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Declaration

I, Irene Tollefsen, declare that this thesis is a result of my own research investigations and findings. Sources of information other than my own have been acknowledged and a reference list has been appended. This work has not been previously submitted to any other university for award of any type of academic degree.

Signature

Date.....

Abstract

To mitigate a climate that is changing in a potentially catastrophic direction due to human influences, we need to develop sound environmental policies that abate these influences. And the changes need to come from changes in human behaviour. This paper compares two economic theories of human behaviour; the rational choice theory of neoclassic economics and the institutions-as-rationality-contexts (IRC) of institutional theory. Where rational choice theory views the individual as the correct unit of analysis, with maximization of utility, fixed preferences and perfect information as core assumptions, IRC views the relationship between the individual and the surrounding structures as the core of analysis. The latter theory accepts the presence of intrinsic motivations to be drivers of our behaviour, and looks at how these are developed and influenced. The two theories will be compared by using the case study of waste management in Ulstein where two surveys with the same respondents were conducted during two different waste management systems. Interviews and focus groups interviews have been used to get background information and to go deeper into the results from the surveys.

Results from the surveys indicate that the weight-based system has triggered an increase in sorting levels, though, according to interviews, with varying levels of quality. The system was left due to bad economy and subscribers' use of strategic solutions to get rid of waste in order to save money. According to the survey the current system has maintained the sorting level and the quality has improved. While the presence of warm glow can explain the current sorting level, the rational choice theory does not go into what generates the warm glow. The IRC theory looks into the development of the warm glow and presents a better understanding of the dynamic between individuals and the society they are part of. For the development of future policies it is recommended to properly assess the existing norms and motivations present in the context in which the policy is implemented. It is also recommended that the policy support individuals' need for autonomy, competence and relatedness, which are needs that can be challenged by policies that are perceived as unfair and controlling.

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ACRONYMS

IPCC – International Panel on Climate Change

IRC – Institutions as Rationality Contexts

SSR – Søre Sunnmøre Reinhaldsverk

WBFS – Weight Based Fee System

YFFS – Yearly Fixed Fee System

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1. Introduction

Our current environmental problems of global warming and depletion of natural resources are acknowledged to be manmade (IPCC 2007) and a result of human development ultimately through our daily choices and actions. Environmental policies have adapted accordingly and when addressing how to achieve change in behaviour toward a more sustainable future the “main focus is today on behavioural patterns at the level of individuals” (Berglund and Matti 2006:3). How can individuals be induced to make environmentally friendly choices? What political tools can best encourage environmentally friendly behaviour?

The choice and activity investigated in this thesis is that of sorting waste on the household level in Ulstein municipality. Berglund and Matti (2006) consider choices made in the privacy of the household a bit of “black box” because little research is done in this sphere of society. Sorting of waste has been, in varying degrees, an activity done in Norway for many years. The increased attention of the need for environmental sustainability has induced a stronger focus on reusing resources and therefore also sorting waste at source of use. So what can encourage individuals to sort more? Economic incentives have been used as a policy tool to encourage sorting. The rationale of economic incentives has its origin from neoclassic economics, also considered mainstream economics, and the rational choice theory. Rational choice theory is part of the foundation of many policies. But is the use of economic incentives always the best? There have been scenarios where using an economic incentive have led to the opposite of the intended effect; less compliance to the encouraged behaviour. An attempt at an explanation is that of the “crowding theory”. The “crowding theory” states that individuals have intrinsic motivations to do certain acts and that an external incentive, such as a monetary reward or punishment, can ‘crowd’ out the inner motivation (Frey and Jegen 2001). For rational choice theory the phenomenon of the crowding theory becomes an anomaly because the inner motivation isn’t really assessed. The rational choice theory will therefore be compared to the institutions-as-rationality-contexts theory, a theory that both acknowledges intrinsic motivations and takes a closer look at how they are developed and how they can be affected by economic incentives.

The two theories will be compared through a case study from Ulstein where renovation subscribers experienced two different fee systems that used different policy tools to encourage

sorting of waste. The two systems are: an economic incentive that encourages sorting through a weight-based system where more sorting leads to a lower fee, and a communicative approach where a normative message presents sorting as a collective task where everyone should contribute in order to take care of the environment. These two approaches have been used consecutively in the municipality of Ulstein where the data collection has taken place.

Research questions:

In order to compare the two theories the following research questions have been developed:

1. How can the change from using an economic incentive as policy tool to using a normative communication strategy affect the actual act of sorting?
2. How does the change affect the motivations to sort?
3. How has the relationship between the subscribers and SSR affected the motivation to sort?

This thesis is part of larger project called Environmental Policy and Human Action (ENVACT), and the aim of the project is to provide more empirical evidence on the effects of using economic incentives to promote environmentally friendly behaviour (Vatn 2009).

2. The case study

Søre Sunnmøre Reinhaldsverk is an inter-municipal renovation company that includes the municipalities of Hareid, Herøy, Sande and Ulstein on the western coast of Norway. All together the company delivers services to about 10 000 subscribers. Together with a board of representatives elected from the four municipalities, Søre Sunnmøre Reinhaldsverk manages company operations and policy. The research is done in the municipality of Ulstein.

Up until 2008 each household paid a flat yearly fee and were given plastic bags in which they could dispose of their waste. The flat fee system offered two sorting fractions; paper and the rest, and the bags were collected every week. At the start of each year, every household would receive a specific number of bags and if a household did not use all of them they could be used to dispose of other types of wastes for free. However, there was a problem of animals (birds, rats etc.) digging through the bag when it was taken outside the evening before pickup and scattering the waste. Therefore, in 2008 the company decided to go over to hard plastic waste containers (Interviews and newspaper).

2.1. The weight-based fee system (WBFS)

Together with the transition from plastic bags to bins in 2008, the board of representatives, based on a proposal by the daily management, decided to implement a new system where the fee for waste collection was to be calculated by the number of kilograms of waste a household produced. The payment system was based on a set yearly fee plus a fixed kilogram price multiplied by the weight of the waste. When the system was implemented the set fee was 1040 NOK and the price per kilogram was 1.95 NOK. Plastic was introduced as a new category for the subscribers and the company included a bin for paper and a bag for plastic, which were collected every second week and these were not weighed. In this way it became a clear incentive to sort as much as possible into paper and plastic. The remaining waste was collected every week and the number of kilograms was registered and then presented to the households on their bill. In this way the households had an overview of how much they waste they produced and the cost of it.

It was emphasized that each household could lower their amount of waste and save money by sorting the waste, as paper and plastic were not weighed. In this way the company hoped to encourage more sorting, which is good for the environment, and to become more credible and fair in the eyes of the subscribers. The weight-based system was introduced with a focus of

being fairer for each household because they now had to pay for the actual amount of waste they produced; “More fair for you” (Berset, J. pers. comm.). The ENVACT project conducted a survey among the subscribers of SSR in 2009 and about half of the respondents claimed that the introduction of the weight-based system had made them sort more (Trehjørningen 2010).

2.2. The yearly fixed fee system (YFFS)

In 2011 SSR went back to the system of a fixed yearly fee. The households now have three options;

- Standard fee: 3847.50 NOK for 240 L paper bin and 140 L waste bin collected every other week
- Standard plus fee: 4222.50 NOK for 240 L paper bin and 240 L waste bin collected every other week
- Standard reduced: 3347.50 NOK for 240 L paper bin and 140 L waste bin collected every fourth week

Furthermore they still have the plastic, which is collected in larger plastic bags at the same time as the paper is collected. After collection of the remaining waste SSR transports it to Grautneset in Ålesund where it is burnt and used to generate electricity (SSR).

3. Theory chapter

This thesis will compare two economic theories of behaviour. The first theory is the mainstream economic theory of rational choice and the second is the theory of institutions as rationality contexts. The two theories will be compared in order to see which theory is best suited to explain what motivates human behaviour and to see what policy implications they have.

3.1. Rational choice theory

Rational choice theory is used in mainstream economics, also called neoclassic economics, to predict human behaviour. At the core of this theory is the assumption that individuals act in accordance with what maximizes utility. It is a concept originating from utilitarianism, which states that we are motivated to do what gives us pleasure and avoid actions that incur pain (Perman, Ma et al. 2011). The theory is developed through analysis of market behaviour where we make choices based on what “offers the highest expected net benefit or lowest expected net cost” (Jackson 2005: 29). It views exchange as fundamental for human behaviour. “...,we exchange a variety of different goods (time, gifts, labour, critical appreciation, sexual services and so on) in the expectation that (at least over the long-term) these exchanges will benefit our self-interest” (Jackson, 2005:32). These exchanges are also part of determining a value that reflects the costs of producing the good and the preferences for the good. In this way “the concepts of price and value ceased to be distinct” (Perman, Ma et al. 2011) (PAGE??). This idea of value generation is the foundation for the logic of economic incentives. Determining value through the price of exchange shapes the logic of using economic incentives in social dilemma situations where what is considered to benefit the individual contradicts what benefits the common good. If the price of value is determined through exchange, it is possible to change “the relative costs and benefits of environmentally beneficial behaviour in order to make it profitable for the individual to behave in accordance with the collective interest.” (Thøgersen 1994: 409)

3.1.1. A mathematical theory

In order to evaluate the options of choice, we are considered to have ‘perfect information’ about the costs and benefits of each option, and there is no information cost, as collection of information is not considered. When we make choices we have fixed preferences that are

independent from context; if A is better than B and B is better than C, then A will always be better than C. The theory has an agent-based approach to human behaviour analysis. This is in line with methodological individualism where the individual is viewed as the appropriate unit of analysis and social phenomena are the sum of the individual's actions. The contexts, or institutions, only work as constraints and are not part of forming individual choices except to work as the 'stage' where our choices are made (Vatn 2005). As our preferences are fixed and independent of context, individuals are perceived to be "in an initial institution-free state of nature" (Hodgson 2007: 326). Using the individual in search of utility maximization as the unit of analysis, in combination with fixed preferences and no information costs are the core assumptions of rational choice theory. They have made it possible for the rational choice theory to become a mathematical theory with a utility function. The different factors determining choice are put into an equation and the most likely outcome is calculated. In this way it becomes possible to predict behaviour and also guide behaviour by changing costs and benefits of the different factors in the equation.

3.1.2. Adding a complex factor

The ability of the rational choice theory to predict behaviour in market conditions has been successfully demonstrated through the use of experiments (Ostrom 2000), and economic incentives often prove effective to adjust behaviour. But real life events and research show that individuals do not always act in accordance with the rational choice theory. The theory especially falls short when it comes to the ability to explain other-regarding behaviour. To accord for this Andreoni explains the existence of other-regarding behaviour by introducing "warm-glow"; the good feeling people get from doing good to others without receiving other benefits themselves. He calls these acts "impure altruism" because individuals ultimately do the good acts to get the "warm-glow" feeling and therefore is egoistically motivated (Andreoni 1990). Though "impure altruism" does provide a simplified explanation to other-regarding behaviour, it does not delve into why and how we get the "warm-glow" feeling in the first place. It also does not explain why individuals in some situations can punish other 'wrong-doers' even at a cost to themselves. The ultimatum-game is a good example of this. In ultimatum-games there are two individuals playing. Individual 1 is given a \$ 100 to share with individual 2. Individual 2 have to accept the offer for both of them to receive the offer. Purely self-interested people should accept any offer because it means receiving a benefit. But what often happens in such a game is that individual 2 will "punish" individual 1 by not accepting

if the offer is too low. The offer should preferably be close to half. This behaviour varies from country to country, but is quite common in western countries (Henrich, Heine et al. 2009).

Another theory that seeks to add a moral dimension is the Norm Activation Theory where “personal norms are the only direct determinants of pro-social behaviours” (Jackson 2005: 54). This theory has actually become “the most widely applied model of moral behaviour” (Jackson 2005: 54) and sets out to explain other-regarding behaviour. It builds on the rational choice theory and still has the individual in focus in the sense that the norms are triggered by internal values. The internal values are said to come from awareness of consequences and acknowledgement of responsibility and the strength of these internal values is part of shaping how well the personal norm influences behaviour. The Norm Activation Theory is one out of several theories that have been developed to include the presence of other regarding behaviour (Jackson 2005). In many of these theories other-regarding behaviour is considered a mathematical constant that is included in the equation.

3.1.3. Social dilemmas and economic incentives

A social dilemma can be explained as a situation where defecting is individually better than cooperation, but where “all are better off if all cooperate than if all defect” (Dawes and Messick 2000:111). Social dilemmas are situations where individuals have to make a choice between what benefit themselves and what benefit the society as a whole. The choice that benefits the society as whole is considered to come at an expense to the individual. Economic incentives are used in such situations to change the cost and benefits of some of the factors in the equation that are part of determining choice, so that the socially beneficial choice coincides with the individually beneficial choice. Environmental issues are often presented as a social dilemma in which individuals have to make a choice between acting in accordance with what benefit themselves and what benefits the environment, which ultimately is about what benefit humans as a group. In this case it is the choice of sorting waste. To sort waste is considered a personal cost because it takes up time and place (in terms of more bins). Introducing a monetary incentive that makes it economically beneficial to sort waste changes a factor in the equation of choice, which according to the theory, makes it more likely that the individual will sort. If all individuals act in accordance with the assumption of maximizing own utility, increasing a monetary incentive will increase supply of certain behaviour.

It has however happened again and again that introducing an economic incentive has not increased supply. In some cases it has even led to less supply. An old example is that of blood donation. An incentive to donate blood was given and it led to a decrease in supply. Titmuss concluded that the introduction of a monetary incentive for an activity that had been motivated by an inner, moral incentive ended in crowding out the inner incentive and therefore lead to fewer people wanting to donate. (Frey and Jegen 2001). The crowding out effect is considered “one of the most important anomalies in economics as it suggests the opposite of the most fundamental ‘law’, that raising monetary incentive increase supply” (Frey and Jegen 2001)

Vohs and Mead (2006) conducted experiments to analyse how the presence of money affect decision-making. The experiments showed that “money makes people feel self-sufficient and behave accordingly” (Vohs, Mead et al. 2006: 1154). The report indicates how the presence of money induced more self-reliance and less other-regarding behaviour.

3.2. Institutions as rationality contexts

The alternative behavioural theory presented here, which can explain why increasing a monetary incentive does not always work, is that of “institutions as rationality contexts”. In this theory the context of a choice or exchange is not merely seen as a stage, but actually plays the part of guiding which rational the individual should choose, like a stage with different settings. This theory presents the existence of plural rationality; a social rationality and an individual rationality. And each of these rationalities act according to norms, conventions, habits and rules that constitute institutions. Institutions “structure the decision environment by defining the logic of the situation” (Vatn 2009: 191) and in this way indicate which rationality should be pursued.

3.2.1. Infinite regress

Institutions “constrain, influence and enable individuals” (Hodgson 2007: 327) and are in turn influenced and changed by individuals. It becomes a situation of infinite regress, like the chicken and egg situation where it is impossible to really state which came first, unlike the assumption of rational choice theory where individuals are considered to live in an initial institution free state of nature. Viewing the relationship between the individual and society as

a relationship of infinite regress makes it difficult to hold inner moral motivations as a constant in a mathematical equation.

3.2.2. The setting that coordinate behaviour

The institutions are, as mentioned, part of shaping how to interpret and act in different situations. A good example is an experiment which was done where individuals were divided into two groups to play a public goods game, but the game was presented with two different names, one name for each group. One group were to play the game called “The Wall Street Game”, the other group were to play the game called “The Community Game”. In the public goods game the participants could choose to cooperate or not cooperate, and in each game the pay-offs were identical. In this experiment there were significantly fewer people who cooperated in the “The Wall Street Game” than in “The Community Game”. Though the only difference was the name, it changed the behaviour of the individuals playing the game (Vatn 2009: 192). Institutions can be considered “socially constructed remedies that help people coordinate their behaviour.” (Vatn 2009: 188). Examples of such coordination problems are: how to drive in traffic, how to use common concepts, how to communicate through language, how to share a common resource, how to solve environmental problems etc. The institutions also guides in sense of telling people what is socially considered the ‘right’ thing to do.

3.2.3. Habits and norms

In order to solve coordination problems we need a common understanding about what the expected behaviour is in the given situation. Habits and norms are part of developing this understanding. Habits are actions that are repeated over time and which are not usually deliberated over. They are personal and they give cognitive relief in the sense that it frees individuals from having to deliberate over every action that is made. Like putting on the seatbelt, like closing the door, brushing teeth before bed or sorting waste. Though habits often have logics behind them, they can over time be so ingrained in our routines that we continue to do them even though they might be illogical; like driving the same route as you would to work, when you are supposed to go somewhere else. What exists before our habits develop is basic instinct. “The infant individual has to be “programmed” to discern and respond to specific stimuli so that the repeated behaviours that lead to the formation of habits can become possible” (Hodgson 2007: 332). Habits are considered to both form and alter our preferences and they are part of how norms and conventions are internalized over time in that a deliberate choice is made and then repeated over time. Biel and Thøgersen (Biel and Thøgersen 2006: 94) explains the view of habits and norms well by stating that: “just as habits

are functional for the individual in reaching his or her goals, norms arise and operate in groups because they are functional for the group.”. Norms and conventions tell you how you are expected to behave in a certain situation and what you can expect from others.

Acknowledging that these norms and conventions are part of shaping our behaviour is also acknowledging that humans do not have fixed preferences and that knowing how they will react to a monetary incentive is difficult without assessing the situation in which the incentive is given. The development of norms is an internalization process where external influences are “digested”, contemplated and accepted over time. Individuals become get intrinsically motivated to do certain acts. It is part of an enculturation process all individuals are influenced by and also exert influences on (Vatn 2009). Understanding this enculturation process can explain why economic incentives sometimes fail to achieve a wanted behaviour.

3.3. Intrinsic motivations and crowding theory

“One is considered to be intrinsically motivated to perform an activity when one receives no apparent reward except the activity itself” (Deci 1971). Intrinsic motivation would in this case study be the subscribers’ wish sort their waste without an external motivator present. Considering the fact that the inhabitants in Ulstein already sorted paper, they can be interpreted to have an intrinsic motivation to sort.

Intrinsic motivation is as an established concept within social psychology. “Some activities provide their own inherent reward” (Deci, et.al. 1999: 627). Intrinsic motivation will be affected by external motivations and can be encouraged; crowding-in, or discouraged; crowding-out. Deci uses Cognitive Evaluation Theory to explain intrinsic motivation: “CET asserts that underlying intrinsic motivation are the psychological need for autonomy and competence, so the effect of an event such as a reward depend on how it affects perceived self-determination and perceived competence” (Deci, et.al. 1999: 627). If an activity is perceived to enhance autonomy and competence, the individual will internalize an intrinsic motivation for the activity. If an activity is perceived to challenge and decrease the feeling of competence and autonomy, the intrinsic motivation (if there is one), will be crowded out. In the case of encouraging sorting, internalizing sorting as an activity has the benefit of excluding the need for an external incentive that need to be maintained in order for the sorting to continue.

In order to better understand how extrinsic and intrinsic motivations work and originate, Deci constructed a figure showing different types of motivations and how they relate to regulations, processes and their locus of causality.

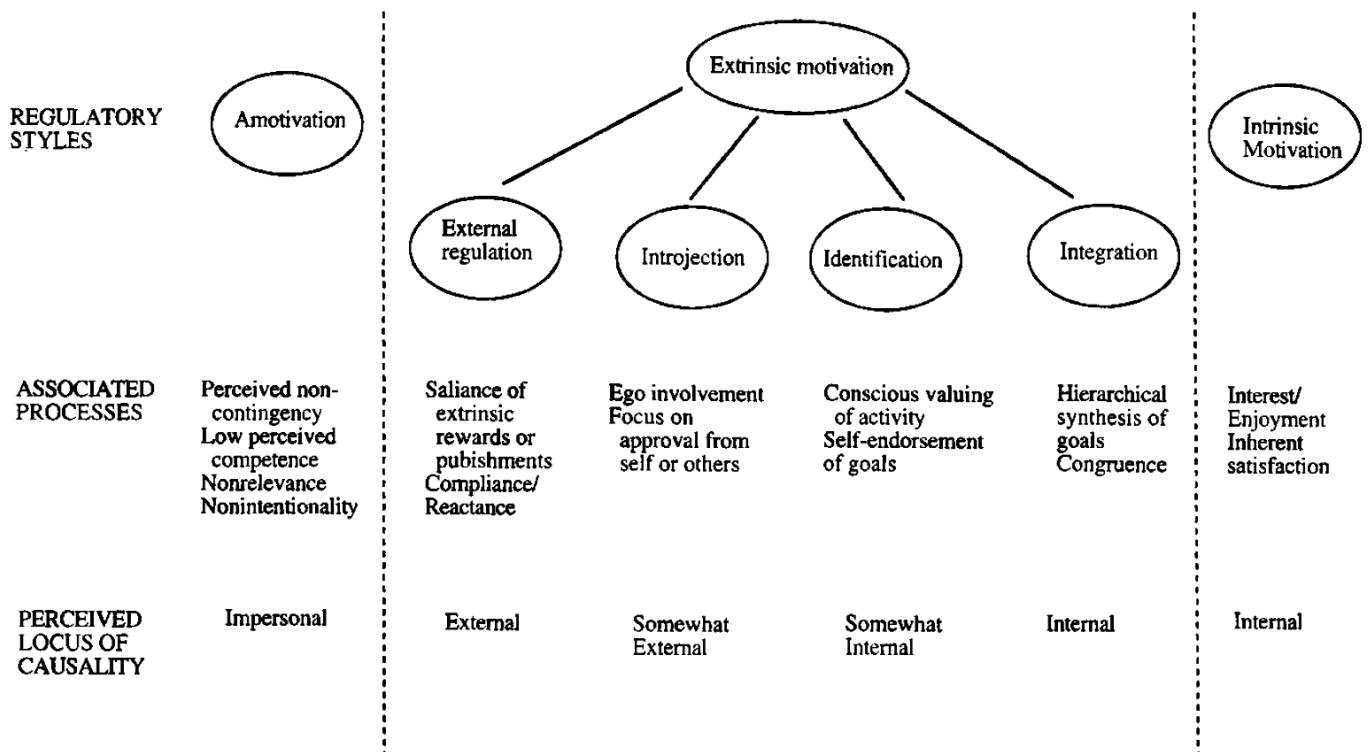


Figure 1: “A taxonomy of human motivation” (Ryan and Deci 2000) This paper will focus primarily on integration and internalization.

Deci presents how intrinsic motivations can be developed through integration and internalization. Integration of external regulation happens when the individual perceives the regulation to be in “congruence with one’s other values and needs” (Ryan and Deci 2000). Autonomy and competence is present, but the perceived locus of causality is still considered to be external in the sense that the behaviour is motivated by an outcome separated from the activity and not from the activity itself. Internalization leads some activities to become intrinsically motivated. To facilitate internalization of externally motivated behaviours Deci points to the importance of creating a feeling of relatedness. How our significant others perceive an activity is important to us, and to provide “a sense of belongingness and connectedness to the persons, group, or culture disseminating a goal” (Ryan and Deci 2000) is part of facilitating internalization. Using the concepts of integration and internalization requires focus on how the individual interacts with its surroundings; the relationship between the agent and the structures. This is an aspect missing in the methodological individualism approach.

3.3.1. Examples of economic incentives failing

There have been several cases where implementing an economic incentive to promote a cooperative behaviour have had the opposite effect. **The kinder garden example in Israel:** A kinder garden in Israel implemented a (“rather low”) fine for parents who came late to pick up their children (Frey/Bowles). They announced the fine by writing a note. This note had no normative message, but simply stated the new system. (Though calling it a fine should perhaps give a normative-message association?) What happened next was that more parents came late to pick up their children from day care. This is thought to happen because it was now ok to come late as long as they paid the fine; there was no social pressure anymore. The kinder garden removed the fine in the hope that the routine would go back to the pre-fine state and that more parents would pick their kids on time. This did however not happen. The parents continued their late comings as a pattern developed during the fine-system.

Another interesting example is that of compensation in so-called NIMBY (No In My Back Yard) situations. In Switzerland residents were asked if they were willing to accept a nuclear waste repository in their neighbourhood and 50.8 % said yes. Afterwards the same respondents were asked if they would accept the waste repository if they were compensated, and the 50.8 % dropped to 24.6 %. The respondents were divided into three groups that were offered three different levels of compensation, but the level of compensation did not appear to influence the level of acceptance (Frey and Oberholzer-Gee 1997).

What is essentially crowded out is our intrinsic motivation to do a certain act. External influences can crowd out internal motivations we might have of doing activities and the consequence in some cases can be that we continually need the external influence to continue doing the activity. Intrinsic motivations are excluded from standard economic theory because it is difficult to measure. If it is included it is held as a constant to fit into the utility function.

3.4. Comparing the two models empirically

The ability of the two theories to explain behaviour and their suitability to be used as tools to encourage certain behaviours will be compared by using the example of the two different fee systems for waste management in Ulstein. The weight based fee system is based on an economic incentive where having less waste is financially rewarded. According to the theory the subscribers should have started sorting more with this incentive, which the subscribers

did. It also implies that changing away from the system should cause a decrease in sorting. The last statement will be assessed by using questions from the survey conducted in 2009 and repeat them with the same individuals. The repetition of the survey will provide information about the current system, which is based on encouraging sorting through better communication and information. In combination with interviews and focus groups we hope to get a solid picture of how the different waste management systems have influenced the sorting behaviour in Ulstein.

4. Methodology

The research questions of this master thesis look into the social phenomenon of sorting waste and how economic incentives can be used to encourage individuals to do this socially approved activity. In order to get the best possible understanding of how the use of an economic incentive has worked on the subscribers in Ulstein, I have chosen an interdisciplinary approach where different methods have been used in triangulation. This paper uses both theory triangulation and methodological triangulation. Theory triangulation is the use of “multiple perspectives to interpret a single set of data” (Denzin and Lincoln 2000). Methodological triangulation is the use of multiple research methods to acquire information and knowledge about the phenomenon in question (Denzin and Lincoln 2000). When using this type of triangulation there are ontological and epistemological issues that have to be taken into consideration.

4.1. Ontological and epistemological considerations

Ontology concerns the philosophy of the nature of entities. Does the world exist ‘out there’ independently of us, as the objectivists would have it? Or is the world socially constructed and constantly changing, as the constructivists would have it? (Bryman 2008) This thesis compares two theories that have differing ontological perspectives. Where neoclassic economics view the world in more objectivist terms, institutional economics look closer at the relationship between the individuals and its surrounding structures and can therefore be said to have more of a social constructionism view because it acknowledges that the individuals are part of shaping social reality. This divide is part of shaping the fundamental differences between the two economic theories of how to analyse and understand human behaviour.

This thesis has an interdisciplinary approach in the sense that it combines the epistemological perspectives of the interpretivist and positivist approaches to attain knowledge. Epistemology concerns what constitutes knowledge and how can we go about getting it (Bryman 2008).

The world out there is very much real to me and exists independently of me seeing and experiencing it. But I also believe that we interpret and understand the world through socially constructed glasses that differs depending on the environment in which we have grown up. I also believe there is a difference between a physical reality and a social reality. It is easier to make laws about physical entities and the ‘natural world’ because these entities are not

themselves affected by the ‘laws’ of their nature generated through research. Social entities are in my view constantly changing and individuals affect their surroundings and the surroundings affect them. I think it is possible and important to look at causal links between actors and structures, but I think it is difficult to make generalized laws about the social realities. I therefore conclude to be ontologically more of a social constructivist than objectivist.

Epistemologically I’m not wholly positivist in nature, but I believe that some natural science approaches, such as surveys can be used to explore social phenomena. Quantitative data makes it possible to reach more people and statistical approaches can, if used wisely, show general tendencies in a community. I do however believe that results from surveys are better understood in combination with more interpretivist and qualitative approaches such as interviews and focus groups. They contribute to the level of understanding of the complexities in social phenomena.

4.2. Theory- and methods triangulation

As have been mentioned before, economics lie in the realm of both social and natural sciences. The phenomena that are researched are social in nature, and the approaches used to investigate them are often taken from the natural sciences. This aspect of economics in combination with my own interdisciplinary background made it a logical choice to combine qualitative methods from social sciences and quantitative methods from natural sciences in order to properly investigate the case study, and how the results from the investigation apply to the two theories of rational choice and institutions-as-rationality-contexts.

The advantage of theory triangulation is that different perspectives are presented on a given topic and make it possible to compare theories. A hypothesis can be presented for each theory, and the findings can confirm or challenge and highlight shortcomings of the different theories. A challenge of using theory triangulation is that the different theories might be based on different ontological perspectives. This is, as mentioned, to a certain degree the issue in this thesis because the opposing theory of institutions-as-rationality-contexts has a more constructivist approach where rational choice theory use an objectivist approach. This also floats over in the agent versus structure debate. Where neoclassical economics view social phenomena as a sum of individual action outside the individual’s control, institutional

economics view social phenomena and institutions as dynamic entities constantly being influenced by each other. This ontological conflict does not affect the choice of research methods, but rather the interpretation of the results.

Different epistemological foundations of theories concern what research methods are considered “correct” to explain the social phenomena. Neoclassical economics support the use of natural science on the study of social phenomena. Experiments and questionnaires are used frequently. This does not necessarily imply a conflict with that of institutional economics.

The agent versus structure debate represents an important difference between the theories used in this paper. Where most economists and social psychologists use the individual as the unit of analysis, sociology use the structures as unit of analysis. Institutional economics use a combined approach looking at the dynamic between the two; how individuals shape institutions and how institutions shape the individual. This distinction makes the theories see the same picture in different ways.

Methodology triangulation means applying various methods to investigate a research question (Denzin and Lincoln 2000). It has the advantage of verification, as findings can be verified or proved erroneous through different methods of information collection. Challenges of this approach is the epistemological (what should be considered knowledge) issue of “whether or not the social world can and should be studied according to the same principles, procedures and ethos as the natural sciences” (Bryman 2008). As mentioned, this is not considered a conflict in this paper.

Both quantitative and qualitative methods have been used as they present different strengths. Where quantitative methods can give indication of tendencies in a population, qualitative research can potentially explain why some of these tendencies occur. Quantitative methods views the world in the ontological sense of objectivism where social reality is “an external, objective reality” (Bryman 2008: 22). They also use a deductive approach where theories are first developed and then tested, and they take a positivist stand in the sense that natural science methods are used for the collection and analysis of data. These methods are in essence about analysis through numbers. Qualitative methods view the world in the ontological sense of constructionism where the social reality is constantly changing due to individual changes and influences. It usually applies an inductive approach to theories where research is first

done and theories are developed from the findings. Where quantitative research aims to test theories, qualitative research is more about generating theories (Bryman 2008).

There have already been two master thesis students participating in the Environmental Policy and Human Action project. One student wrote a quantitative paper and the other student wrote a qualitative paper. This paper combines both quantitative and qualitative methods in order to better understand the situation in Ulstein. The first step was to send a questionnaire to the same respondents that participated in the project's survey of 2009. The new questionnaire contained 19 of the same questions as the first survey, but also included new questions totalling 32 questions (see appendix 1). The purpose of asking the same questions to the same respondents was to do a panel data study in order to uncover if there had been a change in the motivation of sorting waste on the individual level. Interviews were conducted with key figures to get background information about the implementation and use of the weight-based system and about the transition to the current system. This information has proved itself important to understand the results of the questionnaire. When the survey was completed we used focus groups to go in depth of some of the findings.

4.3. Quantitative methods:

When SSR and the board of representatives decided to move away from the weight-based system and go over to the current semi-differentiated system it provided the opportunity to do a panel data study. In this panel data study the same individuals have been followed over time as they are 'exposed' to two different waste management system. As a survey on motivations for sorting of waste had already been conducted, it was now possible to repeat the same survey and see if there have been changes in motivation. A panel data analysis implies following the same entities, in our case; the same individuals, over time and see if changes in the surroundings cause changes in the individual's behaviour.

4.3.1. The survey

Some of the questions from the previous survey, which were directly linked to the weight-based system of the time, were excluded and replaced with questions of the current system. A lot of time was spent revising the questions in order to make them as neutral as possible and to create a natural flow that did not seem to suggest favourable answers. We also added new questions. One question was added about what feelings the respondent associates with sorting. It was added to clarify how they view the act of sorting and if those feelings could have an intrinsic value to it. We also added a question about what feelings the respondent got when

she/he learnt of the change in fee system in order to better understand how the two systems were perceived. At the end of the questionnaire we asked the respondents to evaluate different statements about nature, its resource capacity and humans' role in it. The hope of these statements was to learn more of what role the environment and nature have for the respondent. The last two questions are about SSR and were added to clarify if the respondents perceived a change in the company's focus.

The questions in the survey provide answers the respondents could choose from. Providing answers runs the risk of eliminating information, but the respondents are also asked to add other answers. Combining the survey with focus groups made it possible for us to both gain new information and elaborate on the information from the survey. Full survey can be found in appendix 1.

4.1.1. Sampling

In 2009 there were 198 respondents that took part in the survey and we needed as many as possible of these respondents to participate again. We sent the first round of mails in the end of November. In early January we sent a reminder-mail to those who had not answered. In late January we called the respondents still not answering to ask them to participate. It was a difficult balance to convey the importance of the survey and at the same time make the possible respondents feel that they are choosing themselves to participate instead of making them feel coerced. Through these phone calls we learnt that some respondents had died, some had moved away and that many respondents had changed mail addresses. We also realized that SSR had conducted surveys earlier and so many of the respondents were tired of having to answer questions about the "same" things. In the end we had 86 respondents, which we concluded was enough to be able to do the statistical analysis.

4.1.1.1. Sampling bias

What is intriguing about this study is that we get to follow the same individuals over time under different institutional settings. This is however not problem free. When approaching the same respondents it could be that those willing to answer have a special interest in the issue and the respondents might therefore not represent the views of all the subscribers in Ulstein. Another bias that we could not change and simply had to accept was that most of the respondents were male. The respondents that were selected for the first questionnaire was

selected from the subscribers' list from SSR and there were more men who were listed as the household 'representative' than women.

4.1.2. Statistical analysis

The primary statistical tools to analyse the results are bar charts, independent t-tests comparing mean and the non-parametric Wilcoxon's Signed Rank test on the question of sorting level. The bar charts give good visual pictures of mean and are good indicators of the different means in comparison to each other. The t-tests shows whether or not changes in mean are significant, and Wilcoxon Signed Rank test compares the distribution of the responses to see if there are significant differences.

4.1.3. The respondents:

86 of the respondents from the survey in 2009 responded to the survey in 2012, and of the respondents there where 60 men and 26 women. The average age of the respondents is 52 years. 95,2 % of the respondents live in their own houses and 4,8 % live in apartments. In the first survey we asked the question of household size and education level. By extracting the individuals that replied to both surveys from the list of individuals that replied in 2009, we got this overview:

Table 1: Household size and education

Household size			Education		
No. of people	Frequency	Percent	Level	Frequency	Percent
1	11	12.8	Secondary School	11	12.8
2	31	36.0	High school	16	18.6
3	18	20.9	Vocational training	16	18.6
4	9	10.5	University/college	40	46.5
5	11	12.8	Other	2	2.3
6	6	7.0	Total	85	98.8
Total	86	100.0	Missing	1	1.2
			Total	86	100

56,9 % of the respondents live in households with either 2 or 3 people, 30,3 % live in households with 4 to 6 people. There is no correlation between how many live in the household and the sorting level. Almost half of the respondents have education on university or college level. There is a significant negative correlation (p-value of .081*) between sorting level and education, which means the higher the education the lower the sorting level is.

In terms of combined income of household the respondents represent more or less all the given income categories, from less than 150 000 NOK per year to over 1 000 000 NOK per year.

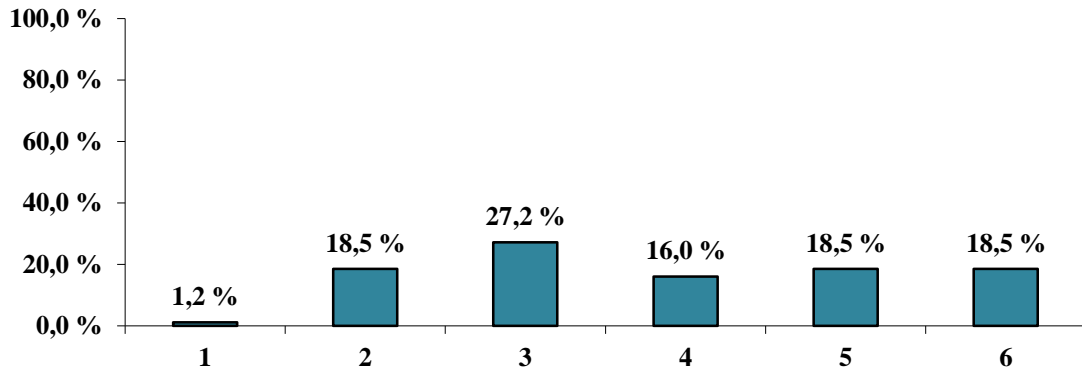


Figure 2: Income

1 = Less than 150 000 NOK

4 = Between 650 001 and 800 000 NOK

2 = Between 150 001 and 400 000 NOK

5 = Between 800 001 and 1 000 000 NOK

3 = Between 400 001 and 650 000 NOK

6 = Over 1 000 000 NOK

It appears to be a correlation between income and sorting level. Regression analysis indicates that the relationship between the two variables is negative; the higher the income, the more the sorting level decreases. Both education and income have a negative correlation to sorting level, a result that begs the questions of what kind of education is most prevalent and if higher income could indicate higher consumption? These are however just speculations. They would be interesting to look into in the larger project of ENVACT where several municipalities are compared, but will not be delved further into in this thesis as they somehow fall outside the scope of the research questions.

4.2. Qualitative methods

Qualitative methods were used to collect both background information and for data collection. From the 27th to 30th of November 2012 I was in Ulstein to conduct background interviews. From the 24th to the 26th of April 2013 my co-supervisor and I went back ones more to conduct focus groups and stunt-interviews, and to meet again with representatives of SSR.

4.2.1. Data collection

The situation in Ulstein has proved to be complex. Valuable information has been attained through going online and searching the local newspaper Vikebladet, and also through interviews with key figures in SSR and with municipality representatives.

4.2.1.1. Newspapers

Browsing through Vikebladet.no gave valuable insights about when changes occurred and the local responses and opinions about the changes. The articles brought facts and incidents that people forget over time. They also reflect the emotions that these incidents created at the time. It added valuable background information and understanding of the situation that was good to take into the focus groups in order to understand what was said there.

What have been kept in mind when reading the many articles is that there are more news when people are unhappy than when they are happy, and that the articles therefore only reflect parts of the whole picture.

4.2.1.2. Interviews

After sending out the questionnaire to all of the respondents that participated in the survey in 2009, I travelled to Ulstein to conduct interviews with one representative of SSR, and two representatives of Ulstein municipality (Kommunestyre ?). The intent of doing interviews were to get a better idea of the process that started with the implementation of the weight-based system in 2008, up until today where a household can choose between different flat fees depending on need. The three interviews that were conducted were semi-structured and had open-ended questions, but there were also some specific information we were after. All of the respondents showed willingness to comply and had no aversion answering any of the questions. In order to keep the flow going I used a recorder.

4.2.1.3. Focus groups

“... the focus group is to qualitative research what analysis of variance is to quantitative research” (Krueger 1994). Focus groups “allow for group interaction and greater insight into why certain opinions are held” and they can be summarised to be a permissive environment for generation of perceptions on the defined topic (Krueger 1994). Through the use of this method we hoped to learn more about why the respondents of the survey answered the way they did. The results from the questionnaire showed tendencies which we wanted to investigate further.

Focus groups erupted because the role and influence of the interviewer was acknowledged to be colouring answers and opinions. The limitations of close-ended questions narrowed down potential factors that could be important to understand a situation properly. With more open-ended questions there were room for explanations and sharing of experiences and opinions. “Evidence from focus group interviews suggests that people do influence each other with their comments” (Krueger 1994). The questionnaire will have the shortcoming of assuming that the respondents have assessed how they feel about the different fee systems. Subscribers choosing to participate in focus groups could potentially have a higher interest in sorting than the average subscriber and so this is acknowledge and thought of when assessing their explanations. The focus groups can open up for development of thoughts and opinions, and potentially reveal some explanatory factors which contributes to our understanding of what has happened in Ulstein and why.

In a focus group Kreuger emphasise the importance of creating a permissive environment where the participants want to share (Krueger 1994). The moderator’s role is important to be able to create an atmosphere where people feel encouraged to share all kinds of thoughts and ideas. Nothing is wrong, all opinions are allowed, aggressive or condescending behaviour will be discouraged, everyone should partake, and everyone is important for the group. In order to create this atmosphere we had to think of whether or not the participants knew each other, how it could affect the dynamic, how the moderator should behave etc. As we wanted to show some of the survey results to the focus group participants, we chose to ask primarily respondents of the survey to partake. Through phone conversations during the preparations for the focus groups, it became evident that putting an earlier SSR worker amongst the other participants in the focus group could potentially lead to tensions. But a very accommodating participant arranged it so that instead we got more workers from SSR in one group, a group which proved to give very valuable information.

Kreuger recommends that there is a certain commonality between the participants of a group. Except for the group with people from SSR, we had little control over this, as we wanted to have as many participants as possible and couldn’t be picky. Through travels to Ulstein and communication with several inhabitants, we have the impression that the community has homogenous traits, but we do know that there are still traces of tension between SSR and some inhabitants.

The number of participants in focus groups can range from 4 to 12. In this research we would have liked to have about 5 to 6 participants, but it ended up ranging from 3 to 4 participants in three groups. Though we did not get to have as many groups as we would have liked, the three groups gave valuable insights to the happenings and dynamics in Ulstein. The different combinations of people within the groups opened up for the presentation of different angles and different perspectives. It became clear to us that the issue of waste management has created a lot of emotions in Ulstein, because some of the participants became quite engaged in the discussion, at times almost to the point where the aim of the focus group became somehow lost. But also this experience gave valuable insights into the case study.

4.3.Learning by doing

Using triangulation proved to be a very enlightening method of data collection. The data from the survey and the information gathered from interviews and focus groups have given a detailed picture of the case study. As an afterthought I have learnt the value of systemizing all the data properly. So many details can leave a researcher blind to the bigger picture, but through discussions and joint analysis with supervisors, I hope to have painted an understandable picture of the situation in Ulstein.

5. Analysis

The following section will present results from analyses of the survey data of 2012, including results from the survey of 2009 where the questions are repeated in 2012. Some of the results were discussed in focus groups and information gathered from this, combined with information from interviews, will be presented together with the relevant result.

5.1. Changes in activity

Results from the first survey showed that after the implementation of the weight-based fee system (WBFS), respondents felt that they sorted more (Trehjørningen 2010). The question “How much do you sort?” was repeated in 2012 and the following graph shows the results with the data from 2009 (WBFS) in green and (YFFS) in blue:

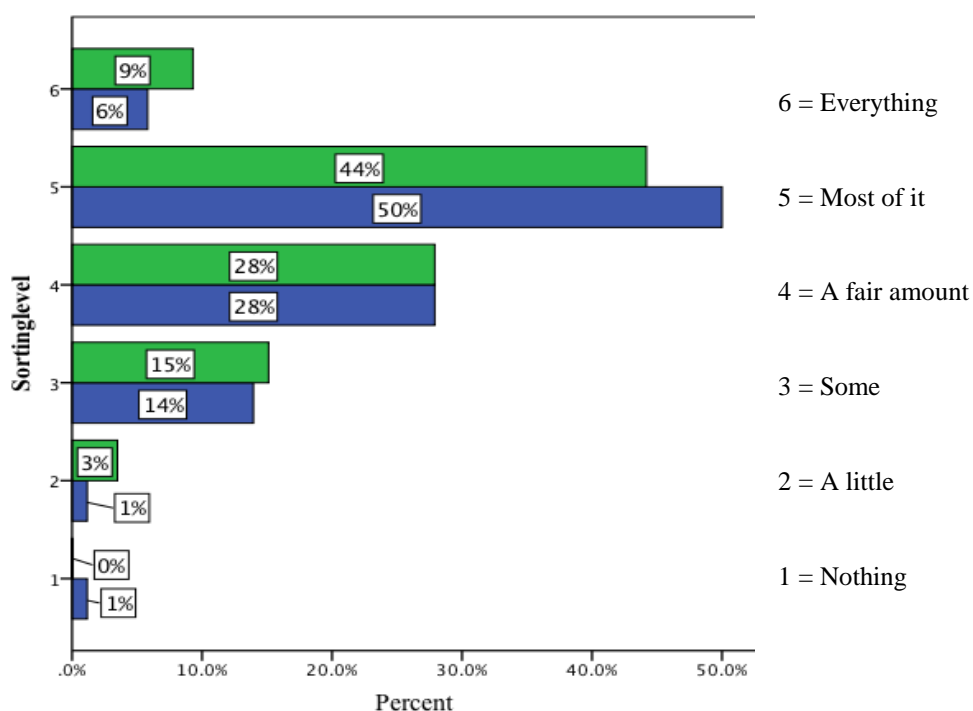


Figure 3: “How much of your waste do you sort?” Blue = YFFS and Green = WBFS

From figure 1 it is more people sorting “all of it” in 2009 and more sorting “most of it” in 2012. Overall, there was no significant change in difference of mean of self-perceived sorting level when the WBFS was replaced by the semi-flat fee system. T-tests comparing the means of the sorting levels show no significant change in degree of sorting, but according to representatives of SSR the subscribers sort better with the current system in the sense that the quality of the paper and plastic has improved, and the two categories are no longer incinerated

with the rest (focus groups). The Wilcoxon Signed Rank test, a non-parametric test, was conducted to compare the distribution of answers for this question. The result was a p-value of .776, indicating that the distribution of the answers is not significantly different between the two samples. The following table compares the mean of the different sorting categories under each fee system:

Table 2: Overview of t-test values comparing sorting levels of 2012 and 2009.

	System	N	Mean	Std. Deviation	Std. Error Mean	Sig. (2-tailed)
Paper	YFFS	85	5.52	.548	.059	.745
	WBFS	86	5.55	.607	.065	
Plastic	YFFS	85	4.98	1.069	.116	.090
	WBFS	85	5.25	.999	.108	
Organic waste	YFFS	82	2.21	1.668	.184	.490
	WBFS	84	2.39	1.784	.195	
Glass	YFFS	84	5.20	1.278	.139	.945
	WBFS	85	5.19	1.358	.147	
Metal	YFFS	80	4.64	1.545	.173	.816
	WBFS	81	4.58	1.572	.175	
Textiles	YFFS	81	3.78	1.589	.177	.183
	WBFS	83	4.13	1.800	.198	
Special waste	YFFS	84	4.50	1.668	.182	.728
	WBFS	85	4.59	1.628	.177	
Electronic waste	YFFS	84	5.05	1.439	.157	.996
	WBFS	86	5.05	1.533	.165	

None of the categories have had a significant change in mean on a .01 or .05 significance level, but plastic has a significant change on a .10 level where the self-perceived level of sorting was higher in 2009 than 2012. The first survey was conducted right after plastic was introduced as an additional category together with the implementation of the WBFS. A general impression is that there is little change in self-perceived sorting level between the weight-based system and the semi-flat system.

Numbers from SSR show how the amount of paper, plastic and unsorted waste has varied over the last 5 years. The following table presents the amount in tonnes per year from 2008.

Table 3: Overview of sorted and unsorted waste in kg tonnes, numbers from SSR

Category (in tonnes)	2008	2009	2010	2011	2012
Unsorted waste	5161	5290	5365	4200	3600
Plastic	179	145	40	38	121
Paper	5111	4020	1500	1400	1421
Total	10451	9455	6905	5638	5142

Plastic has an interesting development ranging from highest in 2008, to a lowpoint in 2011 before picking up again in 2012. Plastic as a category was first introduced in 2008 then removed in 2010 due to bad quality, and then reintroduced again in October 2011. This reflects the low numbers in 2010 and 2011 and the higher number in 2012. In total the amount of waste is going down. Workers at SSR participating in one of the focus groups also mentioned this development. When SSR introduced fewer pick-ups of unsorted waste, from every week to every second week, more glass and metal were sorted out. Removing glass and metal from the bin is an efficient way of reducing volume (Solberg, G. pers. comm).

The respondents were also asked if they sometimes throw things that belong in the waste-bin into one of the other categories. In 2009 the mean showed 1.24, which is quite low, indicating that few people state that they throw wrong. In 2012 the mean is 1.29, which is a slight increase, but with a p-value of .535 it is not a significant increase. The distribution of replies is quite similar in both surveys. The responses were 1 = *Never*, 2 = *Rarely*, 3 = *Sometimes*, 4 = *Often* and 5 = *Don't know*

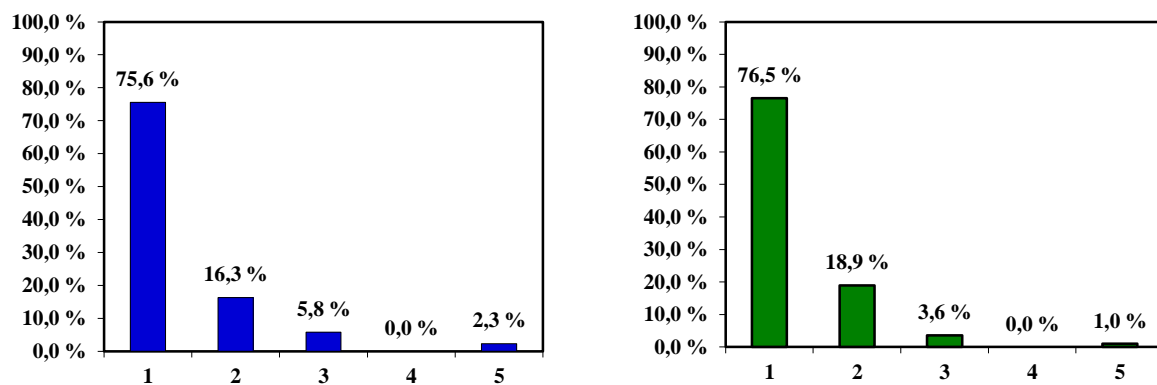


Figure 4 and 5: “Do you or anyone else in the household throw things that belong in the unsorted waste in one of the other sorting categories?” Blue = YFFS Green = WBFS

In neither survey do any respondent state to throw wrong *often*. $\frac{3}{4}$ of the respondents *never* throw wrong. The respondents were also asked “Does it happen that you or others in the household get rid of the waste in other than ways than through the waste management of the

municipality?”. Mean of this question has not significantly changed over time with 1.59 in 2009 and 1.65 in 2012 (p-value of .604), and the distribution is also more or less the same. So the respondents appear to be sorting more or less according to rule. Through interviews with representatives of the municipality, workers at SSR and focus group interviews we did however hear many stories of the opposite. Because a negative consequence of the WBFS was that subscribers started to find strategic solutions of getting rid of the waste that was supposed to be in the unsorted category. Examples of such strategies were to throw waste in neighbours’ bins, in containers belonging to private companies, and in nature. Some subscribers also polluted paper and plastic with the heavier waste that did not belong there, such as diapers being re-categorized to paper and thrown in the paper bin (Focus groups and interviews). Through the focus group interviews we also heard of elders burning their diapers causing it to smell rather bad. The bad quality of the sorting, which led to polluted paper and plastic, caused SSR to start controls of the bins during collection in order to see if the plastic and paper was clean enough to throw in the truck. Sometimes the bins were too polluted to empty and so the SSR employees had to leave them behind full. For the household this was also problematic and caused quite a lot of anger. Unhappy subscribers wrote many articles in the local newspaper (Vikebladet), see Appendix 2, and the anger was also taken out on the employees on the trucks. An SSR employee participating in a focus group actually experienced life-threats and also once experienced how a subscriber came running after him/her. SSR employees also spent much more time sorting at the company’s facilities causing additional expenses for the company. The problem of storing polluted plastic and paper in the SSR facilities attracted rats to the buildings, which in combination with the bad quality led to the conclusion that the plastic was too polluted to recycle and therefore it was burnt with the rest at Grautneset. When subscribers got wind of the fact that the plastic was being burnt it made them angrier as their efforts felt useless. Some then decided to stop sorting waste all together (Focus group interviews).

The discrepancy between the survey results and the information collected through focus groups and interviews either implies that those who chose to respond are not among those who acted strategically, or the respondents are not answering completely honest. With the transition from the weight-based system and the economic incentive to the semi-flat fee system, there is no significant difference in self-reported sorting level and there is little change in the number of people who state to throw the waste in the wrong category. Representatives from SSR have stated that the quality of both paper and plastic has improved

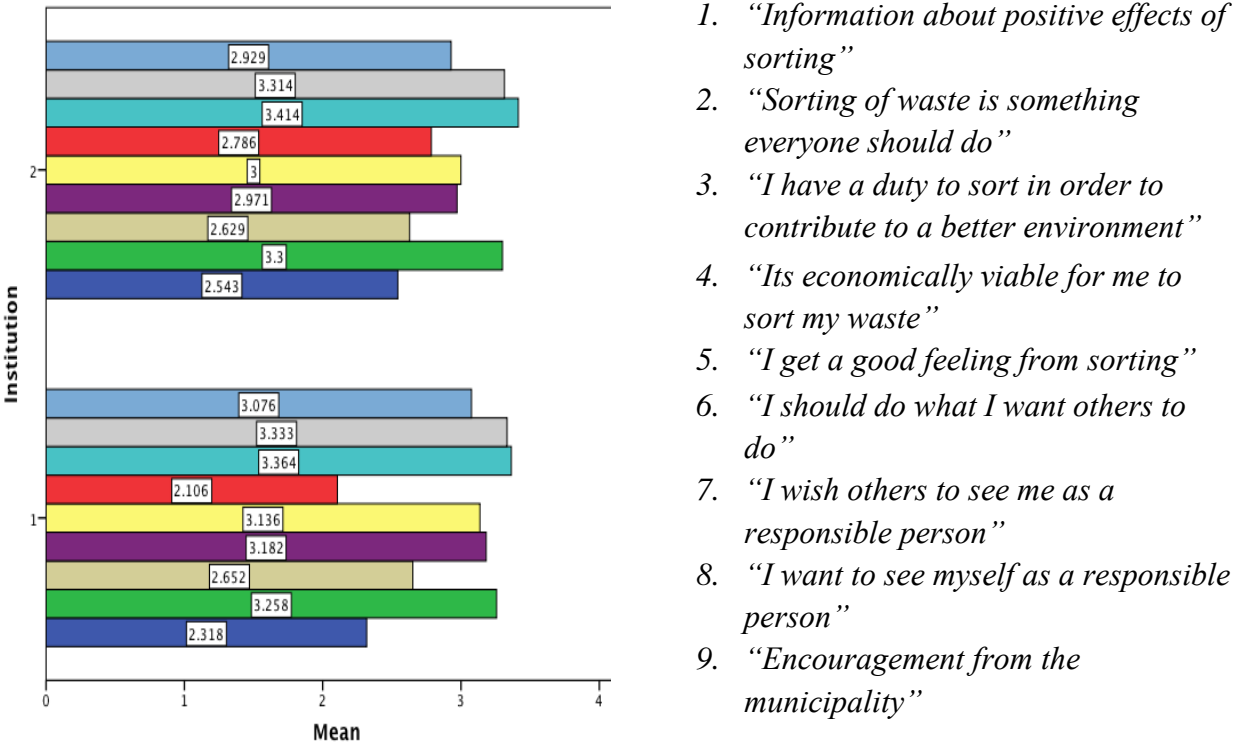
after the weight-based system was removed, and the volume of metal and glass had increased. There is also less need for control of the bins and there are fewer cases of waste in nature now (Interviews and focus groups).

5.2. Changes in motivation

According to the survey there are no significant changes in sorting activity. SSR claim that their subscribers are better at sorting now than during the weight-based system so there seem to be a discrepancy between how the respondents view their own sorting activity and what figures from SSR say about actual sorting levels. To see if the fee system has affected the subscribers’ motivation to sort, several questions about views on the sorting activity were asked in both 2009 and in 2012. Results from the survey were used in the focus groups to get the participants to reflect on and explain some of the findings. The following section presents results of the survey combined with explanations given by participants of the focus groups.

5.2.1. Why do you sort?

The first question looks at what motivates the subscribers to sort and the respondents were asked to rate the following statements from “Is not correct/true at all” to “Is very true”:



1. *“Information about positive effects of sorting”*
2. *“Sorting of waste is something everyone should do”*
3. *“I have a duty to sort in order to contribute to a better environment”*
4. *“Its economically viable for me to sort my waste”*
5. *“I get a good feeling from sorting”*
6. *“I should do what I want others to do”*
7. *“I wish others to see me as a responsible person”*
8. *“I want to see myself as a responsible person”*
9. *“Encouragement from the municipality”*

Figure 6: "What makes you sort your waste?" 1 refers to the YFFS, 2 refers to the WBFS

There are generally many statements that have a fairly high mean, indicating that there are several motivators present that make the respondents want to sort. “*I have a duty to sort in order to contribute to a better environment*”, “*Sorting of waste is something everyone should do*” and “*I want to see myself as a responsible person*” are the statements that got the highest means, indicating that duty and the feeling of responsibility are important influences on the level of sorting. The statement that has changed the most from 2009 to 2012 is “*It’s economically viable for me to sort my waste*”. This makes sense, as the economic incentive is no longer present. It also indicates that the incentive was part of motivating the subscribers to sort.

T-tests comparing the mean of the motivation statements were conducted to assess whether or not the motivations have changed under the different fee systems. Beneath is a presentation of mean from highest to lowest in 2012 and the rank of the mean according to the 2009 survey, and also t-test results and their p-value.

Table 4: “*What makes you sort your waste?*”

Statement according to descending mean of 2012	Rank in 2009	Fee system	N	Mean	T	Sig.
<i>I have a duty to sort in order to contribute to a better environment</i>	1	YFFS	79	3.36	-.526	.599
		WBFS	82	3.43		
<i>Sorting of waste is something everyone should do</i>	2	YFFS	79	3.32	-.329	.743
		WBFS	83	3.36		
<i>I want to see myself as a responsible person</i>	3	YFFS	78	3.29	-.192	.848
		WBFS	84	3.31		
<i>I should do what I want others to do</i>	5	YFFS	71	3.21	1.454	.148
		WBFS	79	3.00		
<i>I get a good feeling from sorting</i>	4	YFFS	79	3.15	1.064	.289
		WBFS	80	3.01		
<i>Information about positive effects of sorting</i>	6	YFFS	77	3.00	.362	.718
		WBFS	82	2.95		
<i>I wish others to see me as a responsible person</i>	8	YFFS	77	2.65	-.081	.935
		WBFS	82	2.66		
<i>Encouragement from the municipality</i>	9	YFFS	79	2.34	-1.500	.136
		WBFS	82	2.55		
<i>Its economically viable for me to sort my waste</i>	7	YFFS	77	2.11	-3.786	.000
		WBFS	79	2.76		

Only “*Its economically viable for me to sort my waste*” has had a change on a .01 significance level where the mean has gone down. This is a change showing that the economic incentive

was a reason for the respondents to sort, though not the most important reason as the mean of this statement was ranked as number 7 of 9 possible reasons. The lack of change in the mean of the other statements indicates that the general motivation, which seems guided by duty and feelings of responsibility to sort, has not been significantly altered by changes in the fee system. The second biggest change in mean is “I should do what I want others to do” which has an increase in mean from 3.00 to 3.21. It is however not a significant change as the p-value is .148.

5.2.2. What would make you sort more?

To further assess the motivations to sort, the respondents were asked to rate statements about what would make them sort more. The statements were rated from “Is not correct at all” to “Is very correct”.

Table 5: “What would make you sort more?”

	Institution	N	Mean	Sig. (2-tailed)
<i>Better waste mgt system, ex: increased no. of pick ups</i>	<i>YFFS</i>	80	2.91	.738
	<i>WBFS</i>	81	2.96	
<i>Better and more extensive information about the consequences of waste and sorting on the environment</i>	<i>YFFS</i>	80	2.33	.110
	<i>WBFS</i>	82	2.56	
<i>Information about how much waste the household sort compared to others</i>	<i>YFFS</i>	71	1.82	.223
	<i>WBFS</i>	82	2.00	

The most important tool that would make the respondents sort more is to improve the waste management system. None of the three statements have had a significant change in mean. Though *Better and more extensive information about the consequences of waste and sorting on the environment* is still an important tool, the higher mean in 2009 indicates that it was a tool more sought for then than in 2012. Participants of focus groups claimed that when the weight-based system was implemented SSR provided almost no information. In combination with the change in system in 2010 SSR also hired an information consultant and the participants now seemed happier with the communication from SSR. This could somehow explain why this factor is less important now, as it is not something that is missing. The mean of *Information about how much waste the household sort compared to others* was fairly low during the WBFS and is even lower now, though not significantly lower.

5.2.3. What feelings do you get from sorting?

An important assumption behind using an economic incentive to encourage a certain act is that the act is viewed as something that somehow incurs a cost on the individual doing the act.

In the case of sorting waste it is therefore very interesting to know how the subscribers actually view the act of sorting waste and the question “*What feelings do you get from sorting?*” was therefore asked in the 2012 survey. The following feelings were presented as options: *pride, controlled, good conscience, force, independence* and *contentment*.

The graph below presents the mean of each feeling ranged from ‘completely disagree’ (1) to ‘completely agree’ (5).

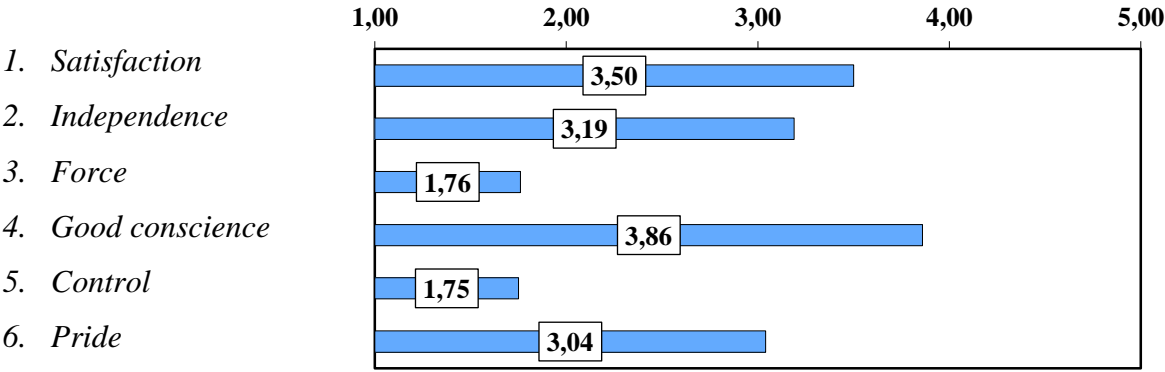


Figure7: “*What feelings do you get from sorting?*”

Though there are more positive options than negative options to this question and the question therefore can be perceived as somewhat skewed, the result gives a quite clear indication as to how the respondents feel about sorting. *Good conscience* is the most prominent feeling with a value of 3.78. It is a feeling that almost all respondents “completely agree” to. After *Good conscience* come *satisfaction* and *independence*. That these three feelings represent the most how the respondents feel when sorting, indicate that sorting is not necessarily considered a negative activity.

The fact that respondents get a feeling of *good conscience* when sorting waste indicates the presence of a social dimension in the choice of sorting. *Satisfaction, independence* and *pride* are also among the strongest emotions present under the current system where there is no economic incentive. They indicate that sorting of waste does not have to be seen as a cost, but rather that it has it’s own intrinsic value and that the respondents therefore have an intrinsic motivation to sort. Focus group participants were asked to provide some thoughts on why the feeling of *independence* came out quite high. One idea originated from Ulstein’s history itself in that the whole community was part of Ulstein’s development through the building and foundation of a strong shipyard. Having all the citizens partake in the town’s development in each their own way made everyone feel involved, included and important. It was a good way

of making people feel competent and autonomous. The explanation was used on sorting; sorting is viewed as a civic duty, something everyone should do, and being able to partake, being able to do one’s bit and having the choice of doing it, provides a feeling of independence because of the feeling of mastering this socially approved task.

We also asked the focus groups participants what it is like for them to be in places where sorting is not an option. The general response was that of it feeling wrong and the following were stated by some of the participants: “I hate it, it is the exact opposite of what I want to do”, “It provokes me massively! (...) I want to throw up, it sits in the stomach”, “We have a cabin where there is only one bin, and we therefore considered taking the waste home”. This also confirms the impression of the activity of sorting as an activity that is intrinsically motivated, conveyed by feelings of competence and autonomy when it is done. And the autonomy and competence is challenged in situations where the intrinsic motivation goes unfulfilled.

5.2.4. Has the sorting become a habit?

As discussed in the theory chapter, an activity repeated over time often becomes habituated. Though the respondents have sorted paper for some time, the introduction of the economic incentive in combination with plastic as an own category have been stated to have encouraged more sorting. So has the increased activity of sorting become a habit? In the 2012 survey the respondents were asked to assess this development and the following statements were to be evaluated from “Not correct at all” to “Perfectly correct”:

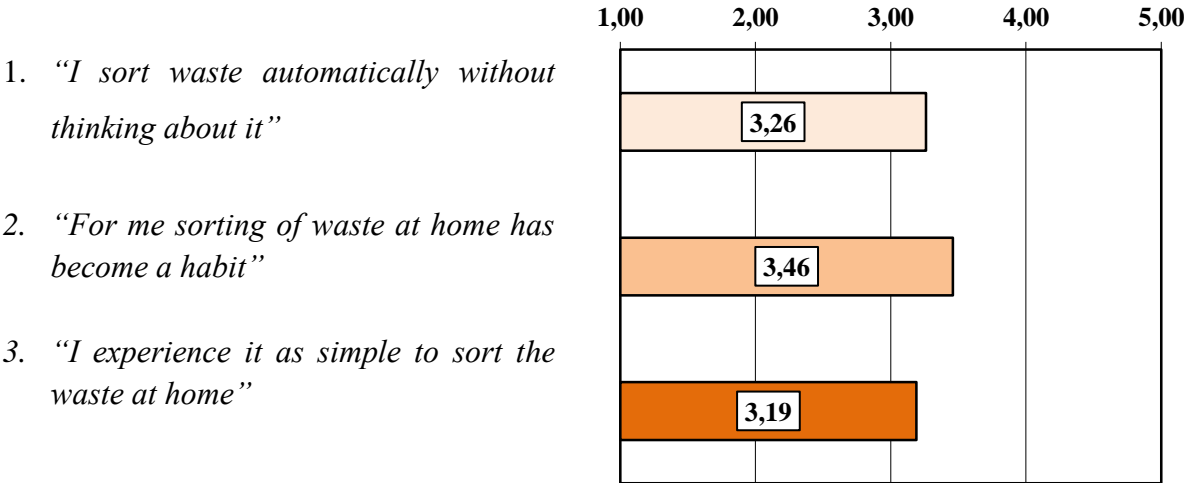


Figure 8: Mean of statements concerning habit.

All the statements have a fairly high mean, indicating that sorting is becoming a habit and that it is experienced as simple to sort. The two first statements somewhat states the same, but the statement about habit seems to better reflect how the respondents feels about the act of

sorting. The statement about how sorting is done automatically was also asked in 2009 and when the two years are compared the mean has increased over the years. From a mean of 3.06 in 2009 to 3.26 gives a p-value of .067* making it a significant change on a .10 level.

Repeating the same act over time often results in the act becoming a habit. It would make sense that this also happened to the act of sorting. By repetition the individual no longer has to think about why or how, it is simply done and the development of the habit gives a sense of cognitive relief. Participants in the focus group stated that sorting provides mental hygiene. They explained this by the sense of being in the moment, doing a physical activity that somehow requires the presence of the mind, but also gives a level of relaxation when it is done right. Some participants viewed sorting as a sport, especially during the WBFS when there was a lot of focus on the economic benefit. The feeling of sport did however continue even though the economic benefit was removed, perhaps as a result of the transition in focus of SSR towards the benefits of sorting, both for the environment and in taking care of the resources. This focus encourages the motivation to fulfil the civic duty that sorting has become. It also encourages the need to be responsible, and fulfilling the feeling of duty and responsibility gives the subscribers feelings of good conscience and independence. The good conscience and feeling of independence can be contributed to the ability be able to contribute to society and consequently feeding into the need for competence and autonomy.

5.3. The many perceptions of the weight-based fee system

Data from the survey, interviews and focus groups show that there were quite different views of the weight-based fee system. A question in the 2012 survey that depicts how divided the community was on the weight-based fee system is the question: “How did you experience having to pay for kg of waste?”. Possible responses were ‘whip’, ‘carrot’ or ‘neither’. The distribution of the answers can be seen beneath:

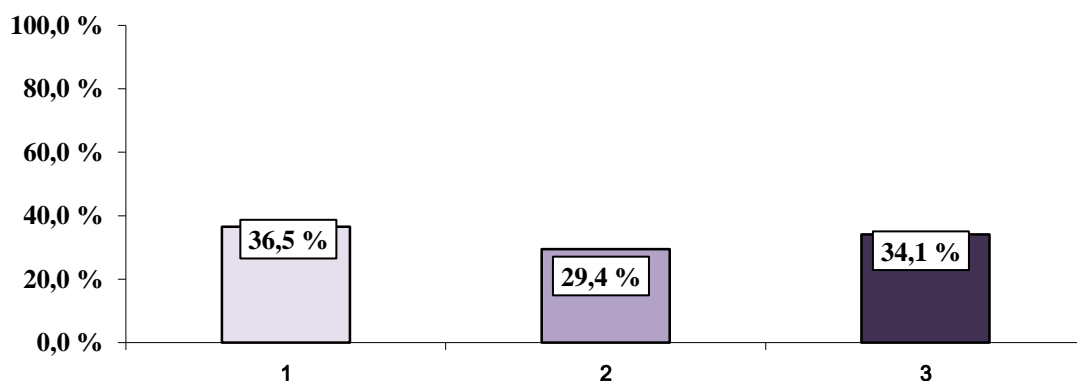


Figure 9: “How did you experience having to pay for kg of waste?” 1: “Carrot”, 2: “Whip” 3: “Neither”

Figure 10 shows how the community is fairly evenly divided on the three options of viewing the system as a whip, carrot or neither, reflecting how there was not one dominant view on the WBFS. Some focus group participants felt that the system encouraged their competitive side and that it was a sport. Others felt the system made them more conscious about the environmental effects of sorting and that each individual had a role to play in taking care of the environment. People living in small households felt the system benefitted them as they now only paid for what they actually delivered; that they did not subsidize other households, and therefore perceived the system as more fair. On the other side were the larger households, and especially those with small children, which felt they were being punished for being many, having a lot of diapers etc.

Some respondents emphasised that the lack of information made it difficult to understand exactly how this system worked. How could they benefit from it? Then came the problems with the technology that led the invoices to be erroneous and made households feel that their effort was useless. And on top of that were the rumours about how the plastic, which they also spent extra effort cleaning, was actually burnt with the rest.

The negative consequences of the WBFS and the emotions it generated made many subscribers complain to the local newspapers and several articles, especially in Vikebladet, can be seen showing discontent. The articles reflect how subscribers were getting “creative” by for example throwing food in the paper bin (appendix 9.2.1) and how that attracted rats (appendix 9.2.2.). Vikebladet also wrote about how the workers at SSR felt “bullied” (appendix 9.2.3.). And as can be common, unsatisfied people tend to shout louder than the satisfied people, causing an impression that more people are unhappy than what is actually the case. When we showed figure 10 to the focus group participants many of them were surprised that as many as 1/3 saw the WBFS as a carrot. It was their impression that more people were unsatisfied. All the opinions being expressed about the system has, according to SSR representatives, made the subscribers in Ulstein more attentive to the issue of waste management than the average Norwegian subscriber, especially in terms of fees. With the amount of attention waste management has had in the community this makes sense.

The second survey was conducted two years into the current system and now that the subscribers have experienced both, we wanted to learn more about which system was

preferred. Several questions were dedicated to uncover what system would best please the more than average waste-management-attentive subscriber in Ulstein.

5.4. So which system?

A question asked in the last survey was “*What kind of emotion can best explain how you felt when you realized that the fee system would be changed from the weight based system to the flat fee system?*” The following emotions were the options:

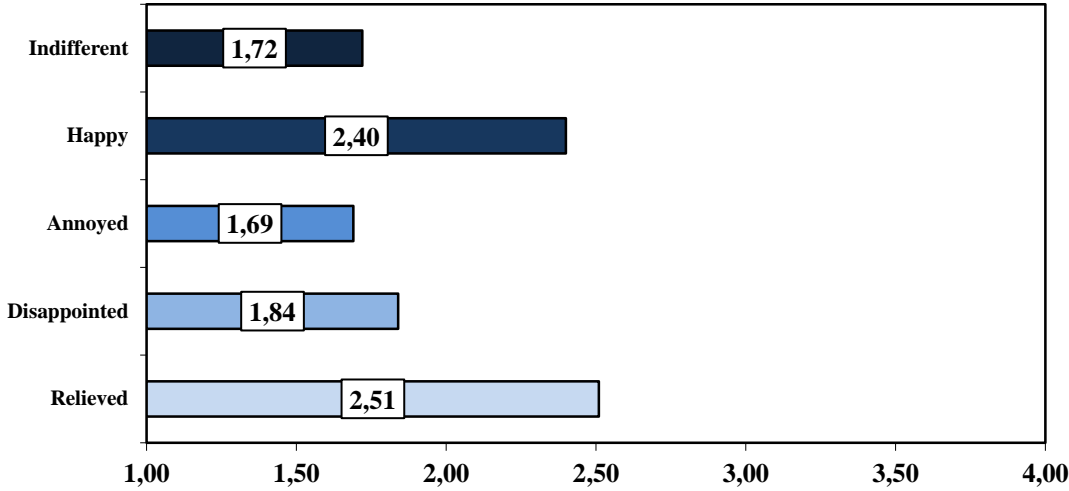


Figure 10: Feelings when WBFS was removed. Responses ranged from 1 being “Is not correct at all” to 4 being “Is very correct”.

Though none of the emotions ranged very high, the two most prominent feelings are *relieved* and *happy*. It gives a quite clear indication of the general feeling when the WBFS was left in favour of a return to a fixed yearly fee. A focus group participant explained that the emotion of relief made sense as the feeling of being watched was no longer there. The participant experienced the WBFS as controlling and that both other people and SSR paid attention to the sorting effort.

In 2009 the respondents were asked to rate several statements about the WBFS. These statements were repeated in the survey of 2012 and t-tests have been conducted to compare results from the two surveys. The following table presents the results.

Table 6: Comparison of statements about the WBFS, each statement was rated from 1 being “*not correct at all*” to 4 being “*very correct*”.

	Survey	N	Mean	t	Sig. (2-tailed)
Good, because I want to decide for myself how much I want to sort and pay for the rest	2012	71	2.23	-2.314	.022**
	2009	78	2.64		
Bad, because I want to decide how to much to sort for myself without being punished through a fee	2012	72	2.14	3.441	.001***
	2009	77	1.56		
Good, because such a system punishes though who don't sort properly – they must pay more	2012	72	2.33	-1.507	.134
	2009	79	2.59		
Good, because such a system gave a clear economic incentive to sort	2012	72	2.36	-2.780	.006***
	2009	75	2.83		
Bad, since my motivation to sort decreased	2012	67	1.64	1.307	.193
	2009	74	1.45		
Bad, because it is a civic duty to sort, and I think that sorting should be encouraged through other means than an economic incentive	2012	72	2.60	2.131	.035**
	2009	73	2.21		
Bad, because such a system punishes large households	2012	72	2.75	2.517	.013**
	2009	78	2.28		

Several of the statements have had a significant change in mean, reflecting a general change in perception of the WBFS. The highest mean from the two surveys is the statement *Good, because such a system gave a clear economic incentive to sort* from 2009 with a mean of 2.83, indicating that the incentive was a primary reason why the system was enjoyed. The statement has a clear change in mean to 2.36 with a p-value of .006** when the question was asked again in 2012. This drop in mean reflects a change in perception of the economic incentive as a positive force, and could be explained by the occurrence of side-effects, such as strategic solutions used to minimize waste. The second highest mean, of 2.75, is from 2012 and is that of *Bad, because such a system punishes large households*, where the p-value is .013**, reflecting how this disadvantage is perhaps the clearest argument against the WBFS. The third highest mean, which also has significantly changed since 2009 (.022**), is that of “*Good, because I want to decide for myself how much I want to sort and pay for the rest*” from 2.64 in 2009 to 2.23 in 2012. Again some of the varying perceptions of the WBFS become evident, and at the same time indicate why the system was enjoyed by about 1/3 of the subscribers. Another significant result is that of “*Bad, because I want to decide how to much to sort for myself without being punished through a fee*” (p-value of .001). The increase in mean is from 1.56 to 2.14, again reflecting how the subscribers were more positively

inclined towards the WBFS in late 2009 than now when it is abandoned. The last significant results is that of *“Bad, because it is a civic duty to sort, and I think that sorting should be encouraged through other means than an economic incentive”*, which also has a fairly high mean (2.60), reflecting the presence of a moral dimension.

The descent of the mean of the statements goes back and forth between positive statements and negative statements, indicating that there is no unified opinion about the WBFS. It is however a clear trend that the means of all the positive statements about the weight-based fee system has gone down and all the means of the negative statements have gone up from 2009 to 2012. The respondents perceive the WBFS as worse now than when they actually had it. As mentioned earlier, the previous survey was conducted quite soon after the implementation of the WBFS and so the negative aspects of the system might not have had time to be played out in full. Experiences with the YFFS might also have changed the perception of the WBFS.

In the 2012 survey the respondents were asked to rate how satisfied they were with the current system (the yearly fixed fee system) from “Very unsatisfied” to “Very satisfied”. Results are presented in the following graph:

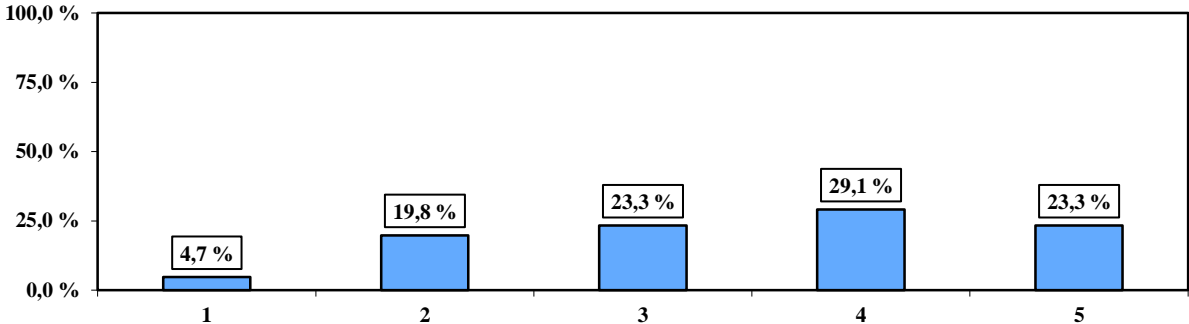
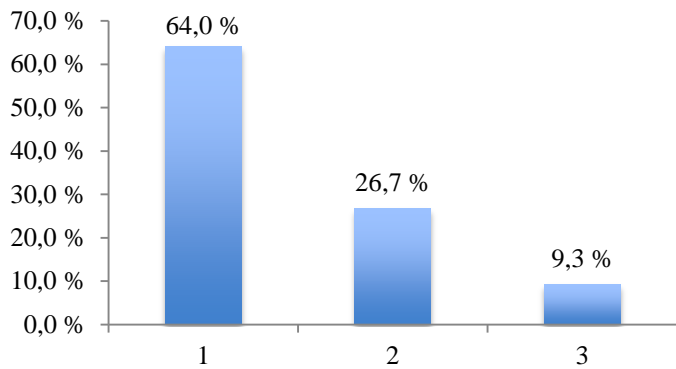


Figure 11: Satisfaction with the YFFS 1= very unsatisfied, 5= very satisfied

Also here the responses are somewhat dispersed on the whole scale, indicating the varying opinions about the fee system. The emphasis is however primarily towards satisfaction and with a mean of 3,47 it would seem as though the respondents are overall quite satisfied with the current system.

So which system do the respondents prefer? In 2012 we asked the respondents which of the two fee systems they think are the best and got the following result:



1	The Yearly Fixed Fee System
2	The Weight Based Fee System
3	I don't know

Figur 12: "Which fee system would you prefer?"

The yearly fixed fee system is preferred to the weight-based fee system. But which of the two fee systems encourage sorting the most? In both surveys the question "How has the current fee system affected your sorting?" were asked with the possible answers of 1="I sort more", 2 = "I sort less" and 3 = "I sort the same".

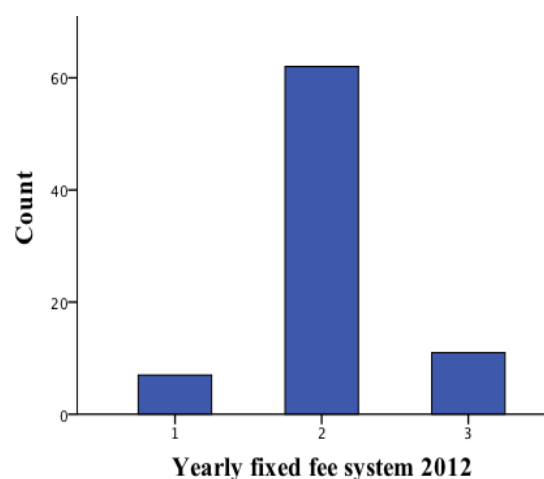
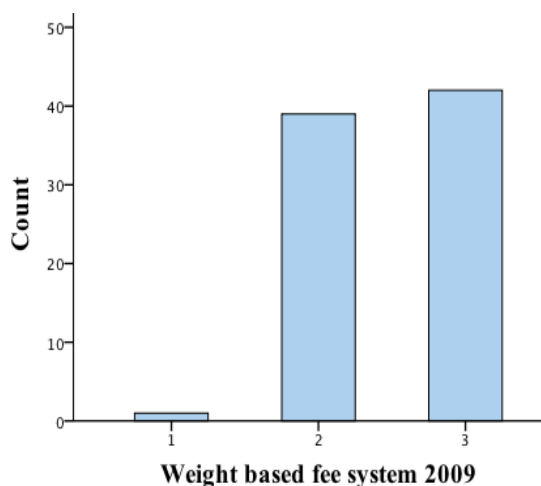


Figure 13 and 14: "How has the current fee system affected your sorting?" The first graph represents responses from the survey in 2009, second represents survey from 2012.

Mean of 2009 is 2.50 and mean of 2012 is 2.05. The weight-based fee system is viewed to give a stronger encouragement to sort than the current yearly fixed fee system. During the WBFS the fee system itself was an incentive to sort and with the current fee system this is no longer the case. Of the 9 statements about motivations discussed in section 1.2.1, *Its economically viable for me to sort my waste* is ranked as number 7 out 9 indicating that it was never the most important reason to sort, but rather one of many reasons. It is however an external incentive that is quite tangible and easily discernable, and therefore easy to pinpoint. When SSR replaced the WBFS with the yearly fixed fee, the fee system itself was no longer an incentive and SSR chose to focus more on communication and information. This appear to

have worked as the sorting level is the same, and SSR claim that the subscribers are better at sorting now than before. The three reasons for sorting that was rated highest; *“I have a duty to sort in order to contribute to a better environment”*, *“Sorting of waste is something everyone should do”* and *“I want to see myself as a responsible person”*, are more abstract motivations in the sense that they are internalized over time and can at a given time be internalized in varying degrees among the different individuals. As the sorting level is still the same, SSR’s focus on information and communication appears to have worked in filling up the “void” left when removing the fee incentive, if such a void existed.

The current waste management system has a stronger we-focus. Subscribers sought for more communication from SSR during the WBFS. That the current management system combines better communication with more information about the benefits and the social responsibility of sorting can explain the increasing satisfaction with the system because it both appeals to, and encourages already present intrinsic motivations. Removing the fee incentive also removed many of the side effects of strategic solutions and SSR workers becoming watchdogs, which made the subscribers feel controlled.

5.5. Comparing communication strategies

Through interviews with municipality representatives we learnt that the WBFS was introduced with a focus on both the environment and on being a fairer system. More sorting at source would benefit the environment and each household was now only to pay for their actual amount of waste. Smaller households would no longer subsidize the larger households. Workers of SSR also stated that the management considered the fee system to be easy to understand and it was therefore little attention on information.

Through focus group interviews we learnt that until the WBFS was introduced, few subscribers considered the flat fee system as unfair. We also learnt that not all the subscribers easily understood the WBFS and how they could benefit from it. Where smaller households felt the benefit of lower bills, larger households felt the disadvantage of larger bills. The subscribers also seem to have been confused about the message. Focus group participants were asked about how they perceived the focus of SSR when introducing the WBFS and several answers came up; fairness, environmental concern, economic benefit for “you” and economic benefit for SSR were some of the varying focuses presented by the respondents.

To better understand the communication and relationship between the respondents and SSR, we added a section in the 2012-survey where we asked the respondents to rate several adjectives according to whether or not they thought it fit as a description of the focus of SSR.

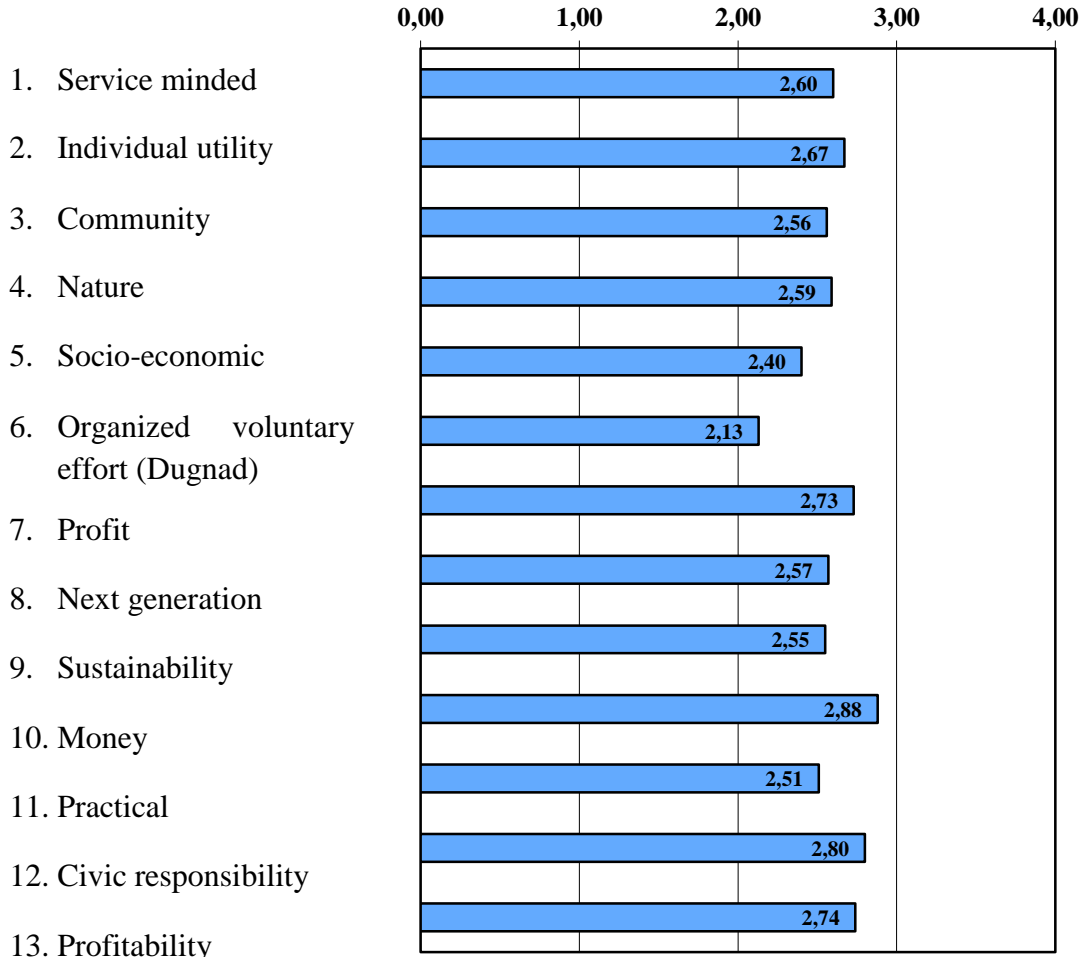


Figure 15: Adjectives describing the focus of SSR

Statement 7, ‘profit’, and 13, ‘profitability’, are two words that are more distinct in Norwegian, but a definition of the two English words indicates the difference: they differentiate in that profit reflects a focus on the potential output that can be generated, whilst profitability reflects a focus on the “amount of equity required to generate” the profit (Clime 2013).

Of all the 13 statements, none really stands out. All of them have a mean between 2 and 3. The highest mean is that of *money* with 2.88, the second highest is *civic responsibility* with 2.80 and the third is *profitability* with 2.74. Again the results from the survey reflect a dispersion of views of SSR and their waste management systems amongst the subscribers.

The experiences of the WBFS are wide-ranging; from experiencing it fair or unfair, from encouraging environmental awareness to encouraging throwing waste into nature, to perceiving it is a sport or to experiencing it as controlling. The varying perceptions of the weight-based fee system show that the message behind the weight-based system was unclear and that the communication was lacking. A participant of the focus group explained how she was discouraged from sorting because the only feedback given from SSR during the WBFS, if any, was always negative: *“I felt they were never satisfied no matter what we did. (...) In the beginning the system felt as a whip, because of bad communication.”* Feeling controlled and getting negative feedback in combination with information about how the sorted plastic ended up being burnt created feelings of mistrust between the subscriber and SSR.

Another aspect of the bad communication between SSR and the subscribers during the WBFS was how information from company reports was perceived to be held back from the public. This added to the general feeling of mistrust towards SSR. From SSR’s point of view the reports did not reflect the real situation and they wanted new reports to be made. At a point workers from SSR felt attacked from all angles as they felt they had both the subscribers and board of representatives against them. The discontent with SSR resulted in changes of the members of the board of representatives and a new daily manager. Changing from the WBFS back to the fixed fee system came about after an assessment was conducted of the expenses of having the weight-based fee system and the unintended creativity that occurred.

When the YFFS was introduced, SSR included a lot more information and a stronger normative message. In 2011 they introduced the slogan of “Find the everyday hero within you” and it was meant to stimulate the subscribers’ sense of civic duty in order to increase sorting. A stronger emphasis was put on responsibility to the environment. SSR hired an economics- and information-consultant and they started conducting surveys to figure out what the subscribers wanted. This was a way for subscribers to give feedback and be part of shaping the services that SSR were to provide (Interviews). In 2012 they put more emphasis on presenting sorting and recycling as a common responsibility by using the slogan: “Together we take better care of the resources”. In the same year SSR also went from picking up the waste every week to every second week, a decision that at first caused some discontent, but which was readily accepted later on. It resulted in more glass and metal being sorted out as it was a way of saving space (SSR). Participants of the focus groups confirmed both the

initial feeling of discontent and also that it settled down when they realized that they managed to sort enough for pick-ups every second week.

5.6. What about environmental awareness?

Both of the waste management systems presented sorting as a positive effort in an environmental perspective. In both surveys the respondents were asked to rate three statements concerning responsibility towards the environment. The three statements were rated from 1 being *“Is not correct at all”* to 4 being *“is very correct”*.

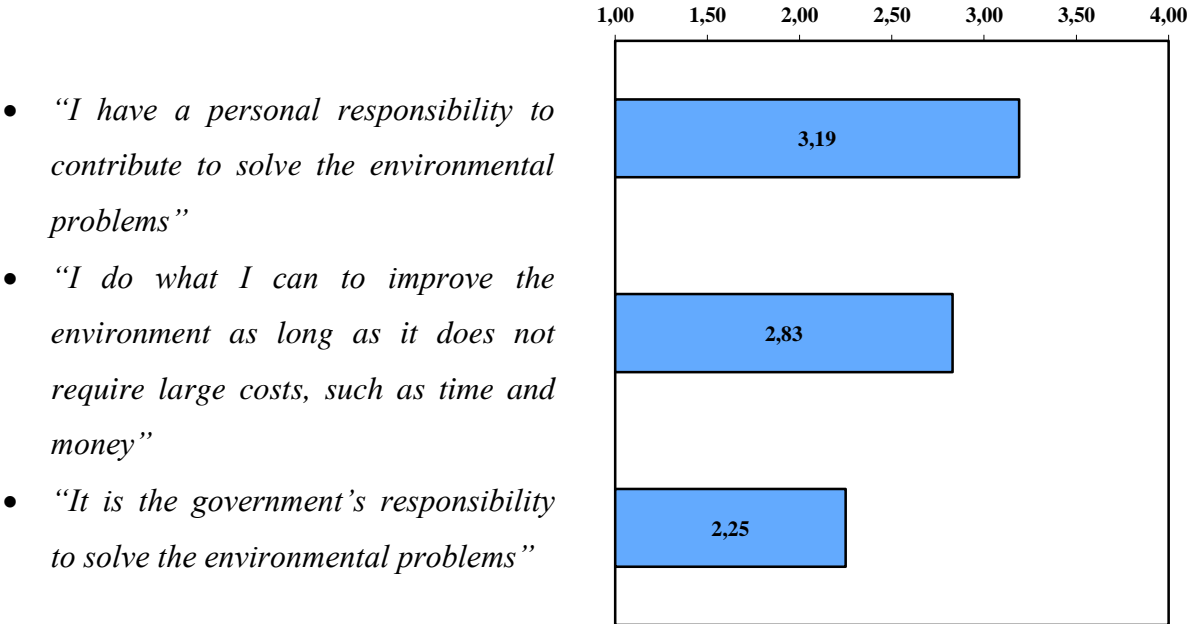


Figure 16: Environmental responsibility.

T-tests comparing the answers from the two surveys show that the first statement, which is rated highest, has had an increase in mean from 2.94 to 3.19. Even in 2009 the subscribers felt the personal responsibility towards the environment, and even more so in 2012. The change in mean is significant - has a p-value of .064*. The *“I do what I can to improve the environment as long as it does not require large costs, such as time and money”* has had a change in mean from 2.70 to 2.83, but is however not significant. Neither is the change in mean of the last statement *“It is the government’s responsibility to solve the environmental problems”* significant. This statement is also rated the lowest of the three statements, indicating that solving environmental issues is considered a task that is everyone’s responsibility more than the government’s.

6. DISCUSSION

Results from the surveys show that the respondents started sorting more during the WBFS and that they have maintained the sorting level under the current YFFS. Further, according to the data from the surveys people see themselves as good at sorting according to the categories defined; this is also a result that has remained the same during both systems. Figures and statements from SSR coincide with the results of more sorting, but regarding the quality of sorting a somewhat different picture has evolved as some subscribers did throw waste in the wrong category during the WBFS. Statements from SSR reflect how under the current system of a yearly fixed fee the subscribers have improved the quality of the sorting. They are now considered to sort better than ever.

A consequence of the WBFS that was not detected in the survey material is the occurrence of strategic behaviour. In order to reduce the cost of the waste that was weighed, some subscribers found alternative ways of getting rid of waste. Examples of the strategic behaviour was to pollute paper and plastic with the remaining waste, throw waste in the neighbour's bin or in a private company's bin and/or throw waste in nature. The occurrence of this behaviour was realized through the interviews and focus group discussions. This behaviour could be considered rational according to rational choice theory, as it is a way of reducing cost. According to IRC theory the occurrence of the strategic behaviour can be explained in terms of a change in motivational structures; the WBFS made it beneficial to find ways of decreasing the amount of waste and combined with the unclear signals that the WBFS conveyed, different rationales could be triggered dependent on how the system was experienced. Where some subscribers experienced the system as fair, other experienced it as unfair. Where some subscribers saw the system as an encouragement to sort more because it is good for the environment, others saw the opportunity to save money by throwing waste into nature. The fact that the strategic behaviour was not detected in the survey could indicate that the respondents acknowledged that it was inappropriate behaviour and therefore didn't want to admit to have been part of it. It does however also indicate that the respondents have not been entirely honest and shows the importance of backing up the survey data with the information from other sources such as the interviews.

Strategic behaviours were repeatedly mentioned as one of the main reasons why the system was abandoned. The strategic behaviour could be a result of norms being crowded out. In the survey norms such as duty and responsibility were presented as main motivators to sort, and as they have not changed from the first survey to the second, they can be assumed to have been equally important under both systems. The different subscribers could be in different stages of internalizing the duty and responsibility as motivators of sorting. Subscribers also experienced the WBFS differently in terms of fairness and this in combination with the varying stages of internalization could make some subscribers more prone to strategic behaviour. Their intrinsic motivation in terms of duty and responsibility can have been easier to crowd out. Such a crowding out effect could have caused the change in motivation and made strategic behaviour the logical behaviour.

Under the current system of YFF the households still have the opportunity to choose a smaller bin and pay less, but the combination of the smaller incentive and a clearer communication strategy, which emphasises environmental concern as a civic duty, has stopped the strategic behaviour. It no longer provides a clear economic benefit. According to SSR the subscribers are now sorting better than ever, but according to the surveys the motivations to sort have not changed. As discussed earlier, it is reason to believe that some subscribers have experienced a change in motivation. The economic incentive has become a less important motivator, but it was not considered amongst the important motivators in 2009 either. For the individuals who were prone to strategic behaviour, this motivational factor might have been more important. The reason why it has not been reported so could be due to either few respondents being amongst them who are prone to act strategically, or that the respondents who were prone to this behaviour understood it to be socially inappropriate but did it anyway because they had a stronger I-rationality.

Not only did the strategic behaviour stop after the implementation of the YFFS, but also the mean of personal responsibility to take care of the environment has had a significant increase from 2009 to 2012. This reflects how the subscribers view their own responsibility to take of the environment as more important now than it was in 2009 during the WBFS. This could reflect that the communication strategy of the current system have succeeded in encouraging the view of taking care of the environment as a task everyone should take part in.

Though the removal of the economic incentive initially should, according to rational choice theory cause a decrease in supply of the encouraged behaviour, the theory can still explain the improved behaviour of the subscribers by the presence of warm glow feelings. The respondents get feelings of good conscience, satisfaction and even independence when they are sorting. This could be interpreted as the presence of warm glow. The respondents rated duty and responsibility as the two most important motivations to sort. These are two motivations that can be considered as norms; you should do your duties and be a responsible person. The good conscience and satisfaction could be seen in relation to this. When following these norms, the individual feel able to adhere to a socially approved and encouraged behaviour. This in turn, could be related to Deci's concepts of competence and autonomy; by self-determined adherence to the socially approved behaviour, individuals feel both autonomous and competent. Independence was also a feeling the respondents related to. Independence often generates connotations of standing alone, making own choices and to be separate from a group. The explanation mentioned earlier, which was taken from Ulstein's own history of the joint venture of establishing the shipyard, somehow turns the concept around and views independence to originate from how well individuals are able to contribute to the common good. When you feel able to contribute well and this is acknowledged, you feel that your effort is important and that you are part of influencing society in a good way. The ability to influence could explain the feeling of independence. An individual will be dependent on society, but by being a good contributor, society becomes dependent on the individual. It somehow reflects the infinite regress; the society influence the individual and the individual influences the society.

SSR and many of the subscribers had a strained relationship during the WBFS. It could be interpreted to affect subscriber's feeling of competence and it certainly affected the workday of SSR employees on the trucks. That SSR had to conduct controls of the bins due to knowledge of pollution of paper and plastic was not conducive to encourage the subscribers. The subscribers felt that they only got negative feedback. Workers at SSR stated that they felt the pollution of the sorted waste was sometimes done on as pure sabotage. The general animosity between subscribers and SSR could in total be interpreted to discourage the feeling of duty and responsibility to sort.

The logic of the two different fee systems could be interpreted to capture the difference between individual and social rationality as clarified in the theory section. Where the WBFS

could be seen as built on the theory of rational choice with its focus on how waste management can benefit the individual with the economic incentive, the YFFS is more based on social rationality through the presentation of sorting as a task to be done by everyone together. This latter interpretation relates to the IRC theory that opens up for a change in rationality and motivations following from a change in the institutions regulating, in this case; waste sorting. Comparing the two theories on human action through the way the two waste management systems have worked, has given valuable insights into their ability to encourage pro-environmental behaviour.

Andreoni's concept of warm glow feeling can be considered present in this case study through the respondents' rating of good conscience and satisfaction as the most prominent feelings derived from sorting. The rational choice theory does however not reflect on how the warm glow feelings occur. It seems to have a simplified view on why individuals choose to adhere to norms, and it is a way for the theory to maintain its assumption about how utility maximization is the main motivator of choice. In comparison, the IRC theory emphasises the dynamic between the individual and its surroundings, and how the surroundings tell us what the appropriate behaviour is. Through the relation an individual have to others in society, he/she will detect what is considered appropriate behaviour. This relationship could be interpreted through Deci's concept of relatedness. By internalizing the behaviour and norms, individuals choose to accept and adhere to socially approved rules of conduct. The internalization process could be interpreted to depend on how the norms address an individual's sense of competence and autonomy. If a norm compliments an individual's sense of competence and makes the individual feel free to choose for him- or herself, the norm can be internalized and habituated. The internalized behaviour and norms can be the source of the warm glow. We feel good about contributing to the public good, and we get satisfaction from it. If this theory of how the warm glow feeling comes to life is accepted, it implies an acknowledgment of the power of institutions, and it implies that institutions are important tools to signal and encourage the behaviour that can solve social dilemma situations.

With regards to the development of environmental policies, both of the waste management systems have benefits. If the WBFS had been implemented with a clearer focus and logic, it could have caused less confusion and been a positive encouragement to sort. It would, however, be difficult to accommodate for the fact that some subscribers would be encouraged to find ways of getting rid of waste by other means. It would still be viewed as unfair as the

system affects households differently; smaller household experienced it as fair as they no longer subsidized larger households, and larger households felt punished for being many. The implementation of the WBFS signalled varying rationales and that could explain the different experiences and behaviours that came about. The YFFS accommodates the needs of the subscribers better by providing options in terms of differently sized bins and in number of collections, and it also sends a clearer signal about what is the expected behaviour. That SSR provides these options shows that they want to encourage sorting and at the same time leaves it up for the household to decide the effort they want to put into it. This system is developed with the participation of the subscribers and so it reflects what is important to the subscribers. It builds on the existing norms of duty and responsibility framing sorting as a pro-environmental task to be done by everyone; together. It appears to have worked and the subscribers are more satisfied with this system than the WBFS.

7. CONCLUSION

The sorting level has remained the same after the change from the WBFS to the YFFS. The WBFS caused strategic behaviour, which amongst other things caused polluted plastic and paper. SSR states that this is not a problem with the current system and that the subscribers are now sorting better than ever. Duty and responsibility are according to the survey the two prominent motivators to sort, and these do not show a change in mean from the WBFS to the YFFS. But the survey did not uncover the strategic behaviour either. For those subscribers who used strategic solutions it could be possible to explain the strategic behaviour by how some individuals experienced the WBFS. From the surveys it was indicated that there were different experiences of the WBFS; some experienced it as fair, others as unfair. Some experienced it as encouraging pro-environmental behaviour, whilst others experienced it as an encouragement to find alternative ways of getting rid of waste. For those who felt the fee system as unfair and who haven't really internalized the norms of responsibility and duty as motivators to sort, their level of the intrinsic motivations could have been crowded out. This could have led to a change in rationale from a We-rational of duty and responsibility to an I-rational of minimizing costs. The WBFS signaled different rationales. When the YFFS was implemented it was a clearer signal presenting a We-rational to be the norm through presenting sorting as a social task to be done together.

The respondents stated that they associated sorting with feelings of good conscience, satisfaction and independence. These emotions could be interpreted as the warm glow feeling presented by Andreoni. If it does, it could also be interpreted as generated by the adherence to the socially accepted behaviour; by being able to understand and follow the indicated approved behaviour, we feel good about ourselves. If we accept this interpretation it indicates how important it is for the individual to adhere to the socially accepted behaviour. It could be interpreted as the importance of relatedness. Whether or not the individual choose to adhere to the socially approved behaviour and internalize the norms of duty and responsibility can be thought to depend on how the behaviour and norms contribute to the individual's need for autonomy and competence.

The two economic theories of behavior present different ideas of what motivates human behaviour. The rational choice theory and its focus on utility maximization might be able to

predict human behaviour in market economies, but appears to fall short of explaining individual behaviour in contexts where there are social components that take part in influencing the individual's actions. As the institutions-as-rationality-contexts theory focus on the relationship between the individual and the surrounding structures, it can better address how this dynamic influence individual choices. The theory requires an understanding of a society's institutional structures and of how different incentive can play out for people in different situations. Using this understanding to develop policies that build on the existing norms and conventions and also support individual's need for autonomy and competence can prove to be useful when encouraging environmentally friendly behaviour. For the development of future policies, knowledge attained from this research also reflects the importance of creating policies and systems that sends a clear signal. Having the clear signal could attain the feeling of competence, as it makes it easier for the individual to know what the expected behaviour is and therefore what behaviour to adhere to. Autonomy can be achieved by opening up for the choice of part-taking, which the YFFS does by providing options. Autonomy has also been achieved by letting the subscribers take part of the development of the system, which happened through the use of surveys. As the subscribers in Ulstein are said to sort better than ever, the system could be said to be a suitable model for future reference regarding the development of pro-environmental policies.

The research conducted for this master thesis benefitted from methodology triangulation. The strategic behaviour was not uncovered in the quantitative method of using the survey, but through the qualitative method of using interviews. General changes in self-perceived sorting-level and motivation would have been difficult to attain without the possibility of comparing the same individual over time using statistical tools. Both qualitative and quantitative methods have provided important information that has made it possible to get the attained understanding of the case study of sorting in Ulstein. Using one without the other would have created a very different understanding.

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Personal communications

Jan Berset – Mayor in Ulstein, interviewed 28th of November, 2012.

Harald Øvereng – Technical group representative, interviewed 29th of November 2012

Gunnhild Solberg – Economic- and information consultant, interviewed 30th of November 2012

9. Appendices

9.1. Appendix 1: Questionnaire 2012



Undersøking kring kjeldesortering i Ulstein

Kjære deltakar,

Dersom du har spørsmål undervegs kan du ringe Irene Tollefsen på telefon nr: 922 60 983 eller Marit Heller på telefon nr: 995 11 616.

Ein stor takk for at du tar deg tid til å delta!

Beste helsing

Arild Vatn (Professor), Irene Tollefsen (master student) og Marit Heller (PhD student)



1) Ønskjer du å bli kontakta seinare for deltaking i ei samtalegruppe om endringar kring kjeldesortering?

Ja Nei



DEL A: OM KJELDESORTERING I HEIMEN

Her kjem først nokre spørsmål kring kjeldesortering i heimen. Ver venleg å svar på alle spørsmål.

2) Kor stor del av avfallet frå hushaldet ditt vert sortert? Kryss av for det svaralternativet som høver best:

- Ingenting
- Lite
- Ein del
- Ganske mykje
- Det meste
- Alt
- Veit ikkje



3) Kor stor del av følgjande avfallskategoriar sorterer du/hushaldet ditt? Kryss av for det svaralternativet som høver best:

	Ingenting	Lite	Ein del	Ganske mykje	Det meste	Alt	Veit ikkje
Papp/Papir/Drikkekartong	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Plast	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Organisk avfall for kompostering	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Glas utan pant	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Metall	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tekstilar, til dømes gamle klede	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spesialavfall, til dømes batteri, reingjeringsmiddel, løysemiddel, olje, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Elektronisk avfall, til dømes mobiltelefonar, radioar, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



4) Kva får deg til å sortere hushaldningsavfall? Vurder følgjande utsegnar og kryss av for det svaralternativet som høver best:

	Stemmer ikkje i det heile teke	Stemmer litt	Stemmer ganske godt	Stemmer særsgodt	Veit ikkje
Oppmoding frå kommunen om å sortere	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eg ønskjer å sjå på meg sjølv som ein ansvarleg person	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Eg ønskjer at andre skal sjå på meg som ein ansvarleg person	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eg bør gjere det eg vil at andre skal gjere	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eg får ei god kjensle av å sortere avfallet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Det er økonomisk lønsamt for meg å sortere	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eg har plikt til å sortere avfallet mitt for å bidra til eit betre miljø	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eg synest avfallssortering er noko alle burde gjere sjølv om det ikkje skulle løne seg for meg personleg	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Informasjon om positive verknader avfallssortering har for miljøet får meg til å sortere	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Oppmoding frå Søre Sunnmøre Reinhaldsverk om å sortere	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Innføring av 14. dagers henteordning som standard for dei tre avfallstypene; restavfall, papp/papir og plastemballasje	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

5) Andre tilhøve som gjer at du blir motivert til å sortere, spesifiser:



6) Kva ville få deg til å gå i gang med sortering eller sortere meir avfall? Vurder følgjande utsegner og kryss av for det svaralternativet som høver best:

	Stemmer ikkje i det heile teke	Stemmer litt	Stemmer ganske godt	Stemmer særs godt	Veit ikkje
Opplegget kring sorteringa blir betre. Døme: auka tal hentingar, lettare tilgang til returpunkt, som til dømes glasigloar, etc.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Det er ingenting som vil gjere at eg startar å sortere eller sortere meir	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Betre og meir omfattande informasjon om kva for konsekvensar avfall og sortering har for miljøet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Informasjon om kor mykje hushaldet ditt sorterer i høve til andre hushald

Det faste avfallsgebyret blir fjerna og erstatta med det gebyret som var i Ulstein før, dvs gebyr per kg restavfall

7) Andre tilhøve som gjer at du vil sortere meir eller gå i gang med å sortere dersom du ikkje gjer det i dag, spesifiser:



8) Kva for kjensler knytr du til sortering av avfall? Vurder følgjande utsegner og kryss av for svaralternativet som høver best.

	Heilt uenig				Heilt enig
	1	2	3	4	5
Ei kjensle av å være tilfreds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ei kjensle av sjøvtende	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sortering av avfall gir meg ein kjensle av tvang	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Godt samvet	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sortering av avfall gir meg ein kjensle av å bli kontrollert	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ei kjensle av stoltheit	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9) Er det andre kjensler du knytr til sortering av avfall? Ver venleg å spesifiser:



10) Vurder følgjande utsegner og kryss av for det svaralternativet som høver best:

	Stemmer ikkje i det heile teke	Stemmer litt	Stemmer ganske godt	Stemmer sær godt	Veit ikkje
Eg sorterer avfall automatisk utan å tenkje på det.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
For meg er sortering av avfall heime blitt ein vane	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eg opplever det som enkelt å sortere avfallet i	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

heimen



11) Sorterer du alt avfallet du potensielt kan sortere? Kryss av for det svaralternativet som høver best:

- Ja
 Nei
 Veit ikkje

12) Vurder følgjande utsegner og kryss av for det svaralternativet som høver best: Eg sorterer ikkje alt eg potensielt kan sortere fordi.....

	Stemmer ikkje i det heile teke	Stemmer litt	Stemmer ganske godt	Stemmer særs godt	Veit ikkje
Det er ikkje lagt godt nok til rette for sortering der eg bur	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sortering krev for mykje tid i kvardagen	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sortering av hushaldsavfall gjev ikkje stor nok miljøeffekt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Det er ikkje lenger økonomisk lønsamt for meg å sortere	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Andre sorterer ikkje	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13) Dersom du ikkje sorterer alt som er mogleg å sortere, er det andre tilhøve som gjer at du ikkje sorterer alt, spesifiser:



14) Vurder følgjande utsegner og kryss av for det svaralternativet som høver best:

	Stemmer ikkje i det heile teke	Stemmer litt	Stemmer ganske godt	Stemmer særs godt	Veit ikkje
Eg snakkar med naboane mine om avfallssortering	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nabolaget eg bur i er oppteken av avfallssortering	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Folk i nabolaget ser det som si plikt å sortere avfallet sitt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eg handlar i tråd med kva nabolaget meiner om	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

avfallssortering



15) Hender det at du eller nokon i husstanden kastar ting som hører til i restavfallet (grøn dunk) i ein av dei andre sorteringsdunkane - til dømes matavfall i plastavfallet? Kryss av:

- Aldri
- Sjeldan
- Av og til
- Ofte
- Veit ikkje

16) Vurder følgjande utsegner og kryss av: Det hender at eg eller nokon i husstanden kastar ting som hører heime i restavfallet (grøn dunk) i ein av dei andre avfallsdunkane fordi....

	Stemmer ikkje i det heile teke	Stemmer litt	Stemmer ganske godt	Stemmer særs godt	Veit ikkje
Eg er ikkje så oppteken av sortering	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Det hender hushaldet har meir avfall enn det er plass til i dunken for restavfall (grøn dunk)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eg gløymer meg	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17) Dersom det hender at du kastar restavfall (grøn dunk) i andre kategoriar, er det andre tilhøve som gjer at du velje dette?

Spesifiser:



18) Hender det at du eller andre i hushaldet blir kvitt hushaldningsavfall på andre måtar enn gjennom kommunen si avfallsteneste - til dømes ved å brenne avfallet?

- Aldri
- Sjeldan
- Av og til
- Ofte

19) Dersom du kvittar deg med avfall på andre måtar, kvifor nyttar

du ikkje kommunen si avfallsteneste, spesifiser:



DEL B: OM AVFALLSGBYR

I 2009 vart det innført eit todelt gebyr for avfallstenesta i Ulstein. Ein del av gebyret var fast per år; 1356 kroner eks.mva. Den andre delen av gebyret varierte med kor mange kilo restavfall (grøn dunk) som vart henta frå hushaldet i løpet av eit år. Det variable gebyret var sett til 2,24 kroner per kilo eks.mva.

Frå 2011 gjekk ein bort frå den kilobaserte gebyrordninga og no betaler alle eit fast avfallsgebyr i året.

Her kjem spørsmål kring dei ulike avfallsgebyra. Det er viktig at du svarer på alle spørsmåla.

20) Korleis opplevde du det å måtte betale pr. kilo restavfall? Eg opplevde det som:

- ei "gulrot". Dvs. som ein oppmuntring til å sortere meir
- ein "pisk". Dvs. som ei straff for å ikkje sortere nok
- Ingen av delane



21) Ta utgangspunkt i det kilo baserte avfallsgebyret. Vurder følgjande utsegner og kryss av for det svaralternativet som høver best: Eg syntes det kg baserte avfallsgebyret var.....

	Stemmer ikkje i det heile teke	Stemmer litt	Stemmer ganske godt	Stemmer særs godt	Veit ikkje
Bra, fordi eg sjølv kunne velje kor mykje eg vil sortere og betale for resten	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dårleg, fordi eg ønskjer å velje kor mykje eg vil sortere sjølv utan å bli 'straffa' i form av gebyr	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bra, fordi eit slikt system 'straffar' dei som slurvar med å sortere - dei må betale høgare gebyr	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bra, sidan eit slikt system gav ein tydeleg økonomisk grunn til å sortere	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dårleg, sidan motivasjonen min for å	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

sortere minka

Dårleg, fordi det er ei samfunnsplikt å sortere, og eg synest sortering bør fremjast ved å bruke andre verkemiddel enn gebyr

Dårleg, fordi eit slikt system straffa store hushald



22) Kva for ei kjensle kan best forklare det du følte då du oppfatta at gebyrsystemet skifta frå betaling pr. kilo til fast avgift? Vurder følgjande utsegner og kryss av for det alternativet som høver best:

	Stemmer ikkje i det heile teke	Stemmer litt	Stemmer ganske godt	Stemmer særs godt	Veit ikkje
Letta	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Skuffa	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Irritert	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Glad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Likegyldig	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

23) Dersom du hadde andre kjensle, spesifiser:



24) Kor nøgd er du med dagens gebyrordning i kommunen din (fast årleg avfallsgebyr)?

- Svært misnøgd 1
- 2
- 3
- 4
- Svært nøgd 5

25) Korleis har dagens gebyrordning (fast årleg avfallsgebyr) verka inn på avfallssorteringa di? Kryss av for det svaralternativet som høver best:

- Eg sorterer meir
- Eg sorterer mindre
- Eg sorterer like mykje
- Veit ikkje

26) Kva for ei gebyrordning for avfallshandtering tykkjer du er best?

- Gebyrordninga der eg betaler pr. kg restavfall
- Gebyrordninga der eg betaler ei fast avgift i året
- Veit ikkje

27) Spesifiser kvifor



DEL C: GENERELLE MILJØSPØRSMÅL

28) Vurder følgjande utsegner og kryss av for det alternativet som høver best:

	Stemmer ikkje i det heile teke	Stemmer litt	Stemmer ganske godt	Stemmer særs godt	Veit ikkje
Eg har eit personleg ansvar for å bidra til å løyse miljøproblema	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Eg gjer det eg kan for å betre miljøet såframt det ikkje gjev meg store kostnader, som til dømes tid og pengar	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Det er det offentlege sitt ansvar å løyse miljøproblema	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



29) Vurder følgjande utsegner og sett eit kryss per linje

	Heilt ueinig				Heilt einig
	1	2	3	4	5
Vi nærmar oss grensa for kor mange menneske jorda kan bere	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Menneske har rett til å utnytte naturen for å dekke behova sine	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Når menneske grip inn i naturen, får det ofte katastrofale følgjer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Menneskjers evne til å finne løysingar vil sørgje for at vi IKKJE gjer jorda ubueleg	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Menneska utnyttar miljøet grovt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jorda har rikeleg med naturressursar dersom vi bare lærar oss å utnytte dei	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Planter og dyr har like stor rett til å	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

eksistere som menneska

Naturens balanse er så stabil at han kan stå imot verknadene frå moderne industrinasjonar

Til tross of menneskas spesielle eigenskapar, er vi framleis underlagt naturlovene

Den såkalla "økologiske krisen" er sterkt overdriven

Jorda er som eit romskip med avgrensa plass og ressursar

Det er meininga at menneska skal herske over resten av naturen

Balansen i naturen er svært skjør og lett å forstyrre

Menneskja vil til slutt lære nok om korleis naturen fungerer til å kunne kontrollere han

Viss dagens kurs held fram, vil vi snart oppleve ein stor økologisk katastrofe



DEL D: SØRE SUNNMØRE REINHALDSVERK OG FOKUS

30) Kva for nokre av dei følgjande orda tykkjer du uttrykkjar fokuset til Søre Sunnmøre Reinhaldsverk idag?

	Stemmer ikkje i det heile teke	Stemmer litt	Stemmer ganske godt	Stemmer særs godt	Veit ikkje
Sørvisinnstilt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Individuell nytte	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fellesskap	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Natur	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Samfunnsøkonomisk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dugnad	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Profitt	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Neste generasjon	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Berekraftig	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pengar	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Praktisk	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Samfunnsansvar	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Lønnsemd	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>



31) Tykkjer du at fokuset til Søre Sunnmøre Reinhaldsverk har endra seg over tid, det vil seie dei siste 2-3 åra?

- Nei
- Ja
- Veit ikkje

Denne informasjonen blir berre vist i førehandsvisinga.

Dei fylgjande kriteria må vere oppfylte for at respondenten skal få spørsmålet:

- (If Tykkjer du at fokuset til Søre Sunnmøre Reinhaldsverk har endra seg over tid, det vil seie dei siste 2-3 åra? *equals* Ja
-)

32) Korleis tykkjer du at fokuset har endra seg?



DEL E: PERSONOPPLYSNINGAR

33) Kva slags bustad har du?

- Einebustad, kjeda /rekkehus
- Leilegheit
- Anna, spesifiser:

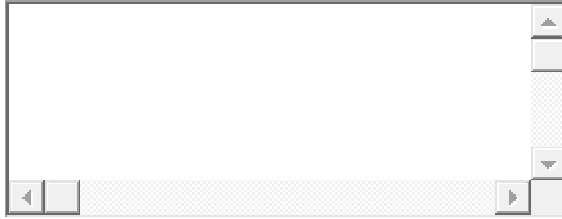
34) Om lag kor stor er hushaldet si ca. årlege inntekt før skatt? (Inkluder òg inntekter som barnebidrag, kontantstøtte, stipend, sjukepengar, osv.) Kryss av for det alternativet som høver best:

- Mindre enn 150 000
- Mellom 150 001 - 400 000
- Mellom 400 001 - 650 000
- Mellom 650 001 - 800 000
- Mellom 800 001 -1 000 000
- Over 1 000 000



DEL F: ANDRE KOMMENTARAR

35) I dette avsnittet inviterer vi deg til å kome med kommentarar og synspunkt til avfallshandteringa i kommunen din, kjeldesortering generelt eller andre synspunkt til denne studien.



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9.2. Appendix 2: Vikebladet

9.2.1. “Fastgebyret kjem først”

Om ikkje lenge kan du vente deg årets første faktura frå SSR i postkassa.

Denne veka startar nemleg Søre Sunnmøre Reinhaldsverk (SSR) med å sende ut fakturaer. Dei skal sendast ut til abonnentane i alle kommunar der SSR har ansvaret for innhenting av avfall. – I første omgang er det fastdelen av gebyret som skal betalast, og den summen er på 1356 kroner pluss moms, fortel dagleg leiar i SSR, Einar Heimdal. I tillegg til dette kjem eit fakturerings tillegg på 50 kroner og eit tillegg på 30 kroner for grein plass som går til kommunen. Det vert altså 80 kroner ekstra, men Heimdal understrekar at desse beløpa gjeld for heile året. Veging av bosset SSR er no godt i gang med veging av bosset. – Så langt ser det ut til å fungere bra, seier Heimdal. Rekninga for den variable delen i første tertial (januar-april) vert fakturert i mai. Rekninga for andre tertial (mai-august) vert fakturert i september. Rekninga for tredje tertial (september-desember) vert fakturert i januar i samband med det faste gebyret for 2010. – Vi har bevisst prøvd å unngå å sende ut reknningar i sommarferien. Det er dumt viss dei vert liggjande i postkassa, og at folk får unødvendige purringar, seier Heimdal. Det er hushaldningsavfallet som ligg i den grøne dunken som vert vege. Dermed vil folk få ulike fakturabeløp alt etter kor mykje dei kastar. Prisen på den variable delen er fastsett til 2,24 kroner per kilo utan moms. – *Vil bossrekninga verte høgare enn tidlegare?* – Det er heilt avhengig av kor mykje du kastar, seier Heimdal. Gjennomsnittsfamilien SSR reknar med at ein gjennomsnittleg familie kastar rundt 400 kilo hushaldningsavfall i året. Då vil den variable delen deira verte som følgjer: 400 kilo x 2,24 kr per kilo = 896 kroner. I tillegg til dette kjem det faste gebyret på 1356 kroner. Til saman må hushaldninga betale 2 252 kroner i året. – *Vil ikkje denne ordninga gå hardt ut over småbarnsfamiliar?* – Målet med denne ordninga er at ein skal få det mest mogleg rettferdig også for dei som kastar lite, og for dei som er flinke til å sortere søpla. Det er eit politisk vedtak som ligg til grunn for at vi skal ha denne ordninga, forklarar Heimdal. **Matavfall i papiret SSR har fått problem med at folk kastar matavfall i hushaldningspapiret. Dette problemet kan ha vorte forsterka etter at innføringa med veging starta. Den blå papirdunken vert nemleg ikkje vege.** Heimdal oppfordrar folk til å la vere å kaste matavfall i papirdunken. – Problemet er at papiret vert forureina, og det fører igjen til at vi får dårlegare betalt når vi sender det ifrå oss. Sidan vi driv etter sjølvkostprinsippet så går dette igjen ut over abonnentane, seier Heimdal. Når SSR får dårlegare betalt for papiravfallet dei sender ifrå seg, så må dei få inn inntekter på andre måtar. I verste fall kan dette resultere i at ein må auke gebyrnivå for abonnentane. Trass i at SSR slit med matavfall i papiret, så prøver Heimdal også å sjå dei positive sidene. – Rutene går mykje betre no, og ikkje minst så går alt betre utan snø. Vi slepp både overtid og skadar på utstyr, og det igjen er positivt for abonnentane, seier Heimdal

<http://www.vikebladet.no/nyhende/article100470.ece>

9.2.2. “Veginga er årsaka rotteplagene”

- Eg forsvarar ikkje at folk kastar organisk materiale i papirdunken, men eg er overtydd om at det er veginga som gjer at folk tyr til slike løysingar, kommenterer Dag Snipsøyr, Folkelista for Hareid kommune.

Kommunestyrerepresentant Dag Snipsøyr synest det var nesten "tragisk" å lese oppslaget i Vikebladet Vestposten laurdag (*har ikke funnet denne artikkelen...*), **om rotteplagene i sorteringshallen til SSR. Rottene kjem inn i hallen fordi folk kastar nesten alt mogleg i papirdunken, fordi denne dunken ikkje blir vegen.** – Det er meir enn leitt dersom SSR må bruke store ressursar på å rydde opp. For det er forbrukarane som til sjuande og sist må betale rekninga, slår Snipsøyr fast. Men han er ikkje så veldig overraska. Snipsøyr fortel at Folkelista for Hareid før veginga vart innført peika på at dei frykta at konsekvensen ville bli at det kom hushaldningsavfall i papirdunken. – Folkelista brukte nettopp dette som eitt av kronargumenta for å gå imot veging. Eg forsvarer det ikkje, men eg kan faktisk forstå at det til dømes mellom barnefamiliar, som må betale mykje meir for den nye ordninga, kan vere dei som tenkjer at når det blir laga ei slik usosial ordning, så skal vi sanneleg finne smothol for å få ned prisen, seier Snipsøyr, som understrekar endå ein gong at han ikkje forsvarer slik framferd. Dag Snipsøyr meiner også at etter at ordninga med veging vart innført, så har han registrert meir dumping av boss på plassar der det ikkje skal vere. – Det er naturlegvis synsing frå mi side, men inntrykket mitt er at det no særleg blir dumpa meir boss i utkantane, seier han.

<http://www.vikebladet.no/nyhende/article102232.ece>

9.2.3. “SSR-tilsette føler seg mobba”

Når sjåfør Rune Jensen og lempis Jon Arne Folkestad er ute og hentar bosset til folk, får dei haugen på med spydige merknader. – Det er ikkje rett å ta oss som jobbar på golvet, varslar dei.

Rune Jensen har jobba i SSR i 9 år, og arbeidssituasjonen hans har aldri vore så ille som no, fortel han. Dei spydige kommentarane frå folk er utløyste av selskapskontrollen i Søre Sunnmøre Reinholdsværk, og vedtaket om å hente inn papirdunkane berre kvar 4. veke. – Ta ikkje oss, ta heller styret – Vi får forferdeleg mykje kjeft når vi er ute for å gjere jobben vår. Men folk bør heller ta medlemene i styret eller i representantskapet til SSR. For det er ikkje vi renovatørane som har bestemt noko som helst. Det er ikkje vi som har skapt problema til folk, peikar Jensen på. I staden for å bruke berre nemninga SSR, meiner Jensen media bør vere flinkare til å poengtere styret i SSR eller representantskapet i SSR. Vurderer å skjule seg bak finlandshette – Aller verst er nettsidene til Vikebladet Vestposten og Sunnmørsposten. Der får vi uhorveleg mykje drit. No har det blitt så gale at det er like før eg kjøper meg ei finlandshette, slik at folk ikkje skal kjenne meg att, kommenterer Jensen. Når renovatørane no skal ut på innsamlingsrundene sine, må dei stålsette seg på førehand. For kritikken frå abonnentane har auka i takt med medieoppslaga. – No har det blitt slik at vi får kjeft viss vi kjem og hentar boss tidlegare på dag enn det vi gjorde veka før. Men folk bør ikkje gi oss kjeft, for det står i reglementet at dunken/sekken skal stå klar frå klokka 07.30, fortel Jon Arne Folkestad. Jensen og Folkestad meiner renovatørane i SSR strekkjer seg så langt som dei berre kan. Og påstanden om at dei yter dårleg service, stemmer ikkje med det biletet dei har av kvardagen sin. Jobben er hard både fysisk og psykisk, noko som gjer at det er stor utskifting blant renovatørane. – Å ha ei velfungerande renovasjonsordning er svært viktig for innbyggjarane. Eg har ei kjensle av at alle vi ha oss, men at ingen vil sjå oss. Når vi dukkar opp, blir det kjeft å få, sukker Rune Jensen.

<http://www.vikebladet.no/nyhende/article103428.ece>

Additional links:

<http://www.vikebladet.no/nyhende/article105626.ece>

<http://www.vikebladet.no/nyhende/article104906.ece>

<http://www.vikebladet.no/nyhende/article103907.ece>

<http://www.vikebladet.no/nyhende/article104765.ece>

<http://www.vikebladet.no/meiningar/leiar/article104035.ece>

<http://www.vikebladet.no/meiningar/lesarbrev/article103344.ece>

<http://www.vikebladet.no/nyhende/article105314.ece>

<http://www.vikebladet.no/meiningar/leiar/article104956.ece>