 doi:10.20944/preprints202205.0261.v1

Article

Green Behavior: Factors Influencing Behavioral Intention and Actual Environmental Behavior of Employees in the Financial Service Sector

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Abstract: The financial sector, too, is developing innovative services and products that have the potential to make a more positive impact on global environmental goals. However, research sheds little light on environmental attitudes and behavioral patterns of employees in this sector. There are multiple factors promoting or inhibiting environmental behavior. Those factors may be rooted in individual or subjective norms, but also social influence and to some extent financial incentives and benefits. A survey concerning the intention to improve and actually show 'green behavior' was developed based on widely used acceptance models which differentiate between desirable behavior and the intention to show such behavior. Employees are predominately responsive towards environmental behavior: 20% are convinced of the need to act in a "green" and sustainable manner, only 5% are hard to win over or are not accessible at all. Financial loss or benefits combined with social motives contribute to sustainable living whereas financial benefits alone actually hinder such behavior. The study underlines the existence of a intention-behavior gap: The intention to behave sustainably is built somewhat separately from various influences. There are moderating factors like sex, age and family status that influence the decisions. This then leads to a gap between intention and actual behavior.

Keywords: environmental behavior; financial industry; employee survey; behavioral acceptance; intention-behavior-gap

1. Introduction

Sustainability and ecologically friendly measures are trending in nearly all economic sectors. Companies in all fields – whether in manufacturing industries or the provision of services – increasingly try to contribute to sustainable development and lead society into an ecologically better future. The financial sector, too, is developing innovative services and products that have the potential to make a more positive impact on global environmental goals.(1) In the financial sector, scientific research predominately focuses on sustainable reporting practices or the impact of sustainability guidelines on bank performance.(2-5) However, research sheds little light on environmental attitudes and behavioral patterns of employees in the financial sector. How do employees in the financial

 doi:10.20944/preprints202205.0261.v1

sector perceive the ecological crisis and how do they behave as a consequence? This paper derives employees' green behavioral intention as well as actual green behavior depending on different types of influence (individual, social, financial) and moderating factors (age, gender, etc.).

1.1. Theoretical background and hypothesis development

Except for the financial sector, employees' green behavior as an instrument for companies' environmental goal achievement is frequently examined in the literature. Employees' green behavior is defined by employees behaving pro-environmentally aiming to be sustainable und not wasteful, which benefits the company's sustainable development.(6) Pro-environmental behavior has complex patterns and includes various behavioral features.(7) Examples include conscious traveling habits, procuring sustainable products and reducing single-use items.(6) Employees' green behavior can be distinguished in two ways: green behavior that is required for the employees' jobs (creating sustainable products and adhering to organizational policies) and voluntary behavior which exceeds the company's requirements and expectations (environmental initiatives, activism).(8) We are sure that those behavioral patterns can be observed in employees of every economic sector, also in the financial sector.

There are multiple factors promoting or inhibiting environmental behavior. Those factors may be rooted in individual or subjective norms, but also social influence and to some extent financial incentives and benefits. The theory of self-determination explains that subjective norms have a great power to influence behavior as behavior is formed through individual motivation in order to derive personal satisfaction (6) and the knowledge of circumstantial information as well as individual needs.(9, 10) People increasingly develop high environmental concern which more likely translates into green behavior. (10, 11) One individual factor influencing environment-protecting behavior lies in well-being: being well-off and otherwise concern-free enables individuals to have an increasing interest in environmental protection.(10) In terms of that and the resulting green behavior, individuals show green self-efficacy which describes their own ability to achieve environmental goals. If the individuals feel that they are capable of achieving their goal, meaning their green self-efficacy is high, they are more likely to actually display green behavior.(12)

Social factors or social pressures, however, also influence people's behavior patterns.(11) Marshall, Cordano, Silverman (13) showed that normative, cultural pressures that were put on winemakers forced them to engage in sustainable practices. In a company setting, the relationship among co-workers is a crucial factor influencing employees' green behavior. For example, if individuals believe that their work team is able to achieve goals (14) and if the team shares the same values,(15) this increases the probability that an employee will engage in green behavior. It helps if the team members discuss environmental issues, share knowledge and encourage each other to pull their weight.(15) The way individuals perceive their co-workers' attitudes towards green behavior also influences their own behavior.(16)

Another social pressure factor or social context that has an effect on employees' green behavior is the relationship between work leaders or the company and the actual employee. A factor facilitating green behavior is the environment-supporting atmosphere that can be created by the organization and which helps to promote the employees'

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willingness to behave in a greener manner. In certain ways, this so called green opportunity enables and motivates people to behave well.(6, 17) Dixon-Fowler et al.(18) describe psychological contracts in which individuals believe that the company and they themselves have mutual obligations, so if the company makes an effort to have a more sustainable impact, employees with sustainable intention can connect to corporate goals and behave more sustainably as well. Organizational leaders appear to be role models for employees.(19) Besides that, research found that employees show more green behavior if they perceive their company to also pursue climate-related goals.(16) It is apparent that organizational leaders are able to support their employees in trying to achieve their environmental goals which – in an ideal context – highly resemble the organizations' goals.(20)

Additionally, the belief that green behavior patterns will be rewarded and are therefore encouraged is a possible lever in order to motivate the employees further.(6) Those rewards – either monetary or non-monetary – are another crucial point of research being discussed in the light of actual green behavior. Do incentive systems affect the actual environmental behavior of people? The scientific results of research are ambivalent. Various researchers find that green incentives that are in line with employees' financial goals have a positive effect on the employees' green behavior.(21-23) Ariely, Brancha and Meier (22) emphasize that incentives have a positive impact if individuals decide to behave sustainably in their private life. Merriman et al. (23) show that tying rewards and financial benefits to sustainability objectives motivates and engages employees to some degree. When it comes to symbolic rewards, these seem to have an impact if the rewards are given to the individuals publicly. The degree of social recognition for behaving sustainably motivates the individuals to act accordingly.(21)

Other research attests a short term effect of incentives; however, in the long term, incentives weaken intrinsic motivations, especially if the incentives are removed at some point in time.(24) By contrast, research has not been able to find a positive relation between sustainability-oriented incentive systems and actual green behavior.(25, 26) The incentive systems even have discouraging effects on sustainable behavior.(25) Potential reasons for the negative impact of incentive systems lie in the relationship of trust between company and employee: as long as the employees trust their company, they are willing to invest more effort. Explicit incentive schemes, however, signal distrust which leads the employees to question the schemes and possibly decline participation and effort.(27-29) In addition, it is crucial for the participation of the employees that they perceive the company's goal and behavior as non-selfish. Encouraging green behavior through incentives in order to increase the company's payoff rather than for non-selfish motives ("green washing") also evokes distrust and therefore less engagement in sustainable and social actions.(29) This distrust and doubt about the actual motivations of companies is called overjustification effect which was shown to be an important reason for partial or net crowding out of sustainable behavior because of material or image-related rewards or punishments.(27)

Extrinsic incentives have the power to defeat the employees' motivation to improve their own green image.(22, 28) As soon as an extrinsic incentive is introduced, the green behavior does not appear to be voluntary and is therefore not as well-regarded as before.(22) The

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actions no longer signal an image-improving contribution; instead, the employees are perceived as opportunistic and mercenary.(28) The result is that employees refrain from green actions that are incentivized. This relationship between social or financial influence, trust and the demonstration of employees' green behavior appears to be rather delicate and needs to be taken into consideration when promoting green behavior.

In order to analyze such individual and social factors influencing green behavioral intentions and actual green behavior, research has started using the Technology Acceptance Model (TAM).(30-36) Here, it is also possible to check for moderating factors, such as age, gender and professional status. Its usage contributed to various new insights: Akman and Mishra (32), for example, examined sustainable IT usage in the private and public sector. Biswas (33) studied the impact of social media on the sustainable consumption of goods using the TAM. The impact of factors such as perceived ecological value or handiness on behavioral intention was also examined by Chen and Lu in 2016.(34)

Another scientific model that also matches the requirements and desired outcomes is the Unified Theory of Acceptance and Use of Technology (UTAUT). The UTAUT reflects upon four determinants that influence the intention to use and the actual use of information systems: expected benefit, expected effort, social influence and facilitating conditions.(37) In turn, those determinants are further influenced by variables like age, gender, usage experience, etc. The UTAUT model is expandable, more explanatory variables can be added, for example Bouteraa et al. (38) added religion as a variable so they could check for religious influences on consumption intentions. Other research based the UTAUT model around determinants influencing consumer satisfaction in the banking sector.(39)

The information and findings derived from the UTAUT are suitable to be followed up by a behavioral segmentation. In the context of sustainability and environmentalism, numerous segmentation models were introduced in the past. In the UK, the Department for Environment, Food and Rural Affairs presented a framework in 2008 which takes food and drink consumption, personal and tourism travel, home and household as well as other environmental behaviors into account. The result of the framework consists of seven behavioral clusters of environmental attitude and behavioral patterns (e.g. "Positive Greens", "Concerned Consumers", "Sideline Supporters", etc.).(40) Similarly in the US, the Global Warming's Six Americas model identifies six clusters reflecting the whole spectrum of environmental concern and engagement (from alarmed to dismissive).(41) Based on this segmentation model, other researchers applied similar methods on different populations like Australia (42, 43) or Wales (44) resulting in similar segmentation patterns. Besides analyses concerning populations' environmental behaviors, research has also started to examine specific population segments. Sütterlin, Brunner and Siegrist (45) describe different types of energy consumers by using a broader and more distinct behavioral base compared to previous research. This results in six consumer segments. Others have investigated the different behavior patterns of, for example, day travelers (46) and students (47, 48). To our knowledge, almost no research has been conducted concerning sustainable segmentation in the context of employees or work environments. Opreana (49) explores the impact of companies' green internal marketing on their employees' perception of Corporate Social

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Responsibility practices by segmenting the employees into groups representing their perceived benefits from green practices in the company.

The acceptance models presented differentiate between the behavioral intention and the actual behavior and assume a strong unidirectional relationship between both measures. However, scientific research discovered difficulties in quantifying and rightly predicting actual behavior. In theory, behavior is rooted in intentions which are built upon attitude.(50) Various influences like incentives or the behavior of fellow peers as well as individual notions are able to shape peoples' attitudes towards specific topics, such as environmental protection.(8) Those attitudes may then have significant influence on peoples' behavioral intentions,(51) meaning that green or environmental incentives and values create green attitude which in turn has an impact on people's behavioral intentions. The theory of planned behavior which is described in Ajzen (52) highlights intentions that are shaped by behavioral attitudes combined with subjective norms and perceived behavioral control. The intention to adopt certain behavior patterns will then lead to the actual behavior. According to this theory, intentions are an essential intermediate step between attitude or psychological climate and actual behavior and are therefore useful to predict the actual behavior of subjects as they are easy to query(53).

Other research, however, discovered that those theories and related researching methods overestimate the predicting power of behavioral intentions on actual behavior.(54) There seems to be a gap and therefore no reliable correlation between subjects' expressed attitudes or intentions and the behavior patterns, which is known as the attitude-behavior gap or rather intention-behavior gap.(55-57) For example, when asked about organic food, subjects attest a positive attitude towards sustainable consumption, however, only a few actually purchased said items.(58) Researchers found different explanations for those deviations: Rokka and Uusitalo (59) state that the final purchase decision does indeed depend on ecological or general ethic attitudes, but subjects also take multiple other product attributes into consideration. Others explain the gap between intention and behavior by introducing influencing factors or moderators like consumers' guilt,(60) habits, the willingness to commit and sacrifice,(61) product availability and perceived effectiveness (62) or rather efficacy of the proposed behavior (63). If the execution of behavioral intentions calls for significant behavioral costs, the subjects are found to be less likely to take such actions. This cost dependency is often found in scientific research as the low-cost hypothesis.(11, 63, 64) Diekmann and Preisendörfer (64) define this low-cost hypothesis as follows: "environmental attitudes promote 'green' actions when the related behavioral costs are low but become irrelevant when people have to bear significant costs or discomfort in order to protect the environment effectively." Taking all of these aspects of past research into consideration, we are contributing to the literature by using acceptance models to analyze individual, social and financial factors that influence green behavioral intentions as well as the actual employee green behavior in the context of employees within the finance sector.

2. Methods

2.1. Design

A survey concerning the intention to improve and actually show green behavior was developed based on widely used acceptance models

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which differentiate between desirable behavior and the intention to show such behavior.(30-39) Individual factors, such as subjective norms and beliefs, were distinguished from external or supporting factors, such as social influence from peer groups and financial consequences such as costs or benefits resulting from green behavior. In addition, moderating variables – sex, age group, professional status, place of residence and family status – were recorded. Based on our literature review we checked for the following hypotheses (cf. fig. 1 for a full overview of factors and hypotheses):

H1: Actually shown green behavior is mostly influenced by subjective norms whereas behavioral intention is equally influenced by internal and external factors.

H2: Among the external factors, social aspects, such as reactions from peer groups and influencers, have a stronger positive impact on green behavior than financial benefits.

H3: Behavioral intention paves the way to green behavior expressed by a strong unidirectional relationship between intention and actual behavior.

H4: Sex, age group, professional status, place of residence and family status influence the impact of internal and external factors on green behavior in various degrees.

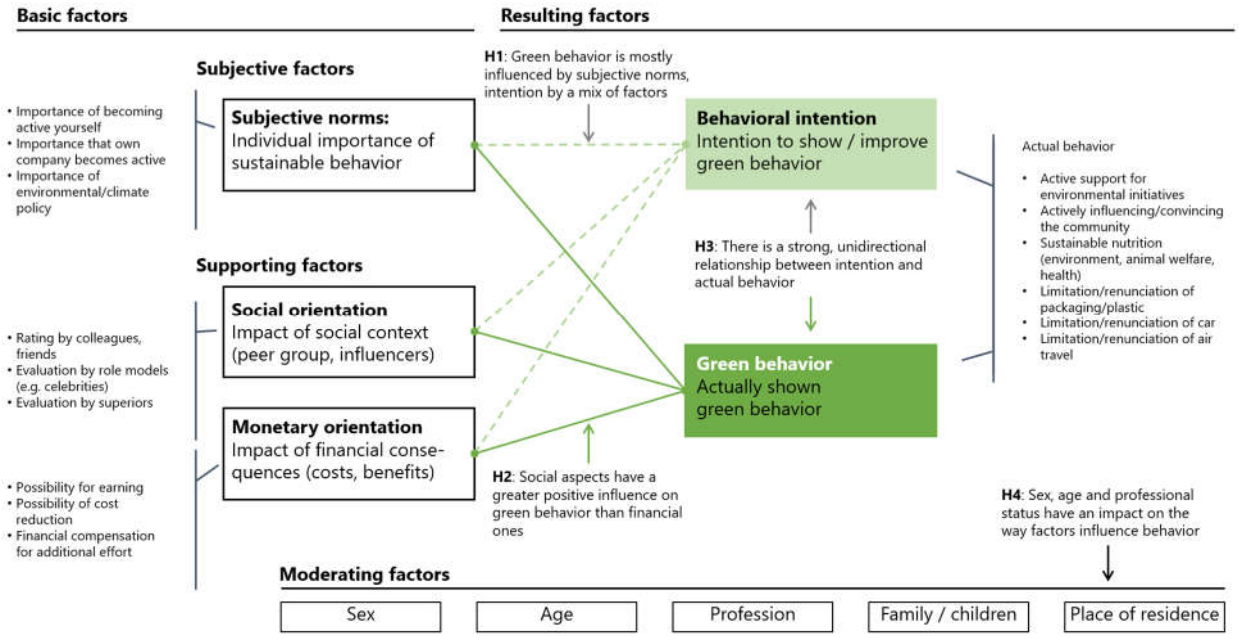

Figure 1. Overview of factors influencing behavioral intention to improve green behavior and actual green behavior as well as the hypotheses of the study.

2.2. Subjects

In summary, 470 employees of a European management and IT consulting firm participated in this study, 143 of which were women (30%), 295 were men (63%), 32 gave no indication (7%). The participants fell into three age groups: 33% were 20 to 30 years old, 40% 31 to 45 years and 27% 46 to 65 years old. With respect to their professional position, 25% ranged in top management positions (Partner, Senior Manager), 21% in the middle (Manager) and 26% in lower management positions (Senior Consultant / Consultant), 2% trainees (Analyst) and 25% had administrative and

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support functions (Professional, Senior Professional, Expert, Administration) with only very few participants from internal management (3%). 35 persons (7%) did not state their position. Due to their small number, trainees were added to the "consultants" group and all internal staff were summarized in one group. About 28% of the participants lived in a city of more than 1 million inhabitants, 38% in a city of more than 100,000 inhabitants, 15% in smaller towns with more than 20,000 inhabitants and 19% in rural areas. A majority of 59% had no children, 41% had at least one child. Table 1 gives a detailed overview of all subject variables.

Table 1. Summary of subject variables (n and %).

Age group (yrs)	n	%	Professional status	n	%	Place of residence	n	%
20-25	47	10.7	Partner	27	6.2	City of millions (>1m inhabitants)	121	27.8
26-30	100	22.8	Senior Manager	78	17.9	Big city (>100k to <1m)	169	38.9
31-35	74	16.9	Manager	92	21.1	Medium-sized city (>20k to <100k)	64	14.7
36-40	54	12.3	Senior Consultant	64	14.7	Small town (>5k to <20k)	42	9.7
41-45	45	10.3	Consultant	52	12.0	Rural area (<5k)	39	9.0
46-50	55	12.6	Analyst	10	2.3			
>51	63	14.4	Professional	12	2.8			
			Senior Professional	18	4.1			
			Expert	14	3.2			
			Manager Internal	8	1.8			
			Head	6	1.4			
			Administration	54	12.4			
Total	438	100.0	Total	435	100.0	Total	435	100,0

2.3. Material

The questionnaire consisted of 36 items (see appendix 1). Seven items related to the current, sustainable behavior. Questions were asked about the actual green behavior with the following topics: not using the car for short distances, avoiding plastic bags when shopping, saving electricity, mobility on vacation, meat consumption and nutrition, donations to environmental organizations, and voluntary commitment in environmental organizations (see table 5a for a list of items).

Nine items related to how sustainability is valued as a subjective norm. The items included personal statements such as: "The topic of

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sustainability is of great importance to me personally" as well as general statements such as: "Politicians should swiftly take drastic measures to stop climate change" (see table 5b for a list of items).

Fourteen items related to the intention to behave sustainably in the future. These items were aggregated in four brief topics relevant for consultants: 1) mobility on business trips and vacation, 2) working from home, 3) nutrition and 4) use of car and public transport. Each topic was introduced with a short scenario or an explanation and then alternative courses of action were put forward (see Table 2 for the topic "nutrition").

Table 2a: Introductory explanation of "nutrition" as one of four topics in the questionnaire.

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A resource-saving diet is plant-based and uses regional and seasonal products. Are you planning to change your diet for sustainability reasons? (i.e. no/few animal products; no tropical fruits such as oranges, mangoes, kiwis; fresh produce such as fruit and vegetables depending on the season).

a) No – I eat what I like.

b) I reduce climate-damaging foods, but freshly squeezed orange juice on weekends is a must. (example)

c) I already eat predominantly sustainably.

–

The possible answers were always arranged in a way that the least sustainable behavior (e.g. "I eat what I like" = 1 point) was mentioned first and the most sustainable (e.g. "I already eat predominantly sustainably" = 3 points) last. Therefore, with the sustainability of the behavior, the score increased. In a second step, the extent to which financial and social incentives have an influence on sustainable behavior was queried. This made it possible to determine whether financial and social incentives change behavior (see Table 2b).

Table 2b: Query of influencing factors on the subject of "nutrition" in the questionnaire.

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How would it affect your eating habits if your entire environment were to eat sustainably?

a) Not at all – delicious, individual food is important to me. I don't care what others eat.

b) In some areas I would adapt. But there are things I won't do without.

c) If my environment changes, then I will do the same.

d) I eat sustainably anyway and am therefore a role model for my environment.

How would it affect your eating habits if a demonstrably sustainable diet (as described) led to financial benefits (e.g. via tax breaks, subsidies or cashback)?

a) Not at all – I eat what I like. Money has no influence on my decision.

b) Given financial incentives, I would partially change my diet.

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c) Given financial incentives, I would consistently change my diet.

d) I already eat sustainably and do not need any financial incentives to do so.

A final block of questions explicitly referred to motives for sustainable action, the "subjective norm" including values ("doing the right thing"), financial benefits, role models, private social environment as well as the professional environment (see table 3).

Table 3. Explicit motives as "subjective norm" for sustainable behavior in the questionnaire.

Behavior can be influenced by incentives. Please evaluate the significance of the mentioned incentive options for you. 5 stands for "extremely important" and 1 corresponds to "completely unimportant"

a) Feeling like you're doing the right thing

b) Money or monetary reward

c) People who are role models for me exemplify the behavior

d) Recognition in my circle of family and friends

e) My disciplinary supervisor exemplifies the behavior

While responding to three items of the survey, participants were asked to enter the following numbers:

1. Monetary compensation (in Euro) for longer travel times (for a train ride from Hamburg to Munich lasting about 6 hours from station to station as compared to a 1-hour flight without getting to the airport and security measures)
2. Time compensation (in hours of spare time) for longer travel times (again, for a train ride from Hamburg to Munich as compared to a flight)
3. Percentage of total work hours that could be done just as well from home without compromising on content

Finally, gender (male, female, non-binary), seven age groups (from 20 to 30 years old up to 51 years plus), the exact hierarchical position in the company (6 career levels for consultants and 4 career levels for internal employees) and the place of residence (5 size levels from rural area to cities of over a million inhabitants) were queried.

2.4. Procedure

All employees of a management and IT consultancy for the European financial services industry were contacted by e-mail and asked to participate in the survey, which was available in English and German. There was one e-mail reminder to participate, and the survey was also

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advertised on the company's intranet. The survey ran for three weeks and was conducted by an interactive chatbot that presented one question after another (cf. figure 2).

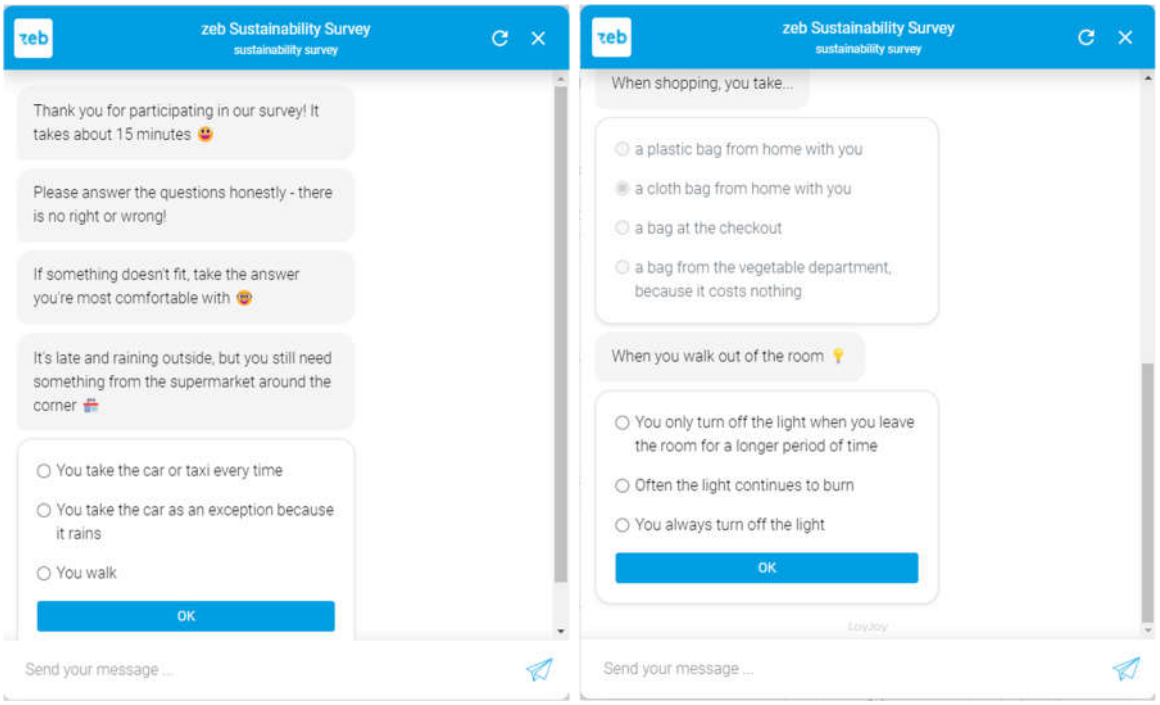

Figure 2. Chatbot displaying the survey on actual sustainable behavior (green behavior) and behavioral intention.

3. Results

In a first section, we report on significant effects of items asking about monetary and time compensation as well as percentage of work hours spent working from home. In the subsequent sections, we describe the results concerning the four hypotheses guiding this study.

3.1. Number inputs: monetary and time compensation, working from home

The participants entered numbers in order to indicate what they would expect as monetary and time compensation for more sustainable but also more time consuming travel (train vs. flight). Men expected about EUR 170 (USD 190), women EUR 150 (USD 170) and both genders on average 5.9 hours of spare time in compensation. Employees with children asked for more compensation than employees without: EUR 209 (USD 237) and 7 hours in compensation for longer travel times for participants with children, and EUR 154 (USD 175) and 5.4 hours for participants without ($F[1,159]=3.74$; $p<.05$). Age group had a significant impact on monetary compensation ($F[6,153]=2.70$; $p<.05$) and time compensation ($F[6,153]=2.26$; $p<.05$), showing higher numbers with increasing age (see table 4). No other significant effects were found, and estimates for work hours from home did not differ significantly either: women estimated that they could perform up to 65% of their work from home without compromising on quality, for men the figure was 58%. Employees with kids would like to spend 57% of their working hours at home, employees without kids 60%.

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Table 4. Summary of subject variables (mean and standard deviation).

Monetary compensation (in EUR)								
Age group (yrs)	M	SD	Professional status	M	SD	Place of residence	M	SD
20-25	117	120	Partner	189	106	City of millions (>1 m inhabitants)	165	132
26-30	132	105	Senior Manager	149	126	Big city (>100k to <1m)	156	131
31-35	183	141	Manager	192	146	Medium-sized city (>20k to <100k)	167	148
36-40	193	153	Senior Consultant	162	156	Small town (>5k to <20k)	211	178
41-45	234	171	Consultant/Analyst	156	107	Rural area (<5k)	223	155
46-50	163	116	Internal staff	168	159			
>51	265	184						
Total	169	138						
Time compensation (in hours)								
Age group (yrs)	M	SD	Professional status	M	SD	Place of residence	M	SD
20-25	4.2	2.3	Partner	4.7	3.2	City of millions (>1m inhabitants)	6.6	6.1
26-30	5.5	4.5	Senior Manager	6.5	4.6	Big city (>100k to < 1m)	5.2	3.7
31-35	5.5	2.8	Manager	6.3	6.4	Medium-sized city (>20k to <100k)	5.8	4.8
36-40	7.2	6.2	Senior Consultant	6.0	5.5	Small town (>5k to <20k)	7.2	6.3
41-45	6.3	4.7	Consultant/Analyst	5.8	4.6	Rural area (<5k)	5.9	2.8
46-50	8.0	9.0	Internal staff	5.7	4.6			
>51	5.9	2.8						
Mean	5.9	4.9						

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Hours worked from home (in percent)

Age group (yrs)	M	SD	Professional status	M	SD	Place of residence	M	SD
20-25	57.4	24.0	Partner	66.0	21.2	City of millions (>1m inhabitants)	57.3	23.3
26-30	59.2	20.7	Senior Manager	62.4	22.8	Big city (>100k to <1m)	59.2	20.5
31-35	63.3	22.6	Manager	53.9	23.4	Medium-sized city (>20k to <100k)	61.3	20.1
36-40	61.2	20.7	Senior Consultant	57.4	18.3	Small town (>5k to <20k)	64.8	18.5
41-45	64.7	20.8	Consultant/Analyst	58.5	19.0	Rural area (<5k)	62.0	24.2
46-50	53.9	20.4	Internal staff	59.8	21.4			
>51	53.6	20.0						
Mean	59.4	21.3						

M = Mean, SD = Standard Deviation

3.2. Green behavior and subjective norms (Hypothesis 1)

We hypothesized that actually shown green behavior is mostly influenced by subjective norms whereas the behavioral intention is equally influenced by internal and external factors. We used a number of items in order to describe behavioral intention and actual green behavior (see appendix 2a) as well as internal factors (subjective norms) and external factors (social influence and financial losses or benefits; see appendix 2b). In order to make all items comparable, negatively worded items were reversed and recoded on a scale from 1 to 5.

In order to check the impact of internal and external factors on behavioral intention (see table 5a) and green behavior (see table 5b), two discriminant analyses were calculated with these items predicting the quartile groups of the means of items representing behavioral intention (from 1=lowest quartile to 4=highest quartile) and the actual green behavior (quartile groups 1–4), respectively. Both analyses show a highly significant solution for the classification of behavioral intention ($Chi^2[69]=135.9$; $p<.001$; 51% of variance explained, 68% cases correctly classified) and actual green behavior ($Chi^2[69]=160.7$; $p<.001$; 77% of variance explained, 69% cases correctly classified). A closer inspection of items substantially contributing to the correct classification of the four quartile as well as differentiating between these groups shows that personal values are relevant for both intention and actual behavior ("Feeling like I am doing the right thing", item 19) as well as travel behavior (items 10 and 11). Financial issues (taxation addressed in item 5 and 15) play an

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important role in behavioral intention, whereas societal and political engagement (items 1, 3, and 8) are more relevant for actual green behavior.

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Table 5a: Discriminant analyses of items substantially contributing to the prediction of behavioral intention (p<.1).

	Test of equality of group means			Behavioral intention (quartile groups) function coefficients				
	Wilks' Lambda	F[3,281]	Sig.	Q1 <25%	Q2 <50%	Q3 <75%	Q4 <=100%	abs. diff.
Internal: subjective norm								
1. The topic of sustainability is of great importance for our society	0.99	0.48	0.700	7.69	6.70	6.50	5.68	11.20
2. The importance that sustainability has in my circle of acquaintances strongly influences me	0.98	2.01	0.112	7.43	3.88	3.73	4.64	4.81
3. The topic of sustainability is of great importance to me personally	0.95	4.54	0.004	8.35	4.80	5.17	4.81	6.43
4. Politicians should swiftly take drastic measures to stop climate change	0.99	0.94	0.423	6.14	4.26	4.13	3.79	6.04
5. I accept it if these measures have an impact on my personal life (e.g. stronger taxation of animal products or flights)	0.94	6.02	0.001	-1.31	3.16	3.34	4.24	12.05
6. I look closely at my consumption of resources, e.g. CO_2 footprint	0.94	5.90	0.001	-2.52	-1.05	-0.88	0.27	0.87
7. I set myself personal goals for a more sustainable life and also control whether I achieve them	0.95	5.24	0.002	0.72	2.04	2.13	2.50	5.95
8. I think projects such as the deepening of the Elbe in Hamburg are right, even if fish and plants die as a result. Preserving jobs is a higher priority for me	0.98	1.75	0.158	8.35	7.10	7.18	8.40	14.33
9. Cutting down a forest for a supplementary runway at the airport is the right thing to do in my opinion	0.98	2.02	0.111	5.84	4.71	4.74	5.68	9.29
External: social orientation								
10. It would affect my travel behavior if my entire project team took the train instead of flying for sustainability reasons	0.94	5.91	0.001	-5.643	-5.998	-5.836	-4.922	11.11

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11. It would affect my travel behavior if the relevant managers in my environment (e.g. mentor, project manager) attached importance to traveling by train for sustainability reasons	0.95	4.96	0.002	6.161	6.533	6.601	7.768
12. I would work from home more often, if it was explicitly endorsed by the project manager and/or mentor	0.99	0.84	0.473	2.075	3.238	3.146	3.353
13. It would affect my eating habits if my entire environment were to eat sustainably	0.93	7.40	0.000	1.090	.538	.790	1.891
14. If the majority of my environment gave up the car for sustainable mobility and switched to public transport, I would adapt and give up my car as well	0.99	1.06	0.367	-1.276	-2.111	-2.412	-3.321
External: monetary orientation							
15. If I could claim higher expenses for a project journey by train than for a flight, I would travel by train instead of plane	0.92	7.97	0.000	2.68	4.22	4.67	5.50
16. If I work significantly more from home, I do not fear for my privileges in bonus programs of hotels and airlines	0.99	1.38	0.249	0.00	0.92	0.75	-0.58
17. It would it affect my eating habits if a demonstrably sustainable diet led to financial benefits (e.g. via tax breaks, subsidies or cashback)	0.94	5.85	0.001	-1.65	-0.89	-0.73	0.01
18. If public transport were free and the car was taxed much more heavily, I would adapt my car use	0.99	1.10	0.350	-0.98	1.84	1.68	1.95
Individual relevance: personal values							
19. Feeling like I am doing the right thing	0.97	2.38	0.070	3.974	7.611	7.626	6.955
20. Money or monetary reward	0.96	3.76	0.011	2.574	4.333	4.298	7.106
21. People who are role models for me exemplify the behavior	0.97	2.47	0.063	1.813	1.351	1.176	.780
22. Recognition in my circle of family and friends	0.95	4.80	0.003	7.615	4.221	3.960	7.496

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23. My disciplinary supervisor exemplifies the behavior	0.98	1.68	0.171	4.413	3.025	3.161	.900	2.67

Table 5b: Discriminant analyses of items substantially contributing to the prediction of actual green behavior (p<.1).

	Test of equality of group means			Actual behavior (quartile groups) function coefficients				
	Wilks' Lambda	F[3,277]	Sig.	Q1 <25%	Q2 <50%	Q3 <75%	Q4 <=100%	abs. diff.
Internal: subjective norm								
1. The topic of sustainability is of great importance for our society	0.96	3.81	.011	6.76	6.87	6.58	6.14	12.84
2. The importance that sustainability has in my circle of acquaintances strongly influences me	0.97	2.43	.066	3.73	3.62	3.56	3.86	7.31
3. The topic of sustainability is of great importance to me personally	0.83	19.41	.000	4.84	5.22	5.07	5.86	11.32
4. Politicians should swiftly take drastic measures to stop climate change	0.87	13.90	.000	4.20	4.45	4.44	4.52	9.21
5. I accept it if these measures have an impact on my personal life (e.g. stronger taxation of animal products or flights)	0.91	9.64	.000	3.15	3.05	3.04	3.00	5.94
6. I look closely at my consumption of resources, e.g. CO2 footprint	0.85	16.37	.000	-1.22	-1.23	-0.79	-1.06	1.86
7. I set myself personal goals for a more sustainable life and also control whether I achieve them	0.86	15.31	.000	2.00	1.85	2.28	2.41	4.55
8. I think projects such as the deepening of the Elbe in Hamburg are right, even if fish and plants die as a result. Preserving jobs is a higher priority for me	0.89	11.15	.000	6.98	6.74	6.74	6.40	12.90
9. Cutting down a forest for a supplementary runway at the airport is the right thing to do in my opinion	0.90	9.83	.000	4.63	4.37	4.41	4.30	8.45
External: social orientation								
10. It would affect my travel behavior if my entire project team takes the train	0.91	9.63	.000	-6.23	-6.55	-5.38	-6.51	12.22

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instead of flying for sustainability reasons							
11. It would affect my travel behavior if the relevant managers in my environment (e.g. mentor, project manager) attach importance to travelling by train for sustainability reasons	0.90	10.67	.000	6.44	6.95	6.17	7.64
12. I would work from home more often, if it was explicitly endorsed by the project manager and/or mentor	0.97	2.94	.034	3.20	3.07	3.30	3.12
13. It would affect my eating habits if my entire environment were to eat sustainably	0.86	15.04	.000	0.48	0.30	0.44	1.03
14. If the majority of my environment for sustainable mobility gave up the car and switched to public transport, I would adapt and give up your car as well	0.95	4.78	.003	-2.08	-1.60	-2.01	-1.20
External: monetary orientation							
15. If I could claim higher expenses for a project journey by train than for a flight, I would travel by train instead of by plane	0.93	6.45	.000	4.21	4.59	4.02	3.98
16. If I work significantly more from home, I do not fear for my privileges in bonus programs of hotels and airlines	0.98	1.74	.158	1.06	1.12	1.11	1.11
17. It would affect my eating habits if a demonstrably sustainable diet led to financial benefits (e.g. via tax breaks, subsidies or cashback)	0.84	18.02	.000	-1.05	-0.84	-0.51	-0.55
18. If public transport were free and the car was taxed much more heavily, I would adjust my car use	0.97	3.18	.025	1.78	1.49	1.94	1.00
Individual relevance: personal values							
19. Feeling like I am doing the right thing	0.90	10.36	.000	7.79	7.62	7.53	7.25
20. Money or monetary reward	0.99	1.14	.333	3.94	4.07	4.10	4.10

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21. People who are role models for me exemplify the behavior	0.97	2.78	.042	1.23	1.99	1.63	1.48	3.86
22. Recognition in my circle of family and friends	0.98	1.54	.205	3.70	3.40	3.54	3.50	6.74
23. My disciplinary supervisor exemplifies the behavior	0.98	1.46	.227	3.43	3.11	3.06	3.40	6.13

Additionally, we checked by a factorial design calculating a MANOVA with the quartile groups "subjective norm", "social orientation" and "financial loss/benefit" (1–4) as independent factors as well as behavioral intention and actual behavior as dependent variables. In order to reduce error variance we used the individual characteristics sex, age group, professional status, place of residence and family status as covariates. Consistent with our hypothesis, the subjective norm had no significant impact on behavioral intention but on actual green behavior ($F[3,124]=6.4$; $p<.001$): the higher the subjective norm, the more green behavior is shown (cf. figure 3, left hand side). Also, social influence had an impact on actual behavior ($F[3,124]=2.7$; $p<.05$). Behavioral intention was only significantly influenced by an interaction of subjective norm and social influence ($F[8,124]=2.1$; $p<.05$): high social influence (quartile group 4) may be experienced as "social pressure" reducing the behavioral intention when the subjective norm is low (quartile groups 1 and 2), but supports it when the subjective norm is high (quartile groups 3 and 4; figure 3, right hand side).

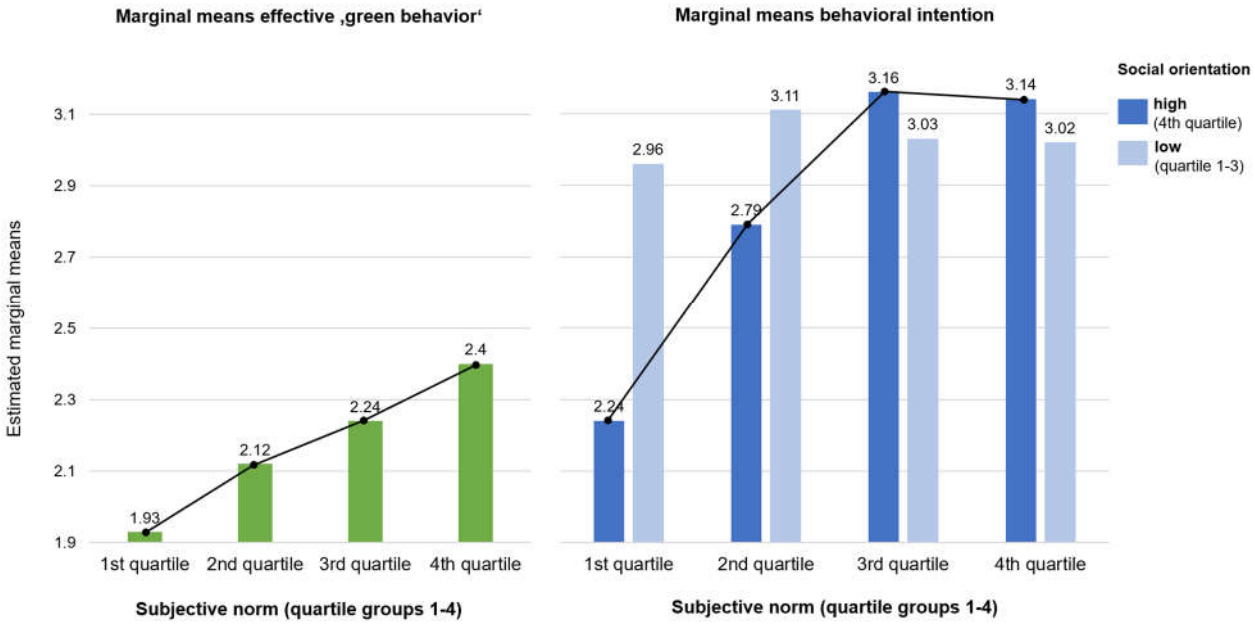

Figure 3. Impact of subjective norm on actual behavior (left) as well as social orientation and subjective norm on behavioral intention (right).

In summary, relevant items in the discriminant analysis (summarized in table 5b) and the results of the factorial design (figure 3) support the great importance of personal values and subjective norms for actual green behavior. The results of the discriminant analysis (table 6a) show

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that a broader spectrum of items including subjective norm as well as social and monetary orientation are relevant to predict the behavioral intention. This is also supported by the outcome of the factorial design which revealed no major effect of the subjective norm alone but an interaction of subjective norm and social orientation.

3.3. Green behavior and external, supporting factors (Hypothesis 2)

In our second hypothesis we claimed that external factors concerning social aspects, such as reactions from peer groups and influencers, have a stronger positive impact on green behavior than financial benefits. In order to check this hypothesis we calculated a MANOVA with the factors high vs. low personal value (personal rating of item 19 "Feeling like I am doing the right thing" above or below the overall mean), high vs. low financial orientation (item 20 on monetary rewards above or below overall mean) as well as high vs. low social orientation (means of items 21 to 23 above or below the overall mean). Personal characteristics (sex, age, professional status, place of residence and family status) were introduced as covariates (see hypothesis 4 below). A high personal value resulted in a higher behavioral intention ($F[1,452]=9.57$; $p<.01$; figure 4 left hand side, dotted line) and more actual behavior ($F[1,452]=26,17$; $p<.001$; figure 4 left hand side, solid line). In addition, we found a significant main effect of financial orientation which reduces behavioral intention ($F[1,395]=4.36$; $p<.05$) and a significant interaction of financial and social orientation on actual behavior ($F[1,395]=6.37$; $p<.01$): if social orientation is high, monetary aspects do not play an important role. However, if social orientation is low, then a high financial orientation reduces green behavior (see figure 4 right hand side). In summary, one part of hypothesis 2 is directly supported by the results: personal values – that is, the feeling of doing the right thing – drive both behavioral intention and green behavior. Social and monetary influence resulted in an interaction where a high social orientation counterbalances the negative effect of monetary rewards on actual behavior.

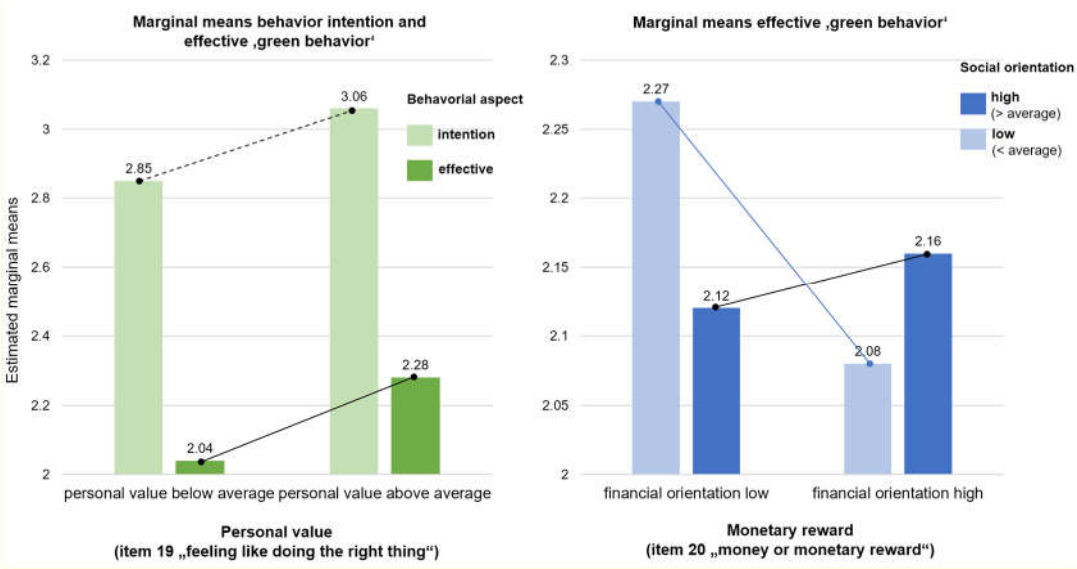

Figure 4. Main effect of personal values (endorsement of item 19 "doing the right thing" low vs. high) on actual behavior and behavioral intention (left) and interaction of monetary and social orientation concerning actual behavior (right).

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3.4. Relationship between behavioral intention and green behavior (Hypothesis 3)

In hypothesis 3, we examined whether behavioral intention paves the way to green behavior expressed by a strong unidirectional relationship between intention and actual behavior. We calculated two regression models: all items about behavioral intention were used to predict the mean of the items concerning actual green behavior and vice versa. We checked for the stability of the items and scales calculating items' correlations (see appendix 2) and Cronbach's alpha. The alpha value for the overall survey is sufficiently high (alpha=0.83) and expectedly lower for the small scales of behavioral intention (alpha=0.32) and actual green behavior (alpha=0.57). According to the item statistics and Cronbach's alpha the scales show sufficient independence and stability. Consistent with our hypothesis, the five items addressing behavioral intention predict actual behavior much better (R^2=0.51; F[5,282]=20.03; p<.001) than the seven items concerning actual behavior predict behavioral intention (R^2=0.25; F[7,452]=4.43; p<.001; see table 6).

Table 6. Regression models – behavioral intention predicting actual behavior (left) and actual behavior predicting behavioral intention (right).

Behavioral intention → actual behavior				**Actual behavior → behavioral intention**			
	Stand. Beta Coeff.	t	Sig.		Stand. Beta Coeff.	t	Sig.
(Constant)		10.117	0.000	(Constant)		12.137	0.000
I would travel to the project by train instead of by plane for the sake of sustainability.	.161	3.038	0.003	I walk … even when it's late and raining outside, but I still need something from the supermarket around the corner.	-.061	-1.339	0.181
Physical presence at the customer's site is indispensable, sustainability issues must take a back seat. (reversed)	-.014	-0.229	0.819	When shopping, I take … a cloth bag from home with me.	.099	2.119	0.035
I gladly accept the disadvantages of working from home in order to conserve resources.	.166	2.780	0.006	When I walk out of the room I … always turn off the light.	-.007	-0.142	0.887
I plan to change my diet for sustainability reasons (i.e. no/little animal products; no tropical fruits ...).	.355	6.585	0.000	On vacation, I usually travel by … train, bus or I go on a hiking vacation.	.017	0.375	0.708
When it comes to cars, I don't limit myself. (reversed)	-.070	-1.304	0.193	I give up meat, fish or other animal products for the sake	.174	3.602	0.000

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	of the environment or sustainability.			
R^2=0.51; F[5,282]=20.03; p<.001	I have financially supported environmental protection associations … with donations in the last 12 months.	.099	1.999	0.046
	I have supported environmental protection associations … through volunteer work in the last 12 months.	-.001	-0.012	0.990
		R^2=0.25; F[7,452]=4.43; p<.001		

3.5. Moderating effects related to green behavior (Hypothesis 4)

Our final hypothesis states that individual characteristics, such as sex, age group, professional status, place of residence and family status, influence internal and external factors of green behavior. In the MANOVA performed to check the influence of supporting factors (hypothesis 2) we used the personal characteristics sex, age, professional status, place of residence and family status as co-variates. The results show that behavioral intention is influenced by sex (female 3.2 vs. male 2.9, F[1,395]=15.51; p<.001) and age (<45 yrs. 2.9 vs. >45 yrs. 3.2, F[1,395]=7.3; p<.01), actual behavior by sex only (female 2.3 vs. male 2.1, F[1,395]=25.33; p<.001). In the following we report the impact of personal characteristics on the scenarios described in the survey, that is, professional and private mobility, nutrition and use of car (see table 2a, 2b).

Mobility. Most consultants go on vacation by car or short-haul flight (65.5%), followed by long-haul flights (28.5%) and trains or buses (5.9%). Long-haul flights are mostly found among the 26 to 30-year-olds, who also make up the majority of the few bus and train riders. Older persons from 45 years onward predominantly travel by car or short-haul flight (age group x type of travel, see table 7a, Chi^2[12]=38.39; p<.001). This is confirmed by the frequencies broken up by professional status: the majority of long-haul flyers are managers and senior consultants, who are mostly between 25 and 35 years old. The older senior managers and managers use cars and short-haul flights (cf. table 7b, Chi^2[20]=41.78; p<.01).

Table 7a: Persons indicating how they travel when going on vacation (by car, short-haul and long-haul flight, respectively) by age group.

	Age group (in years)						
Type of travel	20–25	26–30	31–35	36–40	41–45	46–50	>51
Long-haul flight	12	42	31	12	7	7	14
Car or short-haul flight	30	49	40	40	36	47	45
Train or bus	5	9	3	2	2	1	4
Total	47	100	74	54	45	55	63

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Table 7b: Persons indicating how they travel when going on vacation (by car, short-haul and long-haul flight, respectively) by professional status.

	Professional status							
Type of travel	Partner	Senior Manager	Manager	Senior Consultant	Consul-tant	Analyst	internal	other
Long-haul flight	7	18	25	30	22	1	14	10
Car or short-haul flight	19	59	65	30	25	8	41	35
Train or bus	1	2	2	4	5	1	3	9
Total	27	79	92	64	52	10	58	54

Persons flying long distances mostly live in a metropolis of more than one million inhabitants, city dwellers in large cities (>100.000 inhabitants) tend to take the bus or train whereas people living in smaller towns or the countryside prefer the car or short-haul flights ($Chi^2[8]=26.66$; $p<.01$; table 7c).

Table 7c: Persons indicating how they travel when going on vacation (by car, short-haul and long-haul flight, respectively) by place of residence.

Type of travel	Metropolis (>1m)	Large city (>100k)	City (>20k)	Town (>5k)	Country-side
Long-haul flight	47	47	12	9	9
Car or short-haul flight	70	105	51	33	26
Train or bus	4	17	1	0	4
Total	121	169	64	42	39

Families with children mostly travel by car or short-haul flight whereas people without children make up the majority of long-distance airline passengers ($Chi^2[2]=34.52$; $p<.001$; table 7d).

Table 7d: Persons indicating how they travel when going on vacation (by car, short-haul and long-haul flight, respectively) by family status.

Type of travel	Without children	With children
Long-haul flight	106	30
Car or short-haul flight	152	154
Train or bus	20	8
Total	278	192

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Nutrition. (Almost) only men "eat what they like", women pay particular attention to sustainable nutrition ($Chi^2[2]=31.63$; $p<.001$; table 8a).

Table 8a: Persons reporting on their diet (without restrictions, little adaptations and mostly sustainable) by sex.

Are you planning to change your diet for sustainability reasons?	male	female
No, I eat what I like	101	16
I reduce climate-damaging foods a little	136	78
I feed myself mostly sustainably	58	49
Total	295	143

The professional status has a significant influence on a sustainable diet with a focus on younger people (consultants) and persons with less professional travel habits (internal employees) ($Chi^2[20]=55.48$; $p<.001$; table 8b). Age, place of residence and children do not play a significant role.

Table 8b: Persons reporting on their diet (without restrictions, little adaptations and mostly sustainable) by professional status.

planning to change diet	Partner	Senior Manager	Manager	Senior Consultant	Consultant	Analyst	internal	other
No, I eat what I like	7	25	32	25	10	1	5	7
I reduce climate-damaging foods a little	17	37	40	27	36	4	37	23
I feed myself mostly sustain-ably	1	17	20	12	6	5	16	24
Total	25	79	92	64	52	10	58	54

Car use. Car lovers are by far predominantly male, whereas women's approval and rejection of the car are in balance ($Chi^2[4]=13.36$; $p<.05$; table 9a).

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Table 9. a: Persons assessing their car use (from full agreement to full rejection) by sex.

When it comes to cars, I don't limit myself	male	female
Totally agree	31	10
Agree	52	17
Neither nor	66	47
Do not agree	88	53
Do not agree at all	58	16
Total	295	143

Unrestricted car use polarizes in age groups up to 30 years of age – with a majority that claims to restrict car use. Age groups from 45 years and older have a rather neutral attitude to the car ($Chi^2[24]=52.18$; $p<.001$; table 9b).

Table b: Persons assessing their car use (from full agreement to full rejection) by age.

When it comes to cars, I don't limit myself	20–25 yrs.	26–30 yrs.	31–35 yrs.	36–40 yrs.	41–45 yrs.	46–50 yrs.	>51 yrs.
Totally agree	1	9	8	6	7	6	4
Agree	8	13	11	12	10	10	5
Neither nor	12	21	17	10	9	20	24
Do not agree	19	24	28	16	13	18	23
Do not agree at all	7	33	10	10	6	1	7
Total	47	100	74	54	45	55	63

Professional position and – surprisingly – also the place of residence (city vs. country) do not play a significant role in the restriction of car use. However, it was not asked whether the car is used a lot or little, but whether a restriction of car use is planned. Parents reject a rather neutral or negative attitude toward car use without restrictions ($Chi^2[4]=21.60$; $p<.001$; table 9c).

Table 9c: Persons assessing their car use (from full agreement to full rejection) by family status.

When it comes to cars, I don't limit myself	Without children	With children
Totally agree	28	14
Agree	36	34
Neither nor	58	60
Do not agree	75	68

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Do not agree at all	58	16
Total	255	192

3.6. Model summary and model check

In summary, personal characteristics and different scenarios play a relevant role in forming behavioral intention as well the actual behavior shown. Women are more interested in sustainability and implement it more consistently. Women are more responsive to social incentives, men to a combination of social and material incentives. Material incentives alone, however, have a negative effect. Younger people show an ambivalent behavior: they want to act in a sustainable, "green" manner, but they also want to experience a lot of long-distance and air travel. The greatest willingness to change in men is shown in midlife at the age of 35 to 45 years. Sustainable behavior is mainly found in the big city, but the greatest willingness to behave more sustainably can be identified in small towns and in the countryside.

Career starters are more interested in the topic and attach higher importance to sustainable action than people in higher positions. Women in higher professional positions are more likely to act as role models: they show more actual sustainable behavior, while men in higher positions show less actual behavior. Having children does not lead to sustainable action but to more pragmatism, e.g. in car use and nutrition. Younger people are more likely to use bus or coach journeys while in low-income positions. Airplanes are a more popular means of travel among those with a higher income – especially if they live in a big city. People in midlife and with children are most likely to refrain from air travel. Healthy nutrition is an issue especially for younger people and women. Healthy living is an important incentive, especially for women.

In order to summarize and check our basic hypotheses we used the means for all items forming the factors subjective norm (9 items), social orientation (5 items) and monetary orientation (4 items; see appendix 2b) as independent variables, and behavioral intention (5 items) and actual behavior (7 items, see appendix 2a) as dependent variables of two regression analyses (see table 10). This summary supports the previous results that it is easier to predict actual behavior (table 10, right hand side) than behavioral intention (table 10, left hand side), and that subjective norm and social orientation play a dominant role to explain actual green behavior (table, significant beta coefficients, right hand side).

Table 10. Model summary as linear regression of the means of subjective norm, social orientation and monetary orientation as independent variables and behavioral intention (left) and actual green behavior (right) as dependent variables.

	Behavioral intention (5 items)			**Actual behavior (7 items)**		
	Standardized Beta Coefficients	t	Sig.	Standardized Beta Coefficients	t	Sig.
(Constant)		11.347	0.000		6.490	0.000

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Mean Subj. Norm (9 items)	0.049	0.935	0.350	0.271	6.064	0.000
Mean Social Orientation (5 items)	-0.042	-0.687	0.492	0.319	6.095	0.000
Mean Monetary Orientation (4 items)	0.208	3.566	0.000	0.083	1.664	0.097
	R^2=0.21; F[3,447]=6.59; p<.001			R^2=0.56; F[3,447]=67.0; p<.001		

In figure 5, we summarize all aspects of this study in the format of the study design displayed in figure 1.

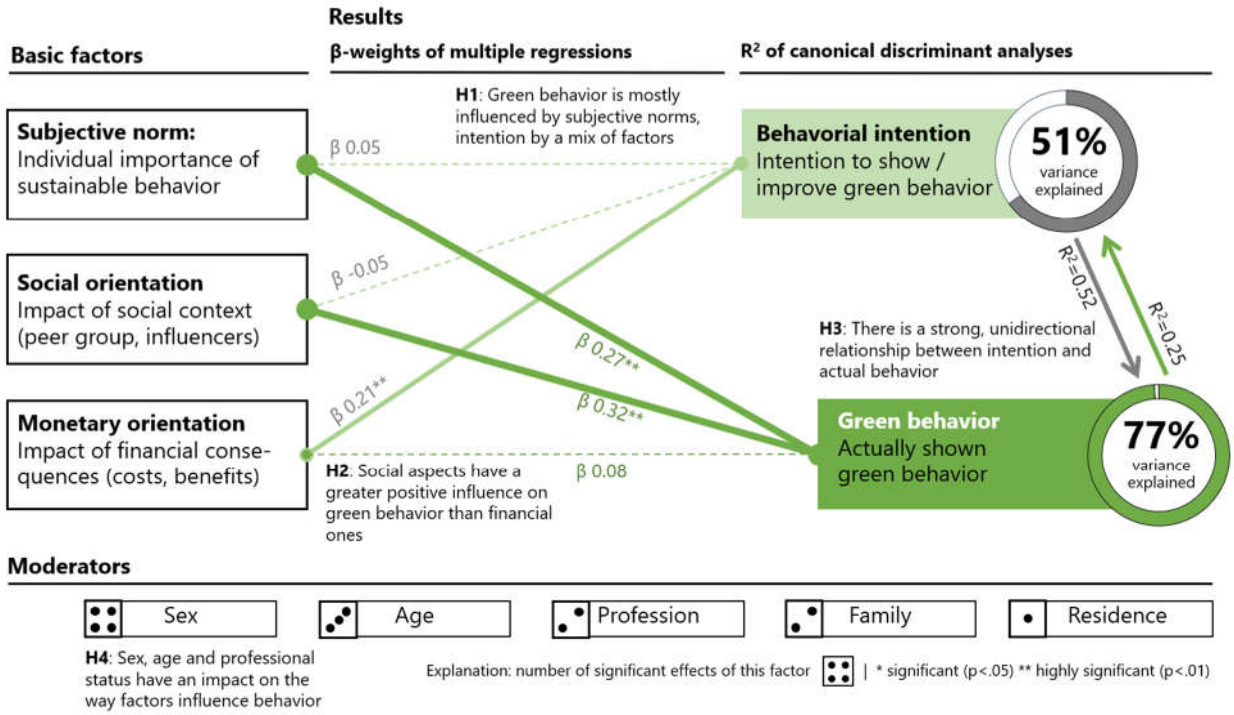

Figure 5. Model summary based on the design (see figure 1) and the empirical results reported in this study.

4. Discussion

Our study shows that employees in the financial sector are predominately responsive towards sustainability and green behavior. 20% are convinced of the need to act in a "green" and sustainable manner and therefore are classified as influencers. On the other side of the spectrum, only 5% are hard to win over or are not accessible at all, which means that 75% of the included employees are reachable and approachable in terms of sustainable behavior.

4.1. Contribution to the literature

Our study contributes to the literature as it can show that sustainable behavior is conveyed through subjective but also social norms and interactions. Financial loss or benefits combined with social motives

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contribute to sustainable living whereas financial benefits alone actually hinder such behavior.

The study underlines the existence and therefore the methodological challenge of the intention-behavior gap.(55-58) The intention to behave sustainably is built somewhat separately from various influences. With regard to actual green behavior, however, there are moderating factors like sex, age and family status that influence the decisions. This then leads to a gap between intention and actual behavior. Other factors and moderators that were not part of our research but were found by other researchers were consumer guilt,(60) habits, the willingness to commit and actually sacrifice,(61) product availability and perceived effectiveness (62) as well as behavioral costs involved (11, 63, 64) or rather efficacy of the proposed behavior.(63) It is possible and probable that those moderating factors also have an influence on our study sample. Further research should be conducted in this area.

According to our findings, even employees in the financial sector who tend to be financially proficient do not react to financial benefits in a behavior-enhancing way. Financial benefits contribute to sustainable behavior if they are combined with social motives, but financial benefits alone actually hinder green behavior. This contributes to the literature and provides a new outlook on the role of financial benefits among financially savvy people in the context of sustainable behavior. It contradicts various research,(21-23) e.g. Merriman et al. (23) which showed that financial rewards that are tied to sustainable objects affect employees' green behavior. However, our findings confirm other research results which emphasized that sustainability-oriented incentive systems do not affect and rather discourage actual employees' green behavior.(25, 26) According to researchers,(22, 28) as soon as incentive systems are introduced, the employees' motivation to behave sustainably deteriorates because it no longer signals an image improvement but green behavior then appears to be opportunistic. We were able to show that it is necessary to tie social motives to financial benefits as financial benefits alone hinder employees' green behavior. This delicate circumstance needs to be considered carefully.

Social pressure and social support have a positive effect on employees' green behavior. This is in line with previous literature.(11, 14-16, 19, 20) The relationship among co-workers and influencers as well as the relationship with the company and leaders within the organization influence employees' green behavior. Shared values, knowledge, discussions and a trusting or supportive relationship with the company motivate workers.(15) Our research underpins those findings. Sustainable behavior is conveyed through social support, pressure and influence.

Additionally, we expand the literature by introducing a segmentation model for behavioral patterns of employees. Whereas previous segmentation models have looked at sustainable behavior within wide populations, e.g. the population of Great Britain (40), Wales,(44) the United States of America (41) or Australia, (42, 43) our model concerns a more narrow population of employees in the financial sector. We introduce a segmentation model of sustainable behavior patterns categorizing six different types of actual behavior.

Table 11. Typology of green behavior based on a schematic summary of results of this study.

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Type of actual behavior	Pain point	Gain point
Person of conviction: Often lives in the big city and tends to be a career starter, has high expectations of their environment, especially employers, is committed to more sustainability; wants to convince others; is socially only little and materially hardly influenceable	Not acting sustainably, indifference	Convince/change others and direct environment
Socially oriented: Mostly female and under 45 years of age, high demands on herself but not necessarily on her environment, actively takes up numerous suggestions, especially from the social environment; role models play an important role for women	Ambitions are missed, no or weak social orientation	Meet demands and follow role models
Health-conscious selectors: Mostly women pay attention to a healthy lifestyle regardless of age and potentially children and therefore eat sustainably, but high professional and travel burden has a negative effect on sustainable behavior	Being under pressure, endangering health	Health and well-being
Pragmatic families: No big intentions for change, pragmatic handling of nutrition as well as mobility and means of transport; although car is seen skeptical, it is often used for travel; inhabitants of large cities also use short-haul flights	Additional effort, reorganization of support (e.g. baby-sitting)	Uncomplicated way of doing the right thing– also for children – doing good
Sustainable materialist: Mostly male; age and place of residence do not play a major role; seeks mainly monetary advantages, is less interested in cost savings; does not like to give up car use and nutritional habits, but can be influenced above all by direct social environment	Practice renunciation, lack of social recognition	Material gain, recommendations from friends
Indifferent hedonists: Mainly young city dwellers who – if they can afford it – like to take long-distance trips and long-haul flights; especially men are reluctant to do without a car and good food, but are responsive to their direct social environment	Practice renunciation, lack of social recognition	Have fun, be able to afford something

4.2. Practical implications

Sustainability and environmentalism are focal points of our society. Companies and organizations increasingly need to participate and lead society into a more sustainable future, ecologically as well as socially and in terms of governance. As companies' actions arise from and are carried by employees' attitudes and behavior patterns, it is crucial to mobilize and motivate employees to share organizational sustainability goals. There are a few practical implications organizations should consider in this context.

First, it is beneficial to evaluate the green attitude and behavioral patterns of the employees in order to determine the actual willingness and openness the company faces: to this end, a practical typology of "green behavior" like the one we created from our empirical results reported in this study (table 11) can be helpful. From there on out, the company knows its baseline and what actions must be taken to lead the company in the desired direction. According to our study, solely concentrating on financial incentives is not recommended as an organizational

 doi:10.20944/preprints202205.0261.v1

measure because it does not promote sustainable behavior, but in fact hinders it.

Our study showed that social influence has a big impact on employees' green behavior. Organizational leaders are able to establish norms and values for employees' green behavior, which underlines the importance of green transformational leadership.(65-67) Wang et al. (65) explain that if leaders demonstrate green behavior, employees are more likely to accept it and adapt their own behavior. Therefore, companies should train their leaders in green leadership by improving environmental knowledge and skills, so they can set an example, provide clear signals and visions to the employees and motivate and support them.(66, 67) Simultaneously, corporate social responsibility managers can be introduced and recognized as critical change agents. They can be a role model for all employees and also for other organizational leaders.(68)

But not only organizational leaders should be trained, it is also beneficial to educate and train employees in order to raise awareness for green behavior. Sustainability should be contextualized to the company and to people's situations, so it is more tangible and relevant, thereby raising a higher willingness to commit.(68) Additionally, sustainability strategies should be directly linked to daily business routines and should be communicated as a collective effort of the whole organization, although the organization should avoid obligations.(18) The trainings should furthermore involve understanding environmental protection as one of the important goals of the organization. Besides employees' training, the identified influencers in the organization could be utilized to mobilize and motivate the other reachable employees. Influencers can also be motivated to build networks which, again, are supported by organizational leaders.

A measure that enables employees to perceive sustainable behavior and actions helps to make sustainability quantifiable. Having actual performance indicators convinces employees to participate and motivates them to influence those indicators and thus change their behavior.(68) The use of internal benchmarking measures can guide employees and instill internal competitive spirit. Additionally, the European Union introduced a mandatory corporate sustainability reporting directive for listed companies making sustainability concerns matter, but also potentially external benchmarking possible.(69)

Another factor promoting employees' green behavior is enabling those employees to participate in the development of their organization's sustainability policy.(67) Organizations can incorporate the social desires and environmental concerns of their own employees, raise more interest for their sustainability policies and create higher commitment for the organization's goals. Finally, sustainability strategies can also play a part in the human resource recruitment processes. Within interviews, environmental attitudes and sustainability awareness of future employees can be evaluated and aligned to organizational goals.(67)

4.3. Limitations

Having set out our contributions to the literature and accumulated knowledge, it is also relevant to state the limitations of our material and procedures. It is in the nature of questionnaire surveys that the given answers are restricted to self-evaluation. We are unable to track the behavioral patterns. Equally, the sample used in this paper consists of mostly young, well-educated consultants in Europe with a relatively high

 doi:10.20944/preprints202205.0261.v1

income. The sample can therefore be seen as highly selective and not sufficient for a cross-sectional study of a representative average population. The data also does not allow for a longitudinal approach.

In the future, research should consider the following:

1. Impact study with at least pre-post design to check whether certain measures help to increase actual green behavior and better translate intention into real action
2. Comparison of behavioral intention and actual behavior of different target groups, especially professionals who are relevant for green behavior in society, such as consultants and financial service specialists

Finally, our study invites further research concerning employees' green behavior in the financial sector as well as basic research methods. Which additional factors influence the intention-behavior gap? Why do incentive schemes – contrary to common belief – actually hinder sustainable behavior? How can employers and companies utilize those findings?

5. Conclusion

Sustainability and environmentalism is a crucial topic of the present day as well as our future – in terms of both society and corporate governance. In order to align employees' green behavioral ambitions with corporate goals, companies need to understand their employees' environmental intentions and behavioral patterns and introduce measures to influence those. Research has shed only little light on employees' green behavior in the financial sector so far. This paper aims to contribute to the literature by using acceptance models to analyze individual, social and financial factors that influence green behavioral intentions as well as actual employees' green behavior in the context of employees within the financial sector. Employees in the financial sector are largely responsive towards sustainability and green behavior. We were able to show that subjective norm had no significant impact on behavioral intention but much more on actual green behavior. Furthermore, we have seen that sustainable behavior is conveyed through subjective but also social norms and interactions. Financial loss or benefits combined with social motives contribute to sustainable living whereas financial benefits alone actually hinder sustainable behavior. Based on our findings, we were able to introduce a new segmentation model of employees' green behavior.

Author Contributions: Conceptualization, V.D. and AK.; methodology, K.D.; software, K.D.; validation, V.D., K.D. and AK.; formal analysis, V.D., K.D. and AK.; data curation, V.D., K.D. and AK.; writing—original draft preparation, V.D., K.D. and AK.; writing—review and editing, V.D., K.D. and AK.; visualization, K.D.; supervision, V.D.; project administration, V.D. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Data Availability Statement: Not applicable.

Acknowledgments: The authors wish to express their sincere gratitude for their cooperation to the staff of the Forest Service of Xanthi. This synergy contributed to a great extent to the implementation of the current research project. We hope that the research will contribute to the existing body of knowledge and raise awareness among forest managers. The authors also wish to thank Mrs. Malivitsi Zoe for editing the paper.

Conflicts of Interest: The authors declare no conflict of interest.

 doi:10.20944/preprints202205.0261.v1

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Appendices

Appendix 1

1a: Survey about green behavior (original German version)

A Fragen zum aktuellen Nachhaltigkeitsverhalten

1. Es ist spät und regnet draußen, aber du brauchst vom Supermarkt um die Ecke noch etwas.

a) Du nimmst 100%ig das Auto oder Taxi

b) Du nimmst ausnahmsweise das Auto, weil es regnet

c) Du gehst zu Fuß

2. Beim Einkaufen nimmst du...

a) eine Plastiktüte von zu Hause mit

b) einen Stoffbeutel von zu Hause mit

c) eine Tüte an der Kasse

d) eine Tüte aus der Gemüseabteilung, weil die nichts kostet

3. Wenn du aus dem Raum gehst

a) Machst du nur das Licht aus, wenn du länger den Raum verlässt

b) Brennt oft das Licht weiter

c) Machst du immer das Licht aus

4. Womit verreist du meistens in den Urlaub?

a) Zug, Bus oder Wanderurlaub

b) Auto oder Kurzstrecken-Flug

c) Langstreckenflug

5. Verzichtest du zugunsten der Umwelt bzw. der Sustainability auf Fleisch, Fisch oder andere tierische Produkte?

a) Nein! Tierische Lebensmittel gehören für mich zu einer richtigen Ernährung

b) Nein! Ich ernähre mich vegetarisch / vegan, aber nicht wegen der Umwelt

c) Ja, ich versuche der Umwelt zuliebe tierische Produkte zu reduzieren

d) Ja, ich ernähre mich vegetarisch / vegan um einen Beitrag zur Nachhaltigkeit zu leisten

6. Hast du in den letzten 12 Monaten Umweltschutzverbände oder ähnliche Organisationen mit Spenden finanziell unterstützt?

a) Ja – ich spende regelmäßig

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b) Ja, ich spende manchmal anlassbezogen
c) Nein, aber ich habe es mir vorgenommen
d) Nein

7. Hast du in den letzten 12 Monaten Umweltschutzverbände oder ähnliche Organisationen durch ehrenamtliches Engagement unterstützt?

a) Ja – ich engagiere mich regelmäßig
b) Ich war vereinzelt bei Veranstaltungen, beispielsweise Fridays-for-future-Demos
c) Ich unterzeichne häufig Petitionen, die Umweltschutz und Nachhaltigkeit zum Ziel haben
d) Nein, aber ich habe es mir vorgenommen
e) Nein

B Fragen zur Meinung von Nachhaltigkeit

Bitte bewerte die folgenden Aussagen zum Thema Nachhaltigkeit. 5 steht für „unterstütze ich vollumfänglich“ und 1 entspricht „stimme ich gar nicht zu“

8. Das Thema Nachhaltigkeit hat für unsere Gesellschaft eine hohe Bedeutung
9. Die Bedeutung, die Nachhaltigkeit in meinem Bekanntenkreis hat, beeinflusst mich stark
10. Das Thema Nachhaltigkeit hat für mich persönlich eine hohe Bedeutung
11. Die Politik sollte zügig drastische Maßnahmen ergreifen, um den Klimawandel zu stoppen
12. Ich akzeptiere es, wenn diese Maßnahmen Einfluss auf mein persönliches Leben haben (z. B. stärkere Besteuerung von tierischen Produkten oder Flügen)
13. Ich beschäftige mich mit meinem Ressourcenverbrauch, z. B. CO_2-Fußabdruck
14. Ich setze mir persönliche Ziele für ein nachhaltigeres Leben und kontrolliere auch, ob ich sie erreiche
15. Projekte wie die Elbvertiefung in Hamburg halte ich für richtig, auch wenn dadurch Fische und Pflanzen sterben. Der Erhalt von Arbeitsplätzen hat für mich höhere Priorität
16. Einen Wald für eine ergänzende Startbahn am Flughafen abzuholzen halte ich für richtig

C Fragen zur Verhaltenseinschätzung

17. *Situation 1: Projektanreise Berater*

Würdest du zugunsten der Nachhaltigkeit mit dem Zug statt mit dem Flugzeug zum Projekt anreisen?

a) Auf keinen Fall – ich nehme immer die schnellste Verbindung
b) Nur wenn der Zeitunterschied gering ist (< 1 Stunde)
c) Ja, ich bin bereit, einen mittleren Zeitunterschied zu akzeptieren (< 3 Stunden)
d) Ja, wo immer möglich und auch bei langen Zugfahrten (z. B. Hamburg – München) und Vorabendanreise

18. Wenn du für eine Projektanreise mit dem Zug höhere Spesen bekommen würdest als bei einem Flug, würdest du dann mit dem Zug statt mit dem Flugzeug reisen?

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a) Auf keinen Fall – ich nehme immer die schnellste Verbindung
b) Ich würde mit dem Zug anreisen, wenn es nur einen geringen Zeitnachteil ggü. dem Flugzeug gibt (< 1 Stunde)
c) Ich würde mit dem Zug anreisen, auch wenn es einen mittleren Zeitnachteil ggü. dem Flugzeug gibt (< 3 Stunden)
d) Ich würde mich wo möglich immer für den Zug entscheiden, auch bei langen Strecken (z. B. Hamburg – München) und wenn ich dafür am Vorabend anreisen muss

19. Stelle dir folgendes Szenario vor: Die regelmäßige Projektanreise montags morgens mit dem Flugzeug zum Kunden dauert von Tür zu Tür 3 Stunden, Ankunft mit dem frühesten Flieger ist 10:00 Uhr. Die Anreise mit dem Zug dauert 3 Stunden länger, insgesamt 6 Stunden von Tür zu Tür. Da ein Start nach 10:00 Uhr beim Kunden nicht möglich ist, ist mit dem Zug eine Anreise schon sonntags erforderlich, späteste Abreise um 17:00 Uhr.

1. Wenn dir eine monetäre Kompensation für längere Reisezeiten geboten würde, um wie viel Euro müssten sich im oben genannten Szenario die Spesen erhöhen, damit du die Zugfahrt im Kauf nimmst? ___ € (Zahleneingabe)

2. Wenn dir eine zeitliche Kompensation für längere Reisezeiten geboten würde, wie viele Stunden müssten dir im oben genannten Szenario auf einem Zeitkonto gutgeschrieben werden, damit du die Zugfahrt in Kauf nimmst? ___ Stunden (Zahleneingabe)

20. Wie wirkt es sich auf dein Reiseverhalten aus, wenn dein gesamtes Projektteam aus Nachhaltigkeitsgründen den Zug nimmt statt zu fliegen?

a) Das beeinflusst mich nicht, ich nehme die für mich schnellste Verbindung
b) Ich nehme ebenfalls Zug, wenn es nur einen geringen Zeitnachteil ggü. dem Flugzeug gibt (< 3 Stunden), andernfalls fliege ich
c) Ich nehme ebenfalls den Zug, auch bei langen Strecken (z. B. Hamburg – München) und wenn ich dafür am Vorabend anreisen muss

21. Wie wirkt es sich auf dein Reiseverhalten aus, wenn die relevanten Partner in deinem Umfeld (z. B. Projektverantwortlicher) aus Nachhaltigkeitsgründen Wert auf eine Anreise mit dem Zug legen?

a) Das beeinflusst mich nicht, ich nehme die für mich schnellste Verbindung innerhalb der Policy
b) Ich nehme ebenfalls Zug, wenn es nur einen geringen Zeitnachteil ggü. dem Flugzeug gibt (< 3 Stunden), andernfalls fliege ich
c) Ich nehme ebenfalls den Zug, auch bei langen Strecken (z. B. Hamburg – München) und wenn ich dafür am Vorabend anreisen muss

Situation 2: Home Office

22. Arbeiten aus dem Home Office ist ein weiteres Mittel, den Ressourcenverbrauch für Mobilität zu senken. Bitte bewerte die folgenden Aussagen zum Thema Home Office. 5 steht

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für „unterstütze ich vollumfänglich“ und 1 entspricht „stimme ich gar nicht zu“. Gemeint ist „normales“ Home Office, nicht die Corona-Ausnahmesituation.

d) Physische Präsenz beim Kunden vor Ort ist unverzichtbar, Nachhaltigkeitsfragen müssen zurückstehen
e) Die Nachteile vom Home Office nehme ich gerne in Kauf, um Ressourcen zu schonen
f) Home Office ist nicht nur besser für die Umwelt, ich bin auch produktiver
g) Wenn ich deutlich mehr von zu Hause arbeite, fürchte ich um meine Privilegien bei Bonusprogrammen von Hotels und Fluglinien
h) Mein Unternehmen sollte den Kunden die Möglichkeit der Remote-Arbeit als nachhaltige Option ausdrücklich anbieten

23. Welchen Prozentsatz deiner Tätigkeit könntest du (optimale Technik vorausgesetzt) ohne inhaltliche Abstriche genauso gut aus dem Home Office erledigen? ___ % (Zahleneingabe)
24. Wie viel häufiger würdest du das Home Office nutzen, wenn es vom Projektleiter und/oder Mentor ausdrücklich befürwortet würde?
    a. Wann immer möglich
    b. viel häufiger
    c. etwas häufiger
    d. gar nicht häufiger

Situation 2: Ernährung

25. Eine ressourcenschonende Ernährung ist pflanzenbasiert und verwendet regionale und saisonale Produkte. Planst du, deine Ernährung aus Nachhaltigkeitsgründen umzustellen? (D. h. keine/wenig tierische Produkte; keine Südfrüchte wie Orangen, Mangos, Kiwis; frische Lebensmittel wie Obst und Gemüse je nach Saison).
    a) Nein – ich esse, was mir schmeckt
    b) Ich reduziere klimaschädliche Lebensmittel, aber der frisch gepresste Orangensaft am Wochenende muss sein (Beispiel)
    c) Ich ernähre mich bereits überwiegend nachhaltig.

26. Wie würde es dein Ernährungsverhalten beeinflussen, wenn eine nachweislich nachhaltige Ernährungsform (wie beschrieben) zu finanziellen Vorteilen (z. B. über Steuererleichterungen, Subventionen oder Cashback) führen würde?
    a) Gar nicht – ich esse, was mir schmeckt. Geld hat keinen Einfluss auf meine Entscheidung
    b) Bei finanziellen Anreizen würde ich meine Ernährung teilweise umstellen
    c) Bei finanziellen Anreizen würde ich meine Ernährung konsequent umstellen.
    d) Ich ernähre mich bereits nachhaltig und brauche dafür keine finanziellen Anreize

27. Wie würde es dein Ernährungsverhalten beeinflussen, wenn sich dein gesamtes Umfeld nachhaltig ernährt?
    a) Gar nicht – leckeres, individuelles Essen ist mir wichtig. Was andere essen ist mir egal
    b) In manchen Bereichen würde ich mich anpassen. Aber es gibt Sachen, auf die ich nicht verzichten werde
    c) Wenn mein Umfeld sich umstellt, dann mache ich das auch

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d) Ich ernähre mich ohnehin nachhaltig und bin damit Vorbild für mein Umfeld

Situation 3: Auto

28. Das Autofahren als Symbol für die individuelle Mobilität ist häufig in den Medien wenn es um das Thema Nachhaltigkeit und CO2-Verbrauch geht. Bitte bewerte die folgenden Aussagen zum Thema Nachhaltigkeit. 5 steht für „unterstütze ich vollumfänglich“ und 1 entspricht „stimme ich gar nicht zu“
    a) Beim Thema Auto schränke ich mich nicht ein
    b) Um CO_2 zu sparen, bin ich bereit, ein kleineres Auto zu fahren, als ich mir wirtschaftlich leisten kann und ich mir sonst kaufen würde
    c) Um CO_2 zu sparen, bin ich bereit, ein E-Auto mit Ökostrom zu fahren
    d) Ich bin bereit, mein Auto viele Jahre zu nutzen, um den Ressourcenverbrauch zu reduzieren
    e) Ich bin bereit, aus Nachhaltigkeitsgründen auf den Zweitwagen im Haushalt zu verzichten
    f) Ich bin bereit, aus Nachhaltigkeitsgründen mein Auto abzuschaffen bzw. alle Autos im Haushalt abzuschaffen

29. Wenn der öffentliche Nahverkehr umsonst wäre und das Auto deutlich stärker besteuert würde, würdest du deine Autonutzung anpassen?
    a) Nein. Beim Thema Auto würde ich mich nicht einschränken, unabhängig von den Kosten und möglichen Ersparnissen
    b) Soweit es geht, würde ich das Auto stehen lassen, um Geld zu sparen
    c) Bei starken finanziellen Anreizen würde ich mein Auto abschaffen und meine Mobilität anpassen
    d) Ich habe mein Auto bereits abgeschafft, auch ohne finanzielle Anreize

30. Wenn die Mehrheit deines Umfelds für eine nachhaltige Mobilität das Auto abgeben und auf öffentliche Verkehrsmittel umsteigen würde, würdest du dich anpassen und dein Auto ebenfalls abgeben?
    a) Nein, beim Thema Auto werde ich mich nicht einschränken
    b) Vielleicht steige ich dann auf ein kleineres Auto oder ein E-Auto um
    c) Ja, ich würde dann auch mein Auto abgeben
    d) Ich habe mein Auto bereits abgeschafft und bin damit Vorbild für mein Umfeld

31. Allgemein:

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Verhalten lässt sich durch Anreize beeinflussen. Bitte bewerte, welche Bedeutung die genannten Anreizmöglichkeiten für dich haben. 5 steht für „äußerst wichtig“ und 1 entspricht „völlig unwichtig“

1. Gefühl, das Richtige zu tun
2. Geld oder geldwerte Belohnung
3. Menschen, die für mich Vorbilder sind, leben das Verhalten vor
4. Anerkennung im Familien- und Freundeskreis
5. Mein disziplinarisch Vorgesetzter lebt das Verhalten vor

Sozialökonomische Fragen:

32. Welches Geschlecht hast du?
    a) Mann
    b) Frau
    c) divers

33. Wie alt bist du? (Altersspannen)
    a) 20-25 Jahre
    b) 26-30 Jahre
    c) 31-35 Jahre
    d) 36-40 Jahre
    e) 41-45 Jahre
    f) 46-50 Jahre
    g) >51 Jahre

34. Was ist dein Funktionslevel?
    Unteres Management
    a) Consultant
    b) Senior Consultant
    Mittleres Management
    c) Manager
    d) Senior Manager
    Top-Management
    e) Head
    f) Partner
    Verwaltung / Support-Funktion
    g) Professional
    h) Senior Professional
    i) Expert
    j) Manager Internal

35. In welchem geografischen Raum lebst du?
    a) Millionenstadt (ab 1 Mio. Einwohner)
    b) Großstadt (zwischen 100.000 und 999.999 Einwohner)
    c) Mittelstadt (zwischen 20.000 und 99.999 Einwohner)

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d) Kleinstadt (zwischen 5.000 und 19.999 Einwohner)
e) Ländliches Gebiet (unter 5.000 Einwohner)

36. Hast du Kinder?
    a) ja
    b) nein

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1b: Survey about green behavior (English translation)

A Questions on current sustainability behavior

1. It's late and raining outside, but you still need something from the supermarket around the corner.
    a) You take the car or taxi every time
    b) You take the car as an exception because it rains
    c) You walk

3. When shopping, you take...
    a) a plastic bag from home with you
    b) a cloth bag from home with you
    c) a bag at the checkout
    d) a bag from the vegetable department, because it costs nothing

4. When you walk out of the room
    a) You only turn off the light when you leave the room for a longer period of time
    b) Often the light continues to burn
    c) You always turn off the light

5. How do you usually travel when taking a vacation?
    a) Train, bus or hiking vacation
    b) Car or short-haul flight
    c) Long-haul flight

6. Do you give up meat, fish or other animal products for the sake of the environment or sustainability?
    a) No! Animal foods are part of a proper diet for me
    b) No! I am a vegetarian / vegan but not because of the environment
    c) Yes, I try to reduce animal products for the sake of the environment
    d) Yes, I am a vegetarian / vegan to contribute to sustainability

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7. Have you financially supported environmental protection associations or similar organizations with donations in the last 12 months?

    a) Yes – I donate regularly

    b) Yes, I sometimes donate on a case-by-case basis

    c) No, but I have resolved to do so

    d) No

8. Have you supported environmental protection associations or similar organizations through volunteer work in the last 12 months?

    a) Yes – I am regularly involved

    b) I occasionally went to events, such as Fridays-for-future demos

    c) I often sign petitions that aim to protect the environment and sustainability

    d) No, but I have resolved to do so

    e) No

B Questions about the opinion of sustainability

Please rate the following statements on the subject of sustainability. 5 stands for "I fully support" and 1 corresponds to "I do not agree at all"

9. The topic of sustainability is of great importance for our society
10. The importance that sustainability has in my circle of acquaintances strongly influences me
11. The topic of sustainability is of great importance to me personally
12. Politicians should swiftly take drastic measures to stop climate change
13. I accept it if these measures have an impact on my personal life (e.g. stronger taxation of animal products or flights)
14. I look closely at my consumption of resources, e.g. CO2 footprint
15. I set myself personal goals for a more sustainable life and also control whether I achieve them
16. I think projects such as the deepening of the Elbe in Hamburg are right, even if fish and plants die as a result. Preserving jobs is a higher priority for me
17. Cutting down a forest for a supplementary runway at the airport is the right thing to do in my opinion

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C Questions on behavioral assessment

Situation 1: Project travel – consultant

18. Would you travel to the project by train instead of by plane for the sake of sustainability?

    a) No way – I always take the fastest connection

    b) Only if the time difference is small (< 1 hour)

    c) Yes, I am willing to accept a medium time difference (< 3 hours)

    d) Yes, wherever possible, even for long train journeys (e.g. Hamburg – Munich) and if I have to travel the evening before

19. If you were to receive higher expense allowances for a project journey by train than for a flight, would you travel by train instead of by plane?

    a) No way – I always take the fastest connection

    b) I would travel by train if there was only a small time disadvantage compared to the plane (< 1 hour)

    c) I would travel by train, even if there was a medium time disadvantage compared to the plane (< 3 hours)

    d) I would always opt for the train wherever possible, even for long distances (e.g. Hamburg – Munich) and if I have to travel the evening before

20. Imagine the following scenario: The regular Monday morning journey by plane to the project at the client's premises takes 3 hours from door to door, arrival by earliest plane is 10:00 am. Arriving by train takes 3 hours longer, a total of 6 hours from door to door. Since the client will not allow a start after 10:00 a.m., taking the train would require you to travel on Sunday, latest departure at 5:00 p.m.

    a) If you were offered monetary compensation for longer travel times, by how many euros would the expense allowance have to increase in the above scenario in order for you to take the train? ___ € (enter number)

    b) If you were offered time compensation for longer travel times, how many hours would have to be credited to your time account in the above scenario for you to accept the train ride? ___ hours (enter number)

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21. How does it affect your travel behavior if your entire project team takes the train instead of flying for sustainability reasons?

    a) This does not affect me, I take the fastest connection for me

    b) I also take a train if there is only a small time disadvantage compared to the plane (<3 hours), otherwise I'll fly

    c) I will also take the train, even for long distances (e.g. Hamburg – Munich) and if I have to travel the evening before

22. How does it affect your travel behavior if the relevant partners in your environment (e.g. mentor, project manager) attach importance to travelling by train for sustainability reasons?

    a) This does not affect me, I take the fastest connection for me within the constraints of the travel policy

    b) I will also take a train if there is only a small time disadvantage compared to the plane (<3 hours), otherwise I'll fly

    c) I will also take the train, even for long distances (e.g. Hamburg – Munich) and if I have to travel the evening before

Situation 2: Working from home

23. Working from home is another means of reducing the consumption of resources for mobility. Please rate the following statements on the subject of working from home. 5 stands for "I fully support" and 1 corresponds to "I do not agree at all". This refers to working from home under regular circumstances, not during theCovid-19 emergency situation.

    a) Physical presence at the customer's site is indispensable, sustainability issues must take a back seat

    b) I gladly accept the disadvantages of working from home in order to conserve resources

    c) Working from home is not only better for the environment, I am also more productive

    d) If I work significantly more from home, I fear for my privileges in bonus programs of hotels and airlines

    e) My company should explicitly offer customers remote work as a sustainable option

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24. What percentage of your job could you do just as well from home (assuming optimal technology) without compromising on content? ___ % (enter number)

25. How much more often would you work from home if it was explicitly endorsed by the project manager and/or mentor?

    a) Whenever possible

    b) Much more frequently

    c) Slightly more frequently

    d) No more frequently

Situation 2: Nutrition

26. A resource-saving diet is plant-based and uses regional and seasonal products. Are you planning to change your diet for sustainability reasons? (i.e. no/little animal products; no tropical fruits such as oranges, mangoes, kiwis; fresh foods such as fruits and vegetables depending on the season).

    d) No – I eat what I like

    e) I reduce climate-damaging foods, but freshly squeezed orange juice on weekends is a must (example)

    f) I already eat mostly sustainably

27. How would it affect your eating habits if a demonstrably sustainable diet (as described) led to financial benefits (e.g. via tax breaks, subsidies or cashback)?

    e) Not at all – I eat what I like. Money has no influence on my decision

    f) Given financial incentives, I would partially change my diet

    g) Given financial incentives, I would consistently change my diet

    h) I already eat sustainably and do not need any financial incentives for this

28. How would it affect your eating habits if your entire environment were to eat sustainably?

    e) Not at all – delicious, individual food is important to me. I don't care what others eat

    f) In some areas I would adapt. But there are things I won't do without

    g) If my environment changes, then I do the same

    h) I eat sustainably anyway and am therefore a role model for my environment

Situation 3: Car

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29. Driving as a symbol of individual mobility is often mentioned in the media when it comes to sustainability and CO_2 consumption. Please rate the following statements on the subject of sustainability. 5 stands for “I fully support” and 1 corresponds to “I do not agree at all”

    a) When it comes to cars, I don’t limit myself

    b) To save CO_2, I am willing to drive a smaller car than I can afford and would otherwise buy

    c) To save CO_2, I am ready to drive an e-car using green electricity

    d) I am ready to use my car for many years to reduce resource consumption

    e) I am willing to do without the second car in the household for sustainability reasons

    f) I am ready to give up my car for sustainability reasons or to give up all cars in the household

30. If public transport were free and the car was taxed much more heavily, would you adapt your car use?

    a) No. When it comes to cars, I wouldn’t limit myself, regardless of the costs and possible savings.

    b) As far as possible, I would leave the car in the garage to save money

    c) Given strong financial incentives, I would give up my car and adapt my mobility

    d) I have already done away with my car, even without financial incentives

31. If the majority of your environment gave up the car and switched to public transport for sustainable mobility, would you adapt and give up your car as well?

    a) No, I’m not going to limit myself when it comes to cars

    b) Maybe I’ll switch to a smaller car or an electric car

    c) Yes, I would then also give up my car

    d) I have already done away with my car and am therefore a role model for my environment

D General

32. Behavior can be influenced by incentives. Please evaluate the significance of the mentioned incentive options for you. 5 stands for “extremely important” and 1 corresponds to “completely unimportant”

    f) Feeling like you’re doing the right thing

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g) Money or monetary reward

h) People who are role models for me exemplify the behavior

i) Recognition in my circle of family and friends

j) My disciplinary supervisor exemplifies the behavior

Socio-economic issues:

33. What gender do you identify with?

a) Male

b) Female

c) Non-binary

34. How old are you? (age ranges)

a) 20–25 years

b) 26–30 years

c) 31–35 years

d) 36–40 years

e) 41–45 years

f) 46–50 years

g) >51 years

35. What is your functional level?

Consultants / lower management

a) Consultant

b) Senior Consultant

Consultants / middle management

c) Manager

d) Senior Manager

Consultants / top management

e) Partner

f) Head

Administration / Support

g) Professional

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h) Senior Professional

i) Expert

j) Manager Internal

36. In which type of geographical area do you live?

a) City of millions (1 million inhabitants or more)

b) Big city (between 100,000 and 999,999 inhabitants)

c) Mid-sized town (between 20,000 and 99,999 inhabitants)

d) Small town (between 5,000 and 19,999 inhabitants)

e) Rural area (less than 5,000 inhabitants)

37. Do you have children?

a) yes

b) no

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Appendix 2

Appendix 2a: Items describing behavioral intention and actual green behavior

Behavioral intention

Item	Median	Mean	SD	fully agree (in %)
1. I would travel to the project by train instead of by plane for the sake of sustainability.	2.5	3.1	0.9	6.0
2. Physical presence at the customer's site is indispensable, sustainability issues must take a back seat. (reversed)	3.0	3.0	1.2	7.4
3. I gladly accept the disadvantages of working from home in order to conserve resources.	4.0	3.6	1.1	11.1
4. I plan to change my diet for sustainability reasons (i.e. no/little animal products; no tropical fruits such as oranges, mangoes, kiwis; fresh foods such as fruits and vegetables depending on the season).	3.0	3.3	1.2	23.0
5. When it comes to cars, I don't limit myself. (reversed)	3.0	2.7	1.2	8.9
Overall mean for "behavioral intention"	3.1	3.1	1.1	11.3

Effective Green Behavior

Item	Median	Mean	SD	fully agree (in %)
6. I walk … even when it's late and raining outside, but I still need something from the supermarket around the corner.	5.0	4.2	1.2	4.9
7. When shopping, I take … a cloth bag from home with me.	5.0	4.7	0.8	84.0
8. When I walk out of the room I … always turn off the light.	2.0	2.9	1.5	33.8
9. On vacation, I usually travel by … train, bus or I go on a hiking vacation.	3.0	2.9	0.9	6.0
10. I give up meat, fish or other animal products for the sake of the environment or sustainability.	3.0	2.6	1.4	7.7
11. I have financially supported environmental protection associations or similar organizations with donations in the last 12 months.	1.0	2.3	1.3	10.6
12. I have supported environmental protection associations or similar organizations through volunteer work in the last 12 months.	1.0	1.6	1.0	2.3

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Overall mean for "actual 'green' behavior"	2.9	3.0	1.2	21.3

Appendix 2b: Items constituting subjective and external / supporting factors

Internal factor: subjective norm*

Item	Median	Mean	SD	fully agree (in %)
1. The topic of sustainability is of great importance for our society	5.0	4.4	0.8	55.3
2. The importance that sustainability has in my circle of acquaintances strongly influences me	3.0	2.9	1.0	2.3
3. The topic of sustainability is of great importance to me personally	4.0	4.0	0.8	24.7
4. Politicians should swiftly take drastic measures to stop climate change	4.0	4.2	1.0	46.8
5. I accept it if these measures have an impact on my personal life (e.g. stronger taxation of animal products or flights)	4.0	4.0	0.9	33.2
6. I look closely at my consumption of resources, e.g. CO_2 footprint	3.0	3.3	1.1	11.2
7. I set myself personal goals for a more sustainable life and also control whether I achieve them	3.0	2.9	1.0	4.9
8. I think projects such as the deepening of the Elbe in Hamburg are right, even if fish and plants die as a result. Preserving jobs is a higher priority for me (reversed/completely disagree)	3.0	3.1	0.9	7.1
9. Cutting down a forest for a supplementary runway at the airport is the right thing to do in my opinion (reversed/completely disagree)	3.0	3.5	1.0	17.1
Overall mean for "subjective norm"	3.7	3.6	0.6	22.5

External factors: social orientation*

Item	Median	Mean	SD	fully agree (in %)
10. It would affect my travel behavior if my entire project team took the train instead of flying for sustainability reasons	4.0	4.2	0.6	13.0
11. It would affect my travel behavior if the relevant managers in my environment (e.g. mentor, project manager) attached importance to travelling by train for sustainability reasons	4.0	4.2	0.6	14.2

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12. I would work from home more often, if it was explicitly endorsed by the project manager and/or mentor	4.0	3.5	1.0	20.4
13. It would affect my eating habits if my entire environment were to eat sustainably	4.0	3.6	1.0	10.5
14. If the majority of my environment gave up the car and switched to public transport for sustainable mobility, I would adapt and give up my car as well	4.0	3.7	1.0	11.5
Overall mean for "social influence"	4.0	3.9	0.9	13.9

External factors: monetary orientation*

Item	Median	Mean	SD	fully agree (in %)
15. If I were to get higher expense allowances for a project journey by train than for a flight, I would travel by train instead of by plane	3.0	2.6	0.8	13.0
16. If I work significantly more from home, I do not fear for my privileges in bonus programs of hotels and airlines	4.0	3.6	1.4	38.1
17. It would affect my eating habits if a demonstrably sustainable diet led to financial benefits (e.g. via tax breaks, subsidies or cashback)	4.0	3.6	1.1	8.9
18. If public transport were free and the car was taxed much more heavily, I would adapt my car use	4.0	3.6	0.9	19.6
Overall mean for "financial loss & benefit"	3.1	3.1	0.9	19.9

Individual relevance: personal values*

Item	Median	Mean	SD	supremely important (%)
1. Feeling like I am doing the right thing	2.0	2.3	0.9	18.6
2. Money or monetary reward	3.0	2.8	0.9	6.2
3. People who are role models for me exemplify the behavior	3.0	3.0	1.0	5.5
4. Recognition in my circle of family and friends	3.0	3.1	0.9	2.7
5. My disciplinary supervisor exemplifies the behavior	4.0	3.6	1.0	2.5
Overall mean for "personal values"	3.0	3.0	0.9	7.1

* The higher the mean/median, the more sustainable behavior is indicated; SD = standard deviation

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Appendix 3: Intercorrelation and correlation of items concerning behavioral intention and actual 'green behavior'

	I would travel to the project by train instead of by plane for the sake of sustainability.	Physical presence at the customer's site is indispensable, sustainability issues must take a back seat. (reversed)	I gladly accept the disadvantages of working from home in order to conserve resources.	I plan to change my diet for sustainability reasons (i.e. no/little animal products ...).	When it comes to cars, I don't limit myself (reversed)	I walk … even when it's late and raining outside, but I still need something from the supermarket …	When shopping, I take … a cloth bag from home with me.	When I walk out of the room I … always turn off the light.	On vacation, I usually travel by … train, bus or I go on a hiking vacation.	I give up meat, fish or other animal products for the sake of the environment or sustainability.	I have financially supported environmental protection associations … with donations in the last 12 months.	I have supported environmental protection associations … through volunteer work in the last 12 months.
Behavioral intention												
I would travel to the project by train instead of by plane for the sake of sustainability.	1					,141*	,127*	.032	,142*	,199**	.111	,126*
Physical presence at the customer's site is indispensable, sustainability issues must take a back seat. (reversed)	-.094	1				-.042	-.094	-.007	-.114	-,154**	-,123*	-.112
I gladly accept the disadvantages of working from home in order to conserve resources.	,140*	-,490**	1			.110	,185**	.100	,146*	,151*	.096	.101
I plan to change my diet for sustainability reasons (i.e. no/little animal products; no tropical fruits …).	,214**	-,203**	,189**	1		.054	,189**	.023	,161**	,455**	,230**	,250**

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When it comes to cars, I don't limit myself. (reversed)	-,148*	,211**	-,215**	-,174**	1	-,245**	-.059	.012	-.085	-,187**	-.047	-,106*
Effective "green behavior"												
I walk … even when it's late and raining outside, but I still need something from the supermarket …						1						
When shopping, I take … a cloth bag from home with me.						.083	1					
When I walk out of the room I … always turn off the light						-.063	-,094*	1				
On vacation, I usually travel by … train, bus or I go on a hiking vacation						-.006	,095*	-.037	1			
I give up meat, fish or other animal products for the sake of the environment or sustainability.						.062	,176**	.010	.050	1		
I have financially supported environmental protection associations or similar organizations with donations in the last 12 months.						.027	.060	-.020	.020	,133**	1	

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I have supported environmental protection associations or similar organizations through volunteer work in the last 12 months.	.051	.029	-.062	.064	,268**	,405**	1

*. Correlation is significant at the 0.05 level (2-tailed). positive negative

**. Correlation is significant at the 0.01 level (2-tailed). positive negative