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Master Thesis

How has the public media framed the debate about the European Parliament's recommendations of a taxing scheme on robotics from 31 May 2016 till 16 February 2017?

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Abstract

On February 16, 2017 the European Parliament's plenary session adopted a report with recommendations to the European Commission on the European Civil Law Rules on Robotics. On the background of increasing automation and the ensuing loss of jobs, the European Parliament proposed the introduction of a robot tax to fund a general basic income scheme in the European Union. In a final vote, however, the proposal was rejected from the legislative resolution of the European Parliament. With regard to the media debate on this subject, this research provides an unique insight into how english speaking newspapers, mass media agencies and articles on technology, economy and of political interest group websites have framed the debate about the European Parliament's recommendations of a taxing scheme on robotics to compensate for the possible effects of robotics and AI on the European labour market. While the analytical methods used in this research illustrate how the media framed the debate, it also allows to reconstruct how different stakeholder involved in the policy process perceive, organise and communicate about the issue. For this a series of news articles published in the media and on websites in the timeframe from 31 May 2016 till 16 February 2017 is analysed. The analysis is focussing on the period in which the first draft report of the European Civil Law Rules on Robotics was published and the final voting on the resolution in the European Parliament. The main results of the analysis will show how the topic was framed by different experts and authors from different areas of publication (technology, media, economy, politics) and will provide insights on how the various perspectives have altered the perception of the European Parliament's recommendation.

Keywords

Robot tax, Basic income, European Civil Law Rules on Robotics, Frame Analysis, Media

Table of Contents

Abstract	1
Table of Contents	2
List of Figures	4
List of Abbreviations	4
I. Introduction	
1.1. Introduction	5
1.2. Background	7
1.3. Research Objective	9
1.4. Research Question	9
1.5. Structure of the Thesis	10
II. Theory	
2. Theory	11
2.1. Framing	11
2.2. Agenda Setting	12
2.3. Policy Frame Analysis	14
2.4. Content Analysis	16
III. Methodology	
3.1. Research Design	18
3.2. Case Selection	20
3.3. Data Collection	20
3.4. Unit of Analysis and Unit of Observation for framing the media debate	24
3.5. Time Period	24
3.6. Measurement Reliability and Validity	24
3.7. Operationalization	26

IV. Content Analysis

4.	Content Analysis	29
4.1.	Dominant Positions	29
4.1.1.	NEWS articles	31
4.1.2.	TEC articles	32
4.1.3.	ECO articles	33
4.1.4.	POL articles	34
4.2.	Main Messages	35
4.3.	Sub-conclusion: Content Analysis	37

V. Frame Analysis

5.1	Frame Analysis	39
5.1.1.	The 'alternative funding' Frame	40
5.1.2.	The 'implementation' Frame	41
5.1.3.	The 'possible effects' Frame	42
5.2.	Sub-conclusion: Frame Analysis	43

VI. Conclusion

6.1.	Conclusion	46
6.2.	Limitations of Research	51

VII. Literature

List of Figures, Tables and Abbreviations

List of Figures

Figure 2.1	Civil Law Rules on Robotics Legislative Procedure	14
Figure 2.2	Ordinary Legislative Procedure	14
Figure 3.1	Operationalization	28
Figure 4.1	Coverage of articles between 31. May 2016 and 16. Feb. 2017	30

List of Tables

Table 4.2	Coverage of articles in different area of publication	31
Table 4.3	Main Messages and Position	37
Table 7.1	NEWS articles	57
Table 7.2	TEC articles	59
Table 7.3	ECO articles	60
Table 7.4	POL articles	60

List of Abbreviations

EC	European Commission
EU	European Union
EP	European Parliament
ECLRR	European Civil Law Rules on Robotics (2015/2103(INL))
JURI Committee	European Parliament's Committee of Legal Affairs
MS	Member State of the European Union
MEP	Member of the European Parliament
CEU	Council of the European Union

I. Introduction

1.1. Introduction

For years the European Union (EU) has struggled defining its real character, as a union which delivers peace, stability and prosperity, helps raising living standards and promotes human rights, democracy and equality between EU Member states (MS) and around the world. But, since Brexit and the migration crisis happened some Eurosceptics may see the EU as being incapable to follow its own standards. According to the EU's multifaceted nature issues like political dysfunction, social exclusion and poverty are not easy to solve. Therefore, the EU has to look forward at which position it will adopt in the future, in order to secure welfare states in the EU from failing. In his speech on March, 1 2017 President Juncker has formulated a task concerning the European Commission's (EC) contribution to the Rome Summit, in context of the 60th anniversary of the Rome Treaties, in which he presented five scenarios for '*How the Union could evolve by 2025*'. One of the "Next Steps" the EC will follow is, regarding to Juncker, the development of the future social dimension of Europe (European Commission, 2017). In December 2015 Eurostat released an article claiming that 17.2 % of the population in the 28 MS were at risk of poverty after social transfer, meaning that their national at-risk-of-poverty rate after social transfers is higher than their disposable income (Eurostat, 2015). In comparison with 16.5% in 2008 this number has slightly increased, which in other words shows that the EU is failing continuously to secure its citizens from slipping into the poverty trap. Today, the risk of long-term unemployment and ensuing job loss are two of the greatest challenges of the EU (Welch, 2002), as well as the impact of emerging technologies on employment and public policy. Since, robotics and AI are already transforming the world, the EU seeks for new measures and opportunities to deal with the possible effects of new technologies on the European labour market (European Commission, 2017). To this end, the European Parliament's Committee of Legal Affairs (JURI Committee) of the European Parliament (EP) decided to establish a working group on legal questions related to the development of robotics and artificial intelligence in the EU. In May 2016 the working group published a report with recommendations to the Commission on civil-law and ethical aspects of robotics and artificial intelligence, including such topics as effects on the labour markets, privacy protection, public safety and civil liability. On February 16, 2017 the EP's plenary session adopted the report with recommendation to the EC on the European Civil Law Rules on Robotics (ECLRR). The report

calls on the EC to propose EU legislations defining a 'smart robot', and to introduce a system of registration of advanced robotics managed by a EU Agency on Robotics and Artificial Intelligence. In the light of the possible effects of robotics and AI the first draft report proposed that rules on liability of robotics could be complemented by a compulsory taxation scheme for robot users to pay out compensations in case no insurance policy covers the risks on the European labour market. As to compensate the possible effects on the labour market the report further recommended to 'seriously' consider a general basic income. Nevertheless, in a debate held the day before the final voting the recommendation of a robot tax was rejected from the final resolution of the EP, which turned out to be a call for a general basic income, but not for a taxing scheme on robots and AI. After the final voting MEP Mady Delvaux, Vice-Chair of the JURI Committee tweeted on Twitter: "Report on #robotics adopted in Plenary. Disappointed because right-wing coalition refuses open-minded debate!" (Mady Delvaux on Twitter, 2017). As there was no 'open-minded' debate on this subject in the EP, this begs the question: What caused the rejection of the proposal from the final report? Why was it finally dropped? Although, the idea of a robot tax to finance for a basic income did not survive the plenary vote, the topic gained traction in the public media debate. A causal factor that could bring some light in the discussion about the EP's proposal is media framing. In this regards, this research seeks to examine the media debate about the EP's recommendations of a taxing scheme on robotics during the agenda-setting process of the ECLRR from the date of first publication, 31 May 2016, till the final vote on the report in the EP on 16 February 2017. Eventually, this effort aims to contribute some insights for why the proposal did not make it on the political agenda of the EP.

1.2. Background

In January 2015, the JURI Committee set up a working group with the primary goal to develop '*European Civil Law Rules on Robotics and AI*'. Therefore, the group held 10 sessions between May 2015 and September 2016, in which they heard advice from public consultations, expert groups, scientists and lawyers. While respecting the EC's rights of initiative, on 31 May 2016 the JURI Committee published a first draft report with recommendations on the ECLRR. The draft contains a motion for a EP resolution and an annex with recommendations to the EC for the content of a possible legislative proposal on robotics and AI, which was in many parts adopted in a EP plenary vote on February, 16 2017. Even though, the usage of robotics and AI is not yet commonplace and the possible effects are not fully foreseeable, the JURI Committee urged that the time has come to legislate. In the report the JURI Committee stresses that robotics and AI are sectors of the future and, thus, they call for guidelines to regulate the developments of robotics and AI. A lot of emphasis has been put on ethical issues of robotics, which should govern the design, production and use of robotics and would complement the framework for legislation recommended by the draft. As an annex to the resolution - a 'Code of Ethical Conduct for Robotics Engineers' and a 'Code for Research Ethics Committees' was presented. The 'Code of Ethical Conduct for Robotics Engineers' in the report is based on four ethical principles: 1) *beneficence* (robots should be programmed in a way to act in the best interest of humans); 2) *non-maleficence* (robots should be programmed not to harm humans in any form); 3) *autonomy* (human interactions with robotics and AI should be voluntary); 4) *justice* (the benefits of robotics and AI should be distributed fairly among society) (European Parliament, 2017A). The JURI Committee's report also calls to propose EU legislation defining 'smart robot's' and to introduce system of registration for advanced robots which should be managed by an EU Agency on Robotics and Artificial Intelligence. Furthermore, the report addresses the issue of liability for damages caused by robotics and AI that could either be based on strict liability (no fault required) or on a risk-management approach (liability of a person who was able to minimise the risks) (European Parliament, 2017A). In order to ensure the best possible security level, the first draft version of the legislative text urges for the establishment of "a corporate reporting system on the extent and proportion of the contribution of robotics and AI to a company's revenue for the purpose of taxation and social security contributions" [and, therefore,] "to seriously consider a general basic income" (European Parliament, 2017B). For this, liability should be proportionate to the degree of autonomy and to the level of instructions

given to the robot by a reliable human being.

However, on February 16, the EP's plenary session adopted the JURI report with recommendation to the EC on the ECLRR (2015/2103(INL)). As mentioned before, in a debate held the day before the final voting on the report, the proposal to introduce taxation scheme on robotics was rejected from the final resolution on the ECLRR. In the end, the proposal turned out to be a call for a general basic income, but not for a 'robot tax'.

On the background of the 2009 global financial crisis, the idea to introduce a basic income has seen a significant rise in prominence both in the literature and in public. But, it was not until recently that Bill Gates, co-founder of Microsoft, on a Reddit AMA (Blackwell, 2017), Mark Zuckerberg, founder of facebook, during his commencement speech at Harvard (Shead, 2017) and the founder of the German dm-drogerie markt chain Götz Werner (Kröger, 2017) openly discussed the benefits of a basic income in regards to increasing automation and the ensuing loss of jobs. The discussion about basic income in Switzerland even led to a 'Basic income referendum, which was signed by more than 130,000 Swiss citizens, but was rejected by a public majority (Martin, 2016). Another example for a European experiment with basic income is the Finnish 'Kela' project which was introduced in December 2016 to a group of 2,000 randomly selected persons (kela.fi).

Even though, the idea of a basic income has gained traction in the most recent debates and the EP has taken up the idea in their report, the proposal did not survive the plenary vote. Since, the public media as an instrument of political mobilisation becomes more important for political decision-making in the modern age, it is interesting to find out more about the way the debate about a 'robot tax' was framed in the media.

1.3. Research Objective

In recent times, the idea of Civil Law Rules on robotics and AI gains momentum in public and parliamentary debates and appears to be a first step to ensure that the robotics impact on the labour market is properly examined and that issues on the liability of robots are properly addressed. After the challenges of the enforcement of data protection rules were widely discussed in the EU, several countries and among them different scholars and famous entrepreneurs stressed that robotics are already used and developed in Europe and, therefore, it is urgent that an 'open-minded' debate takes place on the issue. Although, research in this field is still in an early stage and the social impact of robotics and AI are difficult to predict, the first draft report on the ECLRR stresses that it should be ensured that the damages caused by robotics and AI are compensated. This led to major controversies about the feasibility of the proposal, which were widely discussed in the media. In regards to the possible effects of robotics and AI on the European labour markets the JURI Committee's proposal turned out to be a call to 'seriously consider' a basic income. However, instead of focussing on the EP's formal decision-making procedures, this research aims to provide a unique insight into the media debate during the agenda-setting phase of the ECLRR. For this, the content of a number of relevant media articles published between May, 31 2016 till February, 16 2017 in different categories (mass media/ national newspapers [NEWS], technology [TEC], economy [ECO], politics [POL]) will be analysed. The timeframe refers to the date when the first draft report was published (May, 31 2016) till the EP's final voting on the ECLRR resolution (February, 16 2017). The theoretical concepts used in this research are based on two approaches, content and frame analysis, for analysing the agenda-setting phase in policy-making. The concepts of framing and content analysis will help to identify different positions, main messages and dominant frames in the debate about the 'robot tax'. This will be done with the following main research question:

1.4. Research Question

Research Question: *How has the public media framed the debate about the European Parliament's recommendations of a taxing scheme on robotics from 31 May 2016 till 16 February 2017?*

In order to answer the main research question in the best possible way, this research responds to two sub-questions.

Sub-question 1: *What are the dominant positions and main messages in the public media debate about the EP's recommendation to 'seriously' consider a general basic income in the light of the possible effects of robotics and AI on the European labour market?*

Sub-question 2: *What are the dominant frames in the public media that framed the debate about the European Parliament's recommendations of a taxing scheme on robotics from 31 May 2016 till 16 February 2017?*

1.5. Structure of the Thesis

This research is composed by the following steps. In the first chapter the theoretical concepts of framing, agenda-setting and content analysis are introduced. After an introduction of the general concept of framing, this chapter moves on with an explanation agenda-setting theory in the area of public policy. Hereafter, the concept of frame analysis by Rein and Schön (1994) is presented. Rein and Schön's (1994) framing approach provides the theoretical groundwork is based on, as well as, a general concept content analysis.

The second chapter elaborates on the methodology which is applied in this research. This part explains systematically which methods are applied for the analysis of the public media debate.

Chapter three contains the analytical parts of this research. In this part the dominant frames in the media arena during the agenda-setting phase of the ECLRR are analysed. Eventually, in this part the findings of the frame analysis are presented.

Chapter five is the concluding chapter of this research. This chapter is focussing on the findings of the frame analysis, in order to answer the main research question. For this the findings are described again and the limitation of this research are presented.

II. Theory

2. Theory

In this chapter the theoretical framework is presented. At first an introduction of the concept of framing will be given. Further, in this section the research topic will be assigned to the agenda-setting phase, in order to simplify the complex work environment of policy-making in the EU. Finally, the concepts of frame and content analysis used for this study are presented.

2.1. Framing

Framing is a complex set of concepts and theoretical perspectives on how stakeholders or social groups communicate about reality and their “underlying structures of belief, perception and appreciation” (Rein and Schön, 1994). Policy framing involves social constructions and comprises what actors think, how they organize, perceive and communicate about a policy issue. Social constructions of a policy issue differ between interest groups, the media, governments, oppositions and other actors. A policy frame enables a view on a policy issue that stakeholders, analysts or the mass media obtain to make a topic more comprehensible (Zundel, 1995). In other words, framing provides insights in an individual’s perception and the personal constructions of the policy. Moreover, is framing able to give meaning to reality by transforming fragmentary or incidental information into a structured and meaningful problem, including an implicit or explicit solution (Verloo, 2007). Thus, policy frames shape the understanding of reality and provide policy analysts with an instrument to select, emphasize and organize aspects of complex issues, in order to understand, analyze and to induce social behavior (Pan & Kosicki, 1993; Daviter, 2007). In the area of public policy framing provides an opportunity to influence how a topic is perceived by the public through the selection of certain attributes and the exclusion of others (Entman, 1993). Framing in politics is essential for policy-makers and governments to mobilise public support for their political agenda. Knowledge about existing frames in a policy debate help actors to adjust their policy approach and to understand how the policy is perceived by the public. In the political arena stakeholders take advantage of policy frame analysis which provides them news on how experts, scholars and journalists discuss the issue, perceive their messages and frame their policy, in order to adjust their agenda and win elections. Weak support for a policy issues, for example, generally stems from conflicting

frames in the public media debate. Therefore, it is essential for policy-makers to know how the media has framed the policy issue (Entman, 1993). In conclusion, frame analysis is important in the field of public policy, in order to evaluate what frame dominates the public debate, how framing influences the debate and how policy-makers themselves are able to play a key role in controlling those frames, in order to reframe an issue or even adjust the entire policy agenda. Mass media play a critical role in the agenda-setting phase of a policy, because media sources are able to deliver different positions, messages and frames. Policy-makers use this sources to set or adjust their political agenda. Research has shown that the media not only illustrates how the public perceives a policy issue, it is also able to draw the attention to a certain issue and sustain its image. The media, as well as institutional policy-makers, change the discourse around a policy debate by framing. Frames in the media set new anchors and commentates on the different players involved in the policy process. Media frames affect the nature, causation and consequences of a policy issue and, thus, affects the type of policy solution sought. Moreover, mass media provide a platform for the discussion of ideas between national governments, supranational institutions, interest groups, experts and the public. Subsequently, media debates provide insights and knowledge about framing, when an issue is not extensively discussed in parliament or other legislative bodies.

2.2. Agenda-Setting

The next section reviews the theory of agenda-setting. Further, in this section the possibility of framing to influence the agenda-setting process in the EU will be illustrated, before moving on with the framing approach used in this study (Soraka et al., 2012).

The policy agenda-setting literature has a strong relation with policy framing and can be divided in two levels of agenda setting. First-level agenda-setting focuses on research of what policy issue reaches the public agenda. Here, the literature shows that the media coverage of a particular policy issue has a significant impact on what topic defines the public agenda. Thus, the media plays an essential role in making a policy issue more salient to those involved in the policy process and to the public (Entman, 1993; Hunt and Ruben, 1993; Wanta and Wu, 1992).

Second-level agenda setting, goes a step further and illustrates, how the topic is received by the public and perceived by the stakeholders involved in the process. This level focuses on specific elements of a policy and mentions its more hidden aspects, such as how an issue is framed (McCombs and Reynolds, 2002).

Even though, research of first-level agenda setting would bring some interesting insights about topics and actors that play a key role to get on top of the agenda, this research aims to evaluate how the policy issue is framed in the media. Therefore, this analysis focusses on the second level of agenda setting. Thus, this research is based on the view, that the role of the media in agenda setting focuses on the individual level and on the question, if the media has a direct impact on a political stakeholder directly or points at a specific aspect of the policy issue. In this regards, it is to mention that political actors are affected by media in the same way as ordinary citizens, which plays a significant role when a new policy or proposal occurs in the policy arena (Soraka et al., 2012). Although, the mass media may not be able “in telling people what to think, but is stunningly successful in telling its readers what to think about” (Cohen, 1963; Soraka et al., 2012).

However, after assigning the research case to the second agenda-setting phase and before moving on to the concept of framing for this study, the following section provides some information about agenda-setting in the EU.

The traditional view of agenda-setting in the EU posits the Commission as the primary ‘initiative organ’. In the academic literature the understanding of the legal nature of the EU is often referred to as a system “sui generis”, due the mixture of intergovernmental and supranational elements (Phelan, 2012). The so-called ‘Ordinary Legislative Procedure’ (Fig. 2.2) is the standard decision-making process used in the EU which allows the EU to legislate on a number of different policy areas.

Generally, the ‘Ordinary Legislative Procedure’ provides the EC with the right to submit proposals to the EP and the Council, but in case of the ECLRR the EP used the right to propose a legislative text to the EP (Fig. 2.1). This is explained as follows, according to the Treaty of Maastricht enhanced by the Treaty of Lisbon, the EP also has a right of legislative initiative that allows the EP to ask the EC to submit a proposal. In areas where the treaties give the EP the right of initiative, the Committees are allowed to draw up a report on a proposal for a “legislative text”, which will then be presented by the EC. The subjects of Committee’s report must be within the EP’s remit and presents a motion for resolution to the EC. But before, they must request authorisation from the Conference of Presidents. This process is defined in the Rules of Procedure (Rules 37, 46, 52, Annex XIII, Article 17 (1) of the TEU and Article 225 of the TFEU.

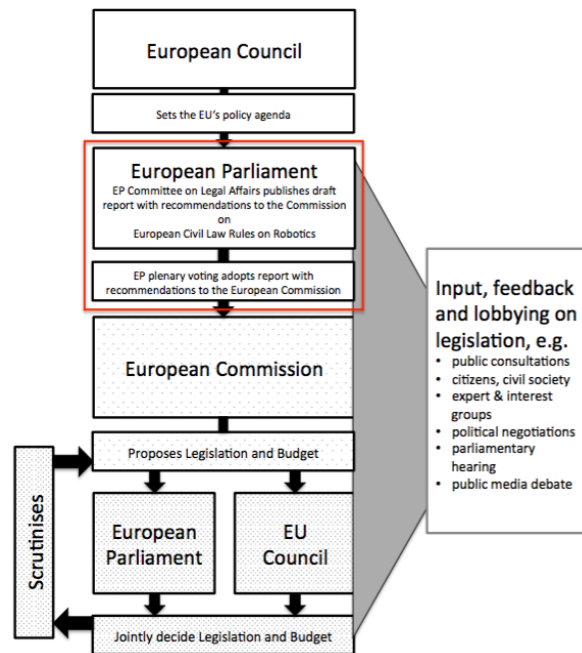


Figure 2.1: Civil Law Rules on Robotics Legislative Procedure

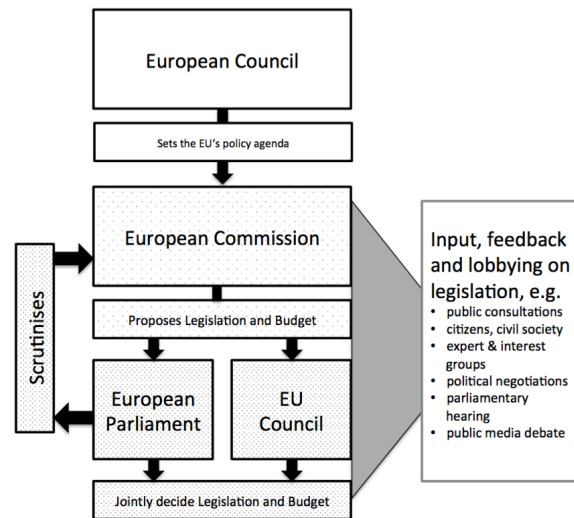


Figure 2.2: Ordinary Legislative Procedure

However, Fig.2. illustrates that the 'Legislative Procedure' of the ECLRR offers space to set and adjust the agenda. This phase is open for input, feedback and lobbying by the media, public consultations, civil societies, policy experts and interest groups before a policy or report finally gets adopted. While agenda-setting looks at why policy issues reach the agenda and how policy issues are described by the various actors, framing looks at how policy issues are perceived, organised and communicated among the different actors (Soraka et al., 2012). In the following section, the concept of policy frame analysis for the purpose of this research will be presented.

2.3. Policy Frame Analysis

Among the different approaches of the argumentative turn, Rein and Schön (1993) are considered as the leading scholars in this area of research. The framing approach introduced by Rein and Schön (1993; 1994) provides the theoretical concept for analysis on which this research is based.

According to their work (1993; 1994) a framework is defined as "a way of selecting, organizing, interpreting, and making sense of a complex reality to provide guideposts for knowing, analyzing, persuading, and acting." Framing is based on the belief that the way an

issue is presented to the public influences how it is generally understood (Rein and Schön, 1993; 1994). In other words, issue framing reflects to the selective exposure of information to an audience with the intention to have an impact on their understanding of an issue. As a matter of fact, an issue frame can be constructed rather differently depending on how the audience perceives the issue. In this regards, media framing must not be understood as a simple discussion of events and means, but as a method to organize a storyline around a series of events in which the information is presented to the public in way that changes their view on the subject (Soraka et al., 2012). According to this logic, controversies in a debate are caused by differences in the “underlying structures of belief, perception and appreciation” (Rein & Schön, 1994) of the audience towards a certain policy issue (Fischer, 1993). These types of conflicts are not easy to solve, as the nature of a frame decides what is regarded to as evidence and how it has to be interpreted (Rein and Schön, 1993). Evaluating frames is less concerned with individual problems, it rather “select[s] aspects of a perceived reality” (Entman, 1993) in such a way as to learn more about a particular problem definition, causalities and categorizations and/or social constructions. Seeing as, framing interconnects facts, values, personal preferences and theoretical explanations, it is necessary to differentiate whether, for example, a basic income is framed as an alternative to traditional welfare state structures, an “unrealizable” concept or simply a burden for taxpayers. Given the fact that frames create a multitude of social realities, in debates it is often the case that stakeholders not only disagree with one another, but also disagree about the nature of their disagreement (Rein and Schön, 1991). Framing an issue means that an analyst has to withhold information or prioritize some facts over others (Entman, 1993). Put differently, framing in policy-making is a form of ‘reality (re)construction’ which selects, names and frames certain things and ignores others (Hulst and Yanow, 2014). To capture and to deal effectively with disagreements, Rein and Schön (1993) refer to storytelling as a method of ‘framing’ and ‘naming’. Such storytelling practices are able to frame the way a policy issue is experienced and perceived by the audience. The result is a frame, a cluster of interrelated social construction of belief to which actors can relate, in order to give meaning and a sense of direction towards an issue by pulling values and emotions into the debate (Rein and Schön, 1994). As mentioned above, policy disagreements often involve contradictory “structures of beliefs, perception and appreciation” (Rein & Schön, 1994). Thus, conflicting frames require a research objective that primes social values differently, and simultaneously establishes the perceivability of the subject and promotes a policy direction (Soraka et al., 2012). “Given the multiple social realities created by conflicting frames, the participants not only disagree with one

another but also disagree about the nature of their disagreements” (Rein and Schön, 1991). In this regards, Rein and Schön (1993) recommend storytelling as a method of naming and framing that reconstructs policy problems and suggests a particular proposal for action in which stakeholders bring and develop their desires for change. However, Rein and Schön’s (1994) approach is expected to support and rationalise controversies, in order to reach a consensus. Frames are based on a specific selection principle that decides what is perceived as meaningful and existent in a wealth of information. Policy controversies arise from conflicting frames. Knowledge about conflicting frames is not ‘self-interpretative’ and always linked to a specific actor, policy groups or government programs, which in turn explains their position in the stratified nature of social reality (Rein & Schön, 1994). In order to reconstruct such frames, at least three questions have to be answered: (i) one that ‘names’ the problem (problem definition), (ii) one that ‘names’ and ‘frames’ actors or groups who are affected by the issue (social classification), and (iii) one that gives an explanation on how the issue can be solved (causality) (Rein and Schön, 1994).

In this study, the three questions create the groundwork of the frame analysis, but in order to identify the different positions and the main messages in the media debate and to make use of the data obtained from mass media sources, another research method has to be applied first.

2.4. Content analysis

In the following section content analysis will be introduced as a research method for studying communication artifacts and large amounts of textual information.

Content analysis is used to quantify certain message characteristics or argumentative patterns in texts or artifacts, such as newspapers. Practices of content analysis involve observation or systematic reading of large amounts of textual information. Such amounts of information must be categorized. Therefore, texts and artifacts are assigned to labels or codes, in order to indicate meaningful patterns or other properties in text. Labeling or coding enables a researcher to statistically measure the occurrence of patterns in texts (Hodder, 1994; Krippendorff, 2004).

The content analysis of newspapers is mainly based on the question of how certain newspapers address a particular subject and how this affects the reader. The success or failure of a content analysis builds upon the choices a researcher has made when conducting the

research design. For a research design several aspects are decisive, such as choosing the right type of textual information, the selection of units, setting a rational timeframe, categorization of textual information in labels or codes (Krippendorff, 2004; Flick, 2009). Researchers have to explain what they have done or how they are planning to replicate their analysis, in order to create a reliable and valid research design. In this research the observation and categorization of meaningful pattern will set the groundwork for an analysis of the dominant frames.

After discussing the different theoretical approaches, it is now to explain how these concepts help to analyse the issue. Seeing as, the EP's report on the ECLRR is an approach to adjust the political agenda of the EU in regards to increasing automation and the possible effects of robotics and AI on the European labour market, it is necessary to understand the mechanisms of framing and agenda setting. As mentioned before, framing offers access to a number of possibilities to influence the process of agenda setting. Furthermore, framing provides a researcher with insights on how certain policy issue is perceived by the public. Knowledge about frames enables the one who understands the composition of a frame with a view or experience on how experts, scholars and journalists discuss an issue, how they perceive a message or frame a certain policy, in order to adjust their agenda and win elections. Holding the view, that media frames affect the perception, as well as, the consequences of a policy issue and its solutions sought, framing plays a significant role when a new policy or proposal occurs on the political agenda.

In regards to the research objective, it is to analyse what frames dominate the agenda-setting phase of the EP's report on the ECLRR. Having in mind that the legislative procedures of the ECLRR offer great space for input, feedback and lobbying (Fig.2.1), the theoretical concept of agenda setting helps to set the research focus. Since, this aims to evaluate how the policy issue is framed in the media, this analysis focusses on the second level of agenda setting. Whereas the agenda setting theory seeks to make the legislative processes more comprehensible, the concept of framing provides an approach to analyse how policy issues are perceived, organised and communicated among the different actors (Soraka et al., 2012). As it is indicated in the research question, the agenda-setting phase of the ECLRR is referred to as the time frame between the first publication of the report on May, 31 2016 and the final voting on February, 16 2017.

After the different theoretical approaches have now been brought together, the following chapter the methodological concepts that are applied in this research will be further elaborated.

III. Methodology

This chapter elaborates on the methodology which is applied in this research paper. The following part explains systematically which methodological choices are made for the analysis of the public media debate. Firstly (3.1.), the research design explains the analysis structure and methods of analysis. In part two (3.2.), the case selection is explained. Thirdly (3.3.), the collection of data is described. The fourth part (3.4.) presents the units of analysis, and in part five (3.5.) the time frame is discussed. Part six (3.6.) covers both measurement reliability and validity for this research. Finally, the last part (3.7.) explains how the concept for analysis in this research is operationalized.

3.1. Research Design

The research design is designed in a way to better understand how the media has framed the debate about the EP's recommendation to introduce a taxing scheme on robotics in the ECLRR which eventually helps finding answers to research and sub-questions. Firstly, the analysis structure is presented. Secondly, the two types of policy analysis are discussed, before moving on to an explanation for the case selection. As the main research question indicates, this research is designed as an exploratory study of specific in-depth case. The case this research refers to is the media debate about the EP's recommendation of 'tax on robots'. This study is an inductive analysis where the data is used to detect argumentative and framing patterns. The primary purpose of an inductive approach is to allow the research results to emerge from the dominant positions of argumentation, main messages and dominant frames inherent in raw data of media sources. Inductive approaches have the aim to aid an understanding of meaning in complex data through the development of main messages, frames or categorised dominant positions from the raw data (Thomas, 2003).

Analysis Structure

The analysis starts with a framing analysis of the media debate concerning the EP's recommendation of a taxing scheme on robotics in the ECLRR. The first part of the analysis focusses on articles from media sources, in order to reconstruct the debate that finally led to the exclusion of the EP's proposal. Tables 7.1.- 7.4. give a detailed overview of the different

sources of this research distinguished in the four categories. Further, this table provides the titles, name of the authors and the date of publication. A detailed description why these sources have been chosen for the analysis is explained in section 3.3. Data Collection (p.x).

The second part of the framing analysis focusses on a more specific aspect of the debate concerning the ECLRR. Here, the aim is to get new insights on how the EP's proposal to consider of a general basic income paid by a 'robot' tax is framed in the media.

The recommendation of a basic income, as well as the idea of a taxing scheme on robotics are considerably controversial policy issue. In this context, framing must be understood as a selection of aspects that reconstruct a perceived reality of policy-making that is made accessible through communication in media articles. In addition, the framing analysis in this study aims to provide access to specific problem definitions, causal interpretations, moral evaluations on the policy issue that can help finding a possible solution to the controversies caused by the ECLRR report with recommendations to the EC.

Content analysis

The main reason for analysing the content is to identify the dominant position and main messages in the text. The dominant position is determined by the distribution of arguments for or against the respective subject. Next, the main message of the article concerning the research subject is identified. For this purpose, the focus of the article is summarized as a main message. Content analysis is a useful tool to work out frames in texts and helps to distinguish whether a statement is a topic and a frame. Hereafter, follows the framing analysis.

Framing analysis

The second part of the analysis focusses on framing. The analysis in this research is executed as recommended 2.4.4. Frame Analysis. Rein and Schön's (1994) concept for framing requires answering at least three question: (i) one that 'names' the problem (problem definition), (ii) one that 'names' and 'frames' actors or groups who are affected by the issue (social classification), and (iii) one that gives an explanation on how the issue can be solved (causality) (for the operationalisation, see below p. 26). The purpose of this part of the analysis is to determine whether there are dominant frames can be assigned to a general trend of framing in the debate about a tax on robots, that allows to identify the dominant frames which is necessary for

answering the main research question. After introducing the analysis structure, in the following section explains the case selection.

3.2. Case Selection

The EP's proposal of a taxing scheme on robotics and AI to pay for a basic income is a highly relevant topic in the more recent parliamentary and public media debates in Europe. As already mentioned in the 'Introduction' (1.1.) and 'Background' (1.2.) section, the relevance of the EP's proposal, as a topic for research, has several reasons.

Firstly, there has not been a study that solely focuses on analysing media frames in the debates about a taxing scheme on robotics and AI or a basic income, which could provide unique insight in how the topic is understood in the public.

Secondly, on the background of increasing automation and ensuing loss of jobs, scholars alongside with famous entrepreneurs came up with a taxing scheme on robots to finance an universal basic income. Since, numerous experiments with a basic income have failed in their execution on the long run or before they were even implemented, it is interesting to see how the public opinion frames the controversies in regards to a basic income financed by a robot tax.

Thirdly, this case is selected because it represents a first effort of the EU to restructure the 'failing' welfare states. With 'failing' it is meant that traditional welfare states are continuously struggling to fight increasing poverty and unemployment rates in the EU. Consequently, the consideration of a robot tax to fund a basic income is a logical step in the light of increasingly difficult conditions on the European labour market.

3.3. Data Collection

Data for the frame analysis is collected from online media articles. The selection of samples from the media sources is executed with a focus on contributions from MEPs, experts on basic income, economy and technology experts, interest groups or those with a relevant function in EU institutions and other bodies. The reason for looking at insiders of the debate is that arguments of authorities create a stronger likelihood of a reader agreeing to a message, dominant position or frame when it is presented by an authority, even if the conclusion is questionable (Matthes, 2009). In regards to the fact that political stakeholder embrace the media

and utilize frames to achieve political and personal goals, adapting arguments of authorities enables decision-makers to increase the credibility of a political decision towards public perception. Having in mind that the EU has no common European media agencies this research solely focuses on contribution in English language.

Within the EU are many languages spoken. The number of 23 officially spoken languages sets unavoidable limitations for this research. Nevertheless, at a national level English is the most widely spoken foreign language in most of the 25 Member states of the EU, where it is not an official language. According to a survey published by the EC and the Eurobarometer in 2012, a quarter (25%) of Europeans are able to read a newspaper or magazine in English language. Further, one has to take into consideration that a Eurostat report on "*What languages are studied the most in the EU?*" which was published in 2012 showed that 61% of Europeans are holding the view that learning a new language is a key advantage for them, which leads to the assumption that the number of people who are able to read a newspaper in English language could have increased in five years time (Eurostat, 2012). Furthermore, English is and remains the most dominant among the three working languages of the EU. Since, the aim of this research is to frame the media debate between Members of the EP, experts on basic income, interest groups or those with a relevant function in EU institutions and other bodies, it is assumed that the majority of the debate takes place in English language. Consequently, the selection of data in English language for this research is sufficient and adequately justified.

For the collection of articles the database LexisNexis Academic is used. The search focussed on newspaper articles electronically available on Lexis Nexis Academic with reference to the research topic in a set time period. The database uses a variety of different search options, and provides access to over 15.000 full-text news, business and legal sources. The first search string used is: "basic income" AND "robotics", which provided access to 285 articles. A broad analysis of the content shows that the majority of articles are irrelevant for this research. In consequence, the search string needs to be adjusted. The search string covering the most adequate literature is: (basic income AND robots OR robotics OR Civil Law Rules OR new technologies OR AI OR European Parliament OR Committee OR Commission) and Date(geq(05/31/2016) and leq(02/16/2017)); Source: Newspaper; Articles Geographic: Europe. In this search 65 articles were found. After skimming and scanning the content of all 65 articles, the number of relevant articles shrunk to only 15. The reason why only 15 of the 65 articles are considered as relevant is that the other sources (40 articles) have not specifically mentioned the

EP recommendation, but a more general idea of a 'tax on robots'. Seeing as, this research focusses on the contribution in regards to the EP's proposal, these articles may have altered the results of the analysis. Thus, these articles needed to be excluded. In regards to the relatively small number of results (15 articles) and the fact that several articles are published in newspapers outside the borders of the EU, therefore, the search is extended further. For the new search the search engine "google" is used. Arguably, "google" is not referred to as a credible search engine in the academic literature. However, in consideration of the research topic and the facts that "google" has 1.6 billion estimated unique monthly visitors with 72.48 % of the world's market share of search and the Alexa rank 1 (O'brien, 2015), it can be assumed that a large number of people use the "google" search function to find articles in their field of interest. Since this assumption can not be adequately substantiated, each of the selected sources found on google are submitted to a credibility test. The precise approach for this test is explained in more detail below (3.6.) After a number of pre-tests with different search strings are executed on this platform, the search string: Search-string: basic income AND robots AND European Parliament; Customised date range: 31 May 2016 - 16 Feb. 2017 shows the most adequate results. In order to find the most relevant sources, the content of 143 articles is skimmed and scanned, which provided a final number of 37 articles that pass the credibility test. (explained below p. 24) Altogether the different searches and tests provides a total number of 52 articles published in newspaper and on websites of mass media agencies, political parties and Members of the EP, media experts with a background in economy or new technologies. Further, it is important to mention that the articles chosen for this research referred to the idea of a robot tax to finance a basic income based on the recommendation in the report on the ECLRR. Many of the sources that failed the first phase of the skimming and scanning process mentioned the same idea, but did not mentioned the ECLRR. The media sources used for this research are distinguished in four different categories: NEWS, TEC, POL, ECO. Instead of focussing on solely on one category, like articles from news agencies, a categorisation aims to provide insights from different angles of expertise. Further, it enables this research to compare, whether there are differences in the positioning (FOR, AGAINST or NEUTRAL) towards the proposal in the four categories of publication.

The four categories, to which the sources are assigned, are described below.

NEWS sources:

The NEWS category strongly focusses on articles published by mass media companies (NBCNews, CNN, Euronews etc.) or newspapers with a large circulation of copies and/or significant readership numbers among the European public. Articles published in this category are mainly written by editors with broad expertise and a degree in journalism.

TEC sources:

Articles in the TEC category are published on websites with expertise in the area of technologies and research. TEC sources often refer to a mission that equips their audiences with the intelligence to understand and to contribute to a world shaped by technology. Those sources derive their authority from authors with deep technical knowledge, capacities to understand technologies in a broader context, and access to leading innovators and researchers.

POL sources:

The POL category is assigned to analysis newspapers on lobbying in the EU, political review magazines and articles published by political stakeholders or groups with a decision-making function in the EU. Articles published in POL sources are written by policy analysts, MEPs, members of political movements or parties and authors with a degree in politics or a related fields of study.

ECO sources:

In this research ECO articles are referred to as sources dealing with economics and social policy impact. Authors in this category represent trade union organisations, management consulting firms, businesses, governments and non-governmental organisations.

3.4. Unit of Analysis and Unit of Observation for framing the media debate

The main unit of analysis in this research are the 52 online articles in the media debate about a general basic income paid by a 'robot' tax.

The unit of observation are the relevant stakeholders in the debate about the EP's proposal. Relevant stakeholder are, as it was mentioned before, MEPs, experts on basic income, economy and technical experts, political parties, interest groups, journalists or those with a relevant function in EU institutions and other bodies.

3.5. Time Period

The time frame the analysis is focussing is the period_in which the first draft report of the ECLRR was published and the final voting on the resolution in the EP. The draft report was first published on May, 31 2016. However, in a February 2017 vote on recommendation to address the effects of robotics and AI, the EP rejected the proposal from the final report. The EP's plenary session voted on the EP's resolution with recommendations to the EC, on February, 16 2017. This voting adopted the report of the EP's resolution with recommendation to the ECLRR with 396 votes for, 123 against and 85 abstentions. Even though, the recommendation was rejected in an earlier session in February 2017, several pre-tests on the media debate have shown that the period between the first publication and the final voting is best suited for a frame analysis of the public debate in the media.

Time period: 31. May 2016 - 16. February 2017

3.6. Measurement Reliability and Validity

Source Credibility Test

As already mentioned, the collection of relevant data for this research proves to be difficult. Therefore, the search engine "google" is used for finding data. Since, from an academic point of view using "google" as a source for finding adequate data is questionable, the sources found on "google" have to pass a 'Source Credibility Test'. The test is carried out by taking the following assumptions into account. Media framing does not necessarily require that articles have

academic backing. Articles from non-academic sources are, as well as academic source, important for the outcome of a media debate. Moreover, the sources are analysed as a primary text and will not be referred to as an academic sources. The 'Source Credibility Test' asks to answer the following questions:

- 1) Where was the source published?
 - Website link
- 2) Who wrote it?
 - Brief online research into the author
- 3) What is the estimated media reach of the article?
 - Brief online research on the estimated readership and/ or number of estimated unique monthly visitors or Alexa rank.
- 4) Is the piece appropriate for its field?
 - Brief summary of website and the focus of their publications.

Measurement Reliability

The process of skimming and scanning helps to identify relevant sources. Hereafter, a sample of relevant articles is coded and the source credibility tests are executed. A first coding protocol will contain observations and evidence about content, frames and argumentative patterns. In a second step, the reliability of coding decisions are tested. Pre-testing helps to ensure the intracoder reliability. Moreover, does pre-testing help to organize a clear and structured coding scheme for the analysis of articles and to reduce coding errors. In a last step, each article is evaluated again with a consistent coding scheme, which will further increase the level of reliability.

Measurement Validity

The methodological steps in this research, the consistency of the measurement tools and a clear formulated operationalization ensure a high internal validity. Moreover, is the measurement of articles an appropriate method to reconstruct dominant position and frames in the public debate. Framing experiments provide the researcher with extensive control over the structure of the most dominant frames and certainty of an actor's perception. Thus, the concept

of framing, with proper controls, almost completely excludes influencing factors, such as variations in subject's responses, which is another indicator for a strong internal validity (Callaghan et al., 2005). The threats to the external validity, or generalisability, of the research is minimized by choosing main messages, dominant position and frames of experts and the media that contribute to the conditions of real-life media exposure. The results of the frame analysis provide clear evidence of cause and effects of the experimental setting. Therefore, is the concept of framing a suitable method for analysing policy debates.

3.7. Operationalization

In the following section the operationalization of the two key for analysing frames in the media debate concerning the EP's recommendation to consider a basic income in the light of the possible effects of robotics and AI on the European Labour market will be defined.

Starting with the analysis of the content, at first it will be evaluated what dominant position towards a 'general basic income paid by a robot tax' can be identified. This will be measured by the scale of (1) For, (2) Against and (3) Neutral. The decision for one of the three categories is dependent on the number and strength of arguments in favor or against the EP's proposal in media articles. A strong argument is a non-deductive argument that succeeds in providing probable, but not conclusive, logical support for the conclusion in an article. An article is measured as Neutral, when no dominant position is identified. Further, it is to mention that the result only refers to a basic income paid by a 'robot' tax and not to the idea of a basic income in general. The aim of measuring the dominant position is to gain insights whether the subject is considered positive, negative or neutral in the media debate.

In part two of the content analysis the main message of the article concerning EP's proposal will be identified. This method enables a comprehensive overview on how the author's communicate and perceive the issue. Identifying the main message must not be confused with framing. According, to Rein and Schön's (1994) concept frames can only be identified by answering the three questions for framing, whereas the main message simply describes the subject of an article.

The analysis of dominant frames in the media debate is based on the concept introduced by Rein and Schön (1994). In order to be identified as a frame three questions have to be answered: (i) one that 'names' the problem (problem definition), (ii) one that 'names' and 'frames' actors or groups who are affected by the issue (social classification), and (iii) one that

gives an explanation on how the issue can be solved (causality), which are formulated in this research as follows:

(i) Problem definition:

What is the problem concerning the recommendation to consider 'general basic income paid by a robot tax'?

(ii) Social classification:

Who is affected by the issue?

(iii) Causality:

What is solution is mentioned to solve the issues of the policy?

Below, the 'Operationalization' (Fig.3.1) sheet for the content and frame analysis of the media debate is illustrated.

Operationalization (N= 52)

Nr.:

Article / Link:

Area of publication: (e.g. NEWS)

Title:

Publishing date:

Byline:

Website:

Source Credibility:

Focus of publications:

Author:

Media reach:

Content Analysis:

What dominant position towards a 'general basic income paid by a robot tax' can be identified?

Coding:
 (1) For (2) Against (3) Neutral

What is the main message concerning the basic income in the article?

Coding Example:
 (1) MEPs requests a legal status for robotics and a basic income to compensate possible effects on the European labour market, which is a logical step

Frame Analysis:

(i) Problem definition: What is the problem concerning the recommendation to consider 'general basic income paid by a robot tax'?

Coding:
 (1) Policy effects; (2) Policy funding; (3) Policy implementation; (4) Policy enforcement; (5) Policy image

(ii) Social classification: Who is addressed by the issue?

Coding Example:
 (1) Member of the EP Committee of Legal Affairs

(iii) Causality: What solution is mentioned to solve the issues of the policy?

Coding Example:
 (1) Expansion of conversation about BI in public & parliamentary debates

Figure 3.1: Operationalization

IV. Analysis

The following chapter intends to answer the first sub-question:

What are the dominant positions and main messages in the public media debate about the EP's recommendation to 'seriously' consider a general basic income in the light of the possible effects of robotics and AI on the European labour market?

Therefore, the chapter is structured as follows. Starting with a general introduction of the chapter (4. *Content Analysis*), followed by a section about the 'Dominant Position' (4.1) in the public media debate, which distinguished in four categories: 'NEWS articles' (4.1.1.), *TEC articles* (4.1.2.), *ECO articles* (4.1.3.) and *POL articles* (4.1.4.). The chapter moves on with an analysis of the 'Main Messages' (4.2.) and finally provides a 'Sub-conclusion' (4.3.).

4. Content Analysis

As mentioned in the previous chapters there are a lot of different opinions about the EP's proposal of a robot tax to fund a basic income. The EP's proposal has caused an interesting debate in the media in which framing plays a significant role. Seeing as, the report represents a series of recommendation to the EC in regards to increasing automation and ensuing job losses, the nature of the issue urges for legislation. Subsequently, the media attention has raised significantly after the report was published in May 2016. By analysing the media coverage of the debate about the EP's recommendation to 'seriously' consider a general basic income paid by a 'robot' tax provides, this study aims on giving insights on how the public media has framed the issue. In the following section the findings of the content and frame analysis of 52 online media articles will be presented.

4.1. Dominant Position

As mentioned in chapter three, the filtering of articles on LexisNexis Academic and Google led to a total of 208 articles. After skimming and scanning the content of all 208 articles only 52 fulfilled all requirements. The results of the skimming and scanning process show that in 156 articles the research subject is not sufficiently discussed or that the source failed the credibility

test. Eventually, the final filtering led to a total of 52 articles from different sources.

The results of the content analysis show, that between May, 31 2016 and February, 16 2017 the highest coverage of articles is in July 2016 after the first draft was published and in the last three months before the final voting. Between July 2016 and December 2016 the coverage decreases. Figure 4.1 shows that in January and February 2017 the highest peak of coverage is reached. Here, it is to mention that the coverage of articles for February 2017 is only tested until the EP's plenary voting on February, 16 2017, which explains the decrease of publication in February which is illustrated in Figure 4.1. Searches outside the time period show that the media attention further increased after the recommendation to consider a basic income was rejected from the final report, which indicates that the topic gains attention after the final voting.

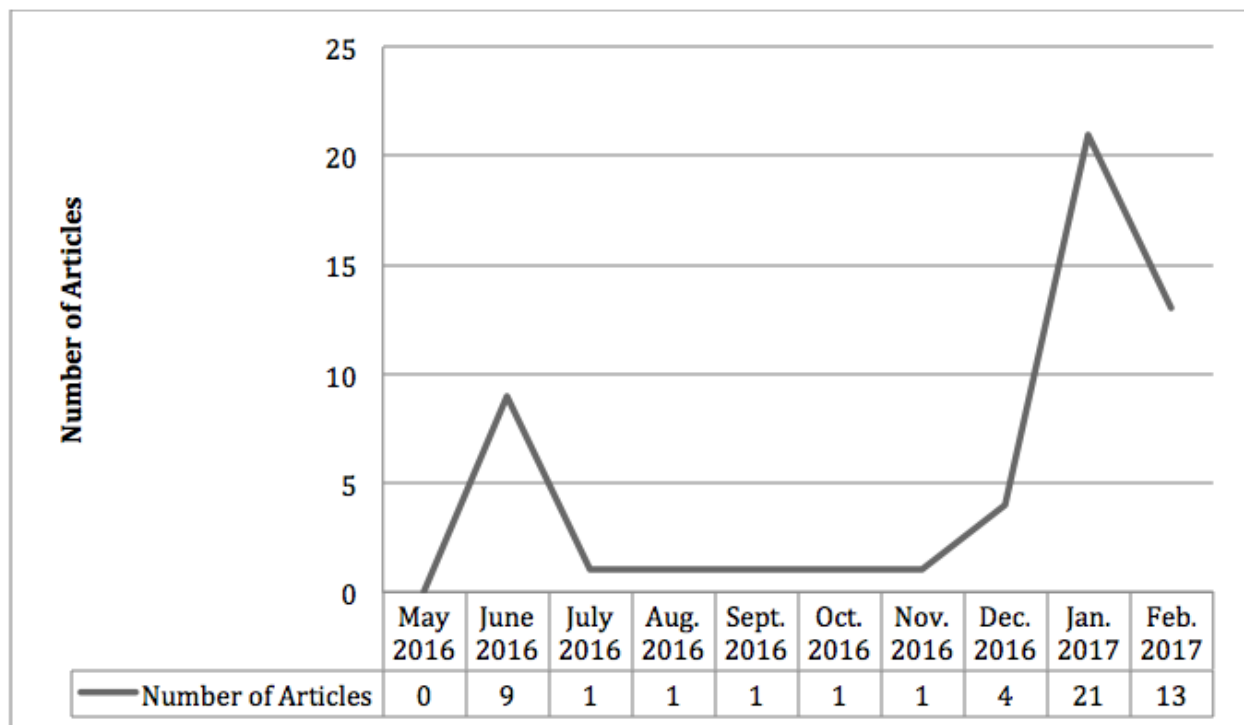


Figure 4.1: Coverage of articles between 31. May 2016 and 16. Feb. 2017

Furthermore, the dominant position is analysed and categorised in three variables measured with ordinal scale variables: FOR (1), AGAINST (2) and NEUTRAL (3). The results of the content analysis (Figure 4.2) show that a total of 20 articles (38,5%) can be assigned to position against the EP's recommendation, 14 articles (26,9%) consider the idea as useful to compensate possible effects on the European labour market and 18 (34,6%) have a neutral position. Figure 4.2 shows that 23 (44%) of the evaluated articles are published by mass media

agencies or national newspaper with a wide media reach (NEWS), 16 (31%) articles are published on websites with a technical focus (TEC), 8 (15%) are published on economic news websites (ECO) and 5 (10%) of the articles are published on websites with a focus on politics (POL). Figure 4.2 shows that the dominant positions towards the proposal varies between the different sources, making it difficult to sufficiently measure the correlation between dominant position and area of publication.

	FOR	AGAINST	NEUTRAL
[23] NEWS (44%)	34,8% (8)	30,4% (7)	34,8% (8)
[16] TEC (31%)	12,5% (2)	43,8% (7)	43,8% (7)
[8] ECO (15%)	37,5% (3)	50% (4)	12,5% (1)
[5] POL (10%)	20% (1)	40% (2)	40% (2)
[52] total	26,9% (14)	38,5% (20)	34,6% (8)

Figure 4.2: Coverage of articles in different categories of publication

The following section provides insights of what is behind NEWS, TEC, ECO and POL category and on what might have influenced the different positions in the articles.

4.1.1. NEWS articles

The analysis of NEWS sources shows that articles published by mass media companies, such as *CNN* (cnn.com), *NBC* (nbc.com) or *Euronews* (euronews.com) generally have a neutral position in regards to the subject. Mass media agencies, on the one hand, tend to cover hard facts on the debate without leaning towards a specific position on the subject. National newspapers with a wide media reach, on the other hand, seem to have a more politically motivated interests on the subject. In national newspapers articles frequently included opinion journalism, which has biased the subject in the reporting. The differences between both sources of information could be analysed by looking at the argumentative structure of the articles. Whereas, the mass media neutrally and objectively report on the subject (NEUTRAL), author's of national news often engage in the subject they were reporting about by using a certain

terminology or quoting experts from specific interest groups (FOR or AGAINST). Depending on the position of the political actor or expert quoted by the author, their level of expertise and the number of arguments 'against' or 'for' the proposal, the author added weight to a particular set of opinion, which then determined the dominant position. In other words, national news show a certain degree of journalistic interventionism, which has a significant impact on the position the articles are later assigned to (FOR, AGAINST or NEUTRAL). However, another aspect that probably biased the results of the analysis is that the research only looked into the content of articles written in English language. Due to the fact, that the EU has no common European media coverage, 11 of the 23 articles in the NEWS category were published by author's based in the UK or those working for a UK news agency, such as *theguardian* (theguardian.co.uk), *Mirror* (mirror.co.uk) or *Daily Express* (express.co.uk). The daily newspaper *Daily Express*, for example, is a newspaper in the UK with a daily circulation of almost 400,000 copies and is known for hard Euroscepticism and right wing populism. Euroscepticism is a significant element in the politics of the UK and UK citizens are the least likely to feel a sense of European identity (Eurobarometer, 2015). Subsequently, this could be an explanation for the predominantly negative position towards the EP's proposal in UK newspaper articles. Subsequently, Euroscepticism could be an explanation for the predominantly negative position of sources published in the UK. However, the lack of evidence on the author's or the newspaper's political motivation makes it difficult to further elaborate whether or not the articles are written on behalf of a political party or other group with an interest in European politics.

4.1.2. TEC articles

Furthermore, Figure 4.2 shows that articles published on websites with a technical focus (TEC) are predominantly classified as AGAINST (7) or NEUTRAL (7). In 7 the articles with an opposing position regarding the EP's proposal, the idea of introducing a robotic tax is strongly criticized. Technology experts mainly justify their position in regards to the proposal with the fear that a tax on robots could slow down the development of new technologies. Here it is to mention, that the articles that are assigned to the TEC category are written by authors specialised on tech-focussed media or a research background on tech trends like robotics, drone technology, Internet of Things, artificial intelligence and their impact on various industries. The TEC articles that are referred to in this study mainly covered technology issues, but not necessarily the politics or the money behind the issue. This condition, however, provides an

insight on how the technical world has positioned itself in regards to the EP's proposal. The results of the analysis show that the dominant position of TEC articles was significantly dependent on the author's personal opinion. When, on the one hand, the author supported the EP's belief that robotics and AI could negatively affect the developments on the European labour market, the article is classified with a position that favored the proposal (FOR). On the other hand, authors that disagree with the EP's belief, the article is classified as 'AGAINST'. Those with an opposing position repeatedly argue that "an increase of automatable occupations does not necessarily lead to job losses." "Even if robots take over, only particular tasks can be automated" (Boyle, 2016). As a matter of fact, is the focus of interest in TEC articles not the idea of a robot tax to pay for a basic income, but on the fear that a robot tax could harm the technical development of robotics and AI. Nevertheless, what all TEC articles have common, is their certainty about the inescapable increase of automation. The idea of a basic income is received mainly positively by most authors, but they predominantly disagreed with a robot tax to fund the scheme. In this regards, it is further argued that the EP's proposal is 'poorly' conceived, as the possible effects of robots and AI on the labor markets can not be adequately documented (Griffin, 2017).

4.1.3. ECO articles

Articles in the ECO category are published by economists, scholars or journalists with expertise in economy or other related fields. In articles published by authors with an interest in national economies an opposing position in regards to the EP's report dominates (AGAINST). Those critics claim that the EP's report recommends the EC to force robot owners to pay taxes and contribute to an almost untested welfare program. A basic income paid by a robot tax not only means a reconstruction of the entire welfare state structures of the participating countries, it also puts a high financial burden on automated industries. Economy experts fear that such a system could cause new dependencies among the MS, when weaker economies are unable to pay for their basic income on the long run. Of course, the question of the level financial contributions of are not being discussed, but just for this reason is the EP's proposal a controversial and politically charged issue (Straubhaar, 2017). However, in articles with a position in favor (FOR), it is argued that "if robots and AIs are generating the wealth then it makes sense to tax those machines and using that to support consumption" (Riley, 2017). Various well-known entrepreneurs with libertarian views supported the EP's proposal of a basic income paid by a

tax on robots and attribute the idea to a large set of new opportunities, such as “enough opportunity to feel free and to make own choices. To care or to have an own business” (as cited in Clifford, 2017). However, the differences between the libertarian and the conservative perspective clash on several matters in the debate about the EP’s proposal such as national security and morality which explains why they were assigned to contrary positions.

4.1.4. POL articles

The dominant position in the POL category significantly depended on the political view of the author. The article supporting the idea is written by a member of the S&D Group of the EP and is published on the S&D Group’s website. The S&D Group is the leading centre-left political group in the EP and the second largest, with 191 members from all 28 EU countries. The article states in regards to the proposal that it is urgent to “look at new models to manage society in a world robots do more and more of the work” (Allan, 2017). Moreover, is the Vice Chair of the Committee of Legal Affairs and Chair of the Working Group on robotics, MEP Mady Delvaux, a member of the S&D Group. MEP Mady Delvaux is a strong supporter of the ECLRR and the recommendation to ‘seriously’ consider a basic income paid by a robot tax, which provides a logical explanation for the supportive position in the article. However, the two articles against the resolution are published on websites of conservative political interest groups. Both groups are part of a modern conservative movement that enjoys the broadest allegiance of conservatives. In both articles strong doubts in regards to a basic income are expressed. Instead of recommending a controversial taxing scheme on robots and AI, they urge for transition-period programs for workers, in order to adjust to the new technological challenges on the labour markets,. According to those articles the report hints at growing political unease and the fear of the EU to lose control over its member states when robots take over. “Because robust regulation is always ‘urgently’ needed, and because it must, of course be ‘European’”. This is not something the nation-states can be left to decide upon for themselves” (Stuttaford, 2017). Conservatives tend to disagree with the proposal, because they understand it as an instrument of power for “EU’s command-and control regime” (Stuttaford, 2017). A neutral position is found in articles published by *Politico Brussels* (politico.eu). *Politico* a weekly intelligence and analysis newspaper on money and lobbying in the EU, formerly known as European Voice with 100.000 unique visitors daily. *Politico Brussels* has neutrally covered the debate about the tax on robots in their articles and expects an ongoing debate.

What can be said is that the dominant position is a strong indicator on how the debate is framed in the media among all categories. As mentioned in the section about ‘Agenda-Setting’ (2.2.), media sources are able to set and adjust a political agenda. However, the results of the content analysis illustrated that experts, stakeholders and interest groups try to get involved in the policy process by using the media as a mouthpiece for their interests. Policy-making in the EU, however, offers great space for those who want to get involved in a policy debate, to contribute their “underlying structures of belief, perception and appreciation” (Rein and Schön, 1994). The analysis of the content also show that the author’s individual perception of a policy issue directs the dominant position of an articles, which draws the attention of the receiver towards a certain political agenda. Now, that it has been illustrated what the different positions (FOR, AGAINST, NEUTRAL) mean in regards to the four categories (NEWS, TEC, ECO, POL), it is to find out what messages were by the different articles in regards to the EP’s proposal.

Seeing as, the aim of this section is to provide an answer for the first part of ‘Sub-question 1’: *What are the **dominant positions** [and main messages] in the public media debate about the EP’s recommendation to ‘seriously’ consider a general basic income in the light of the possible effects of robotics and AI on the European labour market?*, it can be concluded that 38,5% (20) of the selected articles (52) posses a dominant position against the EP’s proposal, whereas 34,6% (18) have a neutral position compared to 26.9% (14) in favor. However, the results also show that the category in which the articles are published has a significant impact on the allocation to a specific position.

Before moving on with a ‘Sub-conclusion’ (4.3) of the content analysis, the next section focusses on the second part of the sub-question: *What are the [dominant positions and] **main messages** in the public media debate about the EP’s recommendation to ‘seriously’ consider a general basic income in the light of the possible effects of robotics and AI on the European labour market?*

4.2. Main Messages

After identifying the dominant position of argumentative patterns in the articles (n=52), the next step looks at the content with a on the main messages. In order to display the main message used in the articles, the content of all articles is summarized to evaluate what messages occurred most. Therefore, articles using the same catchphrases or argumentative patterns are

grouped, in order to determine the main messages. However, this must not be confused with framing the articles, since in this phase only the main message are taken into account.

The results of the second phase of content analysis show that the two main messages that could be extracted from articles with a dominant position in favor mention the 'policy image' and 'policy enforcement'. The first message outlines the positive image of the proposal. The main message is: *"A general basic income paid by a tax on robotics should be considered as an alternative solution in the light of the possible effects of robotics and AI on the European labour market"*. In almost 50% (7) of articles in favor, it is argued that the EPCLA recommendation *"to consider a general basic income is a logical step towards the future"*. The other half (7) mentioned the enforcement of the policy. The main message in those articles is that they are in favor of the general idea, but in order to realize such a policy it *"should be enforced by the national governments"*. In other words this means that the EU should take a step back and let national governments decide upon the subject themselves.

In articles with a dominant position against the introduction of a general basic income the main messages are mentioned 19 of the 52 articles. The opposing position predominantly mentioned that *"the proposal to implement a general basic income on the European level should be excluded from the report"*. This reaction is justified by the fact that the possible effects of robotics and AI on the European labour market are still unpredictable which makes it irrelevant to discuss the funding of a basic income with a tax on robotics. The second most dominant message is mentioned in 18 of the 52 articles. The message mentions that another reason why the EPCLA proposal *"should be rejected from the report, is the fact that experiments with a basic income have only been tested in small pilot projects"*. For this reason the proposal is currently not seen as an alternative to the existing welfare states.

In articles with a neutral position the main message is that: *"The idea of a basic income has gained traction in the public debate, so the topic will be pursued with more interest in the future"*.

Position	Main Message 1	Main Message 2
FOR	<i>“A general basic income paid by a tax on robotics should be considered as an alternative solution in the light of the possible effects of robotics and AI on the European labour market”</i>	<i>A BI paid by a robot tax „should be enforced by the national governments”</i>
AGAINST	<i>“The proposal to implement a general basic income paid by a tax on robotics should be excluded from the report”</i>	<i>EPCLA proposal “should be rejected from the report, because experiments with a basic income have only been tested in small pilot projects”</i>
NEUTRAL	<i>“The idea of a basic income has gained traction in the public debate”</i>	<i>“the topic will be pursued with more interest in the future”</i>

Figure 4.3: Main Messages and Positions

As it is the aim of this section to find answers to the second part of the first sub-question, namely to identify the main messages from the 52 selected articles, the results have shown that EP’s proposal is perceived rather differently depending on the author’s *‘dominant position’*. In general, the findings show that not the idea to introduce a basic income led to concerns, but the intention to pay for a basic income with a tax on robots. Even though, various articles claim that the proposal could be an alternative solution ‘in the light of the possible effects of robotics and AI on the European labour market’, the majority disagrees with the idea to implement such a scheme on the EU level and urges to exclude the proposal from the report. Nevertheless, the findings also show that the topic will certainly be a topic which will be ‘pursued with more interest in the future’ and further provides insights about how the topic is framed in the media.

4.3. Sub-conclusion: Content Analysis

In the following, a short conclusion of the previous findings will be given, before moving on with finding answers for the first sub-question.

What are the dominant positions and main messages in the public media debate about the EP's recommendation to 'seriously' consider a general basic income in the light of the possible effects of robotics and AI on the European labour market?

To sum up the results of the content analysis it can be said that the majority (38,5%) of the 52 articles hold a position that rejects the EP's proposal. Further, it is shown that 34,4% have a neutral position, whereas 26,9 % of the articles agree with the proposal. By dividing the articles into four different categories additional insights could be gained about what eventually led the author to take a certain position. The analysis revealed that the position significantly depends on the personal or political preferences of an author and the area of publication. Furthermore, it could be analysed that a negative position is often found in articles in which the author has a 'Eurosceptic' view or those written by authors who fear that the proposal could harm the development of new technologies. Authors that argue in favor generally hold a position that fears a collapse of the current welfare state structures in the EU and, therefore, urge for an alternative solution, such as it recommended by the EP. Authors with neutral positions tend to follow a judgment-free reporting style. The classification of the different positions made it easier to elaborate the main statements in the further course of the analysis.

After identifying the dominant positions in the 52 articles, the second part of the content analysis aimed to find out more about the main messages. In addition to the confirmation of the previous findings, it was found that the criticism of the EP's proposal was based mainly on the idea to fully finance a basic income through a tax on robots, due to the lack of experience with both schemes. As a result, many called for the proposal to be withdrawn.

The elaboration of the dominant position and main statements from the differently categorized articles show that despite the differing positions regard to the EP's proposal, the debate points out a clear direction. What is striking about the results is that the EP's proposal appears to be a call for a basic income, but not for a robot tax. Seeing as, the report is written on the background of increasing automation and the ensuing of job losses, the representation of the proposal in the media is rather contrary. The question that arises from the results of the content analysis is how the media has framed the debate about the robot tax, in order to contribute an explanation for why the proposal was eventually dropped from the legislative resolution in the EP. While, the analysis of the content provides first insights regarding the debate in the media, it does not provide an answer that addresses why the proposal did not make it onto the political agenda.

Now that the dominant positions in the different categories (NEWS, TEC, ECO, POL) are assigned and the main messages are extracted, the following section focuses on analysing how the subject is framed in the public media debate.

V. Frame Analysis

The aim of the frame analysis is to answer the second sub-question, which was formulated as follows in an earlier part of the paper:

What are the dominant frames in the public media that framed the debate about the European Parliament's recommendations of a taxing scheme on robotics from 31 May 2016 till 16 February 2017?

5.1. Frame Analysis

As mentioned in previous sections of this research, the debate about the EPCLA's proposal to consider a basic income in the light of the possible effects of robotics and AI is surrounded by a lot of different opinion and controversies. Since, the parliamentary debate hardly provides any insights for why the proposal was finally rejected, the analysis of the dominant frames in the media debate might help finding an answer to the two sub-question and eventually to the main research question. However, in order to identify the most dominant frames, the following three question need to be answered:

1. What is the problem concerning the recommendation to consider 'general basic income paid by a robot tax' (problem definition)?
2. Who is affected by the issue (social classification)?
3. What is solution is mentioned to solve the issues of the policy (causality)?

Finding an answer to all of the three question is essential in order to determine whether a statement can be identified as a frame or simply a statement. To understand the difference between a frame and a statement is significant, in order to get the most accurate results. In contrast to a statement, is a frame able to reconstruct a problem definition, to socially classify those affected by the policy and proposes a possible solution to the problem. As mentioned

before, weak support for a policy issues, like it seems to be the case for the EP's proposal, often stems from conflicting frames that are generated in the public media debate (Entman, 1993). Since, there was no open-minded debate in the EP on this issue, framing the media maybe contributes explaining the decision of the EP to reject the 'robot tax' from their agenda. After a second reading of the 52 articles various frames could be identified, but three frames were particularly dominant beyond the four categories (NEWS, TEC, ECO, POL).

□ 5.1.1. The 'alternative funding' Frame

The 'alternative funding' frame is one of the most dominant frames in the media debate on the EP's proposal of a robot tax paying for a basic income. A key statement connected to this frame is: "a general basic income might put too much stress on businesses working with new technologies".

Problem definition:

This frame view the great concerns in regards to the EP's that "the costs of a general basic income might put too much stress on businesses working with new technologies". Economists fear that the costs of a basic income will increase significantly over time. Since, such a scheme already puts great pressure on businesses working on new technologies, the financial burden would become intolerable when costs increase. Economists further argue that the possible effects of robotics and AI on the European labour market are not yet fully predictable, making it difficult to conceive a taxing scheme on robots to finance an almost untested basic income. Taxing robots is a misleading economic policy, which would slow down the development of new technologies and thus negatively affects the competitiveness of businesses. Even if new technologies have led to a reduction of jobs in short terms, experiences have shown that they were prosperous in the long run.

Classification:

The group of people directly affected by the EP's proposal are business owners. According to various experts, business owners would have to cope with great financial risks. If such a policy gets adopted business owners are forced to decide whether they want to pay taxes on robots or find an alternative solution to keep their company running. Even if a business owner decides to turn away from working with robots, keeps his staff or hires new staff, there is still a great risk to

be overtaken by rapid technological changes. Since, the increase of automation is inescapable, turning away from working with robotics and AI could harm companies and negatively impact wages and their competitiveness on the market.

Causality:

A possible solution are alternative funding scheme or system of alternative redistribution. Alternative solutions mentioned in the articles are, for example, “an auto-financing scheme paid through an income tax of people whose earnings are above the mean income or a European wide tax reform including a dividend paid by the European Central Bank in form of a so-called ‘SocialCredit’”.

□ 5.1.2. The ‘implementation’ Frame

The ‘implementation’ frame is the frame that occurred the most in the public media debate. The key element of this frame are general concerns about the legality of EP’s proposal.

Problem definition:

The ‘implementation’ frame names the proposal a “controversial legislative issue”. The main problem the ‘implementation’ frames names is the “unpredictability” of the costs and the social impact of a basic income, as well as the fact that the performance of robotics and AI are not yet fully examined in the context of funding and their possible effects on the European labour market. Critics claim that the EP’s proposal represents a “poorly conceived” measure, seeing as there is “hardly any evidence that predicts the costs of a basic income” nor “have basic income scheme being tested in large entities”. Eurosceptics go even further and argue that the EP’s proposal is simply an instrument of power to expand the “EU’s command-and control regime”, which will create new dependencies among the MS. Bearing in mind that each MS has its own country specific legislation, welfare state structures or social security system and persisting claims for national sovereignty, and considering the fact that both schemes are still in an “early stage of their development”, the EP’s proposal is “simply unrealizable”. If such a system were to fail, the EU would collapse, as would every MS. Therefore, is the EP’s recommendation of a basic income paid by robot tax “inappropriate” to secure European labour market and “should be rejected from the final resolution”.

Categorization:

According to the articles the implementation of a general basic income paid by a 'robot' tax would mainly take national governments and the bodies of the EU at risk. Promoting such a proposal without knowing the effects of it, "could easily lead the electorate to turn against a government at the next election". Since, the introduction of a basic income means to entirely replace old welfare state structures, it seems illogical that economically weaker MS are able to afford such a massive system change. If the system fails, poorer countries will not be able to recover themselves which creates new dependencies and potentially supports the rise of the populist right in the EU.

Causality:

Instead of a basic income, an alternative solution to repair and protect the European labour market is "an employment protection legislation on the European level" that "sets of laws governing the initiation of open-ended contracts and temporary contracts, as well as contractual relationships". A possible solution for the effects of robotics and AI on the labour markets could be the introduction of "transition-period programmes" for "unemployed workers whose jobs have been reduced or eliminated". However, in most of the articles is no specific solution mentioned, but "everything seems better than a tax on robots funding a basic income". However, most 'experts' simply demand an "alternative solution".

□ 5.1.3. The 'possible effects' Frame

The "possible effects" frame is mentioned predominantly in articles in favor of the EP's proposal. A key element that characterises this frame is the general agreement that "Europe's social dimension needs a 'next' step".

Problem:

The majority of experts mentioned in the 52 articles believes that "a EU policy on basic income might be a step too far", but "it should definitely be tested on the MS level". Further, it is argued that "if robots take our jobs, a basic income could actually be a good idea." One article goes even further by stating that "a basic income is a misunderstood social policy, the tragedy of the image is that it looks like it attempts to reach a political goal with unsuitable means." Problematic is simply the fact that a basic income has never been tested among a large group

of participants or in an entire nation. However, the advocates agree that the “possible effects of robots and AI could further harm the European labour market” and that “it is now at the time to take action”.

Categorization:

According to the articles the unemployed and employees whose jobs are at risk have to fear poverty and long-term unemployment, if their jobs are taken over by robots. Therefore, “we have to think about a universal basic income, because if there are so many unemployed people, we need to insure that they can have a decent life.” This is a scenario governments need to be prepared for.

Causality:

In regards to the fact that many disagree with a EU policy on basic income, one solution mentioned in the articles is the enrollment of more basic income pilots on the national level, like the one in Finland. Therefore, the discussions about a basic income need to be extended in the EU, in national parliaments and in the media. However, it is important that the MS can decide for themselves whether they want to test a basic income in their respective nation.

5.2. Sub-conclusion: Frame Analysis

The following section will provide an overview of the main findings of the frames analysis. As mentioned before, this chapter aims to find answers to the second sub-question:

What are the dominant frames in the public media that framed the debate about the European Parliament’s recommendations of a taxing scheme on robotics from 31 May 2016 till 16 February 2017?

After carefully reading and analysing the content of all articles the results show how challenging it is for policy makers to promote such a controversial legislative issue. Seeing as, the EP’s report on the ECLRR is already a highly controversial approach to address ‘possible’ effects in the fast-evolving field of robotics and AI, the idea to promote a basic income paid by tax on robots seems even more challenging.

By reading and analysing different definitions, positions, argumentative patterns and messages in the 52 articles, three dominant frames have been identified:

1. The 'alternative funding' frame
2. The 'implementation' frame
3. The "possible effects" frame

The 'alternative funding' frame tackles the idea to fund a basic income with a tax on robots. This frames questions whether a basic income paid by a 'robot' tax is an appropriate measure to compensate the possible effects of robotics and AI on the European labour market and offers a number of alternative funding methods for a basic income. The second frame is the most dominant frame. The 'implementation' frame 'names' the problem of the policy recommendation a "controversial legislative issue". Moreover, the 'implementation' frame indirectly claims to exclude the recommendation to 'seriously' consider a general basic income from the report and urges for an alternative solution. The third frame generally supports the idea of a basic income paid by a 'robot' tax. However, the recommendation to implement a basic income in the EU is rejected by majority. MS should themselves decide whether a basic income is a suitable measure for them. A European policy would intervene too much with the sovereignty claims of the MS regarding social security and welfare state protection.

As seen in the previous chapters, there are a lot of different opinions about the EP's proposal of a robot tax to fund a basic income. Seeing as, the proposal turned out more to be a call for a basic income than a tax on robots, the framing analysis has shown the debate is shaped by different positions in regards to the proposal and a variety of conflicting frames. The three most dominant frames differ not only in their nature, but also in the way they organize, perceive and communicate about the policy issue. The fundamental differences between the most dominant frames are that only the 'alternative funding' frame defines the problem in regards to put a robot tax into place to finance a basic income. The other two frames base their problem definition with a main focus on the idea of a basic income. This somehow corresponds to the impression that the EP's is more of a call for a basic income, than it calls out for discussing a robot tax. Whereas the 'alternative funding' frame defines the fear that a robot tax could harm the future development of new technologies, the 'implementation' frame and the 'possible effect' frame are more concerned about the unpredictable impact of a basic income on the European society. Since, the EP's resolution with recommendations to the EC originally

pursued the purpose to legislate increasing automation, the idea of a basic income occurs contradictory to the actual purpose of the report. In most of the 52 articles the idea to put a robot tax into place is only a side story. The results of the framing analysis support this impression and provide an explanation why the proposal eventually dropped out of the final report.

To sum up, the frame analysis of the media debate tells a lot about the case in question. As it is mentioned before, the proposal turned out to be a call for a basic income, but not particularly for a robot tax. Since, the resolution on the ECLRR has already been recognized as a controversial legislative issue in regards to the uncertainty of the effects of robotics and AI on the European labour market, the recommendation to finance a basic income with a taxing scheme on robots seems to miss the actual point of the report. Nevertheless, the results also show that the debate about basic income has gained momentum after the proposal was published in the first draft report, which could be a reason why the proposal was included in the report in first place. Even though, the proposal eventually was rejected in the EP plenary session before the final voting, the proposal clearly indicates a new movement in the EP towards a new 'European Social Dimension'. The "next step" is to further expand the conversations about a basic income in the EP, on the national level and in the media. In order to generate more knowledge and experience, the number and size of pilot projects on the MS level have to be increased.

VI. Conclusion

6.1. Conclusion

In recent times, the power of news media to set the public and political agenda is steadily growing. Even though, politicians are quick to blame the media when news articles do not put them in a favourable light, they also use the media to gain public support for their political goals. However, with regard to the missing debate in the EP on the exclusion of the proposal for a general basic income from the final report on the ECLRR, the media seems like the only source for finding answers. This research represents a first effort to frame the media debate of the EP's recommendation of a robot tax to fund a basic income light of the possible effects of increasing automation on the European labour market.

The theoretical part of this research illustrates the uniqueness of policy making in the EU and provides the reader with an understanding of the impact of framing in public policy. The concept framing or frame analysis is according to the public policy literature a practical method for analysing the “underlying structures of belief, perception and appreciation” (Rein & Schön, 1994) of actors involved in the policy process. Nevertheless, in order to quantify message characteristics or argumentative positions in news articles, the method of content analysis is also introduced. Content analysis is generally used to analyse large amounts of information and assigns the information to different labels or codes. This concept supports an analyst to make a distinction between frame or theme and provides the right tools to identify dominant positions and main messages in texts, such as media sources.

While the key part of the analysis looks at how the public media has framed the proposal of a general basic income paid by a ‘robot’ tax, it also looks at the different positions that shape the reality of the policy process of the ECLRR from 31 May 2016 till 16 February 2017. Thus, the analysis in this research is divided in two parts. In the first part the context of media sources is analysed, in order to get a better insight on the different positions and main messages send distinguished in four categories of publication (NEWS, TEC, ECO, POL). The analysis of the context aims to develop an understanding for the controversies that emerged during the policy process of the ECLRR. In this part, the first sub-question is answered:

What are the dominant positions and main messages in the public media debate about the EP's recommendation to ‘seriously’ consider a general basic income in the light of the possible effects of robotics and AI on the European labour market?

The main results of the content analysis have shown that the majority (38,5%) of the 52 articles hold a position that rejects the EP's proposal. Further, it is shown that 34,4% have a neutral position, whereas 26,9 % of the articles agree with the proposal. By dividing the articles into four different categories additional insights are given on what influences the author's dominant position. Further, the analysis revealed that the author's position significantly depends on the personal or political preferences in a certain area of publication (NEWS, TEC, ECO, POL). Authors with a 'Eurosceptic' view or articles written by those who fear that the proposal could harm the development of new technologies predominantly obtain a negative position. A position in favor generally depends on a view that sees the EP's proposal as an alternative solution. Authors with neutral positions tend to follow a judgment-free reporting style.

The analysis of the main messages in the 52 articles has shown that the idea of a basic income paid by a 'robot tax' significantly depends on the author's '*dominant position*'. Moreover, the findings have shown that not the idea to introduce a basic income led to concerns, but the intention to pay for a basic income with a tax on robots. In this regards the main messages predominantly rejected the idea of the EP's recommendation. Even though, various articles claim that the proposal could be an alternative solution 'in the light of the possible effects of robotics and AI on the European labour market', the majority of authors disagreed with the idea to implement a basic income scheme paid by a 'robot tax' on the EU level.

The second part focusses on frame analysis of the public media debate, which is derived from 52 online news articles. Here, the second sub-question is answered.

What are the dominant frames in the public media that framed the debate about the European Parliament's recommendations of a taxing scheme on robotics from 31 May 2016 till 16 February 2017?

The three dominant frames in the public media that framed the debate about the European Parliament's recommendations of a taxing scheme on robotics are:

1. The 'alternative funding' frame
2. The 'implementation' frame
3. The "possible effects" frame

The contents of the three dominant frames are finally examined in more detail in the following section. Eventually, the main research question will be answered:

How has the public media framed the debate about the European Parliament's recommendations of a taxing scheme on robotics from 31 May 2016 till 16 February 2017?

The results of the content analysis show that most of the 52 articles adopted a position AGAINST the EP's proposal. The categorisation (NEWS, TEC, ECO, POL) in this part of the analysis provided insights in what defines the different position in the articles and where this position comes from. What is striking about the results is that even those with a position in favor of the proposal generally disagree with an introduction of a general basic income on the European level. In this regards, one of the main messages send in the articles is that "every MS should decide upon themselves, if a basic income is a right measure for their respective nation". Subsequently, the analysis of the media debate shows, however, that even if the EU urges for a "next step" to solve the issues of increasing poverty rates and long-term unemployment on the European labour market, the MS are not yet ready for such significant changes on the structures of their welfare states. The welfare state and the economy market still proved to be fields in which the MS claim for national sovereignty.

This message is also supported by the most dominant frame in the public media debate. The 'implementation' frame 'names' the proposal of the EP a "controversial legislative issue". The problem defined in this frame indirectly attacks the formulation of the legislative text in the report. The frame 'names' the EP's proposal "unrealizable" due to the fact that each MS has its country specific legislation on social security issues. Moreover, this frame 'names' the proposal an "inappropriate" measure to secure the European labour market. Critics claim that in case of an actual implementation of the EP's proposal, national government would have to take enormous risks to secure that such a scheme will not become an inescapable financial burden. Subsequently, this frames demands for an alternative solution such as "an employment protection legislation on the European level" or "transition-period programmes".

The second most dominant frame, is the 'alternative funding' frame. The greatest concern mentioned in this frame is that "the costs of a general basic income might put too much stress on businesses working with new technologies" which could lead to competitive disadvantage on the markets. Another problem is that the possible effects of robotics and AI on

the European labour market are still “unpredictable”. A possible solution to the problems mentioned is that instead of funding a basic income with taxes depending on the impact of AI and robotics on a company's revenue, an alternative way of funding a basic income should be developed.

The third most dominant frame is the ‘possible effects’ frame. This frame stresses the concern that a basic income has never been tested among a large group of participants or in an entire nation, but is not necessarily a bad idea. Moreover, the frame reflects that possible effects of robotics and AI are not unlikely to have an impact on the European labour market. Therefore, governments need to be prepared. The simplest solution to solve the issues is to start testing a basic income on the national level. Further, the frame recommends to expand the discussion not only in the media, but also in the EP and in national parliaments, in order to gain more public support for a basic income.

The final results of the frame analysis show that the media debate has predominantly framed the policy recommendation of the EP a “controversial legislative issue”. The comparison of the three most dominant illustrated that the legislative issue has been organized, perceived and communicated rather differently in the different sources. Whereas, the ‘alternative funding’ frames criticises the robot tax as an adequate measure to fund a basic income, the ‘implementation’ frame and the ‘possible effect’ are more concerned about the unpredictable impact of a basic income on the European society. Having in mind, that the ECLRR originally pursued the purpose to legislate the future development of robotics and AI, the results of the analysis show that the EP’s proposal turned out to be a call for a basic income, not a robot tax. Subsequently, provides the analysis of the media debate an explanation why the EP’s proposal eventually was rejected from the final resolution by plenary vote. What does this tell about the case in question? Firstly, it is not the idea of a robot tax nor is it the idea of basic income that was rejected, it is the combination of both. When the proposal turned out to be a call for a basic income, instead of a taxing scheme on robots, it missed the actual purpose of the ECLRR. Secondly, is a great disadvantage of the proposal that both ideas are not sufficiently researched and their outcome and impact on society are still unpredictable. Finally, it needs to be said that the idea of a basic income is not the main reason for concern, even though, the recommendation was excluded from the final resolution.

However, applying a frame analysis during the phase of agenda-setting also illustrates that the frames set out by the different actors have the ability to alter the public opinion on a certain issue. Seeing as, a number of articles published in ‘UK newspapers’ with a large

estimated readership have framed the topic predominantly negative because of their 'Eurosceptic' position, the impact of the media on a certain issue can significantly influence the public opinion. The same applies for articles from other categories, like TEC or ECO articles or those published political interest groups (POL). The analysis has shown that author's often rely on expert opinions, political preferences of their editors or their personal view, which influences how a topic is framed. Framing implies that the media shifts attention to certain events or solutions and places them with a meaning. In this regards, it is to mention that a frame itself does not necessarily suggest the truth about a policy outcome, but delivers an indefinite idea of how reality could look like when a policy comes into action. Thus, the influence of a frame depends on the extent to which it is considered realistic by the public and political decision-makers. In other words, a frame that is strengthened by an expert opinion or published by a media agency with significant media reach can change public perceptions and, consequently, influence a political agenda.

Despite all the controversy in regards to the media debate, the idea of a basic income marks a lot of positive elements. Since, this first effort of the EP to put a basic income on the political agenda of the EU, the report on the ECLRR has definitely contributed to extend the debate a in the EU to the benefits of future experiments with a basic income.

"An incredible year. There has been more written and said on basic income than in the whole history of mankind." (Philippe van Parijs, 2017)

Seeing as, the report is only a proposal to the EC and not hard law, it is a first real effort taken by the EP to fight the risks of increasing poverty and unemployment rates in the EU. The report creates a certain awareness towards an area of research which has hardly been addressed in the academic literature, a basic income. This effort sets a clear statement to the EC that it is time for a 'next step' for 'Europe's Social Dimension', before the effects of robotics and AI on the European labour market become unavoidable or the welfare states fail to secure their citizens.

6.2. Limitations of Research

As it is already indicated in the methodology this study has its limits, due to lack of access to relevant data. The fact that there is no such thing as a European media agency or a 'lingua franca' in the EU has made the work quite difficult. For this reason, this research has focused solely on articles in English language published on media platforms with a large estimated readership. Anyhow, even this adjustment has its limits considering that the majority of citizens in the EU would prefer to read the news in their own mother tongue. Consequently, this research could have possibly made a more significant contribution to the research literature, if the subject had been analysed for each of the 27 MS separately.

Another limitation for the relevance of this research is the fact that there has not been an 'open-minded' debate in the EP regarding the proposal to consider a basic income which makes it difficult to compare the exact exclusion criteria of the EP with the results of the frame analysis.

Moreover, the specified time period from May, 31 2016 till February, 16 2017 can be seen as a limitation, since the discussions about the proposal has further gained momentum in the public media after the final voting.

Despite the limitations of research, the frame analysis proved to be a practical method for analysing a debate in the media. Given the fact that the public debate about a basic income just gained traction, it might be possible to identify frame-shifts or new frames in the near future, which is an interesting case to follow.

Even though, framing is a time-consuming task, the results have shown that this method allows a researcher to identify important frames in discussion about a certain topic, which provides great insights on how individuals, groups and others communicate about policy and how they perceive it.

VII. Literature

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News

Title	Author	Source	Date
Universal basic income is not a magic solution, but it could help millions; The current system of welfare and employment simply isn't working	Anthony Painter	the guardian	January 4, 2017
Is a 'money for nothing' policy the best solution to growing crisis of populism?; In a radically changing world, a fundamental restructuring of the welfare state may be what's needed	Jody Corcoran	Sunday Independent	January 22, 2017
The rise of the robots - is it a brave new world?	N/A	Yorkshire Post	February 16, 2017
My prediction is kids born today will never get to drive a car	Gary Robbins	Gulf Times	January 1, 2017
Give robots 'personhood' status, EU committee argues; Proposed rules for robots and AI in Europe include a push for a general basic income for humans, and 'human rights' for robots	Alex Hern	the guardian	January 12, 2017
Basic income not the answer	Peter Hartcher	Canberra Times Europe	June 7, 2016
Labour taking a close look at universal basic income; Shadow chancellor says the concept of an unconditional payment to all could prepare country for robotisation of the workforce	Heather Stewart	the guardian	June 5, 2016
Get ready for robots that'll eat your lunch; are already going beyond training and education to test the feasibility of a basic income	Peter Kammerer	Morning Post	August 30, 2016
'Free money' floated as robots take jobs; 'Universal basic income' idea is gaining traction among European lawmakers, leaders	John Leicester	The Star	January 17, 2017
Universal Basic Income Explained - How a fringe idea could redefine the welfare state	Ross McCafferty	The Scotsman	February 6, 2017

State handouts for all? Europe set to pilot universal basic incomes; Switzerland is poised to hold a referendum on introducing the concept, and Finnish and Dutch pilots are set for 2017	Philip Oltermann	the guardian	June 7, 2016
Opinion: Robots could put most humans out of work. What then?	Sean Welsh	euronews.com	January 4, 2017
HEY ROBOT, LEAVE MY JOB ALONE; Job insecurity and technology have created a 'crisis of meaning' in the workplace. In today's world how do workers find fulfilment?	Joe Humphreys	The Irish Times	February 4, 2017
Socialists choose leftwing rebel Benoît Hamon for Élysée fight; Hamon's trouncing of centrist Manuel Valls is damning verdict on failed presidency of pro-market Hollande	Angelice Chrisafis	the guardian	January 29, 2017
Has the pace of innovation stalled?; Growth in productivity and output has been disappointing while the gap between rich and poor widens	Ryan Avent	The Irish Times	February 16, 2017
As robots take human jobs, Europeans mull free money for all	Lulu Chiang, Lauren Hoenemeyer and Gilad Thaler	cbsnews.com	January, 17 2017
MEP from Luxembourg urges robot regulation	AFP/sth	wort.lu	January, 12 2017
Are they MAD? EU set to give robots same legal status as humans	Siobhan McFadyen	express.co.uk	January, 16 2017
Is Universal Basic Income the Answer to an Automated Future?	Dylan Love	nbcnews.com	December, 7 2016
Universal basic income debate gains traction in the EU	Jorge Valero	euractiv.com	September, 21 2016
#robots: MEPs consider the legal and ethical ramifications of robotic revolution	N/A	eureporter.co	January, 12 2017
Robots allowed to trade money and claim copyright on their work under radical new EU plans	Scott Campbell	mirror.co.uk	June, 23 2016

Tab. 7.1.

TEC

Title	Author	Source	Date
New EU report recommends Universal Basic Income for all 27 member states	Matthew Griffin	globalfuturist.org	January, 18 2017
Countries should put a universal basic income in place before robots take our jobs	Nancy Bazilchuk	sciencenordic.com	December, 14 2016
MEPs in 'urgent' call for new laws on artificial intelligence and robotics	Alexander J Martin	theregister.co.uk	February, 16 2017
A Robot Tax is a bad idea	Leonid Bershidsky	bloomberg.com	January, 23 2017
Today's Artificial Intelligence Does Not Justify Basic Income	Vincent Conitzer	technologyreview.com	October, 31 2016
Europe Looking to Make AI Kill Switch Mandatory	Kristin Houser	futurism.com	January, 13 2017
EU move to bring in AI laws, but reject robot tax proposal	Rich Haridy	newatlas.com	February, 16 2017
New proposal to create legal status for robots as 'electronic persons'	Mark Eltringham	workplaceinsight.net	June, 23 2016
Brussel's Robot Revolution	Kai Peter and Eike Radszuhn	vdmaimpulse.org	December, 6 2016
Make the Robots Pay Taxes	Melanie Ehrenkranz	mic.com	June, 29 2016
Should working robots be considered "electronic persons"?	Nicole Kobie	itpro.co.uk	June, 23 2016
Are rapid advances in automation driving us towards a universal basic income?	Richard van Hooijdonk	richardvanhooijdonk.com	November, 25 2016
Technology, jobs, and the future of work	James Manyika	mckinsey.com	December, 15 2016
The new robot revolution will take the boss's job - not the gardener's; Advances in artificial intelligence mean a second wave of change is approaching - and it is not the low-paid service sector where jobs are most at risk	Larry Elliot	techcom	January 22, 2017
Autonomous weapons' notably absent from EU motion on robotics, AI	Frédéric Simon	euractiv.com	February, 16 2017
Basic Income - Musk likes it, who else?	Michael Barnard	cleantechnica.com	February, 12 2017

Tab. 7.2.

ECO

Title	Author	Source	Date
Should robots have to pay taxes?	Charles Riley	money.cnn.com	June, 22 2016
European politicians have vote to rein in the robots	Sam Shead	businessinsider.com	February, 16 2017
On the Economics of a Universal Basic Income	Thomas Straubhaar	intereconomics.eu	February, 4 2017
Why we need a universal basic income	Marta Pacheco	katoikos.eu	December, 27 2016
MEPs Call For Rules on Legal Status of Robots	Charles O'Donnell	extra.ie	January, 15 2017
Universal basic income could find more mainstream traction in 2017	Patrick Kulp	mashable.com	January, 5 2017
The new robot revolution will take the boss's job - not the gardener's; Advances in artificial intelligence mean a second wave of change is approaching - and it is not the low-paid service sector where jobs are most at risk	Larry Elliot	the economist	January 22, 2017
ETUC resolution on digitalisation: "towards fair digital work"	N/A	etuc.org	June, 16 2016
Ensuring people's self-determination in the age of robotics and artificial intelligence	Julia Reda	juliareda.eu	February, 15 2017

Tab. 7.3.

POL

Title	Author	Source	Date
MEPs fear the rise of the robots	Joanna Plucinska	politico.eu	January, 12 2017
EU, Robot	Andrew Stuttaford	nationalreview.com	January, 14 2017
Don't kill us, R2-D2: MEPs warn against robot revolt	Harry Cooper and Joanna Plucinska	politico.eu	February, 16 2017
Universal basic income - what do socialists say?	Judy Beishon	socialistparty.ie	February, 9 2017
We cannot let the robot revolution lead to even greater inequality in our societies	Tim Allan	socialistsanddemocrats.eu	January, 13 2017

Tab. 7.4.