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Expert Knowledge Utilisation in the EU: Instrumental, Symbolic or Strategic? An empirical study on the Commission's utilisation of expert knowledge in the preparation of the EU Green Deal's Farm to Fork Strategy during the first mandate of the EU Platform on Food Losses and Waste (2016-2021)

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Expert Knowledge Utilisation in the EU: Instrumental, Symbolic or Strategic?

An empirical study on the Commission's utilisation of expert knowledge in the preparation of the EU Green Deal's Farm to Fork Strategy during the first mandate of the EU Platform on Food Losses and Waste (2016-2021)

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Abstract:

The European Commission has recently initiated a comprehensive Green Deal with the objective of enhancing the environmental sustainability of agriculture, promoting nature inclusivity, and facilitating the mitigation of greenhouse gas emissions. However, much controversy has been surrounding the formulation of its Farm to Fork (F2) Strategy policy objectives due to incompatible perspectives regarding the envisioned future sustainable food system between the involved actors and the European Commission. This, therefore, raises the question of what is the role of expert knowledge in the realm of EU policymaking? Moreover, what factors influence the Commission's utilisation of expert knowledge? The utilisation of expert knowledge has been a topic of academic debate in the social sciences. The scholarly discourse pertaining to the role of expert knowledge in the realm of public policymaking processes, and in particular in the EU context, is abundant in theoretical frameworks; however, it also lacks consistency in defining and explaining the role of expert knowledge in public policymaking. This study aims to address the gap in existing literature by improving the understanding of knowledge utilisation and its features in the context of a new EU policy case. The research question seeks to determine the Commission's utilisation of expert knowledge in the preparation of the Farm to Fork Strategy and explain whether the combination of internal and external dynamics account for the anticipated type of knowledge utilisation. The study focuses on a single case to achieve the theoretical objectives of demonstrating a causal relationship and examining whether the causal process occurred as anticipated. The study focuses on the timeframe from 2016 to 2021, coinciding with the first mandate of the EU Platform on Food Losses and Waste (FLW) and its efforts towards food waste policies, which were subsequently integrated into the F2F Strategy.

Keywords: European Commission; expert knowledge; EU Green Deal; Farm to Fork Strategy; knowledge utilisation; EU Platform on Food Losses and Waste; Sustainable Development Goals (SDGs); food sustainability

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List of Abbreviations

CoEU	Council of the European Union
CoR	European Committee of the Regions
DG(s)	Directorate(s) General
DG AGRI	Directorate-General for Agriculture and Rural Development
DG RTD	Directorate-General for Research and Innovation
DG SANTE	Directorate-General for Health and Food Safety
EC	European Commission
EEA	European Environment Agency
EESC	European Economic and Social Committee
EFTA	European Free Trade Association
EFSA	European Food Safety Authority
EGD	European Green Deal
EP	European Parliament
EU	European Union
FLW Platform	EU Platform on Food Losses and Food Waste
F2F Strategy	Farm to Fork Strategy
GHG	Greenhouse Gas
IA	Impact Assessment
JRC	Joint Research Centre
NGO(s)	Non-governmental organisation(s)
SAPEA	Science Advice for Policy by European Academies
SDG(s)	Sustainable Development Goal(s)

1. Introduction

Given the exceptional climate and biodiversity challenges, decision-makers are progressively receptive to the insights provided by environmental-transitions research. In line with the scientific recommendations received during the Universal Exhibition (EXPO) in 2015, the imperative to revolutionise fundamental societal structures has also been progressively recognized in strategic policy documents of the European Union (EU). Following the years after EXPO 2015, which coincided with the adoption of the UN 2030 Agenda for Sustainable Development, the European Commission (EC) has produced a notable amount of legislation, conducted external studies, appointed numerous external experts in various expert group and platform configurations. Notably, in 2019, the Commission introduced the European Green Deal (EGD) as a comprehensive growth strategy that prioritises the attainment of a climate-neutral Europe by 2050 (European Commission, 2019). Moreover, this approach involves implementing comprehensive policies that will have a profound impact on the economy, with the aim of facilitating a fundamental shift towards environmental sustainability (Paleari, 2022).

In line with the objectives of the EGD, the Commission has recently published its so-called “A Farm to Fork (F2F) Strategy” Communication that outlined the Commission’s goals and intentions (European Commission, 2020). The document is accompanied by an Annex that outlines a proposed action plan and aligns particular legislative measures with a tentative schedule for their attainment by the end of 2023 (European Commission, 2020). The Communication, which was released in May 2020, marked a breakthrough step towards credible governance of food systems and appeared to be appropriately timed to tackle some of the most urgent health and environmental security issues that European society confronted, given the COVID-19 pandemic (Boix-Fayos and de Vente, 2023; Buckwell et al., 2022). However, as noted by scholars, an essential obstacle in the execution of the F2F Strategy pertains to the persisting uncertainty surrounding the definition of ‘food sustainability’ or a ‘sustainable food system’ (Schebesta and Candel, 2020). The European Commission refrains from providing a definition of sustainability and does not recognise its multidimensional nature (Schebesta and Candel, 2020). Rather, it highlights the various environmental, health, social, and economic advantages that can be derived from transitioning towards a sustainable food system (Schebesta and Candel, 2020).

Accordingly, this presents a problem for two distinct reasons. At the outset, the notion of food sustainability has evolved into an umbrella term that encompasses a diverse array of goals (Schebesta and Candel, 2020). The emergence of policy incoherencies is a legitimate concern, as policy actions aimed at achieving certain objectives of the Strategy may hinder or regress other objectives (Schebesta and Candel, 2020). Secondly, scholars argue that while the Commission employs the ambiguity of the food sustainability concept to garner support from various stakeholder groups, actors within the food system may hold incompatible perspectives regarding their envisioned future food system or the means to achieve it (Schebesta and Candel, 2020). Disregarding or de-emphasizing these distinctions may have adverse consequences and diminish the perceived legitimacy of the outlined policy goals (Schebesta and Candel, 2020).

1.1. The Commission's Dilemma: Balancing Policy and Science in the EU Green Deal's Farm to Fork Strategy

As noted earlier, the Farm to Fork Strategy constitutes a pivotal element of the European Union's Green Deal, which seeks to effectuate a shift towards a more sustainable food system. However, much controversy has been surrounding the formulation of its policy objectives due to incompatible perspectives regarding the envisioned future food system between the involved actors (Schebesta and Candel, 2020). As highlighted by the Commission's Joint Research Centre (2022): "Policymakers, today, face complex issues, from global pandemics and geopolitical challenges, to energy and climate crises. Scientific knowledge can help them understand problems more accurately, and identify and assess policy options." Hence, the success of the Strategy's execution is contingent upon the European Commission's capacity to integrate expert knowledge into its policymaking processes. However, given that the Strategy may potentially have an impact on a variety of policy domains (e.g. health, environment, agriculture), it follows that the Commission must carefully utilise expert knowledge in developing its policy objectives in order to gain support from various actors.

In her influential research on expert knowledge utilisation by the EC, Boswell (2008) argues that the issue of expert knowledge utilisation is highly pertinent to the EU by exemplifying how a Commission DG utilised expert knowledge to enhance its credibility and advance its policy objectives. Similarly, a recent study by Rimkutė's (2015) on an EU regulatory agency has further expanded the theoretical understanding of the circumstances

and factors that determine the prevalence of various applications of expert knowledge. The issue of expert knowledge utilisation, however, has long been the subject of academic debates. Scholars have contended that the European Union's policy is mainly characterised by regulation and technocracy, and that its civil service gains legitimacy from its expertise (Majone 1996; Radaelli 1999). In his account on the role of epistemic communities in international policy coordination, Haas (1992, p.12) asserted that "the increasing uncertainties associated with many modern responsibilities of international governance have led policymakers to turn to new and different channels of advice, often with the result that international policy coordination is enhanced." However, despite normative explanations that emphasise the critical role of expert knowledge in the public policymaking processes, scholars in the field still argue that there is a limited understanding of the actual involvement of experts in this process (Boswell, 2009; Daviter, 2015). Moreover, one of the most pressing theoretical puzzles in the different sub-disciplines of social sciences is the role that knowledge utilisation plays in the formulation of public policy (Christensen, 2021; Daviter, 2015). Despite the increasing attention towards the significance of expert knowledge in the formulation of policies, academic research in this area has been notably fragmented, as outlined by Christensen (2021) and Daviter (2015).

According to Rimkutė (2015), the main issue pertaining to literature on knowledge utilisation is when endeavouring to comprehend which of the explanatory factors hold defining significance, what the theoretical underpinnings of these explanatory variables are, and how they can be integrated into a theoretically consistent causal explanation? In other words, there is a lack of a thorough theoretical understanding of the mechanisms that trigger various behavioural patterns in the utilisation of expert knowledge (Rimkutė, 2015).

1.2. Research Question and Relevance

The scholarly discourse pertaining to the role of expert knowledge in the realm of public policymaking processes, and in particular in the EU context, is abundant in theoretical frameworks, but the practical investigation is confined to either broad data on the structure of expert groups or a limited number of comprehensive case analyses that track the application of knowledge in particular contexts (e.g., Boswell, 2008, 2009; Hertin et al., 2009; Radaelli, 1999, 2009; Rimkutė and Haverland, 2015; Schrefler, 2010; Weiss, 1979). Scholars have identified three types of expert knowledge utilisation in policy contexts: instrumental, symbolic, and strategic. These categories have been defined by Boswell (2008), Schrefler

(2010), and Radaelli (2009). Further explanation of this typology will be provided in **Chapter 2**. Nevertheless, Rimkutė (2015) contends that the current research on expert knowledge utilisation lacks a comprehensive analysis of the external environment, as it predominantly concentrates on the internal dynamics of expert organisations such as features of the policy area/organisation or political salience and conflict/uncertainty (e.g. Boswell, 2008; Radaelli, 1999; Schrefler, 2010). The scholar posits that external and internal dimensions have equal explanatory power in determining the occurrence of distinct behavioural patterns in the type of knowledge utilised by the expert organisation (Rimkutė, 2015). Following the standpoint for further research set out by Rimkutė (2015), the objective of this study is to fill the existing literature gap by enhancing the existing body of knowledge utilisation literature and features that account for the utilisation of expert knowledge in a novel EU policy case. The research question seeks to determine the Commission's utilisation of expert knowledge in the preparation of the Farm to Fork Strategy and explain whether internal and external dynamics account for the anticipated type of knowledge utilisation. Therefore, this thesis aims to answer the following question:

“How does the European Commission utilise expert knowledge in the preparation of the EU Green Deal's Farm to Fork Strategy, and does high internal capacity to produce expert knowledge and high external pressure explain the type of knowledge utilisation?”

This research employs a set of theoretical expectations to examine whether the case unfolds in accordance with the predictions of the knowledge utilisation typology developed by Boswell (2008), Radaelli (2009) and Schrefler (2010). This thesis employs within-case analysis to comprehend the theoretical expectations that establish the connection between causal factors and outcomes, as suggested by Blatter and Haverland (2012) and Rohlfing (2012). The study focuses on a single case to achieve the theoretical objectives of demonstrating a causal relationship and examining whether the causal process occurred as anticipated. However, the research's scope focuses on the period between 2016 and 2021, which corresponds to the first mandate of the EU Platform on Food Losses and Waste (FLW) and its work on food waste policies, which is further discussed in **Chapter 4**. This limitation is due to the fact that the Commission's Strategy encompasses a variety of objectives in different policy domains, and specific legislative measures will only be adopted by the end of 2023 (European Commission, 2020). This, on the other hand, represents a novel opportunity to trace the utilisation of expert knowledge in the policymaking process of the F2F Strategy's preparation across the political mandates of two different Commissions.

1.3. Structure of the Thesis

Following this section, **Chapter 2** of the thesis introduces a theoretical framework on how expert knowledge plays a role in the policymaking processes of the European Commission. This chapter also includes a review of literature to gain an understanding of expert knowledge utilisation and to identify the factors that affect the function of knowledge in the policymaking processes. **Chapter 3** describes the research methodology used to address the research question. It explains the conceptualization and operationalization of the variables utilised in this study, the documents used for the purpose of the study, and the limits of the research. **Chapter 4** delves into the extent to which the theoretical expectations are fulfilled by conducting a comprehensive analysis of the work carried out by the Commission throughout the first mandate of the FLW Platform. Subsequently, the findings of the analysis will be discussed in **Chapter 5**. Finally, **Chapter 6** serves as a summary and conclusion section in which the main findings will be summarised, demonstrating their relevance to the research question, providing an overall answer to the main research question and proposing suggestions for future research.

2. Theory & Literature Review

This chapter begins by presenting the theoretical framework of the research and outlines the theories and concepts used to analyse what constitutes expert knowledge and then elaborate on the many aspects of expert knowledge utilisation. The following sections will review relevant academic literature on the organisation and provision of expert knowledge within the European Commission, as well as the role that expert knowledge plays in the policymaking process on the EU level. This is then followed by a section that discusses the most relevant features and translates them into theoretical expectations. Finally, a summary of the expectations that were formulated will be included in the very last section of this chapter.

2.1. What is Expert Knowledge?

As discussed earlier, public and scholarly interest in the role of experts and their knowledge in the policymaking processes has increased in recent years. However, the academic literature on this subject is very dispersed as evidence-based policymaking, epistemic communities, and ideas and politics are all examples of what Christensen (2021, p.455) refers to as “silos in the literature” that prevent continuous empirical investigation from taking place. Hence, in order to establish a solid foundation for research on the role and influence of expert knowledge in the EC, it is essential to firstly define the concept of expert knowledge, or in other words, *expertise*. In their work, Martin et al. (2012, p.30) define expert knowledge as:

“Expert knowledge is substantive information on a particular topic that is not widely known by others. An expert is someone who holds this knowledge and who is often deferred to in its interpretation.”

According to the authors, this knowledge might be the product of training, research, and abilities, or it could be the consequence of personal experience (Martin et al., 2012). In this sense, experts exist, are dispersed unequally across the human population, and are not only produced via educational institutions (Martin et al., 2012). Hereby, following this definition, this study conceptualises expert knowledge as: the result of practical skills, training, and experience that has been developed by academics, specialists from NGOs, think tanks, and other professionals from expert networks. This implies that advice on policy matters provided by these professionals is also regarded as expertise, and that expert knowledge is not necessarily limited to what is written in an academic journal or book.

2.2. The Function of Expert Knowledge in the Realm of Public Policymaking Processes

As mentioned earlier, the primary obstacle encountered by scholars studying the intersection of expertise and policymaking is the conceptualization of the function of expert knowledge in the realm of public policy. According to Christensen (2021), the central question at hand pertains to whether emphasis should be placed on the knowledge or expert idea per se, the expert who produces it, or the groups responsible for generating and disseminating expert knowledge? Answers to these questions may be found in a variety of literature strands, each of which provides a somewhat different answer (Christensen, 2021).

Scholars in the realm of public policy have a well-established history of investigating the application of information, research, or knowledge in the process of policymaking (Christensen, 2021). This tradition dates back to the works of Weiss (1979), Sabatier (1987), Oh and Rich (1996), Landry et al. (2003), and Weible (2008). This body of literature posits that research-based and analytically-derived information holds significant value in guiding policymaking (Christensen, 2021). Therefore, it is imperative to comprehend the mechanisms through which such information is integrated into the policy process (Christensen, 2021). A prevalent literature strand that has emerged from this work pertains to the investigation of evidence-based policymaking, as noted by Head (2016). The primary focus of this literature is to comprehend the utilisation or “uptake” of evidence in the development of policies (Christensen, 2021). In this context, evidence typically denotes the outcomes of a formal and systematic inquiry (Oliver et al., 2014). However, a potential issue with concepts such as “evidence uptake” is that they possess normative connotations (Christensen, 2021). Moreover, the aforementioned scholars posit that policymaking is predicated on the premise that research evidence is impartial and devoid of political influence, thereby facilitating a more rational approach to policymaking (Christensen, 2021).

Another strand of literature, which is interrelated, contests the notion that the utilisation of research primarily involves only the form of problem-solving (Christensen, 2021). This body of literature presents various models that describe the diverse methods in which scientific knowledge is utilised in the policymaking process (Christensen, 2021). These recent models include the strategic model, where knowledge is employed as a political tool to endorse pre-established policy positions, and the symbolic model, where knowledge is utilised to acquire legitimacy in relation to other actors (Boswell, 2008, 2009; Schrefler, 2010; Rimkutė and Haverland, 2015; Weiss, 1979). To explain how knowledge is utilised, the

research on knowledge utilisation generally refers to characteristics of the policy issue or area (Christensen, 2021). This comprises the level of uncertainty that surrounds an issue, the level of political salience, or the degree to which there is contestation (Radaelli, 1999; Boswell, 2008; Schrefler, 2010). For instance, when there is a high level of political salience, knowledge will be employed in ways that are more strategic, as noted by Schrefler (2010). These explanations, however, are quite broad and ambiguous in their generalisation for the variations that may exist between two similar organisations, or even within the same one but in a different policy domain (Christensen, 2021). Consequently, this facilitates the establishment of numerous sound foundations for future research, as suggested by Christensen (2021).

2.3. Conceptualising the Types of Expert Knowledge Utilisation

As noted above, the most current research on the utilisation of expert knowledge identifies a number of distinct rationales for the application of expert knowledge. For the purpose of this study, a closer look will be paid to the scholarly works of Boswell (2008, 2009), Schrefler (2010), Radaelli (1995, 2009) who are among the most prominent scholars in the field of expert knowledge utilisation and its typological characteristics.

The first type of knowledge utilisation exemplifies how scientific knowledge is often intended to be used: as an ‘instrument’ to address policy issues and/or boost problem-solving abilities (Boswell, 2008; Schrefler, 2010). Knowledge is, therefore, used *instrumentally*, which means that scientific knowledge can be used to articulate the cause-and-effect relationships of intricate problems, as well as provide information that assists in the framing of a problem, thereby encouraging collaborative discussion and the search for scientifically validated solutions to challenges that already exist. In this context, the outcomes of policy, such as policy initiatives, represent the results of situations in which scientific reasoning is highly influencing the contemplation of policy alternatives (Boswell, 2008; Schrefler, 2010). The aforementioned approach, commonly associated with rational approaches to the policy-making processes, is founded on the notion that once an issue has been identified, expertise can be employed to determine the most suitable plan of action (Boswell, 2008; Schrefler, 2010). In this context, the agent (in the context of this study, the EC) has been assigned the responsibility of setting the agenda and fulfilling its primary function of generating knowledge and formulating policy recommendations (Boswell, 2008; Schrefler, 2010). The present format bears resemblance to the ‘problem-solving model’ of Weiss

(1979), and is typically employed by organisations that leverage expert knowledge to carry out their tasks (Schrefler, 2010).

The second type of knowledge utilisation is related to what scholars refer to as the ‘symbolic’ purposes of knowledge. Research examining the reasons why expert organisations are actually consulted in policy contexts demonstrates that, in addition to their instrumental function in ideal contexts of evidence-based policymaking, expert knowledge can also serve a *symbolic* function in organisational policymaking processes (Boswell, 2008, 2009; Schrefler, 2010; Radaelli, 1995). According to this type of knowledge, organisations solicit knowledge to enhance their claim to resources and epistemic authority, recognition, and legitimacy (Boswell, 2008; Schrefler, 2010). In other words, the motivation behind the utilisation of knowledge is related to the agent’s goals to increase political influence and power, as well as to enhance its prestige, status, or reputation (Rimkutė and Haverland, 2015). Furthermore, Rimkutė and Haverland (2015) argue that the Directorates-General may perceive a necessity for possessing “epistemic authority” due to the Commission’s status as a multilateral organisation, wherein they are engaged in interdepartmental disagreements and tensions (Hix, 2005; Rimkutė and Haverland, 2015). Furthermore, the application of scientific expertise may also be employed to manage external pressures arising from legislative bargaining procedures, wherein the Commission must navigate between the stances of its co-legislators, namely the CoEU and the EP (Rimkutė and Haverland, 2015).

The use of knowledge in a *strategic* manner is the third type of knowledge utilisation and, as argued by Daviter (2015) and Rimkutė (2015), has received little attention in the standard literature. However, this type of knowledge utilisation was broken down into two subcategories by Radaelli (2009) and Schrefler (2010). These divisions are *strategic-political* and *strategic-substantiating*. According to Schrefler (2010), the strategic-political utilisation of knowledge is intricately linked to the agency’s position within the policy arena and is contingent upon the contextual factors and actors that the agency encounters while executing its duties. The theoretical basis of this methodology can be attributed to an organisation’s imperative to react to supervisory mechanisms, including legal scrutiny, and more broadly, to the management of political authorities and those being regulated (Sabatier 2007; Jenkins-Smith and Sabatier, 1994; Schrefler, 2010). Schrefler (2010) also makes a relation to Weiss’ typology (1979), where the utilisation of knowledge for strategic purposes is referred to as a ‘tactical model’ of knowledge. This approach can be employed for various objectives, such as enhancing the political influence of the agent, broadening its authority, and reinforcing its credibility and prestige (Schrefler, 2010). The strategic-substantiating type, as

identified by Schrefler (2010), draws upon Boswell's (2008) research, and is primarily associated with policy content rather than the political context in which policies are developed. Schrefler (2010) argues that agencies generally employ a strategic approach to substantiate the utilisation of knowledge, with the aim of justifying and bolstering an established or favoured policy preference. This scenario occurs when an impact assessment is conducted to rationalise the implementation of a predetermined policy alternative (Schrefler, 2010; Radaelli, 2009). The utilisation of knowledge to provide evidence can also function as a means of protection in a conflicting situation, as noted by various scholars (Boswell 2008; Sabatier 2007; Jenkins-Smith and Sabatier, 1994). In this scenario, the agency will strategically utilise scientific knowledge to promote its favoured approach over alternative perspectives advocated by other stakeholders in the policy sphere (Schrefler, 2010).

2.4. Organisation and Provision of Expert Knowledge in the European Commission

The European Commission, as the executive body of the EU, is responsible for initiating EU policies and advancing the European interest (Christensen et al., 2017). The EC is led by a group of politically selected Commissioners from the member states who represent European interests and is responsible for overseeing the execution of EU law (Christensen et al., 2017; Metz, 2013). The Commission is structured into distinct policy departments, commonly referred to as Directorates-General (DGs), that are assigned with specific policy domains. The DGs are responsible for the development, implementation, and management of European Union policies, legislation, and funding initiatives. Furthermore, service departments are responsible for addressing specific administrative matters. The Commission's established programmes are managed by executive agencies (European Commission, n.d.).

The utilisation of scientific knowledge as a mechanism to tackle policy concerns is employed by the Commission for various rationales. The legislative bodies, namely the CoEU and the European Parliament, entrust the Commission with responsibilities and bearing the assumption that it will execute its duties in an unbiased manner (Gornitzka and Sverdrup, 2011). This entails that the Commission's decisions will be based on solid evidence rather than predetermined biases or interests (Majone, 1996). According to Pollack's (1997) findings, it can be inferred that the Commission's agenda-setting authority is crucial as other European Union entities depend on the Commission to generate impartial and dependable policies. Given that the responsibility for formulating policy proposals is delegated to the Commission, it is expected that decisions made collectively will be underpinned by robust

and dependable expert knowledge (Gornitzka and Sverdrup, 2011). The vast majority of policies within the EU are based on recommendations put forth by the Commission. The theory of delegation from a functionalist perspective emphasises that agents assigned with specific duties may possess preferences that differ from those of the principals who delegated these tasks (Majone, 1996). The fundamental concept underlying the principal-agent (P-A) model posits that agents progressively cultivate their individual interests, which they can promote due to their possession of resources, particularly scientific expertise, that are essential for policy formulation (Majone, 1996). The Commission, therefore, possesses the obligation and adequate resources to utilise scientific evidence in an impartial manner. However, it may strategically employ the scientific committees under its supervision and the evidence they generate to attain its institutional or policy objectives, as suggested by Majone (1996), Boswell (2008, 2009), and Schrefler (2010).

The European Commission derives its expertise from a diverse array of sources as argued by Gornitzka and Sverdrup (2011). As an agenda-setter, the Commission might depend on several expert committees to assist in the development of new proposals (Gornitzka and Sverdrup, 2011). According to the scholars, the most extensive structured information system in the EU is constituted by its expert committees (Gornitzka and Sverdrup, 2011). In formal terms, an expert group is a consultative body consisting of external experts who provide advice to the Commission in the development of legislative proposals and policy initiatives, as well as in its responsibilities of monitoring, coordinating, and collaborating with member states (Gornitzka and Sverdrup, 2011). The configuration of the group is indicative of the Commission's decisions, primarily at the level of Directorates General (DGs) (Gornitzka and Sverdrup, 2011). The Commission is responsible for the formation of expert groups. Typically, there are two methods for accomplishing this task: (1) through a decision or other legal measure issued by the Commission, or (2) through a Commission service that has obtained the consent of the Secretariat General (Gornitzka and Sverdrup, 2011). The majority of the groups belong to the latter category (Gornitzka and Sverdrup, 2011). The selection of members for an expert group is contingent upon discretion, whereby the DGs extend invitations to relevant stakeholders within their respective spheres (Gornitzka and Sverdrup, 2011). However, this is an area of EU decision-making where formal legislative regulations that outline participation rights and the function that such organisations are expected to provide are not in place (Gornitzka and Sverdrup, 2011).

Stakeholder consultation is considered as another crucial mechanism for the development of expert knowledge. In accordance with the Better Regulation Guidelines of

the EC (2021), stakeholder consultation pertains to the process of engaging with stakeholders, either through public or targeted consultation, throughout the policy initiative's development (Eliantonio and Spendzharova, 2017). According to what is outlined in the agenda, the best procedure to follow is to solicit all of the main relevant information from a diverse group of stakeholders (Eliantonio and Spendzharova, 2017). Evaluation studies and impact assessment represent a crucial mechanism for generating expertise, as they serve to guarantee the quality control of the better regulation agenda (Eliantonio and Spendzharova, 2017). It is imperative for responsible Directorates-General (DGs) to conduct evaluations and impact assessments (IA), alongside engaging in stakeholder consultation, as per the Guidelines provided by the European Commission (2021). In order to provide support for the assessment studies and the IA, external experts are brought in to carry out research (Eliantonio and Spendzharova, 2017). These external experts might be research institutions or commercial consultancies (Eliantonio and Spendzharova, 2017). In-house expertise, such as that provided by Joint Research Centre (JRC), for example, is able to give appropriate analytical approaches and knowledge for IAs, as stated in the Guidelines (Eliantonio and Spendzharova, 2017).

2.5. Knowledge utilisation by the EU Institutions: The Case of the EU Commission

Any discourse on the utilisation of knowledge by organisations is inherently based on what Boswell (2008) calls “a theory of organisations,” which comprises a series of assertions regarding the origins and characteristics of organisational objectives, and how these are manifested in organisational conduct. The majority of knowledge utilisation theories espouse rational choice perspectives, which posit that organisations are fundamentally motivated by the pursuit of power maximisation (Sabatier, 1978), or the fulfilment of mandated objectives (Weiss, 1979). The approach followed by Boswell (2008) in her research on a Commission DG is an organisational institutionalism, as defined by DiMaggio and Powell (1991). The central argument posits that administrative agencies are primarily focused on attaining legitimacy, which involves conforming to societal norms regarding suitable structures, practices, language, or outcomes (Boswell, 2008; DiMaggio and Powell, 1991). Organisations, thus, place great importance on obtaining internal legitimacy from their members, as their loyalty is crucial for the continued existence of the organisation (Boswell, 2008; Brunsson, 1985). Rimkutė (2015) asserts that although internal dynamics hold significance, there is a growing emphasis on examining the impact of external actors, including political and non-political entities, on the level of pressure exerted.

According to Kohler-Koch (1998), the need for continuous negotiation among diverse stakeholders necessitates policy work in informal networks as a crucial complement to formal decision-making processes. Initially, Radaelli (1999) established the fundamental basis for the scholarly discourse on the utilisation of knowledge within the European Union. In his work, the scholar asserted that the Commission's fundamental basis lies in the utilisation of expert knowledge (Radaelli, 1999). Similarly, Metz (2013) contends that the engagement of external advisors is a crucial element in the process of policy formulation within the EU. The author posits that the governance framework of the EU encompasses several tiers of administration and, unlike nation-states, lacks a centralised government (Metz, 2013). Instead, it operates on the basis of power-sharing among its decision-making bodies (Metz, 2013). At the same time, the institutional system of the European Union, which is open and fragmented, offers numerous access points for external advisors (Metz, 2013). As a consequence, 'constant consultation' with a significant amount of outside counsel has always been the mantra for the EU's daily policymaking (Metz, 2013). As noted by the Commission:

“Scientific expertise is increasingly becoming a critical element in the design, implementation and assessment of public policies. This means that policy-makers must be able to consult the scientific community. Scientists should have an opportunity to share their concerns and knowledge. (European Commission, 2005)

In their work, Rimkutė and Haverland (2015) argue that there are a variety of reasons why we might anticipate the Commission to use scientific knowledge to address policy concerns. In rational choice theory, explanations of institutional choices centre on the tasks a particular institution is required to execute and its impact on policy outcomes (Pollack, 2006; Rimkutė and Haverland, 2015). In order to explain the delegation of tasks to non-majoritarian institutions, a functionalist perspective emphasises the competence created by autonomous entities that are distinct from their founders (Rimkutė and Haverland, 2015). This delegation is justified by the need for collaborative action, the need to address commitment issues, and the need to overcome knowledge asymmetries in order to generate well-informed, long-term oriented EU policies (Thatcher and Sweet, 2002; Rimkutė and Haverland, 2015). In accordance with the functional theory of delegation, the Council of the EU, and the European Parliament delegate responsibilities to the Commission with the expectation that it will operate in an impartial manner (Rimkutė and Haverland, 2015). This entails that the Commission's conduct is grounded in reliable evidence rather than conflicting preferences, beliefs, or goals (Majone, 1996; Tallberg, 2002; Thatcher and Stone Sweet, 2002). The

preference of Member States is, therefore, for the Commission to possess the authority to set the agenda, as they anticipate proposals that are “relatively unbiased and well-informed” (Pollack, 1997, p.106). Hence, the transfer of policy-making responsibilities to the supranational entity, specifically the Commission, is anticipated to result in collective decisions that are grounded on credible evidence (Rimkutė and Haverland, 2015).

Accordingly, the institutional framework of the European Union adheres to this rationale. The Commission, in its capacity as an agenda-setting entity, is supported by over a thousand expert committees that aid in the origination and development of novel legislation (Gornitzka and Sverdrup, 2011). According to Gornitzka and Sverdrup (2011), expert committees constitute the most extensive organised information system in the European Union, surpassing the Council Working Groups and Comitology Committees as the primary sources of expert advice. While the former serves as the backbone of the Council, the latter is responsible for overseeing the Commission’s delegated legislation and policy implementation through the scrutiny of national civil servants (Eichener, 1997; Joerges and Vos, 1999; Quaglia et al., 2008; Gornitzka and Sverdrup, 2011).

2.6. Features Impacting the Type of Knowledge Utilisation

As previously discussed, Radaelli (1999) has emphasised on the intricacy and extent of EU regulation resulting in elevated requirements for expertise from external stakeholders involved in the policy-making procedure (Radaelli, 1999). In a more critical approach, Radaelli (1999) addresses the technocratic aspect of the European Union and emphasises the significance of expertise inside the EU. The author argues that the initial concept for European Union integration elucidates the significance of expertise (Radaelli, 1999). Hence, the initial notion of integration was technocratic, with a privileged place for professionals in determining supranational policy (Radaelli, 1999). The author observed that while technocracy has its merits, its applicability is limited (Radaelli, 1999). He was one of the pioneers in suggesting that certain factors and mechanisms contribute to the prevalence of a particular ‘mode’ of knowledge utilisation over others (Radaelli, 1999). This was achieved by examining variations in the independent variables of political salience and uncertainty in the policymaking process (Radaelli, 1999). In his findings, the variable of salience highlights the contrast between policy domains that are “opaque or pillarized” and those where “public opinion, diffuse interests, parliamentary oversight, and mass political parties” render issues more visible and the underlying logic more political (Radaelli, 1999, p.763). In short, the

concept of “salience” serves to distinguish policies that are intended for the general public from those that are not. His second variable pertains to the concept of uncertainty (Radaelli, 1999). Greater levels of uncertainty provide additional opportunities for the application of problem-solving strategies that are grounded in expert knowledge (Radaelli, 1999).

Researchers have considered the findings of Radaelli (1999) when examining the utilisation of expert knowledge within organisations, as evidenced by the qualitative studies on the immigration policy of the Commission by Boswell (2008), and the one by Schrefler (2010) on the US regulatory agencies. These studies are essential to this research because, unlike Radaelli’s (1999) study, they were among the first to employ the presently contested instrumental, symbolic, and strategic typologies of expert knowledge utilisation. It is noteworthy that the prevalence of particular knowledge in the research of Boswell (2008) is contingent upon the independent variables of features of the organisation and features of the policy area. The author posits that the Commission’s institutional structure, coupled with specific characteristics of the policy area, results in a significant inclination towards knowledge as a means of legitimising and validating decisions (Boswell, 2008). According to Boswell (2008), the EC employs an instrumental approach to knowledge utilisation when their objective is to address a policy issue and a legitimising utilisation of knowledge to bolster their legitimacy (Boswell, 2008). Additionally, when the EC aims to advance their preferences, they resort to substantiating utilisation of knowledge (Boswell, 2008). However, according to Boswell (2008), the Commission lacks a predetermined approach for utilising knowledge during the initial phase. Boswell (2008) also discovered that the Commission’s perspective on the strategy of knowledge utilisation is dynamic and changes over time.

In her research, Schrefler (2010) incorporated the independent variables of issue saliency and problem traceability. Additionally, the author highlighted the significance of delegation theories in establishing a correlation between delegation and the application of scientific knowledge within independent regulatory agencies and asserted that delegation theories highlight the strategic aspect of knowledge utilisation (Schrefler, 2010). Schrefler’s (2010) findings suggest that the types of knowledge utilisation vary depending on changes in saliency and problem tractability, which is consistent with previous research. However, Schrefler (2010) recognised that the integration of multiple factors can lead to two distinct outcomes, limiting the generalizability of her findings. According to Schrefler (2010), the utilisation of process tracing methods and case studies may offer a viable solution to address this matter and facilitate a better understanding of causal processes and mechanisms.

Rimkutė (2015) undertook the challenge of operationalizing the existing knowledge utilisation typology and researched the utilisation of expert knowledge within the European Food Safety Authority (EFSA). Following the typology of expert knowledge utilisation and suggestions by Schrefler (2010), Rimkutė (2015) employed process tracing methods in the context of a single case study. Nonetheless, Rimkutė (2015) asserted that identifying the defining explanatory factors, theoretical foundations, and coherent causal explanation for the previously-mentioned features by scholars (uncertainty, political saliency, features of the organisation/policy area, conflict, and problem tractability) was a challenging task and presented a fragmentation in the literature. In light of this, Rimkutė (2015, p.3) asserted that the effectiveness and credibility of policy solutions depend on two features: “(1) the external environment (including formal and informal pressures), in which scientific output is produced and (2) the internal capacity of the agency to produce expert knowledge.” The fragmentation issue was therefore resolved by the scholar through a comprehensive approach that considered the various explanatory factors as a collective set of causal mechanisms that result in the outcome (Rimkutė, 2015). The findings of Rimkutė (2015) further discussed various theoretical expectations regarding the relationship between external pressure, internal capacity, and their potential outcomes such as problem-solving, symbolic and strategic-political uses of expertise. However, the empirical study only examined one specific causal configuration, which involved high external pressure and high internal capacity which resulted in the strategic-substantiating use of expertise (Rimkutė, 2015). The findings presented a theoretical basis for analysing the causal mechanisms that lead to the utilisation of expertise in practice and called for further research whether it applies to all bodies of expertise that rely on scientific knowledge, including the Commission.

2.7. Summary of Theoretical Expectations

Following Rimkutė’s (2015) call for further research on her theoretical framework, this thesis aims to examine the Commission’s utilisation of expert knowledge in the preparation of the F2F Strategy during the first mandate of the FLW Network. It also seeks to identify whether internal capacity to produce knowledge and external pressure contribute to the different types of expert knowledge utilisation by testing Rimkutė’s (2015) framework on a novel EU policy case. The following theoretical expectations, derived by the research of Rimkutė (2015), and built upon the typology of Boswell (2008), Schrefler (2010) and Radaelli (2009), have been formulated and summarised in **Table 1**:

Expectation 1 (E1): *If the level of internal capacity to produce expert knowledge and the level of external pressure in the policy area are both high, we expect to see a strategic-substantiating type of knowledge utilisation by the European Commission.*

Expectation 2 (E2): *If the level of internal capacity to produce expert knowledge is high and the level of external pressure in the policy area is low, we expect to see an instrumental type of knowledge utilisation by the European Commission.*

Expectation 3 (E3): *If the level of internal capacity to produce expert knowledge is low and the level of external pressure in the policy area is high, we expect to see a symbolic type of knowledge utilisation by the European Commission.*

Expectation 4 (E4): *If the level of internal capacity to produce expert knowledge and the level of external pressure in the policy area are both low, we expect to see a strategic-political type of knowledge utilisation by the European Commission.*

Table 1. Summary of Theoretical Expectations

	External pressure (formal and informal)	
	High	Low
High	<p>E1 Strategic-substantiating</p>	<p>E2 Instrumental*</p>
Low	<p>E3 Symbolic</p>	<p>E4 Strategic-political</p>

Note: Adapted from Rimkutė, D. (2015). Explaining Differences in Scientific Expertise Use: The Politics of Pesticides. *Politics and Governance*, 3(1), 114–127.

*In her original theoretical framework, Rimkutė (2015) utilises the label of ‘problem solving,’ when referring to *instrumental* type of expert knowledge utilisation.

3. Research Design & Methods

This chapter begins with an explanation of the kind of research design that is selected in order to answer the research question of this study. The second section provides an explanation of how and why this particular case study was chosen. The chapter's third section contains details about the data that was collected. In the fourth and fifth sections, the definitions of the variables as well as the techniques for measuring them are discussed. The final section elaborates on the possible limitations this research might face.

3.1. Single Case Study Design

This study proceeds with a within-case level analysis. The selected approach facilitates comprehension of the theoretical expectations that establish a connection between causal conditions and their corresponding outcomes, as suggested by Blatter and Haverland (2012) and Rohlfing (2012). The ultimate goal of this design is two-fold as it holds both a descriptive and explanatory value. On the one hand, the design's descriptive value is rooted in the simple description of the ways in which the Commission utilised knowledge in a novel EU policy case, which contributes to the academic literature on expert knowledge utilisation. According to Toshkov (2016, p.293), descriptive case studies serve as "reservoirs" that facilitate the generation of insights, formation of hypotheses, and construction of theories. On the other hand, the design's explanatory value lies in the description of the features under which the Commission utilised expert knowledge and ascertain what explains the type of knowledge utilisation employed by the European Commission in the F2F Strategy's preparation process in relation to the expectations derived from theory.

As mentioned earlier, the study's empirical analysis is focused on a single case, as this methodology enables the article's theoretical objectives, which are to establish substantial evidence of a causal connection and to track the progression of the causal mechanism as anticipated (Toshkov, 2016). Toshkov (2016, p.285) suggests that case studies offer two main benefits: firstly, they provide an initial understanding of the case in question, and secondly, they have the potential to narrow down the scope of established theories. The present study, therefore, employs a theory testing approach that centres on the examination of whether the hypothesised causal mechanisms are responsible for the observed effects (Toskov, 2016).

3.2. Case Selection

There are a variety of reasons why the case of the Commission's utilisation of expert knowledge in the preparation of the EU Green Deal's F2F Strategy was chosen for analysis of this study. According to Christensen (2021), the discourse surrounding the present fragmented academic literature on the relationship between expert knowledge and policymaking has revealed significant variations in the conceptualization and explication of the role of expert knowledge in public policymaking. It has emphasised the challenges of experimentally defining fundamental ideas as well as the significant flaws and "blind spots" of current explanatory arguments (Christensen, 2021, p. 462). For this reason, an empirical study on the Commission's utilisation of expert knowledge in a novel EU policy case is essential in order to expand the understanding of factors and mechanisms that account for the utilisation of expertise in the current academic debate. Moreover, as noted by Rimkutė (2015), the current research on expert knowledge utilisation lacks a comprehensive analysis of the external environment, as it predominantly concentrates on the internal environment of expert organisations and examines features such as the policy area/organisation, saliency and conflict/uncertainty (Boswell, 2008; Radaelli, 1999; Schrefler, 2010). As highlighted earlier, the formulation of the comprehensive F2F Strategy's policy objectives has been controversial due to conflicting perspectives on the future 'sustainable food system' among the involved actors (Schebesta and Candel, 2020). Hence, this case study provides a novel opportunity to test Rimkutė's (2015) recent theoretical framework by examining whether both high internal and external explanatory factors collectively function as causal mechanisms leading to the type of knowledge utilised throughout the preparation of the F2F Strategy.

Finally, as the Strategy was officially published subsequent to the political appointment of the Von der Leyen Commission in late 2019, it is suggested that its preparation took place already during the mandate of the previous Commission, under former Commission President Juncker, and throughout which the FLW Platform was established. By focusing on the work carried out by the Commission throughout the FLW Platform's first mandate, this presents a novel opportunity to also trace the utilisation of expert knowledge in the policymaking process of the F2F Strategy in the political mandates of two 'distinct' Commissions.

3.3. Methods of Analysis and Data Collection

The research design of this study employs process tracing as its primary method of analysis. According to George and Bennet (2005), the aim of process tracing is to pinpoint causal processes, which are the causal links connecting independent variables to the dependent variable. In other words, process-tracing aims to identify the causal steps that ultimately contributed to the observed outcome, as suggested by Christensen (2021) and Dür (2008), and illustrated by the research on explaining the differences in expert knowledge utilisation by Rimkutė (2015). According to Toshkov (2016, p.300), a common approach in process tracing research is “recovering in as much detail as possible the institutional context and reconstructing the chronology of events leading to an outcome of interest.” Therefore, in the context of the Commission’s utilisation of expert knowledge throughout the preparation of the F2F Strategy, process-tracing techniques are employed to uncover the process by which expert knowledge was utilised during the first mandate of the FLW Platform from 2016 to 2021.

Toshkov (2016, p.299) posits that process tracing is applicable across various levels of analysis, including individuals, organisations, and states, and can be employed with diverse data collection methods such as archival research, document analysis, structured and unstructured interviews, and participant observation. Therefore, in order to supplement the analysis, this research will undertake archival research and document analysis as methods of relevant documents pertaining to the F2F Strategy throughout the designated timeframe. Conducting archival research is a crucial component in identifying and tracing causal mechanisms (Toshkov, 2016). To gain a better understanding of the Commission’s motivation and ‘channels’ of expert knowledge, this research gathers relevant documents from: EU legal documents derived from EUR-Lex, Commission press releases, FLW Platform’s panel meeting reports, studies published by the Commission’s Publication Office, opinions issued by the EP, CoEU, EESC, and CoR, JRC’s scientific output (including impact assessments mandated by the Commission), and recommendations by independent expert groups. A document analysis is performed on the obtained data, which often involves the use of expert knowledge. Bowen (2009) asserts that document analysis is especially relevant to qualitative case studies, which involve in-depth investigations that yield detailed portrayals of a singular phenomenon, occurrence, institution, or initiative. The indicators for the types of knowledge, which are summarised in **Table 2**, and discussed further in the next section of this chapter, are used to evaluate the evidence that may be discovered in the collected documents.

By extracting data from these documents, a chronology of significant events will be compiled. Hence, for better comprehension, the analysis chapter is separated into two separate sections: the first one covering the period 2016-2019, which is the duration of the former Juncker Commission; and the second one covering 2019-2021, which is the duration of the current Von der Leyen Commission (see **List of Tables and Figures**). Consistent with this reasoning, it is deemed appropriate to allocate two distinct appendices for each of the two sections of the analysis chapter, accompanied by a title that accurately reflects its contents. Therefore, the aforementioned documents will be categorised into four appendices, namely:

- **Appendix 1:** EU documents, scientific studies, press releases during the Juncker Commission
- **Appendix 2:** FLW Platform documents during the Juncker Commission
- **Appendix 3:** EU documents, scientific studies, press releases during the von der Leyen Commission
- **Appendix 4:** FLW Platform documents during the Von der Leyen Commission

However, despite the publication of all documents and the inclusion of all information, a document analysis may still be deemed insufficient. A limitation to these methods is, therefore, the absence of interviews and direct observations of experiences from expert groups and European Commission staff members, which due to time constraints of this research are considered a missed opportunity to acquire additional contextual information.

3.4. Operationalisation

According to Scheffler (2010, p.62), a significant challenge in the proposed expert knowledge utilisation typology is “identifying appropriate indicators” for each type of knowledge utilisation. Regarding this matter, initial evaluations can be made by examining particular patterns in the actions of the institution and the manners in which resources are linked to the generation and utilisation of expert knowledge by carefully evaluating the research findings of scholars such as Boswell (2008), Radaelli (2009), Schrefler (2010) and Rimkutė (2015) and are summarised in **Table 2**.

Table 2. Indicators for the types of knowledge utilisation

Type of Expert Knowledge Utilisation	Indicators
<i>Strategic-substantiating</i>	<ul style="list-style-type: none"> → The EC aims to justify its preferred/predetermined policy choice (Schrefler, 2010) → Expert knowledge is produced and utilised by the EC in order to fit with broader EU goals and other institutions' preferences (Schrefler, 2010) → The EC conducts Impact Assessments but does not fully implement them (Radaelli, 2009)
<i>Instrumental</i>	<ul style="list-style-type: none"> → The EC carries out its assigned tasks/mandate and broadens the understanding of an existing policy issue and improves its problem-solving abilities (Boswell, 2008; Schrefler, 2010) → The EC strictly adhered to scientific standards (e.g. a comprehensive description of the data included in the scientific outputs; a clear description of the inclusion/exclusion criteria of evidence) (Rimkutė, 2015) → The EC conducts Impact Assessments to determine what is the most effective option (Radaelli, 2009)
<i>Symbolic</i>	<ul style="list-style-type: none"> → The organisation conforms to established structures and acquiesces to external expectations or pressures by adopting the practises of relevant actors in the field (Radaelli, 2009; Rimkutė, 2015; Schrefler, 2010) → The EC tends to replicate comparable frameworks and conform to anticipated standards or external pressure (Schrefler, 2010) → The EC conducts Impact Assessments primarily to enhance its legitimacy rather than enhance policy effectiveness (Radaelli, 2009).
<i>Strategic-political</i>	<ul style="list-style-type: none"> → Expert knowledge is produced in order to be utilised by the EC in political debates with other EU institutions/stakeholders (Schrefler, 2010) → The EC endeavours to establish or uphold its position within the policy field. Expertise is utilised to establish legitimacy among other actors or institutions, rather than to resolve a particular issue (Rimkutė, 2015). → The EC conducts Impact Assessments in order to use them in debates with other institutional actors (Radaelli, 2009)

3.5. Variables

This research is composed of one dependent variables (DV), type of expert knowledge utilisation, which can take four different values: instrumental, symbolic, strategic-political, and strategic-substantiating; and two independent variables (IV): internal capacity to produce expert knowledge (IV1) and external pressure (IV2).

The variables that are considered independent in this study are the external pressure emanating from formal and non-formal entities, as well as the extent of internal capacity to generate expert knowledge. The independent variables' values are derived from Rimkuté's (2014) theoretical expectations. Following that, empirical analysis will be conducted on these independent variables. This study posits that the outcome is influenced by two interdependent factors: external pressure, which can be either *high* or *low*, and internal capacity, which can also be *high* or *low*. It is suggested that these factors play a crucial role in determining the outcome, independent of any other conditions that may be associated with it (Rimkuté, 2015). The F2F Strategy case has implications for the environment, food supply chains, and political discourse due to its controversial nature among the actors involved. The interdependence of the two dimensions is such that their combined effect is anticipated to exert an impact on the behaviour of the organisation and result in the utilisation of *strategic-substantiating* use of knowledge (Rimkuté, 2015).

As mentioned above, the dependent variable is one; however, it can take four different values: *instrumental*, *symbolic*, *strategic-political*, and *strategic-substantiating*. According to Schrefler (2010), the underlying basis of knowledge utilisation is the motivating factor that drives each type of expert knowledge utilisation. As mentioned in the previous chapter, the scholarly literature has identified four distinct types of the utilisation of knowledge, namely: *instrumental*, *symbolic*, *strategic-political* and *strategic-substantiating* (Boswell, 2008; Schrefler 2010). However, as suggested by Rimkuté (2015), the explanations pertaining to the numerous tactics for applying knowledge cannot be understood as a simple link between simple independent components; rather, they must be examined in terms of combinations of different circumstances which are essential for the occurrence of a specific outcome (Rimkuté, 2015). In accordance with the theoretical expectations of this study, the EC is anticipated to employ a *strategic-substantiating* type of knowledge utilisation when there is high external pressure and it possesses a high capacity to produce expert knowledge. The utilisation of the process-tracing techniques will enable the determination of whether the unfolding of events aligns with the theoretical expectations.

3.6. Limitations

Single-case studies, similar to other research designs, inherently possesses both advantages and disadvantages, which must be taken into consideration when interpreting the results. Single-case studies, similar to other research designs, have limitations. According to Toshkov (2016), the primary concern is the uncertain potential for generalisation beyond the specific case under examination. Since there is only one case being investigated by definition and since this case is frequently chosen for its substantive rather than methodological significance, generalisation (external validity) cannot be guaranteed unless one makes the assumption that the population of cases is completely homogeneous and that there are deterministic causal relationships (Toshkov, 2016). In addition, explanatory case study designs are limited by their reliance on pre-existing theories to construct individual explanations (Toshkov, 2016). Without these essential components and lacking a solid foundation of prior knowledge that establishes robust causal relationships, integrating different pieces of within-case analysis into persuasive explanations can be exceedingly challenging, as noted by Toskov (2016).

Moreover, the task of tracing the utilisation of knowledge, particularly its instrumental function, can be challenging due to the fact that such utilisation may not yield immediate and practical outcomes (Schrefler, 2010, p. 315). Another potential issue that could arise pertains to the possibility of a shift in the role of knowledge as time progresses (Hunter and Boswell, 2015).

Furthermore, the methodology employed in this study is primarily reliant on the existing documents accessible during the period of examination. This situation could pose potential issues as it implies a significant reliance on publications originating from the European Commission. Despite the publication of all documents and the inclusion of all information, a document analysis may still be deemed insufficient. Tracing the context in which documents are published can often prove to be a challenging task. The exclusion of personal experiences from expert groups and European Commission staff members represents a missed chance to gather valuable contextual information.

4. Analysis

Drawing on the data collected from the documents under examination, this chapter analyses the findings and relates them to the indicators of the types of expert knowledge utilisation. As described in the previous chapters, two distinct periods pertaining to the case will be examined. Simultaneously, the levels (high/low) of internal capacity to produce expert knowledge and external pressure are measured and deliberated upon.

4.1. First Stage: The Preparation for the EU Green Deal's F2F Strategy (2016-2019)

The first stage of the Commission's food sustainability policies, spanning from 2016 to 2019, is characterised by a comprehensive preparation process. This preparatory phase involves a range of activities and initiatives aimed at laying the groundwork for the establishment of the EU Platform on Food Losses and Waste, and the future Communication of the Green Deal's F2F Strategy, which covered food sustainability as a central pillar. These activities include extensive research, consultations with stakeholders, and the development of a robust policy framework that would guide the Strategy's implementation. Through this preparatory phase, the Juncker Commission (2014-2019) was able to establish a solid foundation upon which to build the F2F strategy, setting the stage for its subsequent implementation and eventual success during the Von der Leyen Commission.

4.1.1. EXPO 2015 and the EU Scientific Steering Committee

In line with the scientific recommendations received during the Universal Exhibition (EXPO) in 2015, the imperative to revolutionise fundamental societal structures has also been progressively recognized in strategic policy documents of the EU. The theme of EXPO Milano 2015, "Feeding the Planet, Energy for Life," was of great significance for both the EU and the world. On the one hand, it marked the first EXPO held in Europe in 15 years. On the other hand, the EU's significant contribution to the EXPO negotiations was crucial, given that its timing coincided with the target year of the United Nations Millennium Development Goals and the launch of the Sustainable Development Goals (SDGs). Therefore, the event served as a significant milestone in the global discourse on food and sustainability as it provided the Commission with an opportunity to engage with stakeholders, scientists, and citizens, thereby enhancing its comprehension of the policy issue. In this regard, the starting point of analysis in this study is the scientific documents generated during the EXPO, which

were among the first novel policy documents that recognized the importance of food sustainability in the Commission's future-proof environmental policies.

The conclusions of the EU's scientific programme at EXPO 2015, which was coordinated by the Commission's JRC, were produced by an independent EU Scientific Steering Committee, hereafter: the Scientific Committee (European Commission, 2015a). As a central recommendation, the Scientific Committee urged the EC to collaborate with its Member States in establishing a "panel of experts on food and nutrition security to enhance research efforts" on this subject (European Commission, 2015a). Additional discoveries were made, such as the necessity to heighten the consciousness of food security concerns among policymakers and consumers/citizens (European Commission, 2015a). Franz Fischler, who served as the Chair of the Scientific Committee, stated that:

"Achieving food and nutrition security requires strong commitment from policy makers. We have seen this commitment shown throughout the six months of Expo. These recommendations should be a reminder to strengthen EU research and innovation efforts to help guarantee food and nutrition security globally and end world hunger." (European Commission, 2015a)

Following the conclusion of EXPO 2015 in October and the expert recommendations on food security, produced by the scientists, the Committee has delivered several scientific documents to the Commission, which were published on its official website (European Commission, 2015a). Former EU Commissioners Vytenis Andriukaitis (DG SANTE), Phil Hogan (DG AGRI), and Carlos Moedas (DG RTD), have all welcomed EXPO 2015's scientific findings (European Commission, 2015a). Moreover, former Commissioner for Education, Culture, Youth, and Sport and head of the Commission's JRC, Tibor Navracsics made the following statement:

"Continuous scientific progress is needed to help us ensure safe and nutritious food for all. I welcome the great effort made by scientists, policy makers, industry representatives and citizens to compile evidence on food security challenges. These recommendations are a truly valuable basis for future research actions at EU level." (European Commission, 2015a)

As it can be concluded, this positive endorsement indicated the Commission's intention to utilise the generated scientific knowledge and incorporate it into its future environmental policy strategies on sustainable food systems.

4.1.2. The Circular Economy Communication and the launch of the EU FLW Platform

As a result of the EXPO in 2015 and the EU's commitment to the UN SDGs, the growing issue of climate change and, specifically, food sustainability, received even more attention during the second half of the Juncker Commission. In its December 2015 "Circular Economy Action Plan," the Commission designated the reduction of food waste as one of its crucial domains for intervention and necessitated the need for designating a "platform" that involves the participation of multiple stakeholders, and is exclusively dedicated to the prevention of food waste (European Commission, 2015b). As outlined in the Commission's Action Plan:

"The Commission will also create a platform dedicated to food waste, bringing together Member States and all actors in the food chain. This platform will support the achievement of the food waste reduction target under the Sustainable Development Goals through appropriate steps, the involvement of stakeholders, the sharing of valuable and successful innovation and relevant benchmarking." (European Commission, 2015b)

Hence, in the first very attempt to broaden its understanding of the existing policy issue and improve its problem-solving abilities, it can be concluded that the Commission utilised the generated knowledge by the EXPO Committee in a rather *instrumental* way as it chose to strictly adhere to the recommendations of the Scientific Committee and provide information that assists in the framing of the problem, thereby encouraging collaborative discussion and the search for scientifically validated solutions to challenges that already exist. Another indicator of that is the absence of any Parliament resolutions or Council recommendations on food waste, prior to the publication of the Circular Economy Communication, indicating that the external pressure was low.

Several months after the Communication's release, however, the CoEU issued its "Conclusions on food losses and food waste" in June 2016, urging the Member States and the Commission to undertake additional measures (Council of the European Union, 2016). Furthermore, the CoEU also welcomed the Commission's initiative to establish an EU platform dedicated to food waste and suggested to the Commission that:

"Use the stakeholders platform as a forum for exchanging views on developing consumer information in the Member States in order to meet the huge challenge of influencing consumer behaviour." (Council of the European Union, 2016)

Hence, similar to the recommendations generated by the EXPO Committee, the CoEU underlined the necessity that the Commission should include the input of all actors in the food chain in its policymaking processes (Council of the European Union, 2016). Moreover, in its concluding remarks, the CoEU (2016) expressed the need for “periodic evaluation of the progress made in the implementation of its proposed measures.”

Following the call for more action by the CoEU, the Commission published its first-ever study on sustainable food systems in October 2016, coordinated by DG RTD, and titled “European research & innovation for food & nutrition security”, or famously known as “Food 2030 Policy Framework” (DG RTD, 2016). The study summarised data by international organisations, research institutes and external experts, and aimed to outline how scientific research and innovation practices could contribute to food and nutrition security in Europe for the future (DG RTD, 2016). The complexity and diversity of food systems and their interconnectivity across various industrial sectors, scientific disciplines, and actors, operating at different geographical scales, were further highlighted (European Commission, 2016). Moreover, the study demanded a greater emphasis on research and innovation that would have a greater impact by adopting a food systems approach based on sustainability and encompassing the entire ‘food value chain’ - from producers to consumers and vice versa (DG RTD, 2016). Nevertheless, as outlined by the study:

“The paper recognizes that the current research and innovation policy landscape lacks a complete food system approach and is scattered across different sectors and stakeholders, with weak food and sustainability (FNS) policy coherence and coordination encompassing food security, public health and environmental protection.” (DG RD, 2016)

Hence, even though the importance of data and the role of experts in the Commission’s policymaking processes have been emphasised, the EC also acknowledged that a critical question still remained regarding how to set up the upcoming policy landscape and agenda for food and nutrition security in a way that could also fit with broader EU goals and other institutions’ preferences (agriculture, health, environment, etc.). Shortly after the publication of the study in October, the Commission established the promised EU Platform on Food Losses and Food Waste (FLW) in November 2016 with the primary objective to provide assistance in attaining the UN SDG 12.3, which entails a “50% decrease in per capita food waste by 2030” (DG SANTE, 2016). The Platform was set to be chaired by DG SANTE, and include representatives or experts from the EC, CoR, EESC and Member States, along with relevant stakeholders from the public and private sectors (DG SANTE, 2016). The

mandate given to the Platform was for 5 years (from 2016 to 2021), indicating that the Commission recognized the strategic importance of incorporating expert knowledge in tackling the issue even in the priorities of the next elected Commission.

In its first panel meeting in November 2016, the Platform gathered representatives from several Commission DGs (SANTE, AGRI, RTD, etc.), Member States representatives, EFTA observers, invited *ad hoc* experts, NGOs, private sector organisations, as well as representatives from other public institutions, such as the EESC, CoR, UN, etc (DG SANTE, 2016). Moreover, the Platform itself was divided into four sub-groups, namely: Action & implementation; Food donation; Food loss and waste monitoring; Consumer food waste prevention (DG SANTE, 2016). According to the Summary Report of the meeting:

“She [the chair] indicated that the Commission planned to work in more depth on specific issues by convening sub-groups of the Platform, bringing together a maximum of 25 member organisations. Reflecting priorities set out in the Circular Economy Action Plan, the first sub-groups to be created would address the issues of: food waste measurement and food donation.” (DG SANTE, 2016)

“The first priorities remain the immediate key deliverables from the Circular Economy Action Plan discussed at the Platform’s first meeting: that is, the EU food donation guidelines and elaboration of a methodology to measure food waste. Members were requested to provide comments on working documents presented by the Commission by 20 January. Concerning the EU guidelines on the use of former foodstuffs, the comments are to be provided by mid-December.” (DG SANTE, 2016)

Following the feedback delivered by the various actors on the Commission’s working documents upon the agreed deadlines, as well as European Parliament resolution of May 2017 on “Initiative on resource efficiency: reducing food waste, improving food safety”, which called for more action, the Commission became under even higher external pressure to deliver a strategic approach in combating food waste (European Parliament, 2017). Shortly after the resolution, a second meeting of the Platform was organised in June 2017. During the meeting, the subgroups provided the Commission with a number of presentations in support of food waste prevention cooperation, and specifically food donation (DG SANTE, 2017a). According to the official summary document, published after the meeting, the Commission indicated:

“With regard to the food donation guidelines, the Commission would take into consideration comments made by members during the meeting and transform the accompanying document to the guidelines into a future deliverable of the Platform itself.” (DG SANTE, 2017ba)

As promised by the Commission, the scientific output generated during the Platform meetings was taken into consideration in the preparation of the “EU Food Donation Guidelines“, which was published in October 2017 (European Commission, 2017b). As noted by the Commission’s Guidelines:

“In this regard, the EU guidelines on food donation, adopted by the European Commission in consultation with the EU Platform on Food Losses and Food Waste, can serve as a reference for actors in Member States to take into account when elaborating national guidance and rules.” (European Commission, 2017b)

During the next two panel meetings of the Platform, in 2017 and 2018, members were tasked to produce the Platform’s first deliverable - a document that “had to be published by the end of 2018 illustrating how Member States implement relevant legal provisions to facilitate food donation” (DG SANTE, 2017b; 2018). As promised, the Platform’s output was recognized as crucial in the development of the Commission’s “EU Guidelines for the feed use of food that is no longer intended for human consumption”, which was published in late 2018 (European Commission, 2018). As noted by the Commission’s document:

“A consultation of stakeholders was undertaken in the margins of the EU Platform on Food Losses and Food Waste in the fourth quarter of 2016 in order to identify the issues with respect to this initiative.” (European Commission, 2018)

As it can be concluded, the Commission’s actions corresponded with the scientific output generated by the FLW Platform, as well as the fact that the Commission took into consideration the Conclusions of the CoEU in 2016 and the Parliament’s resolution in 2017. As the Commission provided a thorough account of the data used in scientific outputs, clearly outlining the criteria for including or excluding evidence and presenting independent and unbiased scientific conclusions, it can be noted that it used expert knowledge in a rather *instrumental* way. However, this does not exclude the possibility of utilising the expert knowledge in a *substantiating* way as the Commission also defined broader EU objectives at

that time (as was the case with the publication of the “Food 2030” Framework) while aligning with the preferences of other institutions.

4.1.3. The “Food 2030” Science Policy Dialogues and the Independent Expert Group

In September 2017, former Commission President, Jean-Claud Juncker outlined his objective for the Union to “be the leader when it comes to the fight against climate change,” during his State of the Union speech (European Commission, 2017a). Shortly after Juncker’s speech, and in addition to revisiting the “Food 2030” publication from 2016, the EC convened a science policy dialogue event in October 2017 during which stakeholders and experts had the opportunity to provide feedback on the EC’s future food sustainability goals. According to former Commissioner Carlos Moedas, in charge of DG RTD:

“It was on this basis that I and the Commissioner for Agriculture Phil Hogan, during the 2015 MILAN EXPO, launched the first phase of the FOOD 2030 initiative. It set out a debate with a wide diversity of stakeholders on the role of Research and Innovation (R&I) in future-proofing our currently unsustainable food systems. (...) We are now entering the second phase of FOOD 2030 that will prepare the ground for the next EU R&I Framework Programme and outlook towards 2030.” (DG RTD, 2017)

The goal of the event, as emphasised by former Commissioner Moedas, was to give scientific evidence in support of the “Food 2030” Framework, based on an open dialogue with various stakeholders and inspired by the scientific output achieved during EXPO 2015. Most importantly, however, the Commission’s intention was to generate expert knowledge that will prepare the ground for its 2030 outlook, which fits broader sustainability goals of the Union. As the event concluded, DG RTD (2017) published the Commission’s “Food 2030: Future-proofing our food systems through research and innovation” study which compiled various experts’ findings of food system research that is grounded in evidence-based practises, and endorsed the scientific input of numerous stakeholders in food systems research, spanning “the entire spectrum of the framework programme and the food chain.”

Following the success of the first science policy dialogue, the Commission, under the umbrella of the Bulgarian Presidency of the CoEU, organised a second “Food 2030” event in June 2018 (DG RTD, 2018). While providing the space for an open dialogue between experts, the second event also resulted in the appointment of experts with the aim to form the Food 2030 Independent Expert Group. The group of twelve independent experts with expertise and various domains (including, but no limited to: food, agriculture, fisheries, nutrition,

sustainability, bioeconomy, innovation, economics) was mandated by the Commission's DG RTD and tasked to scrutinise the then-current and prospective contribution of the "Food 2030" initiative and its potential to aid the wider policy objectives of the EU for a sustainable food system (DG RTD, 2018). As a result of the intensive collaboration between experts, the Independent Expert Group produced a scientific report for the Commission, which on four key aspects: "(1) promoting sustainable and healthy diets through nutrition; (2) developing food systems that are environmentally sustainable and climate smart; (3) enhancing the resource efficiency and circularity of food systems; and (4) empowering communities through innovation" (DG RTD, 2018). However, the report also outlined that:

"Food waste is seen as a problem along the entire food supply chain and therefore action should be targeted to all along the chain with potential benefits for all those involved. Emphasis should be put on prevention, as the benefits of avoiding waste outweigh those of dealing with it later." (DG RTD, 2018).

As can be concluded by the report, while there is room for expansion of the Commission's policy scope on a more comprehensive sustainable food system, food waste was viewed by experts as the Commission's primary starting point, which had to be addressed first. Moreover, it is important to highlight that while in the very beginning (after the EXPO 2015), expert knowledge was primarily utilised to improve its problem-solving abilities, the "Food 2030" report suggests that the EC has recognized the need to go beyond solving specific policy gaps separately, but adopt a holistic approach that covers the multi-dimensional aspects of a future-proof EU sustainable food system. As argued by Krijn Poppe, Chair of the Food 2030 Independent Expert Group:

"In its FOOD 2030 initiative the European Commission has recognised this challenge to make our food system future-proof. Several publications and conferences have been dedicated to the need for a food system approach with improved governance." (DG RTD, 2018)

Nonetheless, the report generated by the Food 2030 Independent Expert Group suggests that the EC expanded its policy scope for future policies, allowing it to align with broader EU objectives and other actors' preferences and fill the gap set out by the initial "Food 2030 Policy Framework," indicating that it utilised expert knowledge in a *substantiating* manner.

4.1.4. Platform's Criticism towards the Waste Directive and Juncker's "Towards a Sustainable Europe by 2030" Agenda

During the fourth meeting of the FLW Platform in May 2018, the Commission informed the Platform about its progress on revising the Union's Directive 2008/98/EC on waste (DG SANTE, 2018a). Several private sector organisations, however, have raised the following issue as a result of certain shortcomings in the Commission's working document:

"Member States' monitoring and reporting on food losses in primary production, in particular food which is "ready to harvest" but not harvested, which was not covered by the definition of food waste provided in the revised Waste Framework Directive" (DG SANTE, 2018a)

On its side, the Commission argued that the "legal definition of 'food waste'" put forward in the working document of the revised Waste Framework Directive is based on the definition of food laid down in the General Food Law which does not include food pre-harvest" (DG SANTE, 2018a). Nonetheless, the Commission confirmed that:

"Even though food losses were not covered by the scope of the revised Waste Framework Directive, prevention of such losses was part of the mandate of this Platform and would be considered separately at a subsequent stage. Moreover, the future measurement methodology to be adopted by the Commission was designed to accommodate the possibility to report on food losses, should Member States wish to go beyond the minimum requirements laid down in EU legislation" (DG SANTE, 2018a)

Shortly after the Platform's meeting, the EP and the CoEU called the Commission to step further and amend the Union's Directive 2008/98/EC on waste in June 2018 (European Parliament and CoEU, 2018). In the proposed amendment, the EU's co-legislators urged the Commission to adopt a delegated act "to supplement this Directive by establishing a common methodology and minimum quality requirements for the uniform measurement of levels of food waste" (European Parliament and CoEU, 2018). They suggested that Member States should incorporate food waste management in their national waste prevention programmes and proposed the implementation of a uniform methodology for monitoring food waste levels across the EU, which would be developed "on the basis of the outcome of the work of the EU FLW Platform" (European Parliament and CoEU, 2018). Additionally, it was suggested that

at each level of the food supply chain, Member States should be obligated to “minimise, measure, and report” on food waste (European Parliament and CoEU, 2018).

During the fifth meeting of the FLW Platform in December 2019, Commissioner Andriukaitis updated the Platform members on the Commission’s progress on the revised Directive and waste methodology, and highlighted that:

“The proposed methodology was based on the revised Waste Framework Directive as agreed and adopted by the Council and the European Parliament. Nevertheless, he highlighted that food losses would be further discussed and addressed, beyond the boundaries of the proposed methodology, as part of the work of this Platform.” (DG SANTE 2018b)

Shortly after the last Platform meeting, the Commission published a Reflection Paper “Towards a Sustainable Europe by 2030” in January 2019 (DG COMM, 2019). According to the Commission’s Reflection Paper (2019, p.11), which relied heavily on the most recent report by the European Environment Agency (EEA), food production was still “a significant consumer of water and energy and emitter of pollutants, being responsible for approximately 11.3% of EU greenhouse gas emissions.” The Reflection Paper was among the first strategic policy documents of the Union’s environmental ambitions and highlighted the endorsement of the SDGs at “the highest political level within the EU,” serving as a foundation for forthcoming policies and undertakings for the next Commission (DG COMM, 2019). By incorporating data collected by reports from numerous international organisations, Union’s agencies and external experts, the EC included the collective phrasing “From Farm to Fork” for all its ideas on sustainable food systems, which up to this point have been divided in the policy landscape (DG COMM, 2019).

Following the scientific output generated during the last meeting of the FLW Platform and the publication of the Reflection Paper, the Commission fulfilled its commitments to the Platform and institutions and published its delegated act on “supplementing Directive 2008/98/EC of the European Parliament and of the Council as regards a common methodology and minimum quality requirements for the uniform measurement of levels of food waste” (European Commission, 2019a). According to the Commission’s delegated act:

“The Commission is to establish a common methodology and set out minimum quality requirements for the uniform measurement of levels of food waste on the basis of the

outcome of the work of the EU Platform on Food Losses and Food Waste.” (European Commission, 2019a)

A few days after the publication of the revised Directive, the Platform held its final meeting in May 2019, before the political appointment of the new European Commission. According to the summary of the meeting:

“The Commission thanked Platform members for the work invested in shaping the Delegated Act laying down a common food waste measurement methodology, which had been adopted by the Commission on 3 May 2019. (...) The measurement methodology will be complemented by a reporting format, to be adopted as a Commission Implementing Decision following discussion and vote in the Technical Advisory Committee on Waste, before entry into force of the Delegated Act. The Commission also presented the draft content of the Quality Check Report that will accompany the reporting format.” (DG SANTE, 2019a)

Following the very end of Juncker’s Commission mandate in September 2019, the Commission fulfilled its commitment to the Platform and institutions by adopting the Union’s first “Common methodology and minimum quality requirements for the uniform measurement of levels of food waste.” Moreover, in November 2019, the EC also adopted the promised “Format for reporting of data on food waste and for submission of the quality check report in accordance with Directive 2008/98/EC of the European Parliament and of the Council” based on the external pressure by the EP, CoEU and the Platform’s recommendations (European Commission, 2019c; 2019d). However, it appears that although recognizing the scientific output by the FLW Platform experts, the Commission did not take into account the recommendations made by the Platform members during the fourth meeting while revising the Waste Directive. The EC chose not to include remarks on food losses resulting from pre-harvested food from the updated Waste Directive. This exclusion holds significant influence over the national legislation of Member States. Instead, the EC incorporated this measurement into its reporting format, which was accompanied by the measurement methodology. This, on the other hand, suggests that the Commission may have utilised expert knowledge *symbolically*, as it merely adhered to identical structures and accepted the FLW Platform's work in accordance with expectations.

4.2. Second Stage: After the Publication of the Communication on the EU Green Deal's F2F Strategy (2019-2021)

The second stage of the Commission's food sustainability policies during the first mandate of the FLW Platform, spans from 2019 to 2021 and commences subsequent to the publication of the Communication on the EU Green Deal in December 2019, as well as the Communication regarding the F2F strategy in May 2020. This stage is characterised by a series of actions and initiatives aimed at achieving the underlined objectives by the Juncker Commission, which were included in the Von der Leyen Commission's F2F Strategy. Moreover, the second stage is a critical phase that involves the implementation of various measures to ensure the success of the objectives under the new Commission's climate ambitions. It is a period of intense activity that requires the collaboration of various stakeholders, including policymakers, experts, consumers, and stakeholders, among others.

4.2.1. From Juncker to Von der Leyen: The 'Continuation' of the EU Climate Ambitions Under the Newly-Elected European Commission

Following the elections of the EP in 2019, Ursula von der Leyen was elected as the new President of the European Commission by the Parliament. Shortly after the appointment of the newly-elected Commission and in accordance with Von der Leyen's "Political Guidelines for the Next European Commission 2019-2024," the Commission presented its Communication on the European Green Deal in December 2019, aimed at promoting sustainable development and addressing environmental challenges for the European Union and its citizens (European Commission, 2019e). One of the primary objectives of the EU Green Deal's Communication was to prioritise the "Farm to Fork" Agenda, which as already mentioned in the Juncker's "Towards a Sustainable Europe by 2030," sought to establish an equitable, health-conscious, and ecologically sustainable food system.

A few days after the publication of the Commission's Communication, the FLW Platform held its first meeting under the mandate of the newly elected Von der Leyen Commission. Stella Kyriakides, the newly-elected DG SANTE Commissioner, emphasised in her remarks that "food waste will be an integral part of the new "Farm to Fork Strategy" that is going to be developed by the Commission as part of the European Green Deal" (DG SANTE, 2019b). Moreover, during the meeting, the Platform presented its "Key Recommendations for action of the EU Platform on Food Losses and Food Waste" document, which following the end of the meeting was published on the Platform's page on the website

of the Commission. According to the document, the Platform's recommendations address actions necessary by public and private sectors at each level of the food supply chain (including food redistribution), in keeping with the integrated, comprehensive approach required to combat food waste without sacrificing food safety (DG SANTE, 2019b). Zooming more into the document, it becomes evident that six rapporteurs from the Platform's subgroup on "Action and Implementation" coordinated the data collection (DG SANTE, 2019b). They came up with a preliminary list of activities, which were subsequently expanded upon via extensive Platform member interaction (DG SANTE, 2019b). Moreover, additional contribution credits were paid to the Commission's JRC services:

"The Platform recommendations build on the work of the Joint Research Centre of the European Commission (JRC) to develop a common evaluation framework for food waste prevention actions." (DG SANTE, 2019b)

Hence, even though a new Commission came to power, there is no evidence that the work of the Platform was interrupted or priorities were changed. Even more interestingly, while at first the Platform has been designated and recommended (by the CoEU) to serve as a point of 'information exchange' between the various representatives, its first novel document demonstrates that there has been a closer cooperation between the experts and the Commission's JRC services. This, on the other hand, points out to the conclusion that the Commission has recognized the importance of the FLW Platform's output and aligned its goals with those of the experts involved, which highlights the *instrumental* utilisation of expert knowledge in its policymaking process.

4.2.2. The Commission's Group of Chief Scientific Advisors and the SAPEA Report

Following the publication of the Communication on the EGD and the Platform's "Key Recommendations" document, the Commission's DG RTD mandated an external scientific study to the Group of Chief Scientific Advisors (CSA), hereafter: the Scientific Advisors, which is an independent group of experts that provide impartial scientific advice to European Commissioners to assist in decision-making (DG RTD, 2020). The advisors collaborate in close proximity with the Scientific Advice for Policy by European Academies (SAPEA) consortium, which assembles an extensive amount of knowledge in various fields, and sourced from more than 100 academies and societies throughout Europe (DG RTD, 2020). The advisors and SAPEA are jointly referred to as the Scientific Advice Mechanism (SAM), which also includes a secretariat based in the Commission's DG RTD (DG RTD, 2020). The

Scientific Opinion titled “A sustainable food system for the European Union” was supported by an evidence review report and a systematic literature review provided by SAPEA, and published in March 2020. The study drew on and reviewed a wide range of scientific data, provided by various research institutes, international organisations (such as the OECD, UN, etc.), independent experts, as well as Commission bodies and services (such as the EEA, JRC, etc.). Among its many aspects, the study further emphasised the necessity of diminishing food waste across the complete food value chain, ranging from production to consumption, with the aim of minimising the depletion of resources and GHG emissions (DG RTD, 2020).

This, on the one hand, corresponds with the findings of previous expert configurations, appointed during the Juncker’s Commission, such as the Food 2030 Independent Expert Group and the FLW Platform. However, according to the Scientific Advisors, the study was mandated with the request to:

“Use social sciences insights to map and analyse the various components of food systems and their dynamics in relation to sustainability objectives. What are workable paths to deliver an inclusive, ‘just’ and timely transition to an EU sustainable food system, considering ‘co-benefits’ for health, the environment, and socio-economic aspects, including the socio-economic situation of the farming sector, and addressing territorial imbalances, the rural-urban divide, food waste as well as responsible consumer behaviour?” (DG RTD, 2020, p.50)

Hence, the Scientific Advisors were tasked with adopting what they refer to as ‘a systems approach,’ which entails transcending departmental viewpoints and taking into account all pertinent levels of analysis, ranging from local to global dimensions (DG RTD, 2020, p.17). Among other things, the experts were asked to take governance-related factors, trade-offs, agents of change, and drivers, impediments, and synergies into account (DG RTD, 2020).

On the one hand, the request for advice from SAPEA suggests that EC’s intention was to broaden the understanding of the existing policy issue and thus improve its problem-solving abilities, which perhaps suggests an *instrumental* type of knowledge utilisation. However, this does not exclude the possibility of utilising the expert knowledge in a *substantiating* way as the knowledge generated in this report also corresponds with the overall strategy of the Commission to not solely focus on solving specific policy gaps but fit wider goals and institution’s preferences in its policies, as illustrated before.

4.2.3. The Road Towards the EU Green Deal's Communication on "Farm To Fork" Strategy

Shortly after its release, the report was referenced by a coalition of approximately 50 NGOs in a collective correspondence addressed to Frans Timmermans, Vice-President of the EC and responsible for the EU Green Deal, as well as other relevant Commission DGs, in which experts emphasised on the urgency for the Commission to publish its F2F Strategy by the end of April 2020 (ACT Alliance, 2020). Due to the outbreak of the COVID-19 pandemic in Europe during that time, the letter further emphasised the significance of bolstering the resilience of Europe's food security in the aftermath of the pandemic (ACT Alliance, 2020). The undersigned organisations have contended that it is more important than ever for the Commission to demonstrate that it is actively guiding the EU towards a more environmentally friendly future, of which resilient and sustainable food systems are a crucial component:

"We look to the European Commission to provide guidance and a clear perspective of the road forward, meeting citizens' expectations across Europe, by publishing the Farm to Fork strategy by the end of April 2020." (ACT Alliance, 2020)

Following the release of the external study, mandated by the Commission and conducted by the Group of CSA, as well as the high pressure exerted by NGOs across the Union, additionally fueled with the outbreak of the COVID-19 pandemic, the Commission (2020c) published its long-awaited Communication on F2F Strategy in May 2020. The document titled "A Farm to Fork Strategy - for a fair, healthy and environmentally-friendly food system" presented a thorough integration of conclusions derived by the work of the FLW Platform, the review by SAPEA, as well as previous studies mandated by the Commission. The preparation of this document consolidated significant perspectives and evaluations, establishing a basis for the establishment of the F2F Strategy under the context of the EGD. The Communication presented the long-term objective behind its innovative strategy, known as "Farm to Fork," which aimed to transform the food system of the EU (European Commission, 2020c). Utilising the vast pool of information gathered from experts, the tactic was devised to tackle various urgent climate-related challenges (European Commission, 2020c). Minimising the amount of food that goes to waste has also been identified as a significant objective in the F2F Strategy:

"The Commission will integrate food loss and waste prevention in other EU policies. (...) Coordinating action at EU level will reinforce action at national level, and the

recommendations of the EU Platform on Food Losses and Food Waste 39 will help show the way forward for all actors.” (European Commission, 2020c)

In order to carry out the F2F Strategy in an effective manner, the Commission also stressed upon the importance of utilising its Better Regulation tools. According to the Communication, the Commission will utilise regulatory tools, impact assessments, public consultations, and legislation to create and execute the Strategy:

“New legislative initiatives will be underpinned by Commission’s better regulation tools. Based on public consultations, on the identification of the environmental, social and economic impacts, and on analyses of how small and medium size enterprises (SMEs) are affected and innovation fostered or hindered, impact assessments will contribute to making efficient policy choices at minimum costs, in line with the objectives of the Green Deal.” (European Commission, 2020c)

Less than one month after the publication of the Communication, the Commission presented its F2F Strategy to the FLW Platform during its meeting in June 2020. As promised by the Commission, reducing food loss and waste was highlighted by the Commission as one of the Strategy’s main action pillars (DG SANTE, 2020a). In light of the adoption of the F2F Strategy, the Commission provided additional information on the implementation of the EU’s food loss and waste Action Plan (DG SANTE, 2020a). Concerning the implementation of the new measurement requirements for food waste, the Commission informed experts that “Eurostat will collect and publish data on food waste reported by Member States and that Eurostat will soon send a questionnaire and guidance documents to Member States regarding the reporting of data on food waste” (DG SANTE, 2020a). As outlined by the Commission, based on the data, Platform experts were invited to provide their input and participate in the policymaking of the following priorities:

“As part of the Farm to Fork Strategy, the Commission proposes to: a) establish, by 2023, binding EU-level targets for food waste reduction, based on the results of the first round of EU-wide monitoring using common methodology); b) revise EU rules on date marking by 2022, to improve consumer understanding and their use by all players c) further investigate food losses at the production stage and d) scale up action and mobilise key players across the EU.” (DG SANTE, 2020a)

4.2.4. Institutional Reactions Following the Publication of the F2F Strategy and the Special Eurobarometer on Food Waste in 2020

After publishing the Communication, the Commission requested that the EP, CoEU, EESC, and CoR endorse the Strategy and its commitments. By the end of 2020, opinions were delivered by the CoEU, EESC and CoR, while due to the impact of COVID-19 on its complex configurations, the EP delayed its opinion until October 2021.

In their opinion of the Commission's Strategy, all the institutions welcomed the overall policy objectives of the Strategy, each of them still proposed their specific recommendations to the Commission and stressed on the importance of inclusive decision-making processes and base legislative proposals on thorough impact assessments:

“An impact assessment should be undertaken for the different ways to achieve every target set in the strategy, taking into account the state of play in each Member State.” (EESC, 2020)

“[The Council of the European Union] DRAWS ATTENTION to the wide range of policy areas, legislation and non-binding instruments influencing the implementation of the F2F Strategy and (...) CALLS ON the Commission to base legislative proposals on thorough impact assessments.” (Council of the European Union, 2020)

“[The European Committee of the Regions] suggests that transparent impact assessments be carried out and communicated, in order to monitor the medium-term targets reached and renegotiate any necessary adjustments in consultation with the Member States, local and regional authorities and agri-food players.” (CoR, 2020)

As noted above, the institutions held the view that the Commission should adhere to the Union's Better Regulation, which aims to guarantee that the Union's laws and policies are formulated, executed, and evaluated in a transparent and inclusive manner, grounded in evidence, and with the backing of both the business community and the average citizen. Hence, despite the Commission's high internal capacity to produce knowledge, it is worth noting that it was also under a high external pressure to base its policies on scientific evidence and communicate the outcome with the respective institutions.

Shortly after the release of the Strategy, and as mentioned during the last meeting of the FLW Platform, the Commission's DG SANTE conducted a special Eurobarometer survey titled “Making our food fit for the future – new trends and challenges”, with which it aimed

to learn more about citizens' food buying and eating habits, as well as to determine what they believe constitutes "sustainability," gauge their willingness to switch to a healthier, more sustainable diet, and determine who should be in charge of change (European Commission, 2020e). This was done in order to determine how well-informed the general public was about the current system and how eager the citizens were for change (European Commission, 2020e). The survey was among the first ones in support of its recent publication of the F2F Strategy and was conducted between August and September 2020, with results being presented in a report, published in October 2020 (European Commission, 2020e).

The Commission's report on the survey revealed several significant findings related to its future-proof food waste policies and were further discussed during the plenary meeting of the FLW Platform in December 2020. Most notably, and following the data revealed by the Eurobarometer, citizens encountered a primary obstacle in the form of inadequate information on food labelling pertaining to a product's environmental, health, and social impacts (European Commission, 2020e). In light of these findings and the intense information exchange during the meeting, the Commission noted that:

"The Commission informed Platform members that all legislative proposals will be preceded by impact assessments and stakeholder consultations, in line with the Commission's Better Regulation agenda." (DG SANTE, 2020b)

As it can be concluded, despite the extensive presence of scientific research, impact assessments were required to ensure alignment between Commission's objectives and the expectations of key actors from both the formal and informal structures of the Union, as well as the general public. Hence, following the Eurobarometer report, the Commission's policy ambitions were, on the one hand, endorsed by the public, which suggested that its actions are highly needed. On the other hand, this 'endorsement' also added up to the external pressure stemming from recommendations to conduct impact assessments and stakeholder consultations obtained via the opinions of the CoEU, EESC, CoR, and the FLW Platform.

4.2.5. Consultation process, Inception Impact Assessments and Final Platform Meeting

As promised, the Commission released an inception impact assessment (IIA) on 23 December 2020 regarding front-of-pack nutrition labelling, nutrient profiles, origin labelling, and date marking. The assessment presented the Commission's preliminary examination of the issues, policy objectives, various solutions, and anticipated effects. The period for public consultation regarding the IIA conducted by the Commission was available until the

beginning of February 2021, whose feedback was afterwards summarised and presented to the FLW Platform.

During its first meeting of 2021, held in March, the Commission presented the results of its inception impact assessment to the experts. According to the Commission's findings:

“The majority of the comments received regarding date marking were in favour of maintaining the current rules, which make a clear distinction between safety and quality. In addition, almost all comments highlighted the need of finding means to improve consumer understanding of date marking. The Commission also referred to the consumer behaviour research that will support the impact assessment as well as to the second part of EFSA’s guidance on date marking, foreseen for publication in April 2021” (DG SANTE, 2021a)

“The Commission affirmed that the Platform will be closely associated with the Commission’s work on date marking, together with the Member States Working Group on Food Information for Consumers.” (DG SANTE, 2021a)

Moreover, as the Platform's mandate was coming towards an end, the Commission called for a re-establishment of the Platform for a second mandate (2022-2026) and gave a summary of the current and upcoming projects that the expert group would be participating in. The Commission also provided two online surveys for Platform members to share their opinions on the objectives, operations, and deliverables of the current Platform as well as the significance of the “Key Action Recommendations” document, adopted in December 2019, and the extent to which they have been carried out. According to the Commission's summary:

“The information collected will feed into the Platform’s future operations and work programme. Based on members' feedback, a Platform's activity report will be drafted, summarising the main achievements of the expert group in its first mandate and offering an overview of the status of the recommendations for action.” (DG SANTE, 2021a)

Following EFSA's scientific output and by strictly adhering to the Union's Better Regulation, the Commission released another IIA on food waste reduction targets, which was published for public feedback from throughout October 2021. However, as the second panel meeting of the FLW Platform was held before the closure of the IIA, the EC sought input from stakeholders on the IIA for “setting food waste reduction targets and possible policy options described therein.” (DG SANTE, 2021b). Interestingly, the Commission noted that:

“The Chair explained that the Inception Impact Assessment focuses solely on the subject of legally binding targets (and not other possible measures to reduce food waste), reflecting the Commission’s mandate laid down in the Farm to Fork Strategy. The Commission encourages Platform Members to contribute to the ongoing Inception Impact Assessment through today’s consultation meeting and by providing feedback in writing.” (DG SANTE, 2021b)

As can be concluded from the statement, despite requesting the input of Platform experts, the Commission made it explicit that it already had predetermined policy objectives - the ones outlined in the EGD. Consequently, this suggests that the generated scientific knowledge will be utilised in a *substantiating* manner, thereby assisting the Commission in integrating what science has to offer but under the objectives of the EGD while aligning with other institutions’ policy preferences.

During its final panel meeting in November 2021, experts had the opportunity to reflect on the work of the Platform throughout the first mandate, as well as present a report to the Commission, as requested during the previous meetings. This final document depicted food waste prevention actions performed by the various phases of the food supply chain, as well as the implementation of the Platform's main recommendations (DG SANTE, 2021c). According to Stella Kyriakides, European Commissioner for Health and Food Safety:

“With the help of the Platform, the European Commission has developed EU guidelines to facilitate food donation and food use as animal feed – while always ensuring food safety. Platform members have also contributed to our common food waste measurement and its consistent monitoring at all levels – from farm to fork, across the EU. And, thanks to members’ commitment to lasting change, the Platform has defined a clear roadmap, showing the way forward and inspiring others to take concrete steps to remove food waste from our food systems.” (DG SANTE, 2021d)

5. Discussion

The analysis of the case study sheds light on the Commission's utilisation of expert knowledge in the preparation of the EU Green Deal's F2F Strategy during the first mandate of the FLW Platform. This paper section provides theoretical justifications for the empirical results obtained from process tracing, in line with the study's expectations.

5.1. E1: Strategic-substantiating

As put forth by the theoretical expectations of this study, the presence of both high internal capacity and external pressure to produce expert knowledge suggest that the Commission will utilise expert knowledge in a *substantiating* way. According to Rimkutė (2015) organisations that receive feedback, whether positive or negative, or requests to modify their outputs may endeavour to revise their goals and outputs to align with the external expectations of significant actors, including political entities such as the EP and the CoEU, as well as other formal non-formal actors. In light of this, it is worth mentioning that the Commission conducted several external studies, among which was the famous "Food 2030" initiative, after which several policy dialogues were held and an additional Food 2030 Independent Expert Group was appointed. The diverse range of discoveries contained within the Commission's policy documents serve to illustrate that its motivation extended beyond the mere attainment of solving specific policy gaps. The proposal put forth by the Commission also endeavours to explicate its comprehensive and far-reaching perspective for its food security, which is predicated upon the utilisation of efficacious and sustainable research and innovation practices, and based on a solid utilisation of expert knowledge. Following the wider public debate initiated by the "Food 2030," the Commission has additionally published its "Towards a Sustainable Europe 2030" Agenda, which once again confirmed its expanding scope of policy intervention. By incorporating data collected by reports from numerous international organisations, Union's agencies and external experts, the Commission included the collective phrasing "From Farm to Fork" for all its ideas on sustainable food systems, which up to this point has been divided in the policy landscape.

Under the leadership of President Von der Leyen, the new Commission has demonstrated its ability to generate knowledge by publishing the Green Deal and the F2F Strategy. These were released during a time of significant external pressure from non-formal actors and the COVID-19 pandemic. NGOs have suggested that this was an opportune

moment for the Commission to take the lead and present its envisioned food sustainability system. The F2F Strategy, on the other hand, encompassed a wide array of policy objectives and while being considered novel, it also became under much focus of the Parliament, CoEU, EESC and CoR, who strictly called the Commission to adhere to the Union's Better Regulation and produce IAs. Following this call, the Commission has launched two IIAs. However, due to the end of the first mandate of the FLW Platform, only the results of one of them was presented. The interesting part, however, was the Commission's argument that "the Inception Impact Assessment focuses solely on the subject of legally binding targets (and not other possible measures to reduce food waste)", thus indicating that it has a predetermined preference that aligns with the policy direction of the Green Deal's F2F Strategy.

5.2. E2: Instrumental

As put forth by the theoretical expectations of this study, the presence of low external pressure and high internal capacity to produce expert knowledge suggest that the Commission will utilise expert knowledge in an instrumental way. As noted, the results obtained from the process tracing analysis have revealed that following the conclusion of the EXPO 2015, where food sustainability was a central topic of discussion, scientists have emphasised the need to establish a panel of experts on food and nutrition security to enhance the Commission's future research efforts. Notably, the establishment of the EU FLW Platform, in a period of low external pressure (indicated by the absence of formal and non-formal pressure), illustrated the Commission's *instrumental* type of expert knowledge utilisation. As argued by the literature, assuming that the organisation possesses a substantial capability to generate scientific outputs, including adequate human resources and reliable scientific evidence, the lack of external intervention in the agency's operations empowers it to channel its efforts towards utilising its scientific expertise for the purpose of problem-solving (Boswell, 2008; Rimkutė, 2015; Schrefler, 2010). This includes providing a thorough account of the data used in scientific outputs, clearly outlining the criteria for including or excluding evidence, acknowledging, and describing any uncertainties, and presenting independent and unbiased scientific conclusions (Rimkutė, 2015). The latter is indicated by the Commission's utilisation of the Platform's scientific output in the preparation and publication of the 2017 "EU Food Donation Guidelines" and the 2018 "EU Guidelines for the feed use of food that is no longer intended for human consumption."

However, although instrumental knowledge seems to have been visible in some of the Commission's policy actions in the first stage of the analysis, it is worth noting that the

Commission has also defined broader EU objectives at that time (as was the case with the publication of the “Food 2030” Framework) while aligning with the preferences of other institutions. Hence, it can be argued that the publication of the above-mentioned publications of 2017 and 2018, were used in order to align with the CoEU’s 2016 recommendations on “Food Waste” and the 2017 Parliament’s resolution for more action on food waste. Similarly, while the knowledge produced by the SAPEA report, published in March 2020 (and covered in the second stage of the analysis), might have seen as a tool for the Commission to improve its problem-solving abilities, this does not exclude the possibility of utilising the expert knowledge in a *substantiating* way as the knowledge generated in this report also corresponds with the overall strategy of the Commission to not solely focus on solving specific policy gaps but fit wider goals and institution’s preferences in its policies. An indicator of that is the subsequent release of the Communication on the F2F Strategy in May 2020. As noted by Schrefler (2010), the task of tracing the instrumental function of knowledge can be challenging due to the fact that such utilisation may not yield immediate and practical outcomes.

5.3. E3: *Symbolic*

As put forth by the theoretical expectations of this study, the presence of low external pressure and high internal capacity to produce expert knowledge suggest that the Commission will utilise expert knowledge in a *symbolic* way. However, there is no strong evidence indicating the *symbolic* utilisation of expert knowledge. According to the literature, due to a lack of capacity to produce scientific knowledge, the organisation adheres to identical structures and just accepts the work of pertinent field actors in response to expectations or outside pressures (Schrefler, 2010; Radaelli, 2009). In this situation, Rimkutė (2015) suggested that one should objectively monitor the duplication and repeating of what has previously been determined by other entities, such as other EU agencies/institutions, international organisations, or powerful authorities outside the EU. The only time the analysis found evidence of a rather *symbolic* utilisation of knowledge was during the revision on the Waste Directive, when it appeared that although recognizing the scientific output by the FLW Platform experts, the Commission did not strictly take into account the recommendations made by the Platform members. The EC chose not to include remarks on food losses resulting from pre-harvested food from the updated Waste Directive, as suggested by some of the Platform members. However, the EC incorporated this measurement into its reporting format, which was accompanied by the measurement methodology. Therefore, the knowledge was

not utilised symbolically, as the recommendations were still implemented as a policy initiative (the “Format for reporting of data on food waste”) and subsequently incorporated into the F2F Strategy, which may have been the Commission's objective. Clearly, other EU institutions exerted considerable pressure but despite this, the Commission was capable of efficiently allocating resources to generate scientific output in reaction to external demands. Therefore, the Commission did not need to replicate studies from other entities in order to enhance its legitimacy.

5.4. E4: Strategic-political

As put forth by the theoretical expectations of this study, the presence of low external pressure and high internal capacity to produce expert knowledge suggest that the Commission will utilise expert knowledge in a *strategic-political* way. There is no tangible evidence indicating the *strategic-political* utilisation of expert knowledge. According to the literature, in order to maintain position, reputation, and authority, it is possible that an incapacity to generate results supported by strong evidence would be suppressed (Rimkutė, 2015). The present scenario necessitates empirical observation of organisational endeavours aimed at enhancing prestige and reputation, as well as expanding powers and influence, as suggested by Boswell (2008). However, in the case of this study, no evidence was found that the Commission utilised expert knowledge in a strategic-political manner. Even during the FLW Platform’s debate on the Waste Directive, when members necessitated that the Commission should revise the concept of ‘waste’ and include food that is pre-harvest, the Commission did not utilise its expertise to establish legitimacy among other actors or institutions, but rather resolved the particular issue by supplementing the Directive with the “Format for reporting of data on food waste” (European Commission, 2019d).

6. Conclusion and Suggestions for Future Research

In conclusion, this thesis discussed the Commission's utilisation of expert knowledge in the preparation of the Farm to Fork Strategy and explained whether internal and external dynamics account for the type of knowledge utilisation. In answer to the research question "How does the European Commission utilise expert knowledge in the preparation of the EU Green Deal's Farm to Fork Strategy, and does internal capacity to produce expert knowledge and external pressure explain the type of knowledge utilisation?" empirical analysis has demonstrated that the interplay of high external pressure along with high internal capacity to produce expert knowledge has resulted in the utilisation of *strategic-substantiating* type of expert knowledge. The results obtained from the process tracing analysis conducted between the years 2016 and 2021, which covers the first mandate of the FLW Platform spread over two distinct Commissions: the former Juncker's Commission and the current Von der Leyen Commission, have revealed that the EC has the ability to effectively utilise scientific knowledge in order to address not only its legal obligations but also the requirements of other EU institutions. This finding underscores the Commission's capacity to leverage expertise as a means of fulfilling its responsibilities and responding to the needs of other formal and informal institutions. Notably, following the recommendations by the EXPO 2015 Scientific Committee, the establishment of the EU FLW platform in times of low external pressure indicated the Commission's desire to work closely with experts in tackling urgent matters related to establishing its first-ever food sustainability framework.

This study holds empirical significance for several reasons. On the one hand, it fills the existing literature gap by enhancing the existing body of knowledge utilisation literature and features that account for the utilisation of expert knowledge in a novel EU policy case. By following the methodological suggestions of Christensen (2021) and Schrefler (2010), this thesis has proved that process tracing techniques are highly effective for identifying the causal steps that ultimately contributed to an anticipated outcome. On the other hand, testing Rimkutė's (2015) theoretical framework on another expert body such as the Commission, leads to the conclusion that its applicability is not limited to only EU regulatory agencies, which often provide scientific output to the Commission, but is valid for the Commission itself. As discussed earlier, Rimkutė (2015) argues that in times of high internal capacity to produce knowledge and high external pressure, the expert organisation will utilise expert knowledge in a *strategic-substantiating* manner. As underscored by the empirical findings,

the Commission has employed a *strategic-substantiating* type of knowledge utilisation to substantiate the F2F Strategy, particularly in instances where there was a significant external pressure and internal capacity to generate scientific evidence. The utilisation of this approach has been implemented to reinforce the primary policy goal of the EU Green Deal. Prior to its publication, the Commission predominantly relied on instrumental forms of knowledge utilisation.

Hence, while the *strategic-substantiating* type seems to be the case of this thesis as well, it is worth mentioning that an alternative explanation for the type of knowledge utilisation by the Commission's in preparation on the F2F Strategy is the *instrumental* type. As previously indicated, while some of the Commission's policy actions in the initial phase of analysis appear to have been driven by instrumental knowledge, it is noteworthy that the Commission also established wider EU objectives during this period, such as the release of the "Food 2030" Framework, while concurrently adhering to the preferences of other institutions. However, as noted in the design's limitations, the instrumental function of knowledge, can be challenging due to the fact that such utilisation may not yield immediate and practical outcomes (Schrefler, 2010)

The empirical findings of this study have several limitations. As mentioned before, due to the limited time frame available for conducting the research, a lengthier duration would have provided more time to gather additional evidence. Furthermore, the unavailability of Commissioners for an interview with respect to this policy poses a challenge in obtaining additional evidence, as interviews could provide insights into various aspects of the case. Additionally, the lack of access to the working documents of the Commission which were provided for feedback to the FLW Platform members, is another issue-specific limitation to this study. However, in light of the fact that the Platform members meet only twice in the year in Brussels, presents a limitation to conduct an interview due to the timeframe of this thesis project.

As mentioned earlier, the Commission's Strategy encompasses a variety of objectives in different policy domains, and specific legislative measures will only be adopted by the end of 2023. Therefore, additional investigation is required to determine whether the results of this study are applicable in other instances of the F2F Strategy. Incorporating supplementary sources of evidence, such as expert interviews and/or direct observations, would contribute to a more all-encompassing comprehension of the utilisation of knowledge.

Appendix

Appendix 1: EU documents, scientific studies, press releases during the Juncker Commission

Date of Publication:	Institution:	Document Title:	Source:	In-text citation:
15/10/2015	European Commission	Expo 2015: Commission draws on EXPO 2015 to find ways to bolster food and nutrition security	https://europa.eu/expo2015/sites/default/files/files/Recommendation%20Document_pre%20conference%20version-NS(3).pdf	European Commission (2015a)
02/12/2015	European Commission	COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Closing the loop - An EU action plan for the Circular Economy	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52015DC0614	European Commission (2015b)
28/06/2016	Council of the European Union	Council conclusions - Food losses and food waste	https://data.consilium.europa.eu/doc/document/ST-10730-2016-INIT/en/pdf	(Council of the European Union, 2016)
October 2016	European Commission (DG	European research & innovation for food & nutrition security	https://op.europa.eu/en/publication-detail/-/publica	(DG RTD, 2016)

	RTD)		tion/709af455-c03d-11e6-a6db-01aa75ed71a1	
16/05/2017	European Parliament	European Parliament resolution of 16 May 2017 on initiative on resource efficiency: reducing food waste, improving food safety (2016/2223(INI))	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52017IP0207	European Parliament (2017)
13/09/2017	European Commission	PRESIDENT JEAN-CLAUDE JUNCKER'S State of the Union Address 2017*	https://ec.europa.eu/commission/presscorner/detail/en/SPEECH_17_3165	European Commission (2017a)
25/10/2017	European Commission	Commission notice — EU guidelines on food donation	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52017XC1025(01)	European Commission (2017b)
October 2017	European Commission (DG RTD)	Food 2030 - Future-proofing our food systems through research and innovation	https://op.europa.eu/en/publication-detail/-/publication/76d1b04c-aefa-11e7-837e-01aa75ed71a1/language-en/format-PDF/source-48314008	DG RTD (2017)
14/06/2018	European Parliament and Council of the European Union	Directive (EU) 2018/851 of the European Parliament and of the Council of 30 May 2018 amending Directive 2008/98/EC on waste (Text with EEA relevance)	https://eur-lex.europa.eu/eli/dir/2018/851/oj?locale=en	European Parliament and Council of the European Union (2018)
June 2018	European	Recipe for change -	https://op.europa.eu/en/p	DG RTD (2018)

	Commission (DG RTD)	An agenda for a climate-smart and sustainable food system for a healthy Europe : report of the FOOD 2030 expert group	publication-detail/-/publication/d0c725de-6f7c-11e8-9483-01aa75ed71a1/language-en/format-PDF/source-75836117	
16/04/2018	European Commission	Guidelines for the feed use of food no longer intended for human consumption	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52018XC0416(01)	European Commission (2018)
13/02/2019	European Commission (DG COMM)	Towards a sustainable Europe by 2030 – Reflection paper	https://op.europa.eu/en/publication-detail/-/publication/3b096b37-300a-11e9-8d04-01aa75ed71a1/language-en/format-PDF	DG COMM (2019)
03/05/2019	European Commission	COMMISSION DELEGATED DECISION (EU) 2019/1597 of 3 May 2019 supplementing Directive 2008/98/EC of the European Parliament and of the Council as regards a common methodology and minimum quality requirements for the uniform measurement of levels of food waste	https://eur-lex.europa.eu/eli/dec_del/2019/1597/oj	European Commission (2019a)
10/09/2019	European Commission	The von der Leyen Commission: for a Union that strives for more	https://ec.europa.eu/commission/presscorner/detail/en/IP_19_5542	European Commission (2019b)
26/09/2019	European Economic and Social Committee	Opinion of the European Economic and Social Committee on ‘Reflection Paper	https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=CELEX:52019OJ0001(01)0001	EESC (2019)

	Social Committee	“Towards a Sustainable Europe by 2030” (COM(2019) 22 final)	i=CELEX%3A52019AE0917	
27/09/2019	European Commission	Commission Delegated Decision (EU) 2019/1597 of 3 May 2019 supplementing Directive 2008/98/EC of the European Parliament and of the Council as regards a common methodology and minimum quality requirements for the uniform measurement of levels of food waste (Text with EEA relevance.)	https://eur-lex.europa.eu/eli/dec_del/2019/1597/oj	European Commission (2019c)
29/11/2019	European Committee of the Regions	Opinion of the European Committee of the Regions — Sustainable Development Goals (SDGs): a basis for a long-term EU strategy for a sustainable Europe by 2030	https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52019IR0239&rid=8	CoR (2019)
02/12/2019	European Commission	Commission Implementing Decision (EU) 2019/2000 of 28 November 2019 laying down a format for reporting of data on food waste and for submission of the quality check report in accordance with Directive 2008/98/EC of the European Parliament and of the Council (notified under document C(2019) 8577) (Text with EEA relevance)	https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.L.2019.310.01.0039.01.ENG	European Commission (2019d)

Appendix 2: FLW Platform documents during the Juncker Commission

Date of Publication:	Institution:	Document Title:	Source:	In-text citation:
29/11/2016	European Commission (DG SANTE)	SUMMARY REPORT EU PLATFORM ON FOOD LOSSES & FOOD WASTE DG HEALTH AND FOOD SAFETY (SANTE) 1st meeting	https://food.ec.europa.eu/system/files/2017-02/fw_eu-platform_20161129_sum.pdf	DG SANTE (2016)
14/06/2017	European Commission (DG SANTE)	SUMMARY REPORT EU PLATFORM ON FOOD LOSSES & FOOD WASTE DG HEALTH AND FOOD SAFETY (SANTE) 2nd meeting	https://food.ec.europa.eu/system/files/2017-09/fw_eu-platform_20170614_sum.pdf	DG SANTE (2017a)
07/11/2017	European Commission (DG SANTE)	SUMMARY REPORT EU PLATFORM ON FOOD LOSSES & FOOD WASTE DG HEALTH AND FOOD SAFETY (SANTE) 3rd meeting	https://food.ec.europa.eu/system/files/2018-01/fw_eu-platform_20171107_sub-fd_sum.pdf	DG SANTE (2017b)
24/05/2018	European Commission (DG SANTE)	SUMMARY REPORT EU PLATFORM ON FOOD LOSSES & FOOD WASTE DG HEALTH AND FOOD SAFETY (SANTE) 4th meeting, in the framework of the International Exhibition for Agriculture and Food Industry – AgroBalt 2018	https://food.ec.europa.eu/system/files/2018-07/fw_eu-platform_20180524_flw_sum.pdf	DG SANTE (2018a)

06/12/2018	European Commission (DG SANTE)	SUMMARY REPORT EU PLATFORM ON FOOD LOSSES & FOOD WASTE DG HEALTH AND FOOD SAFETY (SANTE) 5th meeting	https://food.ec.europa.eu/system/files/2019-04/flw_eu-platform_20181206_sum.pdf	DG SANTE (2018b)
06/05/2019	European Commission (DG SANTE)	SUMMARY REPORT EU PLATFORM ON FOOD LOSSES & FOOD WASTE DG HEALTH AND FOOD SAFETY (SANTE) 6th meeting	https://food.ec.europa.eu/system/files/2019-08/flw_eu-platform_20190506_sum.pdf	DG SANTE (2019a)

Appendix 3: EU documents, scientific studies, press releases during the Von der Leyen Commission

Date of Publication:	Institution:	Document Title	Source:	In-text citation:
11/12/2019	European Commission	COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS The European Green Deal	https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1588580774040&uri=CELEX%3A52019DC0640	European Commission (2019e)
2020	European Commission	POLITICAL GUIDELINES FOR THE NEXT EUROPEAN COMMISSION 2019-2024	https://commission.europa.eu/system/files/2020-04/political-guidelines-next-commission_en_0.pdf	European Commission (2020a)
March 2020	European Commission (DG RTD)	Towards a Sustainable Food System: Moving from Food as a Commodity to Food as More of a Common Good : Independent Expert Report	https://op.europa.eu/en/web/eu-law-and-publications/publication-detail/-/publication/ca8ffeda-99bb-11ea-aac4-01aa75ed71a1	DG RTD (2020)
14/04/2020	ACT	CSOs open letter on the importance and urgency of publishing the Farm to Fork strategy: no further delays, keep April 2020 as publication date.	https://actalliance.eu/wp-content/uploads/2020/04/Joint-letter-EU-FPC_COVID_F2F.docx.pdf	ACT Alliance (2020)
20/05/2020	European	COMMUNICATION FROM THE	https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1588580774040&uri=CELEX%3A52019DC0640	European Commission

	Commission	COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS	l-content/EN/TXT/?uri=CELEX:52020DC0381	(2020c)
20/05/2020	European Commission	Reinforcing Europe's resilience: halting biodiversity loss and building a healthy and sustainable food system	https://ec.europa.eu/commission/presscorner/detail/en/ip_20_884	European Commission (2020d)
18/09/2020	European Economic and Social Committee	Opinion on "From farm to fork": a sustainable food strategy	https://www.eesc.europa.eu/en/our-work/opinions-information-reports/opinions/farm-fork-sustainable-food-strategy	European Economic and Social Committee (2020)
19/10/2020	Council of the European Union	Council Conclusions on the Farm to Fork Strategy - Council Conclusions (19 October 2020)	https://www.consilium.europa.eu/media/46419/st12099-en20.pdf	Council of the European Union (2020)
October 2020	European Commission	Making our food fit for the future – new trends and challenges	https://europa.eu/eurobarometer/surveys/detail/2241	European Commission (2020e)
10/12/2020	European Committee of the Regions	Opinion of the European Committee of the Regions – From farm to fork – the local and regional dimension	https://cor.europa.eu/en/our-work/Pages/OpinionTimeline.aspx?opId=CDR-594-2020	European Committee of the Regions (2020)
20/10/2021	European Parliament	European Parliament resolution of 20 October 2021 on a farm to fork strategy for a fair, healthy and environmentally-friendly food system	https://www.europarl.europa.eu/doceo/document/TA-9-2021-0425_EN.html	European Parliament (2021)

Appendix 4: FLW Platform documents during the Von der Leyen Commission

Date of Publication:	Institution:	Document Title:	Source:	In-text citation:
12/12/2019	European Commission (DG SANTE)	SUMMARY REPORT EU PLATFORM ON FOOD LOSSES & FOOD WASTE DG HEALTH AND FOOD SAFETY (SANTE) 7th meeting	https://food.ec.europa.eu/system/files/2020-03/flw_eu-platform_20191212_summary.pdf	DG SANTE (2019b)
15/06/2020	European Commission (DG SANTE)	SUMMARY REPORT EU PLATFORM ON FOOD LOSSES & FOOD WASTE (8th meeting) DG HEALTH AND FOOD SAFETY (SANTE) Via WebEx Meetings	https://food.ec.europa.eu/system/files/2020-08/flw_eu-platform_20200615_summary.pdf	DG SANTE (2020a)
10/12/2020	European Commission (DG SANTE)	SUMMARY REPORT EU PLATFORM ON FOOD LOSSES & FOOD WASTE (9th meeting) DG HEALTH AND FOOD SAFETY (SANTE) Via WebEx Meetings	https://food.ec.europa.eu/system/files/2021-03/flw_eu-platform_20201210_summary.pdf	DG SANTE (2020b)
18/03/2021	European Commission (DG SANTE)	SUMMARY REPORT EU PLATFORM ON FOOD LOSSES & FOOD WASTE (10th meeting) DG HEALTH AND FOOD SAFETY (SANTE) Via WebEx Meetings	https://food.ec.europa.eu/system/files/2021-05/flw_eu-platform_20210318_summary.pdf	DG SANTE (2021a)

22/10/2021	European Commission (DG SANTE)	SUMMARY REPORT EU PLATFORM ON FOOD LOSSES & FOOD WASTE (FLW) CONSULTATION ON THE INCEPTION IMPACT ASSESSMENT ON SETTING EU-LEVEL TARGETS FOR FOOD WASTE REDUCTION DG HEALTH AND FOOD SAFETY (SANTE) Meeting via WebEx Events	https://food.ec.europa.eu/system/files/2021-12/fw_eu-platform_20211022_fw_m-webinar_sum.pdf	DG SANTE (2021b)
18/11/2021	European Commission (DG SANTE)	SUMMARY REPORT 11TH MEETING OF THE EU PLATFORM ON FOOD LOSSES AND FOOD WASTE DG HEALTH AND FOOD SAFETY (SANTE) Hybrid meeting on-site in Brussels/ on-line via Interactio	https://food.ec.europa.eu/system/files/2022-02/flw_eu-platform_20211118_sum.pdf	DG SANTE (2021c)
December 2021	European Commission (DG SANTE)	EU Platform on Food Losses and Food Waste Activity report - first mandate (2016-2021)	https://food.ec.europa.eu/system/files/2022-02/fw_lib_stud-rep-pol_flw_act-report_2021.pdf	DG SANTE (2021d)

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