be curious about the industries where the impact investors were especially well-represented. We find in an unreported analysis that the five PitchBook industries in which impact investors are most likely to support pioneers are Alternative Energy Equipment, Forestry Development/Harvesting, Horticulture, Other Utilities (largely composed of clean energy companies), and Plant Textiles. Within each of these industries, impact investors are present in between 20% and 30% of the pioneering deals. For concreteness, the following are examples of impact-backed pioneer companies in each of the aforementioned industries. **Alternative Energy:** Capstone Green Energy was incorporated in 1988 as a California based gas turbine manufacturer that specializes in microturbine power along with heating and cooling cogeneration systems. **Forestry:** Triton Timber was founded in 2000 in Victoria, Canada to develop technology to responsibly harvest the flooded and abandoned forests in reservoirs around the world. **Horticulture:** Nalweyo Seed Company Ltd (NASECO) was formed in 1996 and breeds, produces and sells a variety of hybrid field crops and vegetables to local and international non-governmental organizations, distributors, and smallholder farmers in Uganda and beyond. **Other Utilities:** Cogelec Energy was created in 2014 to provide energy for productive use and act as a catalyst for economic advancement in communities across Africa. **Plant Textiles:** AlgaLife, a Berlin and Israel-based start-up established in 2016, seeks to develop algae-based materials for the fashion and textile industries.

traditional investors (Panel B1).¹⁹

3.3 Patience and Risk Tolerance

Impact investors often assert that they provide patient and/or risk tolerant capital. In this section we provide some support for these claims, by examining the outcomes and duration of investments. Again, we also find evidence of significant heterogeneity across deals and types of impact investors.

Table IV presents results from specifications (1) and (2) for measures of risk tolerance and patience. Columns 1 through 3 examine our proxy for an investment’s level of risk – the probability that a company reaches a successful exit, typically either an initial public offering (IPO) or a merger or acquisition. The outcome in Column 1 is whether an investment results in an IPO, a merger, or an acquisition; in Column 2, it is whether the deal results in a merger or an acquisition; and in Column 3, whether it results in an IPO. We assume investments with a lower success rate are riskier than others. Column 4 presents our proxy for investor patience: for each company that has a successful exit, the outcome variable is the time, measured in months, between the first investment in a company and its exit. While these proxies are not perfect – they also presumably capture skill in deal selection and management – they provide an indication of risk tolerance and patience. On the company level, the outcomes are dummies indicating whether the portfolio companies went through the relevant events; on the investor level, the outcomes are averaged for each investor based on each portfolio company-investment round.

Looking at the company level in Panel A, we see that impact-only companies are 6.6 percentage points less likely to have a successful exit relative to companies that have only had traditional investors (Column 1). The success rate in the latter group is 16.5

¹⁹In Online Appendix Table C.II, we do not find any significant relationship between the likelihood that an impact investment is a pioneer and whether it is a first- or later-round impact investment. For-profit impact investors are somewhat more likely to be pioneers, at least when defined as the first 10 or 20 firms in an industry.

percentage points, so impact-only companies are about 40% less likely to have a successful exit. Columns 2 and 3 present similar patterns when restricting attention separately to mergers and acquisitions and IPOs. Column 4 indicates that conditional on a successful exit, impact-only companies take nearly 16 more months to reach a successful exit event relative to companies with only traditional investors. The average time in the latter group is 62.6 months, so impact-only companies take about 25% longer to reach success.

The pattern is quite different for impact-present companies. Relative to companies with only traditional investors, these companies are 0.7 percentage points *more* likely to realize a successful exit (Column 1), a statistically insignificant difference relative to companies with only traditional investors. The effect is driven by an increase in the likelihood of mergers and acquisitions (Column 2). However, Column 4 indicates that the set of impact-present companies, conditional on reaching a successful exit, also take substantially longer than traditional-only firms: an additional 15 months (insignificantly different from the 16 months for impact-only).²⁰

In sum, we see evidence that impact-only companies are riskier and take longer to exit than those supported by only traditional investors. We find evidence that impact-present companies are *less* risky, though they also take longer to succeed. We cannot say whether these results represent selection or treatment effects. However, either way the results indicate that impact investors accept longer time horizons, and that some – but not all – impact investors accept lower probabilities of success.

We now turn to the investor-level results in Panel B. Surprisingly, we do not find evidence that concessionary investors support riskier companies or companies with longer time horizons to successful exit relative to non-concessionary impact investors. Across the

²⁰In Online Appendix Table C.III, we find some difference in the degree of risk taken by impact investors who support a company in its first versus later round. Companies that received an impact investment in their first round are about two percentage points less likely to reach IPO than companies who received an impact investment in a later round. Conditional on reaching a successful exit, companies that received an impact investment in a later round have significantly longer time to success than companies that received an impact investment in their first round.

board, there are no statistically significant differences between the outcomes of companies supported by concessionary and non-concessionary impact investors, although relative to traditional investors, both types of investors support companies with lower probability of success and longer time horizons to success. In Online Appendix Table C.III, we find quite similar patterns for non-profit and for-profit impact investors.

To what extent are the lower success rates of impact investors a result of them searching for deals in more difficult industries, as opposed to being a consequence of them realizing less financial success than traditional investors controlling for the success rate of an industry? To differentiate amongst these stories, we compute the average success rate and time to success for portfolio companies in each of the 215 detailed industries employed by PitchBook in each year of our data.

In Table V, we re-estimate specifications (1) and (2), but instead of using as outcome variables the realization of an exit or time to success, we use the *leave-one-out average* outcomes for each portfolio company’s industry $\times$ year of investment. This approach captures differences in the likelihood of and time to success for the industry $\times$ years of impact versus traditional portfolio companies. If impact investors are merely selecting companies in industries and time periods with lower probability of success and longer time to success, the results of this estimation should look similar to those in Table IV. We see that at the portfolio company level, about a quarter of the difference in impact investors’ probability of success and none of the difference in their time to success appears to come from their industry selection. The remainder comes from differences in probability of and time to success, controlling for portfolio company industry $\times$ year of investment averages. At the investor level, even less of the variation in probability of exit and time to exit can be explained by the industry composition of their portfolio companies. In sum, most of difference in success rates and in time to success comes from within the industry $\times$ year categories, and cannot be explained by the composition of industries for impact portfolio companies.

4 Do Impact Investors Seek “Additional” Investments?

Thus far, we have established several important differences in the investment strategies of impact investors – and especially those of concessionary and nonprofit impact investors – relative to traditional private investors. We next turn to the subtler, though arguably more important, question of whether impact investors are financing companies that would have struggled to raise capital from traditional investors. At first glance, it may seem that we have already answered this question affirmatively, having found differences in the portfolios of impact and traditional investors. Yet a growing body of economic theory suggests that merely prioritizing impactful investments does not guarantee that impact investors are providing financing to companies that traditional investors would have eschewed. More broadly, such a pattern does not guarantee that impact investors are having their intended impact (e.g. Brest and Born 2013; Oehmke and Opp 2020; Green and Roth 2021).

The underlying logic goes as follows. Some impactful companies are also sufficiently promising such that they could attract traditional private investors. An impact investor could amass a portfolio of many of these companies. Yet in financing these companies, if the impact investor does not at least give these companies more capital, or capital at better terms, than a traditional investor would have, then the impact investor is merely displacing traditional private investors. The net impact of these investments is not the impact of the portfolio companies that the impact investor supports (as these companies would have been financed regardless), but rather the impact of marginally expanding the pool of traditional, purely financially motivated private capital. Therefore, an impact investor that funds companies that others would have does not create more impact than a traditional private investor would have, regardless of the impact of her portfolio companies.²¹

²¹This logic abstracts from ways in which impact investors can have impact post-investment, by exerting influence on the direction of a company’s development. We return to this possibility below.

This literature argues that a more impactful approach would be for impact investors to prioritize portfolio companies that are both impactful and unable to attract traditional private investors. In so doing, the impact investor expands the total set of impactful companies that receive private financing. Impact investors who finance companies that could not have attracted traditional private investment, and more broadly who make decisions that a purely financially motivated investor would not, are referred to as *additional*.

4.1 How Many Impact Investments are Additional?

While a number of papers have illuminated the theory underlying additionality in impact investing, the extent to which impact investors prioritize additionality in practice remains an open question. The conceptual challenge in addressing this question is identifying which portfolio companies could have been financed in the absence of impact investors. We overcome this challenge by following a revealed preference approach to identify non-additional impact investments. Any time a traditional investor co-invests with an impact investor in the same financing round of a particular company, we conclude that it is unlikely the investment was additional, as a traditional investor has demonstrated the deal was worth investing in on the basis of financial considerations alone.^{22 23}

Table VI presents our key co-investment statistics on the round level. Our first result is that the majority of impact investments are not additional. Specifically, of the 8,125 deals that include an impact investor in our data set, 60.3% of them have a traditional private co-investor. More than half of the investments made by impact investors in our data were

²²When multiple investors contribute capital into a venture round, they typically purchase shares of share of the same security (e.g., Series C preferred stock). These shares are governed by a single stock purchase agreement, and the investors come in on identical terms. Were they to invest in the same stock on different terms, it might would be likely to create immediate tax obligations for one party or another. For a discussion of thee issues, see Halloran et al. (1997) and Levin et al. (2008).

²³This approach abstracts from the possibility that traditional investors come into a deal because an impact investor enticed them to join. To the extent that impact investors are ever the “anchor investor” in a deal, our metric will understate the degree of additionality amongst them. We return to this possibility below.

also attractive to a traditional investor solely on the basis of financial considerations. For reference, 31.3% of deals that include only traditional investors have one or more co-investors. The practice of co-investing with traditional investors is therefore much more prevalent amongst impact investors than amongst traditional investors with one another. Across both impact and traditional investors, co-investment is substantially more frequent in venture capital relative to growth equity deals. And across traditional and impact investors, co-investment is more common in later rounds of a company’s financing than in early rounds, though it is relatively common in both cases.

4.2 How Many Impact Investors are Additional?

While the majority of impact deals are not additional, there is considerable investor-level heterogeneity. To characterize which impact investors are additional and which are not, we exploit the network structure of our data. In our analysis, each node is an investor and there is a link between two investors any time that they have co-invested in the same financing round of a company (e.g., Hochberg et al. 2007).

We examine two network-based measures of the degree to which an impact investor aims to be additional. The first and simpler measure is *Fraction of Impact Only*, defined as the fraction of an impact investor’s deals for which all of the co-investors are also impact investors. *Fraction of Impact Only* is 1 if an impact investor never co-invests with a traditional investor, and is 0 if all of an impact investor’s deals have at least one traditional investor in them.

Figure 2 plots the distribution of *Fraction of Impact Only* for the population of impact investors. The distribution has mass throughout the full range, though with distinctly more mass at the low end. About 7% of impact investors never co-invest with a traditional investor, while about 15% of impact investors always co-invest with at least one traditional investor. At the median, 67% of the impact investors’ deals are co-invested with traditional

investors.

Our second measure of additionality comes from a network-theoretic algorithm meant to divide impact investors into those that regularly co-invest with traditional investors and those that do not. We utilize a variant of the minimum-cut algorithm (Stoer and Wagner 1997). Specifically we augment our co-investment network with two additional nodes, one of which we call *Impact*, which is linked to every impact investor, and one of which we call *Traditional* and is linked to every traditional investor. These nodes are meant to represent the self-identification of impact and traditional investors. The algorithm then partitions the investors into two sets, so as to minimize the number of links (co-investments) that cross the partition. For details of the implementation of this algorithm, see Online Appendix B.

The result of this algorithm is a partitioning of impact investors into two sets, where investors in one set rarely co-invest with investors in the other set. Impact investors in the “impact partition” rarely co-invest with traditional investors, and also rarely co-invest with impact investors who regularly co-invest with traditional investors. We refer to these impact investors as *additional* and we refer to the impact investors who fall into the “traditional partition” as *non-additional*. By this metric, approximately 12% of impact investors are additional (Table I). Both of the above measures of investor additionality highlight that while a material fraction of impact investors appear to be additional, the vast majority do not.

4.2.1 The Portfolios and Characteristics of Additional Impact Investors

How do additional impact investors differ from non-additional impact investors? The first dimension we investigate is whether impact investors declare themselves to be concessionary – i.e., whether they are willing to accept below-market risk adjusted financial returns. Seventeen percent of all impact investors in our sample identify as concessionary (Table I). Surprisingly, concessionary impact investors are not more likely to make additional

investments, relative to the full population of impact investors. Only 14% of concessionary investors are additional, which is not statistically significantly different from the 12% additional impact investors in the full population. That is, impact investors who express willingness to accept below-market returns are no more likely to support portfolio companies that could not attract traditional private financing relative to the full population of impact investors.

Table I explores a number of characteristics of additional impact investors. Recall that Columns 1 and 2 compared the full population of impact investors to traditional investors and Columns 3 and 4 compared concessionary to non-concessionary impact investors. Columns 5 and 6 compare additional impact investors to non-additional impact investors.

The most important insight from Table I is that not only are additional impact investors in the minority, but they are also typically far smaller than non-additional impact investors. Relative to the non-additional impact investors, additional impact investors have invested in 33 fewer deals on average, and each deal is on average \$2.1 million larger (though this latter difference is not statistically significant). Additional impact investors are also somewhat younger than the non-additional impact investors on average. Additional impact investors are more likely to invest in Latin America, the Caribbean, and Sub-Saharan Africa, though these differences marginally miss traditional levels of statistical significance. Additional impact investors are less likely to invest in energy and real estate.

Revisiting Tables II through IV, we see that relative to non-additional impact investors, additional impact investors invest in poorer counties and those with higher rates of death from drugs and alcohol within the U.S. (Table II). Moreover, additional impact investors accept more risk than non-additional impact investors, as evidenced by the one percentage point lower likelihood of their portfolio companies to reach an IPO ($p=.113$, Table IV). We do not find evidence that additional impact investors are more likely to support nascent industries, and if anything, Column 1 of Table III suggests the reverse. In Online

Appendix Tables C.I – C.III, we examine an alternative measure of additionality; the fraction of an impact investor’s deals that are co-invested alone or with only other impact investors. The results are qualitatively similar.

While additional impact investors appear to prioritize impact more than their non-additional counterparts, the principal conclusion of this analysis is that additional impact investors comprise only a small share of the industry. Only 12% of impact investors are additional by our preferred metric, and on average each additional impact investor has made about 90% fewer deals than the average non-additional impact investor.

This conclusion relies on the validity of our notion of additionality; impact investments that also attracted traditional private investors must be attractive on their financial merits alone and therefore impact investors were not additional in these deals. There are two primary threats to the validity of our notion of additionality, which are the subject of the remainder of our analysis. First, it may be that impact investors identify impactful and financially attractive portfolio companies that would have been overlooked by traditional private investors. Then, as the lead investor, the impact investor might assemble a coalition of traditional investors to provide capital. In this scenario, the impact investor is pivotal in the financing of their portfolio company even though traditional investors are willing to participate in the deal once they are made aware of it. Second, even conceding that impact investors primarily provide capital to portfolio companies that could attract it by other means, it may be that impact investors are additional at the post-investment stage. Impact investors may empower or encourage portfolio companies to develop in impactful directions that would be less likely under the guidance of traditional private investors. In the following two sections, we propose and execute tests for each of these channels, and do not find evidence to support either of them.

4.3 Are Impact Investors Guiding Traditional Private Investors to New Deals?

While the majority of impact investments are co-invested with traditional investments, it may be that it is the impact investors who identify their portfolio companies and then bring traditional investors into the deal. If this were the case, then many of the impact investment deals could still be additional, despite the presence of co-investments with traditional investors.

One prediction of this theory is that when an impact investor raises a new fund, the traditional investors who have previously co-invested with them should be more likely to invest in “impactful” portfolio companies. The logic underlying this prediction has two components. First, that an impact investor i is most actively searching for portfolio companies in which to invest in the years immediately following having raised a new fund. Second, that the traditional investors who previously co-invested with impact investor i are likely to co-invest with i again.²⁴ Given these two premises, if an impact investor is responsible for bringing their traditional co-investors into deals, we should observe that after an impact investor raises a fund, their previous traditional co-investors are more likely to invest in “impactful” companies.

In contrast, if impact investors are not responsible for bringing their traditional co-investors into a deal, and rather impact investors merely invest in companies that their traditional co-investors anyways would have financed, then we should observe no change in traditional investors’ behavior after an impact investor raises a new fund. In this section, we provide evidence supporting the latter prediction, which more broadly supports our conclusion that impact investors do not principally provide capital to companies that would have struggled to obtain it from traditional investors.

²⁴In our sample, 46.6% of non-impact investors who co-invested with an impact investor undertook a second co-investment with that same impact investor in the following three years. The corresponding probabilities for four and five years following the initial co-investment are 51.8% and 54.3%, respectively.

Specifically, we utilize an event-study framework and estimate the following model:

$$y_{ijt} = \alpha + \beta Fundraise_{jt} + \gamma_j + \delta_t + \epsilon_{ijt} \quad (3)$$

Here, the sample is all investments made into a portfolio company i by traditional private investor j in year t for all i, j, t in our data. $Fundraise_{jt}$ is a dummy variable taking a value of 1 if a) there is an impact investor who has previously co-invested with traditional investor j and b) that impact investor has raised a fund in the last one, two or three years before year t , depending on our specification. γ_j is an investor fixed effect, and δ_t is a fixed effect of the year of the transaction. Our outcome variable y_{ijt} measures various characteristics of the portfolio company i that was financed by traditional investor j in deal-year t . Standard errors are clustered at the investor level.

Throughout, our interest is to understand whether traditional investor j undertakes “impactful” investments in the years following the fundraising event of an impact investor with whom they have previously co-invested. Here, we operationalize how “impactful” a portfolio company is by the degree to which it exhibits the characteristics that impact investors were shown to prioritize in Table II – i.e., whether it is headquartered in a poor region of the US or world, whether it is headquartered in a low population density area, etc. If impact investors have a causal influence on the investment activities of their prior traditional co-investors, β will be large and positive, and small or zero otherwise.

The results are presented in Table VII, where each column corresponds to a different outcome variable. In Panels A, B, and C, $Fundraise_{jt}$ is a dummy corresponding to whether or not an impact co-investor raised a fund in the one, two, or three years prior to year t , respectively. Across the board, we can see that an impact investor’s fundraising activity has virtually no impact on their traditional co-investors’ investment activity. The estimates are never statistically significantly different from zero and are always small in magnitude. To put these magnitudes into context, consider from Table II that relative to

the average traditional-only investment, the average impact-only investment takes place in a county that has \$3604 lower median household income, a population density that is 3038 person/sq mile lower, and has 0.03% more residents who suffer from drug or alcohol related deaths. By contrast, our point estimates in Panel A of Table VII suggest impact investor’s fundraising activity causes traditional investors to invest in portfolio companies in counties with \$114 lower median household income, a population density that is 285 person/sq mile lower, and that have .001% fewer residents who suffer from drug or alcohol related deaths. While impact investments look starkly different from traditional investments, the causal impact of impact investors’ fundraising activity on their traditional co-investors is minimal. Thus, we do not find evidence that impact investors are achieving additionality by helping portfolio companies raise traditional private capital to which they would not otherwise have access.

4.4 Are Impact Investors Additional at the Post-Investment Stage?

Our final line of inquiry regards whether impact investors are additional at the post-investment stage. We utilize data on employee satisfaction and evaluate whether portfolio companies that receive impact investments place more emphasis on employee welfare relative to similar companies that receive traditional private investments. While employee welfare is not a holistic measure of an investor’s impact, treating employees fairly is among the common theses of impact investors. To evaluate this possibility, we employ a difference-in-differences analysis.

The finalized Revelio data set is at the portfolio company-year level. There are ten metrics provided by Revelio. The overall rating, career opportunity rating, compensation and benefits rating, culture and value rating, diversity and inclusion rating, senior leadership rating, and work-life balance rating are all rated from 1 to 5 (with the highest

rating being 5). The business outlook rating, CEO rating, and recommend to a friend rating are rated from -1 to 1 (with one being most positive). The ratings are provided on a company-year level. The survey data about culture and values and future outlook was only collected starting in 2008 and that about diversity and inclusion in 2020. Employees can also choose to skip answering specific questions. Therefore, the metrics have different numbers of observations.

Our difference in differences specification is:

$$y_{it} = \alpha + \beta_1 Post_{it} + \beta_2 Post_{it} * Impact_i + \gamma_t + \delta_i + \epsilon_{it} \quad (4)$$

where outcome variable y_{it} represents our various metrics of employee satisfaction for portfolio company i in year t , $Impact_i$ is an indicator taking a value of 1 if company i is an impact portfolio company (i.e., has at least one impact investor) and 0 otherwise, γ_t is a fixed effect for the year of the observation and δ_i is a portfolio company fixed effect. Recall that as part of our sample construction, for each impact portfolio company j that raised funding from an impact investor in year t_j , we identify one or more non-impact portfolio companies k that raised a round of funding from a traditional investor within three years of t_j – we denote by t_k the year that firm k raised capital. $Post_{it}$ is an indicator variable taking a value of 1 for firm i after year t_i (i.e., after portfolio company i raised capital in year t_i) and 0 before t_i . Standard errors are clustered at the portfolio company level.²⁵

Our parallel trends assumption is that the outcomes of companies who raised capital from impact investors would have evolved in the same way as those of companies that raised capital from traditional private investors, had the former group also raised capital from traditional private investors. Under this assumption, the coefficient β_2 estimates the

²⁵Note that we do not include a fixed effects for the groupings between IPCs and matched NIPCs, as these are subsumed by our company fixed effects.

differential impact of raising impact investment on employee welfare relative to raising traditional capital.

Before assessing the magnitude of β_2 , Online Appendix Table C.IV tests for the presence of pre-trends in employee satisfaction. To do so, we include only the years prior to a fund-raising round. We code a new variable, “Years to Raise,” which indicates (the negative of) the number of years prior to fund-raising that characterizes the observation. So, for a company that raises financing in 2018, Years to Raise would equal -1 in 2017 and -5 in 2013. We find little evidence of differential pre-trends; the impact and non-impact portfolio companies exhibit parallel trends prior to their fundraising event.

Table VIII presents the estimates of Equation 4; the corresponding event-study coefficients are plotted in Figure 3. Two striking patterns emerge. First, consistent with Gornall et al. (2022), the estimates of β_1 indicate that employee satisfaction deteriorates after a portfolio company raises private financing. In all but one metric, there is a statistically significant decline in employee satisfaction after raising private financing. For instance, overall satisfaction declines by 0.12 points following the financing, relative to a mean of 3.7 (column 1), satisfaction with compensation falls by .07 points, relative to a mean of 3.5 (column 3), and satisfaction with work-life balance falls by .08 points, relative to a mean of mean of 3.7 (column 7).

More surprisingly, the estimates of β_2 imply that nearly every metric declines by statistically significantly *more* following an impact investment. In almost all cases, the decline in these metrics fall is about two times or more for impact investment rounds relative to fundraising events from traditional investors. For example, relative to the declines following a traditional private financing, overall satisfaction declines by an additional 0.11 points following an impact investment (column 1), satisfaction with the company’s culture falls by an additional 0.13 points (column 4), and likelihood to recommend the company to a friend falls by an additional 8% (column 10).

In conclusion, we find no evidence that impact investors are additional in the post-

investment stage. In fact, we find that nearly every metric of employee welfare deteriorates significantly further following an impact investment than when following a traditional private investment.

5 Discussion

This paper analyzes the first comprehensive dataset that matches impact investors to their portfolio companies. In doing so, we shed light on several long-standing questions regarding the behavior of impact investors and their role in the private financing landscape.

First, we analyze the portfolio allocation of impact investors, with an eye towards some arguments espoused by impact investors as to their role. We find that impact investors disproportionately invest in disadvantaged areas within the U.S. and across the world. We find support for the claim that impact investors build new industries and markets. Relative to traditional investors, impact investors are more likely to be among the first few dozen investors in a new industry. We find evidence that impact investors accept a greater level of risk and their investments that take longer to reach successful exits, corroborating the story that impact investors provide patient and risk tolerant capital.

Next, we turn to the more nuanced question of the extent to which impact investors are *additional*. In other words, to what extent do impact investors facilitate investments in new enterprises that could not have attracted traditional private financing, as opposed to merely supporting high-impact companies that could anyways have attracted traditional capital? And at the post-investment stage, are impact investors pushing portfolio companies in more impactful directions than would traditional investors?

We find limited evidence for additionality amongst impact investors. More than 60% of impact investment rounds are co-invested with traditional private investors, suggesting that those portfolio companies could have attracted capital on their financial merits

alone. Utilizing network theoretic methods to partition the set of investors into those who regularly co-invest with traditional investors and those that do not, we find that the latter group is small, representing only 12% of impact investors. Moreover, on average each of these impact investors has made only 10% as many deals as the average impact investor who regularly co-invests with traditional investors. Using an event study analysis, we further provide evidence that impact investors have extremely limited influence over the deals pursued by their traditional private co-investors – i.e., impact investors do not appear to be identifying deals that would have been overlooked by traditional investors and then assembling a team of traditional investors to provide additional financing.

Finally, at the post-investment stage, we demonstrate that employee welfare declines following an impact investment, by significantly more than following a comparable traditional private investment. That is, in so far as employee welfare is a metric prioritized by some impact investors as a component of their desired impact, we do not find evidence of (positive) additionality at the post-investment stage.

Ultimately, the differences between impact and traditional investors, and across impact investors, raise the question of how best to quantify and aggregate the social trade-offs associated with these investors. Are impact investors achieving their desired impact despite limited evidence of additionality? To what extent do the net societal benefits from impact investors' portfolio companies offset the lower financial returns to their limited partners documented in the earlier literature? How do the costs and benefits differ across different classes of impact groups? We hope that future research will help quantify these trade-offs.

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6 Main Tables and Figures

Table I: Summary Statistics by Investor Type

	Traditional Investor vs. Impact Investors		Impact Investors Only: Concessionary Impact vs. Non-Concessionary Impact		Impact Investors Only: Additional Impact vs. Non-Additional Impact	
	(1) Traditional Investor Mean	(2) Impact Investor Difference	(3) Non-Concessionary Investor Mean	(4) Concessionary Investor Difference	(5) Non-Additional Investor Mean	(6) Additional Investor Difference
<i>Panel A: Portfolio Profile</i>						
Number of Companies	24.438	1.042 (3.637)	26.748	-7.471 (6.210)	28.400	-25.275*** (4.136)
Number of Deals	30.612	1.399 (4.086)	33.874	-10.980 (7.122)	35.767	-32.517*** (4.609)
Average Investment Size	8.703	-3.720*** (0.754)	5.159	-1.076 (1.323)	4.808	2.094 (3.928)
Years in Operation	9.902	-0.197 (0.310)	9.720	-0.108 (0.843)	9.773	-0.773 (1.343)
<i>Panel B: Global Regions</i>						
US	0.451	-0.007 (0.026)	0.448	-0.023 (0.069)	0.459	-0.125 (0.085)
Canada	0.035	-0.017*** (0.005)	0.022	-0.021*** (0.006)	0.021	-0.021*** (0.006)
East Asia	0.103	-0.089*** (0.006)	0.013	0.010 (0.014)	0.016	-0.016*** (0.006)
North, South, and West Europe	0.184	-0.101*** (0.013)	0.082	0.006 (0.037)	0.084	-0.009 (0.046)
Oceania	0.015	-0.003 (0.006)	0.010	0.015 (0.022)	0.010	0.021 (0.031)
UK	0.063	-0.017* (0.010)	0.041	0.028 (0.034)	0.048	-0.017 (0.033)
Eastern Europe, Russia, and Central Asia	0.023	-0.016*** (0.002)	0.006	0.005 (0.008)	0.008	-0.008*** (0.002)
Latin America and Caribbean	0.021	0.064*** (0.013)	0.083	0.014 (0.039)	0.073	0.108 (0.067)
Middle East and North Africa	0.033	-0.014*** (0.005)	0.022	-0.014* (0.007)	0.022	-0.022*** (0.005)
Southeast Asia	0.021	0.012 (0.008)	0.034	-0.003 (0.020)	0.027	0.051 (0.046)
South Asia	0.033	0.065*** (0.014)	0.102	-0.025 (0.033)	0.107	-0.075** (0.035)
Sub-Saharan Africa	0.013	0.124*** (0.018)	0.136	0.006 (0.047)	0.124	0.114 (0.076)

Table I: Summary Statistics by Investor Type (cont.)

	Traditional Investor vs. Impact Investors		Impact Investors Only: Concessionary Impact vs. Non-Concessionary Impact		Impact Investors Only: Additional Impact vs. Non-Additional Impact	
	(1) Traditional Investor Mean	(2) Impact Investor Difference	(3) Non-Concessionary Investor Mean	(4) Concessionary Investor Difference	(5) Non-Additional Investor Mean	(6) Additional Investor Difference
<i>Panel C: Industry Sectors</i>						
Communication Services	0.056	-0.025*** (0.005)	0.031	-0.001 (0.010)	0.029	0.016 (0.032)
Consumer Discretionary	0.097	-0.015** (0.008)	0.085	-0.017 (0.016)	0.083	-0.005 (0.036)
Consumer Staples	0.046	0.054*** (0.010)	0.096	0.024 (0.030)	0.090	0.086 (0.057)
Energy	0.015	0.023*** (0.006)	0.038	-0.004 (0.015)	0.041	-0.031*** (0.010)
Financials	0.022	0.049*** (0.011)	0.065	0.039 (0.036)	0.074	-0.028 (0.036)
Health Care	0.226	-0.089*** (0.012)	0.145	-0.046 (0.029)	0.138	-0.008 (0.054)
Industrials	0.188	0.024** (0.012)	0.211	0.006 (0.036)	0.204	0.071 (0.064)
Information Technology	0.297	-0.090*** (0.012)	0.211	-0.024 (0.033)	0.214	-0.064 (0.051)
Materials	0.036	0.019*** (0.007)	0.055	0.000 (0.023)	0.053	0.020 (0.044)
Real Estate	0.012	0.041*** (0.008)	0.050	0.019 (0.019)	0.058	-0.042*** (0.015)
Utilities	0.003	0.009*** (0.003)	0.012	0.003 (0.008)	0.014	-0.014*** (0.003)
Number of Investors	20,228	277	230	47	245	32

Specification: Observations are venture capital or growth equity investors with an investment by May 2021. In the odd columns, we show the mean for the group indicated in the column header. The even columns show the coefficient and standard error of the difference between the preceding odd column and the group indicated in the header of the even column. In column 1, we present the mean of the outcome shown in the rows for Traditional Investors; in column 2, the difference between Traditional and all Impact Investors for the outcome in the corresponding row. In columns 3-6, the sample is limited to only Impact Investors. In columns 3 and 4, we compare the outcomes of Non-Concessionary and Concessionary Impact Investors. In columns 5 and 6, we compare the outcomes of Non-Additional and Additional Impact Investors. Robust standard errors in parentheses.

Outcomes: Outcomes are described in the rows of the table. In Panel A, we present summary statistics of the investors' portfolios. In Panel B, we show what fraction of an investor's portfolio companies are headquartered across the global regions listed in the panel. In Panel C, we show the fraction of the investor's portfolio companies that are classified in the industry sectors listed in the panel. The final row of the table shows the number of investors that fall in each of the categories indicated in the column header.

Table II: What are the Socioeconomic Predictors of Impact Investments?

	United States - Based Companies						All Companies
	(1) Median Household Income USD	(2) Population Density (Person/sq.mi)	(3) Black and Hispanic Population Percent * 100	(4) Deaths from Drugs or Alcohol Percent * 100	(5) No High School Diploma Percent * 100	(6) Bachelor or Graduate Degree Percent *100	(7) GDP per Capita USD
Panel A: Company Level							
β_1 : Impact Only	-3,603.74*** (531.84)	-3,037.60*** (516.56)	-1.61*** (0.62)	0.03*** (0.01)	-0.70*** (0.18)	-0.38 (0.41)	-9,391.48*** (509.03)
β_2 : Impact Present	1,280.38*** (381.65)	1,606.26*** (485.41)	-1.14*** (0.39)	-0.01 (0.00)	-0.14 (0.12)	2.04*** (0.29)	421.26 (406.19)
<i>P-value from F-Test $\beta_1=\beta_2$</i>	0.00	0.00	0.52	0.00	0.01	0.00	0.00
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
First Financing Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean for Traditional Only	70,000.66 [19,927.19]	9,520.22 [19,315.56]	30.12 [15.65]	0.69 [0.16]	13.99 [5.09]	48.16 [10.28]	40,750.89 [20,072.78]
N Companies	54,303	51,715	54,353	49,697	54,303	41,722	146,546
Panel B: Investor Level							
Panel B1: Concessionary Impact Investor							
θ_{11} : Concessionary Impact Investor	-2,601.59 (2,512.30)	-5,359.38*** (1,187.47)	-3.15 (2.45)	0.07** (0.03)	-1.67*** (0.54)	-0.97 (1.16)	-7,999.70*** (2,842.88)
θ_{21} : Non-Concessionary Impact Investor	1,252.69 (1,124.11)	-404.81 (1,224.94)	-0.13 (1.03)	0.02** (0.01)	-0.59* (0.32)	0.90 (0.62)	-6,565.80*** (1,426.56)
<i>P-value from F-Test $\theta_{11}=\theta_{21}$</i>	0.16	0.00	0.25	0.10	0.08	0.15	0.65
Panel B2: Additional Impact Investor							
θ_{12} : Additional Impact Investor	-12,478.13** (5,742.70)	-1,613.85 (7,670.93)	-3.82 (7.75)	0.17*** (0.06)	2.03 (3.48)	-4.64 (5.18)	-11,291.39** (5,454.05)
θ_{22} : Non-Additional Impact Investor	1,413.33 (1,014.02)	-1,133.71 (1,051.19)	-0.40 (0.91)	0.02** (0.01)	-0.91*** (0.23)	0.89* (0.53)	-6,354.52*** (1,301.50)
<i>P-value from F-Test $\theta_{21}=\theta_{22}$</i>	0.02	0.95	0.66	0.03	0.40	0.29	0.38
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
First Investment Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean for Traditional	75,729.13 [15,876.67]	11,334.25 [15,153.77]	30.51 [10.21]	0.68 [0.11]	13.69 [3.38]	49.62 [7.48]	42,710.65 [17,415.53]
N Investors	13,325	13,250	13,326	12,783	13,325	12,438	19,710

Specification: Panel A of this table estimates Specification 1 in the paper. Observations are companies funded by venture capital or growth equity investors by May 2021. Impact Only indicates a company that has ever had an impact investor-only round, including 2,949 companies. Impact Present indicates a company that has at least one impact investor, but has no impact investor-only rounds, including 3,117 companies. The comparison group are companies that have never had an impact investor, including 204,640 companies. Panel B of this table estimates Specification 2 in the paper. Observations are venture capital or growth equity investors with an investment by May 2021. In Panel B1, Concessionary Impact indicates that the impact investor is concessionary and Non-Concessionary Impact captures all other impact investors. There are 47 concessionary impact investors and 230 non-concessionary impact investors. We characterize impact investors as concessionary based on the information presented on their website – see Burton et al. (2021) for more information. In Panel B2, Additional Impact Investor indicates that the impact investor is additional as defined in Section 4 and Non-Additional Impact captures all other impact investors. There are 32 additional impact investors and 245 non-additional impact investors. The comparison group in Panel B are traditional investors, including 20,228 investors. Robust standard errors are in parentheses, and the standard deviations are in brackets.

Outcomes: The outcomes in columns 1-6 are calculated at the US county level and hence only US companies are considered. In column 7, the outcome is at the country level. In Panel A, outcomes are assigned to companies based on the headquarters of the company as specified in the first round of investment. Observation numbers vary across columns due to missing data on location of company headquarters or due to missing outcome data. In Panel B, outcomes are averaged for each investor based on each company-investment round.

Data sources: Household income (United States Census Bureau 2011); Population density (United States Census Bureau 2021); Education attainment and Black-Hispanic population (United States Census Bureau 2020); Causes of drug and alcohol deaths (National Center for Health Statistics 2020); and GDP per capita (constant 2015 USD) (World Bank 2020).

Table III: Do Impact Investors Help Create New Industries?

	(1)	(2)	(3)	(4)
	Pioneer	Pioneer	Pioneer	Pioneer
	(First 10)	(First 20)	(First 30)	(First 40)
Panel A: Company Level				
β_1 : Impact Only	0.009*** (0.002)	0.015*** (0.003)	0.026*** (0.004)	0.037*** (0.005)
β_2 : Impact Present	0.002 (0.002)	0.009*** (0.003)	0.013*** (0.004)	0.013*** (0.004)
<i>P-value from F-Test $\beta_1=\beta_2$</i>	0.028	0.192	0.016	0.000
First Financing Year FE	Yes	Yes	Yes	Yes
Mean for Traditional Only	0.013 [0.115]	0.026 [0.160]	0.038 [0.192]	0.050 [0.218]
N Companies	154,458	154,458	154,458	154,458
Panel B: Investor Level				
<i>Panel B1: Concessionary Impact Investor</i>				
θ_{11} : Concessionary Impact Investor	-0.001 (0.005)	0.013 (0.009)	0.018 (0.014)	0.031* (0.016)
θ_{21} : Non-Concessionary Impact Investor	0.005 (0.004)	0.008 (0.006)	0.021** (0.009)	0.023*** (0.010)
<i>P-value from F-Test $\theta_{11}=\theta_{21}$</i>	0.296	0.660	0.837	0.671
<i>Panel B2: Additional Impact Investor</i>				
θ_{12} : Additional Impact Investor	-0.005*** (0.002)	0.009 (0.023)	0.057 (0.042)	0.049 (0.040)
θ_{22} : Non-Additional Impact Investor	0.005 (0.004)	0.009* (0.005)	0.017** (0.008)	0.023*** (0.009)
<i>P-value from F-Test $\theta_{21}=\theta_{22}$</i>	0.017	0.998	0.354	0.517
First Investment Year FE	Yes	Yes	Yes	Yes
Mean for Traditional	0.014 [0.072]	0.031 [0.108]	0.048 [0.137]	0.064 [0.159]
N Investors	19,845	19,845	19,845	19,845

Specification: Panel A of this table estimates Specification 1 in the paper. Observations are companies funded by venture capital or growth equity investors by May 2021. Impact Only indicates a company that has ever had an impact investor-only round, including 2,949 companies. Impact Present indicates a company that has at least one impact investor, but has no impact investor-only rounds, including 3,117 companies. The comparison group are companies that have never had an impact investor, including 204,640 companies. Panel B of this table estimates Specification 2 in the paper. Observations are venture capital or growth equity investors with an investment by May 2021. In Panel B1, Concessionary Impact indicates that the impact investor is concessionary and Non-Concessionary Impact captures all other impact investors. There are 47 concessionary impact investors and 230 non-concessionary impact investors. We characterize impact investors as concessionary based on the information presented on their website – see Burton et al. (2021) for more information. In Panel B2, Additional Impact Investor indicates that the impact investor is additional as defined in Section 4 and Non-Additional Impact captures all other impact investors. There are 32 additional impact investors and 245 non-additional impact investors. The comparison group in Panel B are traditional investors, including 20,228 investors. Robust standard errors are in parentheses, and the standard deviations are in brackets. **Outcomes:** The outcomes in columns 1-4 are indicators for whether the company is among the first 10, 20, 30, or 40 companies, respectively, within its industry to have a financing round in our dataset. We use the first deal date of the company to create the indicator. If the first deal date is missing, we omit the company from the analysis. We use Pitchbook’s detailed 215 industry classification of the companies in our sample. In Panel B, the outcome variable is the fraction of the investor’s portfolio companies that fall in the first 10, 20, 30, or 40 companies with a financing round in our dataset.

Table IV: Are Impact Investors More Patient and Risk Tolerant?

	(1)	(2)	(3)	(4)
	IPO, Merger, or Acquisition	Merger or Acquisition	IPO	Months Btwn First Deal and Exit
Panel A: Company Level				
β_1 : Impact Only	-0.066*** (0.006)	-0.051*** (0.005)	-0.015*** (0.002)	15.895*** (3.153)
β_2 : Impact Present	0.007 (0.007)	0.011* (0.006)	-0.004 (0.003)	14.979*** (1.956)
<i>P-value from F-Test $\beta_1=\beta_2$</i>	0.000	0.000	0.003	0.804
Sector FE	Yes	Yes	Yes	Yes
First Financing Year FE	Yes	Yes	Yes	Yes
Mean for Traditional Only	0.165 [0.371]	0.133 [0.340]	0.032 [0.175]	62.562 [45.669]
N Companies	170,502	170,502	170,502	24,339
Panel B: Investor Level				
Panel B1: Concessionary Impact Investor				
θ_{11} : Concessionary Impact Investor	-0.074*** (0.026)	-0.058*** (0.019)	-0.016 (0.015)	14.275** (7.171)
θ_{21} : Non-Concessionary Impact Investor	-0.061*** (0.012)	-0.036*** (0.011)	-0.025*** (0.004)	14.436*** (2.899)
<i>P-value from F-Test $\theta_{11}=\theta_{21}$</i>	0.658	0.315	0.533	0.983
Panel B2: Additional Impact Investor				
θ_{12} : Additional Impact Investor	-0.066 (0.049)	-0.033 (0.047)	-0.033*** (0.005)	23.169 (15.165)
θ_{22} : Non-Additional Impact Investor	-0.063*** (0.011)	-0.040*** (0.010)	-0.023*** (0.004)	14.239*** (2.767)
<i>P-value from F-Test $\theta_{21}=\theta_{22}$</i>	0.948	0.885	0.113	0.562
Preferred Sector FE	Yes	Yes	Yes	Yes
First Investment Year FE	Yes	Yes	Yes	Yes
Mean for Traditional	0.201 [0.243]	0.153 [0.202]	0.048 [0.120]	69.801 [34.424]
N Investors	19,958	19,958	19,958	11,999

Specification: Panel A of this table estimates Specification 1 in the paper. Observations are companies funded by venture capital or growth equity investors by May 2021. Impact Only indicates a company that has ever had an impact investor-only round, including 2,949 companies. Impact Present indicates a company that has at least one impact investor, but has no impact investor-only rounds, including 3,117 companies. The comparison group are companies that have never had an impact investor, including 204,640 companies. Panel B of this table estimates Specification 2 in the paper. Observations are venture capital or growth equity investors with an investment by May 2021. In Panel B1, Concessionary Impact indicates that the impact investor is concessionary and Non-Concessionary Impact captures all other impact investors. There are 47 concessionary impact investors and 230 non-concessionary impact investors. We characterize impact investors as concessionary based on the information presented on their website – see Burton et al. (2021) for more information. In Panel B2, Additional Impact Investor indicates that the impact investor is additional as defined in Section 4 and Non-Additional Impact captures all other impact investors. There are 32 additional impact investors and 245 non-additional impact investors. The comparison group in Panel B are traditional investors, including 20,228 investors. Robust standard errors are in parentheses, and the standard deviations are in brackets.

Outcomes: The outcome in column 1 is whether the company had an IPO, a merger, or an acquisition. It is the union of the outcomes in columns 2 and 3. The outcome in column 4 is the number of months between the date of the first deal and the date of an exit (IPO, acquisition, or merger). The sample in column 4 is limited to companies that achieve an exit (as defined above) and for which the first investment date and the exit date are not missing. In Panel B, outcomes are averaged for each investor based on each company-investment round.

Table V: Do Impact Investors Select Into Tougher Industries?

	(1)	(2)	(3)	(4)
	IPO, Merger, or Acquisition	Merger or Acquisition	IPO	Months Btwn First Deal and Exit
Panel A: Company Level				
β_1 : Impact Only	-0.023*** (0.002)	-0.023*** (0.002)	0.002 (0.001)	-1.010 (1.164)
β_2 : Impact Present	-0.006*** (0.002)	-0.009*** (0.002)	0.008*** (0.001)	1.375** (0.665)
<i>P-value from F-Test $\beta_1=\beta_2$</i>	0.000	0.000	0.001	0.074
First Financing Year FE	Yes	Yes	Yes	Yes
Mean for Traditional Only	0.252 [0.206]	0.206 [0.169]	0.053 [0.093]	30.075 [19.760]
N Companies	170,311	170,311	170,311	24,272
Panel B: Investor Level				
Panel B1: Concessionary Impact Investor				
θ_{11} : Concessionary Impact Investor	0.003 (0.020)	-0.009 (0.013)	0.011 (0.010)	2.008 (2.438)
θ_{21} : Non-Concessionary Impact Investor	-0.017** (0.007)	-0.017*** (0.006)	0.003 (0.004)	2.436 (1.844)
<i>P-value from F-Test $\theta_{11}=\theta_{21}$</i>	0.353	0.552	0.427	0.889
Panel B2: Additional Impact Investor				
θ_{12} : Additional Impact Investor	0.019 (0.025)	0.015 (0.020)	0.000 (0.012)	0.435 (1.626)
θ_{22} : Non-Additional Impact Investor	-0.017** (0.007)	-0.019*** (0.005)	0.005 (0.004)	2.405 (1.630)
<i>P-value from F-Test $\theta_{21}=\theta_{22}$</i>	0.165	0.096	0.730	0.389
First Investment Year FE	Yes	Yes	Yes	Yes
Mean for Traditional	0.278 [0.175]	0.225 [0.138]	0.064 [0.071]	26.552 [16.288]
N Investors	19,957	19,957	19,957	11,998

Specification: Panel A of this table estimates Specification 1 in the paper. Observations are companies funded by venture capital or growth equity investors by May 2021. Impact Only indicates a company that has ever had an impact investor-only round, including 2,949 companies. Impact Present indicates a company that has at least one impact investor, but has no impact investor-only rounds, including 3,117 companies. The comparison group are companies that have never had an impact investor, including 204,640 companies. Panel B of this table estimates Specification 2 in the paper. Observations are venture capital or growth equity investors with an investment by May 2021. In Panel B1, Concessionary Impact indicates that the impact investor is concessionary and Non-Concessionary Impact captures all other impact investors. There are 47 concessionary impact investors and 230 non-concessionary impact investors. We characterize impact investors as concessionary based on the information presented on their website – see Burton et al. (2021) for more information. In Panel B2, Additional Impact Investor indicates that the impact investor is additional as defined in Section 4 and Non-Additional Impact captures all other impact investors. There are 32 additional impact investors and 245 non-additional impact investors. The comparison group in Panel B are traditional investors, including 20,228 investors. Robust standard errors are in parentheses, and the standard deviations are in brackets.

Outcomes: This table is analogous to Table IV but the outcome variables are the leave-one-out mean of the industry average for the particular outcome. For example, the value of column 1 for a particular company is the proportion of companies in its industry (excluding itself) that had an IPO, acquisition, or merger. The value of column 4 for a particular company is the average number of months between first deal and exit for all companies in its industry (excluding itself) that reach an IPO, acquisition, or merger. The sample in column 4 is limited to companies that achieve an exit and for which the first investment date and the exit date are not missing. In Panel B, outcomes from Panel A are averaged for each investor based on each company-investment round.

Table VI: Percentage of Rounds that are Co-invested With a Traditional Investor

	Only Traditional Investors	At Least One Impact Investor	At Least One Concessionary Investor	At Least One Additional Investor
Entire Sample	31.3%	60.3%	64.4%	14.4%
VC Rounds	33.0%	63.7%	67.0%	22.2%
PE Growth Rounds	11.7%	26.1%	27.1%	10.3%
2000-2005	56.7%	65.9%	50.0%	0.0%
2005-2010	45.1%	68.4%	45.7%	14.3%
2010-2015	33.4%	56.0%	63.1%	14.3%
2015-2020	31.2%	63.5%	69.5%	16.7%
2020-2022	41.5%	77.8%	91.9%	10.0%
1st Round	24.2%	45.3%	51.3%	11.6%
Later Round	49.3%	78.0%	79.6%	31.3%
Total Number	355,811	8,125	1,062	104

Note: In this table we present the percent of financing rounds that are co-invested with a traditional investor. In column 1, we limit the sample to financing rounds that only have traditional investors (and so the numbers reflect the percentage of rounds with more than one traditional investor). In column 2, the sample comprises all financing rounds with at least one impact investor. In column 3, the sample comprises all financing rounds with at least one concessionary investor. In column 4, the sample comprises all financing rounds with at least one additional investor (as defined in Section 4).

At the bottom of the table are the total rounds in each of the relevant samples. Row 1 presents the co-investment percentages for the full sample reflected in the column headers. Rows 2 and 3 present the co-investment percentages for the samples further restricted to either VC or growth equity. Rows 4-8 present the co-investment percentages for the samples further restricted by financing year. Rows 9 and 10 present the co-investment statistics for the sample further restricted by whether the round is the first round in which a traditional/impact/additional impact/concessionary impact investor was present, or whether it is a subsequent round.

Table VII: Are Impact Investors Guiding Traditional Venture Investors to New Deals?

	United States - Based Companies						All Companies
	(1) Median Household Income USD	(2) Population Density (Person/sq.mi)	(3) Black and Hispanic Population Percent * 100	(4) Deaths from Drugs or Alcohol Percent * 100	(5) No High School Diploma Percent * 100	(6) Bachelor or Graduate Degree Percent * 100	(7) GDP per Capita USD
Panel A: Impact Co-investor Raised in Prior One Year							
Fundraise	-114.34 (158.43)	-284.94 (219.67)	-0.01 (0.15)	-0.001 (0.001)	0.01 (0.05)	-0.07 (0.12)	43.98 (166.68)
Panel B: Impact Co-investor Raised in Prior Two Years							
Fundraise	-3.70 (148.17)	-274.10 (197.95)	-0.10 (0.13)	-0.001 (0.001)	-0.01 (0.04)	0.02 (0.11)	153.37 (162.72)
Panel C: Impact Co-investor Raised in Prior Three Years							
Fundraise	-121.34 (149.48)	-135.53 (184.65)	-0.19 (0.13)	-0.001 (0.001)	-0.00 (0.04)	0.03 (0.11)	279.24 (268.37)
Investor FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Deal Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean for Outcome	70,809.08 [19,185.02]	12,115.09 [21,144.28]	30.25 [14.64]	0.671 [0.141]	14.25 [4.76]	49.90 [9.92]	42,144.75 [19,082.86]
N Observations	176,797	166,802	176,858	163,901	176,797	134,984	368,573
N Investors	10,341	10,050	10,342	10,031	10,341	9,052	18,062

Specification: This table estimates Specification 3. Observations are on the investor-portfolio company-round level, and are limited to traditional investors' investments. Fundraise is a dummy variable taking a value of 1 if there is an impact investor who has previously co-invested with the traditional investor and has raised a new fund. Panel A, B, and C use the specification where the impact investor raised the new fund in 1, 2, and 3 years before. All regressions control for the investor and deal year fixed effects. Robust standard errors, clustered at investor level, are in parentheses. The standard deviations are in brackets.

Outcomes: The outcomes in columns 1-6 are calculated at the U.S. county level and hence only U.S. companies are considered. In column 7, the outcome is at the country level. Outcomes are assigned to companies based on the headquarters of the company as specified in the first round of investment. Observation numbers vary across columns, due to missing data on the location of company headquarters or to missing outcome data.

Data sources: Household income (United States Census Bureau 2011); Population density (United States Census Bureau 2021); Education attainment and Black-Hispanic population (United States Census Bureau 2020); Causes of drug and alcohol deaths (National Center for Health Statistics 2020); and GDP per capita (constant 2015 USD) (World Bank 2020).

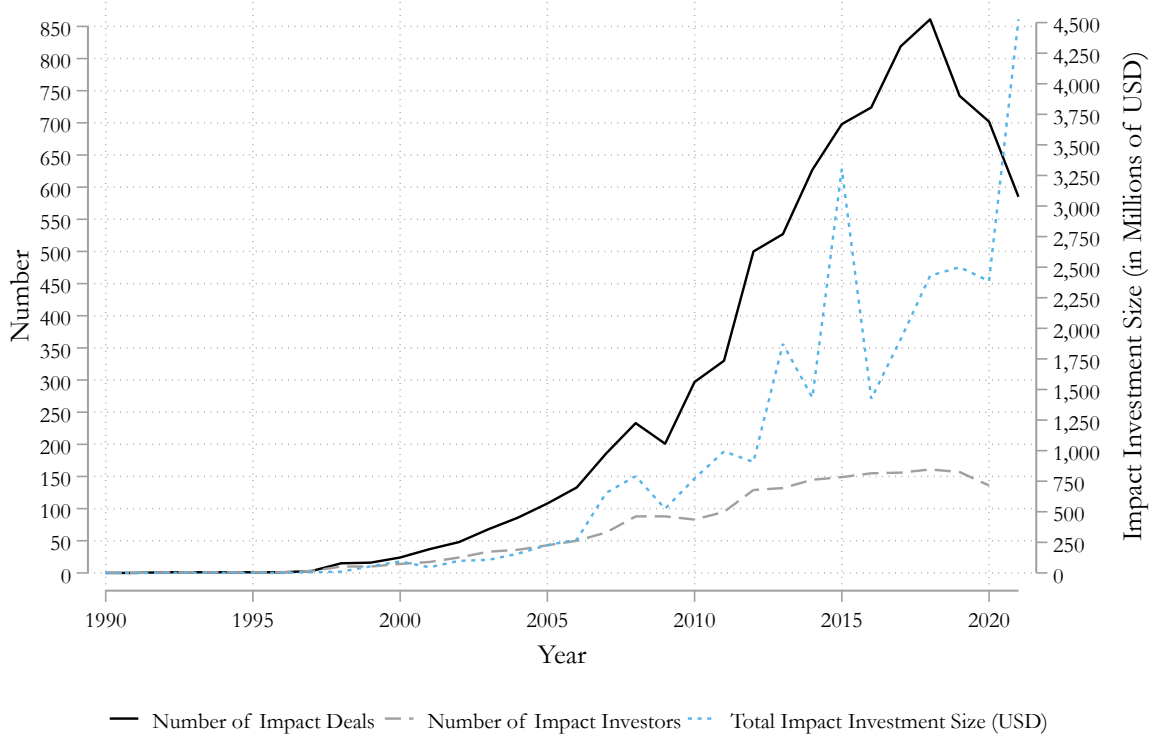
Table VIII: Are Impact Investors Additional at the Post-Investment Stage?

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Overall	Overall	Career	Compensation	Culture	Diversity	Leadership	Balance	Outlook	CEO	Recommend
Post	-0.12*** (0.02)	-0.10*** (0.02)	-0.07*** (0.02)	-0.11*** (0.02)	-0.05 (0.07)	-0.12*** (0.02)	-0.08*** (0.02)	-0.05*** (0.01)	-0.04** (0.02)	-0.05*** (0.01)
Post * Impact	-0.11** (0.05)	-0.14*** (0.05)	-0.07 (0.05)	-0.13** (0.05)	-0.58*** (0.19)	-0.16*** (0.06)	-0.12*** (0.04)	-0.07** (0.03)	-0.07* (0.04)	-0.08*** (0.03)
Company FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean for IPC	3.73 [1.10]	3.49 [1.14]	3.53 [1.02]	3.75 [1.15]	3.86 [1.05]	3.47 [1.22]	3.72 [1.05]	0.37 [0.65]	0.52 [0.64]	0.35 [0.72]
Mean for NIPC	3.74 [1.11]	3.50 [1.15]	3.54 [1.03]	3.72 [1.16]	3.84 [1.07]	3.48 [1.23]	3.73 [1.05]	0.37 [0.64]	0.50 [0.65]	0.35 [0.72]
N Observations	84,231	78,494	78,359	75,282	29,198	78,159	78,465	71,573	47,966	76,384
N Companies	15,642	14,731	14,693	14,492	10,103	14,669	14,719	13,878	8,593	14,426

Specification: This table estimates Specification 4 in the paper. Observations are on the company-year level, including companies funded by venture capital or growth equity investors by May 2021, who have the Revelio ratings. There are 1,580 impact companies and 18,587 non-impact companies that have at least one year of Revelio observations (any metric). Post indicates a company has raised a round of capital at the time of the observation, which equals to 1 if the company has raised a round of capital before year t and 0 otherwise. Impact takes a value of 1 if a company is an impact portfolio company and 0 otherwise. All regressions include company and year fixed effects. Standard errors clustered at the company level are in parentheses, and the standard deviations are in brackets.

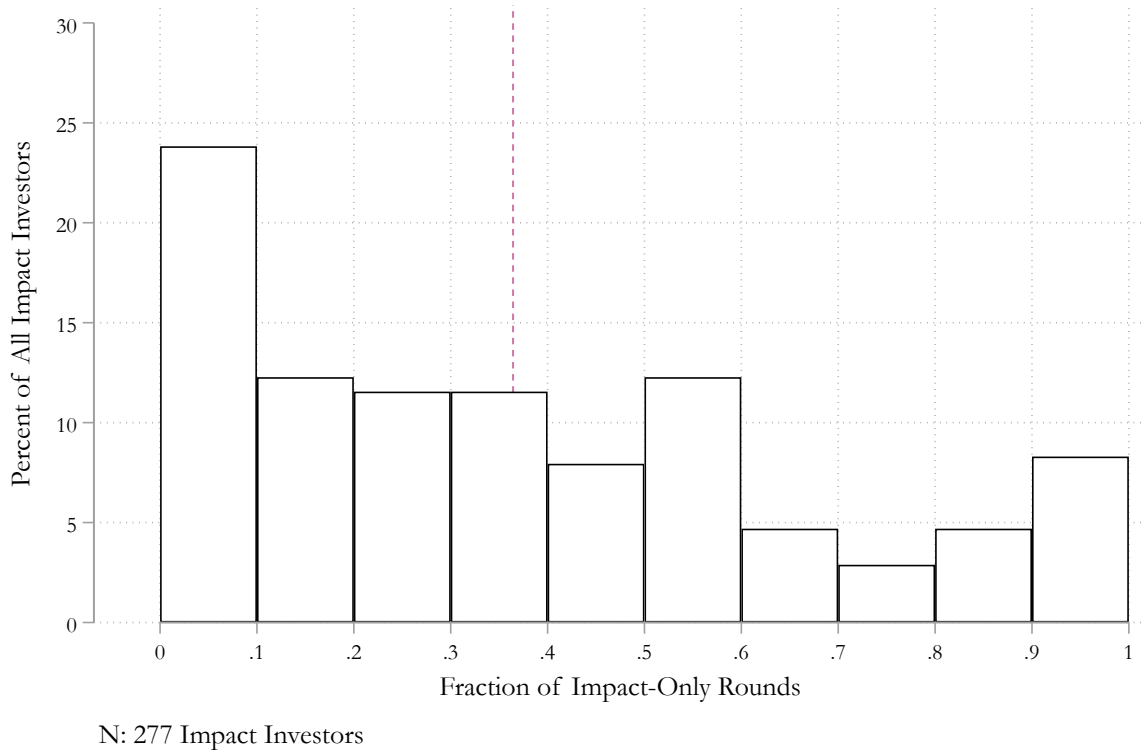
Outcomes: The outcome in column 1 is the overall rating from 1 to 5. The outcome in column 2 is the career opportunity rating from 1 to 5. The outcome in column 3 is the compensation and benefits rating from 1 to 5. The outcome in column 4 is the culture and value rating from 1 to 5. The outcome in column 5 is the diversity and inclusion rating from 1 to 5. The outcome in column 6 is the senior leadership rating from 1 to 5. The outcome in column 7 is the work-life balance rating from 1 to 5. The outcome in column 8 is the business outlook rating from -1 to 1. The outcome in column 9 is the CEO rating from -1 to 1. The outcome in column 10 is the recommend to a friend rating from -1 to 1. In each case, a higher number indicates a more positive ranking.

Figure 1: Number of Impact Deals, Number of Impact Investors, and Estimated Investment Amount by Year



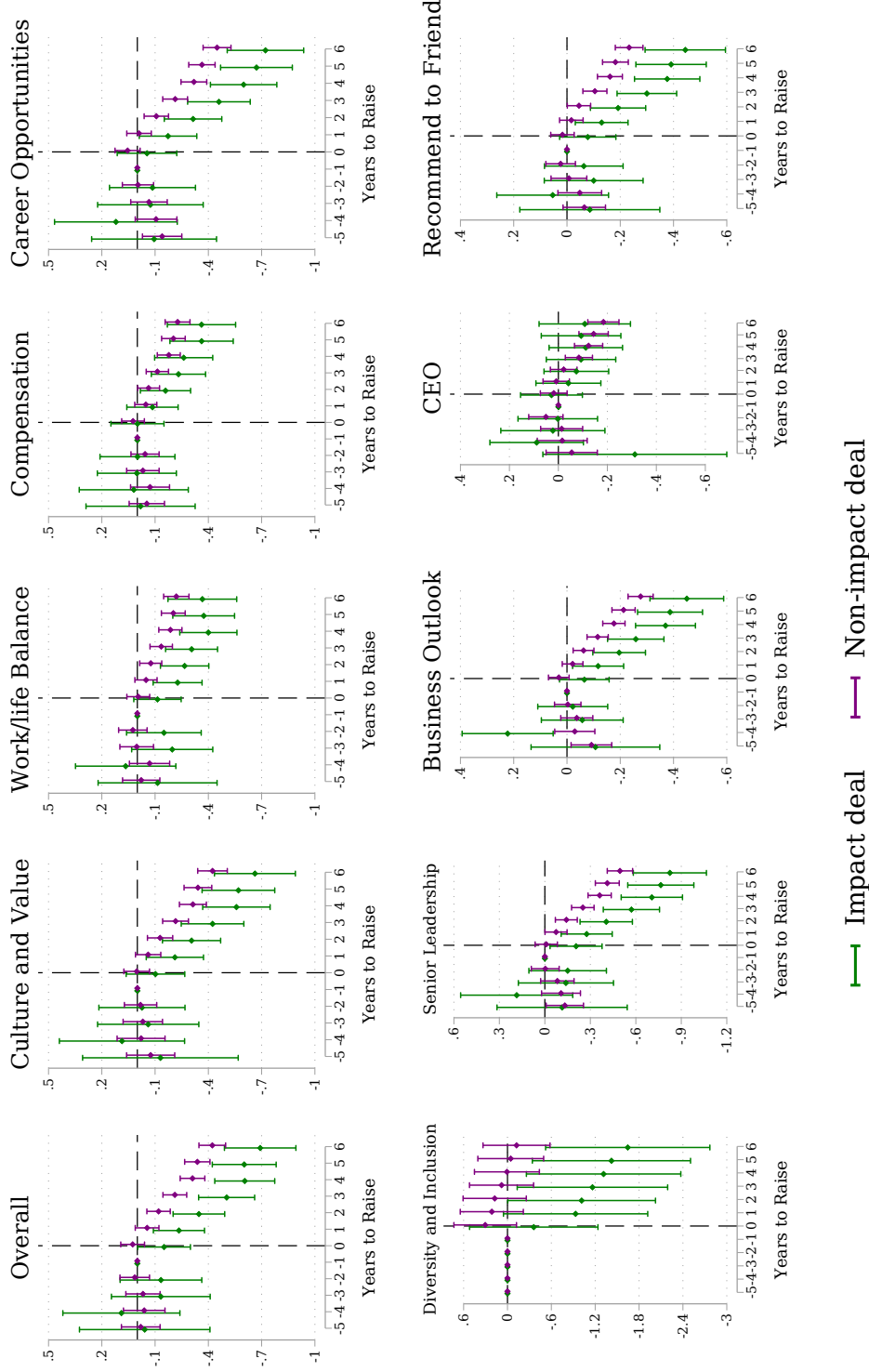
In this figure we plot the total number of impact deals (left axis), number of unique impact investors (left axis), and total investment from across impact deals in millions of USD (right axis) in our dataset between the years 1990 and 2021. We have data only from January to April 2021, so we normalize the 2021 number of impact deals and total impact investment size by linearly projecting based on the first four months in 2021. There are no impact deals in the years 1990 and 1991. We do not observe the investor-specific financing in each round; we only observe the total financing by all investors in that round. We, therefore, divide the total financing in each round by the number of investors in that round and assign that (equal) portion to each investor. The outcome in the right axis is thus the sum of this measure for all impact investors in each year. During the sample period, a total of 277 impact investors invested in 8,125 unique deals involving 6,066 distinct portfolio companies.

Figure 2: Distribution of the Fraction of Impact-Only Rounds in Impact Investors' Portfolios



The unit of observation is an impact investor. There are 277 impact investors represented in the figure. For each impact investor, we compute the fraction of the rounds in which they have invested either alone or only with other impact investors. For example, nearly 25% of impact investors have invested either alone or only with other impact investors between 0 and 10% of their deals. So for that 25% of investors, between 90% and 100% of their deals are co-invested with non-impact investors.

Figure 3: Event Study on the Employee Satisfaction after Raising a New Deal



In this figure, we plot the event study estimates of employee satisfaction for impact and non-impact companies around the fundraising event. The estimates for impact companies are in green, and the estimates for non-impact companies are in purple. Each sub-figure presents a separate measurement of employee satisfaction. We control for the year and company fixed effects, and cluster the standard errors at the portfolio company level. We plot the 95% confidence intervals. The baseline is the year before the fund-raising event, and the x axis is the year difference between a given year and the fund-raising event. Data for the Diversity and Inclusion measure is only available from 2020 onwards; thus, we have no pre-transaction information here.

Variable Description

Definition of Key Variables

Type of Variable	Group	Name	Source	Definition
Independent variables	Company	Impact Only	PII collected	Companies that ever had an impact only round
Independent variables	Company	Impact Present	PII collected	Impact companies but never had an impact only round
Independent variables	Company	First Round Impact	PII collected	Companies whose first investment round had impact investor
Independent variables	Company	Sector	Pitchbook	The industry group defined by Pitchbook, including 41 major industry groups
Independent variables	Company	First Financing Year	Generated from Pitchbook	The first year that the company received an investment
Independent variables	Investor	Concessionary Investor	PII collected	Impact investors who seek concessionary return (Based on the website)
Independent variables	Investor	Additional Impact	PII collected	Impact investors who finance companies that could not have attracted traditional investments
Independent variables	Investor	Fraction of Impact Only	PII collected	Percent of Impact only investments for impact investors, 0 for traditional investors
Independent variables	Investor	Non-profit Investor	PII collected	Non-profit oriented impact investors (Based on the website)
Independent variables	Investor	Preferred Investing Sector	Generated from Pitchbook	The most frequent industry group of an investor's portfolio companies
Independent variables	Investor	First Investment Year	Generated from Pitchbook	The first year that the investor conducted an investment
Dependent variables	Company & Investor	Median Household Income	U.S. Census Bureau	Median number of income matched by US counties
Dependent variables	Company & Investor	Population Density	U.S. Census Bureau	Population density matched by US counties
Dependent variables	Company & Investor	Black/Hispanic	U.S. Census Bureau	Percent of black or Hispanic people matched by US counties
Dependent variables	Company & Investor	No High School Diploma	U.S. Census Bureau	Percent of people that don't have high school diploma matched by US counties
Dependent variables	Company & Investor	Attained Bachelor/Graduate Diploma	U.S. Census Bureau	Percent of people that receive bachelor or graduate diploma matched by US counties
Dependent variables	Company & Investor	Deaths From Drugs/Alcohol	NCHS	Number of deaths from drugs or alcohol divided by population matched by US counties
Dependent variables	Company & Investor	GDP Per Capita	World Bank	GDP per capita data matched by different countries (constant 2015 US \$)
Dependent variables	Round	Impact Investor Number	PII collected	Number of impact investors in each round
Dependent variables	Round	Traditional Investor Number	PII collected	Number of traditional investors in each round
Dependent variables	Round	Impact Investor/All Investor	PII collected	Percent of impact investors in each round
Dependent variables	Round	Impact Investment/All Investment	PII collected	Percent of impact investments in each round
Dependent variables	Round	Impact Investment Size	PII collected	Size of impact investments in each round
Dependent variables	Company & Investor	IPO/Merger And Acquisition	Pitchbook	1 for the companies that had an IPO exit or M&A exit, 0 for other companies
Dependent variables	Company & Investor	IPO	Pitchbook	1 for the companies that had an IPO exit, 0 for other companies
Dependent variables	Company & Investor	Merger And Acquisition	Pitchbook	1 for the companies that had a M&A exit, 0 for other companies
Dependent variables	Company & Investor	Months Between First Deal And Success	Pitchbook	Months between the first investment and the date of successful exits (IPO/M&A)

Online Appendix for “What Do Impact Investors Do Differently?”

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A Data Appendix

This Online Appendix provides a description of the construction of the data set and the sample selection decisions made for this paper. The impact database construction process is described in great detail in Burton et al. (2021).

A.1 Impact Investor Identification

In Table A.I, we summarize how we create our final set of impact investors used in our analyses. Table A.II provides the geographical location of these investors. 150, or about 55 percent, of the investors are based in the United States.

Table A.I: Creating the Set of Impact Investors analyzed in Study

	Modification	Remaining
PII Impact Investors		445
Investors with no specific impact mandate	-46	399
Foundations	-3	396
No match found in PitchBook data feed	-105	291
No deal information in PitchBook	-1	290
No VC or PE growth investments	-9	281
Subsidiaries or groups with failed transactions	-5	276
Fund-level investor	+1	277
<i>Impact Investors After Screening</i>		<i>277</i>

Table A.II: Impact Investors by Location

Location	Number of Investors
US	150
Non-US	123
Missing location	4
<i>Total</i>	<i>277</i>

In Table A.III below we provide a complete list of the 277 impact investors in our sample.

Table A.III: All Impact Investors in the Analysis

1	1st Course Capital	47	California Clean Energy Fund
2	3Sisters Sustainable Management	48	Calvert Impact Capital
3	3x5 Partners	49	Capria Ventures
4	Aavishkaar Capital	50	Caspian Impact Investment Advisors
5	Accion	51	CEI Community Ventures
6	Actis	52	CEI Ventures Management
7	Acumen Fund	53	Centre for Innovation Incubation and Entrepreneurship
8	Adena Ventures	54	City Light Capital
9	Adenia Partners	55	Clean Energy Ventures
10	Adobe Capital	56	Cleantech Ventures
11	Advance Global Capital	57	Climate Change Capital
12	Advantage Capital (Saint Louis)	58	Climate Fund Managers
13	AgDevCo	59	Closed Loop Partners
14	Agora Partnerships	60	Co-Creation Hub
15	AiiM Partners	61	Community Development Venture Capital Alliance
16	AKAMAI Capital	62	Community Investment Management
17	Albright Capital Management	63	Community Reinvestment Fund
18	Alitheia Capital	64	Congruent Ventures
19	AlphaMundi Group	65	Contrarian Drishti Partners
20	Alter Equity	66	Convergence Partners (Africa)
21	Alterfin	67	Core Innovation Capital
22	Ambar Capital y Expansion SEGR	68	Corporacion Inversor
23	Ananda Impact Ventures	69	Creation Investments Capital Management
24	Ankur Capital	70	Cultivian Sandbox Ventures
25	Aqua-Spark	71	Dayton Development Coalition
26	Aravaipa Ventures	72	DBL Partners
27	Arberview Capital	73	DC Community Ventures
28	ArcTern Ventures	74	Dev Equity
29	Armstrong Asset Management	75	Developing World Markets
30	Bain Capital Double Impact	76	Développement international Desjardins
31	Bamboo Capital Partners	77	Dolma Impact Fund
32	BELLE Impact Fund	78	Easton Capital Investment Group
33	Bethnal Green Ventures	79	EcoEnterprises Fund
34	Better Ventures	80	Edge Growth
35	Big Issue Invest	81	Elevor Equity
36	Big Society Capital	82	Encourage Capital
37	BlueHub Capital	83	Endeavor Catalyst
38	BlueIO	84	Energy Access Ventures
39	BlueOrchard Finance	85	Energy Foundry
40	BonVenture	86	EnerTech Capital
41	Breakthrough Energy Ventures	87	Enhanced Capital Partners
42	Bridges Fund Management	88	Ennovent
43	Bridgeway Capital Management	89	Enterprise Community Investment
44	BrightPath Capital Partners	90	Equator Capital Partners
45	Bronze Investments Investment	91	ETF Partners
46	Business Partners International	92	European Financing Partners

Note: See Online Appendix Section A for an explanation of how we arrived at this final list.

Table A.III: All Impact Investors in the Analysis (cont.)

93	FE Global Clean Energy	139	Juvo Ventures
94	Fifth Season Ventures	140	Kaizenvest
95	Finance in Motion	141	Kendall Investments
96	Fledge	142	Kentucky Highlands Investment
97	Flint Atlantic Capital	143	Kingdom Capital
98	Found8	144	Kukula Capital
99	GAWA Capital Partners	145	Lafise Investment Management
100	Generation Investment Management	146	Leapfrog Investments
101	Global Cleantech Capital	147	Leopard Capital
102	Global Energy Efficiency and Renewable Energy Fund	148	Lightrock India (formerly known as LGT Lightstone Aspada)
103	Global Environment Fund	149	Lightrock
104	Global Partnerships	150	Lightsmith Group
105	Good Capital	151	Linn Grove Ventures
106	Goodwell Investments	152	Local Initiatives Support Corporation
107	Grassroots Business Fund	153	LoftyInc Capital Management
108	Grassroots Capital Management	154	Lok Capital
109	Gray Ghost Ventures	155	Lotus Impact
110	Green Investment Group (UK)	156	Maine Venture Fund
111	Greenhouse Capital Partners	157	Masdar Capital
112	Greenmont Capital Partners	158	MCE Social Capital
113	Greensoil Investments	159	Media Development Investment Fund
114	Grupo ECOS	160	Medical Credit Fund
115	HCAP Partners	161	Menterra Venture Advisor
116	IGNIA Partners	162	Meridian Infrastructure
117	Ignite Impact Fund	163	Meridian Management Group
118	Impact America Fund	164	Meritus Ventures
119	Impact Engine	165	MGM Innova Capital
120	Impact Finance Management	166	MicroVest Capital Management
121	Impact First Investments	167	Mindfull Investors
122	Impact Investment Exchange Asia	168	Minerva Capital Group
123	Impact Investment Group	169	Mirova
124	Impact Investment Partners	170	Moringa
125	Impax Asset Management Group	171	Mountaineer Capital
126	Incofin Investment Management	172	Murex Investments
127	Inerjys	173	Natural Capital Investment Fund
128	Injaro	174	Nesta Impact investment
129	Innosphere Ventures	175	New Hampshire Community Loan Fund
130	Insitor Impact Asia Fund	176	New Markets Venture Partners
131	Invest Detroit	177	New Mexico Community Capital
132	InvestEco Capital	178	New Sparta Assets Management
133	Invested Development	179	NewSchools Venture Fund
134	Investisseurs & Partenaires	180	NewWorld Capital Group
135	Iona Capital	181	Next Wave Impact
136	iYa Ventures	182	NextEnergy Capital
137	Jacana Partners	183	NGEN Partners
138	Jadeberg Partners	184	Nordic Impact Funds

Note: See Online Appendix Section A for an explanation of how we arrived at this final list.

Table A.III: All Impact Investors in the Analysis (cont.)

185	North Sky Capital	231	Strategic Development Solutions
186	Novastar Ventures	232	SunFunder
187	Oikocredit Ecumenical Development Cooperative Society	233	Sustainable Growth Management
188	Oltre Venture	234	SustainVC
189	Omnivore	235	Symbiotics
190	Pacific Community Ventures	236	The Builders Fund
191	Pangaea Ventures	237	The Ecosystem Integrity Fund
192	Patamar Capital	238	The Forest Company
193	PC Capital	239	The JumpFund
194	Pearl Capital Partners	240	TPG Alternative & Renewable Technologies
195	Pegasus FinInvest Advisory	241	The Nature Conservancy
196	Penn Venture Partners	242	The Osiris Group
197	Persistent Energy Capital	243	The Reinvestment Fund
198	PG Impact Investments	244	The Social Entrepreneurs Fund
199	Phatisa	245	The Southern Appalachian Fund
200	Physic Ventures	246	The Water Council
201	PrairieGold Venture Partners	247	Third Sphere Capital (Formerly known as Urban US)
202	Progression Capital Africa	248	The Rise Fund
203	Quadria Capital Investment Management	249	Trillium Group
204	Qualitas Equity	250	Triodos Investment Management
205	Quona Capital	251	Triple Jump
206	RAIN Source Capital	252	Triple P Capital
207	Reach Capital	253	True Wealth Ventures
208	Renewal Funds	254	Tsing Capital
209	responsAbility	255	Unitus Ventures
210	Rethink Capital Partners	256	University Venture Fund
211	Ronoc	257	University Ventures
212	Root Capital	258	Unreasonable Capital
213	RSF Social Finance	259	Uprising Capital
214	Rubio Impact Ventures	260	VentureWave Capital
215	Safer Made	261	Vermont Works Management Company
216	Sarona Asset Management	262	VestedWorld
217	Secha Capital	263	VIC Venture Fund
218	Ship2B Ventures	264	Village Capital
219	SI Capital	265	Virgin Green Fund
220	Silk Invest	266	Vision Ridge Partners
221	Sindicatum Carbon & Energy Management	267	Vital Capital Investments
222	SIF Ventures	268	Vox Capital
223	Small Business Community Capital	269	Voxtra
224	Small Enterprise Assistance Funds (SEAF)	270	WAVE Equity Partners
225	Social Capital	271	Wermuth Asset Management
226	Social Impact Capital	272	West Virginia Jobs Investment Trust Board
227	Social Venture Fund	273	WindSail Capital Group
228	Social Ventures Australia	274	Wireframe Ventures
229	Spark Ventures	275	Women's World Banking
230	StartGreen Capital	276	XSML
		277	Yunus Social Business

Note: See Online Appendix Section A for an explanation of how we arrived at this final list.

A.2 Traditional Investor Identification

Table A.IV: Breakdown of PitchBook Primary Investor Types¹

Accelerator/Incubator	6,308	<i>Limited Partner</i>	1,335
<i>Angel (individual)</i>	48,544	<i>Merchant Banking Firm</i>	205
Angel Group	1,638	Mezzanine	151
Asset Manager	1,988	<i>Mutual Fund</i>	96
<i>Business Development Company</i>	65	Not-For-Profit Venture Capital	268
<i>Corporate Development</i>	168	<i>Other</i>	12,556
<i>Corporate Venture Capital Corporation</i>	1,248	Other Private Equity	116
<i>Family Office</i>	67,539	<i>PE-Backed Company</i>	16,048
<i>Fund of Funds</i>	1,300	PE/Buyout	8,913
<i>Fundless Sponsor</i>	204	Real Estate	2,517
<i>Government</i>	43	SBIC	48
Growth/Expansion	1,439	<i>Secondary Buyer</i>	33
<i>Hedge Fund</i>	1,027	<i>Sovereign Wealth Fund</i>	74
<i>Holding Company</i>	719	<i>Special Purpose Acquisition Company</i>	286
Impact Investing	433	<i>University</i>	512
Infrastructure	194	<i>VC-Backed Company</i>	4,228
<i>Investment Bank</i>	869	Venture Capital	19,439
Lender/Debt Provider	539	<i>Missing</i>	915
		Total	203,898

Next, we create a comparable set of traditional non-impact investors. In our study, we focus on venture capital and growth equity transactions because impact investors primarily invest in these deal types. Thus, we begin by screening for investors that primarily engage in these types of investments. Using the PitchBook data feed, we collect all the investors in the Venture Capital and Private Equity universes. These two universes include all the investors that have provided capital to private companies that have ever received venture capital, private equity, or growth equity funding. There are 203,898 investors in total.

We begin by removing our 445 impact investors from the 203,898 total investors. This results in removing 322 impact investors that match.² Next, we restrict attention to investors that primarily invest in earlier-stage private capital investments (i.e., venture

¹Primary Investor Types available in the PitchBook pre-venture, venture, and private equity data feed universes.

²We begin by matching the entire universe of 445 impact investors, but only 322 match to Pitchbook. Had we first removed the ambiguous cases and foundations, we would have had the 291 matches reported above in Table A.I.

capital and growth equity). Table A.IV provides a breakdown of the total investors by PitchBook Primary Investor Type. As an initial screen, we exclude investors whose Primary Investor Types do not include venture capital or growth equity as a main strategy (e.g., hedge funds, foundations). Thus, we remove the types of investors that are italicized in Table A.IV.³ This results in removing 160,035 investors. Next, to further ensure that the traditional investors are focused on VC and growth, we restrict our sample to focus on investors that have at least four private capital portfolio companies, thus removing investors that may only have one-off venture capital or growth equity investments (e.g., we do not want to include a mutual fund that has a few private equity investments, where private equity is not a main part of its investment strategy). Here, we remove 22,253 investors. Lastly, after some additional data cleaning steps, which include removing investors that did not engage in venture capital or growth equity transactions, duplicate investors, and investors with only failed transactions, we are left with 20,228 traditional investors in the final data set. See Table A.V for a summary of our screening process.

From Table A.VI, we see that 42 percent of traditional investors are headquartered in the United States.

³Based on our research, a few of the impact investors were misclassified by PitchBook into the italicized investor-type categories. We leave for future research reviewing the investor types of the non-impact investors.

Table A.V: Creating the Set of Traditional Investors Analyzed in Study

	Dropped	Remaining
Total Number of Investors in PitchBook's VC and PE Universes		203,898
PII Impact Investors (322/445 matched to Pitchbook)	322	203,576
Angel (individual)	48,544	155,032
Business Development Company	65	154,967
Corporate Development	168	154,799
Corporate Venture Capital	1,246	153,553
Corporation	67,534	86,019
Family Office	1,299	84,720
Fund of Fund	201	84,519
Fundless Sponsor	43	84,476
Government	1,893	82,583
Hedge Fund	1,025	81,558
Holding Company	719	80,839
Investment Bank	869	79,970
Limited Partner	1,333	78,637
Merchant Banking Firm	205	78,432
Mezzanine	150	78,282
Missing	915	77,367
Mutual Fund	96	77,271
Other	12,551	64,720
PE-Backed Company	16,046	48,674
Secondary Buyer	33	48,641
Sovereign Wealth Fund	74	48,567
Special Purpose Acquisition Company	286	48,281
University	512	47,769
VC-Backed Company	4,228	43,541
Investors with Fewer Than 4 Portfolio Companies	22,253	21,288
Investors Not Engaged in VC or PE Growth Transactions	488	20,800
Investors Dropped from Data Cleaning	572	20,228
<i>Traditional Investors After Screening</i>		<i>20,228</i>

Table A.VI: Traditional Investors by Location

Location	Number of Investors
US	8,551
Non-US	10,131
Missing location	1,546
<i>Total</i>	<i>20,228</i>

A.3 Portfolio Company Data for Impact and Traditional Investors

In this section, we describe the process by which we obtain the portfolio companies of both the impact investors and traditional investors and our data cleaning process.

First, we match the 277 impact investors to their portfolio companies, and then get 7,395 matches. We remove companies with missing impact deal information (103 companies dropped), companies that have only failed or postponed transactions (4 companies dropped), and companies that did not have any private equity growth or venture capital investments (973 companies dropped). Our last data cleaning step removes companies whose first transaction is a buyout (43 companies dropped), companies that have multiple buyout rounds (104 companies dropped), and companies that have an impact investment occurring only after the first exit (102 companies dropped). Since we are focused on studying earlier-stage investing, these steps eliminate situations when a publicly traded company is taken private, a subsidiary is spun out, or a private mature company is bought out by a private equity firm. We are left with 6,066 companies, which comprise our set of “impact portfolio companies.” See Table A.VII for a summary of our data screening process. From Table A.VIII, we find that about 50 percent of the 6,066 impact companies are headquartered in the United States.

Table A.VII: Number of Impact Portfolio Companies (“IPC”)

	Dropped	Remaining
IPC of Impact Investors (N=277)		7,395
IPC missing deal information about impact investment	103	7,292
IPC only has failed/postponed transactions	4	7,288
No VC or PE growth investments	973	6,315
IPC dropped from data cleaning	249	6,066
<i>Impact Portfolio Companies After Screening</i>		<i>6,066</i>

Table A.VIII: Impact Portfolio Companies by Location

Location	Number of Companies
US IPCs	3,108
Non-US IPCs	2,947
Missing location	11
<i>Total</i>	<i>6,066</i>

Next, we gather the portfolio companies of the 20,228 traditional non-impact investors and conduct the same data cleaning steps as we did above.

We match 20,228 traditional investors to the PitchBook Investment data feed and obtain 320,037 portfolio companies. We remove 4,801 companies that also receive impact investments in addition to capital from traditional investors. We drop 66 portfolio companies that have only failed or postponed transactions. We drop 101,327 companies that did not receive either venture capital or growth equity investments. Our last data cleaning step removes companies whose first transaction is a buyout (2,873 companies dropped), companies that have multiple buyout rounds (3,331 companies dropped), and companies that have a traditional investment occurring only after the first exit (2,999). Again, as we

mentioned above, we are focused on studying earlier-stage investing, and these cleaning steps are used to eliminate situations when a publicly traded company is taken private, a subsidiary is spun out, or a private mature company is bought out by a private equity firm. We are left with 204,640 traditional companies from 20,228 traditional investors. All details of the data cleaning process are shown in Table A.IX below.

Table A.IX: Portfolio Companies of Traditional Investors (“Traditional PC”)

	Dropped	Remaining
Traditional PCs (20,228 traditional investors)		320,037
Impact Portfolio Companies	4,801	315,236
Traditional PC only has failed/postponed transactions	66	315,170
No VC or PE growth investments	101,327	213,843
Traditional PCs dropped from data cleaning	9,203	204,640
<i>Traditional Portfolio Companies After Screening</i>		<i>204,640</i>

Of these 204,640 traditional companies, 79,246 (39 percent) are in the United States. See Table A.X below.

Table A.X: Traditional Portfolio Companies by Location

Location	Number of Companies
US Traditional PCs	79,246
Non-US Traditional PCs	124,943
Missing location	451
<i>Total</i>	<i>204,640</i>

A.4 Revelio Dataset Construction

Table A.XI: Portfolio Companies - Revelio Matching

	Number of IPC	Number of NIPC
US IPC	3,108	
IPC Matched to Revelio	2,600	
IPC Matched to NIPC	2,520	52,784
NIPC Matched to Revelio		38,461
Both IPC & NIPC Have Rating	1,580	18,587

Table A.XI presents the methodology we used to construct the Revelio dataset. IPC refers to the Impact Portfolio Companies, and NIPC refers to Non-Impact Portfolio Companies.

We focus on the US-based IPCs. To match each IPC to NIPCs, we utilize four criteria: location, industry, deal year and deal type. The location is categorized on a regional level (Northeast, Southeast, Midwest, and West). The industry definition is based on PitchBook’s industry groups. The matched NIPC must receive a traditional investment deal inside a three-year (absolute value) window compared to the impact investment deal. We also match the IPC to NIPC based on the deal type: we classify a deal as “first round” if the deal was in the first round; otherwise, the deal is classified as VC/Growth Equity.

B Explanation of Minimum Cut Algorithm to Identify Additional Impact Investors

In Section B, we implement a variant of the minimum-cut algorithm (Stoer and Wagner 1997) to identify additional impact investors. The goal of this algorithm is to partition the network into two disjoint sets, minimizing the number of co-investments that occur across the partition. The result is one set that contains traditional investors, as well as impact investors who regularly co-invest with traditional investors, impact investors who regularly co-invest with impact investors who regularly co-invest with traditional investors, and so on. The other set contains impact investors who rarely co-invest with traditional investors, impact investors who rarely co-invest with impact investors who regularly co-invest with traditional investors, and so on.

The specific implementation of this algorithm is as follows. We define each investor within our data set to be a node n in the network. There is a weighted link $l_{n,n'} \in \mathbb{N}$ between each pair of investors n and n' representing the number of times that the two investors have participated in the same deal (the same investment round of a single company). We then add two additional nodes, one we call *Traditional* and one we call *Impact*. A link is drawn between *Traditional* and every traditional investor, and a link is drawn between *Impact* and every impact investor. That is, $l_{n,Traditional} = 1$ if n is a traditional investor and $l_{n,Impact} = 1$ if n is an impact investor.

We then solve

$$\min_{P_1, P_2} \sum_{n \in P_1, n' \in P_2} l_{n,n'}$$

where P_1 and P_2 are a partitioning of the set of impact investors.

The links between each investor and the two auxiliary nodes *Impact* and *Traditional* are an acknowledgement of their self-identification as impact investors or traditional investors. Therefore this algorithm partitions the set of investors into two disjoint subsets

that minimizes the weighted sum of co-investments between investors in different partitions as well as violations of investors' self-proclaimed identity. The algorithm penalizes partitions that place impact investors in the traditional set and traditional investors in the impact set, as well as partitions with many co-investments between partitions.

C Appendix Tables and Figures

In this section, we present variable definitions and alternative analyses to those in the main text. Online Appendix Tables C.I - C.III mirror those in the main text but with alternative definitions. At the portfolio company level, we investigate differences in outcomes depending on whether a company received an impact investment in its first round of funding (*First Round Impact*), only a later round of funding (*Later Round Impact*), or never. At the investor level, we investigate differences in outcomes depending on whether an impact investor is non-profit or for-profit, and according to an alternative metric of investor *additionality*. Namely, we estimate

$$y_i = \alpha + \theta_1 Impact_i + \theta_2 Impact_i * FracImpactOnly_i + \gamma_i + \delta_t + \varepsilon_i \quad (5)$$

where *FracImpactOnly* measures the fraction of an investors' deals that include only other impact co-investors, and the rest of the variables are as defined in the main text. This is an arguably simpler measure of an investor's desire to finance deals that are not attractive to traditional private investors, and the patterns closely mirror those from regressions using our main definition of additionality.

Table C.I: What are the Socioeconomic Predictors of Impact Investments? (Alternative Impact Investor Definition)

	United States - Based Companies						All Companies
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
	Median Household Income USD	Population Density (Person/sq.mi)	Black and Hispanic Population Percent * 100	Deaths from Drugs or Alcohol Percent * 100	No High School Diploma Percent * 100	Bachelor or Graduate Degree Percent * 100	GDP per Capita USD
Panel A: Company Level							
β_1 : First Round Impact	-393.56 (502.00)	-1,341.31** (532.23)	-1.55*** (0.55)	0.02*** (0.01)	-0.57*** (0.16)	0.70* (0.39)	-7,959.04*** (486.61)
β_2 : Later Round Impact	-398.08 (401.47)	884.30* (495.63)	-1.14*** (0.42)	-0.00 (0.00)	-0.17 (0.13)	1.46*** (0.30)	-356.73 (429.38)
<i>P-value from F-Test $\beta_1=\beta_2$</i>	0.99	0.00	0.55	0.00	0.05	0.12	0.00
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
First Financing Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean for Traditional Only	70,000.66 [19,927.19]	9,520.22 [19,315.56]	30.12 [15.65]	0.69 [0.16]	13.99 [5.09]	48.16 [10.28]	40,750.89 [20,072.78]
N Companies	54,303	51,715	54,353	49,697	54,303	41,722	146,546
Panel B: Investor Level							
Panel B1: Non-Profit Impact Investor							
θ_{11} : Non-Profit Impact Investor	-2,069.29 (2,440.53)	-4,641.50*** (1,184.23)	0.14 (2.45)	0.04* (0.02)	0.04 (1.12)	-1.55 (1.41)	-6,924.40** (2,936.78)
θ_{12} : For-Profit Impact Investor	1,320.98 (1,127.54)	-353.12 (1,269.98)	-0.76 (1.02)	0.02** (0.01)	-0.94*** (0.24)	1.14* (0.60)	-6,927.30*** (1,420.47)
<i>P-value from F-Test $\theta_{11}=\theta_{21}$</i>	0.20	0.01	0.74	0.50	0.39	0.08	1.00
Panel B2: Fraction of Impact Only							
θ_{13} : Impact Investor	2,864.93* (1,544.04)	-3,226.56** (1,445.73)	-1.82 (1.46)	0.01 (0.01)	-0.64 (0.55)	0.65 (0.89)	-344.48 (1,976.12)
θ_{23} : Fraction of Impact Only	-6,855.17* (4,010.26)	6,431.08 (5,179.72)	3.87 (4.89)	0.05 (0.04)	-0.34 (1.28)	-0.03 (2.46)	-17,866.02*** (4,659.31)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
First Investment Year FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean for Traditional	75,729.13 [15,876.67]	11,334.25 [15,153.77]	30.51 [10.21]	0.68 [0.11]	13.69 [3.38]	49.62 [7.48]	42,710.65 [17,415.53]
N Investors	13,325	13,250	13,326	12,783	13,325	12,438	19,710

Specification: In Panel A of this table, Observations are companies funded by venture capital or growth equity investors by May 2021. First Round Impact indicates a company whose first investment round had impact investors, including 2,937 companies. Later Round Impact indicates a company that had impact investors only after the first round, including 3,129 companies. The comparison group comprises companies that have never had an impact investor, including 204,640 companies. In Panel B of this table, Observations are venture capital or growth equity investors with an investment by May 2021. In Panel B1, we differentiate between for-profit and non-profit impact investors. We characterize impact investors as non-profit based on the information presented on their website – see Burton et al. (2021) for more information. There are 44 non-profit impact investors and 232 for-profit impact investors. In Panel B2, Fraction Of Impact Only captures the fraction of the investor's deals that do not include traditional investors (so this variable takes a value of 0 for all traditional investors). Impact Investor is an indicator for whether the investor is an impact investor (as opposed to a traditional investor). The comparison group in Panel B comprises traditional investors. There are 277 impact investors and 20,228 traditional investors. Robust standard errors are in parentheses, and standard deviations are in brackets.

Outcomes: The outcomes in columns 1-6 are calculated at the US county level and hence only US companies are considered. In column 7, the outcome is at the country level. In Panel A, outcomes are assigned to companies based on the headquarters of the company as specified in the first round of investment. Observation numbers vary across columns due to missing data on location of company headquarters or due to missing outcome data. In Panel B, outcomes are averaged for each investor based on each company-investment round.

Data sources: Household income (United States Census Bureau 2011); Population density (United States Census Bureau 2021); Education attainment and Black-Hispanic population (United States Census Bureau 2020); Causes of drug and alcohol deaths (National Center for Health Statistics 2020); and GDP per capita (constant 2015 USD) (World Bank 2020).

Table C.II: Do Impact Investors Help Create New Industries? (Alternative Impact Investor Definition)

	(1) Pioneer (First 10)	(2) Pioneer (First 20)	(3) Pioneer (First 30)	(4) Pioneer (First 40)
Panel A: Company Level				
β_1 : First Round Impact	0.005** (0.002)	0.010*** (0.003)	0.019*** (0.004)	0.026*** (0.005)
β_2 : Later Round Impact	0.006*** (0.002)	0.013*** (0.003)	0.018*** (0.004)	0.022*** (0.004)
<i>P-value from F-Test $\beta_1=\beta_2$</i>	0.896	0.518	0.849	0.515
First Financing Year FE	Yes	Yes	Yes	Yes
Mean for Traditional Only	0.013 [0.115]	0.026 [0.160]	0.038 [0.192]	0.050 [0.218]
N Companies	154,458	154,458	154,458	154,458
Panel B: Investor Level				
<i>Panel B1: Non-Profit Impact Investor</i>				
θ_{11} : Non-Profit Impact Investor	-0.011** (0.005)	-0.010 (0.010)	0.011 (0.025)	0.018 (0.024)
θ_{12} : For-Profit Impact Investor	0.007* (0.004)	0.012** (0.006)	0.022*** (0.008)	0.026*** (0.009)
<i>P-value from F-Test $\theta_{11}=\theta_{21}$</i>	0.004	0.056	0.655	0.755
<i>Panel B2: Fraction of Impact Only</i>				
θ_{13} : Impact Investor	0.001 (0.004)	0.000 (0.007)	0.017 (0.015)	0.010 (0.015)
θ_{23} : Fraction of Impact Only	0.008 (0.008)	0.024 (0.018)	0.009 (0.030)	0.042 (0.035)
First Investment Year FE	Yes	Yes	Yes	Yes
Mean for Traditional	0.014 [0.072]	0.031 [0.108]	0.048 [0.137]	0.064 [0.159]
N Investors	19,845	19,845	19,845	19,845

Specification: In Panel A of this table, Observations are companies funded by venture capital or growth equity investors by May 2021. First Round Impact indicates a company whose first investment round had impact investors, including 2,937 companies. Later Round Impact indicates a company that had impact investors only after the first round, including 3,129 companies. The comparison group comprises companies that have never had an impact investor, including 204,640 companies. In Panel B of this table, Observations are venture capital or growth equity investors with an investment by May 2021. In Panel B1, we differentiate between for-profit and non-profit impact investors. We characterize impact investors as non-profit based on the information presented on their website – see Burton et al. (2021) for more information. There are 44 non-profit impact investors and 232 for-profit impact investors. In Panel B2, Fraction Of Impact Only captures the fraction of the investor's deals that do not include traditional investors (so this variable takes a value of 0 for all traditional investors). Impact Investor is an indicator for whether the investor is an impact investor (as opposed to a traditional investor). The comparison group in Panel B comprises traditional investors. There are 277 impact investors and 20,228 traditional investors. Robust standard errors are in parentheses, and standard deviations are in brackets.

Outcomes: The outcomes in columns 1-4 are indicators for whether the company is among the first 10, 20, 30, or 40 companies, respectively, within its industry to have a financing round in our dataset. We use the first deal date of the company to create the indicator. If the first deal date is missing, we omit the company from the analysis. We use Pitchbook's detailed 215 industry classification of the companies in our sample. In Panel B, Observations are venture capital or growth equity investors with an investment by May 2021. So the outcome variable in Panel B is the fraction of the investor's portfolio companies that fall in the first 10, 20, 30, or 40 companies with a financing round in our dataset.

Table C.III: Are Impact Investors More Patient and Risk Tolerant? (Alternative Impact Investor Definition)

	(1)	(2)	(3)	(4)
	IPO, Merger, or Acquisition	Merger or Acquisition	IPO	Months Btwn First Deal and Exit
Panel A: Company Level				
β_1 : First Round Impact	-0.041*** (0.007)	-0.024*** (0.006)	-0.017*** (0.002)	2.845 (2.365)
β_2 : Later Round Impact	-0.015** (0.006)	-0.012** (0.006)	-0.002 (0.003)	26.308*** (2.186)
<i>P-value from F-Test $\beta_1=\beta_2$</i>	0.003	0.187	0.000	0.000
Industry FE	Yes	Yes	Yes	Yes
First Financing Year FE	Yes	Yes	Yes	Yes
Mean for Traditional Only	0.165 [0.371]	0.133 [0.340]	0.032 [0.175]	62.562 [45.669]
N Companies	170,502	170,502	170,502	24,339
Panel B: Investor Level				
Panel B1: Non-Profit Impact Investor				
θ_{11} : Non-Profit Impact Investor	-0.099*** (0.030)	-0.068*** (0.024)	-0.031** (0.012)	0.924 (4.707)
θ_{12} : For-Profit Impact Investor	-0.057*** (0.012)	-0.034*** (0.011)	-0.023*** (0.004)	17.094*** (3.066)
<i>P-value from F-Test $\theta_{11}=\theta_{21}$</i>	0.184	0.209	0.490	0.003
Panel B2: Fraction of Impact Only				
θ_{13} : Impact Investor	-0.036* (0.019)	-0.014 (0.018)	-0.022*** (0.005)	9.844** (4.363)
θ_{23} : Fraction of Impact Only	-0.074* (0.042)	-0.070* (0.041)	-0.004 (0.009)	14.025 (11.427)
Preferred Industry FE	Yes	Yes	Yes	Yes
First Investment Year FE	Yes	Yes	Yes	Yes
Mean for Traditional	0.201 [0.243]	0.153 [0.202]	0.048 [0.120]	69.801 [34.424]
N Investors	19,958	19,958	19,958	11,999

Specification: In Panel A of this table, Observations are companies funded by venture capital or growth equity investors by May 2021. First Round Impact indicates a company whose first investment round had impact investors, including 2,937 companies. Later Round Impact indicates a company that had impact investors only after the first round, including 3,129 companies. The comparison group comprises companies that have never had an impact investor, including 204,640 companies. In Panel B of this table, Observations are venture capital or growth equity investors with an investment by May 2021. In Panel B1, we differentiate between for-profit and non-profit impact investors. We characterize impact investors as non-profit based on the information presented on their website – see Burton et al. (2021) for more information. There are 44 non-profit impact investors and 232 for-profit impact investors. In Panel B2, Fraction Of Impact Only captures the fraction of the investor's deals that do not include traditional investors (so this variable takes a value of 0 for all traditional investors). Impact Investor is an indicator for whether the investor is an impact investor (as opposed to a traditional investor). The comparison group in Panel B comprises traditional investors. There are 277 impact investors and 20,228 traditional investors. Robust standard errors are in parentheses, and standard deviations are in brackets.

Outcomes: The outcome in column 1 is whether the company had an IPO, a merger, or an acquisition. It is the union of the outcomes in columns 2 and 3. The outcome in column 4 is the number of months between the date of the first deal and the date of an exit (IPO, acquisition, or merger). The sample in column 4 is limited to companies that achieve an exit (as defined above) and for which the first investment date and the exit date are not missing. In Panel B, outcomes are averaged for each investor based on each company-investment round.

Table C.IV: Test of Pre-trends of Employee Satisfactions

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Overall	Overall	Career	Compensation	Culture	Diversity	Leadership	Balance	Outlook	CEO	Recommend
Years to Raise	-0.04*** (0.01)	-0.04*** (0.01)	-0.03*** (0.01)	-0.03*** (0.01)	-0.28 (0.22)	-0.03*** (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.01 (0.01)	-0.02*** (0.01)
Years to Raise * Impact	-0.01 (0.03)	0.00 (0.03)	-0.02 (0.03)	-0.03 (0.03)	0.62* (0.37)	0.00 (0.03)	-0.03 (0.03)	0.01 (0.02)	-0.04 (0.03)	-0.01 (0.02)
Company FE	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Mean for IPC	3.86 [1.16]	3.68 [1.20]	3.65 [1.05]	3.94 [1.18]	4.43 [0.66]	3.68 [1.29]	3.85 [1.03]	0.53 [0.59]	0.62 [0.59]	0.46 [0.70]
Mean for NIPC	3.72 [1.21]	3.53 [1.23]	3.46 [1.11]	3.76 [1.25]	4.01 [1.15]	3.52 [1.32]	3.69 [1.13]	0.47 [0.63]	0.53 [0.67]	0.37 [0.76]
N Observations	6,109	5,872	5,858	5,202	86	5,833	5,875	4,962	2,951	5,691
N Companies	1,772	1,709	1,706	1,583	43	1,698	1,712	1,514	863	1,671

Specification: This table tests the pre-trend of employment satisfaction before raising the first round of capital. Observations are on the company-year level, including companies funded by venture capital or growth equity investors by May 2021, who have the Revelio ratings. There are 1,580 impact companies and 18,587 non-impact companies that have at least one year of Revelio observation (any metric). We include only the years prior to a fund-raising round. *Year to Raise* is a continuous variable measuring the absolute number of years prior to fund-raising characterizes the observation. Impact takes a value of 1 if a company is an impact portfolio company and 0 otherwise. Because the number of survey responses varies across firms, the analysis uses an unbalanced panel. All regressions include company fixed effects. Standard errors clustered at the company level are in parentheses, and the standard deviations are in brackets.

Outcomes: The outcome in column 1 is the overall rating from 1 to 5. The outcome in column 2 is the career opportunity rating from 1 to 5. The outcome in column 3 is the compensation and benefits rating from 1 to 5. The outcome in column 4 is the culture and value rating from 1 to 5. The outcome in column 5 is the diversity and inclusion rating from 1 to 5. The outcome in column 6 is the senior leadership rating from 1 to 5. The outcome in column 7 is the work-life balance rating from 1 to 5. The outcome in column 8 is the business outlook rating from -1 to 1. The outcome in column 9 is the CEO rating from -1 to 1. The outcome in column 10 is the recommend to a friend rating from -1 to 1. In each case, a higher number indicates a more positive ranking.