



Research article

Spreading entrepreneurial news—investigating media influence on social entrepreneurial antecedents

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Abstract: Attitude towards social entrepreneurship (SE), i.e. the positive or negative evaluation of this career and perceived behavioral control (PBC), i.e. the conviction that one is able to succeed as a social entrepreneur have been identified as suitable individual predictors for SE-intention, i.e. the intention to found an enterprise with the aspiration to generate revenue and address social problems. Recent research found evidence for external influences on attitudes, PBC, and SE-intention like culture or economic and political circumstances, however, to date no study has been conducted on the extent to which attitudes and PBC can be altered by external media-related influences. Investigating two students' samples ($N_{total} = 345$), a randomized 2×2 experimental design was used to examine the influence of newspaper articles on SE-related attitudes and PBC. The experiment featured four different conditions, namely articles presenting rather positive (1) and negative (2) information on SE (attitude condition) and articles featuring rather successful (3) or unsuccessful (4) role-models (PBC-condition). The participants were randomly assigned to one attitude and one PBC-condition each. I hypothesized that articles (i) conveying rather positive or negative information on SE (attitude condition) and (ii) featuring rather successful or unsuccessful SE-role models (PBC-condition) in and decrease SE-related attitudes and PBC. The MANCOVA-results suggest that there were higher SE-related PBC levels in the successful role model condition compared to the unsuccessful one. No effect was found for the attitude condition. Despite the study basing on convenience sampling, evidence for the influenceability of SE-related PBC by role models is provided. Future research should investigate the stability of the effect and examine other media forms like television or social media. The findings reveal that presenting appropriate SE role-models can be an effective part of SE-education and governmental programs.

Keywords: social entrepreneurship; media; experiment; Theory of Planned Behavior

1. Introduction

In the last decades, several new forms of entrepreneurial activity evolved (Johannisson and Nilsson, 1989; Dean and McMullen, 2007). Despite notable differences, one essential similarity is the combination of two aspects, namely (i) the aspiration to generate a net profit as in traditional entrepreneurship and (ii) a second mission, e.g. the generation of social value by the means of entrepreneurial activity (Thompson et al. 2011). This so called double-bottom line (Tracey and Phillips, 2007) is one of the key definitional elements of social entrepreneurship (SE).

Entering the scientific community in the 1980s, SE gained more and more popularity amongst a wide variety of scientific disciplines resulting in a growing amount of literature published in various journals (Sassmannshausen and Volkmann, 2018). However, despite the high total number of publications, empirical and hypotheses-testing research is still lacking (Saebi et al., 2019; Short et al., 2009). Only recently did the intention to found a social enterprise emerge as a promising field to fill the empirical gap in SE-research and it was shown that numerous constructs like socio-demographics, personality dispositions, and cognitive variables influence the intention to found a social enterprise (Hockerts, 2017; Nga and Shamuganathan, 2010). Two of the most frequently studied cognitive antecedents are attitudes towards SE and perceived behavioral control which are based on the Theory of Planned Behavior by Ajzen (1991) and have been empirically shown to relate to SE-intention (Kruse, 2020). Even though, it is widely claimed that by boosting cognitive SE-intention antecedents like attitudes and perceived behavioral control, the motivation to found a social enterprise can be fostered (Forster and Grichnik, 2013), this implicit assumption of causality remains doubtful, as the vast majority of empirical SE-intention research is based on self-reports. Consequently, it is not entitled to draw causal conclusions from (Hsu et al., 2017). The same also applies for studies on external influences on SE-intention antecedents. Despite claiming that cultural, economic, and political circumstances affect SE-intention formation, the corresponding studies are usually conducted using non-experimental settings (Kedmenec and Strašek, 2017; Kibler et al., 2014; Jaén et al., 2017). Even though it is enormously difficult to manipulate culture, economy, and politics in an experimental manner, influences that are relatively easy to manipulate, yet important for one's career choice like media (Valkenburg and Peter, 2013) and their impact on SE-intention antecedents are yet to be investigated. However, a better understanding of media influences on the career as a social entrepreneur is vital not only for research but also a wide variety of SE-education programs intending a positive change of SE-actions, SE-intentions and its antecedents.

Thus, the current study aims at providing first evidence on the influenceability of SE-intention antecedents. I employ a randomized 2×2 experimental design to investigate the extent to which attitudes to SE and SE-related-perceived behavioral control (PBC) can be influenced by mock newspaper articles on the basis of a sample of high school and university students ($N_{total} = 345$).

In the following sections, I will provide an overview of the theoretical background of the study, outline the methods as well as the results, discuss the findings, and derive theoretical and practical implications.

2. Theoretical background

2.1. *Social entrepreneurship—an overview*

The general concept of linking entrepreneurial behavior and the aspiration to create social value, which is the core of SE, was first outlined by Young (1983). Even though it took some time for the concept to evolve and gain visibility in the scientific community, SE is now increasingly considered an institutionalized form of entrepreneurship research and of interest for scholars from business, psychology, sociology, and several other fields (Sassmannshausen and Volkmann, 2018; Kraus et al., 2014). One of the reasons for the wide-spread interest in SE is the high practical relevance of the topic. In the face of a growing social inequality worldwide (Milanovic, 2011), welfare-cuts in developed nations, and an increasing danger of persisting social unrest (Wilkinson and Pickett, 2009), SE promises to be an effective tool in two ways. First, SE has the potential to make up for governmental inefficiencies particularly when tackling social problems of marginalized groups, e.g. former drug addicts (Reis and Clohesy, 2001; Perrini et al., 2010). Second, as the aspiration of social enterprises is to generate financial profit on their own and not to rely on donations like NPOs, they are considered more sustainable and less susceptible to political influence than a nonprofit organization (Dupuy et al., 2016). Consequently, the unique aspect of a social enterprise is its perception as a hybrid enterprise that tries to solve social problems with entrepreneurial means on the basis of an elaborated business plan resulting in the generation of a net financial income (Justo et al., 2010). One example for an internationally acknowledged social enterprise is the Grameen Bank founded by the later Nobel Peace Prize Laureate Muhammad Yunus issuing micro credits in rural areas (Yunus, 1999).

Despite the high practical relevance of the topic and the growing amount of scientific interest and publications, a comprehensive scientific basis to build further SE-research on is yet to emerge. One of the most obvious shortcomings in SE-research is that a mutually accepted definition of SE is not yet to be found (Wry and York, 2017) regardless of the majority of papers in SE being of a theoretical nature (Lee et al., 2014). Another limitation in SE so far is the focus on case studies portraying social enterprises that have been more or less successful (Thompson and Doherty, 2006). Even though case studies can be an important method to acquire exploratory data and build models (Perrini et al., 2010; Rowley, 2002), there is a high risk of suffering from an “inability to build cumulative knowledge” similar to early research in traditional entrepreneurship (Venkataraman, 1997).

Given the long persistence of the call to put SE-research on a more solid quantitative basis (Short et al., 2009), the investigation into antecedents of SE-intention emerged as one promising field with a more rigorous empirical and hypotheses-testing approach. Until now, several antecedents of SE-intention have been identified, e.g. socio-demographics like gender or age (Chipeta et al., 2016), personality dispositions like the Big Five personality traits (Nga and Shamuganathan, 2010) or a proactive personality (Prieto, 2011), and cognitive variables like PBC, attitudes, and social norms (Yang et al., 2015). Particularly the three last-mentioned and their underlying theory, the Theory of Planned Behavior (TPB) by Ajzen (1991), have emerged as frequently investigated antecedents of SE-intention.

2.2. The theory of planned behavior in social entrepreneurship

The TPB is one of the most applied theories to predict behavioral intentions and behavior in the field of entrepreneurship and beyond (Krueger et al., 2000; Armitage and Conner, 2001). The TPB has two central assumptions. First, the intention to perform a certain action is the best single predictor for actually performing this action. Second, the intention to perform a certain action is influenced by attitudes towards this behavior, subjective norms, and PBC. Attitudes are defined as the affective evaluations of the consequences of the targeted action. Whereas a (more) positive evaluation of the targeted action increases the probability that this action will be performed, a (more) negative evaluation decreases this probability. Subjective norms are defined as the social pressure built by important other people in a person's life to perform or not to perform a certain action. If friends and important family members are in favor of a targeted behavior, the probability to perform this behavior should increase whereas social disapproval should decrease this probability. PBC consists of two sub-constructs. On the one hand, self-efficacy is defined as the conviction that one is able to perform a targeted action, i.e. that one has the skills and capabilities required for this action. On the other hand, controllability is defined as the extent to which one can generally influence a certain action, i.e. the extent to which one has things in one's own hands. The TPB suggests that high levels of action-related self-efficacy and controllability increase the probability that the targeted action is performed whereas low levels decrease this probability. To further illustrate this, the TPB would state that the intention to found a social enterprise as a cognitive decision based on complex and reflective thinking is high for persons with a positive attitude towards SE, a supportive environment (subjective norms), and high levels of SE-related self-efficacy and controllability. These assumptions have largely been met in previous research and remained relatively solid over different occupations (Forster and Grichnik, 2013; Kruse et al., 2019) and cultures (Prabhu et al., 2017; Hockerts, 2017). However, despite the solid evidence on TPB-components influencing SE-intention, only very little is known about the extent to which the TPB-components evolving in a person him or herself, i.e. attitude towards SE and PBC are subject to external influences.

2.3. External influences on attitudes and perceived behavioral control

Despite several studies claiming that, e.g. "increasing people's perceived ability to act as social entrepreneurs has been identified as an appropriate measure for fostering SE-intention" (Kruse et al., 2019), methodologically rigorous, i.e. experimental research backing this assumption is, to the best of my knowledge, not present in SE. However, due to (i) the susceptibility of self-report data to biases and influences of uncontrolled variables and (ii) the unsuitability of non-experimental design for the investigation into the causality of intra-personal change in attitudes and PBC, experimental studies are needed to identify the suggestibility of these constructs by external influences (Hsu et al., 2017; Cook et al., 2002).

Reviewing the body of SE-research identifies two increasingly studied clusters of external influences on SE-intention and its antecedents, namely (i) culture and (ii) economic and political circumstances. Regarding culture, Jaén et al. (2017) could show that comparing different cultures, the North American and the Latino American cultures emerged as particularly feasible for SE-activity due to high levels of autonomy in North America and the strong presence of egalitarianism in Latino

America. Furthermore, Kibler et al. (2014) found that due to differences in the regional legitimacy of pursuing a career as an entrepreneur, the probability of entrepreneurial intention formation in the first place and also the actual founding of an enterprise in the end may vary. In addition, also the political and economic context can influence an individual's SE-intention and important antecedents. As Urban (2013) showed, the perception of the political and economic environment as favorable for SE-activity may increase the self-belief in the success of one's social enterprise and consequently the probability of SE-activity.

Despite the importance of these findings, one essential shortcoming is that none of these studies can claim to investigate causal relationships of cultural and political or economic circumstances on SE-intention and its antecedents. As they usually base on self-reports (Urban, 2013) or large scale analyses of survey data (Jaén et al., 2017), they cannot meet the criteria of experimental research that systematically varies conditions and may draw causal conclusions from the differences found (Hsu et al., 2017). However, as this is enormously difficult in culture, politics, and economics and drawing from other fields of research, I take the view that the media could be another important external influence on SE-intention antecedents on the one hand and relatively easy to manipulate in an experimental manner on the other hand.

Exposure to mass media like television and newspapers is a frequently studied external influence on constructs like attitudes and self-efficacy (Saleem et al., 2014). Saleem et al. (2014) claim that in the context of career-related information acquisition, the media "is frequently [...] used by youth to seek information regarding various professions, job market, and knowledge about the world around them" which makes it particularly influential in early stages of information search (Wroblewski and Huston, 1987). However, this influence is not only limited to the sheer access to information. Depending on the way of information presentation and framing, attitudes and also self-efficacy can be changed in a process Saleem et al. (2014) refer to as "shap[ing] [...] mind[s]". As a result, early exposure to media content with a positive or negative bias regarding, e.g. the SE career path can result in an early approval or disapproval of this career option and consequently an increased or decreased probability to attend SE-related education programs.

Going more into detail and reviewing experimental research on media influence on people's attitudes suggests that media coverage in general and newspaper articles in particular can exert an influence on opinions in different fields, e.g. politics (Coppock et al., 2018), mental illness (Dietrich et al., 2006), and gambling (O'Loughlin and Blaszczynski, 2018). The pattern emerging in these studies is that negative or positive attitudes presented, influence the subjects' opinion accordingly, i.e. if positive or negative attitudes are conveyed, readers have a more positive or negative attitude towards politics, mental health or gambling. This is in line with fundamental assumptions about cognitive information processing suggesting that schemas organizing a person's beliefs, values, and attitudes (Rokeach, 1973) are no filters for incongruent information. If salience and persuasiveness are high enough, new information can lead to a change in people's attitudes and consequently a new or altered schema (Bennett, 1981; Entman, 1989).

Given the abovementioned empirical evidence on attitude change through news coverage and the central assumptions of information processing theory, I derive the following hypothesis:

H₁: Exposition to a newspaper article conveying more favorable attitudes towards SE results in a more favorable SE-related attitude in an individual whereas exposition to a newspaper article conveying less favorable attitudes towards SE results in a less favorable SE-related attitude in an individual.

Furthermore, despite the number of studies on the suggestibility of PBC being considerably smaller compared to studies on attitudes, there is evidence on self-efficacy changes caused by mass media exposure, e.g. during AIDS-prevention campaigns (Agha, 2003). Additionally, the exposure to success-stories of young entrepreneurs has been shown to increase the self-efficacy of entrepreneurship graduates to pursue an entrepreneurial career themselves (Laviolette et al., 2012). This is in line with a central assumption of Bandura (1965) who states that exposure to role models can lead to a better performance by impacting a person's self-efficacy (Bandura, 1977a, 1977b).

Thus, considering previous studies and Bandura's work, I derive the following hypothesis:

H₂: Exposition to a newspaper article featuring rather successful SE-related role models results in a higher SE-related PBC in an individual whereas exposition to a newspaper article featuring rather unsuccessful SE-related role models results in a lower SE-related PBC in an individual.

3. Methods

3.1. Participants

In order to test my hypotheses, a total of $N = 345$ students was recruited. Subsample 1 consisted of 191 German high-school students attending classes 9 to 12. The mean age was 15.98 years ($SD = 1.05$ years). The sample consisted of 71 male and 120 female students. Subsample 2 consisted of 154 students from business-related fields at a German university. Their mean age was 22.35 years ($SD = 4.72$ years). 108 students were female, 44 were male and 2 considered themselves as diverse.

The reason for choosing two students' samples is two-fold. First, adolescents and young adults are considered to be particularly susceptible to media influences. As the Differential Susceptibility to Media Effects Model (DSMM) by Valkenburg and Peter (2013) suggests, young adults and adolescents rely more on media information than (older) adults due to (i) a generally high susceptibility to external and social influences and (ii) a limited direct and life experience. Second, a large proportion of social entrepreneurs has an academic background, i.e. a university degree or at least a matriculation standard (Wachner et al., 2015), as the majority of SE-courses and other support programs for nascent social entrepreneurs is offered at universities (Kickul et al., 2018; Cinar, 2019). Thus, I covered a sample that has a high susceptibility to media influence on the one hand and represents a potential resource of future social entrepreneurial activity on the other hand.

3.2. Design and procedure

I used a 2×2 randomized experimental design. The first factor included a negative or positive manipulation of the attitude towards SE and the second factor included the corresponding manipulation for PBC. The manipulation for attitude towards SE featured (i) the benefits of micro-lending (Yunus, 1999) as one form of a social entrepreneurial activity for rural Indian farmers (positive condition) and (ii) the negative impact (negative condition) on the local industry in regions where the social enterprise TOMS had operated (Taylor, 2018). The manipulation for PBC featured (i) the success story of the Nobel Peace Prize Laureate Muhammad Yunus (positive condition) and (ii) the story of the failed (negative condition) social enterprise PlayPumps (Borland, 2011). All four conditions were presented

as equally long newspaper articles in two equally well-known and established broadsheets in Germany and distributed randomly amongst the participants. Every participant received one attitude-related article and one article related to PBC.

The newspaper articles were included in a questionnaire that also featured a short description of what is meant by the terms “social enterprise” and “social entrepreneur” in the beginning and the scales to measure attitudes, PBC, and other variables (please see the next section for more details). In order to avoid biases and examine natural, i.e. valid reactions when assessing the data, a cover story was used to initially disguise the experimental manipulation. When constructing the cover story, which is a commonly used tool in psychological experiments (Aronson et al., 1985), I followed the guidelines by Amodio et al. (2007) to construct and use cover stories that effectively achieve their aims based on a logically consistent framing of the study. Consequently, the study was framed as an assessment of career-related variables in both samples. After the end of the assessment and in order to meet the ethical guideline of a post-experiment educational debriefing (Amodio et al., 2007), every participant was made aware of the real background of the story and advised to thoroughly check the career option as a social entrepreneur on him or herself before pursuing it. A summary of the subjects’ distributions in both samples can be seen in Tables 1 and 2.

Table 1. Summary of sample sizes by condition (high school students).

		PBC			
		ATT (-)		ATT (+)	
		-	+	-	+
<i>n</i>		47	52	44	48
Gender	male	19	18	15	19
	female	28	34	29	29
SEK	no	31	42	30	37
	yes	16	10	14	11

Note: PBC = Perceived behavioral control; ATT = Attitude towards social entrepreneurship; SEK = Social entrepreneurship knowledge; -: Negative manipulation; +: Positive manipulation.

Table 2. Summary of sample sizes by condition (university students).

		PBC			
		ATT (-)		ATT (+)	
		-	+	-	+
<i>n</i>		38	40	41	35
Gender	male	9	14	13	8
	female	29	26	26	27
	diverse	0	0	2	0
SEK	no	25	28	26	27
	yes	13	12	15	8

Note: PBC = Perceived behavioral control; ATT = Attitude towards social entrepreneurship; SEK = Social entrepreneurship knowledge; -: Negative manipulation; +: Positive manipulation.

3.3. Construct assessment

I used the Entrepreneurial Intention Questionnaire (EIQ) by Liñán and Chen (2009) as a validated and interculturally robust assessment of the TPB-components and adapted it for social entrepreneurship. Doing so, I replaced the term “entrepreneur” by the term “social entrepreneur” in each item. Thus, attitude towards SE, i.e. the perceived personal attractiveness of a career as a social entrepreneur was measured using five items ($\alpha_{\text{high school}} = 0.83$; $\alpha_{\text{university}} = 0.86$) on a seven-point Likert scale ranging from 1 (totally disagree) to 7 (totally agree). An example item was “Being a social entrepreneur implies more advantages than disadvantages to me”. PBC, i.e. the conviction to have the capabilities, skills, and control necessary to found and run a social enterprise was measured on a seven-point Likert scale ranging from 1 (totally disagree) to 7 (totally agree) with five items ($\alpha_{\text{high school}} = 0.87$; $\alpha_{\text{university}} = 0.77$), e.g. “To start a social enterprise and keep it working would be easy for me”. Both variables served as dependent variables.

Additionally, I included age, gender, SE-knowledge, and subjective norms as control variables in order to account for inter-sample differences. First, due to the different academic stages of the samples (high school vs. university) age differences occurred. Second, as two participants in the university students’ sample considered themselves diverse (an option not chosen by any of the high school students), gender was also included. Knowledge about SE was used as a covariate because previous SE-knowledge was shown to impact attitudes (Breuer et al., 2017) and PBC (Beasley and Bernadowski, 2019). The assessment of SE-knowledge was conducted with one item asking whether SE had already been known to the subjects before participating in the current study. Finally, subjective norms measured with the EIQ were used to control for external social influences that have been shown to impact career-related decisions and attitudes in entrepreneurship (Zellweger et al., 2011).

3.4. Statistical analyses

After checking both samples for variance homogeneity using the Levene Test, the hypotheses were tested applying two multivariate analyses of covariance (MANCOVAs) that were conducted separately for each of the two samples. In both cases the MANCOVAs based on the general linear model.

4. Results

4.1. Pre-test

In order to confirm variance homogeneity as an important pre-condition when calculating MANCOVAs with the general linear model, the Levene-Test was conducted. As a result, no significant result emerged. Thus, there is no indication of variance heterogeneity

4.2. Hypotheses-testing

Empirically investigating my hypotheses, I will present the MANCOVA-results for the sample of high school students first and the sample of university students second.

There was no significant difference in the high school students' attitudes towards SE regarding the attitude condition ($F [1, 190] = 0.82, p = 0.37$). Thus, hypothesis H₁ received no support. Regarding the PBC condition, a significant difference of the high school students' levels of PBC emerged ($F [1, 190] = 7.22, p < 0.01$) confirming hypothesis H₂. According to Cohen (1988) the strength of this effect can be classified as small to modest (partial $\eta^2 = 0.04$). The effect is depicted in Figure 1. Another effect, which had not been hypothesized, emerged, as the attitude condition also had a small to moderate effect (partial $\eta^2 = 0.04$) on the levels of PBC ($F [1, 190] = 7.81, p < 0.01$). An illustration of this effect can be seen in Figure 2. No significant effects were found for the control variables. A summary of the complete analysis can be found in Table 3.

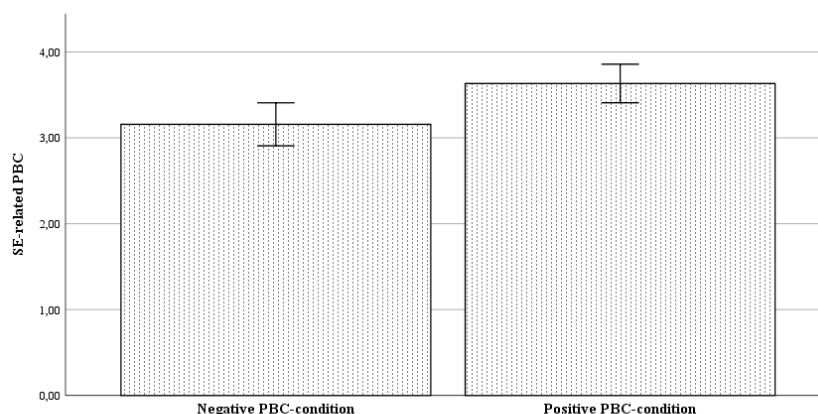


Figure 1. Differences of SE-related perceived behavioral control by perceived behavioral control conditions in the sample of high school students ($n = 191$). Note: PBC = Perceived behavioral control; error bars represent a 95% confidence interval.

Table 3. Summary of the MANCOVA-results for the sample of high school students ($n = 191$).

Variable	df	Squared Mean	F	p	partial η^2
Attitudes	1	1.05	0.82	0.37	0.01
PBC	1	9.43	7.22	0.00	0.04
Gender	1	0.31	0.23	0.63	0.00
SE-Knowledge	1	1.32	1.00	0.32	0.01
Subjective Norms	1	0.86	0.62	0.43	0.00

Disconfirming hypothesis H₁, no effect of the attitude condition on the university students' levels of SE-related attitudes was found ($F [1, 153] = 1.22, p = 0.27$). However, I found a significant effect of the PBC condition on the university students' levels of PBC in SE ($F [1, 153] = 5.09, p < 0.05$) which is in line with hypothesis H₂. The corresponding effect (partial $\eta^2 = 0.03$) can be labeled as small to moderate (Cohen, 1988) and is depicted in Figure 3. In this sample, no significant effects of the control variables emerged either. A summary of the complete analysis can be found in Table 4.

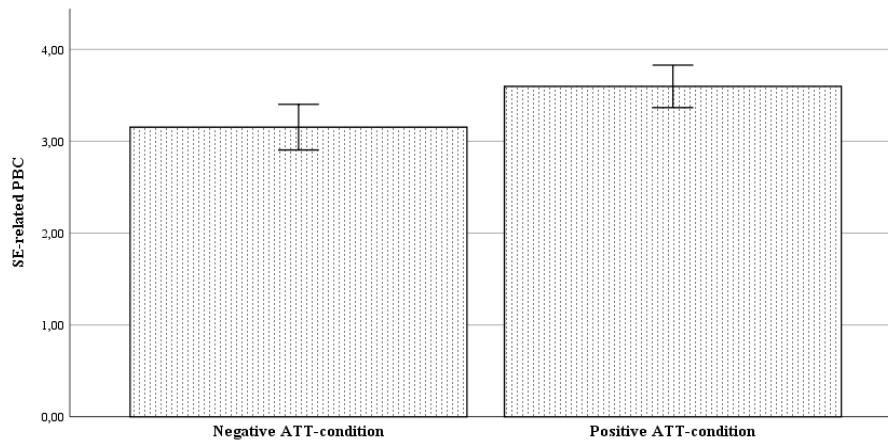


Figure 2. Differences of SE-related perceived behavioral control by attitude conditions in the sample of high school students ($n = 191$). Note: ATT = Attitude; error bars represent a 95% confidence interval.

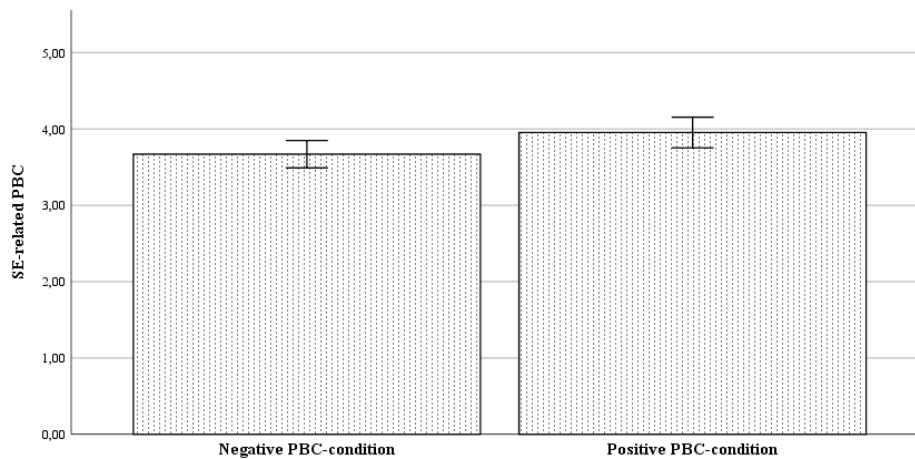


Figure 3. Differences of SE-related perceived behavioral control by perceived behavioral control conditions in the sample of university students ($n = 154$). Note: PBC = Perceived behavioral control; error bars represent a 95% confidence interval.

Table 4. Summary of the MANCOVA-results for the sample of university students ($n = 154$).

Variable	df	Squared Mean	F	p	partial η^2
Attitudes	1	1.47	1.22	0.27	0.02
PBC	1	2.71	5.09	0.04	0.03
Gender	1	2.55	1.80	0.18	0.01
SE-Knowledge	1	0.04	0.03	0.88	0.00
Subjective Norms	1	0.89	1.37	0.25	0.01

5. Discussion

The goal of this current study was twofold. First, I investigated the extent to which mock newspaper articles conveying rather positive or rather negative information on social entrepreneurial activity affect the attitude towards social entrepreneurship amongst high school and university students. Second, it was examined whether the presentation of successful or unsuccessful social entrepreneurial role models impacts the amount of SE-related PBC. In order to meet these two goals, an experimental setting with randomized groups was conducted and analyzed with MANCOVAs based on the general linear model.

Regarding hypothesis H₁ suggesting that the subjects' attitudes towards SE is affected by rather positive or rather negative newspaper articles on the topic, no significant effects for either sample were found. Thus, hypothesis H₁ was not confirmed, even though previous research suggested that an attitude change through media coverage and particularly newspaper articles is possible (Coppock et al., 2018; O'Loughlin and Blaszczynski, 2018). However, going more into detail, two reasons emerge that could have led to the current finding of insignificant effects on SE-related attitudes. First, despite the assumption that cognitive schemata are subject to change and do not act as filters for incongruent information (Rokeach, 1973), thus, make it possible that a given attitude can be changed by external influences (Entman, 1989), there is a need to differentiate between two forms of attitudes. Whereas purely cognitive schemata, e.g. an opinion, can be changed rather easily (Lutz, 1975), behavioral attitudes, i.e. attitudes linked to one's own future behavior, have been found to be much harder to change (Schulze et al., 2003). Consequently, as the attitude scale of the EIQ covers behavioral attitudes instead of sheer opinions on SE (e.g. "Being a social entrepreneur implies more advantages than disadvantages to me"), the newspaper article intervention could have been too soft to trigger behavioral attitude change. Second, considering our samples, only a minority stated that they had heard of SE before participating in the current study. Regarding the high school students, only 26.70% of the participants stated that they had some knowledge about SE and in the sample of university students, 31.61% indicated that they had some pre-knowledge about SE. As hypothesis H₁ suggested that the intervention can change an existing attitude, one necessary condition for this is the formation of an attitude on SE in the past with knowledge about SE as an important antecedent (Baron, 2004; Bradley et al., 1999). Consequently, one reason for the insignificant findings could be that the majority of participants in both samples lacked a profound knowledge of SE. This is a central difference regarding previous research on attitude change through media coverage that has been conducted on more widely spread topics like politics (Jerit et al., 2013) or gambling (O'Loughlin and Blaszczynski, 2018). As a result, the finding that H₁ received no support and no change in attitudes emerged signifies that despite a high susceptibility of students to media influence in general (Valkenburg and Peter, 2013), the presentation of one positively or negatively framed newspaper article on SE does not automatically result in a change of one's personal attitudes. The different kinds of attitudes (opinions vs. behavioral attitudes), the existence of pre-knowledge, and probably also other variables need to be taken into account to successfully and sustainably change SE-related attitudes.

For hypothesis H₂ stating that depending on the display of rather successful or rather unsuccessful SE-role models, participants' SE-related PBC in or decreases, I found significant results in both samples. Thus, hypothesis H₂ was confirmed. This is in line with the general theoretical assumption by Bandura (1965, 1977a) that role models have an impact on the self-efficacy of people regarding the performance of an action (in this case the self-efficacy to found a social enterprise). Moreover, my

results (i) confirm an earlier finding by Laviolette et al. (2012) showing that entrepreneurial role models may impact the career orientation of university students and (ii) extend this finding in two ways. First, I showed that even in an earlier career orientation stage (e.g. as a high school student) role models can impact career related PBC. Second, the influence of positive and negative role models is not only limited to traditional, i.e. commercially minded entrepreneurial careers but can also impact an SE-related career choice. Another important finding is the effect size of the newspaper articles in the PBC-condition due to two reasons. First, comparing high-school and university students, similar effect sizes emerged, i.e. the effect of SE-related role models is relatively similar for high school and university students. Second, despite the effect sizes ($\eta^2_{\text{university students}} = 0.03$; $\eta^2_{\text{high-school students}} = 0.04$) having only a small to moderate size according to Cohen (1988), there is a consensus in psychological research that the effect size benchmarks postulated by Cohen are (i) at times unrealistic considering that the majority of studies only yields small to moderate effects (Bosco et al., 2015) and (ii) decontextualized. Another study by Hill et al. (2008) recommended to judge effect sizes depending on the context they were achieved in and “with respect to empirical benchmarks that are relevant to the intervention” itself. Consequently, considering that the presentation of a newspaper article is an intervention that is relatively easy to design and spread compared to long-term SE-education programs and given the short time between reading the article and indicating one’s PBC in the current study that is considerably shorter than in previous studies (Laviolette et al., 2012), I argue that the effect size achieved is notable.

A rather unexpected finding was that the attitude condition also had an impact on the levels of SE-related PBC amongst the high school students in a way that subjects in the negative attitude condition had lower and subjects in the positive attitude condition had higher levels of SE-related PBC. One explanation for this could be a spillover effect of the attitude condition also impacting the levels of PBC. Already when formulating the TPB in 1991, Ajzen claimed that all three antecedents of intention, i.e. also attitudes and PBC, are not independent of each other but interrelated. Recently, this was confirmed in several studies on SE-intention formation (Yang et al., 2015; Tiwari et al., 2017; Kruse et al., 2019). As a result, and given the general human tendency to rather avoid cognitive dissonance, e.g. contrasting SE-related attitudes and PBC (Eagly and Chaiken, 1993) there could have been a positive and negative spillover effect. Considering that bearing and not simply dissolving cognitive dissonance is a complex process and demands high levels of self-reflection (Stone and Cooper, 2001), one can presume that high school students are more susceptible to spillover effects than university students due to their different stages of cognitive development (Sowell et al., 1999).

5.1. Implications for researchers and practitioners

The current study offers several implications that can be beneficial for future studies in the field and SE-practitioners:

First, this paper is, to the best of my knowledge, the first investigating the extent to which SE-related attitude and PBC are subject to media-related influence. It was shown that the latter but not the former was affected by newspaper articles. Thus, the assumption that SE-role models may impact the career decision of high school and university students received support. Despite the relatively small (decontextualized) effect sizes, I argue that, given the low expenditure of such a newspaper intervention and the consistency of the effect in two different students’ samples, featuring role models in the media

can serve as one measure to encourage students and increase the probability to consider SE a feasible career option. However, a more detailed investigation into the effect's consistency over different forms of media presentation, e.g. in television or social media that are particularly important amongst youths and younger adults (Cheung et al., 2011), is needed to provide more elaborated knowledge for policymakers and promoters of SE-activity on how to effectively and efficiently design adequate contents.

Second, considering that SE-research has been suffering from a lack of empirical evidence and that the empirical SE-research that is conducted does usually base on survey data that is subject to several biases, more experimental research is necessary. Despite acknowledgeable limitations in the current study that are outlined in more detail below, researchers should be encouraged to conduct more experimental studies in SE. This would benefit the whole field, as experiments allow causal conclusions, which are considered a very elaborated way of scientific knowledge acquisition (Hsu et al., 2017; Cook et al., 2002), and can complement the predominantly non-experimental research designs in SE. Consequently, this would result in a more solid empirical basis for SE-scholars to build on and a higher interdisciplinary recognition of SE as an established field of research.

Third, the finding that role models have an impact on SE-related PBC amongst high school and university students, highlights that SE-educators can benefit from the presentation of positive role models in SE-related courses and programs. Furthermore, given that scholarly entrepreneurial education in Germany is rather unsuccessful on the one hand (Fuchs et al., 2008) but large scale governmental support of entrepreneurship programs and initiatives can be remarked on the other hand (Fuerlinger et al., 2015), inviting a successful social entrepreneur to a high school can be a relatively small but very effective intervention to increase the number of potential social entrepreneurs.

Finally, as SE has been found to attract girls and women more than boys and men (Hechavarría et al., 2012; Gupta et al., 2019), female SE-role models could be particularly helpful to encourage females as a largely untapped group in entrepreneurship. This assumption is not only backed by role identification (Kagan, 1958; Krumboltz et al., 1976) and social learning theories (Bandura, 1977a, 1977b) but increasingly receiving empirical and entrepreneurship-specific support (Bosma et al., 2012). Consequently, these findings and the results of the current study should encourage policymakers and practitioners to support or implement more (gender-matched) mentoring programs in SE (Smith and Woodworth, 2012).

5.2. Limitations

First, despite investigating two different samples, namely high school and university students, both samples are not representative for the whole German student populations. Thus it is not possible to generalize the study's findings.

Second, due to administrative reasons at the school and the university where the study had been conducted, it was not possible to include a control group featuring articles on the two SE-antecedents without a positive or negative tendency. As control groups are beneficial to avoid response biases and control for exposition effects (Bailey, 2008), future studies should display a neutral SE-related article to make up for this limitation.

Third, using newspaper articles to manipulate SE-related attitudes and PBC is in line with previous research in other fields. However, as career decisions are complex cognitive processes and not mono-causal, a more contextualized investigation, e.g. including personal values or personality dispositions is necessary.

Fourth, the current study did only investigate the short-term but not the long term-effect of SE-related attitude and PBC interventions. Thus, longitudinal studies are needed to examine whether the effects emerge as stable over time.

6. Conclusion

Given the persistence of social problems in developing and developed countries worldwide, social entrepreneurship, i.e. the combination of entrepreneurial behavior for profit and the aspiration to solve social problems, is largely considered an effective and sustainable way to fight poverty, inequality, and related problems. However, despite previous research found that SE-related attitudes and PBC play a role in the SE-intention formation process, the extent to which both constructs can be influenced has not been thoroughly investigated so far. Using samples of high school and university students I applied a randomized 2×2 experimental design to examine the extent to which newspaper articles have an impact on SE-related attitudes and PBC. The MANCOVA-results suggest that the latter but not the former are subject to change. Despite the current study's limitations, e.g. using a convenience sampling method and the lacking possibility of employing a control group, I encourage SE-scholars to conduct more experimental research in the field in order to (i) make up for problems of cross-sectional studies dominating the empirical SE-landscape in general and (ii) investigate other forms of media and their influence like television or social media in particular. Furthermore, I argue that featuring SE-role models in newspaper articles has the potential to effectively and efficiently increase the SE-related self-efficacy of students given the effect sizes found. Thus, campaigns by policymakers and SE-promoters making aware of SE as a feasible career option could benefit from my findings. Consequently, the current study yields important results and implications for both, SE-researchers and practitioners.

Acknowledgments

I would like to express my gratitude to all participants of this study and particularly to Mr. Norbert Hildebrand who enabled me to conduct this research at Gymnasium Markneukirchen. Furthermore, I would like to thank Charlotte Thiede and Bastian Frenzel for their effort invested in data collection and data management. The current study received no funding.

Conflict of interest

The author declares that there are no conflicts of interest.

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