THE SOCIAL IMPACT OF PHILANTHROPIC VENTURE CAPITAL BACKED SOCIAL ENTERPRISES

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ABSTRACT

Building on prosocial and compassionate organizing, this work quantifies the inequality impact of social enterprises (SEs) receiving philanthropic venture capital (PhVC). Using Ashoka's portfolio of Indian SEs and IPUMS data on India, we find that a) Indian municipalities with PhVC backed SEs have a higher decrease in inequality, and b) those PhVC backed SEs contributing mostly to a higher decrease in inequality have a dominant prosocial orientation.

INTRODUCTION

Social enterprises (SEs), solve local social problems with global relevance (Santos, 2012). By adopting a market-based approach, social entrepreneurship aims at creating social change (Mair and Marti, 2009). Social entrepreneurship has high potential but access to finance is a barrier to its development (Bosma and Levie, 2009; Roberts and Woods, 2005). Philanthropic Venture Capital (PhVC) seeks to address such challenges by providing capital as in traditional VC (Gompers and Lerner, 2001), and non-financial support. Addressing inequality problems is relevant for SEs and PhVC since it can create social dysfunctions (Wilkinson and Pickett, 2009).

We know that ventures benefit from VC funding (Gompers and Lerner, 2000) and PhVCs select SEs that are entrepreneurial (Miller and Wesley II, 2010). We ask: what are the inequality implications of SEs backed by PhVC investors? We also know SEs and PhVCs have a prosocial orientation. If organizational characteristics explain the heterogeneous effect of VCs (Basu et al., 2015), we ask: does organizational orientation affect the SE-PhVC inequality relationship?

We use prosocial and compassionate organizing theory (Dutton et al., 2003; Miller et al., 2013) and develop a set of hypotheses which are tested with data on Indian SEs receiving funding by Ashoka. Results show that municipalities where PhVC backed SEs are active have a decrease in inequality; this effect is stronger when these SEs have a dominant prosocial orientation.

We contribute to theory and practice. Theoretically, we contribute to the literature on prosocial organizing and the micro-geography of social investing. From a practitioners' perspective, we shed light on the effectiveness of social investors.

HYPOTHESES DEVELOPMENT

Prosocial organizing stems from the psychological literature on prosocial behaviour (Brief and Motowidlo, 1986). This includes actions e.g., helping, donating, cooperating, and volunteering which unfold to produce and maintain the well-being of others (Grant, 2008; Grant and Berry, 2011; Grant and Sumanth, 2009) and are not in contrast with self-interest (De Dreu, 2006). At the organizational level, prosociality relates to compassionate organizing resulting in the "collective response to a particular incident of human suffering that entails the coordination of individual compassion in a particular organizational context (Dutton et al., 2003: 61)." This coordinated effort may take the form of social venturing (Shepherd, 2015) which combines a prosocial motivation with market-based mechanisms (Shepherd, 2015; Dacin, Dacin, and Matear, 2010).

Income inequality, i.e., the uneven distribution of income, causes severe social problems (Wilkinson and Pickett, 2009) and coupled with unevenly spread social mobility is a national-level institutional condition

that stimulate social entrepreneurship (Stephan, Uhlaner, and Stride, 2014). This contributes to inequality by empowering marginalized individuals and the creating job opportunities (Mongelli and Rullani, 2016; Dacin, Dacin, and Tracey, 2011). These are necessary elements for inequality alleviation and their knowledge allow social entrepreneurs to better identify the sources of the suffering. By doing so, SEs offer solutions that develop the communities' collective capacities (Shepherd, 2015; Selsky and Smith, 2004).

At the same time, the geographic dimension of SEs should consider that inequality needs coordinated and collaborative effort (George et al., 2016), while being embedded in a matrix of institutions (Miller et al., 2013). Berrone et al. (2016) find that the effectiveness of such organizations increases where the financial sector is particularly developed. Also, the broader set of financial and non-financial resources offered by VCs, including managerial advice, and infrastructure for areas e.g., product development, manufacturing, marketing, and sales, professionalization and access to a network of co-investors (Hochberg et al., 2007; Maula, 2007; Hsu, 2004; Hellmann and Puri, 2002) are ok key importance for success.

Similar principles are adopted by PhVC (Letts et al., 1997) which combines a prosocial motivation of investing with an economically oriented mind-set (Scarlata and Alemany, 2010). The fundamental reason for the PhVC activity lies in the perceived engagement of helping needy entrepreneurs (Allison et al., 2014) with investing seen as an act of "caring" for the combination of social needs that the PhVC investor and the SE seek to address. PhVC is an institutional prosocial endorsement for the local prosocial efforts of the SE. This endorsement amplifies the effects of the prosocial activity of SE on inequality and unfolds thanks to the PhVC non-monetary services. In light of these arguments, the following hypothesis is formulated:

Hypothesis 1 (H1): *Municipalities where a social enterprise has received financial support from a PhVC investor are characterized by lower economic inequality.*

PhVC investments signal complementarity between the prosocial intent of the investor and of the backed SE. The PhVC's investment is a third party authentication of the SE's prosociality. As a matter of fact, ventures do benefit from the reputations of venture investors (Hsu, 2004; Dimov, Shepherd, and Sutcliffe, 2007). Because the PhVC activity seeks to scale investments up to maximize the backed SEs' effectiveness (Scarlata and Alemany, 2010), the PhVC's investing activity generate reputational consequences that the SE benefits from. This strengthens the idea that the localized prosocial activity of the SE (Santos, 2012) is amplified by the international and/or global recognition of the PhVC firm, leading to the following hypothesis:

Hypothesis 2 (H2): *Municipalities where a social enterprise with a dominant prosocial orientation has received financial support from a PhVC investor are characterized by lower economic inequality.*

METHOD

Sample	Ashoka's funded SEs in India. For each SE, operations' location was identified and a) linked with IPUMS censuses available for India (1987, 1993, 1999 and 2004), b) divided in four ranges: 1982-1986, 1987-1992, 1993-1998, and 1999-2004. Each SE was assigned to two ranges, i.e., before and after investment. To deal with inequality reduction happening otherwise, a counterfactual was created and classified in group #1 (municipalities with Ashoka SEs (*Financed*)) and group #2 (municipalities – in the same state - with no Ashoka SEs in the same period (*Non-Financed*)). Results reflect the change in inequality of *Financed*, pre and post Ashoka investment, in comparison to *Non-Financed*, which is any other municipality in the same state without an Ashoka SE. The final sample is: 158 Indian-based Ashoka funded SE-operation-municipality combinations, 158 municipalities with no financing from Ashoka. Total: 316 observations pre and post investment.
DV	Inequality, measured as income inequality through the Gini coefficient. IPUMS data on income per household, adjusted by size was used. Ashoka-Indian SEs received funding in any year in the 1987-2004 range. We assume that a SE receives Ashoka investment in a specific year; the Gini variation is estimated at municipality level before and after the year of the investment.
IVs	H1: *PhVC investment,* dummy (1 = municipality with an Ashoka-funded SE, 0 otherwise). To capture the pre-post investment change, a dummy *Time* was included (0 = period before Ashoka's investment, 1 = after this). H2: *Prosocial Orientation*, dummy (1 = Ashoka's funded SE has a dominant prosocial orientation, 0 otherwise); measured using the SE's mission statement as per Brief and Motowidlo (1986) and Renko (2012).

Controls (municipality level)	*Education Attainment*: aggregate level of schooling completed (1 = "less than primary education completed," 4 = "university completed"). *Employment: p*ercentage of individuals, at least, part-time employed. *Population:* inhabitants registered. *Industry:* share of employed individuals working in labor-intensive industries; data is derived from IPUMS and combined with Ashoka, resulting into twelve groups approximately conforming to ISIC.
Statistical Analysis	H: Difference-in-Difference (DiD) method. Key assumption: the treatment received by one group (*Financed*) is exogenously determined. We do not aim to estimate a causal effect of the PhVC backed SEs and the inequality of the municipalities these serve but to explore whether there is an association between the PhVC backed SEs and their prosociality related to inequality. H2: Ordinary Least Squares (OLS) regression.

RESULTS

Table 1 reports descriptive statistics and correlations. Table 2 presents DiD estimates for H1: Gini in municipalities with Ashoka-funded SEs (Financed) pre-investment is 0.625, for Non-Financed 0.598. The difference (2.7% points) is significant at 1% (t=4.812). Compared to other municipalities in the same state, decrease in inequality is higher with Ashoka-financed SEs. After the Ashoka investment, both Financed and Non-Financed municipalities have a decrease in inequality with Gini-dropping to 0.596 for Non-Financed and 0.606 for Financed, significant at 1% (t=2.075). While both groups have a drop (respectively, 0.002 for Non-financed and 0.019 for Financed), the Financed municipalities have a significant decrease of 1.7% compared to the decrease of Non-Financed (t=-2.313). Figure 1 depicts these effects and shows PhVC backed SEs operate in municipalities with a decrease of income inequality, thus supporting H1. Table 3 includes H2 results. Model 4 shows a negative but not significant effect of Time; Model 5 shows a negative and significant effect for Time (-0.022, p<0.01), suggesting a significant difference between SEs with a commercial and a prosocial orientation. The average greater contribution to inequality is explained by Ashoka funded SEs with a dominant prosocial orientation compared to commercial oriented SEs, supporting H2.

Overall, SEs backed by PhVC investors: i) are associated with significant decrease of income inequality compared to those that are not ii) those SEs with a prosocial orientation are responsible for the overall decrease in income inequality in the municipality where they operate compared to those with commercial orientation.

DISCUSSION AND IMPLICATIONS

This paper has questioned if SEs backed by PhVCs affect inequality and identified which PhVC backed SEs contribute more to this. Data from Ashoka's portfolio of Indian SEs and IPUMS show that municipalities with PhVC backed SEs have lower inequality after investment; such a decrease is significantly lower for those municipalities where SEs did receive PhVC backing. SEs that mostly contribute to a higher decrease of inequality are prosocially oriented.

Our paper contributes to the literature on prosocial organizing and the micro-geography of social investments. When SEs have prosocial and commercial orientations, the one that allows the accomplishment of the SEs' main prosocial objective towards inequality is their prosocial orientation. We do not find evidence that commercial orientation leads to significant inequality results. This has implications for academics and practitioners as it suggests that contexts with severe social problems need more SEs and PhVC investors with a "social heart."

Second, this is a first attempt to assess the effectiveness of PhVC investing. By building a unique dataset with Indian based SEs that got funding from one of the oldest and most important PhVCs, and integrating this sample with micro-level data on Indian municipalities such organizations serve, we are responding to the long strand of call for research by Austin et al.(2006), Short et al. (2009), and Nicholls (2010), amongst others.

Third, being one of the first quantitative, large-scale studies on PhVC, our results do suggest that when SEs are backed by PhVC investors, the contexts where these operate see benefits. Our work further indicates that PhVC investors have a key role to play in the inequality process, further promoting and stimulating the PhVC sector.

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Table 1: Descriptive Statistics and Correlation Matrix

	Mean	SD	(1)	(2)	(3)	(4)	(5)	(6)	(7)
(1) Inequality	0.54	0.05	1						
(2) Social Investor	0.50	0.50	0.19***	1					
(3) Time	0.50	0.50	-0.11***	0.00	1				
(4) Population (thousands)	6.98	4.10	0.12***	0.00	0.00	1			
(5) Education Attainment	1.65	0.15	-0.21***	0.00	0.00	0.00	1		
(6) Employment	0.41	0.04	0.00	0.00	0.00	-0.36***	-0.02	1	
(7) Industry	0.34	0.04	0.04	0.00	0.00	-0.22***	-0.25***	0.91***	1

Figure 1: Difference-in-Difference between Social Investor and Income Inequality

Table 2: Results Difference-in-Difference for Income Inequality
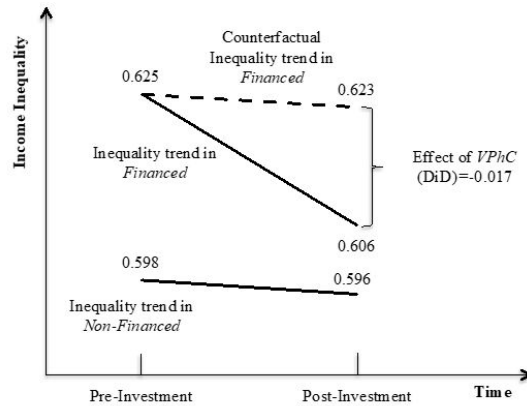
PRE-Investment	Inequality (Gini-coef.)	Standard Error	t-value	P>|t|
Non-Financed (Social Investor=0)	0.598	0.038	15.635	
Financed (Social Investor=1)	0.625	0.037	16.733	
Difference (Fin. vs. Non-Fin.)	0.027***	0.006	4.812	0.000
POST-Investment				
Non-Financed (Social Investor=0)	0.596	0.037	15.934	
Financed (Social Investor=1)	0.606	0.037	16.161	
Difference (Fin. vs. Non-Fin.)	0.010**	0.005	2.075	0.038
DiD	**-0.017****	**0.007**	**-2.313**	**0.021**

R-square: 0.13; Means and Standard Errors estimated by linear regression; Control covariates included; Robust Standard Errors; Significance level: *** p<0.01; ** p<0.05; * p<0.1.

Table 3: Ordinary Least Squares for Inequality

	(Model 1)	(Model 2)	(Model 3)	(Model 4)	(Model 5)
	Full Sample	Full Sample	Full Sample	Prosocial Orientation=0	Prosocial Orientation=1
Social Investor		0.02***	0.03***		
		(0.00)	(0.01)		
Time		-0.010***	-0.00	-0.01	-0.02***
		(0.004)	(0.00)	**(0.01)**	**(0.00)**
Social Investor x Time			-0.02**		
			(0.01)		
Population	1.86e-06***	1.86e-06***	1.86e-06***	-1.74e-07	1.72e-06**
	(4.71e-07)	(4.71e-07)	(4.71e-07)	(1.83e-06)	(7.02e-07)
Education Attainment	-0.06***	-0.06***	-0.06***	-0.04	-0.07**
	(0.01)	(0.02)	(0.02)	(0.01)	(0.03)
Employment	0.23**	0.24**	0.24**	0.47	0.22
	(0.11)	(0.12)	(0.12)	(0.42)	(0.19)
Industry	-0.24*	-0.24*	-0.24*	-0.32	-0.15
	(0.14)	(0.14)	(0.14)	(0.37)	(0.22)
Constant	0.61***	0.602***	0.59***	0.55***	0.61***
	(0.04)	(0.04)	(0.04)	(0.14)	(0.06)
Observations	632	632	632	74	242
R-squared	0.07	0.12	0.136	0.06	0.12
Robust Errors	YES	YES	YES	YES	YES
F	8.41***	11.64***	11.42***	0.69***	4.19***

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

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		(0.004)	(0.00)	**(0.01)**	**(0.00)**
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Population	1.86e-06***	1.86e-06***	1.86e-06***	-1.74e-07	1.72e-06**
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