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Specialization: Global Political Economy

Uploading domestic policies to the EU level

Estonia's opportunities on the issue of cryptocurrencies.

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Introduction

Since the establishment of the European Union [EU] its policy processes have been of interest to the academic world. With the enlargements of the European Union more actors want to defend their interests on the EU level. This makes alignment on preferences among the member states of the European Union [Member States] more challenging. Academic literature has been concerned with how the policy processes take place: who leads and who follows? This interest is not limited to the different standpoints on policies between the Member States, but also concerns different standpoints between different levels of governance between the EU: 'How do Member States influence the institutions-building process in the EU?', but also 'How does European decision-making influence domestic policy-making?'. Previously researchers were mainly interested in either the latter (also called the bottom-up perspective), or the former question (also called the top-down perspective). In this research the concept of Europeanization as described by Börzel (2002), which looks at both the bottom-up as well as the top-down perspective, is used to understand how Member States both influence and are being influenced in the EU policy process. The research is concerned with how small Member States preferences on an issue can be incorporated into EU policy by 'uploading' their domestic norms, rules and practices. It is focused on a specific issue and a single case: Estonia's preferences on cryptocurrencies.

Why use these two frames to narrow-down the scope of the research? Firstly, cryptocurrencies are a topic on which governments are not aligned yet. Cryptocurrencies were designed in recent years. They are designed as electronic cash that can serve as an alternative currency (Nakamoto, 2008). This innovation has offered a choice on whether to use government-issued currencies or cryptocurrencies as an alternative. For users there are benefits to using the alternative, but some people seem to be concerned with this innovation as normally central banks have the prerogative to issue cryptocurrencies on behalf of states (Schmidt et al., 2016, p. 48). Cryptocurrencies can be seen as a recent, relevant example of an innovation which enforce governments to change or make policies (Gilpin, 2001, p. 135). Both in academia as well as in policy practice a debate has risen on how to regard, and how to deal with this new technology. Cryptocurrencies are thus a topic on which it can be expected that Member States have different

preferences. Secondly, Estonia is a Member State with unique ideas and has a history of pursuing its own preferences. Although a small and relative young member of the EU, it has been firmly committed to European Integration since it became independent. Yet, since then it also has not been shy of pursuing its own preferences. And this came with success. The country had adopted a liberal economic approach. Against strict warning from the International Monetary Fund [IMF] it decided to introduce a currency board in 1992[1], which later turned out such a great success that the IMF advised other countries former part of the Soviet Union to do the same (Hendrick Lives, 2001). Another example is when the country was the first in recent times to introduce a flat tax rate in 1994 (Keen, Kim & Versano, 2006, p. 3). This decision from a pro-liberalization government paved the way for other countries. In the following 10 years other former Soviet Union countries followed[2].

Although these radical decisions can be regarded as successful, they were made by the national government when Estonia was not a member of the EU yet. Although in some policy areas the EU does not have binding supranational legislation, the EU still aims for harmonization. This means that national differences are accepted, but must not violate EU law (Kuldkepp, 2005, p. 51). After Estonia obtained membership, questions arose around potential loss of sovereignty to pursue national preferences and whether Estonia as a small state would be able to have a say within the EU (Tambur, 2017). In a recent example, Estonia is seen to pursue its national preferences on the issue of cryptocurrencies. In August 2017, the country introduced its plans to issue estcoin: called a crypto-token, but in its design is very similar to cryptocurrencies (Korjus, 2017a). Yet, these plans received a dismissive reaction from the EU level. The president of the European Central Bank [ECB], Mario Draghi, has voiced his concern about these plans: “The only currency within the EU is the Euro” (European Central Bank, 2017). This most recent example was a direct reason to further investigate the case of Estonia in relation to the topic of cryptocurrencies.

[1] A currency board is a monetary institution tasked with maintaining a fixed exchange rate to another currency (Williamson, 1995).
[2] Lithuania, Latvia, Russia, Ukraine, the Slovak Republic, Georgia & Romania (Keen, Kim & Versano, 2006, p. 6).

Small states are thought to face too many disadvantages to be able to upload their domestic interests. At the same time, they are more adaptable to change, and it could be argued that they might respond to innovation quicker that larger states (Katzenstein, 1985). So, what happens when a small state's adaptability to innovation is linked to its chances to influence the EU policy process? Do the disadvantages specific to small states make that impossible, or are there ways in which they can shape the EU policies in their preferred direction? Therefor central to the research was the following research question: **To what extent can Estonia upload domestic policy regarding cryptocurrencies to the EU level?** By answering this research question this thesis aims to contribute to the academic literature in two-fold. Most importantly, by contributing to the debate on the influence of Member States in the EU policy process by doing a case study. By linking the regulatory discussion on cryptocurrencies with the larger theoretical stake of how small Member States can influence the direction of EU policy making, this research has reviewed the opportunities but also the constraints for Estonia on the issue of cryptocurrencies. The research also contributes to the academic literature in providing a description and a comparison on the regulatory measures of Estonia and the EU. For the research, primary as well as secondary sources have been used for the analysis. As for now in academic literature no overview, no comparison, nor in-depth analyses are available on what regulations and perceptions of cryptocurrencies governments have in place. This research has provided a framework for comparison by linking the characteristics of cryptocurrencies to their possible risks and benefits.

The thesis is organized as follows. The first chapter is concerned with the theoretical framework that underlies the rest of the chapters. An introduction will be given on the innovation of cryptocurrencies, how they challenge the traditional system and how governments have responded to this. Subsequently, it is explained how the concept of Europeanization is understood in this thesis and how is will be used to understand the opportunities and limits to uploading domestic preferences. In relation to this are the counter-balancing strategies that are mentioned, which might be an option for Estonia as a small country in the EU. The second chapter is of descriptive nature and is used to describe the different ways in which the EU and Estonia have reacted to the innovation of cryptocurrencies and the risks they might entail. The third

chapter discusses in more detail whether Estonia's moves are or aren't in line with the EU on this issue. Also, the chances to upload its preferences are reviewed according to the strategies it has at its disposal, but also the limitations it faces. At the end of this thesis, the findings of this research are concluded and discussed, whereby also further research is proposed.

Chapter 1: Theoretical Framework

This first chapter is defined into four parts. The first introduces the innovation of cryptocurrencies. It is followed by a part which explains how they challenge the traditional system. In the third part an overview of the different positions that governments have taken in response to cryptocurrencies is given. In the final part the understanding of the concept of Europeanization in this research is explained. This concept will be used further in the thesis to understand the opportunities and limits to uploading domestic interests by small states.

On the innovation of cryptocurrencies

Money has seen many different forms in history. Besides changes in the form of money, also the production, circulation and use of money have changed. In recent years, cryptocurrencies emerged as a new way of exchanging money. Cryptocurrencies are a specific kind of digital currency: electronic money that serves as an alternative currency. They differ from 'normal' digital currencies because they are regulated with encryption techniques. Although now countless cryptocurrencies exist, the technology and the first cryptocurrency called Bitcoin were introduced in a white paper written under the pseudonym Satoshi Nakamoto. Nakamoto describes the Bitcoin as a "peer-to-peer electronic cash system" (Nakamoto, 2007, p. 1). That means that payments can be done online directly from one person or company to another without using an intermediary service as a bank. Bitcoin enables users to make secure and pseudonymous payments with a new virtual form of money: bitcoins. This development offers people a choice on using a currency that is not regulated by governments or a single company. Although many users value these benefits cryptocurrencies like Bitcoin offer, some people seem to be concerned with its development, because states normally have the prerogative to issue money (Schmidt et al., 2016, p. 48). Central banks now issue fiat money, that is currency in coins and banknotes that are no longer backed up by gold or another commodity but are made legal tender by government decree ('Fiat money' in Oxford English Dictionary). Questions arise on how government and international monetary organizations should react to these new financial technologies. Technological developments enforce governments to make sure that their existing policies are still adequate or otherwise develop new ones (Gilpin, 2001,

p. 135). Both in academia and policy practice, a debate has risen on how to regard and deal with cryptocurrencies.

As mentioned above, the first cryptocurrency that was made was the Bitcoin. It is used here to explain how cryptocurrencies work and how it is different from traditional ways of payment. It was specifically designed to offer an alternative, non-state-issued form of money. This form of money is known as cryptocurrency, because it uses cryptography to create, transfer and secure the money (Schlichter, 2014, p. 289). The system works through the internet, and although the idea behind digital money is not novel, it was the first to make central authority unnecessary. Namely, it had solved the 'double-spending' problem, which means that digital money cannot be copied as you could do with a digital file. Instead, all Bitcoin transactions are publicly accessible as they are recorded on a distributed, public and virtual ledger (which is called the blockchain): "A ledger is a technology of accounting, of keeping track of who owns what (…)" (MacDonald et al., 2016, p. 4). Transactions in Bitcoin take place directly between two addresses. The blockchain is then updated with the information that an X number of bitcoins changed from one address to another. Each address is unique and controlled by a private key and is not linked to any personal information, the latter is the case with a traditional bank account. This makes it a pseudonymous and decentral system. All the bitcoins in the system can be tracked, because of the blockchain technology. The blockchain is maintained through an open system of computers that work through the internet (See figure 1 for the differences between a centralized and a distributed network). Participating computers do not simply update the public ledger, but in order to do this, they have to solve cryptographic puzzles that become increasingly more difficult to solve. Successful solutions will be rewarded with new bitcoins and the ledger is updated with new transactions, which form the incentive to participate in upkeeping the system (Schlichter, 2014, p. 290). The integrity of the system relies on the peer-to-peer networking and cryptography (Grinberg, 2011, p. 160). Concluding, the innovation's key features were that it was designed as a medium of exchange without the need for a so-called third party and being able to trace all transactions publicly. Thus, the innovation challenges traditional (government) institutions in their position by being an alternative to fiat money.

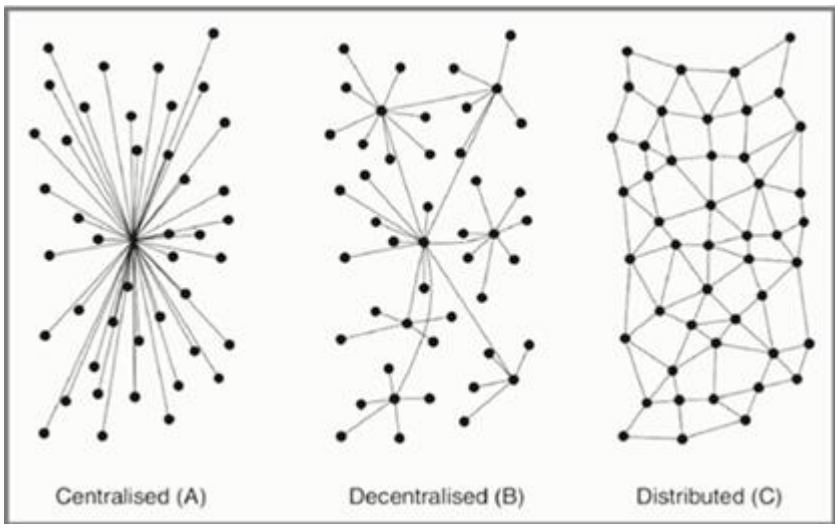

Figure 1: Differences between centralized, decentralized and distributed systems (Baran, 1964, p. 2).

Although cryptocurrencies might seem quite novel, they are not so young for an innovation: Bitcoin has been around for almost ten years now. In academic literature scholars have written about the topic, but the literature is still mainly focused on how we should perceive cryptocurrencies. An important aspect which causes a difference of opinion in academic literature, is the understanding of cryptocurrencies as a currency or rather as an asset. A clear understanding is still missing (Brito & Castillo, 2016, p. 67). While some scholars see them as a digital money (Brito & Castillo, 2016; Bjerg, 2016), others see it as an asset or speculative investment because if fails the criteria for a bona fide currency (Yermack, 2013). For example, cryptocurrencies can be used as a medium of exchange, but because of their fluctuating price levels they are not good to use as a store of value. They could be used both as money as well as an asset, but bitcoins are now more used as an asset because of the potential profit they offer investors with the high volatility of the market price (Tsuckerman, 2015, p. 1127). This makes it more interesting to invest in, but less trustworthy as a currency. However, besides using these different understandings to show the different ways cryptocurrencies can be used, in this research it is also used to help understand how governments react to them. So far there is no single definition used globally. Even though in academic literature roughly two ways are used to categorize cryptocurrency, either currency or asset, a third group can be seen in table 1 where

the terminology does not fall under either category. Data from Bitlegal[3] shows that there are even more terminologies used than just currency or asset. Among 71 countries, no less than 15 different definitions on cryptocurrencies have been used. Table 1 shows the variety of terminology on the nature of cryptocurrencies, whereby the variety implies the possibility for different legal understandings and regulation. For example, in Norway and Sweden Bitcoin has been seen as an asset, while in Kenya and Canada they are seen as Digital Currency (Bitlegal, 2018). Interestingly, half of the countries has not even decided yet or it is unknown what their definition of cryptocurrencies are. It can also be expected that countries might shift between definitions, because government officials might not exactly know how to perceive cryptocurrency. This overview shows that there is no single perception of, nor constant terminology being used for cryptocurrencies.

Table 1: Wildly ranging terminology used for cryptocurrencies (Bitlegal, 2018).

Variations within the category of asset	**Variations within the category of currency**	**Alternative understandings**
Asset	*Currency*	*Alternative Payment Method*
Commodities	*Digital Currency*	*Bartering Tool*
Investment Fund	*Electronic Currency*	*Negotiable Payment Instrument*
Virtual Commodities	*Scriptural Money*	*No currency*
	Virtual Currency	*Taxable Service*
		Undecided/Unknown

A challenge to the traditional system

Linked to these different perceptions of cryptocurrencies are the perceived (potential) benefits and risks. They can be used as arguments for political decisions. The benefits of cryptocurrencies explain why governments might be interested in adopting and reinventing the technology, while

[3] Accessed on 12 February 2018

the risks explain why it may be undesirable to let the free market thrive. All the same, it is expected and demanded from governments to respond to (financial) innovation. Specifically, to developments around cryptocurrencies, because citizens and businesses want to know whether they are trustworthy. Although a ban might not prevent people using them, it does make usage more unattractive (Hendrickson, Hogan & Luther, 2016, p. 931; Grinberg, 2011, p. 182). An adoption of cryptocurrency vice a versa. The benefits of Bitcoin's distributed nature are that transactions are secure through cryptography, that transaction costs are lower because of the lack of a third party, and the supply growth of currency is steady which prevents undesirable monetary expansions (Luther, 2016, p. 391; European Parliamentary Research Service, 2014, p. 1). Yet, Brito & Castillo warn that "the same qualities that make cryptocurrencies attractive as a payment system could also allow users to evade taxes, launder money, and trade illicit goods" (Brito & Castillo, 2016, p. 2). In the case of illegal usage, which might be inviting because of Bitcoin's pseudonymous character, the authorities have their hands tied trying to stop trade. The lack of central authority also means that there is no authority who decides on undesirable use of cryptocurrencies. Transfers cannot be reversed nor can accounts be frozen (Hendrickson, Hogan & Luther, 2016, p. 928). Also, because the lack of central control the worth of a cryptocurrency is decided by the market of supply and demand. This provides high volatility of the exchange rate and makes its value less stable than a government-issued currency.

Consequently, it would be expected from governments to have a negative stand towards cryptocurrencies, because they challenge the prerogative of the state to issue money through a central bank. Most academic literature has regarded the innovation of Bitcoin as a financial innovation. For example, Brito & Castillo (2016, p. 67) regard it as a neutral technology, but they have left out the specific goal of why Bitcoin was created. It was designed by Nakamoto in 2008 with the explicit goal to set up a financial system beyond the traditional financial institutions, as he did not trust them (Nakamoto, 2008). Because of their design cryptocurrencies challenges the main prerogative of the state: "(...) that of money issuance and regulation (…)" (De Filippi & Loveluck, 2016, p. 22). Although some national governments have already given up that prerogative when they enter a monetary union, cryptocurrencies still challenge the prerogative of the traditional issuer of fiat money. In the case of the EU, this is the ECB. The emergence of

cryptocurrency, with Bitcoin in the lead, has provided a public-private competition on the issuance of currency. In that sense cryptocurrencies are not a neutral innovation, but a disruptive innovation that challenges and competes with the role of government to control money (Davidson, De Filippi & Potts, 2016, p. 1; Grinberg, 2011, pp. 186-187). Yet, this challenge can be perceived in different ways. Not all might believe that this requires (the same) action by governments. Depending on the Political Economic paradigm a scholar or politician supports, this challenge by cryptocurrencies on governments would be viewed differently. As the paradigms differ in opinion about the level of interconnection between government and the economy, they differ in how much room they want to leave to the free market. These paradigms views also differ in how they perceive the characteristics of cryptocurrencies, either mostly as benefits or more as a threat to governments.

Libertarians would support the alternative monetary system, as they believe that state-backed financial institutions have been the root of all evil witnessed in the financial crisis of 2008 (De Filippi & Loveluck, 2016, p. 5). Bypassing the financial system would fit their dream of reducing control by the government. Cryptocurrencies could also be regarded as a neoliberal product, as it can be regarded as an offspring of Hayek's wish to end the monopoly of nation-states through their central banks on the production and distribution of money (Hayek, 1976). Neo-liberal economists believe that governments should not intervene in markets, unless in extreme cases, as markets are more efficient (Gilpin, 2001, p. 68). Some scholars have argued against any regulation of cryptocurrency (Kaplanov, 2012), for example: "No restriction, Bitcoin is like cash. (…) It can be used for good, it can also be used for ill" (Brito & Castillo, 2015, p. 67). Statist and heterodox perspectives on the other hand would not consider it all good. According to Schmidt et al. (2015, p. 48) the monopoly by states on money can be regarded as an expression of power. The heterodox scholar might want to stress the redistribution of this power, which comes with an end of central points of control on financial transactions. This would not necessarily mean the best for everyone. For example, some individuals might be excluded from paying taxes by using Bitcoin for payments, but others will then have to pay more to maintain the same level of taxes (De Filippi, 2014, p. 4). In contrast to the neo-liberal view, statists would argue that government regulation is necessary to overcome market failure and that the issuance

of currencies are the prerogative of the state. And in this case, the nature of the Bitcoin system prevents control by the government and could be regarded as a problem, or in the words of Krugman (2013): "Bitcoin is evil". A potential concern is that when cryptocurrencies usage will grow, the monetary authority will lose control of the total money supply (Hendrickson, Hogan & Luther, 2016, p. 930). A second concern is to prevent illegal transactions or money laundering. And a third justification for regulating Bitcoin is consumer protection. For some it is certain that governments will regulate cryptocurrencies like Bitcoin: "The idea that governments issue 'money' and declare what qualifies as 'legal tender' is an ancient notion. (..) it is not likely that governments will surrender their privileges to regulate cryptocurrency issuers, exchanges, administrators, or users" (Middlebrook & Hughes, 2014, p. 848). However, they conclude their article noting that it is of interest how governments (will) do this (Idem).

Table 2: The characteristics of cryptocurrencies and the according arguments for seeing them either as beneficial or risky.

Characteristics of cryptocurrencies	**Benefits**	**Risks**
Distributed, peer-to-peer system	Transactions costs lower, secure and quick.	No central authority.
Innovative	Double-spending problem is solved	No common definition; grey legal area
Pseudonymous	All transactions can be traced in the blockchain.	Can be used to evading of taxes, laundering of money, trade of illicit goods.
Supply growth limited, while value is decided by market	Prevention of undesirable monetary expansions.	High volatility of exchange rate & no central control on money supply.

Government positions

Just as scholars dispute on how we should respond to cryptocurrencies, it appears that countries also have different views on how they should react to cryptocurrencies. In particular on whether specific policy should be made to address them. Research by Hendrickson, Hogan & Luther (2016) mentions that governments react in different ways. It is hard to subdivide all countries in only a few categories, because countries have widely ranging reactions. Still, three themes recur which are here called the awaiting, the regulating and the reinventive positions. To which group each

country belongs may change over time due to politics and are not thought to be completely fixed. For example, it can be expected that more countries now taking the awaiting position will ultimately decide, and thus will change position. The group taking this awaiting position is now the largest. Still, most countries have not made it clear how they regard cryptocurrencies. They have not stated how they view cryptocurrencies (as an asset, currency, or something else), nor is there specific regulation in place for cryptocurrencies (Bitlegal, 2018). Reasons for this can be the lack of knowledge on cryptocurrencies or that they do not (yet) form a big enough problem for the government to respond to. With the regulating position is meant that governments have restricted the use of cryptocurrencies. The level of regulation can differ. The use of cryptocurrencies as a currency could be banned, but also the mining activity could face strict regulation. It is known that Bitcoin has been banned in a few countries[4], but it differs among those countries how far the ban reaches (Swan, 2015, pp. 6-7; Luther & White, 2016, p. 4). At the moment[5] Ecuador has the most far reaching policy in place, where buying, transacting and mining cryptocurrencies are prohibited (Bitlegal, 2018). Whereas for example Iceland had a law restricting cross-border capital movements, which also applied to cryptocurrencies, but has been lifted again since 2017. No single country has clearly banned owning cryptocurrencies, so its function as an asset does not seem to be a big threat to governments. Rather, using it as a currency might be seen as a problem. A possible reason to the relatively small group of countries that have banned cryptocurrency, is that concerns have been made vocal about the ability and the need for governments to ban cryptocurrencies. The distributed networks make it hard to regulate and check whether regulation is being followed. The opposite reaction is that of the reinventive position. An important development is that some governments are now researching and planning to issue their own cryptocurrency: government-issued cryptocurrencies. By doing this they will have reinvented the initial technology to suit their own wishes. In the words of Rogers in his piece on the diffusion of innovation: “Reinvention represents changes in an innovation that are made by its adopters in order to fit the technology to their specific conditions” (Rogers, 1983, p. 146). This will mean that a central point of control will be back in

[4] E.g. Bangladesh, Bolivia, Ecuador, Iceland, Kyrgyzstan & Vietnam have banned Bitcoin in 2013.
[5] Spring 2018

place. Yet, it uses the benefits of openness (within the system) and the speed of the blockchain. Several countries have been looking into this possibility. For example, Russia has been planning to issue CryptoRuble (Partz, 2018).

Aside from what policies regarding cryptocurrencies should be set in place, the next question is on what level decision-making should take place. One of the core themes in political economy regards this question, namely the clash between "increasing interdependence of the international economy and the desire of individual states to maintain their [economic] independence and political autonomy" (Gilpin, 2001, p. 80). As we have seen earlier, so many different views exist regarding cryptocurrencies, which could make it hard to agree on how to perceive them and how to act upon them. At the same time, the cryptocurrencies designed in the free market know no borders. The cryptocurrency developments are not isolated to a single country but can be experienced globally. In this way it could be argued that supranational or even global agreement would be the best way forward. Yet, cryptocurrencies are not merely a technological innovation, but also a political statement. Depending on the political climate in a country, a country might want to have the freedom to choose for itself how far they want to control cryptocurrencies. Monetary Unions faces a specific situation, because they have decided to collectively use the same currency. The prerogative of the national government to issue money has been given up to a higher level of decision-making. And with that they do not have the same level of control on currency as countries that have their own national currency. Unions face challenges regarding the need of coordination among the members, compromising solutions, and the time it takes before the decision-making process is over and the policies have been implemented in Member States. At the same time Member States of these unions have their own preferences, specific to their economy and political views. Membership might limit the room to act autonomously, which might be a problem when a country has a specific opinion (either in favor or against) on issues. The country central in this research, Estonia, is part of both the European Union as well as its Monetary Union called the eurozone. Decisions about cryptocurrencies thus likely will need to be coordinated, but this could cause friction with Member States. Estonia's case, as a part of these unions, is interesting as it already seems to have specific ideas about cryptocurrencies. This research is concerned with how Member States'

preferences can be incorporated into larger policy, or in other words how they can influence the direction of EU policy making. For this purpose, the concept of Europeanization will be used. In the next part this concept is discussed, and it is explained how it can be used to frame the discussion about the different attitudes of the EU and Estonia on cryptocurrencies.

Influencing the policy-making process in the EU

To understand how Estonia can influence EU policy making, it is necessary to understand in which ways they will be able to do that and how they might be restricted. As a small state and a relatively new member of the EU, Estonia faces specific conditions in which they must operate. Academic literature has specified that it is harder for smaller states to influence decision-making on the EU level, but there are some indications that even though it is harder, small states can use several strategies to have an impact. With 28 Member States the EU must deal with many different situations and preferences at the domestic level. Academics therefore have been interested in how decision-making takes place, dealing with so many different views, and which strategies are used. The concept of Europeanization can be used as a framework to look at the interplay between Member States and the EU on policy. Firstly, it is necessary to make clear what the understanding of the concept is here, as Radaelli (2000, p. 1) warned for the risk of conceptual stretching. As a concept it has been used in multiple ways, which can lead to confusion and misinterpretation. Olsen (2002, pp. 923-924) distinguishes no less than five possible ways to use the concept, e.g. it can be used to describe changes in external boundaries, but also to focus on the development of centralized institutions on the EU level. For which specific subject the concept will be used for, thus heavily influences the meaning of Europeanization. This ambiguity might result in resistance to use it. Yet, Olsen (2002, pp. 943) concluded that the different definitions do not have to form an obstacle, if they are acknowledged, treated separately and their specific understanding of the concept for research purposes is clarified. In this research the concept will be used to frame the discussion about the different attitudes of the EU and Estonia towards cryptocurrencies. The understanding of Börzel (2002) of Europeanization works as a stepping stone for this purpose. This understanding is concerned with the process of EU policy making and can be used as an approach to understand how Member States both influence and are being influenced in the European Union. Whereas previously researchers were interested in

either the bottom-up perspective, where Member States influence the institution-building process in the European Union, or the top down perspective, where the impact of European decision-making on Member States was central, this understanding looks at both (Börzel & Risse, 2000, p. 1). Börzel (2002) specifies that Europeanization is not a single direction project, but rather a two-level process. Europeanization consists both of bottom-up forces from the national level to the EU level, as well as top-down forces from the EU down to the national level.

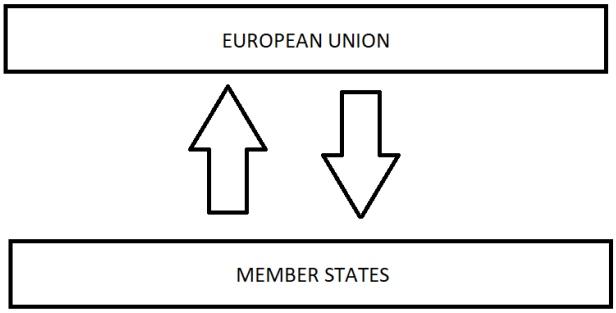

Figure 2: The concept of Europeanization as a two-level process visualized[6].

Three ideas are central to understanding this two-level process. Firstly, a misfit between EU and domestic norms, rules and practices need to exist. The Member States will then face potential adaptational pressures. The misfit, also called the 'goodness of fit' by Risse, Cowles and Caporaso (2001, p. 6), determines the pressure to adjust. The bigger the difference, the higher the pressure for Member States to adapt. If no misfit would exist, it would be easy for Member States to download EU policy without a problem. As the national policies and institutions would have been a fit with those on the EU level (Börzell & Risse, 2000, p. 4). The second idea is that in a reaction to (potential) adaptational pressures it is more beneficial for Member States to upload their norms, rules and practices to the EU level. The alternative of having to download is costlier as the policies and institutions at the national level would have to be adjusted to comply with the EU legislation. Therefore, they would prefer uploading to downloading (Börzel, 2002, p. 193). The third underlying idea is that not all Member States agree with each other. In other word: there is no unanimous point of view. These three things put together mean that regulatory competition

[6] Note: The upward facing arrow represents uploading domestic norms, rules and practices, and the downward facing arrow represents downloading them.

to upload their domestic norms, rules and practices to the EU level exists between Member States (Héritier et al., 1996, p. 21).

Within such regulatory competition the question arises which Member States get to upload their policy to the EU level, and how they manage to do so. Who are the leaders and who are the laggards in this competition? Börzel (2002) argues that Member States not only differ in their views, but also in their capacities to influence policy making. It has been argued that smaller states within the EU have a harder time to influence the decision-making process in the EU directly (Börzel 2000; Panke, 2010; Thorhallsson, 2006). There has been discussion on how the adjective 'small' in this context should be understood, which has resulted in different understandings of the concept of a 'small state'. The smaller number of representatives, and thus less votes that count in voting for or against legislation, could be seen as a disadvantage (Archer & Nugent, 2006; Panke, 2010). Three other traditional variables are population numbers, territory size and military capacity (Thorhallsson, 2006, p. 7). In her piece on Europeanization Börzel's categorization on different strategies could also be seen as distinguishing between bigger and smaller states. She argues in her piece on Europeanization that the main factor resulting in difference in the capacity to influence the policy process is the level of economic development of the countries (Börzel, 2002, pp. 196-197). The level of economic development here described both as level of industrialization as well as GDP per capita (Idem, pp. 208), influences not only the capacity as in money, expertise, number of staff, etc., but also the degree to which regulation is already developed and in place on the national level. Industrial latecomers would lack both aspects, in contrast to the highly industrialized countries in the EU. The different capacity levels result in different strategies that Member States can use. Börzel (2002) categorized them into three strategies (see table 3), whereby it can differ according to the policy topic which strategy is being used. The first is the strategy of pace-setting. Hereby governments are actively pushing to get policy on the EU level according to their domestic interests (Idem, p. 197). They are able to do so, because of their resources and it is assumed they already have policy in place which they would want to upload to the EU level. The strategy of foot-dragging is completely the opposite: instead of uploading, Member States want to block or delay policies as they are perceived to be negative for their own national interests (Idem, pp. 204-205). Their

lower capacity and/or lack of 'ready-to-be-uploaded' policies make uploading harder for them: "Latecomers are policy-takers rather than policy-makers" (Börzel, 2002, p. 205). So, stopping to download policy is a way to deal with adaptational pressures. The final strategy is fence-sitting. This strategy can be used for a more neutral standpoint. By taking on this strategy Member States are not actively uploading or blocking policy, but rather focused on building tactical coalitions. Reasons to use this strategy is that Member States do not have strong interests in a matter, (n)or the capacity (Idem, pp. 206-207).

Table 3: Strategies for Member States to influence policy making (Börzel, 2002).

	Pace-setting	***Foot-dragging***	***Fence-Sitting***
Strategy	Actively pushing and uploading policies.	Blocking or delaying costly policies.	Building tactical coalitions.
Level of economic development	Highly industrialized countries. [High GDP]	Lower industrialized countries [Low GDP]	Level can differ.

The country central in this thesis, Estonia, can be regarded as a small country. Although the country's economy has developed, within the EU it has one of the smallest GDPs. It is ranked 25th out of 28 Member States, with a GDP (current US$) in 2017 of 25,921 US dollar (The World Bank, 2017a). Also, in other regards Estonia is small: it has the fourth smallest population in the EU by having 1,3 million citizens, and the country only has four votes in the Council of the European Union (The World Bank, 2017b; General Secretariat of the Council, 2016). Based on Börzel's framework, it could be concluded that Estonia's influence would be limited to the foot-dragging strategy. This means that as a latecomer it would be expected that Estonia would not have the capacity to influence EU policy. The characteristics of being a small country would restrict the Estonian government to blocking or delaying costly policies. At the same time small states are regarded as being more adaptable to change (Katzenstein, 1985). Cryptocurrencies have caused change through financial innovation, on which governments are expected to respond to. Small states are thus more likely to respond to this innovation quicker. In this sense it would be not inconceivable for small states to influence policies at the EU level. More recent literature claims that small states like Estonia do have ways to upload their interests. Although it is not denied that small states might be disadvantaged due to their size, they can still use other compensating

strategies at their disposal. Panke (2010) introduces counter-balancing strategies for small Member States. They are not limited to only blocking or delaying policies, but rather offer a wider view of the options small states must upload their preferences to the EU level. For the case of Estonia this means that there would be possible ways in which disadvantages are compensated and the domestic preferences could be uploaded to the EU level. In its approach, this research uses the top-down and bottom-up approach on Europeanization as described by Börzel (2002) supplemented by this alternative view on the strategies of small states as described by Panke (2010) to look at both the restrictions as well as the opportunities for Estonia to upload its preferences on cryptocurrencies to the EU level.

Concluding

This chapter has described how cryptocurrencies challenge the traditional system and has stated that the different understandings of cryptocurrencies is a reason why states have different positions towards them. The characteristics of the innovation bring forth both potential risks and benefits. Governments adopt different positions in their response to them. As a small member of the European Union, Estonia is thought to face too many disadvantages to be able to influence the policy process. Yet, Estonia seems to have specific ideas about cryptocurrencies. Keeping in mind the constraints of having to download policy from the EU level, but also by looking at the possible strategies Estonia does have at its disposable, this research is concerned with 'To what extent Estonia can upload domestic policy regarding cryptocurrencies to the EU level'. This research will take both the restrictive top-down as well as uploading forces into account when looking at the case of Estonia's preferences on cryptocurrencies. As has been established that uploading is more preferable than downloading to Member States, and that there is no unanimous point of view on cryptocurrencies among governments, the next step is to examine whether a misfit between the EU and Estonia on cryptocurrencies exists. For this purpose, in the next chapter the different positions by the EU and Estonia are described. How do they compare to each other?

Chapter 2: The different responses by the EU & Estonia

This chapter describes the different ways in which the EU and Estonia have responded to the innovation of cryptocurrencies. Their characteristics can be perceived as risks as well as benefits. The responses by both the EU and Estonia to these characteristics are of importance to the research, because they can give answer to the question whether a misfit exists. This is perceived to be a condition for the wish of a Member State to upload their preferences or actual policy to the EU level. To be able to conclude on the possibilities and restrictions Estonia faces in this two-level process of Europeanization, it is first necessary to understand what the national preferences are and how they differ from those of the EU. The chapter starts with a description of the EU position, which is followed by that of Estonia.

EU responses to cryptocurrencies

It is clear that the EU has lacked a common approach on how to deal with cryptocurrencies. On the EU level, response to the development of cryptocurrencies has been slow. In table 2 in the previous chapter four risks concerning cryptocurrencies were highlighted. From those, the EU has mainly acted upon the risk of evading tax, laundering money and trading illicit goods. Still, it took a few years to come to a common standpoint. On December 20 2017, an effort has been made to issue stricter regulation that prevents cryptocurrencies from being used for money laundering and financing terrorism. On that day, the 5th anti-money laundering directive was agreed upon, which means that the rules are now extending to virtual currencies[7] and related services:

> The rules will now apply to entities which provide services that are in charge of holding, storing and transferring virtual currencies, to persons who provide similar kinds of services to those provided by auditors, external accountants and tax advisors which are already subject to the 4th Anti-Money Laundering directive and to persons trading in works of art. These new actors will have to identify their customers and report any suspicious activity to the Financial Intelligence Units. (Jourová, 15 December 2017)

[7] A different term used for cryptocurrencies. See table 1 in the previous chapter.

Another risk included in table 2, the risk of the lack of central control on the money supply, is not seen as a big problem yet. The ECB does not think that it has to act upon it (European Central Bank, 2015, p. 26). The number of cryptocurrencies used do not (yet) have a big impact on the total money supply. Yet, central authorities are concerned with the high volatility of the exchange rate for consumers' sake. Cryptocurrencies are understood as having a price instability, a lack of security and lacking the backing of banking authorities. The ECB will continue to monitor the developments regarding the innovation and will keep track of potential increased levels of risks but has not yet seen the need to propose any monetary policy regarding cryptocurrencies (Europaen Central Bank, 2014, p. 5). The European Banking Authority has issued a warning about these risks, in particular to EU citizens that might lose money because of this (European Parliamentary Research Service, 2014, p. 7). Specifically, because the value of cryptocurrency can drop dramatically from one day to the next. This standpoint has also been expressed by several banking authorities in Member States. For example, the Autoriteit Financiële Markten (2017), the Dutch supervisor on financial markets, has warned consumers for the same risks.

A third risk the EU has touched upon is that of the definition of cryptocurrency: is it a currency, an asset, or something else? The ECB states that it does not regard them as a currency. The reasons for that are that they are not issued by a central public authority, nor are they generally accepted, users are not protected, and they are prone to volatility (European Central Bank, 2018). Member States also do not see cryptocurrencies as equal to the euro, as none have regarded cryptocurrencies as legal tender (Bitlegal, 2018). A big question is still left unanswered: What should they be seen as? There is no commonly accepted definition. The ECB has called Bitcoin speculative assets (European Central Bank, 2018). But individual Member States have also made different attempts to define it. For example, while in Germany Bitcoin and other cryptocurrencies have been seen as private money (a specific kind of asset), in Spain using cryptocurrencies is seen as a way of barter, and in the Norway the cryptocurrencies are seen as assets (Global Legal Research Directorate Staff, 2014; Bitlegal, 2018). Recently, Germany & France (Le Maire et al., 2018) have used the term 'crypto tokens' and the G20 used 'crypto assets' (G20 Finance Ministers & Central Bank Governors, 2018, p. 1). This big point of ambiguity is also reflected in the attempts for regulation. The 2012 report by the ECB states that cryptocurrencies

fall outside both the Electronic Money Directive, as well as the Payment Services Directive (European Central Bank, 2012, p. 43). This has left cryptocurrencies in a grey jurisdictional area on the EU level. Which could become a challenge (Idem, 2012, p. 47). Apart from the 5th anti-money laundering directive, there has been a lot of room for the Member States to decide on their own how to perceive and act upon cryptocurrencies. They have not only got widely differing views on how to regard cryptocurrencies, but also on how to deal with them. In 2014, researchers working for library of the US Congress (Global Legal Research Directorate Staff, 2014) issued a report on the regulation of Bitcoin in 40 different jurisdictions, including different Member States as well as the EU itself, in which these different views were reflected. The same was concluded in a briefing of the European Parliamentary Research Service in 2014, namely that there were a "multitude of approaches at member state level" (European Parliamentary Research Service, 2014, p.7).

The question is whether the situation needs to be changed. Is there a need for the EU to act more united on this topic? Is there a role for the ECB or the EU commission to act as a central authority on cryptocurrencies to mediate risks? That not much has been decided yet, does not mean that there is no demand for more clarity and and unity on this. The lack of a supranational policy on the EU level can be partially explained by the characteristics of the disruptive innovation. It demands time for research, evaluation and discussion to be conducted by banks, governments and other institutions. Within the EU it is up to the Commission if regulatory action at the EU level is required. For now, their efforts are focused on the assessment of the extent to which existing regulation covers cryptocurrencies, or whether specific regulation should be in place (European Commission, 2018). Among Member States, Germany & France are clearly looking for some clarity in this matter. Yet, they are looking at the international level to see what needs to be done. Before EU legislation is made, it seems that (at least a few) Member States first want to wait for a consensus on regulation on an even bigger scale. Wuermling, a member of the Bundesbank in Germany, said that "national rules may struggle to contain a global phenomenon" (Reuters, 2018). France and Germany have thus been looking towards the G20 meeting in March 2018 to discuss cryptocurrencies to gauge opinions outside of the EU. They send a joint letter to the G20 members to put cryptocurrencies on the agenda of the meeting,

and invited Finance Ministers and Central Bank Governors for this meeting (Le Maire et al., 07 February 2018). In the letter, four specific challenges are highlighted: the lack of a common understanding, the potential threat that for financial stability and market integrity, the need for protection for consumers, and the need for a common approach in the field of anti-money laundering and counter-terrorism financing (Ibidem). As for now, the EU responses have been on assessing and mitigating risks. Instead of focusing on the potential risks that cryptocurrencies bring forward, the EU could also look at the potential benefits (also included in table 2 in the previous chapter). Dombrovkis, the current European Commission Vice-President for the Euro and Social Dialogue, has stated during a Roundtable on Cryptocurrencies that "blockchain technology must be embraced by Europe to remain competitive" (European Commission, 2018). This indicates that the EU might be interested in taking the reinventive position someday. The EU could investigate reinventing cryptocurrencies. It would be very interesting to see how they would change the innovation to fit the interests of the European Union. However, the EU is not there yet. As for now, the position of the EU can better be described as slowly transitioning from the awaiting to the regulating position. It still seems far away from the reinventive position, as they hardly have any idea on how to deal with the cryptocurrencies issued on the market.

The Estonian approach and its digital ambitions

The Estonian government has taken some efforts to mitigate the risks that cryptocurrencies might pose. As far as the risk of dealing with a grey legal area and the lack of a clear definition of the new innovation, the Estonian government has not banned any cryptocurrency. They view them as an alternative payment method (Estonian Financial Supervision Authority, n.d.). But although they might be used to pay for something, they are not seen as an alternative form of currency. Madis Müller (Eesti Pank, 2018a), Deputy Governor of the Eesti Pank[8], agrees with the ECB that cryptocurrencies are not the same as fiat currencies. Although they are not banned, some regulations are in place. As was mentioned in the previous part, the anti-money laundering directive was adopted in December 2017. And as a member of the EU, this directive also applies to Estonia. The risk of tax evasion, money laundering and trade of illicit goods hopefully is mitigated through this directive. However, even before this directive was in place, Estonia had

[8] The Eesti Pank is the Estonian Central Bank.

legislation in place that also applied to cryptocurrencies and could be used to mitigate the same risk (Bitlegal, 2018). In July 2015 all businesses that need to pay tax are obliged to submit transaction information to the Estonian tax authority when the transaction is above the value of a 1000 euros (Estonian Tax and Customs Board, 2015). This way the Estonian government can prevent tax evasion. They would not only be able to track when huge amounts of transactions would be done with cryptocurrencies, but also who are involved in the transaction when the transactions take place with a registered company in Estonia. The Estonian government does not seem to have specific regulation as a response to the risk of volatile exchange rate of cryptocurrency, and the potential lack of control on the money supply. In an interview for the website of the Eesti Pank, Ardo Hansson[9] (Eesti Pank, 2018b), made a comparison between the fluctuating prices levels of cryptocurrencies and the tulip mania in the 17th century. Yet, he does not see this as a problem that needs to be solved by the Central Banks yet:

> (...) I currently do not regard that [fluctuating exchange rates of cryptocurrencies] as a risk to financial stability. The volumes are too low. If they rise sharply and loans are raised in a big way to massively buy such assets, then it could be a danger. Currently, however, it is a problem for investors and consumers. Some people will probably make a lot of money. But many people will probably lose a lot of money too. (Eesti Pank, 2018b)

Rather than being focused on the risks, the Estonian Government is looking at the benefits that the cryptocurrencies might offer them by reinventing them. To go into that in more detail, it is necessary to know how Estonia became a forerunner in digital government services.

Within the EU, Estonia is a relatively young and small member. It became a member of the EU in 2004 and in 2011 part of the eurozone (Tambur, 2017). As a former part of the Soviet Union, it was not until 1991 that Estonia regained its independence (Kotka et al., 2015, p. 2). In their transition from a state-regulated economy to a market-oriented economy some unorthodox quick decisions were to be made. Knöbl, Sutt & Zavoico (2002, p. 21) called it a “fierce determination to achieve a rapid political and economic break with its Soviet Past”, and Vahur Kraft, a previous governor of the Eesti Pank, called the main idea of the Estonian Government in

[9] Hansson is the current Governor of the Eesti Pank, and also a member of the Governing Council of the ECB.

the 90s “to break the shackles of Soviet command economy and quick, non-standard solutions were necessary for that” (Kraft, 2000, p. 1). Since then the Estonian economy has continuously been evolving and growing and is seen as a success story. An example of the non-standard approach was that the Estonian government early on during the transition to a market-oriented economy introduced a national strategy to have an ambitious digital infrastructure, which would serve as a base for its transition (Kotka et al., 2015, p. 2). Even before accessing the EU the digital strategy was in place, and because of this foundation the technological innovation could thrive early on. Estonia has had a clear vision for years now, and it happens to work in their advantage considering these new developments of cryptocurrencies. So not only did the national strategy result in economic development for Estonia to catch up with other countries, it has also worked out in their benefit as they are a global leader in e-government. By taking baby steps, one at a time, they have improved their digital services to their citizens. Kotka et al. (2015, p. 3): “The Estonian e-government enterprise focused on improving services that appeared most directly useful to society and citizens”. In comparison with the other EU Member States, Estonia has this benefit that makes it easier to decide on these (financial) technological developments. It already developed a legal and policy environment for digital databases and e-government twenty years ago (Kotka et al., 2015, p. 2). This is not the case with many other EU Member States, which probably makes it harder for them to welcome these new technologies.

Over the years, the government services that could be received in a digital manner increased and Estonia’s digital ambitions grew simultaneously. In its digital agenda it is stated that “with its e-services, Estonia has become as re-known in the world as Switzerland is in the field of banking” (Estonian Ministry of Economic Affairs and Communications, 2013, p. 16). An example of digital services the government offers its citizens is e-voting (Estonian Ministry of Economic Affairs and Communications, 2013, p. 7). The development of these digital services led to an ambitious digital project launched in 2014: e-Residency. The project entailed that anyone from anywhere in the world could apply for a digital citizenship in Estonia (Kotka et al., 2015, p. 1). With obtaining e-Residency, e-residents receive an eID, which is an electronic identification device. With this you get access to similar e-government services for Estonians: you can encrypt documents, sign & authenticate documents digitally, but you can also start a company in Estonia

(E-Residency, n.d.). The latter was also the key objective for this project: to increase the number of companies started in Estonia (Korjus, 2017a). The hope is that this will attract foreign capital to Estonia. The goal is to have ten million digital citizens signed-up, which is a gigantic number in comparison to the current number of Estonians[10]. Kotka et al. (2015, p. 3) mention that e-Residency is not the same as having Estonian citizenship. To be able to enter the country, a valid passport (and visa) is still necessary. Still e-Residency provides access to the Estonian and European market.

Within the context of these digital ambitions Estonia wishes to take their e-governance services even a step further. The digital climate already in place made it possible for the Estonian Government to investigate reinventing cryptocurrencies according to their interests. The idea of Estonia issuing estcoins was introduced in 2017 to the world. Although they are still plans, if the idea would become reality Estonia would be the first country to issue a cryptocurrency through Initial Coin Offering (Korjus, 2017a). The system of Initial Coin Offering enables companies, and in this case a government, to crowdfund the finances for a specific product, services or the start of company altogether (Idem). Somewhat similar as companies giving up shares. The idea of issuing estcoin in short is to offer the cryptocurrency (at least) to e-residents partaking in the Estonian e-Residency. Although estcoin would not necessarily solve an existing problem, the idea would be to experiment with what it all potentially could be used for (Korjus 2017b). For a start, e-citizens could pay for services with estcoins. What is controversial about this plan is that Estonia is a member of the eurozone and has the euro as its legal tender. Introducing a new currency would cause conflict. ECB President Mario Draghi voiced his concern about these plans with: “The only currency within the EU is the Euro” (European Central Bank, 2017). Kasper Korjus, managing director of the e-Residency program, responded to this that there are no plans to replace the euro as Estonia’s only currency. Rather he mentioned that the estcoin should be seen as a ‘crypto token’ (Korjus, 2017b). Yet, in the article in which the ideas around estcoin were presented to the world, Korjus also stated that “in time, estcoins could also be accepted as payment for both public and private services and eventually function as a viable currency used globally” (Korjus, 2017a). In this way the estcoin would not only be used to crowdfund, but also as alternative

[10] Around 1,3 million citizens (The World Bank, 2017b).

currency. Changing the definition to 'crypto token' does not really change anything about the nature in which it is *used*. It seems to be deliberate intention to avoid the word currency to calm down the initially negative response to the initiative.

Concluding

In this chapter the aim was to describe the different preferences and positions of the EU and Estonia. It can be concluded that EU and Estonia differ in their positions regarding cryptocurrencies. The main difference is that while Estonia is clearly trying to reinvent technological innovation, the EU has been slow in taking regulatory measures. The descriptions of those two different positions will be used in the next chapter as a stepping stone to compare them. Are Estonia's moves in line with the EU or is there a misfit? What strategies does it has at its disposal to influence, but also which restrictions does it face in the policy process?

Chapter 3: Restrictions and opportunities in the two-level process of Europeanization

The two-level process of Europeanization consists of top-down as well as bottom-up elements. Member States will need to download policy and norms from the EU level, but they can also upload domestic policies, interests and norms to the EU level. When a (potential) misfit between the EU and Member States' interests exists, the latter are incited to upload instead of download. In this chapter, the differences between the EU and Estonia's ideas and politics on cryptocurrencies, as were described in the previous chapter, will first be investigated. Is there a misfit to be concluded? Subsequently, Estonia's disadvantages and possibilities to influence the policy process will be reviewed as well. What elements might qualify for uploading? Does the country lack any influence mechanisms? And if so, what counter-balancing strategies can it use to be able to upload its interests on cryptocurrencies?

Is there a misfit?

Looking at the responses to the potential risks of cryptocurrencies by the EU and Estonia, they seem quite alike. Still there are some differences to be discussed. On three risks the EU and the Estonian Government seem to have similar ideas. The ECB as well as the Eesti Pank have concluded that the potential risk of a lack of central control on the money supply is not a current urging issue at the moment. As was stated by Hansson of the Eesti Pank: "The volumes are too low" (Eesti Pank, 2018). Unless a huge increase in the usage of cryptocurrencies will occur, both central banks will stick to monitoring the situation, but will not insist in any regulatory action. Both also acknowledge that the potential risk of high volatility of the exchange rate might result in losses for consumers who use or invest in cryptocurrencies. Although the European Banking Authority has issued an explicit warning targeted at European citizens about this, there are no signs that the Estonian Government has done the same. On the risk of the lack of a common definition of cryptocurrency, which is interwoven with the risk of the grey legal area, the official responses are aligned: cryptocurrencies are not a currency, as in that they should not be seen the same as the fiat currency: the Euro. Yet, Estonia has given an answer to the question to how cryptocurrencies should be perceived: they are regarded as an alternative payment method.

However, the EU has not taken a collective standpoint, which weakens the possibility to harmonize the Member States. For the risk of cryptocurrencies being used to evade taxes, launder money or trade illicit goods Estonia has had legislation in place since July 2015, which also applied to cryptocurrencies. Since December 2017 the EU finally managed to agree on regulatory action to address this risk, by including cryptocurrencies in the 5th anti-money laundering directive. The difference was that the Estonian Government previously did not make it obligatory for businesses to report any suspicious activity, but rather was focused on the collection of taxes (Jourová 2017; Estonian Tax and Customs Board 2015). However, since the 5th directive has been operative, the obligation to report any suspicious activities also applies to businesses and actors in Estonia.

Table 4: The responses to potential risks of cryptocurrencies by the EU and Estonia compared.

Potential risks of cryptocurrencies	EU response	Estonian response	A misfit?
No central authority.	No response yet.	Idea to reinvent cryptocurrencies with estCoin.	**Yes**
No common definition; grey legal area	No currency, but not clear what the definition then should be.	No currency, but alternative payment method.	No
Can be used to evading of taxes, laundering of money, trade of illicit goods.	5th anti-money laundering directive since December 2017.	Obligatory transaction information for transactions over 1000 euros since July 2015.	No
High volatility of exchange rate & no central control on money supply.	Warning to consumers; no threat yet to money supply.	Agreement that investors and consumers face risk, but no further actions has been made; not a risk to financial stability.	No

A risk on which the responses differ is the risk of the lack of central authority. Because the EU has a hard time deciding on how to perceive cryptocurrencies, no actions can be analyzed that might be seen as direct response to the threat of a lack of central authority. For now, the efforts of the European Commission are focused on the assessment of the extent to which existing regulation covers cryptocurrencies, or whether more specific regulation should be in place (European

Commission, 2018). As was described in the previous chapter, France & Germany have been looking at the G20 group to form a common definition and a common approach. In contrast to this is the Estonian approach, which is more focused on reinventing the innovation of cryptocurrencies for domestic interests than on issues concerning regulation of market-issued cryptocurrencies. By taking control over the design of a government-issued cryptocurrency, the central authority by the government is brought back. It is of more interest to Estonia to look at the benefits reinvention might bring, especially in the context of its known digital ambitions. This attitude has caused a tension between Estonia and the EU. In the exploration for the possibilities of reinvention, the plans for estcoin have touched upon the prerogative of the ECB to issue the euro and manage monetary policy. Although the EU has thus far not come up with a good way of dealing with the lack of central authority, it still wants policies in Member States to be harmonized. This means that although national differences are accepted, they must not violate EU law (Kuldkepp, 2005, p. 51). The potential use of estcoin as a currency could be seen as a threat to EU harmonization and the prerogative of the ECB to administer monetary policy in the EU.

The constraints and possibilities for successful uploading

As a misfit can be observed between the EU and the Estonian response to the risk of the lack of central authority, the next part of this chapter will be focused on how Estonia could potentially upload their ideas to the EU level. As was mentioned in chapter one, a central element to the understanding of Europeanization as a two-level process is the idea that uploading is more beneficial than downloading for Member States (Börzel, 2002, p. 193). Yet, a constraint exists when looking at the possibilities for Estonia to upload their idea of estcoin. What does not work in Estonia's favor is the fact that the ideas on estcoin are still in the planning stage. There is no clear national policy in place yet. This makes it hard to imagine what successful uploading of reinvention of cryptocurrencies to the EU level would entail. Yet, there are indications that show which elements of the plans on estcoin have a good or bad chance for uploading. Estonia's membership to the eurozone is a clear example of the downloading aspect of Europeanization. As a member, Estonia needs to adhere to the corresponding rules. These adaptational pressures restrict the way in which Estonia can innovate on their government-issued cryptocurrency and what aspects of their reinvention might be uploaded. The 'currency aspects' of the plans on

estcoin have been heavily scrutinized, which makes the chance to be able to upload these aspects very small. This does not mean that Estonia's efforts to reinvent are good-for-nothing for the EU. Although Estonia and the EU differ in their ability to reinvent and quickly react to the innovation of cryptocurrencies, this also provides Estonia with an opportunity to upload best practices. There are indications that the EU is convinced that the underlying technology of cryptocurrencies, the blockchain, is of great value and in the (near) future should be used to the benefits of the EU and its citizens[11]. Estonia will be able to share best practices of how blockchain technology can serve e-government services. The expertise that Estonia has will be welcome to help the EU to reinvent the innovation of cryptocurrencies to their future preferences. Therefore, the best chance for Estonia to upload is by sharing their best practices on how the blockchain technology can serve e-government serves. The purpose of estcoin is now designed to the demands of the Estonian digital society, and in specific to its functionality within e-Residency[12]. The best way forward would be for Estonia to present their innovative ideas and related products for estcoin in a way that it favors the common interests of the EU as whole (Arter, 2000, p. 679).

But what chances does Estonia have with competing ideas from other Member States? In academic literature small states like Estonia are thought to face disadvantages in comparison to larger Member States. The theory by Börzel (2002) would imply that Estonia would not be regarded as a pace-setting country. The country has a relatively low GDP per capita (The World Bank, 2017a), and thus Estonia would be perceived as lacking national policies, but also the capacity to upload if a policy did exist on the national level. Although it has just been concluded that national existing policies are non-existent at the moment, this probably is due to timing. The plans are still being explored and discussed, but Estonia has a clear perspective on how reinvention could benefit governments. Regarding the lack of capacity, it could be argued that its small size indeed would affect the capacity of Estonia in terms of available capital to hire staff for research & drafting and uploading policy. In comparison to most Member States in numbers Estonia would find itself on the short end. Yet, another way of looking at the capacity of Member States is to look at the influence mechanisms at their disposal. According to Panke (2010) small

[11] See in the previous chapter the quote on Dombrovkis.
[12] At least as how it is described in the plans available now.

states might lack in three influence mechanisms: bargaining power, argumentative power and the power of reputation. The different influence mechanisms can be used by Member States to make others change their position regarding an issue (Panke, 2010, pp. 6-7): bargaining power can be explained as the ability to issue threats, argumentative power as being able to convince others based on sound arguments, and the power of reputation as that the speaker or initiator has a good reputation on the issue which is debated. This results in that in general "small states are indeed often less successful in advocating their policy interests via direct bargaining or arguing in the council" (Panke, 2010, p. 5). However, small states might compensate any lack of the influence mechanisms through what Panke calls 'counter-balancing strategies'.

Table 5: Counter-balancing strategies for small Member States according to Panke (2010).

Influence mechanisms	Counter-balancing strategies
Bargaining power	1. Regional coordination
	2. Strategic Partnerships with bigger states
Argumentative power	1. Contacts to the European Commission
	2. Prioritization of issues
Power of reputation	1. Neutral positions
	2. EU Presidency

As a small Member State, Estonia is thought to lack in these three influence mechanisms. For bargaining power there are no indications that Estonia has more than could be expected of a small state. As a small state, it has not the means to issue threats. Two examples of bargaining power resources are the number of votes and the economic size of a Member State (Bailer, 2009). On both, Estonia has relatively low numbers. As was mentioned earlier on, Estonia has only four votes in the Council of the European Union and a relatively low GDP number. This limits its leverage on other Member States. On the issue of cryptocurrencies, Estonia has not the two counter-balancing strategies to compensate the lack of bargaining power. There are no indications that Estonia has found alliances in other governments on its preferences. While

entrepreneurs and investors in the crypto world apparently were interested and welcomed the idea, traditional institutions are critical according to Korjus (2017b). This could be explained by the fact that Estonia is still looking at the specific development of the plan at the national level to issue estcoin. It is experimenting, and a lot criticism against the plan has been that estcoin is "a solution looking for a problem (Ibidem) The fact that it has not found any government as an ally, could be explained by the fact that the advanced digital climate necessary for being able to experiment this early is specific to Estonia. Using regional coordination or strategic partnerships has thus far been out of the question.

As a small state Estonia also does not have the capacity to draft good quality arguments on all issues dealt with on the EU level. Small states lack enough resources for this (Grøn & Wivel, 2001, p. 529). However, Estonia can already be seen using the two counter-balancing strategies to compensate for their lack of argumentative power. By focusing on specific interests, Estonia needs fewer resources than when they would be occupied with wide-range issues (Milta, 2016, p. 32). It is clear that Estonia has prioritized its ambitions on anything digital. This is beneficial to the chances to upload best practices on cryptocurrencies, as limited time, staff, and finances are already dedicated to issues focused on these digital ambitions (Panke, 2010, p. 8). Another way to compensate for limited capacity is influencing the Commission more directly by having good contacts with them. The Commission is of interest, because of its agenda-setting powers (Grøn & Wivel, 2011, p. 530). Panke (2010, p. 8) explains that by being up to date early on what topics are being researched, Member States may have the opportunity to prepare their position even before the draft proposals reach the European Council. Linking both the strategy of prioritization and the strategy of having good links with the Commission, is the fact that the Estonian Commissioner, Andrus Ansip, is leading the project of the Digital Single Market (European Commission, n.d.). This potentially provides Estonia with a benefit regarding their digital ambitions. Ansip would be able to update the Estonian Government on the developments regarding this topic.

Finally, Estonia would also be expected to lack the power of reputation. Yet, it could be argued that it possesses a reputation of being a leader in the development of e-government services for governments. At least Estonia regards itself as a forerunner: "(...) with its e-services,

Estonia has become as re-known in the world as Switzerland is in the field of banking" (Estonian Ministry of Economic Affairs and Communications, 2013, p. 16). Its advanced digital climate and developments on digital government could be reasons for other Member States to look up to Estonia. This reputation could be used to their advantage when Estonia would want to upload its preferences regarding reinvention. Interestingly, what is regarded by Panke as a counter-balancing strategy has actually been used by Estonia for their digital agenda. Estonia held the office of EU Presidency in the second half of 2017, and this only reaffirmed Estonia's reputation as a forerunner. Holding presidency is a big opportunity for small states to influence EU politics (Tallberg, 2003; Grøn & Wivel, 2011, p. 533). The Estonian Presidency was also called the 'Digital Presidency' as the presidency was aimed at the benefits of having an innovative European Economy (Estonian Presidency of the Council of the European Union, 2017). The overall message on digital societies was that the EU needed to keep up with technological innovation and "fully exploit its potential" (Estonian Presidency of the Council of the European Union, 2017). As President, Estonia saw also an opportunity to upload existing national regulation, by introducing a platform called the Presidency Gateway that uses electronic identities and helps to use and share digital documents in a safe way. This success shows that Estonian innovation for digitizing governments is welcome and can be implemented at the EU. When the plans for estcoin are implemented at the domestic level and it is clarified how their reinvention benefits the whole of the EU, the Estonian Government might be able to lead through example again.

Concluding

A misfit can be concluded between the EU and Estonia on their approach to the risk of the lack of authority. Because the plans for estcoin are still in the planning stage, it is hard to pinpoint which elements will eventually be translated into national policy. The best chance for Estonia would be to upload best practices on how blockchain technology could serve e-government services. To make the uploading of the policy preferences easier, Estonia will have to present this technology as an added value to the whole of the EU in their efforts to keep up with technological market developments. As far as the action capacities of Estonia to upload to the EU level, it was thought that as small Member State it would lack bargaining, argumentative and reputational

power. Yet, Estonia seems to have built quite a strong reputation on its digital ambitions, which it could use to its benefit on the issue of reinventing cryptocurrencies. This reputation has been strengthened by its recent EU presidency of 2017. Furthermore, because Estonia has prioritized on digital innovation for government services, they compensate for their limited number of resources in comparison to bigger Member States. Its capacity to upload best practices or future domestic policy on the reinvention of cryptocurrencies could be strengthened by looking at regional coordination or strategic partnerships.

Conclusion and discussion

The research goal of this thesis was aimed at linking the regulatory discussion about cryptocurrencies with the larger theoretical debate on whether small Member States are able to influence the direction of EU policy making. The research was focused on the case of Estonia, which as a member of the EU is at least regarded to face harmonization on the regulation of cryptocurrencies. The following research question was central to the research: **To what extent can Estonia upload domestic policy regarding cryptocurrencies to the EU level?** By using the view of Börzel on Europeanization as a two-level process, this thesis looked at both the constraints as well as the opportunities for Estonia as a small state to influence EU policy on the issue of cryptocurrencies. Cryptocurrencies were concluded to have specific characteristics that could be perceived either as (potential) benefits or as risks. Governments therefore have adopted different positions in their response to them. The differences between the EU an Estonia positions was Estonia's ability to reinvent the innovation, while the EU has been slow in deciding on regulatory measures. Estonia has introduced their plans for estcoin, while the EU still lacks a common understanding and approach. These different reactions to the lack of central authority to cryptocurrencies could be regarded as a misfit, which left the question whether Estonia would be able to upload its preferences to the EU level.

The general idea in literature has been that the disadvantages that small Member States face, outweigh their capabilities to upload their norms, rules and practices to the EU level. According to Börzel's (2002) theory Estonia would be regarded as a foot-dragger. This research has shown that although Estonia is restricted in their ability to upload their current reinvention plans to the EU level, that this is not due to a lack of capabilities. The two major restrictions Estonia faces are that a) in the current plans estcoin might be used as an alternative payment method or currency and b) that the plans are still in the planning phase. The former has been heavily scrutinized by the ECB. Its membership of the eurozone restricts the freedom to reinvent the cryptocurrencies in this way. These 'currency aspects' do not have a good chance to be accepted. Importantly, this restriction is not necessarily a small state disadvantage. Any Member State needs to adhere to the same rules. The latter make it hard to picture what exactly of the reinvention plans would be implemented in national policy in the future. The absence of national

policy is not due to the lack of capacity, as the Estonian Government has plenty of experience with designing e-government services, but rather could be just a matter of time. Despite these restrictions Estonia does have options for uploading its preferences for reinvention. The best option for Estonia would be to upload best practices on how blockchain technology could serve e-government services, as in the future the EU will need experience to be able to keep up with technological developments.

Unlike theory would suggest, Estonia has strategies at hand to influence the policy process. Small Member States were thought to lack not only resources, but also bargaining, argumentative, and reputation power to influence the policy process. This research shows that Estonia has quite a strong reputational power on developing e-government services and has experience in using counter-balancing strategies to upload its preferences. For example, it has prioritized anything related to digital government services, to which the reinvention of cryptocurrencies is strongly connected. Also, its recent EU presidency in 2017 has only confirmed Estonia's reputational power and is an example of how certain aspects of the EU voting system may also give room to the preferences of small Member States. It can be concluded that Estonia's ability to upload its domestic policy regarding cryptocurrencies to the EU level is now restricted, not because of a lack of capabilities to use available strategies, but mainly because of the lack of clear domestic policy, which also should not conflict with existing EU legislation. Still, Estonia could be perceived as a leader in the regulatory competition as it is already concerned with reinvention. Estonia could improve its chances by specifying its plans for reinvention, by focusing on what the common interests would be and by implementing them at the national level first. Another improvement would be to look for regional coordination or strategic partnerships, which would become easier when the plans for estcoin are more defined.

The findings of this research are based on a particular single case, spanning a certain period of time. Although the former limits the possibility to generalize the findings for all small Member States, the theoretical sampling was specifically done to research the possibilities to extent theory (Eisenhardt, 1989, p. 537). An interesting subject for further research, which this thesis due to limited time has not been able to further research, would be to look at how supranational decision-making also brings adaptational pressures to the EU and its Member

States. This research came across the fact that Germany and France are now looking at the G20 to align on cryptocurrencies. Small Member States do not have a direct say in G20 meetings and their decisions (Nasra & Debaere, 2012). Will this automatically mean that when something is decided on that level, the other EU Member States will have to download this without the ability to influence the policy process? Or would they still have strategies at hand? In addition to this, what has driven Germany and France to take the subject to an even higher international level, before aligning on the EU level? Another possibility for further research would be to compare the reinvention plans from Estonia with other (non-EU) states, e.g. the current plans from Russia on CryptoRuble. Do other governments allow the reinvention to be used as currency? It would be interesting to know how whether other countries also face restrictions to their reinvention plans, or whether this is mainly the case for members of Monetary Unions.

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