

# Capital Structure and the Value of the Social Enterprise

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# Introduction

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- Social activities lead to the evaluation of stakeholders' preferences (Francois and Zabochnik, 2005; Kimbrough and Vostroknutov, 2015).
- Stakeholders of SEs look beyond financial results and present (partly) pro-social behaviour (Kimbrough and Vostroknutov, 2015).

- In practice, SEs:
  - choose between a wide range of existing legal forms (Young, 2012),
  - combine social and commercial goals, as well as financial resources, and globally institutional logics (Billis, 2010; Nyssens, 2006), within or across the non-profit, business, or government sectors (Austin et al., 2006).

- **Hybridity:**
  - The *double bottom line* (or just blended) orientation, such as public/social and market/business (Billis, 2010; Defourny and Pestoff, 2008; Low, 2006; Young and Lecy, 2014, Young, 2012).
- The hybridity of SEs results in a balance between social and commercial goals, access to specific financial resources and coordination efforts among stakeholders groups.

- The nature of activities of SEs is related to their **social mission**.
- However, **business activities** are essential to generate income in order to support the process of the social mission realisation.
- Therefore, all questions regarding the **capital structure and financial performance of SEs are fundamental** for their effective management and building a valid framework for these organisations in theory.

# Capital Structure and the Value of the SE

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What is the optimal mix of debt and equity that enables to **maximise the value** of an SE?

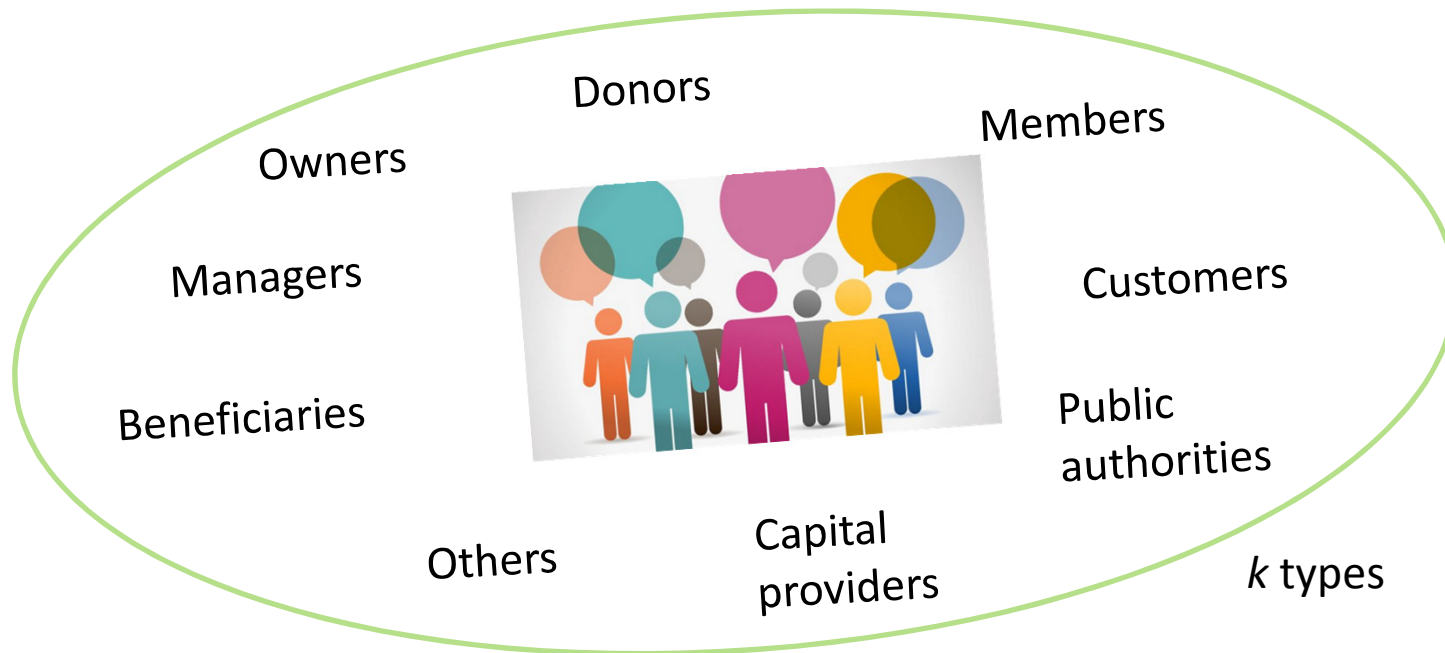


# The aim of this paper

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- A theoretical framework that:
  1. describes the SE,
  2. evaluates the value of the SE,
  3. captures the trade-off between social and economic preferences,
  4. searches for an optimal financial strategy how to run SEs.

# Value of the SE



- Each of them prioritises a contribution of two objectives:

$$U_i = \kappa_i O_{Social} + (1 - \kappa_i) O_{Business}$$



# Main ideas

S O C I A L  
E N T E R P R I S E

## The value of an SE

(Austin et al. 2006; Zahra et al. 2009);



- Stakeholders of an SE have both economic and social goals.
- Hence, the objective of the SE is formulated as a weighted sum of social value and economic value over the time

$$VSE = \sum_{t=1}^n \left[ \left( \sum_{i=1}^k w_i \kappa_i \right) VS_t + \left( \sum_{i=1}^k w_i (1 - \kappa_i) \right) VE_t \right]$$

# Main ideas

S O C I A L  
E N T E R P R I S E

The value of an SE  
(Austin et al. 2006; Zahra et al. 2009);

$$VS + VE = VSE$$

Preferences of  
stakeholders (Lumpkin et  
al. 2013; Townsend and Hart 2008);

$$w_i \kappa_i VS + w_i (1 - \kappa_i) VE = VSE$$

- Each stakeholder  $i$  collaborates towards the mutual benefit of the SE with weight  $w_i$ .
- His relative preferences for economic and social values are defined by  $\kappa_i$ , and will affect the optimal ratio of debt to equity and the size of social output.

# Main ideas

S O C I A L  
E N T E R P R I S E

The value of an SE  
(Austin et al. 2006; Zahra et al. 2009);

$$VS + VE = VSE$$

Capital structure decisions  
are fundamental factors;  
**max VSE** (e.g. Choate 1997; Lin and  
Chang 2011; Myers 1984; Yu and Aquino 2009);

Preferences of  
stakeholders (Lumpkin et  
al. 2013; Townsend and Hart 2008);

$$w_i \kappa_i VS + w_i (1 - \kappa_i) VE = VSE$$

# Value of the SE

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$$VSE = \sum_{t=1}^n [a(VS)_t + (1 - a)(VE)_t]$$

- $VS_t$  - present social value of the SE in period  $t$ ,

$$VS_t = (Q_s)_t$$

- $VE_t$  - present economic value of the SE in period  $t$ ,

$$VE_t = \left( \frac{CF_t}{\prod_{t=1}^n (1 + WACC_t)} \right)$$

# Value of the SE

$$\max_{D_t, E_t} VSE = \sum_{t=1}^n [a(Q_s)_t + (1 - a) \left( \frac{CF_t}{\prod_{t=1}^n (1 + WACC_t)} \right)]$$

$$\text{s.t. } E_t + D_t = E_{t-1} + NE_t + D_{t-1} + \Delta D_t + \pi_t - \text{div}_t + DS_t$$

- Based on yearly (or periodical) financial statement, we use  $E_0$  and  $D_0$ .
- Further, we search for  $E_t$  and  $D_t$ .
- Finally, we calculate  $\frac{D_t}{E_t}$  and  $VSE_t$ .

# The multi-stakeholder's problem



- $t = 1$

$$\begin{aligned} \max_{D_1, E_1} VSE &= (1 - a) \left( \frac{CF_1}{(1 + WACC_1)} \right) + a(Q_s)_1 \\ \text{s.t. } E_1 + D_1 &= E_0 + NE_1 + D_0 + \Delta D_1 + \pi_1 + DS_1 \end{aligned}$$

- $t = 2$

$$\begin{aligned} \max_{D_1, D_2, E_1, E_2} VSE &= (1 - a) \left( \frac{CF_1}{(1 + WACC_1)} + \frac{CF_2}{(1 + WACC_1)(1 + WACC_2)} \right) + a(Q_{s_1} + Q_{s_2}) \\ \text{s.t. } E_1 &= E_0 + NE_1 + \pi_1 + DS_1 \\ E_2 &= E_1 + NE_2 + \pi_2 + DS_2 \end{aligned}$$

- $t = T$

□ *We have 2T conditions*

- 2 WISEs that provide financial data for 7 years.
- Parametrisation of functions describing:
  - cost of debt,
  - capital subsidies,
  - labour.
- Calibration:
  - $\zeta$ , the weight of social production in total production,
  - prices,
  - production costs.

# Analyses (at the moment)



			VSE	change
Social production	$\zeta$	-1%	99.72%	+/- 0.3%
		+1%	100.27%	
Commercial price	$p_c$	-1%	100.00%	+/- 0.3%
		+1%	99.72%	
Commercial cost	$c_c$	-1%	100.00%	+/- 0.3%
		+1%	100.00%	
Social cost	$c_s$	-1%	100.45%	+/- 0.5%
		+1%	99.52%	
Social benefits	$B_s$	-1%	98.26%	+/- 2%
		+1%	101.74%	
	$a_1$	-1%	91.66%	+/- 9%
		+1%	108.91%	
	$a_2$	-1%	107.26%	+/- 8%
		+1%	92.45%	
Power of SV	$a$	-1%	99.00%	+/- 1%
		+1%	101.00%	

- Net social contribution:

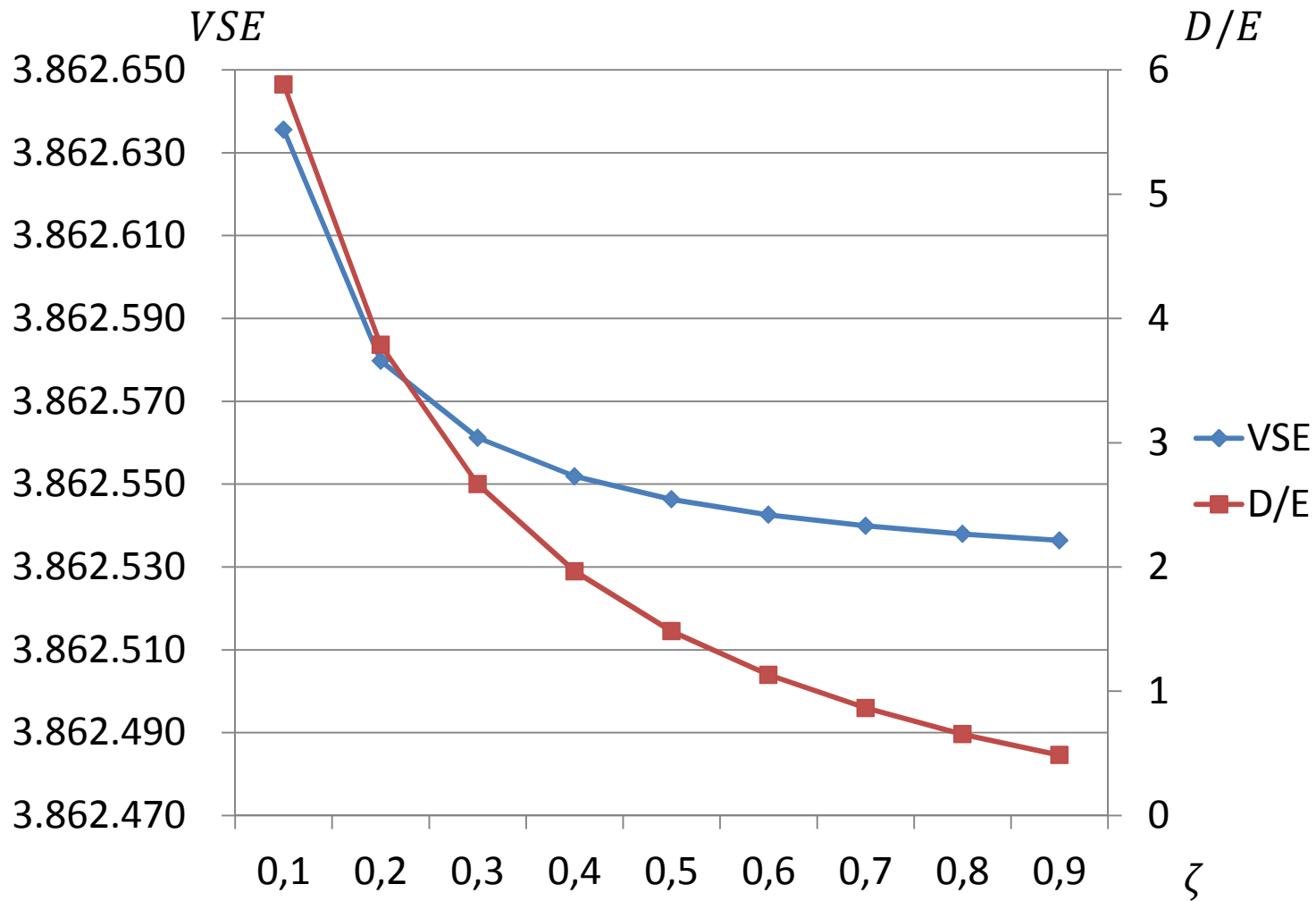
$$Q_s = B_s q_s^{a_1} - c_s q_s^{a_2}$$

- Power of SV

$$a = \left( \sum_{i=1}^k w_i \kappa_i \right)$$



# $VSE$ and $\frac{D}{E}$ w.r.t. changes in $\zeta$





**SEs fulfilling the same social goals and operating in the same sector can be very different.**

- They can differ in their capital structures, resulting in differences in the VS and VE.



**Following optimal stages, SEs are on their path to long-term success.**

- Applying long-term strategies SEs are on their path to long-term success.

Thank you for your attention

