Bachelor Thesis

The agricultural sector and its right-wing party preference: The influence of environmental protection policies on it

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Abstract

Past studies have focused on the relation between right-wing parties and people working in the agricultural sector, but this bachelor thesis takes a new approach and analyzes the influence of environmental protection policies on this relation. Seven countries are selected to answer the research question: *To what extent do the stringent environmental protection policies weaken the right-wing party preferences of people working in the agricultural sector in Western countries in the European Union from 2008 until 2018?* The formulated hypotheses expect the agricultural sector to vote more for right-wing parties than the other economic sectors, and this relation is assumed to be strengthened by right-wing parties speaking favorably about agriculture and weakened when the parties support environmental protection policies. The analysis of the descriptive statistics and logistic regression confirms all but one hypothesis. The results suggest that the difference in right-wing party preferences between the agricultural sector and other economic sectors increases when the parties speak favorably about agriculture. However, the right-wing party support for environmental protection policies does not influence the right-wing party preferences. The answer to the research question is that environmental protection policy support does not weaken the right-wing party preferences of the agricultural sector.

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1. Introduction

Anyone who causes climate and environmental costs, must also pay them, and should not be rewarded with subsidies from taxpayers' money.

- Martin Rücker, Foodwatch Germany, Der Spiegel, September 2019

This quotation of Martin Rücker, CEO of foodwatch Germany, from an article in Der Spiegel (2019) is one of many statements about how agriculture causes environmental damages. But these statements upset people working in the agricultural sector across the European Union because they feel like their work is not validated and that politicians, environmental protection organizations, and the society make them scapegoats for all environmental problems. Farmers and people working in agriculture already feel pressured by the newly introduced regulations and the low prices they garner for their products, leading many farmers to give up farming (cf. Isenson, 2019). In turn, these emotions lead to outrage and protests all over the EU. Recent demonstrations of farmers in the Netherlands, Germany, France, Spain, and Ireland show that the European farmers, and people working in the agricultural sector in general, feel pressured by national and European politics. Although these circumstances have become public only now, tensions have been rising. For example, French farmers regularly hold protests because they feel threatened by globalization, the influence of the Chinese market, trade treaties with other countries like the Mercosur (Trompiz, Pennetier, & Evans, 2018) or CETA (Solletty, 2019), `crazy' environmental standards (Agence France-Presse, 2015) and less subsidiary support (The Local, 2018). The environmental protection policies, in particular, are putting pressure through economic incentives or penalization on the farmers to adopt more sustainable methods of production. The EU´s Common Agricultural Policy includes the `greening´ of payments since 2013, incentivizing farmers to work more `environmentally sound´ (Consilium, 2013). These policies, among other things, place economic hardships on the farmers and thereby force farmers to quit farming (Goetz & Debertin, 2001; Marshall, 2016).

Farmers are known to support conservative parties (Scala, Johnson, & Rogers, 2015) since farmers are self-employed and business owners. Both of these groups have conservative economic party preferences because they want to protect their business and livelihood (Buttel, Larson, Harris, & Powers, 1982; Jansen, 2017). When people feel that economic or political reasons threaten their livelihood, they often turn to far right-wing parties

and or abstain from voting. For example, Geishecker and Siedler (2011) show that the fear of unemployment leads workers to support far right-wing parties in Germany, and Braakmann (2018) finds that company closure leads to a support loss for mainstream center parties. That is especially true for low- and medium-skilled men. This applies to the agricultural sector as well. More men than women are working in agriculture in the EU (European Commission, 2019), and most farmers are low- or medium-skilled workers. Among the younger generations, more farmers have received full agricultural training (about 20%), but among the above 65-year-old, only 2% have full agricultural training (European Parliament, 2019). This proves that most people working in agriculture are not highly skilled workers. Therefore, it is expected that farmers and people working in the agricultural sector could react similarly (politically) as the workers did after the company closure, who turned away from their usual party preference because these parties did not support them enough during the process.

Considering this, environmental protection policies might lead people working in the agricultural sector to either fear the loss of their livelihood, bankruptcy (farmers) or unemployment (workers). Farmers and the agricultural industry are not the usual group targeted by governments with environmental protection policies leading to unemployment. The typical target groups of these policies are the fossil energy sector as well as industries polluting the air or water (Vona, 2019; Yamazaki, 2017). But agriculture is also contaminating the water and soil through soil fertilizers and pesticides (Pearce & Koundouri, 2003; Schaub, 2019) and should, therefore, be included in research about the groups affected by likely job loss by the policies. Both, the environmental protection policies and the quitting of farmers are not new problems, so the farmers who stayed in business had enough time to show their displeasure with the policies and the parties supporting these through their voting behavior. Again, farmers and people working in agriculture are not the usual group of interest when studying the effect; this is a novel finding.

Previous studies about farmers and their political behavior did not include the environmental factor, which makes this study unique (cf. Coulomb, Delorme, Hervieu, Jollivet, & Lacombe, 1991; Lewis-Beck, 1977a; Linz, 1976). Due to the ever-growing tensions between people working in the agricultural sector and government, this research will generate interesting scientific and societal insights. On a scientific level, this research will apply the existing theories about the voting behavior of small business owners and self-employed people, and combine it with the effect of environmental protection policies on it. This is the main scientific interest, but the research will also show the relation between people working in agriculture and their

party preferences and if there is a strong preference for right-wing parties. The social relevance is that the results of this analysis will provide beneficial information not only for all stakeholders of the constant discourse over environmental protection policies, but it also generates valuable insights for the general public, and it may help the EU population to understand the agricultural sector`s side during the discussions. These results may also serve policy makers in establishing new environmental protection policies.

To farmers and those working in the agricultural sector, the environmental protection policies might seem like an insurmountable issue, one that the fulfillment of and the adaption to the regulation is economically challenging. Economic adaptation to the requirements is the primary reason more and more farmers, especially of smaller farms, quit or fear that they cannot stay in business (Goetz & Debertin, 2001; Marshall, 2016). Therefore, the environmental protection policies are seen as business and job threatening for the agricultural sector. In turn, people vote differently if their job or their business is threatened. This research will take the existing knowledge about other industries when they fear the loss of their business and unemployment and apply it to the agricultural sector. That will show if there is a relation between the environmental protection policies threatening people working in the agricultural sector and their political behavior and if people working in the agricultural sector react similarly as other workers do when their job is threatened. To analyze this, the following research question is formulated: *To what extent do the stringent environmental protection policies weaken the right-wing party preferences of people working in the agricultural sector in Western countries in the European Union from 2008 until 2018?*

2. Theories

This section serves as the theoretical foundation for this research, which analyzes the relation between people working in the agricultural sector and right-wing parties, influenced by the stringency of environmental protection policies. It explains why people working in agriculture typically vote for conservative parties, as well as how their party preferences are affected by the likelihood of unemployment or loss of business, and how the environmental protection policies play into this. Built on this theoretical foundation, the guiding hypotheses for the research are established. Firstly, an overview of the agricultural sector as an employment sector in the EU is given (2.1). The next part focuses on the traditional party preferences of people

working in the agricultural sector. It explains from different angles why they tend to prefer conservative parties and how they are expected to prefer right-wing parties more than people working in other sectors of employment in the EU (2.2). The following section concentrates on the party preferences of people working in the agricultural sector as a response to party manifestos of different political parties. Based on the revised literature, it is expected that the more right-wing parties speak favorably about agriculture, the more support they will receive of people working in the sector (2.3). The last part focuses on the influence of environmental protection policies on the relationship between people working in the agricultural sector and their right-wing party preference. It discusses that the consequences of environmental protection policies bring people to dislike right-wing parties, and the more right-wing parties support the policies, the less the agricultural sector prefers the parties (2.4).

2.1 Agriculture in the EU- A short overview

In the EU, 9.7 million people worked in the agricultural sector in 2016, which amounts to 4,2 % of the total employment in the EU at that time. But this number does not account for the people who are helping at the farms without being employed by them. It is also important to acknowledge that many people work in the agricultural sector part-time or as a second job. This clarifies why the regular agricultural labour force in the EU was 20.5 million people in 2016, which is more than double the amount of people employed in the sector. Farms are led by a manager whose responsibility is the daily routine and financial oversight. The manager decides about caring for the livestock, planting, and what will be bought and sold. The farm manager is often also the owner of the farm and, therefore, the farmer; this does not have to be true however, particularly when a farm has a legal form (Eurostat, 2020b). In 2016, there were 10.5 million farms in the EU and 92,5% of them were classified as family farms. This means more than 50% of the regular labor force was done by family members of the farm owner. But there are vast differences in these numbers among the EU member states. More than one-third of the family farms of the EU in 2016 were in Romania, but the size of the family farms measured in hectares per holding in Romania were among the smallest in the EU, with an average of 2 hectares per farm. In comparison, the average family farm in the United Kingdom, which had the biggest family farms in the EU, was 68 hectares per farm (Eurostat, 2020c). These numbers indicate that there is no straightforward way to define people working in the agricultural sector or how to separate farmers and farm managers.

For the sake of this analysis, all people regularly working in the agricultural sector of the EU are defined as people working in the agricultural sector, disregarding their family connections to the farm, to achieve a bigger dataset. Furthermore, although all people working in agriculture are of interest for this research, there will be a separation between farmers and people working in the agricultural sector in this theory section because there might be different motivations for business owners and workers. Also, most of the existing literature separates farmers and people working in agriculture. But in the analysis, both groups are combined under people working in the agricultural sector.

The Common Agricultural Policy (CAP) is the EU`s policy measure to support farmers financially and therefore assist the production and safety of food in the EU (European Commission, 2020a). Currently, the CAP is divided into three policy pillars. Pillar I refers to income support, which are direct payments to farmers linked to the number of hectares they work on or entitlements allotted to farmers. But there are also direct payments especially for young farmers under 35, and there are ´green direct payments` for farmers who voluntarily implement environmentally friendly methods since the CAP reform in 2013 (Maucorps et al., 2019). The first pillar is the biggest, and more than two-thirds of the CAP budget is allocated to it (European Commission, 2020a). But since the introduction of the greening of direct payments, 30% of the direct payments distributed to member states have to be given to farms producing an environmental benefit (Anania & D'Andrea, 2015). The second pillar is the rural development pillar and supports the agricultural sector through training measures and promoting jobs in agriculture and associated sectors. Nearly a quarter of the CAP budget is spent on this pillar (European Commission, 2020a). The last CAP reform also introduced flexibility between pillar I and II. Member states can transfer up to 15% of the budget of pillar I to pillar II and the other way around (Anania & D'Andrea, 2015). The last pillar is the market measure pillar which is intended for difficult market situations like a sudden drop in prices or demand. These payments are linked to the market situation and thus not made regularly (Maucorps et al., 2019). The budget is correspondingly the smallest of the three pillars (European Commission, 2020a). The CAP has a significant influence on the future of employment in agriculture (Breustedt & Glauben, 2007; Kaditi, 2013; Van Herck, 2009) as well as on environmental protection through its incentive payments and cross-compliance with the statutory management requirements and good agricultural and environmental conditions (Anania & D'Andrea, 2015; European Commission, 2020b; Hart & Baldock, 2011). Hence, the CAP plays an important role in the agricultural sector as well as in environmental protection and influences different parts of this research.

2.2 The agricultural sector and its party preferences

Traditionally farmers have been known to vote for conservative parties and candidates (Lewis-Beck, 1977b; Scala et al., 2015; Van der Zee, 1997), and Lewis-Beck (1977a) finds that farmers in the 1970s became more politically engaged than in the past. The conservative party preference holds especially true for managers/owners of large farms (Buttel et al., 1982), due to them being business owners and self-employed. Farmers as business owners have specific interests that they want to protect through their party preferences. Gutter and Saleem (2005) find in their research about financial vulnerabilities of small business owners that among the analyzed small business owners (farm, restaurant, retail, construction, blue-collar service, white-collar service), farmers are the most vulnerable ones. Since their farm generates both their income and wealth, they face short- and long-term financial vulnerability equally. Another aspect is that farmers and people working in the agricultural sector have low job mobility due to various reasons. First, they have low occupational mobility because people working in agriculture often have a low or medium skill set and no work experience in other sectors (Gasson, 1969). Age also plays a role in this. 20% of the people working in the agricultural sector in the EU are older than 54 years and only have a 5-7% chance of working in another sector (Maucorps et al., 2019). This does not allow them to change their profession easily. Additionally, people working in agriculture and especially farmers face personal immobility. They have family ties with the farms and the region which makes it unlikely for them to leave the area in pursuit of a new profession (Gasson, 1969). Worre (1980) shows in his study that these family ties also lead people who have an agrarian background and now live in an urban area to support agricultural parties in Scandinavia because the party preferences of their parents and their childhood milieu influence their own party preferences (cf. Stephens, 1981). This demonstrates that even if people leave the rural area and agriculture behind, they will still have their parents` agricultural business interests in mind and prefer parties supporting them.

The agricultural sector is also susceptible to trade and trade shocks which can correlate with an increase of support for radical right-wing parties at the district level (Cavallaro & Zanetti, 2020; Colantone & Stanig, 2018). Lewis-Beck and Nadeau (2011) establish in their analysis that there is a research gap in the field of policy-oriented hypothesis of economic voting. They measure patrimony (property ownership) when analyzing economic votes because they believe it has a significant influence on voting behavior. They say that "[v]oters with a greater accumulation of wealth – stocks, houses, land – will advocate different policies, and

favor different parties" (Lewis-Beck & Nadeau, 2011, p. 290). Lewis-Beck and Nadeau consider that although many voters have the same opinion regarding the economy, they do not want the same policies implemented. They demonstrate that there is both, positional economic voting where voters support the party closest to their preferences and patrimonial economic voting where voters owning property develop a specific political preference which mostly leads to the support of conservative parties. Farmers have particular policy preferences and they are the owners of land and livestock, so this theory is very applicable for the analysis of the voting behavior of the agricultural sector.

Additionally, farmers are not only business owners but also self-employed. Among the group of self-employed people, farmers belong to traditional self-employment, the `petty bourgeois´. The `petty bourgeois´ describes the group of self-employed people who do not hire workers to produce goods (capitalists) and do not offer their labor force in exchange for wages on the labor market (workers) (Bögenhold & Staber, 1991; Steinmetz & Wright, 1989). Farmers belong to that group because traditionally they did not employ laborers outside their family and they produce their products and sell them to the population (Jansen, 2017). This also means that traditionally agricultural workers were family members or had an agricultural background. In the present day, nine out of ten people regularly working in the agricultural sector in the EU are either the farm owner or members of the farmer´s family (Eurostat, 2020b). Because of these reasons, it was believed that self-employed people like farmers would vote for right-wing parties to protect their business interests through tax reduction, especially regarding inheritance tax, and regulations protecting their small businesses (Jansen, 2017). Many studies agree with this (Jansen, 2019), but more recent studies suggest that self-employed people do not identify only with right-wing parties and that they should not be perceived as a homogenous group anymore (Bögenhold & Staber, 1991). Several self-employed people, especially solo self-employed ones, also have tendencies to vote for (new) left parties for more welfare policies but nevertheless the relation between self-employed people and their support for right parties persists (Jansen, 2019). However, the farming self-employed people are a homogenous group (Korpi, 1972) among the self-employed and still belong to the traditional group of self-employed people and the corresponding voting preferences for right-wing parties. This leads to the formulation of hypothesis 1 (H1): *On average, people working in the agricultural sector of the EU vote more for right-wing parties than people from other sectors.*

2.3 Influence of party manifestos on voters from the agricultural sector

The second part of this theory section focuses on the party preferences of people working in the agricultural sector as a response to party manifestos of different parties. In a democracy, voters put their trust in parties to represent them and their interests. Accordingly, they prefer parties that want to implement policies vital to them. Therefore, during an election, the voters need to combine their policy preferences with the parties` preferences. As Downs (1957) puts it, they select the government which is the most advantageous for them. As voters are not entirely rational, they often compare the party ideologies instead of many policies because it is easier for them to distinguish the parties (Downs, 1957). The Directional Theory of Issue Voting which says that voters support candidates who have a similar view on specific issues relevant to the voter supports this too (Rabinowitz & Macdonald, 1989).

Despite this, recent studies suggest that voters do not realize when parties shift in their policy views. Adams, Ezrow, and Somer-Topcu (2011) find in their research that voters do not respond to left-right or policy shifts of parties, but they react strongly to their subjectively perceived shifts. This means that when parties are changing their policies or manifesto, voters do not alter their opinion and perception of the party accordingly. But other studies (Adams, De Vries, & Leiter, 2012; Adams, Green, & Milazzo, 2012) about the Netherlands and the United Kingdom demonstrate that the party depolarizations during the 1980s and 90s also led to the depolarization of the public in terms of policy preferences and partisan loyalty. This relates strongly to class voting. Jansen, Evans, and de Graaf (2013) discuss that the party positions on left-right ideology impact the strength of class voting in their study. They find that the less polarized parties are along the left-right dimension, the weaker is the class vote relationship. Moreover, they argue that class still has an impact on party choice in most countries despite a general decline of class voting and that party preferences of the classes still exist.

What Jansen *et al.* (2013) discuss is the top-down perspective on class voting. This means that they do not view the weakening class and social structures as an explanation of the decline of class voting, but they look at the changes in class voting as a result of changes in party behavior and supply. The changed positions of parties on policies or in the party system, in turn, affect the voter´s opinion about a party because new choices emerge (see also Evans, 2000). In another study, Green (2007) finds that the left-right dimension led to an increasing consensus between voters and perceived party positions in the UK. The parties and voters understand each other and when the parties merge more, the voters do, too. In contrast, she

discovers that when parties diverged more on European issues, the voters also separated more. This shows that when there is a policy issue the parties have a very different opinion about, the voters drift apart over this issue, too. That also has implications for the society because it can lead to conflicts between different societal groups supporting separate sides of the policy and in turn, pitting them against each other.

In addition, Adams *et al.* (2014) identify in their follow-up study that party manifestos still have no influence on the voters' perceptions of the party positions but political experts` assessments of party positions lead to a changed perception of party position of the voters. This shows the high trust citizens have in the information environment. Moreover, Fernandez-Vazquez (2014) challenges Adams *et al.´*s earlier findings that voters do not change their party perception based on party manifestos. He explains that campaign policy announcements affect the party images voters have and that they can merge the three different perceptions (pre-election, during the election, post-election) they have into one new and complete impression of the party positions. Thus Fernandez-Vazquez proves that campaigns matter because voters listen to campaign declarations and decide accordingly. Seeberg, Slothuus, and Stubager (2017) imply that voters listen even more intently to parties. In their research about shifting party policy positions in Denmark, they find that voters do not have a problem in understanding party positions after a change occurred. Contrary to the results of other studies, the voters here can change the perception they have of two governing parties after they form a coalition with a third party. Earlier studies of the authors support these findings and prove that voters see a strong connection between parties and policy issues, the more the parties talk about it (Stubager & Seeberg, 2016; Stubager & Slothuus, 2013).

All of this suggests that voters can comprehend if a policy issue is essential to parties and when parties shift away from previous positions on a topic. But this also works the other way around. Parties might change their opinion and position about a specific policy issue when they realize that the public opinion differs from the party´s opinion (Adams, Clark, Ezrow, & Glasgow, 2004). The authors show that not only voters listen to parties but that parties listen to their voters, too. Ezrow, De Vries, Steenberg, and Edwards (2011) support this with their findings that the mean voter position on a policy issue shifts the mainstream parties' attitudes towards this policy issue. For the agricultural sector, this means that people working in the sector listen to different parties and decide which represents their interests best. Parties that speak favorably about agriculture are expected to be the preferred parties of people working in the agricultural sector.

In general, all political parties of a country have an interest in agriculture because it is an important policy area (Grant, 2012; Tosun, 2017). But it is especially the right-wing conservative parties which are known to be protective about agriculture (Olper, 2007). For example, in Germany, the Christian Democratic Union (CDU) and the Christian Social Union (CSU) traditionally represent the interests of the agricultural sector, and hence they often lead the agricultural ministry in governmental coalitions (Schaub, 2019; Tosun, 2017). In discussions about agricultural policies, conservative parties are often associated with the idea of `exceptionalism´ which views agricultural producers as the main focus of policy making. In contrast, green parties prefer `post-exceptionalism´ in their policy making, hence considering many actors more than the agricultural producers in the process like NGO´s, consumers, or retailers (Daugbjerg & Feindt, 2017; Daugbjerg & Swinbank, 2008; Tosun, 2017). As right-wing parties take the stance of `exceptionalism´, they are expected to support agriculture or speak positively about it. Thus, hypothesis 2 (H2) is phrased correspondingly: *The more right-wing parties in a country speak favorably about agriculture, the more support they receive from people working in the agricultural sector compared to people working in the other economic sectors.*

2.4. Environmental protection policies and the agricultural sector

This section focuses on the influence of environmental protection policies on the party preferences of people working in the agricultural sector. Environmental issues have become more important in politics in the last few decades. More people are concerned about environmental protection and sustainability. Environmental issues are often mentioned together with other issues under the term `quality-of-life politics´ (Achterberg, 2006; Heath, Jowell, Curtice, & Evans, 1990) which means that people who do not have any material needs now focus on enhancing the quality of their life through safeguarding the environment. Moreover, this impacts class voting. Whereas traditionally the working class voted for left-wing parties to improve its economic position through distribution measures and the middle-class voted for conservative parties to protect their financial interests, the working class now tends to support right-wing parties because of cultural conservatism (Achterberg & Houtman, 2006) and the middle class prefers left-wing parties out of concern for the environment (Achterberg, 2006; Bean & Kelley, 1995).

In general, environmental protection policies affect traditional production sectors and endanger jobs of manual workers. Francesco Vona (2019) analyses how climate protection

policies lose legislative support if they include negative implications like job loss. The starting point is the US withdrawal of the Paris Climate Agreement because of the fear of job loss. He states that climate policies can be seen as unfavorable for employment, more so in areas where polluting industries are the major employers. Vona concludes that policy makers need to find a middle way between the positive and negative impacts. Although Vona does not write about farmers in his research, he shows that climate policies might be a threat for employment, and some farmers feel threatened by environmental protection policies fearing the loss of their economic existence. Yamazaki (2017) agrees that the relation between environmental protection regulations and jobs is complicated because every regulation is unique in its strategy and impact. This is important for the agricultural sector too because it is not only influenced by environmental protection policies aimed at the sector, but it will also be affected by measures like "carbon sequestration incentives in forestry [which] will increase the scarcity and cost of agricultural land, and taxes on fossil fuel emissions [which] will also raise the costs of producing, transporting, and processing agricultural commodities" (Golub et al., 2013, p. 20894).

Walker (2011) has similar findings as Vona and Yamazaki and shows that firms respond to environmental regulations by phasing out jobs rather than by the stopping of hiring new employees. Another study about Germany's coal mining phaseout and its policies from 1950 to 2018 by Oei, Brauers, and Herpich (2019) shows that policies about unemployment and the attraction of new energy corporations and investments are not enough and more factors need to play into the transition towards the coal exit. The authors show that the involvement of local stakeholders in the policy process not only helps in designing the policy but also generates higher acceptance of it despite the fear of job loss. This is also something the farmers asked for in the recent farmers' protest, to be included in the discussions. Based on the literature on climate regulations, it is expected that workers whose jobs are threatened because of these policies will be against these policies or some aspects of them and the corresponding parties.

The agricultural sector of the EU already has a problem attracting young people. Until 2030 the agricultural workforce in the EU will decline yearly by 2%, but this is also due to improved agricultural technology like precision farming. Furthermore, more than 20% of the agricultural workforce in the EU is over 54 years old and the amount of young farmers is declining (European Parliament, 2019). For this reason, the CAP includes young farmer payments (YFP) to encourage and support young people in farming. The given situation combined with stricter requirements for environmental protection leads to a state of anxiety in

the agricultural sector. People working in agriculture are a particularly tight-knit class sharing "their interests in trade, income, and residence […] [as well as having] a more closed and integrated milieu than that of any other social group" (Worre, 1980, p. 305) which enhances the anxiety and leads to discontent with political parties promoting environmental protection.

As mentioned before, the more parties talk about one policy issue the more voters connect them with this issue (Stubager & Seeberg, 2016; Stubager & Slothuus, 2013). Consequently, the more parties talk about policies that do not support the voter or have a negative impact on them, the less support the parties will receive from these voters. Environmental protection policies are essential and often discussed in European politics, but not all professional groups are in favor of them because these policies might threaten their economic sectors. Among them is the agricultural sector which in turn influences the party preferences of people working in the sector. People working in agriculture will not prefer parties that support environmental protection policies because these policies interfere with their work and endanger their jobs. Therefore, hypothesis 3 (H3) is formulated: *The more right-wing parties support environmental protection policies in a country, the less they are preferred by people working in the agricultural sector compared to people working in the other economic sectors.*

3. Data and measurement

This section discusses the chosen research design, data collection, and case selection. In addition, the four main and the control variables are operationalized based on the theory section. The descriptive statistics of the dependent and independent variables also offer first valuable insights for the analysis.

3.1 Research Design

The research design of this analysis is an interrupted time series. The design ensures correlation and correct time order meaning that the independent variables occur and are measured before the dependent one. This will show if there is a change in the party preferences among people working in the agricultural sector because of the influence of environmental protection policies in selected countries of the EU. The research question will be answered through the testing of

the three hypotheses. The data will be analyzed and show if the hypotheses are supported or need to be rejected.

The data of this analysis will be analyzed based on statistical inference using a logistic regression model, including the control variables. This will show if there is a linear relationship between the dependent and the independent variables. The logistic regression analysis is used because the dependent variable is a dummy variable (support of right-wing parties vs. left-wing parties). The logistic regression analysis will show the strength of the relationship between the dummy coded dependent variable `party preferences´ and the respective independent variables `sector of economic activity´, `speaking favorably about agriculture´, and `support of environmental protection policies´.

3.2 Data collection

Data for this study is taken from both the European Social Survey (ESS) and the Manifesto Project. The ESS offers a wide range of data on attitudes and beliefs of people across until 30 countries. The ESS survey is conducted every two years, covering now nearly two decades of survey data in nine rounds (European Social Survey, 2020a). In this study, the ESS rounds 4-9 are used because through this, ten years (2008-2018) are covered so that a possible change in party preferences over time will be visible. Moreover, the CAP reform of 2013 is in the middle of this timespan and it will, therefore, indicate if the increased greening measures influenced the party preferences of people working in the agricultural sector. The ESS offers specific information about the party preferences of the respondents in general as well as the party they voted for in the last national election if they voted. Further, it includes information about the jobs of the respondents and the professional sector they belong to. For these reasons, the data provided by the ESS offers the necessary information for this study.

The Manifesto Project contributes the data about the countries for the other parts of this research. The Manifesto Project analyses the election programs of political parties in national elections to uncover their policy preferences (Manifesto Project, 2020). The contents of the party manifestos are divided into seven different policy domains as well as sub-categories. Because of this, it offers insight into the policy preferences of parties regarding certain issues like the environment, but also regarding sectors like agriculture. When recoding the Manifesto Project data in a data set together with the ESS data, the Manifesto Project data is only correlated with ESS data procured the latest two years after the last national election in the

corresponding country. This ensures that the other variables are more applicable as the respondents remember their socio-economic situation during the previous election still very well. But this measure also minimizes the number of respondents for the analysis because national elections are not as often as the ESS is conducted.

3.3 Case selection and sampling

To answer the research question, quantitative data is used to be able to compare the party preferences of people working in the agricultural sector over time. The ESS is typically used in researches like this one because it offers as van der Brug *et al.* (2012) argue "comparable data across a large number of countries and with the appropriate measures of electoral support for various types of parties, including RRPs (radical right parties)" (as cited in Cavallaro & Zanetti, 2020, p. 320). There are eleven EU member states consistently in all surveys over the years: Belgium, Germany, Estonia, Finland, France, the United Kingdom, Hungary, Ireland, the Netherlands, Poland, and Slovenia.

But the party competition differs in Western and Eastern European countries. Although the political systems have similarities, the basic structures of the party competition in Western and Eastern Europe are fundamentally dissimilar. The reason for that are the histories of communism in Eastern Europe and capitalism in Western Europe. This past strongly influences the party competition. In Western Europe, the typical party competition is of left parties with green/alternative/libertarian (Gal) dimensions and right parties with traditionalism/ authority/nationalism (Tan) dimensions. By comparison, in Eastern Europe, there are strong relations between left parties and Tan dimension and right parties and Gal dimensions because the communism in these countries was left-Tan. Political parties that are attractive to `transition losers´ after the end of communism put emphasis on the total opposite of capitalism, "economic equality and traditional authority" and are, hence, left-Tan (Marks, Hooghe, Nelson, & Edwards, 2006; Vachudova & Hooghe, 2009). Therefore, I proceeded like Cavallaro and Zanetti (2020) and excluded the Eastern European countries because their right-wing parties do not represent what will be analyzed in this study. This excludes Estonia, Hungary, Poland, and Slovenia and leaves seven countries for this research: Belgium, Germany, Finland, France, the United Kingdom, Ireland, and the Netherlands.

3.4 Operationalization

This section describes the operationalization of the main and the control variables. It explains how the existing variables of the two different data sources are computed and combined to ensure that the variables measure what the theoretical framework explains.

3.4.1 Main variables

The dependent variable `party preferences´ is measured using the data of the ESS variable "party voted for in the last national election"[1]. This will show the party preferences of the people over time in each country. The variable is recoded into a binary variable so that it is either right-wing party preferences or left-wing party preferences. The operationalization is thus, right and left party preferences. This is done to show the contrast between left- and right-wing parties on different policy issues like agriculture and environmental protection. Left-wing parties are known to make environmental protection one of their priority policy issues (Carter, 2013; Neumayer, 2004) which is also the reason why they are presently preferred by the middle-class voters mostly working in the tertiary sector and who are concerned about the environment (cf. Achterberg, 2006; Bean & Kelley, 1995). Right-wing parties are preferred by people working in agriculture because they support the agriculture sector more. However, neither left- nor right-wing parties ignore the other topic, also because both agriculture and environmental protection are essential for the parties, voters, and governments of the selected countries. To classify the parties as right-wing and left-wing parties, I refer to the classification of the Manifesto Project (Volkens et al., 2019). The liberal[2], Christian democratic, agrarian, conservative, and nationalist parties from the respective countries will be combined and categorized as right-wing parties (cf. Jansen, 2019, p. 393). In contrast, the ecologist, the socialist, and the social democratic parties form the left-wing parties. Ethnic-regional parties are not included in the analysis as well as when the respondents voted blank, invalid, or when the question was not applicable, or the data is missing for another reason. This also explains

[1] This variable is divided in two variables in Germany because the first vote is for the district candidate and the second cast is for the preferred political party. Because this analysis is interested in party preferences, only the second variable will be used.

[2] Even though the Dutch party D66 is classified as a liberal party in the Manifesto Project, it will not be included as a liberal party in this analysis. Its viewpoints differ from left to right from topic to topic and the party often forms coalitions with the GreenLeft party (European Social Survey, 2020b). Further, D66 suggested during debates in 2019 to cut the amount of livestock in the Netherlands in half to lower the nitrogen emissions. This led to protests among Dutch farmers because they saw their livelihood being threatened (Borst, 2019). For this analysis, D66 will be considered a left-wing party as it does not have a position on agriculture and environmental protection typical for liberal parties.

why there is a high amount of missing data included in Table 1. Overall, more than half of the respondents voted for a right-wing party during the last national elections, but also that about 40% preferred a left-wing party. The analysis will show if the preference for right-wing parties varies among the different economic sectors.

Table 1: Frequencies of party voted for last national election

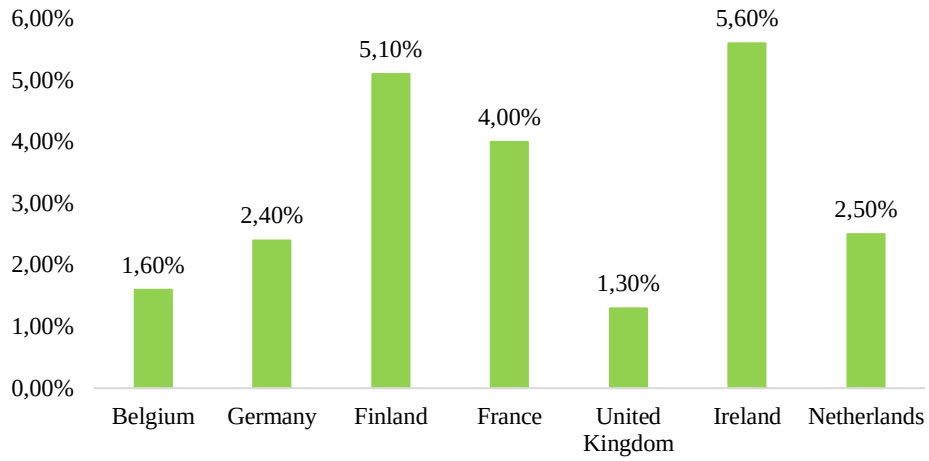
		Frequency	Percent	Valid Percent
Valid	left-wing parties	10659	11,8	41,6
	right-wing parties	14983	16,7	58,4
	Total	25642	28,5	100,0
Missing	System	64334	71,5	
Total		89976	100,0	

The first independent variable `sector of economic activity´ is measured using the ESS variable "nacer" which measures the industry/sector people work in. People who are unemployed, have not entered the working life yet, or are staying at home for various reasons were not included in the analysis. The variable is broken down into the categories of the primary, secondary, and tertiary sectors to divide the reference group into two subgroups. Traditionally, the primary sector is comprised of people working in extraction (mining, forestry, fishing, and agriculture). The secondary sector is manufacturing and the tertiary sector is the service sector (Eurostat, 2020d). But as the primary sector includes other occupations than agricultural occupations, the primary sector category is divided into people working in the agricultural sector and people working in the other professions. These people working in the other professions are added to the secondary sector. This means that the ESS variable is recoded into three groups. Table 2 shows that out of all respondents of the ESS rounds working in either of the three categories, 3,2% work in agriculture, and 15% work in the manufacturing sector. The most people work in the service sector, with more than 80% working there. But as can be seen in Figure 1, the amount of people working in the agricultural sector varies greatly across the countries. Finland (5,1%) and Ireland (5,6%) are the countries with the most people working in the agricultural sector and Belgium (1,6%) and the United Kingdom (1,3%) have the least people working in agriculture.

Table 2: Frequencies of sector of economic activity

		Frequency	Percent	Valid Percent
Valid	Agriculture	2657	3,0	3,2
	Secondary Sector	12466	13,9	15,1
	Tertiary Sector	67364	74,9	81,7
	Total	82487	91,7	100,0
Missing	System	7489	8,3	
Total		89976	100,0	

Figure 1: Percentage of respondents working in the agricultural sector



The next independent variable `speaking favorably about agriculture´ is measured on a ratio level with the "per703" variable of the Manifesto Project dataset. This specific variable of the Manifesto Project describes how much every party speaks favorably about agriculture and is hence a country level variable and not an individual level variable like the first independent variable. It includes all policies in favor of the agricultural sector and statements are only incorporated if they have agriculture as a clear goal (Volkens et al., 2019). As all countries have more than one right-wing party, the parties´ views are weighted with the achieved electoral percentages of each party and then summed up. In turn, this will show the difference in how much right-wing parties across the seven countries speak favorably about agriculture.

The last independent variable `support of environmental protection policies´ is also measured on a ratio level using a variable of the Manifesto Project too. The "per501" variable of the Manifesto Project dataset includes all policies in favor of environmental protection and fighting climate change. It contains policies wanting to preserve the countryside, natural

resources, forests, but also to protect national parks and animal rights (Volkens et al., 2019). This variable shows which parties support environmental protection more and which support it less. This variable is weighted and summed up in the same matter as the second individual variable. Table 3 reports the descriptive statistics of the second and third independent variables and the variables are already weighted with the percentages the right-wing parties achieved during the last national elections. As shown below, right-wing parties overall support environmental protection more than they speak favorably about agriculture which is visible when comparing the means.

Table 3: Descriptive statistics of IV2 and IV3

	N	Minimum	Maximum	Mean	Std. Deviation
Weighted agriculture right-wing parties overall	44501	0,00	2,78	1,1634	,68053
Weighted environmental protection right-wing parties overall	44501	0,00	3,58	1,8818	,85644
Valid N (listwise)	44501				

3.4.2 Control variables

The influence of third variables is a potential threat to this research. To test and limit the influence, control variables, also taken from the European Social Survey (ESS), are included in the data analysis. This strengthens the internal validity. The control variables are comprised of different socio-demographic variables like the age, gender, level of religion, feeling about their income, and the level of education of the respondents of the ESS. The external validity is also strong as case selection bias is countered by random sampling and it is possible to replicate this study with a different dataset as the units are clearly defined. Furthermore, the ability to generalize the results is strong, because data from several countries over various periods are used.

4. Analysis

This chapter will analyze the data in multiple steps to see if the data supports the stated hypotheses or if they must be rejected because the data suggests a different outcome than the theories. In the first step, descriptive statistics are used to test hypothesis 1. The party preferences of the three economic sectors are compared over time and between countries to see if the agricultural sector has a clear preference for right-wing parties in comparison to the other sectors. The second step uses the logistic regression analysis to test hypotheses 2 and 3, thus focusing on the party manifesto data.

4.1 Party preferences of the economic sectors

The starting point of the analysis is to see if there are significant differences in the party preferences of the three economic sectors. This will show if the first hypothesis, which expects that farmers and people working in the agricultural sector vote more for right-wing parties than people working in other sectors, is supported by the data. Table 4 reports the party preferences of the respondents by the sectors of their economic activity. Primarily, it shows that the number of people working in the agricultural sector is smaller than the number of people working in manufacturing and much smaller than the people working in the service sector. Next, the table reports the different means of the three sectors. Consequently, the table shows that the mean of 0,84 for people working in the agricultural sector is much bigger than the mean of 0,61 of the secondary sector, and 0,57 of the tertiary sector. A mean close to 1 means more support for right-wing parties, whereas a mean closer to 0 means more support for left-wing parties. Therefore, the table demonstrates that people working in the agricultural sector tend to prefer right-wing parties more than the people working in the other two sectors because the mean of the agricultural sector is much closer to 1 than the means of the other two sectors. Furthermore, the standard deviation supports this as well because the standard deviation of the agricultural sector is smaller than the standard deviations of the other sectors. Again this shows that people working in the agricultural sector prefer right-wing parties more than people working in the other sectors but also that the people working in agriculture are more homogenous in their voting behavior than the people working in other sectors. This proves that Korpi´s (1972) assessment that farmers are a homogenous group in voting is applicable presently for people working in agriculture.

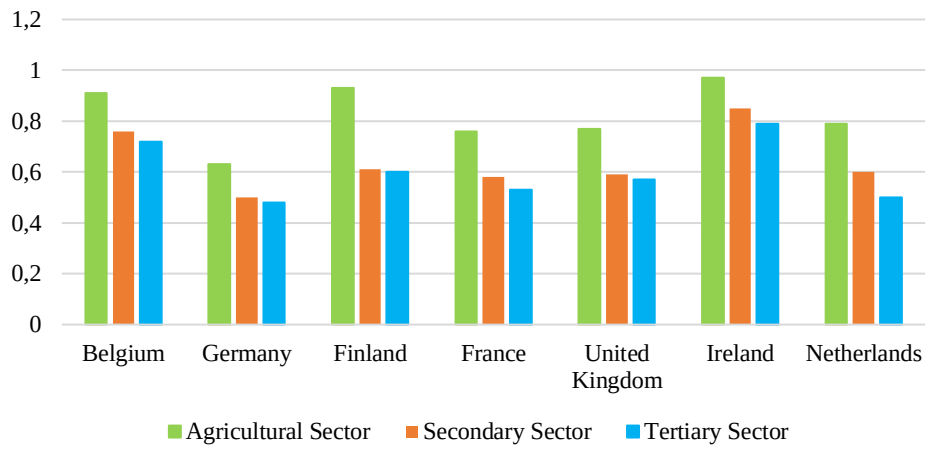
Table 4: Party preferences by economic sector

Party voted for last national election

Sector of Economic Activity recoded	Mean	N	Std. Deviation
Agriculture	,8392	796	,36758
Secondary Sector	,6085	3627	,48815
Tertiary Sector	,5673	20040	,49547
Total	,5822	24463	,49320

When comparing the party preferences of the economic sectors across the seven countries to show the relationship between the agricultural sector and the right-wing party preferences in the EU it becomes clear that even though there are vast differences between the countries, the right-wing party preference of the agricultural sector in comparison to the other sectors is visible in all countries. Germany is the outlier in this comparison. The means of all three sectors are low and the preference for right-wing parties is exceptionally low when compared with the other countries. One reason for the overall low means in Germany is the fact that all the country´s parties are included in the analysis for lack of regional or other parties meaning that it is either right-wing or left-wing party for the respondents. This makes the contrast between the left- and right-wing parties much more evident than in the other countries. Nevertheless, the preference for the right-wing parties in the agricultural sector is not as strong as in all the other countries. Still, the apparent preference of people working in the agricultural sector for right-wing parties in comparison to the other two sectors is also visible in Germany. This means that the expected pattern of party preferences of the economic sectors is found in all countries.

Figure 2: Right-wing Party Preferences of Economic Sectors by Countries



When the different ESS rounds are added to the comparison of means to show the country trends over time, more insights are generated. First, the expected pattern is also found. The agricultural sector compared to the other sectors has an apparent right-wing party preference, but the right-wing party preference differs over time in each country (cf. Appendix C). To sum up, the general difference in the preference for right-wing parties among the three economic sectors is visible not only in the comparison of the total values but also when comparing the trends between 2008 and 2018. It is evident in the figure (Appendix C) that the agricultural sector stands out when compared to the secondary and tertiary sectors. Only one time in three countries the pattern visible in Figure 2 is not observable (cf. Appendix C: Belgium 2014, France 2017, UK 2010). The party preferences of Germany in 2009 are also interesting because the tertiary sector prefers right-wing parties more than the secondary sector. However, the agricultural sector still prefers right-wing parties the most. Nonetheless, these observations do not affect the overall differentiation between the agricultural sector and the other two sectors.

The chi-square test (Appendix D) for all countries supports this as well. The null hypothesis expects no relationship between the two variables and the alternative hypothesis states that there is a relationship. Since the significance level equaling 0.000 is lower than $\alpha = 0.05$, the null hypothesis can be rejected and a relationship between the sector of economic activity and the party preference can be assumed therefore showing that the differences in party preferences among the economic sectors are meaningful. However, the Cramér`s V and Phi of 0,1 suggest that the relationship is weak. A chi-square test by the countries (Appendix E) shows that although all countries have a p-value lower than α, the significance level differs across the countries. Six countries have a p-value smaller than 0.001, Belgium and Germany have a p-value lower than 0.01 and the United Kingdom has a p-value lower than 0.05. This demonstrates that even though the relationship between the economic sector and party preference is proven, it is not as strong as the average in all countries. Hence, there might be other factors influencing the party preferences of the agricultural sector besides their economic sector. So, although the relationship between the party preferences and economic sector is weak, the relationship exists nonetheless which confirms hypothesis 1 that people working in the agricultural sector vote more for right-wing parties than people working in other sectors.

4.2 Logistic regression analyses

Before conducting the logistic regression analyses to test hypotheses 2 and 3, the assumptions for logistic regression analysis are checked. First, the dependent variable is dichotomous with mutually exclusive categories, and the independent variables are either continuous (IV2 and 3) or categorical (IV1) in both analyses. Then the linearity assumption is tested. IV2 fulfills the assumption, but the third independent variable fails the assumption of linearity. Usually, the square root of IV3 would be taken and used instead of independent variable 3 in the analysis to ensure that the linearity assumption is fulfilled. However, this will not be done for this analysis because the independent variables 2 and 3 will not be entered into the regression model. Instead, they will be used to divide the regression model into two groups for both analyses. Lastly, it is tested if outliers are included in the data and no outliers are found.

4.2.1 The influence of speaking favorably about agriculture on right-wing party preferences

A binomial logistic regression analysis is carried out to determine the influence of right-wing parties speaking favorably about agriculture on the effect the economic sectors have on the right-wing party preference and Table 6 reports these results. The table is divided into two models in which model 1 reports the logistic regression analysis for the three countries where the right-wing parties spoke the most favorably about agriculture, namely Finland, France, and Ireland. In all of these three countries, the weighted sum of right-wing parties speaking favorably about agriculture after three election periods is above the mean weighted sum of 1.16. These three countries are the only ones where this is persistently the case over time. Model 2 thus reports the analysis results for Belgium, Germany, the United Kingdom, and the Netherlands where the weighted sum of right-wing parties speaking favorably is below the total mean.

The logistic regression model for countries with right-wing parties speaking most favorably about agriculture is statistically significant, $\chi^2(18) = 488.072$, $p < 0.001$. This model explains 8,9% (Nagelkerke R^2) of the variance in party preferences influenced by how favorably right-wing parties speak about agriculture and correctly classifies 66,4% of cases. The economic sectors are all statistically significant and the b coefficients for the secondary and tertiary sectors show that the log odds for the economic sectors are -1.621 and -1.780 which demonstrates the considerable difference in party preferences between the agricultural sector and the other two sectors. Compared to people working in the agricultural sector, people working in the secondary sector and tertiary sector are less likely to vote for right-wing parties.

In comparison, the logistic regression model for countries where right-wing parties speak less favorably about agriculture is statistically significant, too, $\chi^2(18) = 387.780$, $p < 0.001$. The model explains 4% (Nagelkerke R^2) of the variance of the dependent variable influenced by the right-wing parties speaking less favorably about agriculture and classifies 60,1% of the cases correctly. In countries where right-wing parties speak less positively about agriculture, the b coefficient for the secondary sector is -0,707 and the coefficient of the tertiary sector is -0.827. These coefficients show that the log odds of the two sectors are lower which demonstrates again that the probability of the two economic sectors supporting right-wing parties is lower than the probability of the agricultural sector voting for right-wing parties.

When comparing the two models, the difference in right-wing party preferences between the three economic sectors is much higher in countries where the right-wing parties speak very favorably about agriculture. Further, a comparison of the Nagelkerke R^2 of both models offers more insights. In countries where right-wing parties speak more favorably about agriculture, the economic sector of the respondent explains 8,9% and in countries with right-wing parties speaking less favorably about agriculture, the economic sector only explains 4%. Therefore, the explanatory power of the economic sector, even though it is modest in size, is twice as large in countries where right-wing parties speak more favorably about agriculture. The essential insight of this analysis is that the probability of someone working in the agricultural sector preferring right-wing parties is not only much higher in comparison to the other economic sectors, but it is also higher in countries where right-wing parties speak more favorably about agriculture. Given these points, hypothesis 2 is confirmed because the more favorably right-wing parties speak about agriculture, the more support they are likely to receive from the agricultural sector compared to the other two economic sectors like this comparison between models 1 and 2 shows. Further, the more favorably right-wing parties speak about agriculture, the more the differences in the party preferences of the economic sectors become apparent.

Table 6: Logistic regression estimates of the party voted for last national election on economic sector and right-wing parties speaking favorably about agriculture

	Model 1 (most favorable)			Model 2 (less favorable)		
	b	SE	Exp(b)	b	SE	Exp(b)
Constant	3.071***	0.292	21.564	0.758**	0.220	2.133
Economic sector						
Agriculture	Reference	Reference	Reference	Reference	Reference	Reference
Secondary sector	-1.621***	0.186	0.198	-0.707***	0.149	0.493
Tertiary sector	-1.780***	0.177	0.169	-0.827***	0.144	0.437
χ^2	488.072 (18) ***			387.780 (18) ***		
Nagelkerke R^2	0.089			0.040		
Classification of cases	66.4%			60.1%		

Effects of the included control variables (gender, age, highest level of education, feeling about household income, level of religion) are excluded from the table, full estimates are reported in Appendix F.
b: coefficient
SE: standard error of the coefficient
Exp(b): exponentiation of the b coefficient
$^{+}$p<0.1; *p<0.05; **p<0.01; ***p<0.001

4.2.2 The influence of environmental protection policies on right-wing party preferences

A second binomial logistic regression was performed to determine if right-wing parties supporting environmental protection policies have an influence on the effect the economic sectors have on the right-wing party preference and Table 7 summarizes the results. This analysis is divided into two models, too. Model 1 describes the four countries, Germany, Finland, France, and the United Kingdom, where right-wing parties support environmental protection strongly compared to the other three countries. Model 2 presents the estimates for Belgium, Ireland, and the Netherlands and these are the countries where the weighted sum of the right-wing parties` support is below the mean of 1,88 for all countries. In Ireland, the right-wing parties supported environmental protection policies more before the last election leading to a weighted sum of 1.94 which is bigger than the mean used as a threshold, but the total mean for Ireland is still smaller than the threshold. It is important to notice that in all countries, regardless of the strength of support, the support for environmental protection policies among right-wing parties grew between 2008 and 2018.

The logistic regression model for countries with right-wing parties strongly supporting environmental protection policies is statistically significant, $\chi^2(18) = 468.272$, $p < 0.001$. This model explains 4,9% (Nagelkerke R^2) of the variance in party preferences influenced by how strongly right-wing parties support environmental protection policies and correctly classifies 60% of cases. All b coefficients of the economic sectors are statistically significant and the b coefficients for the secondary and tertiary sectors show that the log odds for the economic sectors are -1.208 and -1.244, demonstrating the differences in party preferences between the three economic sectors. When comparing the three economic sectors, the strong right-wing party preference of the agricultural sector in comparison to the other two sectors becomes obvious. In contrast, the logistic regression model for countries where right-wing parties support environmental protection policies less is also statistically significant, $\chi^2(18) = 432.615$, $p < 0.001$. The model classifies 67,7% of the cases correctly and explains 7,8% (Nagelkerke R^2) of the variance of the party preferences influenced by the right-wing parties supporting environmental protection less. In countries with right-wing parties supporting environmental protection policies less, the b coefficient for the secondary sector is -1,068 and the coefficient of the tertiary sector is -1.467. The coefficients show that the log odds of the two sectors decrease, indicating that the probability of the two economic sectors voting for right-wing parties is lower than the agricultural sector voting for right-wing parties.

A comparison between the two models and the reported values shows the distinct right-wing party preference of people working in the agricultural sector, too. However, there is not a big difference in the b coefficients of the economic sectors of both models which does not support hypothesis 3. In model 1, the difference between the secondary sector and the agricultural sector is bigger as in model 2, but the effect of the tertiary sector is weaker in model 1 than in model 2 showing that the effects are mixed. The Nagelkerke R^2 of the two models show that the explanatory power of the economic sector is stronger in countries where right-wing parties support environmental protection policies less because in these countries it explains 7,8% compared to 4,9% in countries with right-wing parties strongly supporting environmental protection. The fact that the Nagelkerke R^2 is higher in countries with lesser environmental protection support of right-wing parties and that this model explains more cases than the model for countries with strong support for environmental protection demonstrates that model 2 is better than model 1. Yet, hypothesis 3 which expects people working in the agricultural sector to prefer right-wing parties less the more they support environmental protection policies compared to the other economic sectors is not supported by the data. The

hypothesis is rejected because there is no evident difference in the effects of the economic sectors in the models.

Table 7: Logistic regression estimates of the party voted for last national election on economic sector and right-wing parties supporting environmental protection policies

	Model 1 (strong support)			Model 2 (weak support)		
	b	SE	Exp(b)	b	SE	Exp(b)
Constant	1.173***	0.218	3.233	2.353***	0.300	10.519
Economic sector						
Agriculture	Reference	Reference	Reference	Reference	Reference	Reference
Secondary sector	-1.208***	0.136	0.299	-1.068***	0.220	0.344
Tertiary sector	-1.244***	0.130	0.288	-1.467***	0.210	0.231
χ^2	468.272 (18) ***			432.615 (18) ***		
Nagelkerke R^2	0.049			0.078		
Classification of cases	60%			67.7%		

Effects of the included control variables (gender, age, highest level of education, feeling about household income, level of religion) are excluded from the table, full estimates are reported in Appendix G.
b: coefficient
SE: standard error of the coefficient
Exp(b): exponentiation of the b coefficient
$^{+}p<0.1$; *p<0.05; **p<0.01; ***p<0.001

As expected, the control variables also influence the right-wing party preference of the respondents in both logistic regression analyses. If the voter is female it reduces the probability that the voter prefers a right-wing party whereas the age increases the right-wing party preference probability. The level of religiousness is also significant in both analyses and the less religious the people are, the more it decreases the probability that they will prefer a right-wing party. Not all categories of the other two control variables, feeling about income and level of education, are statistically significant, but they change the estimates of the predictor variables and are thus still included in the models.

5. Conclusion

The aim of this research was to address the question if stringent environmental protection policies strengthen the right-wing party preferences of people who work in the agricultural sector. It further aimed to find out if the right-wing party preference of the agricultural sector is still as visible as it was in the past (Lewis-Beck, 1977b; Scala et al., 2015; Van der Zee, 1997) and if right-wing parties speaking favorably about agriculture receive more support from the agricultural sector than right-wing parties which are speaking not so favorably about it. To test this, three hypotheses were formulated and analyzed using the explained data.

The first conclusion of this analysis is that people in the agricultural sector nowadays still have an apparent preference for right-wing parties and that this preference in comparison to the secondary and tertiary sectors is very notable. But the strength of this preference varies among the selected seven countries. Furthermore, although changes in the strength of the right-wing party preferences of the agricultural sector can be seen across the countries between 2008 and 2018, a clear pattern is not evident. In most countries, there was an increase of support for right-wing parties among all sectors but there are also countries where the preference for these parties decreased or where there is a peak of the support from the agricultural sector like in 2010 in Belgium or 2015 in the United Kingdom. However, the evident preference of people working in the agricultural sector for right-wing parties, in comparison to the other two economic sectors, is apparent in all countries and over time. Therefore, hypothesis 1 is supported by the data proving that people working in the agricultural sector have a stronger right-wing party preference than people working in other economic sectors. This shows that Lewis-Beck and Nadeau´s (2011) theory of the patrimonial economic voting behavior is supported. As most of the people working in agriculture are land and livestock owners, the protection of their property is important to them and they protect it through their support for right-wing parties. Further, limited upward job mobility in the agricultural sector is still applicable (Gasson, 1969). Age and level of education are especially important factors. In general, age increases right-wing party preferences as seen in the analysis, but this becomes particularly essential in the agricultural sector, because 20% of the people working in the sector are more than 54 years old and have lower chances of finding work in the other economic sectors (Maucorps et al., 2019). The literature shows that there is a correlation between working in agriculture and having lower levels of education, with respect to finding work in other sectors (Tocco, Bailey, & Davidova, 2013). To protect their livelihood, these people prefer parties

protecting it and hence, support right-wing parties. So, for the agricultural sector, the class-vote relationship is still intact.

The second hypothesis focused on the relation between right-wing parties speaking positively about agriculture and the support they receive from the agricultural sector compared to the other economic sectors. This hypothesis, too, is supported by the data of this analysis. In countries where right-wing parties speak more favorably about agriculture, the difference between the agricultural sector and the secondary and tertiary sector is more prominent than in countries where right-wing parties do not speak as positively about agriculture. This shows that voters listen to party campaigns and manifestos and base their party preference on it as Fernandez-Vasquez (2014) explained in his study. He and this analysis, too, prove other studies wrong which suggests that party manifestos do not change the voters` view of the party position (cf. Adams et al., 2014). Most importantly, this analysis shows that the more importance parties place on a topic by speaking about it, the more support they receive. People working in agriculture see a strong connection between right-wing parties and agriculture the more favorably they speak about it (Stubager & Seeberg, 2016; Stubager & Slothuus, 2013). However, this study cannot explain if people working in the agricultural sector can perceive it if parties change their position on a particular policy issue (cf. Seeberg et al., 2017) because of the already given right-wing party preference of the sector. To sum up, the existing right-wing party preference of the agricultural sector is strengthened the more right-wing parties speak favorably about agriculture.

But the most important hypothesis for this analysis to answer the research question is the third hypothesis. A relationship between low right-wing party support for environmental protection policies and right-wing party preferences of the agricultural sector is expected, and the data does not support the relation. It seems that the fear of regulations or job loss (cf. Vona, 2019; Yamazaki, 2017) does not influence the established right-wing party preference of people working in the agricultural sector compared to the other economic sectors. Thus, the amount the right-wing parties talk about a policy issue people working in the agricultural sector do not support does not influence the support the parties are likely to receive from the agricultural sector. This contradicts the expectations of the theory section that party support for undesired policy issues leads to less support of the voters (cf. Stubager & Seeberg, 2016; Stubager & Slothuus, 2013). Furthermore, it seems that the new CAP did not influence the party preferences because in most countries the support for right-wing parties from people working in the agricultural sector grew. One reason for this might be that the environmental protection

measures of the CAP are voluntary and rewarded with more subsidies which are not job threatening. It seems that when there are monetary rewards for environmental protection measures, then the people working in the agricultural sector support environmental protection, too.

To conclude, the answer to the established research question is that right-wing party preferences of people working in the agricultural sector do not decrease, the more the right-wing parties support environmental protection policies. This is unexpected because a negative effect of right-wing party support for environmental protection policies on the party preferences of the agricultural sector was anticipated and the analysis shows that right-wing party support for environmental protection policies does not influence the right-wing party preference of the agricultural sector. The conclusion is therefore that right-wing parties speaking favorably about agriculture strengthen the right-wing party preference of the agricultural sector, but the support of right-wing parties for environmental protection policies does not influence the relation between right-wing parties and the agricultural sector when compared to the other economic sectors. Thus, this analysis generated interesting and up to date insights into the relationship between right-wing parties and people working in the agricultural sector. These observations will be useful in the dialogues between all the stakeholders involved in the discussions about agriculture and environmental protection.

So, this study does not only contribute to supporting and contradicting existing theories but also to the discussions on the societal level. However, despite the new insights this study delivers, a few reservations apply. Three limitations of this study are identified. First, because existing data sets are used in this study, the third independent variable does not measure the stringency of environmental protection policies but the right-wing party support for environmental protection policies. Further research with original data might be able to repeat the analysis while measuring the stringency of the policies instead of the party support for them. This could lead to a different answer to the research question.

Next, the question remains why there is no difference between the two models of right-wing party support for environmental protection. People working in the agricultural sector complain about environmental regulations, but these regulations and policies do not influence their voting behavior compared to the other economic sectors. This analysis does not offer an answer to this discrepancy. If people working in agriculture show their disapproval of the environmental protection policies during elections, then which party are they going to prefer?

They are unlikely to support left-wing parties because of the established preference for right-wing parties (Lewis-Beck, 1977b; Scala et al., 2015) and because left-wing parties support environmental protection policies more than right-wing parties (Carter, 2013; Neumayer, 2004). So, the most likely outcome is that people working in agriculture will abstain from voting if they are not willing to compromise with the right-wing parties. But this study does not offer this option as it focused on the difference between left- and right-wing parties.

The last limitation is the approach of the cross-country and cross-time analysis. These types of analyses offer many insights which was also the aim of this study. The selected countries were chosen based on their similarities in their party systems and the continuous availability of data for all ESS rounds. But this also means that the amount of countries is rather small and at the same time there are still differences between the seven countries in the size of their agricultural sector or the right-wing party preferences of the people working in the agricultural sector. This means that a smaller number of countries with more similarities might have delivered other interesting insights. Then again, the number of countries could also be increased to include all EU member states so that EU wide patterns and trends could be seen.

Therefore, further research in different directions is encouraged. The focus can either be more firmly on the stringency of the environmental protection policies or on the party choices in a more differentiated way including abstention from voting or lastly, a different country selection could be chosen to generate more insights. Each of these approaches would add another substantial insight into the relation between right-wing parties and the agricultural sector and how certain factors influence it.

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7. Appendices

Appendix A: Sector of economic activity by country

Country			Frequency	Percent	Valid Percent
Belgium	Valid	Agriculture	146	1,4	1,6
		Secondary Sector	1783	16,8	19,1
		Tertiary Sector	7425	69,8	79,4
		Total	9354	88,0	100,0
	Missing	System	1281	12,0	
	Total		10635	100,0	
Germany	Valid	Agriculture	377	2,2	2,4
		Secondary Sector	3067	18,0	19,8
		Tertiary Sector	12069	71,0	77,8
		Total	15513	91,3	100,0
	Missing	System	1482	8,7	
	Total		16995	100,0	
Finland	Valid	Agriculture	582	4,8	5,1
		Secondary Sector	1720	14,3	15,0
		Tertiary Sector	9164	76,1	79,9
		Total	11466	95,3	100,0
	Missing	System	571	4,7	
	Total		12037	100,0	
France	Valid	Agriculture	435	3,7	4,0
		Secondary Sector	1702	14,5	15,8
		Tertiary Sector	8606	73,1	80,1
		Total	10743	91,3	100,0
	Missing	System	1023	8,7	
	Total		11766	100,0	
United Kingdom	Valid	Agriculture	157	1,2	1,3
		Secondary Sector	1548	11,5	12,3
		Tertiary Sector	10849	80,4	86,4
		Total	12554	93,1	100,0
	Missing	System	933	6,9	
	Total		13487	100,0	
Ireland	Valid	Agriculture	710	5,0	5,6
		Secondary Sector	1561	10,9	12,3
		Tertiary Sector	10453	72,9	82,2
		Total	12724	88,8	100,0
	Missing	System	1607	11,2	
	Total		14331	100,0	

Appendix A: Sector of economic activity by country continued

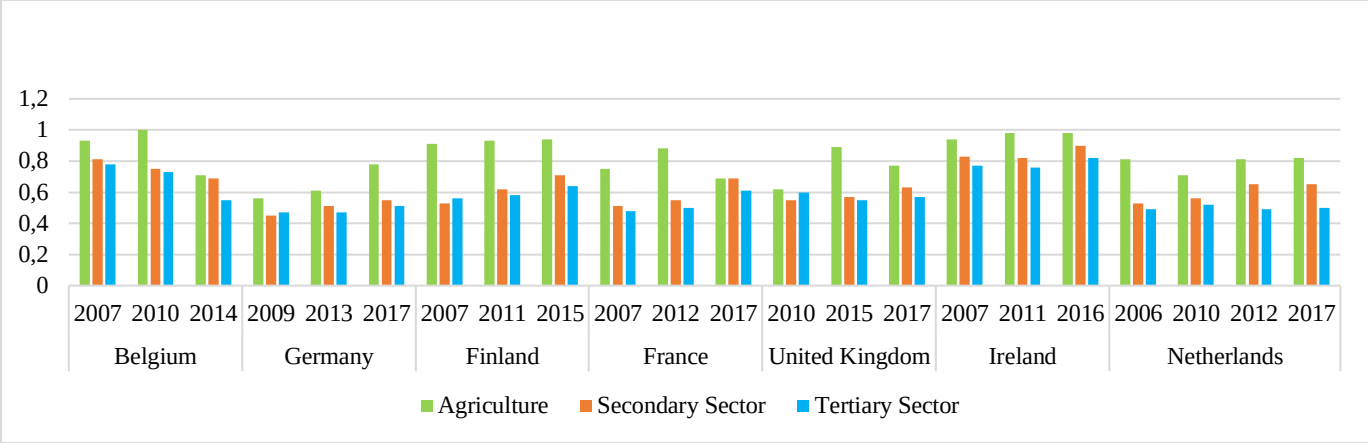
Netherlands	Valid	Agriculture	250	2,3	2,5
		Secondary Sector	1085	10,1	10,7
		Tertiary Sector	8798	82,0	86,8
		Total	10133	94,5	100,0
	Missing	System	592	5,5	
	Total		10725	100,0	

Appendix B: Party preferences of economic sectors by countries

Party voted for last national election

Country	Sector of Economic Activity	Mean	N	Std. Deviation	Minimum	Maximum
Belgium	Agriculture	,9111	45	,28780	left-wing	right-wing
	Secondary Sector	,7598	512	,42764	left-wing	right-wing
	Tertiary Sector	,7203	2056	,44895	left-wing	right-wing
	Total	,7313	2613	,44335	left-wing	right-wing
Germany	Agriculture	,6311	122	,48448	left-wing	right-wing
	Secondary Sector	,5005	1013	,50025	left-wing	right-wing
	Tertiary Sector	,4779	4034	,49957	left-wing	right-wing
	Total	,4860	5169	,49985	left-wing	right-wing
Finland	Agriculture	,9261	203	,26224	left-wing	right-wing
	Secondary Sector	,6137	554	,48734	left-wing	right-wing
	Tertiary Sector	,5915	3070	,49163	left-wing	right-wing
	Total	,6125	3827	,48725	left-wing	right-wing
France	Agriculture	,7629	97	,42752	left-wing	right-wing
	Secondary Sector	,5833	420	,49359	left-wing	right-wing
	Tertiary Sector	,5250	2261	,49949	left-wing	right-wing
	Total	,5421	2778	,49831	left-wing	right-wing
United Kingdom	Agriculture	,7727	44	,42392	left-wing	right-wing
	Secondary Sector	,5855	427	,49322	left-wing	right-wing
	Tertiary Sector	,5741	3102	,49455	left-wing	right-wing
	Total	,5779	3573	,49396	left-wing	right-wing
Ireland	Agriculture	,9695	164	,17245	left-wing	right-wing
	Secondary Sector	,8527	224	,35522	left-wing	right-wing
	Tertiary Sector	,7853	1444	,41074	left-wing	right-wing
	Total	,8100	1832	,39237	left-wing	right-wing
Netherlands	Agriculture	,7851	121	,41244	left-wing	right-wing
	Secondary Sector	,5975	477	,49092	left-wing	right-wing
	Tertiary Sector	,5011	4073	,50006	left-wing	right-wing
	Total	,5183	4671	,49972	left-wing	right-wing

Appendix C: Party preferences of economic sectors by countries over time



Appendix D: Chi-Square test and symmetric measures for crosstab DV& IV1

*Chi-Square Tests Sector of Economic Activity * Party voted for last national elections*

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	244,822[a]	2	,000
Likelihood Ratio	272,740	2	,000
Linear-by-Linear Association	183,545	1	,000
N of Valid Cases	24463		

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 332,55.

*Symmetric Measures Sector of Economic Activity * Party voted for last national elections*

		Value	Approximate Significance
Nominal by Nominal	Phi	,100	,000
	Cramer's V	,100	,000
	Contingency Coefficient	,100	,000
N of Valid Cases		24463	

Appendix E: Chi-square test country by country

*Chi-Square Tests Sector of Economic Activity * Party voted for last national elections by country*

Country		Value	df
Belgium	Pearson Chi-Square	10,776[a]**	2
	Likelihood Ratio	12,587**	2
	Linear-by-Linear Association	8,684**	1
	N of Valid Cases	2613	
Germany	Pearson Chi-Square	12,191[b]**	2
	Likelihood Ratio	12,282**	2
	Linear-by-Linear Association	8,415**	1
	N of Valid Cases	5169	
Finland	Pearson Chi-Square	89,809[c]***	2
	Likelihood Ratio	111,396***	2
	Linear-by-Linear Association	61,343***	1
	N of Valid Cases	3827	
France	Pearson Chi-Square	24,593[d]***	2
	Likelihood Ratio	25,848***	2
	Linear-by-Linear Association	21,666***	1
	N of Valid Cases	2778	
United Kingdom	Pearson Chi-Square	7,127[e]*	2
	Likelihood Ratio	7,654*	2
	Linear-by-Linear Association	3,212+	1
	N of Valid Cases	3573	
Ireland	Pearson Chi-Square	35,487[f]***	2
	Likelihood Ratio	47,229***	2
	Linear-by-Linear Association	34,823***	1
	N of Valid Cases	1832	
Netherlands	Pearson Chi-Square	51,308[g]***	2
	Likelihood Ratio	53,825***	2
	Linear-by-Linear Association	49,323***	1
	N of Valid Cases	4671	

a. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 12,09.

b. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 59,29.

c. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 78,66.

d. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 44,41.

e. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 18,57.

f. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 31,15.

g. 0 cells (0,0%) have expected count less than 5. The minimum expected count is 58,29.

+p<0.1; *p<0.05; **p<0.01; ***p<0.001

Appendix F: *Logistic regression estimates of the party voted for last national election on economic sector, right-wing parties speaking favorably about agriculture and control variables*

	Model 1 (Most favorable)			Model 2 (Less favorable)		
	b	SE	Exp(b)	b	SE	Exp(b)
Constant	3.071***	0.292	21.564	0.758**	0.220	2.133
Economic sector						
Agriculture	Reference	Reference	Reference	Reference	Reference	Reference
Secondary sector	-1.621***	0.186	0.198	-0.707***	0.149	0.493
Tertiary sector	-1.780***	0.177	0.169	-0.827***	0.144	0.437
Gender						
Male	Reference	Reference	Reference	Reference	Reference	Reference
Female	-0.365***	0.053	0.694	-0.185***	0.037	0.831
Age	0.001	0.002	1.001	0.007***	0.001	1.007
Highest level of education						
Less than lower secondary education	Reference	Reference	Reference	Reference	Reference	Reference
Lower secondary education	0.364**	0.129	1.439	0.181*	0.083	1.198
Lower tier upper secondary education	-0.058	0.125	0.944	0.121	0.078	1.128
Upper tier upper secondary education	0.222*	0.106	1.249	0.264**	0.091	1.302
Advanced vocational education	0.316**	0.111	1.372	0.014	0.085	1.014
Lower tertiary education (BA)	0.268*	0.124	1.308	0.055	0.087	1.057
Higher tertiary education (MA)	0.060	0.118	1.062	-0.219**	0.084	0.803
Other level of education	0.188+	0.101	1.206	0.392+	0.233	1.480
Feeling about household income						
Very difficult on present income	Reference	Reference	Reference	Reference	Reference	Reference
Difficult on present income	-0.293	0.188	0.746	0.193	0.139	1.213
Coping on present income	0.155	0.175	0.856	0.191	0.128	1.210
Living comfortably on present income	0.169	0.179	1.185	0.500+	0.128	1.649
Level of religiousness						
Very religious	Reference	Reference	Reference	Reference	Reference	Reference

Religious	-0.366***	0.100	0.693	-0.065	0.073	0.937
Moderately religious	-0.731***	0.100	0.481	-0.239**	0.073	0.787
Somewhat religious	-1.003***	0.109	0.367	-0.407***	0.077	0.666
Not religious	-1.333***	0.114	0.264	-0.637***	0.078	0.529
χ^2	488.072 (18) ***			387.780 (18) ***		
Nagelkerke R^2	0.089			0.040		
Classification of cases	66.4%			60.1%		

b: coefficient
SE: standard error of the coefficient
Exp(b): exponentiation of the b coefficient
$^{+}$p<0.1; *p<0.05; **p<0.01; ***p<0.001

Appendix G: *Logistic regression estimates of the party voted for last national election on economic sector, right-wing parties supporting environmental protection policies and control variables*

	Model 1 (strong support)			Model 2 (weak support)		
	b	SE	Exp(b)	b	SE	Exp(b)
Constant	1.173***	0.218	3.233	2.353***	0.300	10.519
Economic sector						
Agriculture	Reference	Reference	Reference	Reference	Reference	Reference
Secondary sector	-1.208***	0.136	0.299	-1.068***	0.220	0.344
Tertiary sector	-1.244***	0.130	0.288	-1.467***	0.210	0.231
Gender						
Male	Reference	Reference	Reference	Reference	Reference	Reference
Female	-0.176***	0.038	0.838	-0.312***	0.052	0.732
Age	0.007***	0.001	1.007	0.004**	0.002	1.004
Highest level of education						
Less than lower secondary education	Reference	Reference	Reference	Reference	Reference	Reference
Lower secondary education	0.269**	0.094	1.309	-0.286**	0.114	0.751
Lower tier upper secondary education	0.209**	0.075	1.233	-0.208+	0.126	0.812
Upper tier upper secondary education	0.458***	0.084	1.580	-0.157	0.125	0.854
Advanced vocational education	0.288**	0.078	1.334	-0.039	0.138	0.961
Lower tertiary education (BA)	0.268**	0.088	1.307	-0.303**	0.125	0.738
Higher tertiary education (MA)	0.054	0.083	1.055	-0.574***	0.124	0.563
Other level of education	0.315***	0.088	1.370	0.381**	0.143	1.463
Feeling about household income						
Very difficult on present income	Reference	Reference	Reference	Reference	Reference	Reference
Difficult on present income	-0.058	0.150	0.943	0.219	0.168	1.244
Coping on present income	0.110	0.138	1.117	0.249	0.155	1.283
Living comfortably on present income	0.392**	0.140	1.480	0.446**	0.156	1.561
Level of religiousness						
Very religious	Reference	Reference	Reference	Reference	Reference	Reference

Religious	-0.145**	0.073	0.865	-0.248*	0.100	0.780
Moderately religious	-0.418***	0.072	0.658	-0.388***	0.101	0.678
Somewhat religious	-0.560***	0.077	0.571	-0.633***	0.110	0.531
Not religious	-0.777***	0.079	0.460	-0.986***	0.111	0.373
χ^2	468.272 (18) ***			432.615 (18) ***		
Nagelkerke R^2	0.049			0.078		
Classification of cases	60%			67.7%		

b: coefficient
SE: standard error of the coefficient
Exp(b): exponentiation of the b coefficient
$^{+}$p<0.1; *p<0.05; **p<0.01; ***p<0.001