Title: SOCIAL ENTERPRISES, VENTURE PHILANTHROPY AND THE ALLEVIATION OF INCOME INEQUALITY

ABSTRACT

Building on the literature on hybrid organizations, this manuscript explores the relationship between the organizational activity of social enterprises backed by venture philanthropy investors and income

inequality. Using Ashoka's portfolio of Indian social enterprises as empirical context of venture philanthropy investing activity, our results suggest that a) Indian municipalities with social enterprises that have received venture philanthropy investments experience a decrease in income inequality level and b) among these social enterprises, those contributing mostly to inequality alleviation are dominated by a collectivistic organizational identity orientation. Our findings have implications for the research on hybrid organizations, financing of social entrepreneurship and grand ethical challenges.

KEYWORDS

Hybrid organizations, Income inequality, Social enterprises, Venture philanthropy.

ABBREVIATION

SE: Social Enterprise

VP: Venture Philantropy

IPUMS: Integrated Public Use Microdata Series

INTRODUCTION

Goal number 10 of the United Nations Sustainable Development Goals focuses on the reduction of inequality “within and among countries (United Nations 2007).” In particular, the reduction of income

inequality, i.e., the uneven distribution of income, constitutes one of the grand challenges of our times, since it is complex, uncertain and multidisciplinary (Ferraro et al. 2015; Mair et al. 2016). Income inequality, in fact, is a macro level condition that threatens long-term social and economic development through the severe negative consequences it has on, among others, mortality, health, education and access to opportunities (Coleman 1990; Wilkinson and Pickett 2009). Income inequality undermines individuals' freedoms and capabilities as well as their sense of fulfilment and self-worth (Sen 1997).

The macro-level aspects characterizing inequality shape micro-level behaviour through its effects on the availability of opportunities for change. However, this relationship is not uni-directional. Actually, if inequality shapes individual behaviour, the perpetuation of such pattern creates a vicious loop that further exacerbates the negative macro-level conditions that characterize inequality (Coleman 1990; Mair et al. 2016). Wade (2004), among others, suggests that inequality has immoral and unethical implications; in fact, inequality pushes individuals into making inconsistent choices with the requirements and values that guide their choices and actions.

Despite the moral, ethical and economic relevance of inequality's implications and the call for having a better understanding of how organizations deal with it (Beal and Astakhova 2017), the relationship between income inequality and social entrepreneurship has been overlooked. Two main streams of work have looked at inequality in the management literature. On the one hand, only recently the entrepreneurship literature has focused on assessing whether and how income inequality pushes individuals in becoming commercial entrepreneurs (Halvarsson et al. 2018; Packard and Bylund 2018; Ragoubi and Harbi 2018; Sarkar et al. 2018). On the other hand, a recent stream of the nonprofit literature has started to look into the role and ability of non-profit organizations to eradicte income inequality (Berrone et al. 2016; Kim 2015; Viganò and Salustri 2015). Although we know that different forms of entrepreneurship activity, including social entrepreneurship, do have a role in the alleviation of income inequality through their ability to influence the multiple, contextual and local mechanisms that originate it (Lippmann et al., 2005; Mongelli and Rullani, 2017), it remains unclear how the context where social entrepreneurship operates influences such relationship.

What makes social entrepreneurship a peculiar and academically interesting field of study, is the fact that it combines competing and, often, diverging institutional logics, making social enterprises (SEs) hybrid forms of organizations. In particular, hybrid organizations combine the institutional logics of the commercial and non-profit sectors (Mair, Battilana, et al. 2012; Pache and Santos 2013): they adopt a business model typical of commercial enterprises and a social mission typical of nonprofits. The commercial aspect seeks to sustain the SE's operations through the adoption of market-based approaches that are able to generate revenues that feed the SE's social mission. As such, SEs adopt a business model that facilitates the development of social and inclusive types of innovations (Austin et al. 2006; Bacq and Janssen 2011). Ultimately, the social innovations SEs develop aim at creating significant changes for the poor and/or marginalized individuals and communities (Alvord et al. 2004; Mair and Marti 2009; Seelos and Mair 2005; Short et al. 2009).

However, in order to understand how inequality can be addressed, Allard and Small (2013) as well as Berrone et al. (2016) suggest to take into account the local and contextual characteristics that shape the actions of institutional and organizational actors, making organizational research on inequality "*feasible as well as practically and theoretically meaningful* (Mair et al. 2016, p. 2022)." The social entrepreneurship context offers a unique setting where to study inequality, as the combination of diverging institutional logics requires the ability to respond to conflicting demands from a multitude of stakeholders; these demands create complexity and uncertainty, ultimately undermining organizational legitimacy (Battilana and Lee 2014).

Organizational legitimacy influences capital acquisition (Lounsbury and Glynn 2001); this, in turn, influences the ability of SEs to effectively act upon inequality. Traditionally, stakeholders that act as providers of financial resources tend to emphasize *either* the commercial *or* the social logic of the organizations receiving funds (Austin et al. 2006; Battilana and Lee 2014). However, Berrone et al. (2016) indicate that in contexts where the financial sector is well-developed, organizations seeking to solve social problems are better able to address and alleviate inequality. This evidence makes it academically interesting to understand whether hybrid organizations, that have *both* commercial *and*

social logics, do have a role in alleviating inequality when they receive financial resources from stakeholders that value *both* the economic *and* social component of their investments, matter that has been so far overlooked by the literature.

In order to shed light on this phenomenon, our research focuses specifically on the financial support provided to SEs by Venture Philanthropy (VP) investors. According to Boiardi and Giannoncelli (2016), European VP investors invested €6.5 billion in SEs since 2010; this represents a 30% increase compared to 2013, with an average investment per VP investor of €7.8 million. VP is an investment model that seeks to generate societal impact and combines the provision of capital – similar to traditional VC (Gompers and Lerner 2001) – alongside non-financial support, namely value-added and monitoring services. These services include strategic advisory, organizational processes expertise, access to business channels and a network of follow-on investors that are usually not provided by other types of investors (Scarlata et al. 2012).

We also seek to contribute to the ongoing debate on the need to grasp the outcomes created by SEs to be able to ethically frame social entrepreneurship (Chell et al. 2016). This paper thus asks the following research questions: a) *does the activity of SEs that receive VP funding contribute to income inequality alleviation in the local contexts where such organizations operate?* and *b) among those SEs receiving VP investments, are those characterized by a dominant utilitarian or collectivistic organizational identity orientation better able to alleviate income inequality in these contexts?*

To answer these questions, we draw on the literature on hybrid organizational forms (Battilana and Dorado 2010; Battilana and Lee 2014) and develop a set of hypotheses. We test these hypotheses using a unique, self-constructed dataset that includes data from VP-backed SEs active in Indian municipalities. We use municipalities as proxy for local context, as done by Berrone et al. (2016). Results show that municipalities where VP-backed SEs operate experience a decrease in the municipality's income inequality level vs. those municipalities with no VP-backed SEs; this reduction is stronger if SEs are characterised by a dominant collectivistic identity orientation. We identified these effects employing a Difference-in-Difference (DiD) and an Ordinary Least Squares (OLS) estimation methods. Our causal

inferences might be challenged, at least partially, by some DiD empirical caveats, which we explore diligently in our empirical analysis. Our results seem to be robust to the idea that VP-backed SEs are able to reduce income inequality in the municipalities where they operate.

Our work contributes to the current debate on the identification of the key institutional actors that work at local level and foster the eradication of income inequality in localized contexts (Berrone et al. 2016; Lippmann et al. 2005). It also contributes to the emerging literature that seeks to assess the effectiveness of such hybrid organizations in achieving social-related goals (Battilana et al. 2015). This paper shows that hybrid organizations do have an ethical and moral role in inequality alleviation and that their role is strengthened when institutional actors are able to value both the social *and* the commercial logics of the organizations they finance. As such, this work is one of the first ambitious attempts to open an initial debate on the role of SEs and VP investing in the eradication of income inequality.

From a practitioners' perspective, our results suggest that promoting the importance of investors that are able to value *both* of these logics that characterize SEs is an imperative to further strengthen their effectiveness. In particular, if VP investors aim at providing capital to SEs that have inequality alleviation objectives as their core mission, they need to look for investments that are socially oriented. It is precisely in these cases that SEs benefit the most from the value-added and strategic services VP investors can offer.

Social enterprises and Venture Philanthropy: Definitions

Grand challenges, such as inequality alleviation, require organizations to operate at the intersection of conflicting demands (Berrone et al. 2016; George et al. 2016). These demands create institutional contradictions that act as the source of institutional change needed to address such challenges effectively (Ferraro et al. 2015). Arguably, this is the context that characterizes the actions and activity of SEs. Although social entrepreneurship still lacks clear epistemological boundaries that identify it as a field of study (Nicholls 2010a), conceptual work on "social entrepreneurship" and "social enterprises" has increased (Short et al. 2009). Social entrepreneurship has been defined as the ability to leverage resources

to solve complex and persistent local social problems with global relevance, to ultimately trigger catalytic and/or systemic change (Dacin et al. 2010; Dorado and Ventresca 2013; Elkington and Hartigan 2008; Santos 2012). Others look at social entrepreneurship as a process of combining existing, yet diverging, institutional logics that are typical of the commercial and non-profit sectors (Mair, Battilana, et al. 2012; Pache and Santos 2013). The legitimacy embedded in the institutional logics that characterize these sectors, and the process through which such logics are combined in innovative ways, results in new and hybrid organizational forms (Battilana et al. 2015).

SEs are examples of hybrid organizational forms. SEs borrow the logic of commercial enterprises adopting a business model through which they generate income. This commercial logic is combined with the pursuit of a social mission, typical of non-profit organizations (Battilana and Lee 2014; Dacin et al. 2010; Mair and Marti 2009). However, the way SEs recombine the institutional logics results in a different allocation of attention to each of them, making SEs heterogeneous (Dees 1998; Mair, Battilana, et al. 2012; Stevens et al. 2015). Yet, this different combination requires the ability to respond to conflicting demands from a multitude of stakeholders, resulting in threats to organizational legitimacy, complexity and uncertainty (Battilana and Lee 2014). For these reasons, SEs appear to be the ideal candidates to address the grand challenge of inequality alleviation.

However, the differing combinations of conflicting logics, and the external tensions arising from it, challenge SEs in the acquisition of financial resources. In fact, financial stakeholders tend to emphasize *either* the commercial *or* the social logic of the organizations they back (Austin et al. 2006; Battilana and Lee 2014), further amplifying internal organizational conflicts and external tensions. Venture philanthropy (VP) has therefore developed as an innovative funding model that deploys SEs-specific financial resources which "*align with the unique incentives and constraints of social enterprises combining business and charity at their core* (Battilana and Lee 2014, p. 411)." VP investors back SEs that work on complex social problems related, among others, to poverty (EVPA 2016).

VP provides SEs tailored financing and value-added services in order to create societal impact (EVPA 2016; Letts et al. 1997; Scarlata et al. 2015). The VP investing model borrows the socially-oriented

approach of grant-making foundations and emphasizes investments that are able to generate societal impact (Mair and Hehenberger 2014; OECD netFWD 2014). At the same time, VP implements the investing practices developed in the traditional venture capital model. These practices consist in the deployment of capital and value-added services to investees (Gompers and Lerner 2001). Value-added services may take the form of strategic involvement through a board seat, networking with and access to future investors, financial and accounting management, human resource services, marketing and communications, coaching and mentoring of the management team, and the definition of a fundraising or revenue strategy (European Venture Philanthropy Association 2015; Scarlata and Alemany 2012). These value-added activities are unique to the VP investing proposition and consistent with the idea that SEs need support in their commercial professionalization; this is obtained by developing organizational skills and/or improving structures and processes so that commercial practices become embedded into the organizational practices and routines.

Finally, the combination of venture capital investing practices with grant-making foundations approach towards social impact makes VP investors ranging along a continuum of objectives: some investors seeking purely a social return on the investment (with economic return being economic sustainability), and other investors seeking both economic and social returns (Scarlata et al. 2016). This makes some of the VP investors falling into the impact investment umbrella. Impact investors, in fact, pursue social and/or environmental impact alongside financial return (Mudaliar et al. 2016). However, impact investing clearly leaves out of its definition those VP investors that emphasize the social vs. economic return on the investment and that use grants as funding instrument (Scarlata et al. 2015).

Income inequality, Social enterprises, Venture Philanthropy

In order to fully understand it, income inequality needs to be addressed taking into account its contextual aspects. Income inequality refers to a highly dispersed distribution of income among a population. Inequality gives individuals unequal access to opportunities, which results in a series of severe social problems (Wilkinson and Pickett 2009 for a review). As such, inequality stems from the local context, it

has macro-level consequences and it shapes micro-level behavior (Deichmann 1999; Logan et al. 2012; Redding and Venables 2004).

Although we know that entrepreneurial activity is able to affect inequality when this occurs in the low-income, low-wealth and relatively uneducated segments of society (Bruton et al. 2013), we still lack an understanding on a) whether, and to what extent, the local activity of hybrid organizations is able to affect inequality, and b) whether this relationship is further strengthened if SEs receive funding from investors that value *both* the social *and* the economic logic. In fact, the literature suggests that knowledge about the local community dynamics where SEs operate allows them to have a better understanding of the specific socioeconomic environment in which inequality takes place (Peredo and Chrisman 2006; Shepherd 2015). These are necessary elements for the alleviation of inequality as they allow the creation of prospects targeting the empowerment of marginalized individuals and the creation of job opportunities for them (Dacin et al. 2011; Mongelli and Rullani 2017). By doing so, SEs deliver local solutions that are better deployed and accepted by the local communities themselves, developing contextual collective capacities (Shepherd 2015; Mair et al. 2016).

Miller et al. (2012) show that hybrid organizations are embedded in a matrix of institutions. More specifically, Berrone et al. (2016) further suggest that the effectiveness of socially oriented organizations addressing inequality increases in contexts where financial institutions are particularly developed. This happens because financial institutions help with the professionalization of such organizations, particularly with respect to organizational efficiency and financial management, which enhance the alignment of goals between supply and demand of capital. As previously noted, borrowing the investment model from traditional venture capital, VP investors deliver value-added services that are well beyond financial backing. These value-added services are peculiar to the VP model and are not provided by traditional forms of funding available to social sector organizations (e.g., microfinance, crowdfunding and/or traditional grants), which equip SEs primarily, or solely, with financial capital. In classical venture financing literature, the professionalization process related to these activities has been shown to be associated to better investment performance (Hallen et al. 2014; Hsu 2004; Katila et al. 2008; Pahnke et

al. 2015; Souitaris and Zerbinati 2014). Thus, VP investors providing these value-added services along with financial capital allow backed SEs to develop more efficient and effective organizational routines and activities, eventually improving their prospects of societal impact.

In addition, the VP's focus on providing innovative solutions to compelling social problems through their investees is seen and legitimized as an act of "caring" for the particular combination of social needs that the SEs seek to address. As such, having a VP investor signals complementarity between the social logic of the investor and the one of the backed SE through "public emotional competence" (Voronov and Weber 2016). VP backing functions as an institutional endorsement for the local and social efforts of the SEs that receives it. This endorsement works as a third party validation, or authentication, of the SEs' social "bias", amplifying the implications of the backed SEs' social activities on inequality levels.

Taking into account a) the local aspects of inequality and the local activities of SEs dealing with it, b) the SEs' need to operate in financial contexts with investors that facilitate their professionalization and c) the endorsement provided by VP investors to SEs for their social activity, we argue that SEs do have a role in alleviating inequality in contexts with institutional actors, such as VP investors, that value and understand the peculiarities related to their hybrid nature when dealing with societal challenges. This leads to the formulation of the following hypothesis:

> **Hypothesis 1**: *There is a negative relationship between the presence of social enterprises receiving funds from venture philanthropy investors and local income inequality, i.e., income inequality is lower in those local contexts where social enterprises are backed by venture philanthropy investors.*

SEs adopt different and diverging institutional logics (Battilana and Dorado 2010; Pache and Santos 2010, 2013). Competing institutional logics, at organizational level, are conflicting conceptions about the appropriate goals to pursue as well as the appropriate means to achieve them (Scott 1987). The varied forms through which such conceptualizations are adopted by SEs result in differing organizational

identity orientations; these relate to the "*nature of assumed relations between an organization and its stakeholders* (Brickson 2005, p. 577)." As such, SEs range along a continuum. At one extreme lie those adopting merely a collectivistic identity orientation that makes SEs mimicking traditional non-profit organizations' activities and adopting a social mission; at the other extreme lie those emphasizing the individualistic and utilitarian identity orientation that makes SEs similar to traditional commercial ventures (Dees 1998; Brickson, 2005; Moss et al., 2011).

This heterogeneity in SEs identity orientation has implications on the beneficial effect of the value-added activities provided by VP investors. Such activities range from support to develop and improve daily operational routines (e.g. financial and accounting management, human resource services, marketing and communication strategies) to design an organizational growth plan in order to scale up the SE' impact (e.g. access to future follow-on investors, coaching and mentoring of the management team, definition of a growth fundraising or revenue strategy) (European Venture Philanthropy Association 2015; Scarlata and Alemany 2012). "*Fellowship is a way to support them* [SEs] *in their journey. There are two ways when looking at fellowship. One is horizontally, where you* [Ashoka] *support them in their legal, finance, fundraising, HR policies… and then there is a vertical development, where we invest in their thinking in how they think of scale, collaboration, leading and organising, which eventually is they steering their work. We will not be needed for the horizontal needs in this case because we believe, as entrepreneurs, they will find ways. Or, we take care of their horizontal need plus we gonna make them, as I said, becoming leader* (interview extract with one executive A from Ashoka)."

As such, while all SEs benefit from the range of value-added services offered by VP investors, we contend that the provision of the whole range of these services will have a higher beneficial effect on those SEs that lie on the collectivistic end of the identity orientation spectrum. In fact, SEs characterised by a collectivistic identity orientation will be more likely to receive VP supporting services focused on the development and consolidation of fundamental organizational processes and entrepreneurial learning (e.g. business model development, new opportunities identification) which, in turns, strengthen and improve current operations primarly run in the local context of reference: "*[…] they have a skill set that someone*

who is at early stage or very in the idealistic..you know..in that sphere..and haven't pushed into the commercial scene as much […] the less, let's say, business minded people, they might benefit from a different type of support which is the more direct skill building piece, like how do you create different businesses models or a marketing plan. (interview extract with executive B from Ashoka)". On the contrary, utilitarian identity oriented SEs will be more likely to benefit from the organizational growth services provided by the VP investors, which allow them to expand and scale up their activities beyond the initial local context.

The effect of having a VP investor is, therefore, stronger on the alleviation of local inequality for SEs that collectivistic identity oriented compared to those SEs that utilitarian identity oriented. This leads to the formulation of the following hypothesis:

> **Hypothesis 2**: *The negative effect between the presence of social enterprises backed by VP and the level of income inequality in the local contexts where they operate is greater for social enterprises characterized with a dominant collectivistic identity orientation.*

DATA AND METHODOLOGY

Data sources

To test our hypotheses, VP investors had to be first identified. To do so, we followed the definitions by Scarlata and Alemany (2011) and Miller and Wesley (2010) discussed in the "Definitions" section. Based on such definitions, VP investors mimic the traditional VC model and invest in SEs providing tailored financing to their investees; this may take the form of grants, debt, and/or equity, depending on the SE being backed (EVPA 2016). Capital is provided along with value-added services seeking to contribute to organizational development (Scarlata and Alemany 2011). Taking into account that quantitative analysis on VP activities is difficult "*largely because aggregated public data sets […] simply do not exist yet*

(Daggers and Nicholls 2016)," we decided to focus our empirical exercise on those VP firms that a) use grants as main funding instrument since this is the most widely used financial tool used by VP organizations (EVPA 2016), b) provide value-added services, as per the VP investing proposition, and c) are based in Western regions, i.e., Europe and the United States.

Western VP investors were identified relying on prior work by Scarlata, Alemany and Zacharakis (2012) who counted 74 firms active in the field. For each of these firms we built the list of their investments made up to 2015; each investment was classified by country, sector of activity, and year. Among all identified investors, we decided to focus the empirical analysis using the VP organization Ashoka, founded in the United States in 1980, as a proxy for the broader VP investing activity. The reasons why Ashoka can be considered a proxy of a more general VP investing activity are as follows. First, when taking into account all Western VP investors and the portfolio of investments held by each of them, we found that Ashoka represents approximately 65% of all investments made by all the investors. This makes Ashoka one of the leading Western VP investors.

Second, among the many different financing instruments available to VP investors (these include grants, different forms of debt, quasi equity, equity, and/or a combination of them), grants tend to be used across different sectors and different countries, although the size of the grants provided by VP investors varies significantly within the sector (EVPA 2016). In line with this approach, Ashoka does provide capital to its investees in the form of a stipend to recipient social entrepreneurs; pragmatically, this is assimilated to a staged form of a grant, with no expectation of reimbursement. The amount of the stipend is decided on a case-by-case basis and it is meant to allow social entrepreneurs to pursue their social innovative idea, rather than individual self-subsistence. The nature of the instrument used by Ashoka to provide capital to social entrepreneurs is, therefore, consistent with what is typically used in VP, making Ashoka representative for the broader VP investor space.

Third, in an effort to increase the investee's societal impact, VP investors must provide financial backing alongside value-added non-financial support. To this respect, Ashoka "*has provided start-up financing, professional support services, and connections to a global network across the business and social sectors,*

and a platform for people dedicated to changing the world. Ashoka launched the field of social entrepreneurship and has activated multi-sector partners across the world who increasingly look to entrepreneurial talent and new ideas to solve social problems (Ashoka 2015)." Along with monetary resources, and in line with the VP investing model, Ashoka's investment proposition includes the provision of value-added services. More specifically, Ashoka focuses on connecting strategically each funded organization with its network of fellow social entrepreneurs, business and strategic consultants, prospective investors, and specialists that are able to provide each backed SE with the resources and capabilities that complement their internal skillset. This is exactly what VP investors do, thus making Ashoka a meaningful proxy for the broader VP sector.

Finally, interviews with Ashoka's executives revealed that it operates together with other similar VP investors, both because they have investments in locations where Ashoka invests and because Ashoka partners with them. As executive B from Ashoka states: "*One of our* [Ashoka] *goal is to grow the field of social entrepreneurship. So we see it as the ecosystem grows as a tremendous success*"; moreover, talking about where Ashoka is active with its investments, "*we have been very early in…and we hoped to inspire an ecosystem of other organizations that either scale into that country or popping up into that country. So we very much welcome an ecosystem. And yes, we see that there are more and more players similar to us*". In this sense, Ashoka works in the same space where other VP investors are. In fact, Ashoka does work with other VP investors "[…] *our approach is to work and collaborate with as many actors as possible.* […] *we turned more and more in a platform-based…bringing together more players,* […] *all the actors that try to make a difference; see the matter as the market as a whole, rather than keeping all these little initiatives separated. And this we do more and more* (interview extract with executive B from Ashoka's)." In addition, "*Ashoka does not look at other funding agencies and fellowship organizations or other funding organizations as competitors. Because Ashoka… we… believe in bringing more partners on board. We nominate our fellow for other fellowships* (interview extract with executive A from Ashoka's)*."*. This suggests that Ashoka invests in contexts where it is possible to build relationships with

other similar investors. For all these reasons, we can use Ashoka as an empirical setting that allows us to approximate, in the best possible way, what Western VP investors do.

From a research setting point of view, Ashoka presents specific advantages as source of data for academic research on VP. First, Ashoka has made investments in approximately 3,000 SEs located in 70 countries since its inception. Consistent with the networking activities that VP investors provide to their investees (Scarlata and Alemany 2011), Ashoka's investments have activated multi-sector partners across the world in an effort to solve compelling social problems (Ashoka 2015). For all its investments, and unlike the vast majority of VP investors, Ashoka reports detailed information on each investee and makes this information publicly and comprehensively accessible from its website. In particular, Ashoka consistently reports the intial year of funding for all its investments, unlikely the majority of VP investors. This information allows to precisely identify the exact timing of the funding and increases the quality of the design of our empirical study. For its characteristics, thus, Ashoka data have been proposed as an appropriate data source in social entrepreneurship research (Defourny and Nyssens 2010; Seelos and Mair 2005; Shaw and Carter 2007) and validated by Meyskens et al. (2010).

Among all the countries in which VP investors are active with their investments, India is a very attractive option as empirical setting to study VP activities. Considering all the investments done by Western VP investors (previously mentioned), India represents 8.3% (2nd largest recipient of VP after U.S.A.), and also 15.3% when considering only investments done in non-OECD countries, being thus the largest VP investments recipient among developing countries. Looking more specifically at all Ashoka investments made by 2015, Indian SEs represent approximately 11% of the Ashoka's total investments, making the Indian portfolio ranking as #1 for number of investments per country. In addition, in 2009 India exhibited 3.3 million registered non-governmental organizations, which is an average of one of such organizations every 400 Indian citizens (The International Center for Not-for-Profit Law 2015). These statistics make India an extraordinary empirical context for studying SEs; therefore, our empirical analysis focuses on Ashoka-backed SEs operating in India, where Ashoka has been financially active since 1982.

Data used to measure inequality relied on IPUMS-International (Minnesota Population Center 2014). IPUMS-International is an effort to inventory, preserve, harmonize, and disseminate census micro data from around the world. IPUMS project has collected the world's largest archive of publicly available census samples. The data is coded and documented consistently across countries and over time to facilitate comparative research. In the case of India, IPUMS data has been jointly built with the Indian Ministry of Statistics and Programme Implementation.

The advantages of using IPUMS-International data are twofold. First, data are reported at individual level; this facilitates aggregation at household, municipality, state and country level. Since SEs backed by VP investors operate at a local level (i.e., municipality), we are able to accurately link each SE operation to data related to the specific characteristics of the municipalities it operates in. Second, IPUMS data are collected across time in multiple censuses; this is then standardized and harmonized based on institutional (e.g., change in state or municipality borders) or economic changes (e.g., currency change). However, censuses are not collected on a yearly basis. In the case of India, IPUMS reported four census related to the following years: 1987, 1993, 1999 and 2004.

Sample

To identify Indian SEs that received VP funding, we first collected the full list of the 3,000 funded investments made by Ashoka across the 70 countries where it is active as VP investor. For each of these investments, we obtained data on: geography of SE's headquarter and operations, year of investment, and areas of intervention. Then, we extracted those reporting their headquarters in India. The initial sample included 237 India-based SEs that: i) received a VP investment by Ashoka between 1982 (i.e., when Ashoka started investing in India) and 2004 (i.e., when the last India census data is available on IPUMS) ii) reported India as headquarter.

Second, since the headquarter of each SE may not be the unique location of the social enterprise's operations, for each of the 237 SEs we identified the location of their operations through an online search. To ensure high accuracy of the information collected, only Indian SEs with geographical information on

operations, both at state and municipality level, were included. This resulted in a sample of 170 SEs with full information on the geography of both headquarter and operations.

Third, using IPUMS-International on India, each operation of the 170 Indian SEs has been imputed to state and municipality data, including rate of employment, population, and schooling information. Since census data are not collected every year, we built four census ranges, i.e., 1982-1986, 1987-1992, 1993-1998, and 1999-2004. These ranges correspond to the four censuses originally available on IPUMS. Since we are interested in the ability of each VP-backed SE to alleviate inequality, before and after the VP investment, each SE was assigned to two ranges relating to the two closest censuses available. An example: the Centre for Rural Development received Ashoka's funding in 2001. It was therefore imputed to the ranges 1993-1998 (pre investment) and 1999-2004 (post investment).

Finally, since the sample of SEs receiving VP investments from Ashoka starts in 1982, while data from IPUMS-International on India are available from 1987, we had to exclude those SEs that lack IPUMS data. This resulted in 110 Indian SEs that received VP backing with full data from 1987 to 2004. Full data include: income data at individual level for those geographies where SEs operate, geography of the SEs' headquarters and local operations, mission statements and socio-economic micro data at state and municipality level for their operations. However, taking into account that some of these 110 SEs have more than one operations in different locations, we ended with 158 SE-operation combinations. The intuition here is that we expect each SE having an effect on the inequality level of every local context (i.e. municipality) where it operates, and not necessarily beyond it. This approach allows us to produce more conservative claims on our results.

Observing each of the 158 SE-operation combinations allows us to study whether the activities of the VP funded SEs influence the inequality levels in the Indian municipalities where they operate. However, it does not inform us about whether inequality alleviation would have happened otherwise (i.e. decrease in the income inequality level in Indian municipalities with no SEs that is VP financed). To take this into account, we created a counterfactual for each of the 158 SE-operation combinations. In order to do so, we proceeded as follows. First, we built the list of each state of India where at least one of the 110 SEs was

active between 1987 and 2004. Second, we classified each Indian state by its municipalities and grouped them into two sub-groups: groups #1 includes municipalities with at least one VP-funded SE during the period of observation (*Financed*); group #2 includes municipalities – in the same state - with no activity of the 110 VP funded SEs during the period of observation (*Non-Financed*). Group #2 becomes therefore the counterfactual for each of the 158 VP funded SE-operations active in any municipality of group #1[1]. Thus, the interpretation of our results is based not only on the change in inequality of *Financed*, which is a specific municipality pre and post the Ashoka investments for each SE-operation (Plains Western, in the example), but also in comparison to the change of the inequality of *Non-Financed*, which is any other municipality within the same state with no Ashoka-funded SE.[2] Therefore, the final sample consists in: 158 Indian-based VP funded SE-operation-municipality combinations (*Financed*); 158 municipalities with no VP financing (*Non-Financed*). These total 316 observations are observed for two time periods, i.e., pre and post investment, resulting in 632 data points.

We have dealt with potential selection-bias concerns related to our sampling procedure as follows. The initial set of 237 India-based Ashoka SEs was trimmed due to data availability reason, in particular on the SE-operations at municipality level. In fact, for each of the initial 237 India-based Ashoka SEs, we searched the information about the location of their operations at municipality level on multiple internet sources. Only those SEs reporting this information were included in the sample, whereas those SEs that did not report it were excluded. One concern could be, therefore, that the reporting of geographical information of operations by SEs might not be random, resulting in a systematic difference in SE characteristics between those in the sample and those excluded. In fact, it could be the case that those SEs reporting operations information at municipality level do so because they are "better" than those not reporting it. For example, they might have a greater potential performance, more advanced routines, more

[1] As an example, let's consider an Indian based Ashoka-backed SE X that operates in the state S. The state S has three municipalities: M1, M2 and M3. The SE X operates in M1 only. M2 and M3 have not experienced any activity from X or any other Ashoka funded SEs in the 1987-2004 period. We therefore used them (i.e. M2 and M3) as counterfactuals for M1.

[2] In the case of 2 or more municipalities available as counterfactual, we took the average of them for each variable in the models.

able founders/managers. In other words, reporting that information might reflect an overall organizational quality of an SE, which are characteristics that we do not directly observe and that might explain how SEs are sorted in the final sample. Yet, we believe this is not the case since Ashoka has a very articulated, standardized and homogeneous selection process of its fellows. This selection process for its fellows implemented by Ashoka makes, thus, very unlikely that those Ashoka's SEs that have not reported their operations' geographical information are systematically different than those that have not reported it otherwise in the pre-investment period. We are not claiming that the fellows are identical in all sort of dimensions in the period before starting the Ashoka investment program. We are rather reasoning that the SEs motives and characteristics explaining why some SEs reports their municipality level information on operations while some others do not, so that the latter are excluded by the sample, are likely to be random in relation to our variables of interest. This is related to the Ashoka's SEs selection process that makes them homogeneous in organizational ability and potential performance the selected SEs at the starting period of the financing program. In this regards, the attrition we have in the sample construction due to the absence of reporting of the operation location information is likely to be random across Ashoka-funded SE.

Variables

Dependent variable. Our dependent variable is *Income Inequality*. Prior work on social entrepreneurship has shown that, particularly in developing countries like India, social entrepreneurship happens in contexts where the average individual earns less than $2 per day (Bruton et al. 2013; Kistruck et al. 2013; McMullen 2011; Prahalad 2004). By serving the poorer or the poorest, SEs have the opportunity to create/serve underserved markets (Mair, Martí, et al. 2012) by empowering individuals to escape from poverty. To accomplish this social objective, social entrepreneurs work to develop a culture of economic security (Datta and Gailey 2012) and, through the decrease of income inequality, promote inclusive economic growth (McMullen 2011).

Income inequality has been extensively adopted in the economics literature (e.g. Easterly 2007), and operationalized as the Gini coefficient. The Gini coefficient varies between 0, which reflects complete

equality, and 1, which indicates complete inequality, i.e., one person has all the income or consumption, all others have none. To estimate the Gini coefficient for India, we relied on IPUMS-International. An advantage of using IPUMS-International is that income data are reported at individual household level, so we gain more precision in the calculation of income inequality. To take into account for a potential distortion of any intra-household wage distribution, the size of the related household was taken into account. Using the income per household, adjusted by size, allowed for the calculation of the Gini-coefficient at municipality level for each Indian state. Because VP funded-Indian SEs in our sample received the investment any year in the 1987-2004 range, we built four ranges, consistent with census data availability: 1982-1986, 1987-1992, 1993-1998, and 1999-2004. The idea here is that a SE receives a VP investment in a specific year, so that we estimate the variation in the Gini coefficient at municipality level before and after the year of the investment[3].

*Independent variable*s: The independent variable used to test hypothesis 1 is *VP Investor*, which is a dummy equals 1 if an observation refers to a municipality with a VP-funded SE, and 0 otherwise. To capture the change between the pre and post investment period, we also generate a dummy variable *Post-investment* equals to 0 if an observation refers to the period before the VP investment, and 1 for observations after the VP investment.

The variable used to test hypothesis 2 is *Collectivistic Identity Orientation (CIO)*. This variable equals 1 if the Ashoka's funded SE has a dominant collectivistic identity orientation, and 0 otherwise (i.e. the SE adopts a dominant utilitarian identity orientation). *CIO* was measured considering the SEs' mission statement. This was coded following Brief and Motowidlo (1986) and operationalized based on Renko (2013) as well as Moss et al. (2011), who measured it including expressed behaviour related to helping others, helping community, aid in economy, and economic development for this purpose.

Control variables. In all our empirical models to test Hypothesis 1 and Hypothesis 2, we specify a set of control variables. Teulings and van Rens (2008), Shorrocks (1984), Das and Kalita (2009) show that

[3] To clarify, our previous example SE X received one investment from Ashoka in 2001; we therefore estimated the Gini coefficient in the municipality in which it operated using IPUMS data related to 1993-1998 (pre-investment) and 1999-2004 (post-investment).

schooling and employment as well as other characteristics of the municipalities' population (e.g., level of employment, population size and labour-intensive industries presence), impact income inequality. We therefore gathered data from IPUMS-International and used the following variables as controls.

Education Attainment was measured as the person's educational attainment in terms of the level of schooling completed, where 1 is "less than primary education completed" and 4 is "university completed". It is an aggregated measure of the average educational attainment within municipalities. *Employment* was measured as the percentage of individuals with, at least, part-time employment in each municipality. *Population* is the number of inhabitants registered in the municipality. *Municipality NGOs* is the number of NGOs active in each municipality[4]. Finally, *Industry* is the share of individuals working in labor-intensive industries, which are expected to influence income distribution. This classification is derived from IPUMS and refers to the industrial classifications into twelve groups that approximately conforms to the International Standard Industrial Classification (ISIC).

Empirical approach

To test Hypothesis 1 we used a Difference-in-Difference (DiD) approach. DiD is a statistical technique used in econometrics and quantitative sociology which attempts to mimic an experimental research design that uses observational data. In our study, we employ a DiD empirical strategy to identify the relationship between the activities of SEs financed by VP investors (*VP Investors*) and the level of income inequality (*Income Inequality*) in the municipalities where these SEs operate. While DiD is an empirical design that, by construction, attenuates potential endogeneity concerns (for example, reverse causality), it brings some challenges to causal inferences due to the specific assumptions of the method, particularly the Stable Unit Treatment Value Assumption (SUTVA) and the Common Trend Assumption (CTA).

For what concerns SUTVA, this requires stability of the composition of intervention and comparison groups for repeated cross-sectional designs. Our study is at municipality level; respecting the SUTVA assumption implies that a municipality classified as "treated" (i.e. *Financed*) does not enter in the control,

[4] This data have been collected by GuideStar India website (https://guidestarindia.org/), which provides information about the NGOs registered in each state and municipalities. We would really like to thank an anonymous reviewer for directing us toward this website.

and vice versa (i.e. the *Non-Financed* municipalities do not enter in the *Financed* group). Despite we are confident that the SUTVA assumption is not violated for the SEs in our final sample (110), it could be argued that some of the Ashoka-funded SEs excluded by the finally sampled SEs due to the lack information on the location are active in the *Non-Financed* municipalities. This would imply that a municipality is classified as control despite it is a treated one, in fact. Under such circumstances, the SUTVA assumption would be violated. Yet, if some *Non-Financed* municipalities were in fact treated ones (i.e., *Financed*), the resulting estimates would be interpretable as lower bound estimates. In other words, if the hypothesized relationship exists, the fact that non-observed Ashoka funded SEs may be active to reduce inequality in *Non-Financed* municipalities when they should have been included in *Financed* municipalities would reduce the post-investment difference on income inequality between *Financed* (i.e. treated group) and *Non-Financed* (i.e. control group), cancelling out the hypothesized treatment effect. Even in such a case, the potential violation of the SUTVA assumption would play against our prediction, making it harder to identify the effect of *VP Investor* on *Income Inequality*. In this sense, a correction of this classification bias would be in favor of the main theorized effect and would provide further corroboration to the negative relationship between VP funding and income inequality.

In the case the hypothesized relationship would not exist instead, *Financed* and *Non-Financed* municipalities would not differ on their *Income Inequality* level. As such, even in this case, there would be no significant effect of *VP Investor* on *Income Inequality.* So, also in this case the bias would act against the significance of our main hypothesized effect. In sum, taking into account the effects related to the potential violation of the SUTVA assumption, any significant effect should be considered as a reliable estimate of the relationship between *VP Investor* and *Income Inequality* and be interpreted as a lower-bound estimate.

For what concerns CTA, this requires that in the absence of treatment, the difference between the treated and control group is constant over time. In order to explore the validity of this assumption, we collected data for each *Financed* and *Non-Financed* municipalities from IPUMS. Using this data we then performed a series of T-Tests during the pre-treatment period (our data is structured in a way that each

Financed and *Non-Financed* municipality has one period pre-investment and one period post-investment). The T-Tests included the following variables: *Number of fathers in the household, Number of mothers in the household, Age, Percentage of females, Percentage of Hindu religion, School attendance, Education attainment, Employment, Population*. Apart from *Educational Attainment*[5] that is statistically significantly higher in the *Financed* group, there is not a statistically significant difference between *Financed* and *Non-Financed* municipalities in the pre-investment period along all the other variables. Moreover, treated and control municipalities belong to the same Indian state, so that policies at the state level that might affect either inequality, SEs and VP investor activities are, by construction, controlled for. To check the robustness of our results, we specified a fixed-effect model at state level; our main results do not change. In addition, there might be a concern that our sampling procedure combined with a DiD method would generate an over-representation of Indian SEs in the treatment group (i.e. *Financed*), so that this could be the primary identifying mechanism rather than our main variable of interest *VP Investor*. So, ideally, our estimation models need to be specified also with a variable that captures the level activities on other SEs, not necessarily financed by Ashoka, at the municipality level, both for the *Financed* and *Non Financed* group. In order to address this potential concern, we collected data from GuideStar India website, where it is possible to retrieve data on NGOs registered and active in India in all the municipalities considered in our empirical analysis. The "Advanced Search" function on the GuideStar India website allows us to search within each state and within each municipality providing as a result the list of registered NGO. Largely for each listed NGO, using the tabs "Summary" and "Org Profile" in individual NGO webpage created by GuideStar India, we have collected the following detailed information: date of registration, location information for the headquarter office, list of the locations of the NGO's operations. We have been thus able to count the registered NGOs in each year for each municipality, which results in a list of 10,851 NGO-operation combinations. In all our model specifications, thus, we have used in as control variable, namely *Municipality NGOs*.

[5] While we acknowledge that these variables might not be the only ones to compare municipalities, we believe that we had to tradeoff between assessing better the potential bias of the CTA assumption of the DiD method and the data availability on Indian municipalities in the period of observation.

Finally, to test Hypothesis 2 we employed an Ordinary Least Squares (OLS) regression, correcting estimates with robust standard errors.

RESULTS

Table 1 presents the descriptive statistics and the correlation coefficients. In our sample, the average municipality has approximately 700 thousands inhabitants, an employment rate of 41 percent and an educational attainment of 1.65, suggesting that households have a primary level education. Moreover, it shows 0.34 of individuals with, at least, part-time employment, and it is populated by approximately 48 active operations of registered NGOs.

Insert Table 1 about here

Hypothesis 1 predicts a negative relationship between the presence of SEs receiving VP financing and local community (i.e. municipality) income inequality, so that income inequality is lower in municipalities with SEs backed by VP investors. Table 2 presents the estimates for the DiD model used to test Hypothesis 1. The Gini-coefficient (pre-investment) is 0.430 for *Financed* vs. 0.392 for *Non-Financed*. The difference of 3.8 percent points is significant at 1% level (t=6.060). This suggests that pre-investment income inequality is higher in municipalities with VP-financed SEs. After the VP investment, both *Financed* and *Non-Financed* municipalities report a decrease in the inequality level. The Gini-coefficient (post-investment) drops to 0.390 for *Non-Financed* and to 0.400 for *Financed*, reporting a significant difference at 5 percent level (t=2.260). While both groups experience a drop in the value of the Gini-coefficient (respectively, decreases of 0.002 for *Non-financed* and 0.030 for *Financed*), the *Financed* municipalities significantly decreases by 2.8 percent points compared to the decrease of *Non-Financed*

(t=-3.736). This suggests that the decrease of the Gini coefficient in *Financed* is significantly higher than in *Non-Financed* in the VP post-investment period.

Insert Table 2 about here

Figure 1 depicts the described effects. Put in another way, the inequality level of *Financed* municipalities decreases significantly more than in *Non-Financed* municipalities after the VP investment takes place. This result provides support for Hypothesis 1.

Insert Figure 1 about here

Table 3 reports OLS estimates related to Hypothesis 2. Model 1 includes only control variables; Model 2 includes *VP Investor* and *Post-investment*; Model 3 includes the full model with the interaction term between *VP Investor* and *Post-investment*; Model 4 and Model 5 report the OLS results obtained only for the 158 VP funded SE-operation combinations classified according to the dominant collectivistic vs. utilitarian logic. These 158 have been divided into those with a dominant utilitarian identity orientation (Model 4) or collectivistic identity orientation (Model 5).

Model 3 shows that the coefficient of the interaction between *VP Investor* and *Post-investment* is negative (-0.028) and significant ($p<0.01$), thus replicating results reported in Table 2. In Models 4 and 5 the sample of the 158 SEs-operations was split according to their dominant organizational identity orientation, respectively 37 SEs-operations characterized by dominant utilitarian orientation, and 121 with collectivistic orientation. Results of Model 4 show a negative but not significant result for *Post-investment*, while results of Model 5 show a negative and significant result for *Post-investment* (-0.029, $p<0.01$). This indicates a significant difference between SEs with a dominant collectivistic identity orientation and SEs with a dominant utilitarian identity orientation in terms of the income inequality levels in the municipalities they serve. In other words, the combined results of Model 4 and Model 5

imply that the average greater contribution to inequality alleviation (-0.028) is mainly explained by VP funded SEs with a dominant collectivistic identity orientation, compared to SEs with a dominant utilitarian identity orientation. These results provide support for Hypothesis 2.

Insert Table 3 about here

Overall, our results suggest that municipalities with active SEs backed by VP investors: i) experience a significant decrease of income inequality compared to those that are not VP-backed ii) those SEs with a collectivistic identity orientation are more responsible for the overall decrease in income inequality in the municipality where they operate compared to those with utilitarian identity orientation.

DISCUSSION AND CONCLUSIONS

This paper has identified the extent to which hybrid organizations, conceptualized as SEs, are able to tackle the grand challenge of inequality alleviation, which has ethical and moral implications for communities and individuals. In fact, income inequality undermines individual' freedoms and capabilities as well as their sense of fulfilment and self-worth (Sen 1997). Building upon the work by Berrone et al. (2016), this work has focused on SEs and identified how the financial context with VP investors has a role in the alleviation of the inequality levels of the local communities SEs serve. Our research has also delved into the identification of whether SEs with a dominant collectivistic vs. utilitarian identity orientation are better able to accomplish the inequality objective. To empirically answer these questions, this paper has analysed the investing activity of VP firms using Ashoka's portfolio of Indian SEs as proxy for the overall investing activity of Western VP investors.

Using a DiD and an OLS approach to test the two hypotheses presented in this paper, results suggest that Indian municipalities with SEs receiving VP-backing do experience a decrease in their inequality levels, after the investment takes place; this decrease is higher than the decrease shown by municipalities with no

VP-funded SEs. Results also indicate that municipalities with VP-backed SEs show a higher decrease in inequality levels if these SEs have a dominant collectivistic compared to an utilitarian identity orientation. These two results have important implications for both theory and practice. From a theoretical perspective, prior work has focused on how inequality pushes individuals into commercial entrepreneurship (Halvarsson et al. 2018; Packard and Bylund 2018; Ragoubi and Harbi 2018; Sarkar et al. 2018) and the extent to which nonprofits alleviate inequality (Berrone et al. 2016; Kim 2015; Vigano' and Salustri 2015). The relationship between entrepreneurial activity with a social mission at its core, while adopting market-based mechanisms to solve social problems, and its ability to alleviate inequality has been overlooked by the literature so far. Although it should be acknowledged that inequality alleviation is a complex process involving many different policies, forces, and agents, it is a scholarly responsibility to identify which actors may play a role in such a complex process. As such, this paper is one of the early attempts to open an avenue for future work on the role of social entrepreneurship and VP investors on inequality by building an initial intersection between the entrepreneurship and the non-profit literatures, rather than to provide a definitive, prescriptive solution to it.

By assessing the role of hybrids in the alleviation of grand ethical and moral challenge of income inequality, this paper contributes to the academic debates on hybrid organizing (Battilana and Dorado 2010; Battilana and Lee 2014; Pache and Santos 2010) and becomes particularly relevant in the light of the scant quantitative work in the field (Dacin et al. 2010; Short et al. 2009). To this respect, this paper contributes to the ongoing discussions on the identification of the specific institutional actors (Berrone et al. 2016) that facilitate the process through which hybrids are more effective in addressing these challenges. In fact, this paper shows that hybrids do have a role on the income inequality equation, and this role is stronger if they receive financial and value-added services by VP investors that value both the economic and social component of their investees. Building upon prior work in the VC field (Hellmann and Puri 2002), further work could well investigate and quantify the type of financial instrument and value-added services provided by VP investors that are better able to support the effective deployment of innovative solutions addressing inequality. In addition, we need more work on the legitimation and

signalling provided by VP investors in an effort to deepen our understanding on why and how hybrids benefit from the affiliation with a highly reputable VP investor (e.g. Hsu 2004) and how "public emotional competence" (Voronov and Weber 2016) is actually developed and deployed.

Second, prior work on hybrid organizations suggests that hybridity may lead to complexity and uncertainty, ultimately undermining organizational legitimacy (Battilana and Lee 2014). Hybridity may create challenges particularly when organizations face unpredicted exogenous shocks that exacerbate the inconsistency of the logics that they recombine (Ramus et al. 2017). Our results contribute to the debate by showing that SEs receiving VP funding have a higher impact on income inequality if they adopt a dominant collectivistic identity orientation. We motivate this result with the relative higher beneficial effects of the value-added activities provided by VP investors to the organizations they back. These value-added services seek to professionalize SEs with a dominant collectivistic identity orientation more than those SEs with a utilitarian identity orientation, which are more likely to be already equipped with those market-oriented processes and capabilities. To accomplish this goal, VP investors provide guidance at strategic level through board seats, networking with and access to future investors, financial and accounting management, human resource services, marketing and communications, coaching and mentoring of the management team, and the definition of a fundraising or revenue strategy (European Venture Philanthropy Association 2015; Scarlata and Alemany 2012). These value-added activities are unique to the VP investing proposition and consistent with the idea that SEs need support in their commercial professionalization. The argument here is that the beneficial effects related to the process through which organizational routines and activities successfully embed the utilitarian identity orientation are higher for those SEs with a dominant collectivistic identity orientation. As such, we contribute to ongoing debates on the role of social entrepreneurship as a vehicle for change through the adoption of a business model and commercial practices that allow individuals to overcome the barriers that constrain their choices and freedoms (Chell et al. 2016). The endorsement provided by VP investors to hybrid organizations allows them to cope with the uncertainty, complexity and legitimacy concerns that their hybrid nature gives rise to. To this respect, more work is needed to understand the micro-mechanisms that

allow SEs adopting a dominant collectivistic identity orientation to benefit from the beneficial learning process involved in the provision of value-added services deployed by VP investors. It is imperative, to this respect, to gain a better understanding of the stages through which such a learning happens and how this differs in collectivistic vs. utilitarian SEs. To accomplish such a research aim, future work could employ qualitative methods and conduct a finer-grained analysis of these micro-mechanisms.

Third, this work contributes to the efforts to lay the theoretical foundations needed to explain the role of financial investors emphasizing both economic and social returns in addressing grand challenges. In this regard, our paper is one of the first attempts to respond to a long strand of call for research on the topic by Austin et al. (2006), Short et al. (2009), and Nicholls (2010b), amongst others. As such, it provides a framework and background to theoretically and empirically explain the collaborative dynamics between social investors and SEs and their related outcomes. To the best of our knowledge, our paper is the first attempt to extend classical organizational and entrepreneurship theories to the domain of financing of social ventures. Further research would need to investigate the ethical and moral challenges that SEs, and VP investors, face when addressing inequality.

Finally, this piece of research makes important contributions for practitioners, both at SEs and VP level. More specifically, being one of the first quantitative and large-scale studies addressing the question as to whether VP investors are indeed effective tools when dealing with the grand challenge of income inequality, our results suggest that VP may be an actual tool in the eradication of inequality and that SEs do benefit from the financial and non-financial resources that VP investors offer. The identification of this positive relationship might promote and stimulate further the VP sector and the investing activity in SEs.

Although this paper makes important contributions at academic and practitioners level, it bears its own limitations. First, we used data on SEs financed by one VP investor, i.e., Ashoka. Despite Ashoka is one of the oldest and most relevant VP investors in the VP field, our results might be investor-specific. Although conscious of this bias, we appreciated key advantages of using Ashoka, vis-à-vis other VP investors. Such advantages relate to the depth and quality of the data needed to answer our research questions, which required availability of the exact date of the investment required to test our hypotheses.

To assess the reliability of Ashoka as a proxy for the broader VP investing space, we conducted interviews with top-managers of Ashoka and the Asian Venture Philanthropy Association, which gathers together VP investors active in the region. These interviews confirmed the active work of other similar financial institutions for SEs in the region. This gave us additional confidence that the effects of Ashoka's funded SEs on inequality that are identified in this paper are a valid proxy of a more collective investing activity of VP investors.

Second, because the empirical analysis focuses on India, our results may be country-specific. The advantage of considering India relates to this country being the top recipient of of Ashoka's number of investments. On the other hand, because socio-economical-political differences between countries may affect results, we decided to conduct a one-country study and embrace a state and municipality level analysis, which significantly reduces the potential bias from unobserved heterogeneity at country and regional level. Future research might extend to other countries our analysis and set up country level comparisons to appreciate potential differences between and within geographies.

Third, as discussed in the methodological section, the construction of the counterfactual group of SEs (which was used to test Hypothesis 1) relies on specific assumptions about the activities of the SEs in control municipalities and the local context characteristics. Despite the construction of the counterfactual does not reflect an ideal procedure, we believe we attempted to make a reasonable use of the available data. Considering the lack of available censuses at organizational level, in particular in the case of SEs, this allows for a reasonable empirical design. In this respect, we test for differences among the two groups of municipalities included in our analysis and find no differences between them; this suggests that potential endogeneity concerns related to selection of the municipalities with VP investments are taken largely into account. To further corroborate this, we assessed the extent to which the SUTVA and CTA assumptions underlying the DiD methodology are respected. Our detailed assessment of the challenges presented by a DiD approach is in favour of possible causal inferences from the interpretation of our results. Yet, further work, which could include several research institutions and researchers across the world, could ideally develop a multi-level database including in-depth data on both the activities and

effectiveness of SEs and of those organizations that are non-SEs. One promising way forward on this identification issue is to find sources of exogenous variation in social investments, such as national or regional policies affecting social investments, unexpected diplomacy crisis that bring to military conflicts, and other similar research design possibilities.

Despite these limitations, as the challenge of assessing the effectiveness of the activity of SEs that receive funds from VP investors, this paper offers one of the first perspectives useful to deeply understand the relationship between VP investors and the SEs they finance in an effort to alleviate income inequality, thus stimulating new frontiers for future work on the effectiveness of hybrid organizations in tackling grand challenges.

COMPLIANCE WITH ETHICAL STANDARDS

No funding has been received to develop the submitted research project.

Ethical approval: This article does not contain any studies with human participants or animals performed by any of the authors.

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TABLES AND FIGURES

Table 1: Descriptive Statistics and Correlation Matrix

	Mean	SD	Min	Max	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) Income Inequality	0.54	0.05	0.38	0.77	1.00							
(2) VP Investor	0.50	0.50	0.00	1.00	0.19**	1.00						
(3) Time	0.50	0.50	0.00	1.00	-0.11**	0.00	1.00					
(4) Population (in 100 thousands)	6.98	4.10	1.27	30.24	0.12**	0.00	0.00	1.00				
(5) Education Attainment	1.65	0.15	1.28	2.09	-0.21**	0.00	0.00	-0.00	1.00			
(6) Employment	0.41	0.04	0.28	0.52	0.00	0.00	0.00	-0.36**	-0.02	1.00		
(7) Industry	0.34	0.04	0.24	0.43	0.04	0.00	0.00	-0.22**	-0.25**	0.91**	1.00	
(8) Municipality NGOs	48.20	16.68	7.00	84.00	0.01	-0.17**	0.17	-0.04	0.16**	0.18**	0.18**	1.00

N=632

Significance level: ** p<0.01; * p<0.05; + p<0.1

Table 2: Results Difference-in-Difference for Income Inequality				
PRE-Investment	*Income Inequality (Gini-coefficient)*	*Standard Error*	*|t-value|*	*P>|t|*
Non-Financed (VP Investor=0)	0.392			
Financed VP Investor=1)	0.430			
Difference (Fin. vs. Non-Fin.)	0.038**	0.006	6.060	0.000
POST-Investment	*Income Inequality (Gini-coefficient)*	*Standard Error*	*t-value*	*P>|t|*
Non-Financed (VP Investor=0)	0.390			
Financed VP Investor=1)	0.400			
Difference (Fin. vs. Non-Fin.)	0.010*	0.004	2.260	0.024
DiD	**-0.028****	**0.007**	**3.736**	**0.000**

N=632
R-square=0.20
Means and Standard Errors are estimated by linear regression
Control covariates are included
Robust Standard Errors
Significance level: ** p<0.01; ** p<0.05; + p<0.1

Table 3: Ordinary Least Squares for Income Inequality

	(Model 1) Full Sample	(Model 2) Full Sample	(Model 3) Full Sample	(Model 4) CIO=0	(Model 5) CIO=1
VP Investor		0.0232**	0.0378**		
		(0.00385)	(0.00623)		
Post-investment		-0.0153**	-0.00195	**-0.0137**	**-0.0287****
		(0.00352)	(0.00510)	**(0.0103)**	**(0.00584)**
VP Investor x Time			**-0.0279****		
			(0.00747)		
Population	1.65e-06**	1.55e-06**	1.51e-06**	-1.88e-07	1.43e-06*
	(4.65e-07)	(4.66e-07)	(4.66e-07)	(1.87e-06)	(7.11e-07)
Education Attainment	-0.0486**	-0.0407*	-0.0377*	-0.0165	-0.0470
	(0.0169)	(0.0167)	(0.0168)	(0.0643)	(0.0291)
School	0.0317**	0.0410**	0.0446**	0.00846	0.0240*
	(0.00780)	(0.00776)	(0.00787)	(0.0260)	(0.0110)
Employment	0.197+	0.178	0.171	0.325	0.165
	(0.114)	(0.114)	(0.112)	(0.516)	(0.189)
Industry	-0.274*	-0.289*	-0.294*	-0.232	-0.164
	(0.136)	(0.131)	(0.129)	(0.418)	(0.208)
Municipality NGOs	0.0265**	0.0387**	0.0435**	0.0219	0.0260*
	(0.00811)	(0.00822)	(0.00863)	(0.0217)	(0.0104)
Constant	0.482**	0.421**	0.392**	0.443*	0.490**
	(0.0525)	(0.0542)	(0.0569)	(0.169)	(0.0806)
Observations	632	632	632	74	242
R-squared	0.101	0.177	0.196	0.081	0.157
Robust Standard Errors	YES	YES	YES	YES	YES
F	10.15**	14.08**	14.32**	0.955**	6.514**

Robust standard errors in parentheses; ** p<0.01, * p<0.05, + p<0.1

Figure 1: Difference-in-Difference for VP Investor and Income Inequality