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To cite this article: Johan Graafland & Frank G. A. de Bakker (2021) Crowding in or crowding out? How non-governmental organizations and media influence intrinsic motivations toward corporate social and environmental responsibility, Journal of Environmental Planning and Management, 64:13, 2386-2409, DOI: [10.1080/09640568.2021.1873110](https://doi.org/10.1080/09640568.2021.1873110)

To link to this article: <https://doi.org/10.1080/09640568.2021.1873110>



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Published online: 19 Feb 2021.



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Crowding in or crowding out? How non-governmental organizations and media influence intrinsic motivations toward corporate social and environmental responsibility

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(Received 1 May 2020; final version received 26 November 2020)

Motivation crowding theory examines how external intervention may undermine intrinsic motivation. Earlier research has shown that intrinsic motivation plays a decisive role in fostering environmental performance of households and consumers, but that external pressures may “crowd out” the intrinsic motivations. Similar patterns could be expected in business organizations. However, only a few studies consider crowding effects of financial incentives on businesses’ intrinsic motivation to environmental responsibility, whereas none addresses the impact of external pressures from non-governmental organizations (NGOs) and media, despite their prominent role. This study aims to address this gap by offering a mediation framework explaining how pressures from NGOs and media affect intrinsic motivation. Empirically, the paper adds to the scant empirical research by estimating a model on a sample of 4,364 enterprises from twelve European countries. We find that NGOs and media pressures increase financial benefits from environmental responsibility, which in turn crowd in intrinsic motivation in enterprises.

Keywords: corporate social and environmental responsibility; intrinsic motivation; motivation crowding theory; NGOs; media

1. Introduction

Over recent decades, much research has been conducted to identify what motivates firms and their managers to engage with corporate social and environmental responsibility (CSER) (cf. Croson and Treich 2014; de Jong and van der Meer 2017; Muller and Kolk 2010), both in developed and developing countries (Ali, Frynas, and Mahmood 2017; Zhang, Oo, and Lim 2019). Executives are shown to have various intrinsic and extrinsic motives for actively pursuing corporate social and environmental responsibility (Hafenbrädl and Waeger 2017; Kuckertz and Wagner 2010; Muller and Kolk 2010). Intrinsically motivated actions are those for which there is no direct reward but the behavior itself; extrinsically motivated actions are driven by the consequences associated with performing the activity (Allison *et al.* 2015).

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Previous research has shown that intrinsic motivation plays a decisive role in fostering environmental performance (Graafland and Bovenberg 2020; Paulraj 2009), raising the question whether intrinsic motivation has its own underlying drivers. A substantial theoretical literature suggests that financial incentives tend to crowd out, or undermine (Rode, Gómez-Baggethun, and Krause 2015), intrinsic motivation (Bowles 2016). Experimental studies confirm this; if individuals derive intrinsic benefits from behaving altruistically or from honoring civic duties, financial incentives can discourage this type of conduct (for extensive literature reviews, see Bowles and Polania-Reyes [2012] or Rode, Gómez-Baggethun, and Krause [2015]). The mechanism received ample attention in environmental economics, and focused on households' and consumers' motivations and behaviors (cf. Agrawal, Chhatre, and Gerber 2015; Chervier, Le Velly, and Ezzine-de-Blas 2019; Grillos *et al.* 2019; Han *et al.* 2018; Marsiglio and Tolotti 2020; Pellerano *et al.* 2017; Steinhorst and Klöckner 2018; Taberner and Hernández 2011). Yet, motivation crowding is studied way less in the context of enterprises (see Graafland and Bovenberg [2020] for a recent exception). We argue that the same mechanisms can, and should, be examined in the setting of enterprises, but that firms may respond differently to financial incentives because of the competitive environment in which they operate. Because profitability is a necessary condition for a firm to survive in a competitive environment, financial incentives are more likely to enforce (crowd in) rather than curb (crowd out) intrinsic motivations in the business context. The research question here is thus: how do external pressures that create financial incentives affect intrinsic motivations of (managers of) enterprises, and how do they (de)motivate firms to engage in corporate social and environmental responsibility?

Following Lynes and Andrachuk (2008, 378), we use the label CSER for “the commitment of firms to contribute to both social and environmental goals.” Several types of stakeholders (e.g. suppliers, clients, etc.) can stimulate or press enterprises to engage in CSER, but these stakeholders often depend on information on the CSER performance of enterprises provided mainly by non-governmental organizations (NGOs)¹ and media (Doh and Guay 2006; Graafland and Smid 2017). We therefore analyze motivation crowding effects of external pressures from NGOs and media, either from direct interaction with enterprises, as well as from indirect influences if NGOs and media target consumers and other external stakeholders to put market pressure on enterprises. The mediation mechanism is the role played by financial incentives to engage in CSER.

The paper contributes to the literature in three ways. First, it develops a framework that theorizes how pressures from NGOs and media affect intrinsic motivation of (managers of) enterprises toward CSER. Second, it investigates the role of perceived market benefits of CSER as a mediator in the relationship between NGO and media pressure and intrinsic CSER motivation. Third, whereas motivation crowding theory has been tested on several types of behavior of households and consumers, there is scant empirical research on crowding in or crowding out effects of financial incentives on the intrinsic motivation for CSER in enterprises. By testing the mechanisms on a sample of 4,364 enterprises in twelve different European countries, the paper complements the empirical literature in a setting that is highly relevant for working toward sustainability, given that most CSER impacts appear at the production stage, that is, through enterprises. Causality is notoriously difficult to establish in survey data, and instruments are used to establish direction of causality. We thus also contribute to

practice by examining the motivation crowding effects of financial incentives on the intrinsic motivation for CSER in these enterprises, highlighting how NGOs and media play an important role here and hence could be involved more in advancing CSER initiatives.

In the remainder of this paper, first the theoretical framework and hypotheses are outlined. Then we present the methodology and data analysis, followed by the results of our empirical analysis. We then offer a discussion section and an examination of the theoretical and practical implications of this study. The paper ends with a brief conclusion section.

2. Theoretical framework and hypotheses

Motivation, the reason upon which one acts, is an important antecedent to behavior (Kuckertz and Wagner 2010). Behavior can be driven by intrinsic and extrinsic motives (Lindenberg 2001; Scopelliti *et al.* 2018). Within psychology, intrinsic motivation is related to the joy and satisfaction derived from an activity (Deci and Ryan 1985). Intrinsic motivation does not only cover behavior based on enjoyment, but also a motivation to act appropriately (Lindenberg 2001). This type of intrinsic motivation stems from the inner desire to follow a particular norm or principle.

Motivation crowding theory has argued that intrinsic motivations are not independent from external pressures that drive extrinsic motives (Frey 1992). More specifically, crowding theory has recognized that external pressures may crowd *in* or reinforce intrinsic motivation if the individual concerned perceives these external pressures as supportive (Eisenberger, Rhoades, and Cameron 1999). However, external pressures may also crowd *out* intrinsic motivations (Han *et al.* 2018). This idea stems from literature on cognitive social psychology and implies that external rewards or pressures may reduce intrinsic motivation (Bowles 2016).

In this paper, we focus on the influence of external pressures generated by NGOs and media on intrinsic CSER motivation of managers in enterprises. Figure 1 presents our conceptual framework which distinguishes between a direct (H1) and an indirect influence. The indirect effect reflects that NGOs and media can increase market benefits of CSER by activating external stakeholders (H2), and that these market benefits subsequently can affect intrinsic motivation through crowding mechanisms (H3). The framework focuses on *perceived* external and market pressures instead of on real pressures, because it is the perceived rather than the real pressures that shape enterprises' motivation to engage in CSER. After all, managers generally shape their environment through “enactment” – by constructing interpretations and then acting as if such interpretations are reality (Fassin, Van Rossem, and Buelens 2011).

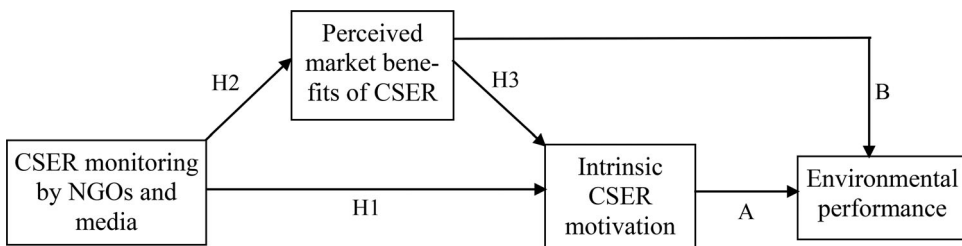


Figure 1. Conceptual framework.

We complement the hypotheses with two other relationships of the effects of intrinsic motivation and market benefits on environmental performance (A and B in Figure 1), assuming that both intrinsic motivation and market benefits motivate a company to improve its environmental performance.

Below H1, H2 and H3 are discussed in detail.

2.1. NGOs and media: direct effects on intrinsic motivation

Social movements, from grassroots organizations at the local level to more formalized NGOs at the regional, national, or international level, can shape corporate social and environmental activities (den Hond and de Bakker 2007). NGOs play a fundamental role, monitoring enterprises and generating attention in the media about situations they deem undesirable, which reflect negatively on the public's perception of the firm (Deegan and Islam 2014). Therefore, enterprises may be seriously challenged if they perceive that their environment becomes hostile to their business when NGOs or media find out that they cause some harm to their community (Aragón-Correa *et al.* 2008).

When local NGOs or media monitor an enterprise's CSER, they can use their knowledge to directly appeal to the enterprise, trying to influence the CSER activities (den Hond and de Bakker 2007). NGOs have specialist knowledge and can be specific in how environmental issues should be resolved by the enterprise. This reduces the managers' room for maneuver and discretion. When NGOs and media gain more influence, motivation crowding theory predicts that this will reduce managers' own intrinsic motivations, because the meaning of a CSER activity changes from one that expresses autonomy and taking responsibility into one that expresses compliance to directives (Graafland and Bovenberg 2020), in this case those coming from NGOs or media.

Another mechanism predicted by motivation crowding theory is that the effect of external pressure on moral motivation depends on the display of trust (Bowles and Polania-Reyes 2012). When NGOs and media signal distrust in the business leader's motivation to perform well, they deny the enterprise's internal motivation and by doing so erode existing intrinsic motivation. Based on these arguments, we expect that intrinsic CSER motivation of an enterprise is negatively related to perceived NGO and media pressure.

However, there are also effects that predict a crowding in effect. First, NGOs and media have the ability to influence social norms, values and societal expectations on corporate behavior (den Hond and de Bakker 2007; Doh and Guay 2006). NGOs and media alter the context in which preferences are acquired and change the process of preference-updating by which managers internalize new social norms. When new rules or norms are broadly diffused and supported, meaning that their social validity is largely unquestioned, enterprises will acquiesce to these (Oliver 1991). Second, the attention of NGOs or media to the enterprise's CSER may lead to more contacts between the enterprise's managers and NGO representatives or journalists. If these intensify, these personal relationships can become an inspiration for managers of the enterprise. Research shows that the frequency of interaction with peers in social networks influences how people respond to moral issues (Weaver, Treviño, and Agle 2005). That is, the moral motivation that drives representatives of NGOs spills over to the managers of the enterprise who then gradually develop intrinsic motivation toward CSER. Third, the contacts with NGOs or media may also induce managers to frame the decision on CSER in a moral context (Bowles and Polania-Reyes 2012). The moral

frame related to the goal “to do the right thing” will affect the processes of information gathering and the choice of options that are relevant for considering moral issues of the operations of the enterprise. NGOs are then willing to provide enterprises with relevant environmental, scientific and legal information on CSER issues (den Hond, de Bakker, and Doh 2015).

Therefore, we posit two competing hypotheses stating that NGO and media pressure crowd in or crowd out intrinsic motivation:

Hypothesis 1a/b. *Intrinsic CSER motivation of an enterprise is negatively/positively related to perceived NGO and media pressure*

2.2. *Effects of NGOs and media on intrinsic motivation through market benefits*

The direct effects of NGO and media pressure on intrinsic motivation can be positive, negative, or insignificant. But there is also an indirect effect. NGOs and media attract public attention to corporate practices and mobilize stakeholders to exert market pressure on an enterprise, improving profits conditional on CSER (den Hond and de Bakker 2007). Neo-institutional theorists have argued that transparency of CSER performance through monitoring by societal organizations, is essential for effective market pressure (Doh and Guay 2006). Not only so for large enterprises; small enterprises are also subject to reputational effects from CSER pressure by (local) NGOs or media (Fraj-Andrés *et al.* 2012). Moreover, given locational sunk costs that restrict geographical mobility, a good reputation has an important strategic value for small enterprises too (Graafland and Smid 2017). Hence, managers will be more aware of the market benefits of CSER if they perceive that local NGOs or media monitor their enterprise’s CSER. This leads to the second hypothesis:

Hypothesis 2. *The market benefits of CSER, as perceived by the enterprise’s managers, are positively related to perceived CSER pressure from NGOs and media*

In turn, there are several reasons for (perceived) market benefits of CSER to affect moral motivation of managers. Freedom to act is a pre-condition for value expression and taking responsibility. Experiencing autonomy requires that managers have a set of options available (Patzelt and Shepherd 2011). When CSER generates market benefits because market parties reward CSER, then this provides managers with more opportunities to take CSER initiatives. For example, the development of environmentally aware consumers who are prepared to pay a markup for environmentally responsible products provides managers with the opportunity for a strategy to enter that market. The market benefits created by CSER signal freedom of action rather than social control. This enlarges managers’ perceived autonomy, fostering their intrinsic motivation to engage in CSER.

A related argument stems from the notion that CSER may be perceived by managers as a conditional or so-called *prima facie* moral duty rather than as an all-things-considered moral duty (Ross 1930). If managers expect that pursuing CSER will harm their enterprise’s financial performance, they hesitate to implement CSER as they also consider other moral duties toward their enterprise, such as providing job security for employees. The survival of the enterprise is essential and job creation and continuation

is often seen as the first responsibility of businesses (Fassin, Van Rossem, and Buelens 2011). Lack of anticipated market benefits will then weaken intrinsic motivation, because CSER can only be considered a moral duty if there are no other, more important, moral reasons against it (Kuckertz and Wagner 2010). That is, perceiving that CSER has financial value leads to greater acceptance of CSER as a moral obligation on which managers should act.

However, perceived market pressures on CSER may also crowd out intrinsic motivation. First, it is possible that managers perceive market pressure as a threat that compels them to improve the enterprise's CSER, leaving them less room for maneuver. CSER that does not leave room for free choice intrudes directly into the manager's realm of self-determination, decreasing their locus of control (Frey 1992; Graafland and Bovenberg 2020). Second, and more subtle, if managers perceive that they are rewarded for their CSER by stakeholders, they may attribute their CSER policies to the reward rather than to their own intentions and thus discount their intrinsic interest in the activity as the cause of their decisions (Lindenberg 2001). The mechanism is known as over-justification and leads to lower post-behavior intrinsic motivation (Deci, Koestner, and Ryan 1999). Third, a change in perceived market effects of CSER changes the frame of managers' decision context. Goals influence the frame within which cognitive processes take place (Linder and Foss 2018). The frame influences the information attended to, the processing of this information, and the alternatives considered (Lindenberg 2001). Market benefits of CSER create a so-called "gain frame," e.g. a frame linked to the goal of improving one's resources while curtailing attention to moral obligation. CSER aspects generating positive market benefits then become more salient, stimulating managers' attitudes toward extrinsic motivation for CSER (Lindenberg 2003). This means that an increase in perceived market benefits crowds out intrinsic CSER motivation. These arguments together lead to two competing crowding out hypotheses:

Hypothesis 3a/b. *Intrinsic CSER motivation of enterprises is positively/negatively related to perceived market benefits of CSER*

2.3. Mediation

Mediation analysis permits examination of processes and gives insight into how an independent variable exerts an effect on a dependent variable via the inclusion of a third variable, known as the mediator variable (Fiedler, Schott, and Meiser 2011). Next to the three main hypotheses outlined before, we need to examine whether the perceived market benefits of CSER act as a mediator between NGO and media pressure on the one hand and intrinsic CSER motivation on the other hand. Such mediation effects in motivation crowding have been rarely examined before (Resh, Marvel, and Wen 2019).² As NGOs and media can attract public attention to misbehavior, they can mobilize various types of stakeholders on the capital market, product market and labor market and thus potentially increase perceived market benefits from CSER. As these market benefits from CSER may, in turn, crowd in or crowd out intrinsic motivations to wards CSER, we expect that NGO and media pressures indirectly affect intrinsic motivations through the perceived market benefits of CSER to some extent. Hence, it is hypothesized that:

Hypothesis 4. *The perceived market benefits of CSER mediates the effect of NGO and media pressure on intrinsic CSER motivation of enterprises*

3. Methods

3.1. Data source

Examining motivation crowding requires specific data that are not easily obtained. Data on CSER by ESG rating agencies (ASSET4, etc.) do not include data on intrinsic motivations. Therefore, we had to gather these data ourselves and for this purpose we used a survey, because the most appropriate way to empirically measure motives is by asking people for the reason for a certain action (Elster 2007; O'Mahoney 2012).

In order to gather a sample of companies, the research team bought company e-mail addresses from Kompass, a business data company often used in research and practice (<http://www.kompass.com>). The researchers personally contacted the representative of Kompass in their country and discussed the characteristics of the database to be delivered by Kompass. An advantage of the Kompass database is that it includes both large and small companies. Intrinsic motivations are more easily identified for small companies than for their larger counterparts, because of the small number of managers (often the owner-manager) deciding about the (CSER) strategy of the company. It is known from the literature that the behavior of small firms is disproportionately driven by the values and motives of their managers (e.g. Revell, Stokes, and Chen 2010). Including small companies therefore makes identification of possible crowding effects of external pressures on intrinsic motivations for SMEs more reliable.

The survey was set out in 2011 in 12 European countries.³ This focus on European countries was due to data limitations – a larger geographical diversity could not be obtained within the limits of this research project.⁴ Existing survey data on intrinsic motivation toward CSER are rare and, if available, only present for one or a few countries. We therefore selected a sample of countries that is considered representative of the existing variety of political and economic institutions in Europe: Continental Western Europe (Austria, Germany, France, and the Netherlands); Scandinavia (Finland, Sweden, and Denmark); Mediterranean Europe (Italy, Spain); Central Europe (Poland and Hungary); and Anglo-Saxon Europe (the United Kingdom).

An advantage of focusing on a limited number of countries was that we could raise the quality of the survey by involving professionals translating the survey from English into the national languages of the countries in which the companies were located. Particularly managers of small companies cannot all be assumed to understand English equally well as their native language. Since a sample across 12 countries is a major improvement in comparison to previous studies, we refrained from further extending the number of countries, as this would have progressively increased the costs of the survey without much added value, as the sample already covers all major regions in Europe.

The number of emails of enterprises per country was set proportional to the total number of enterprises in these countries. A number of email addresses bounced and therefore were not useable. The number of useable email addresses equaled 365,002. The response rate was 3.7% (13,637 enterprises). International mail surveys aiming at an industrial population have a history of low response rates varying between 6% and 16% (Harzing 1997). Since our survey took substantial effort to fill out, the response rate was in line with ex-ante expectations. 4,364 enterprises filled in all questions used

in this study, of which 91% are small and medium sized enterprises (<250 employees) and 9% are large enterprises (>250 employees). Using Cochran's sample size formula, the response was found to be adequate to infer reliable research findings for the total population of companies in the twelve countries, using an alpha of 0.05.

3.2. Measurement

The perceived CSER pressure by NGOs and media on the enterprise's CSER was measured by a survey question asking "To what extent do NGOs and/or (social) media monitor the enterprise's CSER?" The answers were measured by a 7-point Likert scale, ranging from "not at all" (1) to "very much" (7). To test the reliability of this measure, we performed a correlation analysis with responses to a survey question that measured the extent to which the enterprise faced complaints about their social and/or environmental performance. This question not only refers to complaints from NGOs or media, but to complaints from other stakeholders as well. Still, it was expected that the responses to this survey question would be highly correlated to the survey question on CSER monitoring by NGOs and media, since other stakeholders are informed by the findings of NGOs and media. Correlation analysis of the responses to both measures confirmed this ($r=0.26$, p value < 0.001). This finding gives confidence in the reliability of the measure of the intensity of CSER monitoring by NGOs and media.

Perceived market benefits were measured by four questions, surveying managers' perceptions of the reputational effects of CSER, the effects of CSER on profit margins and sales of the enterprise, and the effect on profitability in the long term (see Table 1). In response to the question "To what extent does engagement in CSER influence the following aspects for your enterprise?," managers again could fill out a 7-point Likert scale, ranging from "not at all" (1) to "very much" (7) for each item.

Following Graafland and Bovenberg (2020) the intrinsic CSER motivation was measured by the survey question "How important are the following motives for your enterprise to engage in CSER?". Two measures were used. First, respondents could respond by a 7-point Likert scale ranging from "not at all" (1) to "very much" (7) to the statement "We engage in CSER because we feel responsible for the planet and the society." Furthermore, we asked respondents to respond to the statement "We engage in CSER because it creates personal satisfaction for the people in our enterprise," using the same 7-point Likert scale.

Environmental performance was operationalized by four measures indicating the efforts of companies to improve environmental performance. We used four survey questions measuring concrete actions to reduce energy consumption, water consumption and waste disposal, and to improve environmental performance of suppliers. For each issue, we used a 3-point scale ranging from 0 (no effort), 0.5 (incidental effort) to 1 (continuous effort).

3.3. Control variables

We controlled for various influences in the external business environment, enterprise characteristics and characteristics of the respondent (for details on the measurement of control variables, see the footnotes for Table 2). First, as CSER motivations are conditioned by the wider institutional environment of the enterprise, five dummies for different regions in Europe were used, based on a categorization of different types of

Table 1. Factor analysis of survey items.

Variables	Mean	SD	Factor loadings		
			Perceived market benefits	Intrinsic motivation	Environ. performance
<i>To what extent does engagement in CSER influence the following aspects for your enterprise?</i>					
CSER increases sales	3.26	1.66	0.88		
CSER increases profit margins on products	3.24	1.63	0.89		
CSER reduces reputation risks	4.42	1.67	0.67		
CSER improves profitability in the long term	4.11	1.70	0.86		
<i>How important are the following motives for your enterprise to engage in CSER?</i>					
We engage in CSER because we feel responsible for the planet and the society	5.21	1.48		0.88	
We engage in CSER because it creates personal satisfaction for the people in our enterprise	5.09	1.42		0.86	
<i>Does your enterprise actively improve the following environmental aspect?</i>					
Energy consumption	0.67	0.37			0.78
Water consumption	0.61	0.40			0.80
Waste disposal	0.77	0.34			0.78
Environmental performance suppliers	0.52	0.41	3.57	1.19	0.67
Eigenvalue			0.87	0.73	1.98
Cronbach alpha			0.90	0.86	0.77
Construct reliability			0.69	0.76	0.84
Average variance extracted					0.58

Note: Extraction Method: Principal Component Analysis; Rotation Method: Oblimin with Kaiser Normalization. KMO = 0.795, p-value Bartlett's Test of Sphericity = 0.000.

Table 2. Descriptive statistics.^a

	Mean	SD	CSER monitoring NGOs & media	Perceived market benefits	Intrinsic motivation	Environmental performance
<i>Independent variable, mediator and dependent variable</i>						
CSER monitoring NGOs and media	2.13	1.37	1			
Perceived market benefits	0.00	1.00	0.29	1		
Intrinsic motivation	0.00	1.00	0.19	0.36	1	
Environmental performance	0.00	1.00	0.16	0.20	0.25	1
<i>Country controls</i>						
Scandinavia	0.14	0.35	0.02	0.05	0.03	-0.05
Continental Europe	0.31	0.46	0.09	0.13	0.05	-0.04
Central Europe	0.13	0.34	0.03	-0.03	0.00	0.02
Mediterranean Europe	0.39	0.49	-0.12	-0.14	-0.06	0.06
UK	0.03	0.16	0.00	-0.01	-0.04	0.02
<i>Sector controls</i>						
Materials	0.16	0.37	-0.01	-0.01	-0.04	0.07
Energy	0.03	0.18	0.02	0.03	0.03	0.07
Industrials	0.17	0.37	-0.03	-0.01	-0.02	-0.03
Consumer staple	0.04	0.19	0.01	0.03	-0.01	0.06
Consumer discretionary	0.17	0.38	-0.01	0.01	0.00	0.01
Financials	0.03	0.16	0.04	0.00	0.00	-0.07
IT & com	0.03	0.18	-0.03	-0.01	0.03	-0.07
Other sectors	0.37	0.48	0.02	-0.01	0.03	-0.04
<i>Firm controls</i>						
B2C ^b	2.03	1.07	0.09	0.03	0.01	0.06
Intensity of price competition	5.07	1.88	-0.03	-0.05	-0.03	0.03
External orientation ^c	4.52	1.44	0.07	0.07	0.15	0.06
Flexibility orientation ^c	5.00	1.42	0.01	0.08	0.26	0.05
Share low skilled ^d	0.33	0.32	-0.01	0.02	-0.07	0.06
Share medium skilled ^d	0.42	0.29	-0.01	-0.04	-0.02	0.02
Share high skilled ^d	0.25	0.28	0.03	0.03	0.10	-0.09
Share age employees <25	0.11	0.14	0.07	0.07	0.05	0.05
Share age employees 25–50	0.67	0.23	-0.04	-0.04	0.01	0.03
Share age employees >50	0.22	0.21	-0.01	-0.00	-0.04	-0.07
Enterprise size ^e	3.51	1.82	0.20	0.18	0.07	0.16
<i>Respondent controls</i>						
Age of respondent ^f	2.76	0.91	-0.06	-0.06	0.04	0.02
Director-owner	0.33	0.47	-0.14	-0.13	0.02	-0.05
Director	0.19	0.39	0.02	0.03	0.04	0.00
Manager	0.19	0.40	0.08	0.08	0.01	0.04
Other function	0.29	0.45	0.07	0.04	-0.07	0.02

Note: ^aPearson's correlation coefficients. Italics $p < 0.05$, bold $p < 0.01$. The correlation analysis between control variables is available from the authors on request. Countries, sectors, and functions of respondents are measured by dummies (0 = no, 1 = yes).

^bResponse to 5-point scale ranging from: "B2B"(1) to "B2C"(5).

^cResponse to the survey question: "Please characterize your enterprise on the following two scales. The first scale concerns the organizational focus. This scale ranges from, on the one hand, a strong internal focus on internal organizational efficiency, to, on the other hand, a strong external focus on adapting to the (changing) demands of the external environment. The second scale concerns the management style. This scale ranges from, on the one hand, giving employees clear guidelines, enforced by control mechanisms, to, on the other hand, providing them complete autonomy and participative decision making." The responses are measured by a 7-point Likert scale ranging from: "not at all" (1) to "very much" (7).

^dLow-skilled: % of employees with no qualifications (O-levels, CSEs, GCSEs); Medium-skilled: % of employees with A levels or BTEC equivalent; High-skilled: % of employees with degree and post-graduate level qualifications.

^eIn full-time equivalents; natural logarithm.

^fMeasured by four age groups (1 = <30; 2 = 30–45; 3 = 46–55; 4 = >55 years).

capitalism developed by Moon *et al.* (2012). Furthermore, sector characteristics may also influence the overall strategies available to the enterprise. The authors distinguished eight sectors, based on the Global Industry Classification Standard (GICS).

Third, the authors controlled for the market position of the enterprise in the chain, measured by a survey question measuring to what extent enterprises operate in business-to-consumer (B2C) relations rather than business-to-business (B2B) relations, and for the intensity of price competition that the enterprise faces on its output market. For internal variables, the two dimensions of organizational culture distinguished by the Competing Value Framework were controlled for: “control versus flexibility orientation” and “internal versus external focus.” Linnenluecke and Griffiths (2010) argued that a flexibility orientation and an external focus would positively affect CSER. Furthermore, the size of the enterprise as measured by the number of FTEs, the skill and age structure of the enterprise, the function, and the age of the respondent were included as control variables (Marginson and McAulay 2008).

3.4. Common method, non-response and reverse causality bias

Several precautionary remedies recommended by Podsakoff *et al.* (2003) were used to address common method bias. Furthermore, we applied an ex-post test for common method bias proposed by Lindell and Whitney (2001), the so-called marker variable technique. A marker variable is a variable that is theoretically unrelated to at least one of the variables being studied. The correlation between this marker variable and the theoretically unrelated variable is treated as an indicator of common method bias. As marker variable for the NGO and media pressure, the response to a survey question inquiring the share of women executives on the board of the enterprise was used. The estimated Pearson’s correlation coefficient equaled 0.01 (P -value = 0.67). This suggests that the results are not plagued by common method bias.

In order to control for non-response bias, we used the Heckman two-step estimation procedure (Certo *et al.* 2016). As exclusion restriction the degree of feeling European, measured by the Eurobarometer, was used, because the invitation letter that requested enterprises to respond to the survey was signed by a representative of the European Union. It is expected that respondents who feel more European are more inclined to cooperate with the survey, independent from their interest in CSER. The estimation results of the probit model supported this proposition and showed a highly significant positive effect of feeling European on the response rate ($p < 0.001$), controlling for sector, enterprise size and the starting year of the enterprise. From the regression result, the inverse Mill’s ratio can be calculated. By including the inverse Mill’s ratio as explanatory variable in the regression analysis, one removes the selection bias part from the error terms.

Another potential bias in the regression analysis is reverse causality bias. Enterprises with intrinsically motivated owner-managers might show more consistency in their CSER strategy. They may therefore be more able to convince stakeholders of the quality of their CSER efforts, increasing the market rewards for CSER (Wang and Choi 2013). Moreover, intrinsically motivated managers who want CSER for its own sake will show more perseverance in developing market opportunities, even if market effects are not visible in the short term (Kuckertz and Wagner 2010). Theoretically, it is therefore possible that intrinsic motivation has a positive reverse causal effect on perceived market benefits of CSER. We test for reverse causality through instrumental variables (IV), but with a subtle extension to the standard procedure, because good instrumental variables for the perceived market benefits, the independent variable in the second equation, were lacking, while a good instrument for intrinsic motivation,

the dependent variable, was available. This enabled us to examine whether there is causality from the dependent to the independent variable. To be specific, we test the reverse effect from intrinsic motivation on perceived markets benefits of CSER directly, using the share of female executives on the board of the enterprise as instrumental variable for intrinsic motivation. According to gender socialization theory, women demonstrate more concern for others, are more empathic, show more altruistic attitudes and are more likely to engage in a variety of relationship-oriented actions (Williams and Polman 2015). Building and maintaining relationships are also a crucial element of CSER. CSER therefore fits well with the relational orientation in the ethics of female executives. Therefore, a positive influence of the share of female executives on intrinsic motivation is expected. Regression analysis (controlling for all control variables) showed that this instrumental variable indeed has a positive and very significant effect on moral motivation (t-value 4.52). Next, we used IV regression analysis to estimate the effects of (instrumentalized) intrinsic motivation on perceived market benefits and the results showed that the effect disappears (p-value is 0.943).⁵ Based on these findings it can be concluded that there is no reverse causality from intrinsic motivation on perceived market effects.⁶

3.5. Estimation methods

We use both explorative and confirmatory factor analysis to test the clustering of the survey variables in the three factors identified by our labels “Perceived market benefits,” “Intrinsic CSER motivation,” and “Environmental performance.” The proposed clustering is clearly related to the theoretical meaning of these variables, but there is no previous literature that establishes the relationship between our expected factors and the survey variables. It is then common practice to use an exploratory factor analysis to test our predictions about the factor decomposition of the survey questions. Explorative factor analysis is independent of the structural model, the factor elements are chosen purely on the basis of the subset of survey questions, and free of any *a priori* assumed relationships.

Next, we used structural equation modeling (SEM) with maximum likelihood estimation that simultaneously estimates the structural paths and the confirmatory factor analysis. Factor analysis and structural equation modeling are well-known estimation techniques in management literature (Williams, Vandenberg, and Edwards 2009). The SEM methodology has several advantages (Tomarken and Waller 2005). First, it provides a convenient method to simultaneously estimate latent variables and their manifest indicators (the measurement model/confirmatory factor analysis) and the relationships among constructs (the structural model). The confirmatory factor analysis tests validity of the factors in the specific context of the structural equation model. The use of latent constructs represented by multiple indicators provides more valid and reliable measurements of the variables studied and corrects for biases attributable to random error and construct-irrelevant variance. This improves the ability to draw causal inferences, because testing models with good data and cross-validation allows a better understanding of the phenomenon studied. Another commonly acknowledged strength of SEM is the availability of measures of global fit that provide a summary evaluation of the full model, in contrast to models that are estimated on an equation-by-equation basis. Finally, SEM provides an easy way to test for mediation by the estimation of direct and indirect effects (Bullock, Harlow, and Mulaik 1994). A possible

weakness of the SEM methodology is that it cannot fully prove causality. Notwithstanding the several advantages discussed above, it can only offer tentative causal inferences (Bullock, Harlow, and Mulaik 1994). For this reason, we additionally used the instrumental variable approach to do additional test on causality, as discussed in Section 3.4 above.

4. Results

4.1. Factor analysis and descriptives

In the explorative factor analysis, we used Principle Component Analysis (with Oblimin rotation). The results are reported in Table 1. The factor loadings for all individual variables exceed 0.50. Loadings of 0.50 or greater are considered very significant (Hair *et al.* 2010). The KMO measure of sampling adequacy and the Bartlett's Test of sphericity indicate that the dataset is well-suited for the factor analysis. The Cronbach's alphas indicate the internal consistency of both factors, as both meet the accepted threshold of 0.60 (Hair *et al.* 2010). Also, the construct reliability and convergent validity (measured by the average variance extracted) for both factors satisfied the accepted thresholds of 0.70 and 0.50, respectively (Hair *et al.* 2010). In the regression analysis, the three factors for market benefits, intrinsic motivation, and environmental performance are used. The factors are standardized and normalized to zero mean and unit standard deviation.

The descriptives of the dependent, independent and control variables are reported in Table 2.

4.2. Results of structural equation model

The results of the structural equation modeling (SEM) are reported in Table 3. The model is confirmed by the global fit indices. The CFI index suggests a good model fit (Byrne 2010). Good model fit is also confirmed by the RMSEA measure, because its value is smaller than 0.06.

The estimation results in column 1 show that perceived market effects of CSER depend positively on perceived CSER monitoring by NGOs and media, which provides support for hypothesis 2.⁷ In column 2 intrinsic motivation is found to be significantly positively related to perceived market benefits but not to CSER monitoring by NGOs and media. These results support hypothesis 3a and reject hypothesis 3b, while providing no support for hypothesis 1a or 1b. From column 3 it can be concluded that both perceived market benefits of CSER (which is an indicator of extrinsic motivation) and intrinsic motivation stimulates companies to improve their environmental performance. Particularly, intrinsic motivation is a strong driver; its impact is twice that of perceived market benefits.

An advantage of SEM is that it provides a convenient method to test the significance of indirect effects (Shrout and Bolger 2002). The indirect effect of CSER monitoring by NGOs and media on intrinsic motivation through perceived market benefits is highly significant (see Table 4). Hence, although CSER monitoring by NGOs and media has no direct effect on intrinsic motivation, it indirectly crowds in intrinsic motivation by increasing perceived market benefits. This provides support for hypothesis 4. More specifically, the findings showed that the perceived market benefits of

Table 3. Estimation results.^a

	1 Perceived market benefits	2 Intrinsic motivation	3 Environmental performance
Structural model			
CSER monitoring NGOs and media	0.31***	0.02	
Perceived market benefits		0.57***	0.16***
Intrinsic motivation			0.31***
<i>Country controls</i>			
Scandinavia	0.02	0.12**	-0.10
Continental Europe	0.06	0.15**	-0.13*
Central Europe	-0.08*	0.16***	-0.01
Mediterranean Europe	-0.09	0.22***	0.07
<i>Sector controls</i>			
Materials	-0.01	0.01	0.06*
Energy	0.07**	0.00	0.03
Industrials	0.01	-0.02	-0.04
Consumer staple	0.05**	-0.02	0.04
Consumer discretionary	0.04	-0.02	-0.00
Financials	-0.00	-0.02	-0.07**
IT & com	-0.01	-0.00	-0.11***
<i>Firm controls</i>			
B2C ^b	-0.01	0.03	0.04*
Price competition	-0.00	0.02	-0.00
External orientation ^c	0.06**	0.04*	0.01
Flexibility orientation ^c	0.13***	0.25***	-0.01
Share medium skilled ^d	0.03	-0.01	0.02
Share high skilled ^d	0.06**	0.06**	-0.06*
Share age employees 25–50	-0.04	-0.04	-0.04
Share age employees >50	-0.06	-0.08*	-0.05
Enterprise size ^c	0.13***	0.00	0.16***
Share of female executives in 2007		0.08***	0.07**
<i>Respondent controls</i>			
Age of respondent ^f	-0.00	0.02	0.05*
Director-owner	-0.02	0.11***	-0.04
Director	0.06*	0.05	-0.05
Manager	0.06*	0.02	-0.00
Inverse Mill's ratio	-0.01	0.03	-0.08**
Measurement model			
<i>Perceived market benefits</i>			
CSER increases sales	0.59***		
CSER increases profit margins on products	0.55***		
CSER reduces reputation risks	0.76***		
CSER improves profitability in the long term	0.73***		
<i>Intrinsic motivation</i>			
We feel responsible for the planet and the society	0.73***		
CSER creates personal satisfaction for the people in our enterprise	0.78***		
<i>Environmental performance</i>			
Energy consumption	0.53***		
Water consumption	0.59***		
Waste disposal	0.57***		
Environmental performance suppliers	0.60***		

(Continued)

Table 3. (Continued).

	1 Perceived market benefits	2 Intrinsic motivation	3 Environmental performance
Global fit indices^b			
RMSEA	0.033		
CFI	0.942		
TLI	0.917		
SRMR	0.017		
R ²	0.462		

Note: ^aStandardized coefficients. * $p < 0.05$. ** $p < 0.01$. *** $p < 0.001$. The reference dummies for region, sector, skill structure, age structure and function of the respondent are UK, other Business, low skilled employees, young employees, and other function.

Table 4. Direct and indirect effects.^a

From:	On:	Mediated by	Estimate
Indirect effects			
CSER monitoring NGOs and media	Intrinsic motivation	Perceived market benefits	0.197***
Perceived market benefits	Environmental performance	Intrinsic motivation	0.039***
Direct effects			
Perceived market benefits	Environmental performance		0.035***

Note: ^aUnstandardized coefficients. *** $p < 0.001$.

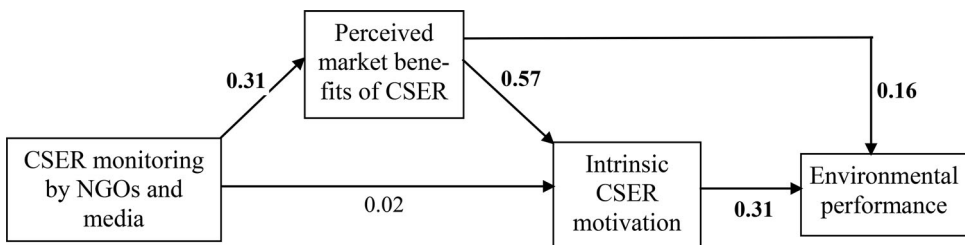


Figure 2. Estimation results of conceptual framework.^a

^aStandardized coefficients. Bold: $p < 0.001$.

CSER positively mediate the effect of NGO and media pressure on intrinsic CSER motivation of enterprises.

Table 4 also compares the direct effect of perceived market benefits on environmental performance and the indirect effect mediated by intrinsic motivation. These effects have a similar magnitude. Thus, the influence of external pressure from CSER monitoring by NGOs and media on environmental performance is equally motivated by intrinsic and extrinsic motives. In Figure 2 the main findings are summarized.

5. Discussion, implications and limitations

5.1. Discussion

This study indicates that crowding in rather than crowding out effects are relevant in the CSER behavior of enterprises that are pressured by NGOs and media. This finding is opposite to many studies of motivation crowding in environmental behavior of households or consumers that support the crowding out hypothesis (Pellerano *et al.* 2017; Rode, Gómez-Baggethun, and Krause 2015). These results beg the question why crowding in is more relevant for CSER behavior of business organizations than for social behaviors of private households or individual consumers. A possible reason for these deviating responses can be found in the arguments underpinning hypothesis 3a on crowding in. For example, rewarding environmentally desirable behavior *can* increase perceived self-determination in a business context, more so than in the context of a private household. Enterprises that face severe competition may not be able to survive if their (often costly) investments in CSER are not rewarded by market parties. This is particularly relevant for small and medium sized enterprises (SMEs). Because of their small scale, CSER measures can be relatively costly for SMEs. Time, finances and a lack of skills and knowledge are commonly identified as constraints on CSER by SMEs (Studer *et al.* 2006). In this context, an increase in market demand for environmentally responsible products will be perceived as a business opportunity that substantially increases the freedom of the enterprise to pursue a CSER strategy, which triggers a higher intrinsic motivation. This argument applies less to financial rewarding of household contributions to environmental goods, for which findings are mixed at best and where crowding out effects have regularly been observed (Schwartz, Milfont, and Hilton 2019). In these cases, it is more likely that, as Frey and Oberholzer-Gee (1997) argue, individuals often perceive price incentives as an external intervention controlling their behavior, which decreases their self-determination and hence their intrinsic motivation.

The increase in enterprises' freedom to act caused by the perceived market benefits also explains why our results differ from Graafland and Bovenberg (2020), who found that government regulation crowds out intrinsic motivation of companies to engage in CSER. Compared to market incentives, government regulations interfere more directly in the operations of the company, thereby limiting the company's self-determination. Hard regulations leave little discretion regarding the environmental policies of companies, shifting the locus of control from the company to the government. This will reduce the company's intrinsic motivation from engaging in environmental actions.

5.2. Implications

Our research has both theoretical and practical implications. First, in terms of theory, it develops a framework that theorizes how external pressures from NGOs and media affect intrinsic motivation of (managers of) enterprises toward CSER. Whereas in earlier literature on CSER (cf. Muller and Kolk 2010; Weaver *et al.* 2005), intrinsic and extrinsic motives have often been conceptualized as independent from each other, we theorize several types of mechanisms that can cause motivation crowding effects of external pressures on intrinsic CSER motivation of enterprises, such as freedom to act, framing, self-attribution, signaling of (dis)trust, and preference update. Through this study we thus suggest that motivation crowding theory offers an alternative focus on understanding a variety of motivations of SMEs to engage in CSER, giving rise to further research on how these motivations may interact.

Second, our research investigated the role of perceived market benefits of CSER as a mediator in the relationship between NGO and media pressure and intrinsic CSER motivation. Within the ongoing debates on drivers for CSER within SMEs (cf. Baumann-Pauly *et al.* 2013; Hamann *et al.* 2017), this is a relevant contribution to interpret such drivers. The mediation framework provides a promising research agenda on the channels through which external pressures affect environmental performance of companies through the intrinsic motivations of managers. More specifically, and in line with motivation crowding theory, it would be interesting to research freedom to act, self-attribution, preference update and framing as mediators in the relationship between external pressures and intrinsic motivation. By explicitly testing the role of these mediators, research will be more able to disentangle crowding out from crowding in effects of external pressures on managers' intrinsic motivation.

Third, whereas motivation crowding theory has been tested on several types of behavior of households and consumers, there is scant empirical research on crowding effects of financial incentives on the intrinsic motivation for CSER in enterprises. By testing the mechanisms on a sample of 4,364 enterprises in twelve European countries, the paper complements the empirical literature in a setting that is highly relevant for working toward sustainability, given that most CSER impacts appear at the production stage, that is, through enterprises.

Developing further insight into motivation crowding effects is important for a nuanced understanding of the motivating power of external pressures on an enterprise's CSER efforts, in theory but also in practice. If external pressures that drive extrinsic motives positively affect intrinsic motivations, the disregard of this relationship may lead to an underestimation of their relevance for CSER. After all, next to their motivating effect on CSER through extrinsic motivations (supported by our estimation results for environmental performance), external pressures will then also foster CSER indirectly by stimulating intrinsic motivations. But if, conversely, managers are motivated to CSER by intrinsic motives, and external pressures are liable to crowd out these motives, an NGO strategy of putting pressure on CSER (den Hond and de Bakker 2007) by monitoring and criticizing its performance will hardly be effective in stimulating CSER and may even weaken the enterprise's engagement in CSER, working counter-productively. A better understanding of all these motivations and their interactions will contribute to more effective ways to stimulate CSER initiatives in enterprises.

In general, the finding that external institutional pressures increase intrinsic motivation implies that it is important to emphasize and understand the role of NGOs and media. By increasing the transparency on CESR in the marketplace, NGOs and media can increase the responsiveness of external stakeholders to enterprises' CESR initiatives. A policy implication, then, is that the free functioning of societal organizations and free press should be respected and not hindered by political agendas. This countervailing power is vital for any society that wants to limit potential negative externalities caused by free market operations in a capitalistic economic system (Ali, Frynas, and Mahmood 2017; Doh and Guay 2006).

5.3. *Limitations and future research*

Our study has several limitations, all of which also provide opportunities for future research. First, the focus of this research is on European SMEs. This choice means that our research cannot be held representative of large companies while the

geographical setting could also limit the representativeness of our work. The scope of crowding theory would be considerably extended if it could be shown to apply to large companies as well. More theoretical and empirical research is necessary to elucidate the relationships between external pressures and intrinsic motivations of large organizations, whereas, as Brammer, Hojmosse and Marchant (2012) note, it also remains important to acknowledge that SMEs are *not* a homogenous group in terms of their environmental management practices. We examined a varied set of SMEs all over Europe to look for motivation crowding effects. This is helpful to obtain a first view on motivation crowding in these organizations, but a more in-depth analysis of SMEs from a particular industry and from other parts of the world would be a useful next step. For instance: are SMEs operating in a business-to-business context in, say, Asia driven by different motivations in their CSER initiatives? Nevertheless, we argue that this extensive European study of SMEs offers a useful starting point for such further work.

Second, future studies could explore the role of other dimensions of intrinsic motivations, such as professional interest in internal goods of practices. However, we do not expect that this will fundamentally change our conclusions. The arguments we developed for arguing that external pressures crowd in rather than crowd out intrinsic motivation will probably also hold for this competence-related type of intrinsic motivation, as rewards have symbolic properties related to perceived competence or self-efficacy, causing individuals to care more about doing the task well (Eisenberger, Rhoades, and Cameron 1999). For example, Harackiewicz and Manderlink (1984) found that performance-contingent rewards stimulate intrinsic motivation more than favorable performance feedback without reward.

Finally, external rewards may influence business people's mood, involving feelings of enthusiasm, excitement and alertness through their positive effects on perceived autonomy and the business leaders' desire to control their own behavior (Eisenberger, Rhoades, and Cameron 1999). Other studies have suggested how externally imposed environmental change within enterprises may also lead to strong emotional responses (Friedrich and Wüstenhagen 2017). Looking into the role of moods and emotions thus would be another relevant next step in understanding enterprises' motivations to engage in CSER.

6. Conclusion

In this study we asked the question how external pressures that create financial incentives affect intrinsic motivations of (managers of) enterprises, and how they (de)motivate firms to engage in corporate social and environmental responsibility? We have shown how external pressures from NGOs and media affect intrinsic motivations to engage in CESR indirectly by increasing perceived market effects from CESR. By focusing on motivation, we have thus illustrated how the inclusion of motivation crowding effects enhances our understanding of the role of intrinsic motivations and the business case as drivers of CESR when a nuanced analysis is made. This paper offers a foundation for further research which develops the potential for business to contribute to positive environmental and social change – we offer several directions for future research.

Notes

1. We use the term NGO here, although there are a variety of related terms available such as secondary stakeholders, civil society organizations, activist groups or not-for-profit

organizations. An NGO could be seen as “the civil society counterparts” of firms and governments, as “a third key set of players in value creation and governance around the world” (Teegen, Doh, and Vachani 2004, 464). In doing so, we follow den Hond, de Bakker, and Doh (2015). Besides, although NGO representation and governance varies across societies (Doh and Guay 2006), in our empirical (European) context the term captures the type of organizations we examine very well.

2. An exception is Graafland and Bovenberg (2020). In their model intrinsic and extrinsic motivations mediate the influence of government regulation on environmental performance.
3. Although data from 2011 may be considered to be rather old, the relevance of CSER was broadly recognized by business at that time. The focus on CSER already started in the nineties and gradually increased. Although it has continued to increase since 2011, it is not expected to have changed that much. This is confirmed by a more recent survey held in 2014 among a subsample of 2,462 companies that we surveyed in 2011. The results showed that the perceptions and motivations only slightly changed from 2011 to 2014. From these results, it can be assumed that the results of the study are likely to be still largely valid in more recent years than 2011.
4. A practical reason was that we managed to attract funding from the EU for a European study.
5. See [Appendix](#) for the results of the OLS and IV regression analysis.
6. Although this reduces the probability that the estimation results are distorted by endogeneity, it should be noted that endogeneity cannot completely be excluded, because endogeneity can also arise from unobserved variable bias. However, since the regression analysis controls for a large number of control variables, the probability of unobserved variable bias is also strongly diminished.
7. We also tested for non-linearities, as previous research has shown that financial benefits impact intrinsic motivations only beyond a certain level (Ezzine-de-Blas, Corberac, and Lapeyred 2019). Hence, the probability of crowding out may increase when NGO and media pressures and perceived market effects become so pressing that they leave little room for maneuver by the owner-manager. The test results partly support this intuition, as squared perceived market benefits have a significant negative effect on intrinsic motivation. However, the effect is rather small in comparison to the positive linear effect. Hence, even for enterprises that perceive large market benefits from CSER, an increase in perceived market benefits does not crowd out intrinsic motivation. Furthermore, squared NGO and media pressure was found to have a small, but significant, negative effect on perceived market benefits, but no significant effect on intrinsic motivation was detected.

Acknowledgments

The authors thank Reyer Gerlagh for his comments on a previous version of this paper. They certify that they have no conflict of interest in the subject matter discussed in the manuscript. This work was supported by the Templeton World Charity Foundation, Inc. Templeton World Charity Foundation had no involvement in the study design; collection, analysis and interpretation of data; in the writing of the report; and in the decision to submit the article for publication.

Disclosure statement

No potential conflict of interest was reported by the authors.

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Appendix: Tests on reverse causality from intrinsic motivation on market benefits^a

	Perceived market benefits	
	OLS	IV ^b
Intrinsic motivation	0.36***	-0.02
Perceived CSER monitoring NGOs and media	0.26***	0.23***
<i>Country controls</i>		
Scandinavia	-0.10	0.06
Continental Europe	-0.09	0.09
Central Europe	-0.50***	-0.33
Mediterranean Europe	-0.43***	-0.27
<i>Sector controls</i>		
Materials	0.01	0.01
Energy	0.21	0.22
Industrials	0.06	0.03
Consumer staple	0.28**	0.28**
Consumer discretionary	0.08	0.08
Financials	-0.10	-0.17
IT & com	-0.10	-0.14
<i>Firm controls</i>		
B2C	-0.01	-0.00
Price competition	-0.01	-0.01
External orientation	0.03*	0.06*
Flexibility orientation	-0.00	0.09
Share medium skilled	-0.00	0.00
Share high skilled	0.00	0.20
Share age employees 25-50	-0.13	-0.24
Share age employees >50	-0.08	-0.32
Enterprise size	0.05***	0.07***
<i>Respondent controls</i>		
Age of respondent	-0.05*	-0.04
Director-owner	-0.26***	-0.16
Director	-0.06	0.05
Manager	-0.00	0.07
Inverse Mill's ratio	-0.13*	-0.10
R ²	0.25	0.14

Note: ^aUnstandardized coefficients.

^bIntrinsic motivation is instrumented by the share of female executives in 2007.

* $p < 0.05$.

** $p < 0.01$.

*** $p < 0.001$. The reference dummies for region, sector, skill structure, age structure and function of the respondent are UK, other Business, low skilled employees, young employees, and other function.