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Sustainable Entrepreneurship Project

Middle Managers' commitment to organizational change towards sustainability

A crucial factor for the successful implementation of sustainability

Master's Thesis

by

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ABSTRACT

With the effects of global challenges such as climate change, resource scarcity, and social inequality becoming increasingly visible in recent years, the need for organizations to incorporate sustainability into their operations has become evident. Even though many organizations already integrated sustainability into their strategies, the majority of the necessary holistic organizational changes are lacking to be implemented. The hierarchical middle managers have been found to play a key role in this implementation stage, as it is their task to translate a strategy into actions for themselves and their employees. This study focuses on the specific perspective of middle managers in the context of change towards sustainability, as it has only been little considered in previous literature. Conducting a qualitative cross-sectional study among the middle managers of three different organizations, influencing factors on employee commitment to change towards sustainability that have been identified in previous studies will be verified from the perspective of the middle managers. The resulting theoretical model of middle managers' commitment will on the one hand enrich existing literature and on the other hand help organizations to understand their middle managers' commitment to this topic. With this suggested organizational changes can be put into action.

Keywords: Sustainability, implementation, organizational change, middle management, commitment

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INTRODUCTION

In recent years, the need for organizations to address sustainability has become increasingly evident. With global challenges such as climate change, resource scarcity, and social inequality, businesses are aiming to operate more sustainably. To achieve this, it needs to be guaranteed that natural resources are used in a way that is meeting the needs of the current generation without undermining the ability of future generations to meet their needs (1). In general, organizations need to transform their operations in order to pursue their profitable business so that it is not harming society or the environment (2). For this holistic transformation, the successful implementation of corporate policies and sustainability strategies, the organizational middle managers have been found to play a crucial role, as it is their task to convincingly sell a suggested change to their employees and to translate a strategy into actions (3,4). It is crucial that they are committed to a suggested change process in order to implement it successfully.

One prime example that is very clearly demonstrating the crucial role of the middle management, is the failure of the US-based company United Financial Services (UFS) (5). In the early 2000s, UFS initiated a complex organizational transformation across all hierarchical levels as it was struggling with profitability due to the disclosure of unethical business practices. The upper management quickly launched the change initiative without taking the support of the middle management into account. That resulted in the different hierarchical levels, especially the upper and the executive level, drifting apart and losing the joint objective of the transformation. Lacking the connection via the middle management the change initiative failed, UFS did not manage to become profitable while operating sustainably and had to be bought out.

It has been found that through their practices large organizations in general have a strong influence on their environment and society (6). Therefore, they are a key lever in enhancing the

worldwide level of sustainable development by successfully integrating sustainable practices into their operations (7). Nevertheless, organizations are mostly not using their leverage to the full extent (8). On the one hand, this is because sustainability is considered a complex and costly challenge for which it is necessary to refrain from the economic paradigm of short-term financial performance (9,10). On the other hand, organizations mostly do not manage to implement sustainability strategies into their operations and across the hierarchy (11–13).

One way to increase the success rate of organizational changes towards sustainability is to focus on the role of the organizational middle management. As the example of UFS demonstrated, middle management's commitment and action are crucial for the successful implementation of a suggested change process. Therefore, this study will be focusing specifically on the middle managers' commitment to organizational change towards sustainability, investigating the following research question: *What is committing an organization's middle management to change towards sustainability?*

The paper is structured as follows: In the upcoming chapter, the relevant literature will be presented regarding the topics of organizational change towards sustainability, the role of middle managers, and the relevance of personal commitment. Then, the study's methodology will be outlined, followed by a presentation of the results. Next, the results will be discussed by connecting them to existing literature. The paper will conclude by elaborating the study's contribution to theory and practice and pointing out its limitations and opportunities for future research.

LITERATURE REVIEW

Sustainability in organizations

To increase the overall level of sustainability in society and the economy, the topic needs to be integrated into the context of organizations, as they have been found to have a strong influence on the economy, their environment and society (6,7,14,15). Organizations build the foundation for today's human life and are a strong lever in shaping economic practices and society-wide transitions (7,15). To make use of this leverage and outreach, current business as usual is no longer practicable (16,17). Organizations have the responsibility to take a systems perspective and to ensure that natural resources are not consumed faster than they can be recycled or regenerated (18). Organizations need to focus on creating quality goods and services that are using as little natural resources as possible while creating a minimum of waste through their entire lifecycle (19). They need to operate inclusively and equitably to create value simultaneously for the economy, society and the environment (2,20). By doing so they have the power to reshape their surroundings, to ensure a continuously healthy planet and the survival of the human species (7).

Sustainable practices have become an increasingly strategic priority for many organizations in the last few years, but only a minority is operating sustainably already (8,21). Many organizations rely on quick-fixing measures and superficial practices to create a sustainable image while still being heavily reliant on natural resources and focusing on corporate and individual wealth (7,8,14). To successfully integrate sustainable practices into an organization's operations, radical and holistic changes are needed (14,15). Sustainability needs to become an organizational business case, which means that economic success is created through activities that are benefiting society and/or the environment (6,7,14,15). But, according to Doppelt (22),

pursuing this change is extremely difficult because organizations need to spend resources to complete multifaceted transitions that often pay off in the long term. Therefore, most organizations focus on the quick-fixing practices, even though climate change is progressing faster and with wider consequences than previously expected (8).

Failure of organizational change and the role of the middle management

Generally, organizational change can be defined as the transformation of an organization from the existing to a future state while pursuing a certain strategic goal (23). It is about recognizing a problem, generating ideas on how to solve it, and applying the new knowledge to successfully solve the problem (24,25). In the current fast-paced economic environment, continuous change is inevitable for organizations to remain operational (26). To stay competitive, they constantly need to react and adapt to new requirements resulting from for example globalization and global competition, technological innovations or environmental conditions (4,27).

Despite the necessity for change being recognized as important, the success rate among organizational change processes implemented is low. On average only 25% to 50% of planned changes are successfully put into practice (11–13). This results from various issues: Change processes are initiated top-down and not well communicated in the organizational hierarchy (12), or guidelines and recommendations for managers and their employees are often vague or very abstract (11,24). Furthermore, researchers and organizations have a lot of theoretical and conceptual knowledge on organizational change but they are lacking the information and practicable frameworks for implementation (6,7,25), or the top management has to deal with their employees' resistance to change. It has been found that especially the commitment of the middle management is crucial for the successful implementation of organizational change, but it is mostly missing (3,4,28–33).

Considered as a middle manager is someone who is working at the intermediate level of an organizational hierarchy, somewhere between the operating base and the board of directors (34,35). Uytterhoeven (36) encloses this definition by stating that middle managers are usually “responsible for a particular business unit” (p. 136).

In organizational change processes, middle managers are examined as change agents, who take initiative and enable a certain change to happen (3,31). They are the ones carrying out the planned change, they undertake required actions for implementation, and by feeling responsible and taking initiative they drive the change process forward (3,37–39). Also being named “change intermediaries” (31 : p. 225), the middle managers’ main task is to translate the planned ideas into actions for themselves and their employees (4). Furthermore, they need to act as sensemakers to simplify and explain complex issues (3,11,40). It is their job to manage their employees’ expectations towards the change and the requirements placed on them, to enable successful change implementation across the organizational hierarchy (4,31). Thereby, the middle managers approve the suggested changes and give the legitimacy needed for organization-wide implementation. But, they are not always committed as they, for example, do not align with the company’s goals, do not feel supported or involved by the upper management, or perceive the change as not feasible (3,4,28–33).

Commitment to change towards sustainability

The concept of commitment, especially organizational commitment, has been receiving great attention from researchers already for decades (41–46). It has been identified as a crucial determinant of employee behavior and their attachment to an organization, its mission and goals (47,48). Commitment in general is defined as the extent to which an individual is psychologically attached to following a certain path, or its willingness to do what it takes to

accomplish a certain goal (43,45). It is referred to as “the glue that provides the vital bond” (49 : p. 147) between an individual and a goal that, if missing, can result in resistance to the process and non-accomplishment of the goal (29).

Various researchers found that commitment is a multidimensional concept, which signals that it is determined by multiple antecedents (43,46,50–52). From the literature review, Meyer and Herscovitch (44) developed a general model of workplace commitment (Appendix 1), following the categorization of commitment by Meyer and Allen (51). Meyer and Herscovitch identified individual commitment as a construction of three different components: The desire (affective commitment) or moral obligation (normative commitment) to pursue a path and to engage in certain activities, or the negative financial impact of not doing so (continuance commitment) (44). Each of these components that can result in commitment at the organizational workplace setting is affected by various influencing factors. Affective commitment is mainly built through intrinsic motivation, personal involvement or the feeling of personal relevance, while normative commitment arises through social norms, moral obligation or a sense of duty (44). Continuance commitment builds on the loss of previous financial investments or the loss of financial gain, as well as the lack of alternative ways to pursue.

In the context of change towards sustainability, some of these factors have been identified as crucial for the commitment to change. One factor that builds the foundation for sustainable behavior and successful organizational change towards sustainability is the employees’ intrinsic motivation (53). It also makes people keep up with their behavior in the long term, which is crucial for global challenges like climate change or inequality (54). Generally, the component of affective commitment has been found to be the most relevant in the context of sustainability (55). Additionally, the factor of empowerment is enhancing (affective) commitment to sustainability

(26,55–58). To be committed to an organizational change process, employees need to be involved in generating ideas on steps to be taken and activities to be conducted (26,55,56). They need the authority to evaluate and decide which activities are the most suitable and feasible ones to be conducted, and they need the freedom to maneuver and plan the requirements of the change along with their other work-related duties and responsibilities (26,57,58). Furthermore, the employees must have the feeling of impact on the organizational change process and, through its implementation, on the organization and eventually beyond (57,59). They need to be convinced that they can influence the way the change is implemented in the organization and by that have an impact on the strategic and operational performance. Furthermore, Steffen et. al. (60) highlighted that there is no alternative to change towards sustainability as the planetary boundaries are already overshoot and the human species is already living beyond its means. They made clear that there is no other way to keep a healthy life on earth than limiting the negative impact and managing to stay within a defined “safe operating space” (60 : p. 737). Additionally, the factor of sense of duty is highly important in sustainability change, as one of the most effective ways to motivate employees to engage in sustainable behavior is to make sustainability an “in-role task” rather than an “extra-role task” (61). Employees are usually motivated to fulfill their job and therefore sustainable behavior can be enhanced by integrating it into daily tasks.

In addition to these influencing factors that have also been identified by Meyer and Herscovitch, other authors found more factors that they consider relevant for organizational change towards sustainability. Pellegrini (62) and Ramus and Steger (63) identified that it is usually not enough for organizations to integrate sustainability into their mission and business strategy, but to also act accordingly on the upper management level. The employees need to recognize the support for the topic through the hierarchy and perceive the company’s willingness to change as genuine.

They need to see that what is said is also acted out. Furthermore, an important factor for commitment to change towards sustainability is the organizational culture. It is defined as a collective state of mind that consists of social norms and values and distinguishes one group of people from another (64). According to Levin (65) and Muller (66) organizational culture is built from ethical values and social responsibility, and it is a crucial success factor for organizational sustainability, especially when it comes to putting plans into action.

Some factors that have been identified by Meyer and Herscovitch as enhancing commitment have been found to be counterproductive in the context of sustainability. Epstein and Buhovac (15), for example, argued that sustainability targets should not be connected to financial gains or losses as those are mostly relevant in the short term and should not be offset against long-term changes. Furthermore, for organizational changes towards sustainability, imposed top-down measures are the most effective way for implementation because collaborative methods are limited in breaking established practices and are therefore not well suited to implement the required company-wide disruptive change (67,68).

Based on the influencing factors identified by Meyer and Herscovitsch and the additional factors that have already been present in literature, the conceptual model of commitment to organizational change towards sustainability has been developed (Figure 1).

Research aim and objective

From this conceptual model, the study aims to analyze the commitment of organizational middle managers to change towards sustainability. Their perspective is crucial in this case as they are mainly responsible for change implementation and as the majority of organizational change processes fail in this step. It has been identified as a gap in literature that existing research on

commitment to organizational change towards sustainability is mainly focused on employee commitment in general (69–72). The study addresses this gap by verifying previously identified influencing factors of commitment to change towards sustainability from the perspective of the organizational middle management.

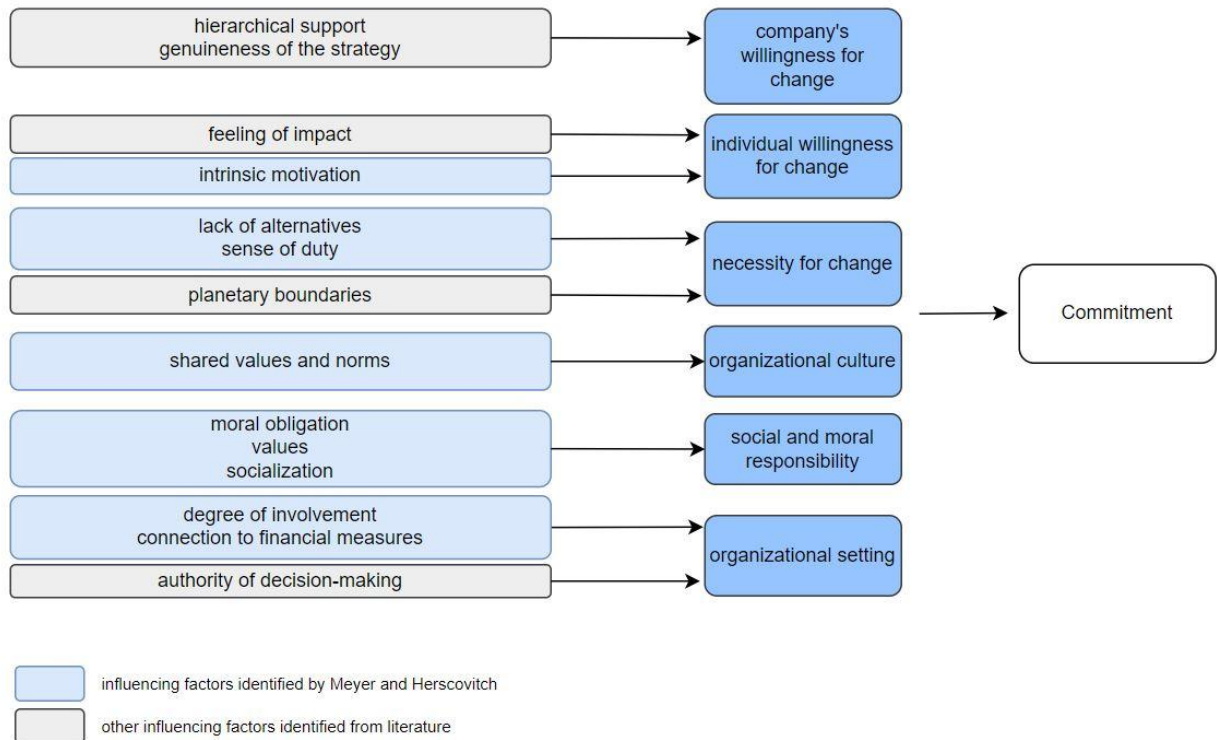


Figure 1: Model of commitment to organizational change towards sustainability

METHODOLOGY

Research design

To address this research gap, a qualitative analysis has been conducted in the design of a cross-sectional study. The qualitative type of research design has been identified as appropriate because it is the most suitable one to gather the participants' points of view, perceptions and behavior (73,74). It enables the researcher to identify what the participants consider as relevant, in the context of this study, what is building or enhancing their commitment to change towards sustainability.

The study has been conducted across two large European manufacturing enterprises in the chemical and electrical engineering sector, that are starting to or are in the process of transforming their operations to be more sustainable. They previously identified their internal departments for sustainability and environmental health and safety as strong levers in this process. The commitment of the middle managers working in these departments is therefore crucial for the success of the transformation process. Despite their wish to operate more sustainably, companies are usually lacking the ability to formulate SMART sustainability goals, to integrate them into their business strategy, and to develop implementation plans (8,17,75). It is therefore increasingly common for these companies to request the service of a consulting company to complete these tasks (76,77). While simultaneously transforming their own businesses towards enhanced sustainability, many consultancies took up advising on sustainable business strategies, business model innovation, or transition procedures, which makes them an additional key player in the economy-wide transition towards sustainability (76). As the companies that are subject to this study have requested such a consulting company to support their operational transformation towards sustainability, it is crucial in this case to understand both

the internal as well as the consultancy's middle managers' commitment to organizational change towards sustainability.

The sample of participants chosen for this study consisted of five middle managers (Heads of Department and Sustainability Managers) of the two companies in the manufacturing business and six middle managers (Project Managers) of the consulting company. The conducted research has been following a cross-sectional approach, as data from multiple cases was considered and collected at one point in time per participant (78,79). Also, the study mainly focused on the factor of commitment instead of taking the unique specifications of every company into account.

Data collection

To get profound insights into the participants' points of view, attitudes and behavior, semi-structured interviews have been conducted (74,80). While following some structure in terms of topics and main questions discussed during the interview, this method allowed following questions to be tailored to the interviewee. Thereby, certain comparability was ensured without diminishing the opportunity to receive detailed individual answers (78,81,82).

It has been found that self-reported data on environmental attitudes and behavior mostly results in major differences between the behavior reported and the actual activities engaged in (83,84). This is because sustainability and environmental protection have become socially desirable topics where a lack of interest or noncompliant attitudes are not socially accepted (85,86). When conducting qualitative semi-structured interviews this increased social desirability bias can be reduced by asking questions in a more indirect and hypothetical manner, as the participants feel less pressured to give a socially acceptable answer (86,87). To follow this approach, the interview questions for this study have been designed as scenario questions, as "stories which

present hypothetical situations requiring action or judgment from respondents” (88 : p. 155). In combination with open questions, these scenarios aimed to reduce social desirability bias as well as provide the interview with increased context, and reduce the probability of an unreflective answer (78,89). The detailed interview guide can be found in Appendix 2.

The data for this study was collected via eleven semi-structured interviews with the previously selected middle managers. The participants from the consulting company volunteered directly to the researcher while the five other participants were approached through the consulting company’s main contact person. With this, the data is subject to a selection bias by these contact persons choosing the interviewees, and to volunteer bias for the consultancy’s project managers. These biases have been reduced by leaving the final decision on the interview participation to the researcher who was able to accept or decline a participant after the completion of the interview. The interviews have been conducted, audio-recorded and transcribed via Microsoft Teams. The full transcripts of the interviews can be found in Appendix 3.

Integrity and ethical consideration

The research procedure was following the University of Groningen’s code of ethics for research. Prior to the data collection, this conformity has been verified by the Campus Fryslân’s ethics committee and the ethical approval has been granted by the academic supervisor. Before participating in the study, the interviewees have been provided with the participant information sheet (Appendix 4) and the form of informed consent. The latter has been signed and returned to the researcher (Appendix 5). According to the University’s code of ethics, the participation in the study was fully voluntary and the interviewees had the right to withdraw their participation at any point in time without providing reasons. Furthermore, all data collected was anonymized, and the information provided is not traceable to the participants or their companies.

Data analysis

The collected data has been analyzed on the individual level of the participating middle managers to determine their personal commitment to change towards sustainability. Therefore, the six main categories of influencing factors from the previously developed conceptual model of commitment to change towards sustainability (Figure 1) have been defined as aggregate dimensions in the deductive coding process. The various influencing factors themselves functioned as second-order themes. In the following step of the coding process, the first-order codes have been identified from the interviews and assigned to the second-order themes using a positivist approach of analysis, leaving room for abductive reasoning and the identification of additional influencing factors that have not yet been present in literature. A detailed result of this coding process can be found in Appendix 6. From the coding, it became evident that the different influencing factors have varying relevance for the participants' commitment. Therefore, the results will be presented focusing first on the universally enhancing factors, followed by the regularly, and the probably enhancing factors of middle managers' commitment to change towards sustainability.

RESULTS

Universally influencing factors

Personal relevance and feeling of impact

One influencing factor that has been identified as crucial for their commitment to change towards sustainability by most of the interviewees is their personal relevance and feeling of impact. It has especially been addressed by the participants from the manufacturing industry. One interviewee stated that "it is fascinating to work for a global player who is able to find solutions and to steer the whole industry" (I4), while two others emphasized that they consider it relevant to "change [customers'] behavior" (I3) by being able to "implement the technology that is needed in this transition" (I9). But, it was also stated that "you have to be careful that you don't lose this perspective in your daily doing" (I10) and that it is not enough to focus on the broad impact but also on the small things that can be done by every person: "I think to reach the goal of sustainability you have to make sure that everyone knows about their personal contribution. [...] It is up to each individual" (I10). Among the consulting company's project managers the feeling of impact was also considered a positive influence on the personal commitment. Here it was more about supporting their clients to pursue the transition towards increased sustainability: "Where we have the biggest leverage is that we can say 'we help your clients to become more sustainable'. [...] That is really a nice point" (I8).

Intrinsic motivation

Personal intrinsic motivation is also named as a crucial factor by the majority of participants, regardless of whether they are from the manufacturing business or the consulting company. One interviewee stated: "I am convinced about sustainability. I can imagine that this makes a difference" (I4), while another called corporate sustainability an "indispensable goal" (I10) that

needs to be achieved through personal conviction. Another confirmed that “sustainability is not just a job title that you start at 8 am and take off at 4 pm. It can only work if certain thoughts are transferred from the company life to the private life and vice versa” (I10), which sums up that sustainability can only be achieved if personal beliefs are in line with the corporate function. What has especially been pointed out by the consultancy’s project managers is that “motivation is intrinsically driven by convenience” (I6), and that one should “focus on creating incentives to increase motivation” (I8) rather than imposing restrictions. Change towards sustainability “should not be burdensome” (I6).

Lack of alternatives and planetary boundaries

The factor of lacking alternatives, of being forced into change, including the focus on limited resources available on the planet, has been indicated by most of the interviewees to increase their commitment to change towards sustainability. Some interviewees stated that “another positive driver is that natural raw materials become more expensive and just less available over time” (I5), and “there is a crisis approaching where we are running out of time” (I7). Other interviewees focused on legal forces for change, stating that they have to ensure that their “products comply with the regulations” (I3) and that everyone has “to obey the law” (I5). They pointed out that “a law [...] is helping a lot, it can lead to massive changes” (I4) because they “already see that voluntariness does not lead to a change” (I11). Another interviewee named market competition as a forcing factor, stating that “if a competitor can demonstrate enhanced sustainability, we do have a disadvantage” (I10). Only two of the interviewees did not see a lack of alternatives as a motivational factor, as they pointed out: “I don't know how much force yields results. [...] you have to make sure that people have a choice” (I6), and “I am not a friend of

limitations and restrictions, you should rather focus on creating incentives to increase motivation” (I8).

Sense of duty

For the majority of the interviewees, their sense of duty, the willingness to do their job well and to complete the assigned tasks, has been considered an important factor regarding their commitment. Both, the interviewees from the manufacturing businesses and the consulting company emphasized that usually “everyone is target driven” (I10), and that it is important to “be at the forefront of sustainability, not just to save the world, but to remain competitive” (I11). Many interviewees attached their motivation to change to being a profitable employee, as one stated: “Of course, we need to go with the change. [...] The company needs to stay competitive in the market” (I9).

This sense of duty has especially been identified as relevant for the interviewees from the consulting company, as for example one of them stated that by fulfilling the duty as a consultant, “we have the biggest leverage as [...] we help our clients to become more sustainable” (I8). Two other interviewees pointed out that “we are consultants and service providers, we cannot say 'no'.” (I2), and “effort is not the criterion. If the customer wants more, then of course, he gets more” (I7), which makes it evident that they are strongly committed to their role as consultants.

Tangible problems and results

Another factor that has been identified as crucial by most of the interviewees is the one of tangible problems and results. It refers to the degree to which one is exposed to a negative situation that could be improved and the effects that can be noticed after the completion of a certain activity. Regarding the challenge of climate change, one interviewee stated “If you for example live in the south of Spain where it is 40 degrees right now, your external environment is

forcing you to care and to act” (I9). Regarding their work context, many interviewees pointed out that “a success that is as tangible as possible, a real difference that has been made” (I7) is always a strong motivation, and that “it will become boring if you do something and don't know what the consequence is” (I1). They stated that it is important to “directly see what is happening because of your work” (I3), for example, “If you install a building automation and at the end of the project the building uses 40% less energy, you have an immediate exposure to your contribution” (I9). What also becomes clear here is the need for the ability to measure and quantify their impact. Some interviewees stated that what they need is “a tool at hand that can calculate figures very quickly” (I11), which “would help gaining knowledge and acceptance” (I7) for the difference that has been or will be made.

Support and prioritization in the company

Additionally, almost all interviewees stated that what they need to be committed to this kind of change process is the upper management’s prioritization of the topic and their support to implement it throughout the company. One interviewee stated that “it is a motivating factor if you see that there is awareness in the company, in the upper management, that the topic is really important to them” (I8), while another one indicated that currently “sustainability targets are not strong enough in the organization” (I10). In order for it to “really become a habit” (I10) sustainability needs to become a core value, so “every decision that is made should be considered from the point of view of sustainability” (I10). Even if this prioritization is officially done, it also needs to be executed. As one interviewee stated: “For me, it is essential that I feel that the company stands with what it says and that they really want it. It needs to be prioritized on the highest level” (I1).

It became evident that this factor of commitment in the higher management is mostly missing, as some interviewees across all three companies stated: “My impact in the company is not big enough [...]. Higher hierarchy levels need to push the change to make it a higher priority” (I3), “it is always a fight with the upper management” (I5) and “we [the project managers] are left alone with this” (I2). Some interviewees explained that with this lack of commitment, “sustainability is rather considered a minor annoyance” (I1) in the companies, where sustainable actions are prioritized only if they “don’t really hurt” (I5). This leads to the situation that “sustainability is just a 'nice to have'” (I4) within daily operations. One interviewee stated: “In the project, it [sustainability] is only a side topic [...]. I have to somehow do my project activities and in the end deliver to the customer, which is important above all. Sustainability runs alongside” (I11).

Some interviewees stated that to increase their commitment to a change towards sustainability, the upper management needs to invest additional resources, above all finances, to advance the topic. In various interviews it was stated that “if you want something you also have to invest” (I1), “you need time and money and the company needs to [...] provide it”, and “you should really have the feeling that the company takes it seriously and is also willing to make compromises and to invest money” (I7). Together with this request, some interviewees emphasized that “sustainability KPIs need to be formulated and put on one level with financial KPIs” (I5), because otherwise “sustainability targets are not strong enough in the organization [...] and mostly decisions are made against sustainability because another goal, the margin or market share, are more important for the organization” (I10).

Regularly influencing factors

Personal involvement

The factor of personal involvement in the development of the change process has been identified as committing by some of the interviewees, while others recognized it as counterproductive for their commitment and the success of the change. Again, there was no difference between the participants from the manufacturing businesses and the consulting company. On the one hand, some interviewees stated that “of course, it is more fun when you realize that you are not only executing but you are also creatively involved” (I9) in the process and that “the company should not do micro-management but give targets to the people” (I1). On the other hand, it was stated that “the only way how sustainability in the company can be implemented is through top-down measures. It does not work any other way” (I5) and that target setting “needs to be done on a corporate level” (I7). One interviewee stated that measures “should be done in a harmonized and standardized way, [because] if one decides to go right and the other decides to go left, there is a danger of losing the connection” (I2), of working together for a common goal. Other interviewees emphasized that this process of target setting is “an iterative process where different hierarchical levels need to work together” (I9), and that it has to be assured that “everyone knows about their personal contribution” (I10) in a process where “different levels of hierarchy [...] engage in a discussion and come out with a possible solution” (6).

Authority of decision making

The authority of decision-making in the implementation of a change process has been identified as important by some interviewees, while others stated that it is not relevant for them because “if you want something to be done, you have to implement it top-down” (I8). The interviewees in

favor pointed out that authority is crucial for them, as one of them stated that “I like being a project leader, I am responsible for implementing something and can really get it done” (I3). Interviewees from the other two companies pointed out that authority of decision-making is a factor they consider crucial but that is missing in their position. One interviewee from the consulting company stated “I don’t think I can make this change happen [...] as project manager I overall have very little influence” (I7), and one interviewee from a client company explained that

“If you want to implement real change, you get slowed down by the company [...] [because] what is presented to the top management for decision making has been washed through various levels of the hierarchy. Nobody tells them how things really are and what really needs to be done” (I5).

The interviewees favoring this factor agreed that “there is no real ownership for the topic [...] and the departments only blame each other” (I10) if certain goals are not reached. “It is important that clear responsibilities are defined and that with these responsibilities also comes the decision-making authority [...] otherwise it is a cat-and-mouse game” (I10).

Investment/financial loss

Regarding the factor of financial investments or aspiring financial loss, there was disagreement among the interviewees on whether this factor is positively influencing their commitment. Where financial loss can also be considered receiving or not receiving financial incentives for sustainable actions, on the one hand, one interviewee stated that “humans work to make money. If there is no financial incentive there is no incentive” (I4) and that “change towards sustainability is costly and risky, a financial reward is needed to take this risk” (I4). Another emphasized that “If they say 'you get less money if you don't reach the new goal', that would

maybe be an issue for me” (I1). On the other hand, one interviewee stated: “A financial incentive would not be a motivation for me” (I3), while another explained that different types of incentives would be more motivating for her: “It would be very important for me to have additional budget and resources rather than a bonus payment” (I11). Additionally, some interviewees argued that connecting change towards sustainability to financial incentives is problematic, because “they could produce greenwashing” (I8), and also because “caring too much about financial incentives is not sustainable” (I10). Nevertheless, one interviewee pointed out that deciding for a sustainable option should not force him to resign from a financial benefit: “I should get this benefit in any other way” (I7).

Organizational culture and working-together

What has been identified as an additional influencing factor by some of the interviewees is how they are working together with others and how sustainability is integrated into the organizational culture. Two interviewees pointed out that to be committed to certain changes they need to be informed about the process. They stated that “the change needs to be well communicated and tangible to give a structure and a vision” (I4), “the management should talk [...] to the employees, [...] [the change] needs to be communicated in a proper way” (I6). It also became clear that working together and finding solutions as a team is important for some interviewees, especially the ones from the manufacturing businesses, and that this is not successfully done in every company. One interviewee stated: “What I find fascinating [...] is that within a company you are working together with so many experts from so many different fields” (I3), while another emphasized that different departments “are working against each other and blame each other for what is not working” (I5). Additionally, it has been stated by one interviewee from the consulting company, that the awareness of sustainability needs to be enhanced not only throughout the

upper management but also in the lower levels of the hierarchy. She stated that whenever she emphasizes the topic of sustainability, her colleagues “sit back, bored, and say ‘OK, yes, wake me up when you have another topic again.’” (I11).

Probably influencing factors

Moral obligation

The factor of moral obligation was considered as committing by only two interviewees, where both of them are working for a manufacturing business. One considered her obligation towards the company, stating that “if the company says that it has to be done, I will do it. No resources and efforts are spared” (I4), while the other focused on his obligation towards the people around him. He stated: “[Sustainability] is a responsibility that I have towards my partner, my children, my family, my friends and my colleagues” (I9) and “it is a strong motivation to work for this company which is not only part of the problem but also part of the solution” (I9).

Socialization

The factor of socialization, of being part of and working as a group, has also been emphasized by a few interviewees as relevant to their commitment. One of them stated that he “would really support these actions but only if they apply for everyone” (I1) in the company, while other interviewees pointed out that reaching sustainability goals is not about individual but about collective action, which can be a lot more effective but also needs to be rewarded jointly. They stated that “some colleagues have great local communities and together they can reach sustainability goals very quickly” (I9), and that “it would be more motivating and more purposeful if the whole team gets [a reward]” (I11) rather than just one individual. One interviewee emphasized the social component of sustainability, that it also means being part of a

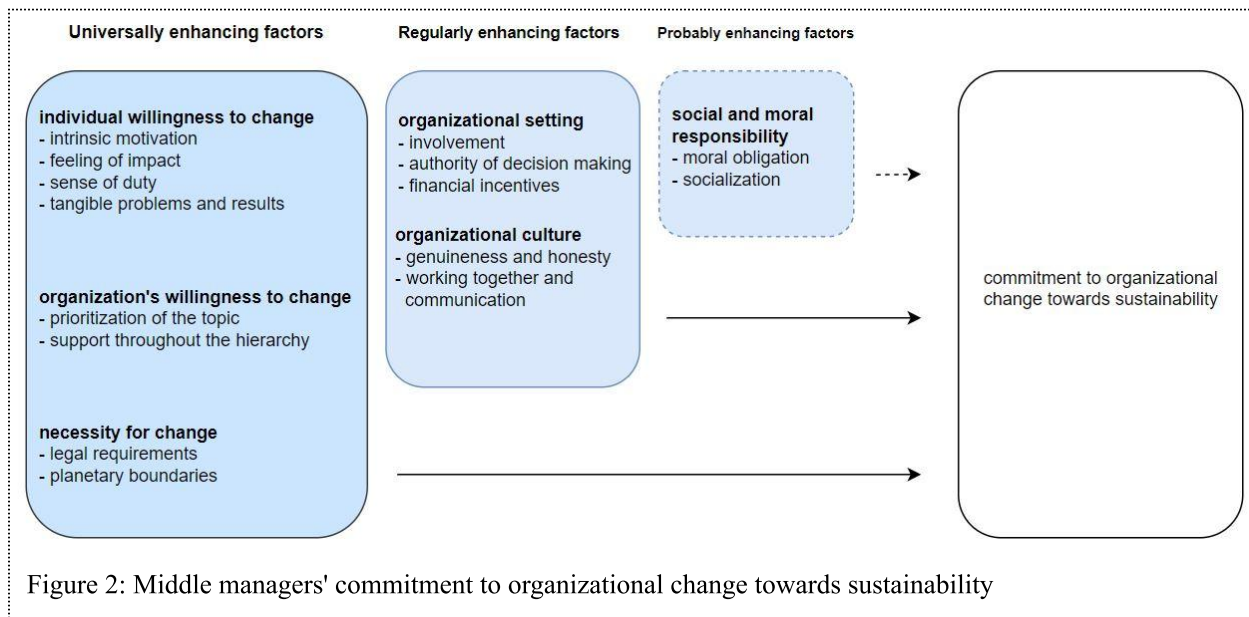
group and interacting with others. Regarding the example of commuting by public transport, he stated:

“You're also engaging more to be part of the public, like you are using public transport, so you're just a person similar to other people sitting in the same cabin. And if possible, have a coffee or have a conversation with another person. So [...] in that way it is motivating” (I6)

DISCUSSION

Connecting these results to the influencing factors of the previously developed conceptual model, this study is answering the research question: *What is committing an organization's middle management to change towards sustainability?*

Generally, the previously developed conceptual model of commitment to organizational change towards sustainability can be declared as valid from the perspective of the middle management. Nevertheless, this focus made clear that for middle managers not all influencing factors are equally important and that additional factors are considered relevant that have not been previously identified. Therefore, the previous model has been adapted to the following multilevel model of middle managers' commitment to organizational change towards sustainability (Figure 2).



Apart from the argument that intrinsic motivation is the foundation of successful change towards sustainability (53,54), no specific order of influencing factors has been identified in literature. As

the interviews have shown that the factors have a varying relevance for the middle managers, the resulting model consists of universally enhancing factors (that are relevant for most or all of the interviewees' commitment), regularly enhancing factors (that are relevant for some interviewees but are considered counterproductive by others), and probably enhancing factors (that have only been identified by some interviewees and were not reliably determinable as relevant). Within these levels, especially the first two, there are influencing factors present that have been categorized into all three components of affective, normative, and continuance commitment. This confirms previous research by illustrating that commitment to change towards sustainability, also from the perspective of the middle managers, is a multidimensional model stemming from various antecedents (43,46,50–52). By this, it is also disproving the statement made by Morin (55), that commitment to change towards sustainability is mostly influenced by the affective component.

Regarding the first and most important level, it becomes evident that the allocated factors are all about the mindset and the condition of the different actors involved in organizational change, namely the middle managers themselves, the organization, and their environment. It becomes clear that the middle managers see themselves as part of a greater whole in this process, which is confirming the statement made by Doppelt (22), that change towards sustainability is a collaborative action, where different components have to work together to reach a certain goal. Especially the allocation of intrinsic motivation, planetary boundaries, and sense of duty confirms their importance that has already been identified in previous literature (22,53,54,60,61). One factor that was identified as crucial in the interviews that has not been explicitly found in literature is the prioritization in the company. Even though it has been found that the upper management needs to support lower hierarchical levels with the implementation of change

measures (62,63), the factor of prioritization is adding another focus. It is about putting financial and sustainability KPIs on the same level, making operational sustainability more than an optional surplus, and investing money and other resources to fully integrate sustainability and to make it more than a side topic.

The second level of regularly enhancing factors is less about the mindset and condition of the actors involved, but about the external influence of the organizational context. It becomes clear that the middle managers have differing perspectives and expectations on how the change should be facilitated by the structural setting and the working-together in the organization. Thereby, they are confirming the disagreement that is present in literature. Especially regarding the factors of involvement, authority of decision-making and financial incentives, some previous scholars argued that to be committed to a certain change managers need to be involved in the development of the process and need to be entitled to decide on the feasibility and suitability of planned activities (26,55–58). Other scholars argued that involvement and authority are hindering the implementation of disruptive changes that are needed in the context of sustainability, and that the connection of these changes to financial incentives is rather counterproductive for the successful implementation (15,67,68). The results are also confirming the relevance of organizational culture and working together identified in literature (64–66), even though they are only allocated to the level of regularly enhancing factors, relevant for some middle managers.

The third level of influencing factors allocated in the model consists of moral obligation and socialization. The factors have previously been identified in the component of normative commitment by Meyer and Herscovitch. These normative factors are considered relevant by only a few interviewees, which could be due to the following two reasons: Firstly, today's economic

activity is mostly focused on monetary wealth and fact-based performance rather than social factors (8–10). It is more present in the peoples' heads to focus on their duty, legal requirements, or financial gains, rather than on their moral and social responsibilities. Secondly, it became clear from the interviews that in the considered companies sustainability is mostly about the reduction of CO² emissions and energy efficiency. They are more focused on the environmental component of sustainability and usually not covering the social component that is widely respected in literature (2,16,90,91). Plausibly due to that, the normative factors were not that widely addressed in the interviews, which does not mean that they are not relevant in the context of middle managers' commitment. Therefore, they have been added as probably enhancing factors, which need to be confirmed in future research.

Finally, it can be concluded that the model on the perspective of middle managers' commitment to organizational change towards sustainability is confirming most of the previous literature on commitment and organizational change, especially in the context of sustainability. It is also adding a few factors that have not been present in literature yet but are especially relevant from the perspective of the middle managers. Establishing the three levels of universally, regularly and probably enhancing factors, the model is reflecting the crucial relevance of some influencing factors while displaying the disagreement on others that became evident from literature and the interviews. Thereby, the study is enriching theory with a detailed model specifically focusing on middle managers' commitment to change towards sustainability. That could lead to a higher success rate of change implementation than the current 25% to 50% (11–13) and result in enhanced sustainability across the whole economy and society.

CONCLUSION

This study is enriching existing theory and praxis by addressing the research question: ‘*What is committing an organization’s middle management to change towards sustainability?*’. In a transdisciplinary way it combines existing literature on organizational change towards sustainability and workplace commitment with the specific commitment of various middle managers determined through the data collection via qualitative interviews. With this and the development of the model on middle managers’ commitment to organizational change towards sustainability, the study is adding this perspective to existing literature, as the middle managers have been identified as key actors in the implementation of organizational change.

The factors influencing middle managers’ commitment are generally confirming the factors identified in previous literature. By allocating them to three levels of relevance, this model is especially helpful for organizations that want to enhance their middle managers’ commitment to a suggested sustainable change. They can primarily focus on enhancing the universal factors as they are most likely influencing the commitment of the majority of middle managers. Focusing on the second and probably the third level of factors would be a possible following step that needs to be determined on a more tailor-made level for each manager.

Nevertheless, it needs to be acknowledged that the results of this study are subject to some limitations, mostly due to the nature of the qualitative study. The results are limited by (a) social desirability bias because the data has been retrieved via personal interviews, (b) a lack of generalizability because only eleven interviewees from three companies were participating, (c) volunteer and selection bias as the participation was fully voluntary and the participants from the manufacturing businesses were selected by the consulting company’s contact person, and (d) hypothetical bias due to the scenarios presented in the questions, which in some cases limited the

originality of the answers. Even though these biases were reduced as much as possible, they could not be avoided. Furthermore, this study is specifically focusing on the perspective of the middle managers. It already became clear with the development of the multilevel theoretical model that the successful implementation of organizational change is not solely dependent on the commitment of the middle management but also on the organizational setting and the environment. Additionally, organizational change is influenced by various internal and external factors like the structure and size of the company, the degree and selection of stakeholders involved, or the organization's economic performance and reputation (22,92–94).

Therefore, the following suggestions are made for further research: Firstly, the results of this study should be verified on a larger scale using quantitative methods. Middle managers from various large, small and mid-market companies should participate to test the validity of the developed theoretical model in the broader context. Secondly, extended qualitative research is needed on the level of probably enhancing factors. As these factors have only been addressed by a few participants, future research should confirm their influence on middle managers' commitment. Thirdly, a similar study to this one should be conducted, focusing on the commitment of people in other specific levels of the organizational hierarchy. Even though the influencing factors for middle managers' commitment are mostly in line with the factors of employee commitment in general, the specific factors for other hierarchical levels could vary and need to be disclosed. In that way, organizations can perform the collaborative action needed to integrate sustainability into their daily operations. They can make use of the strong leverage they have in shaping the economy and society and in enhancing overall sustainable performance.

REFERENCES

1. World Commission on Environment and Development. *Our Common Future*. United Nations; 1987.
2. Elkington J. ACCOUNTING FOR THE TRIPLE BOTTOM LINE. *Measuring Business Excellence*. 1998 Mar 1;2(3):18–22.
3. Sackmann SA, Eggenhofer-Rehart PM, Friesl M. Sustainable Change: Long-Term Efforts Toward Developing a Learning Organization. *The Journal of Applied Behavioral Science*. 2009 Dec;45(4):521–49.
4. Sackmann SA, Eichel V. CHANGE SUCCESS – A QUESTION OF SITUATEDNESS? 2020.
5. Raelin JD, Cataldo CG. Whither Middle Management? Empowering Interface and the Failure of Organizational Change. *Journal of Change Management*. 2011 Dec;11(4):481–507.
6. Nawaz W, Koç M. Exploring Organizational Sustainability: Themes, Functional Areas, and Best Practices. *Sustainability*. 2019 Aug 9;11(16):4307.
7. Dunphy DC, Benn S, Griffiths A. *Organizational change for corporate sustainability*. Third edition. Abingdon, Oxon: Routledge; 2014. 350 p. (Understanding organizational change).
8. Wong L, Avery GC. Transforming organisations towards sustainable practices. *International Journal of the Interdisciplinary Social Sciences*. 2009;4(1):397–408.
9. Epstein MJ, Buhovac AR, Yuthas K. THE ROLE OF LEADERSHIP AND ORGANIZATIONAL CULTURE. 2010;
10. Ohtomo S, Hirose Y. The dual-process of reactive and intentional decision-making involved in eco-friendly behavior. *Journal of Environmental Psychology*. 2007 Jun;27(2):117–25.
11. Collins J. Good to Great - (Why Some Companies Make the Leap and others Don't). *NHRD Network Journal*. 2009 Oct;2(7):102–5.
12. Sackmann S, Eichel V, Schmidt C. Change-Fitness – eine besondere Herausforderung für die Führung. In: Sackmann S, editor. *Führung und ihre Herausforderungen [Internet]*. Wiesbaden: Springer Fachmedien Wiesbaden; 2019 [cited 2023 Feb 20]. p. 175–200. Available from: http://link.springer.com/10.1007/978-3-658-25278-6_10
13. Fay D, Lührmann H. Current themes in organizational change. *European Journal of Work and Organizational Psychology*. 2004 Jun;13(2):113–9.
14. Schaltegger S, Freund FL, Hansen EG. Business cases for sustainability: the role of business model innovation for corporate sustainability. *IJISD*. 2012;6(2):95.
15. Epstein MJ, Buhovac AR. Solving the sustainability implementation challenge. *Organizational Dynamics*. 2010 Oct;39(4):306–15.
16. Bocken NMP, Short SW, Rana P, Evans S. A literature and practice review to develop sustainable business model archetypes. *Journal of Cleaner Production*. 2014 Feb;65:42–56.
17. Millar C, Hind P, Magala S. Sustainability and the need for change: organisational change and transformational vision. Millar C, editor. *Journal of Organizational Change Management*. 2012 Jun 29;25(4):489–500.
18. Marshall RS, Brown D. The Strategy of Sustainability: A Systems Perspective on Environmental Initiatives. *California Management Review*. 2003 Oct;46(1):101–26.
19. Székely F, Knirsch M. Responsible Leadership and Corporate Social Responsibility: *European Management Journal*. 2005 Dec;23(6):628–47.
20. Hart SL, Milstein MB. Creating sustainable value. *AMP*. 2003 May;17(2):56–67.
21. Kolk A, Pinkse J. Towards strategic stakeholder management? Integrating perspectives on sustainability challenges such as corporate responses to climate change. Lenssen G, editor.

- Corporate Governance: The international journal of business in society. 2007 Aug 14;7(4):370–8.
22. Doppelt B. Leading change toward sustainability: a change-management guide for business, government and civil society. Updated 2nd ed. Sheffield, England: Greenleaf; 2010. 296 p.
 23. Hoyte DS, Greenwood RA. Journey to the north face: A guide to business transformation. *Academy of Strategic Management Journal*. 2007;6:91–104.
 24. Garvin DA. Building a Learning Organization. *Harvard Business Review* [Internet]. 1993 Jul 1 [cited 2023 Feb 20]; Available from: <https://hbr.org/1993/07/building-a-learning-organization>
 25. Roome N, Louche C. Journeying Toward Business Models for Sustainability: A Conceptual Model Found Inside the Black Box of Organisational Transformation. *Organization & Environment*. 2016 Mar;29(1):11–35.
 26. Armenakis AA, Harris SG. Reflections: Our Journey in Organizational Change Research and Practice. *Journal of Change Management*. 2009;9(2):127–42.
 27. McKay K, Kuntz JRC, Näswall K. The Effect of Affective Commitment, Communication and Participation on Resistance to Change: The Role of Change Readiness. 2013;42(1).
 28. Erwin DG, Garman AN. Resistance to organizational change: linking research and practice. *Leadership & Organization Development Journal*. 2010 Feb 6;31(1):39–56.
 29. Gill R. Change management — or change leadership? *Journal of Change Management*. 2003;3.
 30. Buchanan D, Fitzgerald L, Ketley D, Gollop R, Jones JL, Lamont SS, et al. No going back: A review of the literature on sustaining organizational change. *Int J Management Reviews*. 2005 Sep;7(3):189–205.
 31. Buick F, Blackman D, Johnson S. Enabling Middle Managers as Change Agents: Why Organisational Support Needs to Change: Middle Managers as Change Agents. *Australian Journal of Public Administration*. 2018 Jun;77(2):222–35.
 32. Herzig SE, Jimmieson NL. Middle managers' uncertainty management during organizational change. *Leadership & Organization Development Journal*. 2006 Dec 1;27(8):628–45.
 33. Huy QN. Emotional Balancing of Organizational Continuity and Radical Change: The Contribution of Middle Managers. *Administrative Science Quarterly*. 2002;47:31–69.
 34. Dopson S, Stewart R. What is Happening to Middle Management? *Br J Management*. 1990 Apr;1(1):3–16.
 35. Harding N, Lee H, Ford J. Who is 'the middle manager'? *Human Relations*. 2014 Oct;67(10):1213–37.
 36. Uytterhoeven H. General managers in the middle. *Harvard Business Review*. 1989;67(5):135–45.
 37. Pfeffer J, Sutton RI. The knowing-doing gap: how smart companies turn knowledge into action. Boston, Mass: Harvard Business School Press; 2000. 314 p.
 38. Heiskanen E, Thidell Å, Rodhe H. Educating sustainability change agents: the importance of practical skills and experience. *Journal of Cleaner Production*. 2016 Jun;123:218–26.
 39. Fontannaz S, Oosthuizen H. The development of a conceptual framework to guide sustainable organisational performance. *South African Journal of Business Management*. 2007;38(4):9–19.
 40. Bridwell-Mitchell EN, Mezas SJ. The Quest for Cognitive Legitimacy: Organizational Identity Crafting and Internal Stakeholder Support. *Journal of Change Management*. 2012 Jun;12(2):189–207.

41. Kanter RM. Commitment and Social Organization: A Study of Commitment Mechanisms in Utopian Communities. *American Sociological Review*. 1968 Aug;33(4):499.
42. Mowday RT, Steers RM, Porter LW. The measurement of organizational commitment. *Journal of Vocational Behavior*. 1979 Apr;14(2):224–47.
43. Jaros SJ, Jermier JM, Koehler JW, Sincich T. EFFECTS OF CONTINUANCE, AFFECTIVE, AND MORAL COMMITMENT ON THE WITHDRAWAL PROCESS: AN EVALUATION OF EIGHT STRUCTURAL EQUATION MODELS. *Academy of Management Journal*. 1993 Oct 1;36(5):951–95.
44. Meyer JP, Herscovitch L. Commitment in the workplace: toward a general model. *Human Resource Management Review*. 2001 Sep;11(3):299–326.
45. Herscovitch L, Meyer JP. Commitment to organizational change: Extension of a three-component model. *Journal of Applied Psychology*. 2002;87(3):474–87.
46. Cohen A. Commitment before and after: An evaluation and reconceptualization of organizational commitment. *Human Resource Management Review*. 2007 Sep;17(3):336–54.
47. Jang YJ, Zheng T, Bosselman R. Top managers' environmental values, leadership, and stakeholder engagement in promoting environmental sustainability in the restaurant industry. *International Journal of Hospitality Management*. 2017 May;63:101–11.
48. Meyer JP, Stanley DJ, Herscovitch L, Topolnytsky L. Affective, Continuance, and Normative Commitment to the Organization: A Meta-analysis of Antecedents, Correlates, and Consequences. *Journal of Vocational Behavior*. 2002 Aug;61(1):20–52.
49. Conner DR. *Managing at the speed of change: How resilient managers succeed and prosper where others fail*. New York: Villard Books; 1992.
50. O'Reilly CA, Chatman J. Organizational commitment and psychological attachment: The effects of compliance, identification, and internalization on prosocial behavior. *Journal of Applied Psychology*. 1986 Aug;71(3):492–9.
51. Meyer JP, Allen NJ. A three-component conceptualization of organizational commitment. *Human Resource Management Review*. 1991 Mar;1(1):61–89.
52. Mercurio ZA. Affective Commitment as a Core Essence of Organizational Commitment: An Integrative Literature Review. *Human Resource Development Review*. 2015 Dec;14(4):389–414.
53. Kulkarni SM. A review on intrinsic motivation: A key to sustainable and effective leadership. *Review of Integrative Business and Economics Research*. 2015;4(3):74–88.
54. Taufik D, Bolderdijk JW, Steg L. Acting green elicits a literal warm glow. *Nature Clim Change*. 2015 Jan;5(1):37–40.
55. Morin AJ, Meyer JP, Bélanger É, Boudrias JS, Gagné M, Parker PD. Longitudinal associations between employees' beliefs about the quality of the change management process, affective commitment to change and psychological empowerment. *Human Relations*. 2016 Mar;69(3):839–67.
56. Morgan DE, Zeffane E. Employee involvement, organizational change and trust in management. *Int Journal of Human Resource Management*. 2003 Feb;14(1):55–75.
57. Spreitzer G. Taking Stock: A Review of More than Twenty Years of Research on Empowerment at Work. In: *The SAGE Handbook of Organizational Behavior: Volume I - Micro Approaches* [Internet]. 1 Oliver's Yard, 55 City Road, London EC1Y 1SP United Kingdom: SAGE Publications Ltd; 2008 [cited 2023 Mar 29]. p. 54–72. Available from: https://sk.sagepub.com/reference/hdbk_orgbehavior1/n4.xml
58. Konczak LJ, Stelly DJ, Trusty ML. Defining and measuring empowering leader behaviors:

- development of an upward feedback instrument. *Educational and Psychological Measurement*. 2000;60(2):301–13.
59. Seibert SE, Wang G, Courtright SH. Antecedent and consequences of psychological and team empowerment in organizations: a meta-analytic review. *Journal of Applied Psychology*. 2011;96:981–1003.
 60. Steffen W, Richardson K, Rockström J, Cornell SE, Fetzer I, Bennett EM, et al. Planetary boundaries: Guiding human development on a changing planet. *Science*. 2015 Feb 13;347(6223):1259855.
 61. Bissing-Olson MJ, Iyer A, Fielding KS, Zacher H. Relationships between daily affect and pro-environmental behavior at work: The moderating role of pro-environmental attitude: DAILY AFFECT AND PRO-ENVIRONMENTAL BEHAVIOR. *J Organiz Behav*. 2013 Feb;34(2):156–75.
 62. Pellegrini C, Rizzi F, Frey M. The role of sustainable human resource practices in influencing employee behavior for corporate sustainability. *Bus Strat Env*. 2018 Dec;27(8):1221–32.
 63. Ramus CA, Steger U. THE ROLES OF SUPERVISORY SUPPORT BEHAVIORS AND ENVIRONMENTAL POLICY IN EMPLOYEE “ECOINITIATIVES” AT LEADING-EDGE EUROPEAN COMPANIES. *Academy of Management Journal*. 2000 Aug 1;43(4):605–26.
 64. Hofstede G. Attitudes, Values and Organizational Culture: Disentangling the Concepts. *Organization Studies*. 1998 May;19(3):477–93.
 65. Levin P. Culture and Markets: How Economic Sociology Conceptualizes Culture. *The ANNALS of the American Academy of Political and Social Science*. 2008 Sep;619(1):114–29.
 66. Muller C, Vermeulen WJV, Glasbergen P. Pushing or Sharing as Value-driven Strategies for Societal Change in Global Supply Chains: Two Case Studies in the British-South African Fresh Fruit Supply Chain: Pushing or Sharing as Strategies for Change in Global Supply Chains. *Bus Strat Env*. 2012 Feb;21(2):127–40.
 67. Trencher G, Truong N, Temocin P, Duygan M. Top-down sustainability transitions in action: How do incumbent actors drive electric mobility diffusion in China, Japan, and California? *Energy Research & Social Science*. 2021 Sep;79:102184.
 68. Kivimaa P, Laakso S, Lonkila A, Kaljonen M. Moving beyond disruptive innovation: A review of disruption in sustainability transitions. *Environmental Innovation and Societal Transitions*. 2021 Mar;38:110–26.
 69. Owens PL. One More Reason Not to Cut Your Training Budget: The Relationship between Training and Organizational Outcomes. *Public Personnel Management*. 2006 Jun;35(2):163–72.
 70. Daily BF, Huang S. Achieving sustainability through attention to human resource factors in environmental management. *International Journal of Operations & Production Management*. 2001 Dec 1;21(12):1539–52.
 71. Allen DG, Shanock LR. Perceived organizational support and embeddedness as key mechanisms connecting socialization tactics to commitment and turnover among new employees: SOCIALIZATION AND TURNOVER. *J Organiz Behav*. 2013 Apr;34(3):350–69.
 72. Sharma S, Prakash G, Kumar A, Mussada EK, Antony J, Luthra S. Analysing the relationship of adaption of green culture, innovation, green performance for achieving sustainability: Mediating role of employee commitment. *Journal of Cleaner Production*. 2021 Jun;303:127039.
 73. Marlatt KL, Beyl RA, Redman LM. A qualitative assessment of health behaviors and

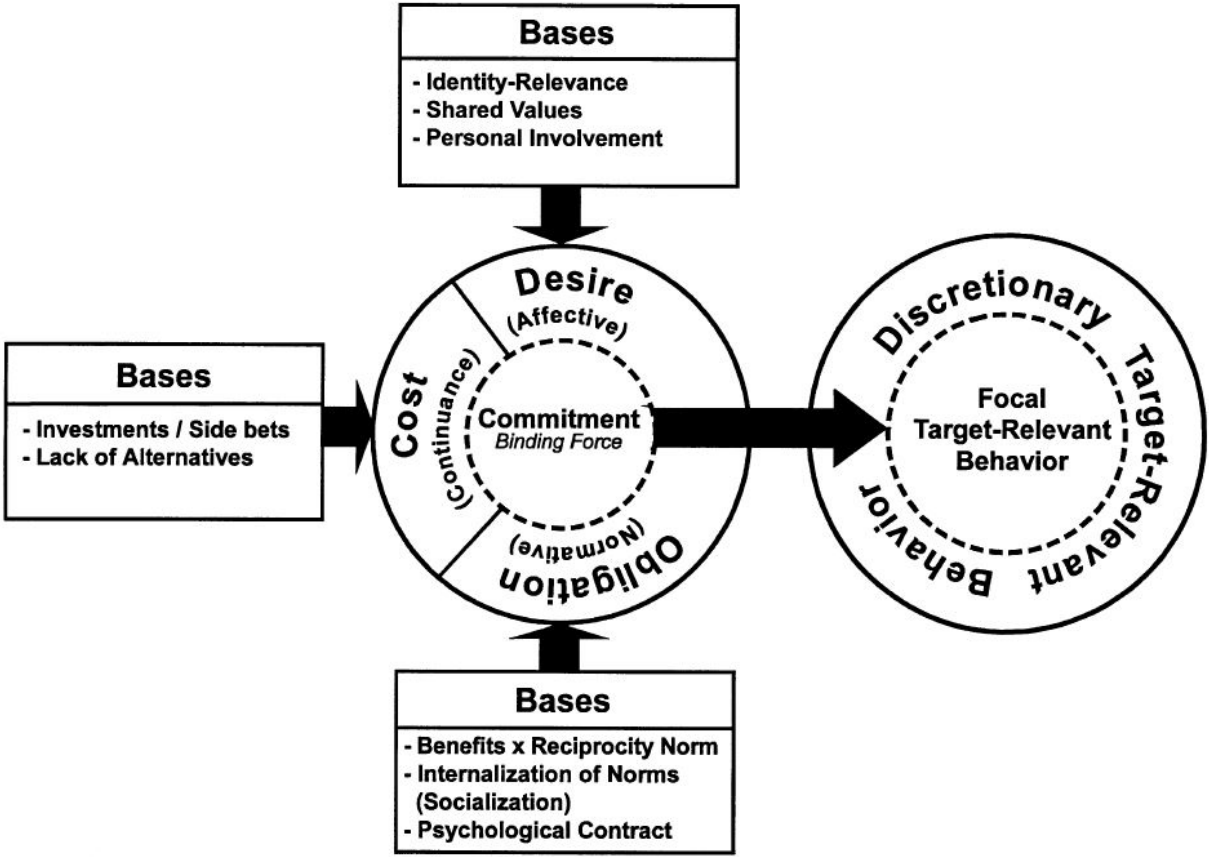
- experiences during menopause: A cross-sectional, observational study. *Maturitas*. 2018 Oct;116:36–42.
74. Tenny S, Brannan JM, Brannan GD. Qualitative Study. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 [cited 2023 Apr 20]. Available from: <http://www.ncbi.nlm.nih.gov/books/NBK470395/>
 75. Patterson J, Schulz K, Vervoort J, Adler C, Hulbert M, van der Hel, et al. Transformation towards sustainability - Emerging approaches, critical reflections, and a research agenda. *Earth System Governance Working Paper*. 2015;
 76. Pereira LF, Jeronimo CM, Ramos MR. Management consulting business models a perspective of sustainability. In: 2017 International Conference on Engineering, Technology and Innovation (ICE/ITMC) [Internet]. Funchal: IEEE; 2017 [cited 2023 Feb 17]. p. 29–35. Available from: <http://ieeexplore.ieee.org/document/8279865/>
 77. Old DR. Consulting for real transformation, sustainability, and organic form. *Journal of Organizational Change Management*. 1995 Jun 1;8(3):6–17.
 78. Bryman A, Burgess P, Harley B. *Business research methods*. Fifth edition. Oxford, United Kingdom ; New York, NY: Oxford University Press; 2019. 642 p.
 79. Verhoeven N. *Doing Research*. Amsterdam: Boom Publishers; 2019.
 80. Hennink MM, Hutter I, Bailey A. *Qualitative research methods*. London ; Thousand Oaks, Calif: SAGE; 2011. 304 p.
 81. Adams WC. Conducting Semi-Structured Interviews. In: Newcomer KE, Hatry HP, Wholey JS, editors. *Handbook of Practical Program Evaluation* [Internet]. Hoboken, NJ, USA: John Wiley & Sons, Inc.; 2015 [cited 2023 Apr 20]. p. 492–505. Available from: <https://onlinelibrary.wiley.com/doi/10.1002/9781119171386.ch19>
 82. Ruslin R, Mashuri S, Sarib M, Alhabsyi F, Syam H. Semi-structured Interview: A Methodological Reflection on the Development of a Qualitative Research Instrument in Educational Studies. *IOSR Journal of Research & Method in Education*. 2022;12(1):22–9.
 83. Milfont TL. The effects of social desirability on self-reported environmental attitudes and ecological behaviour. *Environmentalist*. 2009 Sep;29(3):263–9.
 84. Bamberg S. How does environmental concern influence specific environmentally related behaviors? A new answer to an old question. *Journal of Environmental Psychology*. 2003 Mar;23(1):21–32.
 85. Beckmann SC. In the Eye of the Beholder: Danish Consumer-Citizens and Sustainability. In: Grunert KG, Thøgersen J, editors. *Consumers, Policy and the Environment A Tribute to Folke Ölander* [Internet]. New York: Springer-Verlag; 2005 [cited 2023 Apr 24]. p. 265–99. Available from: http://link.springer.com/10.1007/0-387-25004-2_15
 86. Fisher RJ. Social Desirability Bias and the Validity of Indirect Questioning. *J CONSUM RES*. 1993 Sep;20(2):303.
 87. Kennedy EJ, Lawton L. The effects of social and moral integration on ethical standards: A comparison of American and Ukrainian business students. *J Bus Ethics*. 1996 Aug;15(8):901–11.
 88. Wason KD, Cox KC. Scenario Utilization in Marketing Research. In: *Advances in Marketing*. Texas: Southwestern Marketing Association; 1996. p. 155–62.
 89. Robertson DC. Empiricism in business ethics: Suggested research directions. *J Bus Ethics*. 1993 Aug;12(8):585–99.
 90. Hockerts K. How Hybrid Organizations Turn Antagonistic Assets into Complementarities. *California Management Review*. 2015 May;57(3):83–106.

91. Tracey P, Phillips N, Jarvis O. Bridging Institutional Entrepreneurship and the Creation of New Organizational Forms: A Multilevel Model. *Organization Science*. 2011 Feb;22(1):60–80.
92. Kiron D, Unruh G, Reeves M, Kruschwitz N, Rubel H. Corporate Sustainability at a Crossroads. *MIT Sloan Management Review*. 58(4).
93. Wirtenberg J, Harmon J, Russell WG, Fairfield KD. HR's Role in Building a Sustainable Enterprise: Insights From Some of the World's Best Companies. *HR Human Resource Planning*. 2007;30(1):10–20.
94. Engert S, Rauter R, Baumgartner RJ. Exploring the integration of corporate sustainability into strategic management: a literature review. *Journal of Cleaner Production*. 2016 Jan;112:2833–50.

APPENDIX

Appendix 1

A general model of workplace commitment by Meyer and Herscovitch



Appendix 2 - 6

Provided via [Google drive](#)