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**Diploma Thesis Title:**

**Sustainability in Business – Plan or Action?**

***Implication of Construal Level Theory into Company Perspective***

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## **Abstract**

Sustainable development is increasingly included into business statements and reports, yet sustainability principles are rarely implemented in the core business activities. Such incongruence is similar to the incongruence described by the attitude to behaviour gap for sustainable behaviour vastly studied by consumer behaviour researchers. However business theories are lacking in recognizing and understanding this phenomenon. The present study aims to bring the recognition of the attitude to behaviour gap in business perspective by translating the most recent theory on the topic, the Construal Level Theory. It identifies that due to a conflict of short term and long term business goals and incapability of human brain to easily switch between the two goal dimensions, the choice of managerial decision is biased according to the manager's focus on either strategic planning or on operational planning.

An experimental research was designed focusing on Czech conventional crop farmers with private businesses with regards to the fact that agriculture is one of the main players directly influencing overall sustainability development. Furthermore, managers of privately owned companies are likely to have the main decisive power within the company. The farmers were manipulated into focusing on either strategic or operational planning and the attitudes, estimated actual choice and their interaction were studied.

The findings revealed that there is a support of the presence of attitude to behaviour gap in fulfilling long-term strategic goals. However the results are inconclusive. One of the findings reveals that even the overall attitude is more positive for facilitating the operational goals than facilitating the strategic goal.

This paper brings valuable insights into the problem of attitude to behaviour gap for sustainable business behaviour and, with the discussed improvements, it lays out a sound base for further research of this important topic.

## **Keywords**

Construal level theory, attitude to behaviour gap, strategic management, operational management, personal decision-making, business decision-making, goal structures, business goal structures, business planning, sustainable consumer behaviour, sustainable business behaviour.

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# 1 Introduction

*“Managers must keep their noses to the grindstone while lifting their eyes to the hills – which is quite an acrobatic feat.”*

(Drucker, 2011, p. 54)

The dominating paradigm of continuous economic and quantitative growth of human production and consumption has been challenged with its environmental and social consequences since at least the 1970s (Hardjono & De Klein, 2004; Kotler, 2011). The United Nation’s World Commission on Environment and Development translated the recognition of these consequences into a definition of sustainable development of the world’s contemporary production and consumption (World Commission on Environment and Development, 1987). It calls for the realization that the individualistic pattern of the behaviour in modern western society neglects the need to think about its consequences on the society and environment as a whole. Sustainable development as the common goal for humanity expects the current generation to not only consider consequences of their behaviour for themselves, but as well recognise the consequences of their behaviour on others in future (Gupta & Ogden, 2009; Mebratu, 1998; van Dam & Fischer, 2013; van Trijp & Fischer, 2010; World Commission on Environment and Development, 1987).

Since establishing this definition, sustainable development has been gaining increasing attention from various market players (Mebratu, 1998). National and global policy makers increasingly address sustainable development principles (Hardjono & De Klein, 2004; Mebratu, 1998). Various non-profit and non-governmental institutions are increasingly spreading the knowledge to the public (Mebratu, 1998). The end consumers are increasingly claiming interests in socially and environmentally responsible goods and services (Kotler, 2011; Mebratu, 1998). The private sector is responding as well. More and more business executives claim that sustainability issues are of increasing importance for their companies (Bonini, Görner, & Jones, 2010; Hopkins et al., 2009; McKinsey&Company, 2014). There is,

indeed, an increasing implementation of green marketing strategies (KPMG 2013; Olsen, Slotegraaf, and Chandukala 2014).

Yet incongruence between what is being claimed about sustainable behaviour and the actual performance of such behaviour has been observed in scientific as well as corporate research. The actual change in production and consumption is rather hesitant (Bonini et al., 2010; Gupta & Ogden, 2009; Hopkins et al., 2009; Hussain, 2000; McKinsey&Company, 2014; van Dam & Apeldoorn, 1996; van Dam & Fischer, 2013; Wagner, Lutz, & Weitz, 2009). This paradoxical phenomenon has been vastly studied in the behaviour of individual consumers and defined as so called attitude to behaviour gap (see for example van Trijp & Fischer, 2010). It has shown that there is an increasing number of consumers, who have a positive attitude towards sustainable behaviour and who claim it as important. But at the same time this attitude is not shown in the actual consumption behaviour (Gupta & Ogden, 2009; Hussain, 2000; van Dam & Apeldoorn, 1996; van Dam & Fischer, 2013).

There are indications that the attitude to behaviour gap exists not only in consumer behaviour but also in company behaviour. Positive attitude towards sustainable behaviour is evident in strategic statements of companies and similarly, as for individual consumers, there is a lack of clear evidence of fulfilling these strategies in the operations of the companies (Bonini et al., 2010; Hopkins et al., 2009; McKinsey&Company, 2014; Wagner et al., 2009). Consequences of the attitude to behaviour gap in company behaviour are already visible. Consumers react with scepticism to increased numbers of sustainable brands contradicting to increased number of revealed irresponsible company behaviour (Wagner et al., 2009). They are often questioning whether the company truly intends to help the global problems or rather to make more profit on the current sustainable trend (Alcañiz, Cáceres, & Pérez, 2010). Such reaction may severely affect the demand for sustainable products. Besides that, another reason to focus research on companies rather than on consumers is that research on consumer behaviour indicates that consumers are likely to be biased by the supply choice and the purchase environment into making decisions in favour of the most salient and the most convenient choices (see for

example Ratner et al., 2008). There is a potential in companies' hands to help the sustainable movement if it can lead the way.

The attitude to behaviour gap has been approached by various theories. For example, socio-temporal dilemma theory explains this gap as a cause of a motivational conflict in a situation when benefits to one's behaviour are delayed in time or when one's behaviour is not directly beneficial to oneself but rather to others (Gupta & Ogden, 2009; van Dam & Fischer, 2013). Specifically sustainable behaviour is likely to create a conflict between individual and collective motives (see for example van Trijp and Fischer 2010). For examples of other theories see authors such as Kahneman, (2003), Lutz & Kakkar, (1975), Mann & Ward, (2007) or Wansink (2004). The most recent explanation of the paradoxical phenomenon of attitude to behaviour gap is the Construal Level Theory (CLT), which seems to bring an overarching line of reasoning (see for example van Dam, 2016). It suggests that individuals think differently about their behaviour when it comes closer to actual performance and when it is perceived as distant, such as planned future behaviour. Having either the proximal or the distant mind-set affects the perception of the situation. The constrained perception makes salient only certain motives for the decision that consequently can cause biased choice of the behaviour in the end (Trope & Liberman, 2010).

The dilemma between decisions about close and distal interests of a company seem to be of the same nature. Specifically for sustainable behaviour in companies, the attitude to behaviour gap may be caused by this dilemma in conflicting proximal and distal motives. Similar to individuals, sustainable behaviour for companies is often seen as an investment that is considered beneficial for the long term interests of the company and for the society as a whole, but unnecessarily disturbing the short term interests (Epstein & Roy, 2001; Hardjono & De Klein, 2004; Salzmann, Ionescu-somers, & Steger, 2005; Wagner et al., 2009). Thus this dilemma between close and distal situation and motives may have similar effects on the decisions made in companies.



The aim of the thesis is to bring more understanding into *how the gap between positive attitudes towards sustainability and actual sustainable behaviour in company perspective can be bridged*. It proposes that the knowledge gathered by research of CLT and psychological distance carried on individual consumers can be translated into company perspective and managerial decision-making. By doing so, it can help to understand why the attitude to behaviour gap concerning sustainability exists on the company level in the same way as on an individual level. Consequently, this might lead to new hypotheses about how to help managers with change towards more sustainable operations in their companies.

There are significant similarities between individual decision making and decision making of a company in the bounded rationality reflected in behaviour of both (Cyert & March, 1963; Geels, 2010; Simon, 1984; van Dam, 2016; Wagner et al., 2009; Whittington, 2001; Wind, 1978), hence the translation of the research of individual behaviour into corporate behaviour is suggested. After all, a company is a coalition of individuals joined together to fulfil both shared and individual goals (Cyert & March, 1963; Drucker, 1955). The individuals determine and agree upon a common goal and principles for the whole group and the individual human actions determine the overall functioning of the whole company (Porter, 1996). Furthermore, it is often only an individual on a managerial position who makes the final decision (Drucker, 1955; Mintzberg, 1994).

## 2 Literature review

### 2.1 Perception of reality and its effects on decision making

According to the way in which people perceive the environment around them they draw conclusions about further behaviour. Perception can be direct or indirect. Direct perception is called sensation and it is based on the reception of physical stimuli from the environment by sensory receptors, translation of such stimuli into information in the brain, categorizing it and interpreting it into a certain meaning. According to the meaning, people choose an immediate reaction (Krishna, 2012).

Perception of the reality through sensation is, however, possible only if we directly experience the stimuli. It is impossible to directly experience the future, the past, the places we have not been or the worldview of other people. Yet people are able to predict, evaluate and plan situations in the far future, remember the past or understand someone else's point of view, all of which has never been experienced directly and still serves as a base for decisions about one's behaviour (Liberman & Trope, 2008; Trope & Liberman, 2010). Such indirect perception of reality broadens the subjective environment to which one needs to react by his/her behaviour and enables people to plan future actions. To make decisions about company behaviour, managers have to perceive these abstract realities. Abstract realities can be perceived by construing an abstract image, a mental construal of such reality in the brain (Liberman & Trope, 2008). The construal of the reality is relative to the perceiver's self, here and now; everything beyond direct experience of the self, the here and the now is abstract. Level of abstractness of a mental construal varies with the distance of the perceived reality from the self, the here and the now. The more distant the reality is from the self, the here and the now, the more abstract it becomes for the one perceiving it. The distance from the self, the here and the now is defined as psychological distance and has four dimensions (Liberman & Trope, 2008; Trope & Liberman, 2010; Trope, Liberman, & Wakslak, 2007):

1. Temporal dimension
2. Spatial dimension
3. Social dimension
4. Hypotheticality dimension

Reality close to the self on one or multiple dimensions is perceived in low construal as rather concrete image with specific details describing context dependent properties of the reality usually focusing on secondary features (Trope and Liberman 2003). On the contrary, reality distal from the self on one or multiple dimensions is perceived in high construal as a rather abstract image with simple and structured characteristics, usually describing the core properties of the reality not depending on context (Trope and Liberman 2003). Objects perceived in high construal are superordinate to those perceived in low construal (Trope and Liberman 2003). It is a direct relationship, the lower the level of abstractness of a construal, the more proximal the psychological distance of the object is perceived and vice versa (Gupta and Ogden 2009; Trope et al. 2007; Trope and Liberman 2010). Moreover the four dimensions of psychological distance are interrelated, with increase/decrease in one dimension, the others will increase/decrease as well (Trope and Liberman 2010).

## **2.2 Goals as triggers of myopic perception**

The ability to perceive abstract reality enables people to picture an ideal state of being. The picture of the ideal state of being can be formulated into a goal statement (Austin & Vancouver, 1996; Solomon, Bamossy, Askegaard, & Hogg, 2010) and as such these goals are assumed to influence or even direct human behaviour (Austin & Vancouver, 1996; Belk, 1975; Liberman & Trope, 1998; Solomon et al., 2010). The level of the abstractness of a goal vary along its psychological distance to the decision maker (Liberman & Trope, 1998). The various levels of psychological distance of goals are often represented in hierarchical goal structures where goals are categorized into three levels according to their relative levels of abstractness (Austin & Vancouver, 1996; Pieters, Baumgartner, & Allen, 1995):

1. Super-ordinate goals = “WHY?”
2. Focal goal = “WHAT?”
3. Sub-ordinate goals = “HOW?”

Super-ordinate goals are statements about the desired end states one may have (Gutman, 1982). These goals reflect one’s general values, they are not dependent on context, they tend to be stable over time (Pieters et al., 1995) and they are described in highly abstract and simple terms (Trope & Liberman, 2010; van Dam, 2016). Super-

ordinate goals are therefore likely to be perceived in high construals and distal to the perceiver (Trope & Liberman, 2010), further referred to as distal goals.

Sub-ordinate goals are translations of the super-ordinate goals into the means how to achieve the super-ordinate goals (Gollwitzer & Brandstätter, 1997; Gutman, 1982). These reflect more immediate needs and wants, they are less stable over time (Pieters et al., 1995) and are described in detailed, situational, context-based terms (Trope & Liberman, 2010; van Dam, 2016). Sub-ordinate goals are therefore likely to be perceived in low construals and proximal to the perceiver (Trope & Liberman, 2010), further referred to as proximal goals.

The focal goal is the central goal used as basis for one's decision and it can be either a super-ordinate or a sub-ordinate goal, depending on the situation about which one is deciding (Austin & Vancouver, 1996; Pieters et al., 1995). Predicting behaviour choice therefore might seem straightforward if the focal goal and its psychological distance is known. Further research has shown that getting to know a single focus goal is rather impossible because the majority of decision situations in life there are multiple goals in various psychological distance levels involved (Busemeyer & Townsend, 1989; Pieters et al., 1995), further referred to as proximal and distal goal clusters. Often these distal and proximal goal clusters can be even conflicting with one another (Busemeyer & Townsend, 1989; Izawa, 2014; van Dam, 2016).

### **2.3 Decision-making in situation with conflicting goals**

The dilemma of conflicting distal and proximal goals is assumed to be the core of the attitude to behaviour gap. It seems that the construal level of the decision maker's perception is corresponding with the construal level of the goal in his or her mind (see for example van Dam & Fischer, 2013).

When a distal goal is considered as a focal goal for a decision, it induces the high construal level of perception of the reality and that is likely to further transmit all information needed for making a final decision into high construals as well (Trope & Liberman, 2010). On the other hand, when a proximal goal is considered as a focal goal for a decision, it induces the low construal level of perception of the reality and that is likely to further transmit all information needed for making a final decision into low construals as well (Trope & Liberman, 2010).

One of the basic mechanisms of human judgment about a behaviour is to learn from consequences of the past decisions (Skinner, 1981). A decision is therefore likely to be judged in terms of whether it may facilitate or hinder the focal goal cluster (Fujita, Eyal, Chaiken, Trope, & Liberman, 2008; Trope & Liberman, 2010; Trope et al., 2007; van Dam & van Trijp, 2013).

Preference reversal can be seen with varying construal levels of mind-set. In high construal mind-set the consequences facilitating the distal goal cluster are likely to be perceived as more important than the consequences facilitating the proximal goal cluster. The consequences for proximal goals simply cannot be easily evaluated due to lack of detailed information (Fujita et al., 2008; Liberman & Trope, 1998; van Dam, 2016). And vice versa, in low construal mind-set the consequences facilitating the proximal goal cluster are likely to be perceived as more important than the consequences facilitating the distal goal cluster. The consequences for proximal goals, in this mind-set, overshadow the consequences for the complex distal goals due to focus on the concrete, situational, context-based and narrow categorical (=proximal) goals (Trope & Liberman, 2010; van Dam & van Trijp, 2013).

Therefore there is a tendency to bias decisions favouring consequences facilitating the distal goals rather than consequences facilitating the proximal goals in the high construal mind-set, and on the opposite there is a tendency to favour decisions with consequences that facilitate proximal goals rather than decisions with consequences facilitating distal goals in the low construal mind-set (Fujita et al., 2008; Liberman & Trope, 1998; Trope & Liberman, 2010; van Dam, 2016). When the high construal goals are in conflict with low construal goals behaviour facilitating high construal goals may require a trade-off from the view of proximal goals and therefore it might be suppressed if one focuses on proximal goals and vice versa (Fujita et al., 2008; Trope & Liberman, 2010; van Dam, 2016).

#### **2.4 Bias of a focal goal cluster affecting business decision making**

For successful management, it is essential to balance both long term and short term aims of the business (Drucker, 1955). It is proposed to do so by distinguishing strategic management and operational management as key concepts to manage operation of a company (Johnson, Scholes, & Whittington, 2009; Whittington, 2001). Strategic management focuses on defining the direction of an organization, leading the company in

terms of its long term interest (Johnson et al., 2009; Smith, 2010; Whittington, 2001). Strategic decisions reflect the long-range future and define core goals and objectives as well as the scope of the business activities (Ansoff, 1979; Drucker, 2011; Johnson et al., 2009; Whittington, 2001). Strategic management deals with decisions about activities with long term consequences for the company (Drucker, 1955). Operational management, on the other hand, is concerned with the short term interests of the company. The operational planning includes decisions about the implementations of the general direction of strategy into day to day activities in terms of allocation of resources, processes and people (Johnson et al., 2009). Operational management deals with decisions about activities with immediate consequences.

One of the major tasks of any manager is to see the requirements for both short-range future and long-range future of the company and harmonize or at least balance them in every decision for actions (Drucker, 2011; Johnson et al., 2009; Whittington, 2001). Apart from time, the managerial decisions require an evaluation of the decision's impact on both internal and external environment in which the company operates (Ansoff, 1979; Drucker, 1955; Johnson et al., 2009). Therefore a manager must evaluate the consequences in near and far environments for both immediate and far future and balance them in his or her decision for action. It is likely that ensuring a thriving future for both the company and its stakeholder's immediate investments will have to be made. Yet, ensuring the highest effectiveness without unnecessary investments is crucial for any company to survive. Neither can be sacrificed for the other without endangering functioning of the company (Drucker, 2011; Whittington, 2001).

Perceiving both proximal and distant reality has been demonstrated to be rather problematic (Trope & Liberman, 2010). Managers, like any human beings, are therefore likely to focus separately on either strategic or operational decisions at a time. Consequently, such focus may create a biased perception of the environment and influence their decisions (Ansoff, 1979; Whittington, 2001).

Projecting the above-discussed definition of the strategic and operational goals into the light of the construal level theory offers an assumption that is also within a firm, strategic goals are likely to be represented in high construals and operational goals are likely to be represented in low construals by the managers deciding about the company's behaviour. It is therefore likely that strategic or operational decisions focus may influence

the mind-set of a manager. Under the strategic focus high construal perception is likely to be activated. And contrarily, under the operational focus a low construal perception is likely to be activated in the mind of the decision maker. The specific mind-set caused by fixation on strategic task or operational task may result in different conclusions about the appropriate behavioural response to the situation (Trope & Liberman, 2010; van Dam, 2016).

## **2.5 Conflict within business goals – a case of sustainability**

The dominating paradigm for business goals is to focus on short term profit and sales maximization (proximal goals) with assurance for long term overall growth (distal goals) (Eccles, Ioannou, & Serafeim, 2014; Hardjono & De Klein, 2004; van Dam, 2016; Whittington, 2001). Therefore it is likely that a conflict between the short term and long term interests will occur whenever any investment is considered. Yet, investments are required even to keep the company running without any innovative direction (Drucker, 2011; Whittington, 2001). The conflict between distal and proximal goals is therefore likely to occur even stronger for the implementation of an innovative behaviour, taking the example of sustainable behaviour specifically for the purposes of this paper. A trade-off would be required between the implementation of sustainability into company processes and investing the resources into anyway necessary investments to keep the company running within already established processes (Elliott, 1980). Furthermore, an investment into sustainability comes with an uncertain rate of success. Yet if a company chooses not to proceed with the investment into new behaviour, here sustainability, it risks losing its position on the market if the sustainability implementation becomes the new standard of business behaviour (Elliott, 1980; Chandy & Tellis, 1998; Christensen, 2013). Managerial decision-making therefore requires, to a large extent, managers' ability to perceive the abstract consequences of their decision and the ability to base the judgement on such abstract facts.

Scientific, as well as corporate research, present various models of sustainability implementation into business operations such as Corporate Social Responsibility, Business Case for Sustainability or Corporate Sustainability Framework (Epstein & Roy, 2001; Hardjono & De Klein, 2004; Kotler, 2011; Salzman et al., 2005). These models are focused on translating the environmental and social consequences of behaviour in terms of

already established either proximal or distal goal structures. As such it may have consequences for both levels.

The consequences of sustainability implementation for the company distal goals are presented by scientific literature with at least two aspects: creating added value for stakeholders and a cost saving tactic. Creation of added value for stakeholders is likely to create better comparative advantage and consequently bring the company long term economic growth (Epstein & Roy, 2001; Freeman, 2010; Hardjono & De Klein, 2004; Johnson et al., 2009; Kotler, 2011; Olsen et al., 2014; Salzmann et al., 2005). A cost saving tactic with investments into revision of current processes promises to uncover hidden inefficiencies and unnecessary costs, again consequently enhancing the company's long term economic growth (Epstein & Roy, 2001; Perman, 2003; Salzmann et al., 2005).

Yet these benefit comes with immediate investments that are likely to lead to (at least initially) increased costs and therefore conflicting with the already established proximal goals of the business (see for example van Trijp & Fischer, 2010). Other possible conflicts with already established proximal business goals for sustainability implementation into operations of a company are identified in literature as barriers such as limited accessibility of sustainable products or technologies, high price of sustainable products and technologies, risk of limited demand by end consumers for sustainable products and many more (see for example Hopkins et al., 2009; Kemp, Schot, & Hoogma, 1998).

The number of consequences facilitating distal goals for sustainability implementation will likely cause its high importance during the high construal strategic decision-making. Nevertheless, the number of barriers of sustainability implementation conflicting with the proximal goals will likely cause rejection of sustainability implementation during the low construal operational decision-making focus. Such a bias may bring insight into a possible explanation why sustainability behaviour is likely to be included into strategy of the business yet discarded in decisions about actual operations, showing an attitude to behaviour gap.



### 3 Hypotheses development

The literature reviewed provided the theoretical ground for assessment of the attitude to behaviour gap in the individual decision making process. The phenomenon and its main factors were further compared to the theory of business decision making process. To translate this comparison into measurable insights and fulfil the attempt of this paper to bring more understanding into the gap between positive attitude towards sustainability and actual sustainability implementation in the company perspective, the following hypotheses are built for the present research.

#### 3.1 Effect of a focal goal cluster on the mind-set

The limited ability of human beings to perceive both distal and proximal goals at the same time is likely to cause biased conclusions about behavioural decisions. The focus on either distal or proximal goal cluster induces perception of reality in the same line of abstraction, by either high or low level of construals accordingly to distal or proximal focal goal cluster (Trope & Liberman, 2010; van Dam, 2016).

The psychological effect the fixation on a specific goal cluster has on the mind-set of the decision makers may be an important, yet so far latent factor influencing the actual behaviour of companies. Decisions in companies can be distinguished into two main categories, strategic decisions and operational decisions (Ansoff, 1979; Drucker, 2011; Johnson et al., 2009; Whittington, 2001). It was identified that during strategic decisions the manager is likely to be dealing with distal goal cluster and therefore be induced with a high construal mind-set. On the opposite during operational decisions the manager is likely to be dealing with proximal goal cluster and therefore be induced with a low construal mind-set. It is hypothesized that:

*H1: Managers are likely to perceive in higher construals when focused on strategic goals compared to operational goals.*

### 3.2 Effect of the myopic mind-set on the attitude

The focal goal cluster mediated through shift in perception into a specific construal level, is likely to affect which consequences will be evaluated as important for a decision, and consequently significantly influence the decision. The possible consequences of a decision can be divided into two groups accordingly to the goal structure. First group includes consequences facilitating the distal goals, and second group includes consequences facilitating the proximal goals (Fujita et al., 2008; Trope & Liberman, 2010; Trope et al., 2007; van Dam & van Trijp, 2013). To measure the general attitude, the perceived relevance is used. Perceived relevance is a measurement of self-reflected preferences or general attitudes (Van Ittersum et al., 2007). The perceived relevance thus reflect the core values of the decision maker, which mirrors into the general importance of the measured goals, the general attitude towards the goals (van Dam & van Trijp, 2013; Van Ittersum et al., 2007). By its nature, relevance measurement is prone to switch the focus of respondents on their core values and beliefs and judge the general importance of the questioned items (van Dam & van Trijp, 2013; Van Ittersum et al., 2007). Therefore, this measure is used in the research at hand to detect the attitudes towards the consequences of the decision. The general attitudes should be very similar within a homogeneous population. The hypothesis is defined in the following way:

*H2: Managers are likely to evaluate consequences facilitating distal goals as more relevant than consequences facilitating proximal goals no matter which mind-set has been evoked.*

### 3.3 Effect of the myopic mind-set on the choice of behaviour

To investigate the choice of behaviour, perceived determinance is chosen as the indicator. Perceived determinance indicates the importance in judgment and choice (Van Ittersum et al., 2007). The measures of determinance serves as a priori prediction of actual choice, and therefore is a suitable measure for studies where the actual measure of behaviour would be unfeasible (van Dam & van Trijp, 2013; Van Ittersum et al., 2007). In high construal mind-set consequences facilitating distal goals are likely to be perceived as more determinant than consequences facilitating proximal goals and vice versa for low construal mind-set (Fujita et al., 2008; Trope & Liberman, 2010; Trope et al., 2007; van Dam & van Trijp, 2013). This measure is therefore likely to uncover the choice preference and any preference reversal of the consequences (van Dam & van Trijp, 2013).

The hypothesis is defined as follows:

*H3: Managers in higher construal mind-set are likely to evaluate consequences facilitating distal goals as more determinant than consequences facilitating proximal goals in comparison to managers in lower construal mind-set.*

### 3.4 Spotting the attitude to behaviour gap

The bias caused by a focus on either distal or proximal goal cluster, which are conflicting with one another, seems to explain why sustainability behaviour is likely to be included into strategy of the business yet discarded in decision about actual operations, showing an attitude to behaviour gap. This bias is likely to be demonstrated through a high difference between relevance and determinance rating of a consequence, which do not facilitate the focal goal cluster (van Dam & van Trijp, 2013). Due to the conceptual difference between the relevance and determinance measures discussed above, the effects are likely to be the following.

For consequences facilitating proximal goals, a high relevance rating leads to a high determinance rating indicated by managers in low construal mind-set (Liberman & Trope, 1998; van Dam & van Trijp, 2013). Yet increasing the psychological distance shows a pattern of augmenting the preference of a desirable option, the option with consequences facilitating distal goals, and discounting the preference of feasible option,

the option with consequences facilitating proximal goals (Liberman & Trope, 1998). Therefore the effect should be opposite for managers in high construal mind-set in comparison to managers in low construal mind-set. A high relevance rating of the consequences facilitating the proximal goals does not necessarily lead to their high determinance rating as well, manifesting a conflict between the distal and proximal goals.

For consequences facilitating distal goals, attitude to behaviour gap is shown by a high relevance rating, which does not lead to a high determinance rating indicated by managers in low construal mind-set (Liberman & Trope, 1998; van Dam & van Trijp, 2013). Yet, due to the same principle described in the previous paragraph, a high relevance rating of the consequences facilitating the distal goals leads to their high determinance rating indicated by managers in high construal mind-set.

Translated into the company perspective such relationships would imply that sustainability as a behaviour, supported by a high number of consequences facilitating distal goals (Epstein & Roy, 2001; Freeman, 2010; Hardjono & De Klein, 2004; Johnson et al., 2009; Kotler, 2011; Olsen et al., 2014; Salzmman et al., 2005) will be included, if considered relevant, into company strategic actions while managers are focusing on distal goals within strategic planning.

Yet on the other hand, while managers are focusing on business operations, sustainability is likely to be discarded due its numerous consequences rather hindering the proximal goals (Epstein & Roy, 2001; Freeman, 2010; Hardjono & De Klein, 2004; Johnson et al., 2009; Kotler, 2011; Olsen et al., 2014; Salzmman et al., 2005). Therefore, it is hypothesised that:

*H4a: The correlation between relevance and determinance of consequences facilitating proximal goals is higher for managers in lower construal mind-set than for managers in higher construal mind-set.*

*H4b: The correlation between relevance and determinance of consequences facilitating distal goals is likely to be higher for managers in higher construal mind-set than for managers in lower construal mind-set.*

## **4 Methodology**

### **4.1 Sample**

According to the focus of the present research on translation of individual decision-making research into a company perspective, the research population to be studied was chosen to be owners/managers of agricultural firms in private ownership. Members of such a population are likely to have the main decisive power for all decisions about both strategic and operational activities of the business (Carland, Hoy, Boulton, & Carland, 2007; Drucker, 1955; Sadler-Smith, Hampson, Chaston, & Badger, 2003). Due to this individualistic decisive power they are expected to face the same biases in decision-making with the myopic mind-sets similarly to individual consumers

The sample choice was narrowed down to owners/managers of agricultural firms in private ownership specifically with conventional crop production to control the uniformity of the sample and limit confounding effects as much as possible. 69 owners/managers of agricultural firms in Czech Republic were contacted to participate in the research out of which 19 had to be excluded (4 respondents for missing values, 2 respondents for representing shared owned firms instead of privately owned firm, 9 respondents for representing firms producing organically instead of conventionally and 4 respondents for representing firms with only animal production). The research sample population resulted in 50 respondents valid within the desired population.

### **4.2 Experimental manipulation**

In order to test the hypotheses an experimental research was designed. Participants were randomly assigned to one out of two experimental groups equally distributed within the sample population. One half of the participants were instructed to imagine themselves making a decision with strategic business goals in mind (higher construal mind-set), the other half was instructed to imagine making a decision with operational business goals in mind (lower construal mind-set).

The experimental manipulation was applied to respondents in an initial task description for each task within the research. This description was formulated to include three types of construal manipulation elements:

1. time dimension manipulation (Liberman & Trope, 1998)
2. frame of the question in *Why?* or *How?* form (Fujita, Trope, Liberman, & Levin-Sagi, 2006; Trope & Liberman, 2012)
3. verbal representation of exemplar strategic or operational decision (van Dam, 2016)

These elements of manipulation were constructed on the basis of previous research with the same aim to induce either high or low construal level of perception for individual's decision making for choice of behaviour (Fujita et al., 2006; Liberman & Trope, 1998; Trope & Liberman, 2012).

The manipulation statements can be found in the Appendix B. Respondents evoked with higher construal mind-set were instructed to think about decisions for the next 5 to 10 year and the statement was framed into a *Why?* form, concretely Why would they consider any changes to their company actions. Broad and highly abstract actions represented the exemplar possibilities of a strategic decision. On the contrary, the respondents evoked with lower construal mind-set were instructed to think about decisions for this year and the statement was framed into a *How?* form, concretely How would they change their company actions this year. Concrete and detailed actions represented the exemplar possibilities of an operational decision.

### 4.3 Procedure

Data were collected by using a questionnaire. Knowing that the Internet literacy within the chosen sample is rather low (Sdružení pro internetovou reklamu, 2013), the questionnaire was prepared both in online version and paper-and-pen version. Each respondent was personally contacted for participation in the research via a direct message sent through social media or a phone call. Respondents who agreed with their participation on the research were asked for their preference on participating either electronically or by the researcher's personal visit. As expected, the preference of electronic participation was lower due to limited usage of the Internet within the sample population, 30% of the sample population expressed the preference for an electronic participation. To those an online version of the questionnaire prepared in Qualtrics software was sent. The rest of respondents expressed preference with a personally visit of the researcher and were visited in their facility. The procedure then followed for all participants the same.

Firstly, the participants were familiarized with the purpose of the research, its form and further data usage. After expressing the agreement with participation, a set of questions to ensure the validity of the respondents business within the research sample population was asked. These questions were checking the business ownership, production focus (crop, animal or combined production) and type of agriculture (conventional or organic). Two more questions asking for the age of the participant and a specification of concrete crops produced or animals bred were posed to eventually investigate any confounding effects. The next step was presentation of the experimental manipulation. The initial task description (as described in the previous section) was presented on a new page to the participant accordingly to the randomly assigned experimental group. The participant was instructed to continue with the research after he or she has thought about the task. After the experimental manipulation, the participants were guided through three parts of the study. The sequence of the parts was selected to ensure the highest effect of the manipulation on the measures. The first part consisted of a set of questions designed to check the manipulation effect on the psychological perception of the respondent and was presented as the first part of the study. Five choice items were presented and participants were asked to select one of two options offered for each choice item. The second part contained a reminder of the manipulated focus accordingly to the experimental group and then the participant was presented with twelve choice matrices and asked to choose one of the four consequences of each matrix that they consider the most important for their decision (van Dam & van Trijp, 2013). In the third, and last part of the research, the participants were asked to rate each of the eight consequences included in the research in terms of the importance for the induced decision of each individual consequence on the 7-point differential scale. The experimental manipulation was repeated again in the task description.

## 4.4 Measurements

### 4.4.1.1 *Level of construal*

The level of construal is expected to be the mediator of the experimental manipulation causing the effects on the evaluation of consequences and consequently the final choice of the behaviour (Liberman & Trope, 1998; van Dam, 2016; van Trijp & Fischer, 2010). The level of construal is operationalized according to the literature review into two subgroups: high or low level of construals. To reveal the mediation effect a measurement scale the Levels of personality agency questionnaire (Liberman & Trope, 1998; Vallacher & Wegner, 1989) has been used. The initial questionnaire contains 25 statements about activities followed by two possible interpretations of the each activity. One interpretation reflects a superordinate (why) aspect of the activity; the other reflects a subordinate (how) aspect of the activity. Accordingly to the literature review, the choice for the superordinate interpretations should reflect a high level of construal perception and on the contrary, the choice for the subordinate interpretation should reflect a low level of construal perception (Austin & Vancouver, 1996; Pieters et al., 1995; Trope & Liberman, 2010; van Dam, 2016). A selection of five questions out of the original 25 has been made to prevent a lower response rate caused by extensiveness of the questionnaire (Appendix C). Five questions will provide sufficient evidence for the effect without creating a possible barrier for the participants (Kumar, 2014).

### 4.4.1.2 *Perceived relevance of consequences*

Accordingly to the literature review, consequences are subdivided into two subgroups: the consequences facilitating distal goals and consequences facilitating proximal goals (Fujita et al., 2008; Trope & Liberman, 2010; Trope et al., 2007; van Dam & van Trijp, 2013). In the present research eight consequences with respect to business goals of the researched sample population were selected on recommendation of Dr. ir. Frans Verhees, an expert in the field of small and medium enterprises (personal communication, May 17, 2016). The selected list was further compared and amended with literature identifying possible benefits and barriers for sustainability implementation into a business (Bonini et al., 2010; Epstein & Roy, 2001; Hardjono & De Klein, 2004; Hopkins et al., 2009; Kotler, 2011; Olsen et al., 2014; Perman, 2003; Salzman et al., 2005). The list was further discussed with three representatives of the sample population before the data collection, to check the validity with the real sample and final list was corrected



accordingly. Out of the 8 selected consequences four represent consequences facilitating distal goals and four are those facilitating proximal goals that can be linked with implementation of a pro-sustainable behaviour to company operations.

The consequences facilitating distal goals, further referred as distal consequences are:

- to increase biodiversity on fields
- to lower the impacts of production on the environment
- to reach new customers
- to increase future profit

The selected consequences facilitating proximal goals, further referred as proximal consequences are:

- to sustain current cash flow
- to keep the current quantity and quality of your production
- to fulfil all necessary requirements for obtaining subsidies
- to keep the efficiency of current production

The perceived relevance of the consequences is measured by a direct rating method (van Dam & van Trijp, 2013; Van Ittersum et al., 2007). This method has been used in previous research with a corresponding aim (see for example Fujita et al., 2008; Liberman & Trope, 1998; van Dam & van Trijp, 2013). The indication of importance on a 7-point semantic differential scale varying from absolutely unimportant represented by 1 to highly important represented by 7 (Dawes, 2008) was asked to be filled by every participant for each of the eight selected consequences (Appendix E).

#### **4.4.1.3 Perceived determinance of consequences**

The perceived determinance of the same consequences as defined for the relevance is measured in terms of their relevance for decision by a force choice method inspired by its usage in the study by van Dam & van Trijp (2013) for the same purpose. Twelve two by two matrices were constructed with each consequence repeating six times with a unique combination of the four items in each matrix (Appendix D). This construction allows for equal probability of each consequence to be chosen. In each matrix at least one distal consequence or at least one proximal consequence is included to ensure a choice of either

one or the other. This method of determinance measurement is an application of a zero-sum principle that allows for investigation of trade-offs between individual consequences that the participants have to make in order to decide for a behavioural alternative (van Dam & van Trijp, 2013; Van Ittersum et al., 2007). The determinance of each consequence therefore ranges from 0 to 6 with 0 representing that consequence has never been chosen and 6 as chosen in all cases of occurrence (van Dam & van Trijp, 2013).

#### **4.5 Data analysis**

The statistical analysis of data was carried out with the use of IBM SPSS software. Firstly, the differences between respondents' level of perception are tested by an independent t-test. Secondly, the relevance scores are tested by a mixed design repeated measure ANOVA, testing the within subject effect across distal and proximal consequences, and between subject effect of the manipulation. Thirdly, the determinance scores are tested the same way as the relevance scores testing described above. And lastly, to uncover an attitude to behaviour gap in managerial decision making, the differences between correlation coefficients are tested for aggregated distal and proximal consequences by a Fisher's z-test (Lowry, 2017; van Dam & van Trijp, 2013).

## 5 Results

### 5.1 Data description

The final data used for the analysis include 50 respondents with fully valid data sets (for more details about the sample, please see Section 3.1). The respondents were randomly distributed into the two experimental groups, which resulted in 26 respondents evoked with higher construal mind-set through the focus on strategic decision and 24 respondents evoked with lower construal mind-set through the focus on operational decision.

### 5.2 Effect of the manipulation on construal level perception

Each questioned activity was assigned per participant with a score 1 when the high level construal interpretation was chosen or a score 0 when the low level construal interpretation was chosen. Scores per participant were summed, which resulted in total score ranging from 0 (meaning that a participant chose the low construal interpretation for all 5 questioned activities) to 5 (meaning that a participant chose the high construal interpretation for all 5 questioned activities). As it was hypothesized, the total score was higher for participants under the high construal manipulation ( $M=3.42$ ) than for participants under the low construal manipulation ( $M=2.79$ ). The total scores are normally distributed, the Independent T-test is applied for testing the statistical significance of the difference between the two manipulation groups. This difference is not significant with  $t(48)=-1.817$  for two-sided  $p=0.075$ . The non-significance of the difference might be attributed to the small sample size, which is supported by the fact that the one-sided p-value is significant for  $p=0.04$ .

The mean values for each construal level detecting questions per experimental condition were further investigated and are presented in Table 1. Only one item, the activity of “Making a list”, indicates the preferred direction of the difference, other activities do not show signs of the manipulation.

This result indicates the rejection of the Hypothesis 1, that managers are likely to construct reality in higher construals when focused on strategic goals compared to operational goals.

**Table 1: Mean values for the level of construal perception**

Researched activity	M <sub>Low construal</sub>	M <sub>High construal</sub>
Greeting	.33	.35
Making a list	.50	.73
Reading	.83	1
Locking a door	.71	.92
Going by car	.42	.42

*Note.* Scores are ranging from 0 (Low construal answer) to 1 (High construal answer)

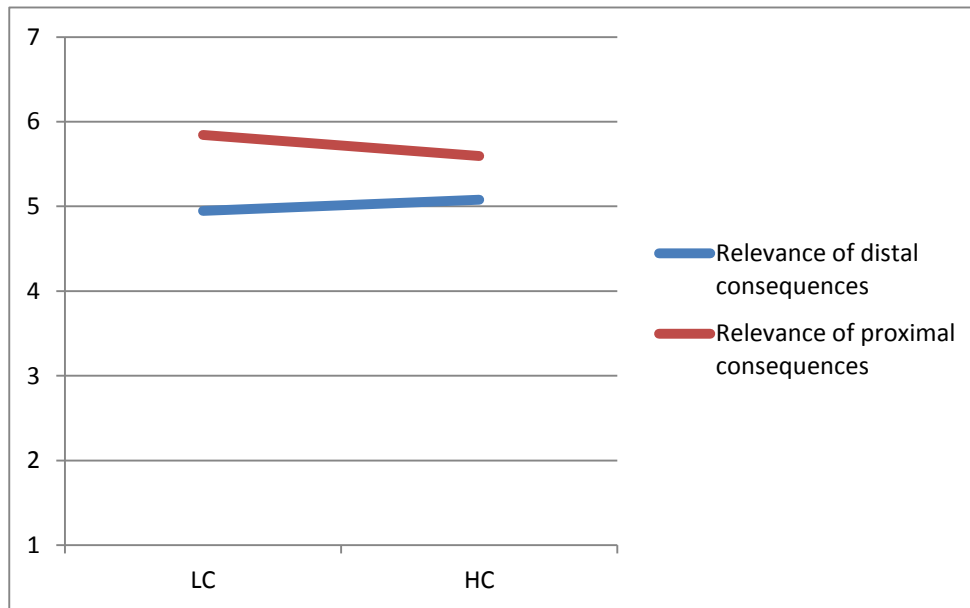
The manipulation was repeated for each measure throughout the research, therefore the analysis of the following hypotheses will further test the effects of the manipulation.

### **5.3 Effect of the manipulation on relevance of consequences**

Average relevance scores for the distal as well as proximal consequences were summed per participant, and further reported as the levels of the type of consequences. A mixed design repeated measure factorial ANOVA is used to test the within-subject effect of the two types of consequence groups and the between-subject effect of the experimental manipulation. As hypothesized, neither the effect of the experimental manipulation nor the interaction effect was found as significant. And also as expected, a significant effect of the type of consequences on the relevance scores was found as significant with  $F(1,48)=16.408, p=.000$ .

The estimated marginal means, illustrated in Figure 1, were further analysed to assess the nature of the effect. It revealed that the direction of the effect is the opposite than expected with a lower average score for distal consequences ( $M=5.391$ ) than the average score for the proximal consequences ( $M=5.720$ ). This result supports the main effect described by the Hypothesis 2 (H2) that managers no matter what mind-set was evoked, are likely to evaluate the same type of consequences as more relevant. It was expected that consequences facilitating distal goals will be evaluated as more relevant than consequences facilitating proximal goals. Yet results have shown the exact opposite, proximal consequences were evaluated as more relevant for both experimental groups than the distal consequences.

Figure 1: Estimated marginal means of Relevance



#### 5.4 Effect of the manipulation on determinance of consequences

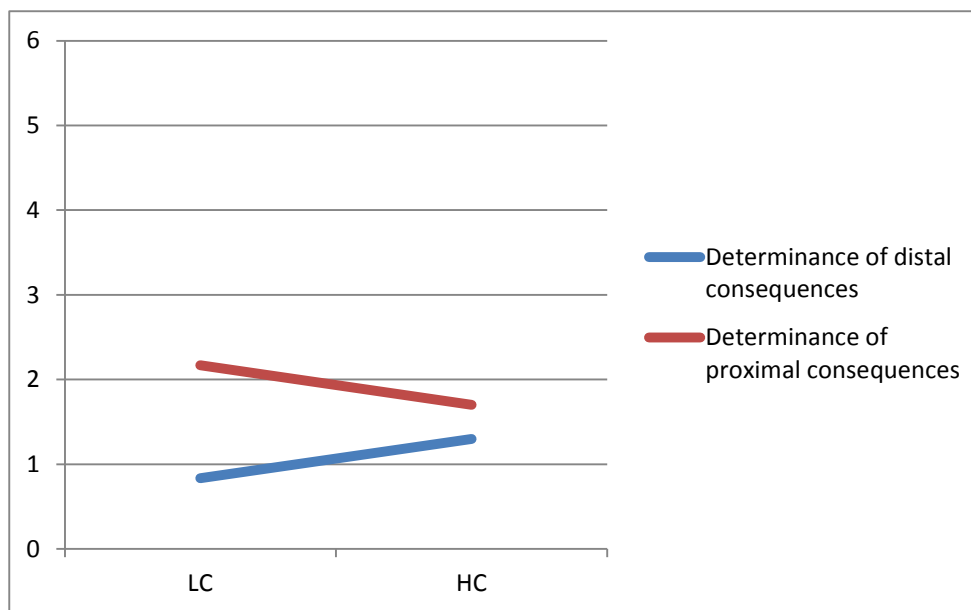
Similarly to relevance scores, the average determinance scores for each type of the consequences were summed per participant. A mixed design repeated measure factorial ANOVA is used to test the within-subject effect of the two types of consequences and the between-subject effect of the two experimental groups. As expected, the main effect of the type of consequences on the determinance scores was significant ( $F(1,48)=20.697$ ,  $p=.000$ ).

Also, the interaction effect between the type of consequences and the experimental manipulation was found significant ( $F(1,48)=5.925$ ,  $p=.019$ ).

The estimated marginal means, illustrated in Figure 2, reveals that for experimental group evoked with lower construal mind-set, the nature of the interaction effect is as expected, with proximal consequences scoring significantly higher on determinance ( $M=2.167$ , 95%CI [1.890, 2.443]) than distal consequences ( $M=.833$ , 95% CI [.557,1.110]). For the experimental group evoked with higher construal mind-set, there is almost no difference between the two types of consequences with the tendency to go in the opposite direction than expected with proximal consequences scoring higher on determinance ( $M=1.702$ , 95%CI [1.436, 1.968]) than distal consequences ( $M=1.298$ , 95% CI [1.032,1.564]).

The significant interaction effect supports hypothesis 3 in the expectation that there is a significant difference between the determinance evaluation of each type of consequences under the specific manipulations. The expectation, that managers evoked with higher construal mind-set evaluate distal consequences as more determinance than proximal consequences, is not met. But the contrary expectation, that the managers evoked with lower construal mind-set evaluate proximal consequences as more determinant than distal consequences, is accepted.

Figure 2: Estimated marginal means of Determinance



### 5.5 Indication of the attitude to behaviour gap

The correlations of the relevance and determinance across distal consequences and across proximal consequences are presented in Table 2. The between group comparison of the correlations was studied by the Fischer's z test (Lowry, 2017; van Dam & van Trijp, 2013).

There is almost no difference ( $z'=-0.27$ ,  $p=0.79$ ) in the correlations between relevance and determinance for proximal consequences measured within managers, who were evoked with higher construal mind-set ( $r=.482$ ) and within managers with lower construal mind-set ( $r=.418$ ). Hypothesis 4a is rejected.

The correlations between relevance and determinance for distal consequences measured within managers, who were evoked with higher construal mind-set ( $r=.624$ ) is

higher, but not significantly higher ( $z'=-0.99$ ,  $p=0.32$ ) than within managers with lower construal mind-set ( $r=.408$ ). Hypothesis 4b is supported but cannot be accepted due to an insignificant statistical result.

**Table 2: Correlations between determinance and relevance across consequences**

Consequence	$R_{\text{Low Construal}}$	$R_{\text{High Construal}}$	$z'$	$p$
4 distal consequences	.408**	.624**	-0.99	0.32
4 proximal consequences	.418**	.482**	-0.27	0.79

\*\*  $p < .01$

## 6 Discussion and conclusion

In noticing the phenomenon of sustainability being applied merely in strategic plans but not implemented in the core operations of a business, this paper sets its goal on investigating *how this gap between positive attitudes towards sustainability and actual sustainable behaviour in a company perspective can be bridged* by using the knowledge gathered by research of construal level theory and applying this theory with appropriate modifications into company perspective and managerial decision-making.

Based on the literature review it was identified that the cause of the attitude to behaviour gap in business is a conflict between strategic and operational goal clusters. It was hypothesised that with a focus on one or the other, the manager's are biased into perceiving different levels of construal and therefore prefer either short term (proximal) or long term (distal) consequences of his or her decision. The effect of such bias is that managers choose different decisions with either strategic or operational goals in mind. The results of the research at hand are summarized in Table 3.

In this chapter, the manipulation effects are discussed followed by discussion of the findings of overall attitude, estimated choice of behaviour as well as the presence of the attitude to behaviour gap. Next, limitations with suggestions for improvement and further research are elaborated. Lastly, the findings of the research at hand are concluded.



**Table 3: Summary of results**

	Expected effects	Results	Conclusion
H1:	Difference between groups: <ul style="list-style-type: none"> <li>• Strategy focus → higher construal perception</li> <li>• Operational focus → lower construal perception</li> </ul>	No	Not supported
H2:	No difference between groups: <ul style="list-style-type: none"> <li>• Distal consequences more relevant than proximal consequences</li> </ul>	Yes No - opposite	Partially supported
H3:	Difference between groups: <ul style="list-style-type: none"> <li>• Strategic focus → distal consequences more determinant than proximal consequences</li> <li>• Operational focus → proximal consequences more determinant than distal consequences</li> </ul>	Yes No - opposite Yes	Partially supported
H4a:	Difference between groups: <ul style="list-style-type: none"> <li>• Distal consequences → Determinance and relevance scores correlate more in strategic focus than in operational focus</li> </ul>	No Yes	Partially supported
H4b:	Difference between groups: <ul style="list-style-type: none"> <li>• Proximal consequences → Determinance and relevance scores correlate more in operational focus than in strategic focus</li> </ul>	No No	Not supported

The first point to discussion is the effect of manipulation. The present study was not successful in uncovering the expected shift in the levels of construal perception of the managers with focus on either strategic or operational goals. There are two possible reasons, either the manipulation did not work sufficiently or the measurement of the construal perception was incorrect. The later appears to be true, as the results of actual choice preferences measured through the determinance force-choice measure revealed a significant difference between the two experimental groups. The measurement used was designed to investigate the individuals' level of construal perception (Fujita et al., 2008; Liberman & Trope, 1998; Vallacher & Wegner, 1989). The main assumption of this paper was that managers of privately owned businesses are subject to the same psychological process while deciding about their business behaviour. Despite that, it became obvious that for a proper use within the business perspective, the existing measurement will have to be modified to better suit the situations of a managerial decision making.

An important question before evaluating the preference reversal and the overall attitude to behaviour gap was to see whether all participating managers considered the researched consequences as relevant in the same manner. As expected, the results support that both groups found the same consequences as relevant, however, it was revealed that the proximal goals are considered as more relevant than the distal consequences.

Further informal discussions with respondents after finishing the official questionnaire supported by further literature research, reveals that the Czech farmers with conventional crop production feel that biodiversity and pro-environmental behaviour is sufficiently fulfilled by following the requirements for obtaining the subsidies within the Common Agricultural Policy set by the European Union (European Commission, 2016; Ústav zemědělské ekonomiky a informací, 2015).

Another reason why the distal consequences may not even be relevant for the approached farmers is that 80% of agricultural land in the Czech Republic is rented, not owned (Voltr, 2015). The rental agreement tends to be only for about 5 years (Ústav zemědělské ekonomiky a informací, 2015). This has shown to be especially uncertain for the farmers around the city of Prague, who formed the majority of the sample population. The price of land around Prague is rising due to the developers' willingness to pay more than what agricultural production can offer (Farmy.cz, 2017).

Furthermore, reaching new customers seemed to be of the least importance of all research consequences. The farmers claim, and it is evident from literature sources as well, that there are not many options to select a buyer for crops. There is only a rather limited number of buyers with strong position on the market (Materna & Očenášek, 2016).

And lastly, the nature of the income in agricultural production is rather uncertain. An increase in cash flow and therefore a possibility to invest is tied to a good yield, which cannot be fully controlled by the farmer due to external environmental factors.

Overall, it is essential for the research at hand to recognise that even though the attitude towards the distal consequences of a decision is less positive than the attitude towards the proximal consequences of a decision, they both are highly positive. The distal consequences were on average indicated as rather important.

To estimate the choice of a decision the determinance measure was used (van Dam & van Trijp, 2013; Van Ittersum et al., 2007). The present study reveals that the determinance rating of the two types of consequence do significantly differ depending on the experimental manipulation of the focal goal cluster. Even though for both groups the proximal consequences are more determinant than the distal consequences, they are significantly less determinant in high construal than in low construal, indicating a preference reversal. And the opposite is found for the determinance of distal consequences, these are significantly more determinant in high construal than in low construal manipulation. Again this result indicates a preference reversal for distal consequences.

The research therefore shows that with lowering psychological distance, the proximal consequences of a decision increase in importance. Contrarily, the distal consequences of a decision decrease on the importance. This indicates that due to the focus of strategic or operational planning, which shifts the perception of the decision maker into different levels of construal perception, sustainability is rather implied into strategy and not operations. It has to be noted, that according to the present research, the proximal consequences would still be the determinant in all cases from the reasons discussed above, meaning that decisions facilitating the operational, short term goals would always be preferred before decisions facilitating the strategic, long term goals.

And lastly, to uncover if there is an indication of an attitude to behaviour gap within the studied population, the correlation coefficients served as the indicator. The results show that there is no attitude to behaviour gap concerning the proximal consequences. For both experimental groups it applies that the higher relevance of the consequences, the higher is their determinance also, with almost identical strengths of the relationship for both experimental groups. The positive attitude towards decision facilitating the proximal, short term goals indicates a likelihood of such a decision to be the choice for actual behaviour. This results is not surprising knowing the previously discussed results of relevance and determinance ratings.

Yet, the results suggest an attitude to behaviour gap for distal consequences. Comparing the two experimental conditions, the result shows that for the respondents focusing on the business strategy, the higher the relevance of the distal consequences, the higher their determinance. Yet for the respondents focusing on the business operations, the higher relevance of distal consequences does not necessarily lead to their higher determinance. This indicates that the positive attitude towards decision facilitating the distal, long term goals does not indicate the likelihood of such decision to be choice for actual behaviour.

However, this result must be interpreted consciously as the differences between the differences of relationships between the two experimental manipulations are not statistically significant. It is likely caused by a lack of power given the small sample size (Field, 2013).

The inconclusiveness of results brings the attention to the limitations of the research at hand. The use of a questionnaire as the research instrument method may lead to a higher level of construal perception per se, as it reflects only a hypothetical situation, not a real decision making situation. This limitation was recognized and eliminated by the use of the determinance measure, which should be sufficiently immune to the shift in perception and adequately reflect the actual behavioural choice even when research by a questionnaire method (van Dam & van Trijp, 2013).

Other limitations of the research come from a small simple. The sample size was set according to the recommended minimum for experimental research (O'Leary, 2004), with inspiration of research with similar methods and aims (Lieberman & Trope, 1998) as well as with consideration of the low end of the recommended size for the analyses (Field, 2013). The number of participants resulted in the minimum of 25 per experimental group,

50 participants in total. The chosen sample population is rather demanding to conduct a questionnaire research with. Majority of farmers were not in favour of online participation and gathering the contact information was rather difficult. There is a publicly available database of Czech farmers (Ministerstvo zemědělství ČR, 2016), but the contact details are not available to the public. Driving to each farm and meeting with the farmers individually was time and money intensive and was the main limiting factor on the final sample size.

The limitations due to the choice of sample population are discussed next. The sample population was chosen according to the extent of the impact of implementation of sustainability into actual business operations on the improvement of sustainability in general. Agriculture is one of the main sectors, which directly influence overall sustainability development. A direct change of core agricultural operations has a huge impact on overall sustainability (Ústav zemědělské ekonomiky a informací, 2015; World Commission on Environment and Development, 1987). To ensure the uniformity of the sample population and therefore elimination of effects of non measured variables, the sample population was narrowed down to only cover the conventional crop farmers. The reason for choice of conventional farmers was that in comparison to the organic farmers the conventional farmers lack the studied implementation of the sustainability principles into core business operations. However, the results revealed that the division of their business planning into strategic and operational is rather difficult. Therefore, better definitions of both psychologically proximal and distal decision situations would be helpful to get conclusive results. A possibility to correct for this fact would be to conduct the data collection after the yield, when farmers are actually able to make decisions about possible larger investments, even though further research would be necessary to reveal all possible factors playing a role in investing within agricultural sector. Another option, and likely a more feasible option for research of the current type, would be to choose a sample population from secondary or tertiary sectors of production as for firms in those sectors the viability of business operations are less influenced by environmental factors in comparison to the primary sector businesses. Therefore the distal future planning is much more in the hands of the management and the implementation of sustainability into actual business may be more feasible. In the Czech Republic specifically, choosing businesses within secondary or especially tertiary sectors of production may allow for a bigger sample as the managers are also more likely to be willing to participate online (Sdružení pro internetovou reklamu, 2013).

The results and follow-up discussion suggests a need for a better measurement of the level of construal perception for the use within the business perspective. A redefinition of the existing Personality Agency Questionnaire (Liberman & Trope, 1998; Vallacher & Wegner, 1989) should be modified in a way that it suits better the business orientation of the research. Furthermore, it has been observed that a verbal measurement used in this research may be leading to a biased choice between the high and low construal options. It was observed that there was a tendency to choose the more desirable, the more intelligent-sounding option, which seems to be the high construal option. Development of a non-verbal measure of a pictorial depiction of a situation with two hidden options representing high and low construals could provide a possibility to prevent this effect. Further research is needed also to a proper identification of psychological distant and proximal decision situation accordingly to the researched business industry.

One point of the discussion worth pointing out is the findings about the influence of the subsidy requirements on the perception of sustainability of the farmers. Further discussion about the possibilities of policy makers on shaping agriculture towards sustainability would be a topic for a separate paper and therefore it will not be included. The present paper only shows support for the potential power of policy makers in speeding up sustainable development.

To conclude, the research suggests that the attitude to behaviour gap with regard to fulfilling the business long term goals, is present even in the business perspective. Such a finding brings a warning to managers that there is a risk of not having the strategy and actual operations in alignment. The assumption of the psychological effect of variation of the level of construals on further decision making was not proved, but all the findings are indicating a support of this assumption. The contribution of business into sustainable development is undebatable. It is necessary to fill in the gaps in theoretical research of the understanding of the attitude to behaviour gap concerning sustainable behaviour from a business perspective. The research at hand is one of the first trials in doing that by translation of the extensive research of the same phenomenon in the individual behaviour perspective. The findings bring important insights into the possibilities of implication of the knowledge within construal level theory into the business sphere and, with the discussed improvements, it lays out a sound base for further research of this important topic.

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## 9 Appendix

### A: Questionnaire – consent form + screening questions

Dear participant,

Thank you for finding time to participate in my Master thesis research. The aim of this research is to interconnect theories about managerial decision making with theories about decision making of individuals. We aim to do that through finding out what is according to your personal opinion important while deciding about your company actions. The outcome of the project is the comparison of the theory and the reality with focus on the fact that managers are simply human beings, as the business theories often forget.

The questionnaire will take you no more than **10 minutes**.

Your answers are anonymous and the collected **data will be used ONLY for academic purposes** of my thesis written within the department of Social sciences at the Wageningen University in the Netherlands. Your participation is voluntary and greatly appreciated. You can withdraw at any time without providing a reason.

The research consists of three main sections. There are **no right or wrong answers**; we are only interested in your personal managerial opinion.

Firstly, please fill in the following questions about the characteristics of your business:

1. What is your production focus?
  - a. Crop production
  - b. Animal production
  - c. Combined production
  
2. What form has your business?
  - a. Private ownership
  - b. Cooperative
  - c. Shared ownership
  - d. Other: \_\_\_\_\_

3. What agriculture do to do?

- a. Conventional
- b. Organic

4. What is your age?

- a. \_\_\_\_\_

5. What do you produce? \*

- Cereals
- Roots
- Legumes
- Oilseeds
- Fruits
- Vegetables
- Other: \_\_\_\_\_

6. What do you produce? \*\*

- Caw
- Poultry
- Pig
- Sheep
- Goat
- Other: \_\_\_\_\_

*Note.*

\* question displayed for those who selected crop or combined production focus

\*\* question displayed for those who selected animal production focus



## **B: Experimental manipulation**

### **Manipulation to evoke high construal perception through focus on strategic planning (HIGH CONSTRUAL MANIPULATION):**

In this research we are interested in what is important for you when you make decision about your company actions. Please think for a moment why would you consider any strategic changes in your company actions in the next 5-10 years?

Business strategy is concerned with, for example, the general direction your company will be heading in the future, new trends in consumer demand, etc.

### **Manipulation to evoke low construal perception through focus on operational planning (LOW CONSTRUAL MANIPULATION):**

In this research we are interested in what is important for you when you make decision about your company actions. Please think in a moment about how would you like to change your business operation during this year?

Business operations can be for example day-to-day actions, ordering or repairing the machines you need for your production, etc.

## C: Questionnaire – 1<sup>st</sup> part: the manipulation check

In the following five questions please select always one of the two options, which in your opinion describes better the activity (written in bold). There is no right or wrong answer, it is only according to your opinion.

### 1) **Greeting**

- a. Showing friendliness \*
- b. Saying hello \*\*

### 2) **Making a list**

- a. Getting organized \*
- b. Writing things down \*\*

### 3) **Reading**

- a. Gaining knowledge \*
- b. Following lines of print \*\*

### 4) **Locking a door**

- a. Securing the house \*
- b. Putting key in the lock \*\*

### 5) **Traveling by car**

- a. Following a map \*\*
- b. Delivering products to a client \*

*Note.*

\* High construal answer

\*\* Low construal answer

**D: Questionnaire – 2<sup>nd</sup> part: determinance measurement**

**The instruction displayed to participants manipulated to focus on strategic goals:**

In the next 12 questions please select always **one of the aspects**, which is according to you the most important in comparison to the other three aspects for deciding about the strategic steps of your business **within the next 5-10 years?**

*(Strategic steps are concerned with, for example, the general direction your company will be heading in the future, new trends in consumer demand, etc.)*

**The instruction displayed to participants manipulated to focus on operational goals:**

In the next 12 quartets please select always **one of the aspects**, which is according to you the most important in comparison to the other three aspects for deciding about the operational steps of your business **in this year?**

*(Operational steps can be for example day-to-day actions, ordering or repairing the machines you need for your production, etc.)*

to increase biodiversity on fields *	to keep the current quantity and quality of production
to sustain current cash flow	to lower the impacts of production on the environment

to keep the current quantity and quality of production	to fulfil all necessary requirements for obtaining subsidies
to lower the impacts of production on the environment	to increase biodiversity on fields *

to increase biodiversity on fields *	to keep the efficiency of current production
to reach new customers	to keep the current quantity and quality of production

to keep the current quantity and quality of production	to sustain current cash flow
to increase future profit	to reach new customers

to sustain current cash flow	to increase future profit
to keep the efficiency of current production	to lower the impacts of production on the environment

to reach new customers	to keep the efficiency of current production
to sustain current cash flow	to fulfil all necessary requirements for obtaining subsidies

to increase future profit	to fulfil all necessary requirements for obtaining subsidies
to increase biodiversity on fields *	to sustain current cash flow

to fulfil all necessary requirements for obtaining subsidies	to keep the current quantity and quality of production
to keep the efficiency of current production	to increase future profit

to lower the impacts of production on the environment	to reach new customers
to keep the efficiency of current production	to increase biodiversity on fields *

to lower the impacts of production on the environment	to keep the efficiency of current production
to increase future profit	to keep the current quantity and quality of production

to fulfil all necessary requirements for obtaining subsidies	to increase future profit
to reach new customers	to increase biodiversity on fields *

to fulfil all necessary requirements for obtaining subsidies	to lower the impacts of production on the environment
to reach new customers	to sustain current cash flow

*Note.*

\* this option was displayed for those who selected crop or combined production focus, for respondents who selected animal production as they focus, the option displayed was “to increase welfare of animals”

## E: Questionnaire – 3<sup>rd</sup> part: relevance measurement

### The instruction displayed to participants manipulated to focus on strategic goals:

In the following table you can see all the researched aspects and at this point the question is how much you consider these aspects as important (if only) for your decisions about the strategic steps of your business **within the next 5-10 years?** Please indicate the importance of the individual aspects on a scale from absolutely unimportant (1) to highly important (7).

### The instruction displayed to participants manipulated to focus on operational goals:

In the following table you can see all the researched aspects and at this point the question is how much you consider these aspects as important (if only) for your decisions about the operational steps of your business **of this year?** Please indicate the importance of the individual aspects on a scale from absolutely unimportant (1) to highly important (7).

	absolutely unimportant	unimportant	less than average	average	more than average	important	highly important
to increase biodiversity on your fields *	1	2	3	4	5	6	7
to sustain your current cash flow	1	2	3	4	5	6	7
to keep the current quantity and quality of your production	1	2	3	4	5	6	7
to lower the impact of your production on the environment	1	2	3	4	5	6	7
to reach new customers	1	2	3	4	5	6	7
to keep the efficiency of your current production	1	2	3	4	5	6	7
to fulfill all necessary requirements for	1	2	3	4	5	6	7

<b>obtaining subsidies</b>							
<b>to increase future profit</b>	1	2	3	4	5	6	7
<b>to increase welfare of animals</b> **							

*Note.*

\* option displayed for those who selected crop or combined production focus

\*\* option displayed for those who selected animal production focus