



**(Re)inventing governance in the digital age:
A comparative study of Estonia
and Taiwan's e-participation dynamics**

Rahvaalgatus and Join

by

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under supervision of

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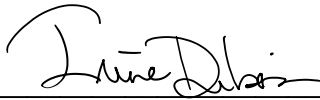
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Irène Dubois

Abstract

Today, governments increasingly experiment using Information and Communication Technologies (ICTs) to improve their relationship with citizens. E-participation instruments such as initiative proposal portals are amongst tools that have widely popularized for the past decade. This paper aims to study the relationship between ICTs and e-participation dynamics using the successful examples of *Rahvaalgatus* and *Join*, implemented by Estonia and Taiwan, respectively in 2016 and 2015. This research compares two portals' system designs and attempts to see if there's a link with user's experience of e-participation. A first section will present a literature review on (Estonia and Taiwan's) e-participation. Then, we will provide national contexts in which *Rahvaalgatus* and *Join* were launched. A third part will use qualitative approach to compare the procedural steps followed by these two platforms in relation to their respective e-participation dynamics and a fourth section will use qualitative data to examine e-participation activity. Finally, a conclusive part will summarize the main implications of our findings.

Keywords: E-participation, Estonia, Taiwan, *Rahvaalgatus*, *Join*

Résumé

Aujourd'hui, nous observons une tendance accrue d'expériences numériques menées par des gouvernements au service de leurs relations avec les citoyens, et c'est notamment le cas des portails de participation citoyenne. Cet article vise à montrer que la manière dont les plateformes de participation sont conçues influence les dynamiques de participation citoyenne en ligne. Deux plateformes feront objets d'une étude comparative, le site *Rahvaalgatus* mis en place en 2006 par le gouvernement estonien, et le dispositif *Join*, lancé par les autorités taïwanaises en 2015. En comparant ces plateformes, notre étude vise à identifier une relation entre le fonctionnement de ces systèmes numériques et la manière dont utilisateurs-citoyens participent en ligne. Une première partie sera consacrée à une revue de littérature. Puis, dans un second temps, le dossier présentera les contextes dans lesquels ces outils ont été créés. Ensuite, grâce à une analyse qualitative, nous comparerons le fonctionnement de ces plateformes ainsi que les dynamiques de participations observées. Enfin, des analyses qualitatives seront commentées avant la conclusion qui exposera les résultats de notre recherche.

Mots-clés : participation numérique, Estonie, Taïwan, *Rahvaalgatus*, *Join*

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Introduction

Since the emerging use of the Internet in the 80s, globalisation's been marked by the rapid shift from the traditional use of communication towards the predominance of Information and Communication Technologies (ICTs). In this historical period commonly known as the "digital age", "diverse set of technological tools and resources used to transmit, store, create, share or exchange information" have become essential means of communication (UNESCO Institute for Statistics, 2009). From radio broadcasting to social media to artificial intelligence, societies are constantly reshaping individual's day-to-day behaviours as well as relations between people and organizations.

From a political standpoint, we are also witnessing a structural change in public policy. In response to a digitalising society and growing ICT innovations, governments strive to adapt by implementing electronic (e-)services. Though not considered a conceptually mature object of study yet, the idea of *e-government* or *e-governance* generally refers to this process of political digitalisation. It should be additionally noted that the purpose of such a revolution in public governance is beyond purely technological fix of services, as it also aspires to enhance trust in G2C¹ and C2G² relations (Kneuer, 2016). Hence, democracy is significantly taken into consideration in e-government strategies. Eventually, as some argue, "E-services mainly summarize the current practices of e-Government, and E-democracy is the future potential of E-government" (Meer, Gelders and Rotthier, 2014). To chase the said ambition, many governments started to experiment with online (e-)participation initiatives, such as e-voting, e-petition, or even e-referendum in the past two decades.

At a time when ICT innovations create endless possibilities for future governance, the vision of democracy seems to glean inspiration from ancient times. Through e-participatory experiences, governments encourage public engagement in agenda setting. This idea can be assimilated with the notion of citizens' self-government, which evokes the "Athenian ideal [...] *agora* or *ekklesia*" (Meer, Gelders and Rotthier, 2014). In contrast to representative model using proxy voting, the Athenian one sticks to the etymological meaning of democracy, "*Demos*" (people) and "*Kratos*" (rule), characterised by a direct and deliberative voting system in decision-making. If a majority of votes is reached, the Athenians' proposals get heard in the legislative process. Now, twenty-seven centuries later, direct democracy still exists but to a weaker degree. It may be expressed through referendum at a local level, regional or municipal, seldom at a national scale due to practical reasons.

However, the use of digital technologies opens a window of opportunity for systemic changes. As ICTs create a new space (cyberspace), while the internet becomes ubiquitous in personal and social spheres, it is conceivable to exercise online direct democracy in an offline representative democracy.

As predicted by Macintosh in 2008, the rise of ICT has opened up new prospects for civic participation (Molnár, 2020). For many decades, citizen participation has been leveraged to strengthen trust in authorities, transparency in policy making and government's legitimacy (Lourenço and Costa, 2007; Fedotova *et al.*, 2015; Wirtz, Daiser and Binkowska, 2018). As a

¹ Government to Citizens

² Citizens to Government

result, some governments strive to implement innovative participation mechanisms, which represents a fundamental change for citizens' role in policy-making process.

As governments experiment with e-participation mechanisms, it is observable that due to "specific socio-economic underpinnings and/or institutional structure" (Jho and Song, 2015), systems take unique shapes, proceed differently, sometimes with distinct priorities in mind and differ in the degree of performance.

Amongst diverse cases, Estonia and Taiwan are considered pioneering examples or practicing democratic life using ICTs. For instance, during covid-19, the world watched both countries encourage democratic practice while successfully leveraging ICTs to face a non-traditional crisis (Makarychev and Wishnick, 2022). This is arguably due to their commitment to democratic values and cyber threats from neighbouring countries, where Estonia and Taiwan have developed outstanding digital prowess. Likewise, their respective initiative proposal portals *Rahvaalgatus* and *Join*, are recognized as successful examples of online participation.

This paper aims to explore the relationship between ICT and online participation by comparing Estonia and Taiwan's e-participation's dynamics within their proposal portals *Rahvaalgatus* and *Join*. It attempts to examine how portals' system design may impact the way citizens experience e-participation while addressing current loopholes in e-governance studies. The research underlying this paper uses both qualitative and quantitative methods and will proceed as follows.

To begin with, we will thoroughly present the state-of-the-art. In a following part, we will explicitise the research question and methods by discussing aspects of e-participation we would like to observe in this study and how qualitative and quantitative analysis will be conducted.

The research is split into three sections. The first section compares Estonia and Taiwan's national contexts in which *Rahvaalgatus* and *Join* are implemented. In a second part, we present Estonia and Taiwan's e-participation mechanisms by describing their portal's procedural steps. A third section then uses quantitative methods to compare the two countries' e-participation dynamics on a 40-month period. At the very end of this paper, a concluding section presents the limits of this research while giving an overview of the results and relativise it in the broader theoretical discussion.

It should be noted that this project's intention is not to present the technical dimension of these platforms, but to inspect how e-participation practices are reflected in different technical frames.

Literature Review

We will first provide with a thorough literature review with the following objectives in mind: to clarify the concept of e-participation and its related themes, to give an idea of where this paper situates in relation to past studies (on e-participation in general and on Estonia and Taiwan case studies). In this section, we will also comment of how the related research has evolved overtime as well as different methods used by scholars.

Defining e-participation

In the emerging academic literature of digital politics, there's no all-inclusive definition given to e-participation. However, most studies have reached a consensus about the themes that revolve around the concept. E-participation is generally defined as the use of ICTs to mediate C2G and G2C relations while enhancing civic engagement in decision-making and public service delivery (Macintosh, 2004; Sæbø, Rose and Skiftenes Flak, 2008; Van Dijk, 2012). As it is a globalised phenomenon, international institutions also provide definitions. The OECD, for instance, refers it as an "ICT-supported participation in processes involved in government and governance" (OECD, 2005).

In more practical terms, e-participation encompasses activities aimed at enhancing citizen's engagement such as e-deliberations, e-petitions, online discussion platforms, even hackathons fall into the umbrella of E-participation (Le Blanc, 2020).

To work with such broad concept, scholars have developed different framework of understanding. For instance, Kneuer (2016) identifies two directions of e-participation, a top-down direction and bottom-up one. This model is inspired by Coleman and Blumler's conception of e-democracy, respectively e-democracy from above, and e-democracy from below (Coleman and Blumler, 2009).

Gilardi also adopts a similar approach to understand e-participation, but referring to Bua and Bussu's contrasting ideas of bottom-up "democracy-driven governance" and top-down "governance-driven democracy"(Bua and Bussu, 2021; Gilardi, 2022). He further extends the framework by categorizing e-participation into two related but distinct groups: civic-tech and crowdsourcing. On one hand the former refers to a strongly bottom-up use of ICTs, in a grass root form of e-participation with organised and non-organized citizens. This is closely associated with the notion of collaborative or participative governance. On the other hand, the latter proceeds from a top-down direction with authorities harnessing "information, expertise, and experiences instead of opinions". As Gilardi precises it, this form of e-participation isn't merely a better version of traditional opinion polling. Instead, he encourages us to perceive crowdsourcing as a change of philosophy in governance, using collective intelligence to address and solve problems.

Situate e-participation in the field

As e-participation is intrinsically connected to digital politics in theory and in practice, it is undeniably part of a greater whole with e-government and (or) e-governance studies.

For instance, when giving directions to the EU on digital strategies, Hennen mentions that e-participation and e-government are mutually constitutive. He emphasizes that Europe cannot view e-government as a “need to have” while e-participation as a “nice-to-have”, that both are equally essential and should be considered as integral components of a larger movements towards a modernized public sector (Hennen *et al.*, 2020).

A scholarly consensus is reached about the link between e-participation, e-government, e-governance, and e-democracy. However, the debate lies in where we situate e-participation in relation to the latter concepts. To understand why scholars struggle to locate e-participation within digital studies, we shall first explore themes revolving around it, through their definitional and conceptual ambiguities.

Defining “e-governance” and “e-government”

To begin with, one must acknowledge that despite its constant and burgeoning development, digital politics is still an early-stage research field. Since the 1990s, a few scholars started to conceptualize recurrent themes such as e-governance, e-government, e-participation, e-services.

In the literature of digital politics, the concepts of e-governance and e-government seem to be overlapped. Many note that a “considerable confusion exists in explaining e-government and e-governance” (Palvia *et al.*, 2015). Both terms are often mentioned interchangeably in journal articles as they’re in many cases “used to grasp the same phenomenon” (Kneuer, 2016). To solve conceptual ambiguities, scholars have suggested various frameworks and criteria, depending on the aims of their studies. Molnár, for example, distinguishes them by associating e-governance to innovative administration and management within of the organisation, while referring e-government to actors outside of the organisation. However, most consider e-government and e-governance to be a process, not a state to reach. The general agreement is established concerning the purpose, that is to “counter the distance between citizens and government” (Pina *et al.*, 2007).

A word on e-democracy

Following the thematic elements stated above, digital politics encompass the study of ICTs’ democratic potential. Some scholars observe that such research topic often takes a prescriptive or normative approach, (Macintosh, 2004; Ferro and Molinari, 2010; Chun and Cho, 2012; Kneuer, 2016) “in which participation is conceptualized on a continuum from low to high” (Bishop and Davis, 2002; Vooglaid and Randma-Liiv, 2022). E-democracy is therefore by essence embedded in e-participation’s literature.

Scholars like Van Dijk (2012) defines e-democracy as the “pursuit and the practice of democracy in whatever view using digital media in online and offline political communication” and analyses it by categorizing into ideal types of democracy. Others like Meer, Gelders and Rotthier sees e-democracy as the continuation of previous e-services development, and not just the final step of e-government. Basic claims about e-democracy made in the 1990s include

its support of public debate, community creation, civic engagement in decision-making. Moreover, a space for e-participation, like e-polls, e-referenda and e-voting, e-government would usher in an era of direct democracy akin to “Athenian agora” but with modern ICTs (Van Dijk, 2012).

E-participation-related studies

With countless e-government experiments since the 2000s, a vast recent area of study on e-participation has opened for research. Amongst scholars who contribute general theories, some study from the governmental perspective by looking at “factors driving the adoption of e-participation” (Zolotov et al. 2018), while others choose to focus on e-participation conditions leading to actual impact on policy tools (Hennen et al., 2020). As e-participation implies civic engagement, the theme is also relevant for sociological analysis. Scholars like Choi and Song (2020) studied the social background of individuals who engage in e-participation. Just recently, a research has been done on how perceived advantages influences citizen willingness to engage through ICTs, adding another layer to e-participation’s literature (Mertes et al., 2022).

As mentioned previously, we usually study e-participation from a pre-defined normative perspective. Research is therefore not only meant to fill an informative purpose by broadening our understanding, but may also serve as guidance for policy makers (advising purpose) e.g. recommendation for improving “e-participation on the EU level without changing underlying legal framework” (Hennen et al., 2020).

In the 2010s, as several findings on e-governance strategy had been reached priorly, e-governments began to implement e-participation strategies, introducing to new research topics in the field. Because of real-life e-governance experiments, research is of paramount importance and becomes increasingly demanded by governments but also by private entities and international organisations for issuing official reports on the global technological development. Subsequently, there seems to be a change in the literature, shifting from one that was mostly based on conceptual assumptions, to a research content that’s growingly filled with real-life examples of experiments. This includes local or national cases studies like the Canton of Zurich (Mertes et al., 2022), comparison between Iceland, Sweden and Estonia (Åström et al., 2013). However, two points regarding case studies in the literature are to be made. First, according to Le Blanc (2020), when it comes to e-participation studies focusing on a specific locality, they are usually not framed on a wide or national scale, as innovative initiatives “largely comes from the sub-national level”. Secondly, there’s a “knowledge decay” according to Gilardi in what we know of ICTs and politics, as our knowledge on this themes is substantially established on research done on the United States (Gilardi, 2022).

Past findings

New findings and correlations about e-participations are observed in the literature. In the early phase of e-participation research, Millard’s report indicates that most administrations in the EU lack the necessary mechanisms and capacities to manage important increase in participation (Millard, 2009). Two years later, Van Dijk’s work show that there was “scarcely any influence of e-participation on institutional policy and politics can be observed yet” (Van Dijk 2010).

However, as e-government currently experiment digital practices, some positive theoretical results have begun to arouse. As of today, a general assumption about e-participation shared by many others states that the use of ICTs increases the number and kinds of people who get involve in the policy formulation, specifically alternative policies (Gilardi, 2022).

Scholars like Hennen have concluded a positive correlation: the more decision-makers and participants interact, the better is the match between the needs of decision-makers and citizens' input, the better is the quality of the input. (Hennen *et al.*, 2020). This implies that governments and citizens both have roles to play on the road to e-democracy. In light of current situations, Choi and Song observe that governments have implemented e-participation initiatives, but there's limited results regarding citizen's involvement or engagement (Choi and Song, 2020).

Existing debates

There are scholarly debates in the literature. As Liiv indicates, discussions on participatory democracy have been increasingly centred on the role of ICTs in enhancing civic engagement in public agenda and service delivery (Bentivegna, 2006; Freeman and Quirke, 2013; Margetts and Dunleavy, 2013). The materialization of e-participation initiatives from the dynamic between "aspirational rhetoric" and "practical potential" has been an on-going debate (Vooglaid and Randma-Liiv, 2022). To put it simply: how to turn ICT's potential into concrete and effective political actions?

Mobilisation or reinforcement?

Jho and Song identifies two major categories of debates regarding the role of ICT on participation, namely, the mobilisation thesis and reinforcement thesis (Jho and Song, 2015).

The former is of a an optimistic view of ICTs, as it suggests the high potential ICTs have for increasing civic participation (Bimber, 2003; Salter, 2004; Lunat, 2008). For instance, some scholars are convinced that social network expansion generate interaction and cooperation between groups of people, broadening the scope of political engagement. Therefore not only do ICTs "reduce the costs of political participation" (Jho and Song, 2015), but also contribute to a "[shift] from an elite democracy to a participatory democracy" (Fraser and Dutta, 2010; Jho and Song, 2015)by organizing, informing and mobilizing new participants who are generally not represented in a political landscape due to their inactivity (Norris, 2005; Coleman *et al.*, 2008; Jho, 2009).

On the other hand, the reinforcement thesis is rather categorized as of pessimism towards digital technologies. Proponents of this position believe that the sole impact of ICTs is the "reinforcement" of existing patterns of social divide between individuals who have access to rich information and those who are poor in received information. Those who are well informed, connected and digitally skilled would find online resources more accessible to them, than those who aren't (Norris, 2005). Moreover, Hill and Hughes (1998) note that individuals tend to select information they are interested to access to. Subsequently, political initiatives are still limited to a certain social group.

In other words, digital divide and tendency deepens social inequality, which is all the opposite of e-government's intended purpose. This is why the balance between technology and institution remains a central research topic in the literature.

Technology or institution?

As prior studies suggest, the sole use of ICT does not naturally grant civil participation nor determine governance practices (Arterton, 1987; Boulianne, 2009; Bertot, Jaeger and Grimes, 2010; Åström *et al.*, 2012). As early as 1989, scholars mention that "technology is not a democratizing force per se" (Dahl Robert Alan, 1989). Boulianne's meta-analysis of research (2009) shows that there's no direct correlation between the use of internet and offline political engagement. Technology is qualified as "ex-ante neutral", meaning that effects generated from it depend on the political context in which the tools are used. This includes the motives of use, transmitted content, the way it's delivered to users, the extent to which the use is institutionalised (Kneuer, 2016).

To extend this view, Jho and Song's research (2015) reminds that "efforts will fail if only a technological infrastructure is considered". This implies that a solid level of e-participation will eventually pose risk to democracy overtime in conditions where the ICT level is high but lack political institutionalisation.

Regarding participative tools' sustainability, Badouard highlights the importance of legitimacy. He insists that an official status and a legal framework of such instruments in the decision-making process are essential conditions to build a digital ecosystem of citizen participation (Badouard, 2010).

Governments are therefore constantly re-inventing governance in the digital age, trying to find the "right" mechanism that'll maximize e-participation, while finding balance between the use of ICT and a proposer political institutionalisation. For example, which reforms are adequate to implement into legislation, how to ensure if such "law" will be effective in practice, not to mention the complexity considering that each country has a unique legislative process.

Estonia and Taiwan's e-participation literature

Now that we've thoroughly gone through diverse contents, methods, and debates in the general e-participation literature, we can look at what's been analysed, how were studies conducted regarding Estonia and Taiwan. If available in literature, we will also discuss what's been studied specifically upon online participation platform.

Being the first country to systemically digitalize its society with e-services such as e-tax board, e-signature, or famous i-voting, Estonia's considered one of the foremost e-government in the world. Similarly, the Taiwanese know-how in technological matters act as a significant driving force in the democratic sphere. Despite having different context to get to where it is now, like Estonia, Taiwan's success story inspires other countries to make "good" use of ICT tools in political landscape. Subsequently, the Estonian and Taiwanese models are exemplary cases based on their digital governance experience and endeavours for e-democracy. They therefore spark e-governance scholars' curiosity and are increasingly given attention to.

From this paper's readings, we may perceive three shared characteristics in Estonia and Taiwan's e-participation's literature:

The first one concerns the explicit normativity in the scholarly discourse. As Taiwan and Estonia are usually deemed as exemplary models, they are often studied to serve as “lessons”. This is the case for Toots who examined Estonia’s past e-participation platform *Osale*, to discuss the main reasons of its failure, provides experience and insights for similar initiatives (Toots, 2019). Biberman’s working paper on Taiwanese e-participation tools within a broader study of a new Indian model in e-governance (Biberman, 2021).

The second observation is that both have received attention from their respective regions. In Europe, Estonia’s case has gained attention to be compared with other Nordic countries such as Sweden and Iceland (Åström *et al.*, 2013). Taiwan, if compared, is often studied with Japan and other technologically advanced “Asian Tigers”, namely South Korea, and Singapore (Ducke, 2004; Cortada, 2012). This may be due to similar cultural, social, or economic backgrounds.

A third characteristic shared in their literature is the close relationship between government and research. As both countries governments are committed to support innovations that develop their e-governance, amongst existing sources, many of them are official reports, or projects carried out or funded by authorities, Estonian, Taiwanese, or even the European Union. Estonia’s R&D (Research and Development) projects are findable through [ETIS](#) (Research Information System). Likewise, Taiwan’s national Science and Technology Council publishes different studies and the funding amount on [GRB](#) (Governmental Research Bulletin). Overall, we notice that research and government are interdependent and mutually constitutive: there wouldn’t be increasing amount of research on e-participation if there weren’t e-government, and e-government without research.

Studies on Estonia and Taiwan’s e-participation platform

In this section we are going to see who has studied Estonia and Taiwan’s online participation platforms? Which methods are used and what are the challenges of doing research on such specific cases?

Estonia

One of the earliest analyses on Estonian e-participation platform was carried out in 2009 (Glencross, 2009). The website observed was TOM (‘Today I Decide’ in Estonian) launched in 2001. As Glencross put it, it was a “ground-breaking move” because other platforms only operate on a municipal or regional level. By using content analysis, aggregate user data, surveys, and interviews with officials, he evaluated the extent to which this e-participation initiative was successful and represented a “procedural and technological change” online engagement. According to the study, only 1% of the initiatives were implemented which shows that technology isn’t likely to enhance e-democracy without authorities’ promotion and coordination of the instrument. However, TOM tool is no longer active today.

Another relevant Estonian platform analysis is one made by Toots in 2016 who studied the platform *Osale* from a retrospective approach (Toots, 2019). In her research project, she focused on explaining reasons why the web-portal failed. Using the “triangle of dependencies”

framework developed by Sauer (1993), Toots argue that most triggers for e-participation platforms failure that are largely context-related: online participation, cultural, public sector, political, etc; including uncertainty, susceptibility, stakeholder's weight in project innovation.

Taiwan

It is no easy task to find Taiwanese e-participation platforms analysis by scholars in the literature, as most information is presented in governmental reports. One of the few secondary sources identifiable is a study examining the online platform *Join*'s user dynamics from September 2015 to March 2021 (Huang *et al.*, 2021). The research team behind mostly relied on a quantitative analysis via available open data, drew content analysis from official reports statistics and conducted user surveys. These data allowed them to observe general characteristics of the proposals made on *Join*, proposals frequency overtime, the platform's most successful proposals and a few proposal example cases.

In this paper, Huang suggests reasons that would explain why despite Taiwan's exemplary e-governance, a significant knowledge gap still exists in literature. They notice that "due to the language barrier little is known about its contents. Internationally available research results are scarce" (Huang *et al.*, 2021).

Other than language barrier, we may also suppose that the lack of non-mandarin research made on the Taiwanese e-government model is due to political and institutional circumstances. As mentioned in previous parts of the literature review, most scholars use the OECD framework and data provided by the United Nations when assessing a country's e-participation and e-governance performance. However, since Taiwan is not a UN member state, no data is provided. International researchers usually find themselves short on statistics and content source to study Taiwan's e-participation, let alone comparative studies using quantitative methods. Overall, studies analysing e-participation web-platforms seem to be scarce in the literature.

Research question

The research underlying this paper explores the relationship between ICT and e-participation dynamics, using Estonia's *Rahvaalgatus* and Taiwan's *Join* as case studies.

The main objective is to observe the way e-participation can be reflected through these platforms and see if system designs have an impact on e-participation. Hence, this research question is premised on the belief that Taiwanese and Estonian users experience e-participation differently on web-portals. For this paper, I consider three ways of citizens e-participating: by proposing initiatives, by engaging in discussions and by voting proposals. The goal is to analyse system designs while observing users e-participation dynamics in the attempt to identify mechanisms that contribute to their corresponding results.

Our research will answer the following questions: How e-participation instruments enable civil societies to be part of decision-making process ? How different platform mechanisms can lead to different e-participation experience and results? What are the implications regarding the relationship between ICT and e-governance in a broader sense?

Methodology

To answer these questions, this project combines qualitative (context and system analysis) and quantitative (data analysis) methods.

Qualitative methods will be used to provide the national context in which *Rahvaalgatus* and *Join* are launched and describe how respective platforms mechanisms work. Contextualization enables some elements of comparison that can be useful for further analysis and explanations.

We will then compare *Rahvaalgatus* and *Join*'s system mechanism by examining differences and similarities in their procedural steps. This part will explain all the steps a proposal has to go through to reach the legislative process. After explaining how these two portals operate, we will compare them and see if e-participation is reflected differently in these two models.

Quantitative analysis will also be used in order to complete our study. This third section will largely rely on primary sources, data provided by government, to attempt an analysis of e-participation activity on the platforms, like Huang did when analysing *Join* (Huang *et al.*, 2021).

Through data analysis we will observe measurable aspects of *Rahvaalgatus* and *Join*, namely, the extent to which the infrastructures are representative, proposal's success rates and e-participation frequency. These measures will provide us insights on e-participation dynamics which may confirm implications reached through qualitative analysis.

I. National contexts

To begin with, the paper suggests an overview of the national contexts to understand what brought Estonia and Taiwan to implement *Rahvaalgatus* and *Join*.

Estonia and *Rahvaalgatus*

Estonia is a small Baltic country with a population of 1.3 million (2023). In 1991, as the Soviet Union collapsed and eastern Europe countries retrieved their independence, Estonia restored its democratic regime and swiftly founded an efficient society from scratch. The public sector solution was to establish a digital identification system and develop the population's digital prowess in the information era. For instance, the Estonian government launched the "Tiger leap program"³ in its main agenda as early as 1996, aiming for higher national digital literacy through ICT education.

This infrastructure legally implemented in 2000 has become today's so-called e-Estonia, where citizenry is completely digitalized. This systemic change has transformed society to a great extent, from day-to-day practices like electronic signatures⁴, to its democratic process such as the well-known pioneering e-voting system.

³ "Tiger Leap" metaphorically refers to the "Asian Tigers", four economic giants that benefited from rapid ICT development, namely Taiwan, South Korea, Singapore, and Hong Kong.

⁴ The Estonian Digital Signature Act established in 2000 grant e-signatures the same legal status as handwritten ones

As early as 2005, Estonia became the first country in the world to proceed legally binding e-voting system on a national level (Madise and Martens, 2006). E-Estonia's success story represents a ground-breaking phenomenon where digital technologies merge into the political landscape. The rapid digitalization of society set the roots for an emerging digital culture characterized by citizen's trust towards ICTs and the concept of e-government. In terms of e-participation, Estonia also endeavours to enhance civic participation using digital technologies. Its continuous efforts are observable through many platform experiments, starting in 2001 with the online forum *Themis* managed by the Estonian Legal Centre, and TOM ('Today I decide') by the Estonian government, in the same year (Vooglaid and Randma-Liiv, 2022). Nevertheless, these platforms were deemed as failures three years from their creation, despite promising perspectives and support from the get-go. Other platform experiments have followed: *Osale* in 2007, *Petitsioon* in 2010, *Rahvakogu* in 2015. Most of them are discontinued or inactive, while others remain active today.

However, the latest portal *Rahvaalgatus* "Citizen Initiative Portal" designed in 2016 and piloted by the Estonian Cooperation Assembly (ECA) is the one widely used by citizen as it enables their legal right to have a voice in the national decision-making process (Vooglaid and Randma-Liiv, 2022). According to the ECA, the portal's creation stemmed from a political crisis of 2016, when Estonia's government failed due to a confidence lost vote (The Guardian, 2016). The platform acts as a convenient channel that enables citizens to submit collective proposals. The project aims to connect citizenry and legislative power in the most transparent and open manner.

Apart from the national parliament, *Riigikogu*, Estonia's decision making is also administered by a subnational government system encompassing "79 local government units among which there are 15 towns and 64 rural municipalities"; All local governments have the decisional power to manage individual local issues (Estonia's Ministry of Finance, 2023). Therefore, there are two possible paths for citizen's collective appeals to be heard in political decision-making process: when a proposal has reached the threshold of 1000 supporters, the Parliament is obligated to process the initiatives and discuss them. Locals may make appeal to the rural municipality if the proposal has been supported by at least 1% of the concerned local, municipal, or city residents.

Rahvaalgatus's legitimacy is empowered through legal acts. According to the ECA, participation in decision-making through collective appeals is a "civil right prescribed by law". In 2014, the *Riigikogu* passed an amendment "Response to Memoranda and Requests for Explanations and Submission of Collective Addresses Act", chapter 3 entitled "submission of collective proposals" in 2014⁵. The local right to participate in local decision-making is codified in the Local Government Organisation Act⁶, chapter 4 § 32 entitled "Right to initiate legislation".

⁵ Response to Memoranda and Requests for Explanations and Submission of Collective Proposals Act—Riigi Teataja. Available at: <https://www.riigiteataja.ee/en/eli/501112016001/consolide>.

⁶ Local Government Organisation Act—Riigi Teataja. Available at: <https://www.riigiteataja.ee/en/eli/528062021006/consolide>

Taiwan and *Join*

Geographically smaller than Estonia, Taiwan is however much denser, hosting a population of 23 million. Just like Estonia, Taiwan's endeavour to build an e-government is embedded in its unique context, especially within its socio-economic circumstances.

Commonly known as one of the four "Asian tigers", Taiwan witnessed a rapid growth of digital technology industry in the 80s, which not only elevated national economy, but also sped up digital culture maturity. Through the democratization of digital technologies, communication had become faster and more practical between citizens. As blogs, chatting platforms, web forums popularized, the Taiwanese civil society developed a sense of (online) expression, which contributed to nurture a rise of social movements and activism.

The Mid-2010 marked a turning point in Taiwanese civil society's attitude towards the idea of making ICT tools meaningful drivers of political actions. In March 2014, a political crisis later known as the sunflower, or 318 student movement planted a seed for e-government prospect. In opposing a pending free trade agreement with China, 300 young Taiwanese activists seized control of the national legislature and overthrew the government (O'Flaherty, 2018). During three weeks of occupation, activists saw ICT as a vital recourse for communicating with other activist to organise their protests and deliver political messages to Taiwanese population outside of the building. This grassroots movement owe its victory to the significant role played by white hat hackers when helping activists to restructure their protest organization. One of many legacies of the Sunflower movement was that it acted as a wake-up call for political transparency, government accountability, and innovative solutions to enhance C2G and G2C relations.

This activist moment opened a new digital chapter in Taiwanese political landscape with the g0v (pronounced 'Gov zero') hacktivist community focusing on creating innovative instruments for the civil society, such as the platform vTaiwan ('v' as in virtual), an online-offline consultation portal providing a space for dialogue between diverse public actors and citizens. This experiment is designed to guide lawmakers when implementing decisions "with greater degree of legitimacy" ([vTaiwan](#)).

In 2015, the Taiwanese government established the portal *join* enabling citizen's participation in public policy process and public administration consultation. This infrastructure is available for all citizens since its creation and extended its use to foreigners living in Taiwan in 2018. Like *Rahvaalgatus*, its purpose to enhance public trust, facilitate C2G and G2C communication and strengthen e-democracy.

Compared to *Rahvaalgatus*, *Join* presents a more comprehensive platform: Apart from e-petition system, it also constitutes an access for public consultation, co-creation discussion, participatory budgeting monitoring too. In September 2018, inspired by the US White House portal "We The People", the "Idea proposal" function was added to the *join* platform in September 2015 which allowed users to create online petition that hold potential legislative power in national decision making.

Like Estonia, the Taiwanese government promulgated the mechanism into its legislation in June 2015, a legal text entitled “Directions for Implementing Online Participation in Public Policy”. This enables *join*’s legitimacy in decision-making process and is significant for building a trustworthy environment amongst users.⁷

Overall comparison

Despite Estonia and Taiwan’s difference social, historical, cultural, and demographic characteristics, the context in which *Rahvaalgatus* and *Join* were implemented are similar in the sense that Estonia and Taiwan both entered a period of society restructuration at the start of the digital age. Timing and democratic commitment were significant factors that brought Estonia and Taiwan on their e-democracy trajectory.

It can also be noted that political crisis paradoxically enabled and strengthen their e-government strategies. In both cases, when C2G and G2C relations are at risk, ICTs offers solutions and empower civil society’s participation through innovative use in the political landscape. Not only does this phenomenon result in greater transparency, government accountability, civil trust but it also nurtures a stronger digital culture and literacy on a national scale. ICTs have therefore merged into the political landscape just as the latter interweaved in the digital sphere.

A last comparable point worth noticing is the legal framework of online petition platforms. As scholars in e-participation study argue, technological infrastructure must come with solid institutionalisation to perdure. Not only is an official status required for e-participation tools sustainability, but it also ensures a certain legitimacy of such instruments in decision-making process (Badouard, 2010; Jho and Song, 2015).

II. Qualitative analysis: platform procedural steps

Rahvaalgatus

Rahvaalgatus offers a space for citizens to write proposals, engage in discussions and submit collectively composed and signed addresses to the *Riigikogu*. There are various kinds of collective address, citizens can suggest amendments to existing regulations, propose ideas to improve the society’s organisation or evoke problems that need a quick solution. Whatsoever, the proposal must stay within the *Riigikogu*’s jurisdiction.

The Estonian portal is split into the following steps: Through *Rahvaalgatus*, citizen who wish to endorse a proposal should first write down the request, invite others to co-create a proposal that’ll be sent to collect signatures, gather e-supporters and address the national Parliament.

The users are invited to meet the following conditions in their e-participation experience. To initiate a proposal or provide commentaries, an account must be created. There are three possible ways to login: via electronic ID-card, phone number and personal ID code, or alter-

⁷ Directions for Implementing Online Participation in Public Policy”, National Development Council - Content. Available at: <https://theme.ndc.gov.tw/lawout/EngLawContent.aspx?lan=E&id=59>.

native Smart-ID authentication. Users must be also at least 16 years-old and permanent residents of Estonia. According to further details provided by the ECA, the co-creation phase has to take at least 3 days. The proposal's author(s) can then send it to collect signature anytime they feel ready to do so.

Regarding content, the collective proposal needs to include a description of the unsatisfactory situation and how the suggestion could be a solution to it. A threshold of 1000 e-signatures then must be reached within 18 months, for the Collective Address to be submitted to the Estonian Parliament. However, no account is needed to give an endorsement signature, only name and personal ID-code are saved. Some terms of use are given in good faith, hate speech and offending remarks are not welcome on the platform and may be removed by *Rahvaalgatus* moderator, namely the ECA.

Once the threshold is reached, the authors are encouraged to send their appeal to the *Riigikogu* within a year and a half from the start of collecting signatures. The Parliament will inform back within 30 days from submission date whether the Collective Address will be become a draft act. If it's the case, the Parliament will forward it to the relevant committees. If not, authorities will give an opportunity to contact person(s) to adjust the Address content. The content may be rejected if it coincides with an Address proceeded within a two-year period or if it doesn't fall under the principles of the Constitution of the Republic of Estonia. Users can follow the *Riigikogu* process on *Rahvaalgatus* and all refusal will be explained to the Address contact person(s). *Figure 1* provides a summary of *Rahvaalgatus*' procedure.

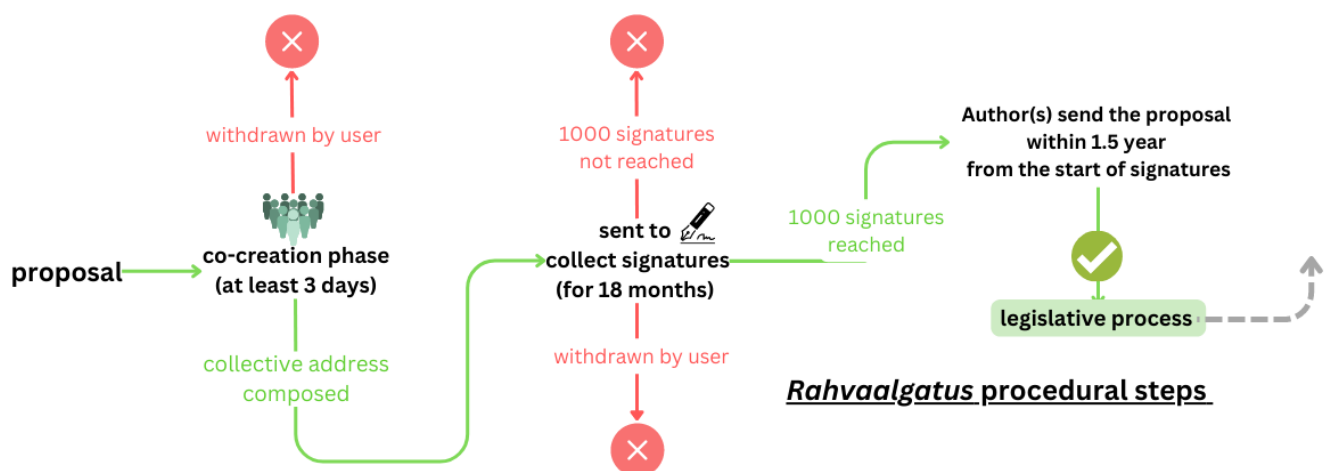


Figure 1

Join

Join includes the following procedural steps: user authentication, proposal submission, verification by authorities that could take up three-working days, public signatures, and a reply from a governmental office.

An account is needed to propose an initiative on *Join*, users can choose to log into the system with Facebook, Google or Yahoo accounts and a two-factor authentication with phone number and e-mail address is required to successfully be able to use the platform.

Users can endorse any proposals their wish as long as the suggested public policy stays “within the operational scope” of governmental agencies. The verification phase ensures proposal’s consistency and appropriateness, the content is checked by the public administration.

The third stage gives the proposal 60 days to collect signature on the platform. Once the signature period is over and the threshold of 5,000 of seconding votes has been reached, the government is obliged address an official response within two months. The proposal may be rejected if it coincides with one that was proceeded within a six-month period (see *figure 2*)

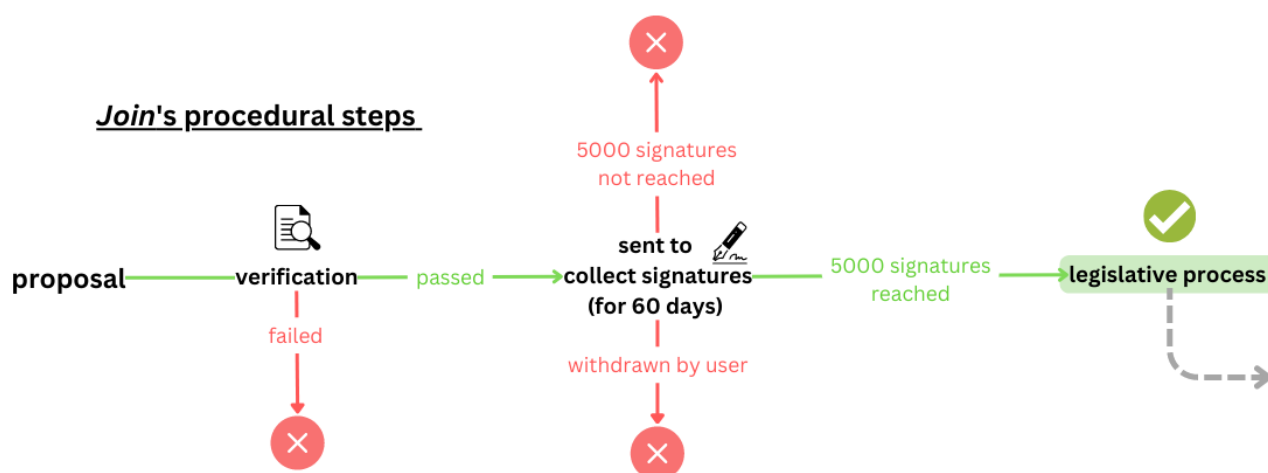


Figure 2

The current threshold of 5000 supporting votes is different than the one initially set. The former procedure was a two-step system, where a proposal must obtain 250 supporters within 15 days to continue to reach 5000 signatures within the next 30 days. In 2016, the National Development Council consulted *join* users’ e-participation feedback and simplified the procedure to a single-step, 60-day, 5000 signature threshold. The proposal portal is only suspended 60 days prior upcoming national or local election.

Points of comparison

The following table provides a summary of *Rahvaalgatus* and Join's system characteristics:

	Estonia's <i>Rahvaalgatus</i>	Taiwan's <i>Join</i>
Creation date	March 2016	September 2015
Legal framework	"Response to Memoranda and Requests for Explanations and Submission of Collective Addresses Act" and "Local Government Organisation Act"	"Directions for Implementing Online Participation in Public Policy"
Register and login	electronic ID-card, phone number and personal ID code, or smart-ID	Social media accounts and two-factor authentication (email and phone number)
Profile requirement	At least 16 years old citizens or permanent resident	Citizens and open to foreign residents since 2018
Verification phase	No	Yes
Period of signature collect	18 months	60 days
Threshold	1000	5000
Parliament response	within 30 days	within 2 months

Table 1

Filters

On *Rahvaalgatus* and *Join*, there are several filters and obstructing factors in the process.

In the Estonian model the first concerns the co-creation phase where a minimum of 3-month discussion is required to go ahead and collect signature. It is a step during which the proposal initiator can choose to abandon or take more time to compose the collective address. The second is the threshold that requires a minimum of 1000 signatures. Finally, a third filter is that even when the threshold had been reached, the collective address will not be sent if the authors choose not to.

In the Taiwanese model, three situations impede a proposal from getting considered by policymakers. The first filter occurs at the verification stage, the second is when the proposal gets withdrawn by the poster, and the third factor is when threshold of 5000 signatures isn't reached during the 60-day collect.

User-friendliness :

First, we realize that *Rahvaalgatus* and *Join* differ in their login systems. The Estonian platform requires a national electronic ID (E-ID) to create an account, while Taiwan's portal enables users to login with social media accounts followed by a two-factor authentication via phone number and e-mail. In Estonia, as public services are entirely digitalised since early 2000s, electronic identity and e-authentication are systems already embedded in people's daily lives. In contrast, Taiwan's E-ID system is still recent, however the use of social media such as Facebook and Yahoo are widely spread. This observation implies that systems are designed to adapt to their respective national contexts. The audience's experience is at heart of the design to make citizen's e-participation experience easy and enjoyable. User-friendliness is

therefore a shared characteristic between *Rahvaalgatus* and *Join*, despite the different forms it can take in respect to the population cultural, social, and technological practice.

(Lack of) Verification

One main distinction between *Rahvaalgatus* and *Join*'s procedures is whether they include a verification step or not. On one hand, the Taiwanese portal has an explicit verification process of proposal right after submission, this step acts as a first filter to eliminate proposals that are evidently unfeasible because they're not in accord with the constitution, or inappropriate. On the other, *Rahvaalgatus*' explicit verification step comes after the threshold. To better understand *Rahvaalgatus*' procedural system, I reached out to a democracy expert from the ECA. The latter explained that apart from the terms of use on the website⁸ *Rahvaalgatus* doesn't really have a formal verification step beforehand. However, the co-creation phase may act as one since initiatives that were not of high-quality gain less attention from citizens and were abandoned before getting to the next step.

We can suppose that this distinction reflects the difference in platforms' primary intention. On one hand, by filtering proposals before getting them posted, the Taiwanese approach seems to be policy-oriented from the get-go, focusing of the feasibility of proposed ideas. On the other hand, Estonia's platform, by verifying after or virtually via co-creation process, adopts an approach of self-government, where citizens are trusted, given opportunities to be active in discussing arguments and filter proposals by themselves.

Forms of e-participation: petitioning culture vs. discussion culture

According to an article published on Open Government Partnership website⁹, presenting *Rahvaalgatus*' achievements, it is said that Estonia's infrastructure has successfully shifted from a petitioning culture to one that encourages argument-based e-participation.

This brings us to another difference between Taiwan and Estonia's platforms that is the place given to discussion. The expert from ECA explained that the co-creation phase is mandatory before a proposal gets sent to collect signature. This requirement isn't present on *Join* as any citizen can individually submit their ideas to collect petitions. Having compared the procedural steps, we can observe that different e-participation platform designs set the ground for different types of user interaction and discussion. By making the minimum 3-day co-creation phase mandatory, the Estonian model seems to prioritize argument-based approach, which encourages a discussion culture within its community.

This particularity contrasts with the Taiwanese model that seems to prefer petitioning culture, even though discussions and commentaries are evidently welcome on the platform. To conclude this section, we may estimate that a platform including a mandatory co-creation phase focuses on generating discussions and while one that enable individual proposals seems to be encourage participation via votes than communication. Consequently, it appears that the

⁸ *Rahvaalgatus*' terms of use, available at: <https://rahvaalgatus.ee/about>.

⁹ Open Government Partnership's article. Available at: <https://www.opengovpartnership.org/stories/rahvaalgatus-ee-yet-another-e-platform-for-civic-engagement-no-a-process-of-democratic-renewal-instead/>.

way procedural steps are designed shape the form of e-participation, and vice-versa, how e-government plans to strengthen e-participation also reflect in system designs.

III. Quantitative analysis : e-participation dynamics

In the second section of the research, we attempt to examine e-participation dynamics and activity using quantitative data.

For *Rahvaalgatus*, I was able to obtain a file of general statistics from the Estonian Cooperation Assembly (ECA) that are periodically shared to their newsletter subscribers. The file includes monthly data encompassing the number of proposals, collective proposals sent to collect signature, those that enter the legislative process, either to the local government or on a national level (*Riigikogu*), and the total number of signatures from January 2019 to March 2023.

For Taiwan's *Join* platform, I have access to aggregated open dataset of all proposal made from September 2015 to April 2022 retrieved on Taiwan's governmental data website¹⁰. A variety of information is presented: the date of submission, titles, content, number of signatures for each proposal, number of comments etc.

As *Rahvaalgatus* and *Join* data I have access to are of different time range; and because the comparative study requires a same time frame, the observations will solely concern the overlapped period, from January 2019 to April 2022. Focusing on these 40 months, the paper is left to work with 232 initiatives created on *Rahvaalgatus* and 7,510 original proposals made on *Join*.

A. General statistics

Estonia's <i>Rahvaalgatus</i>	
Created initiatives	232
Proposal sent to collect signature	176
Proposals sent to <i>Riigikogu</i> or local governments	87
Total signature	293405

Table 2

Taiwan's <i>Join</i>	
Created proposals	7510
Verified proposals (sent to collect signatures)	7130
Withdrawn by users	451
Proposals sent to legislative process (Threshold reached)	112
Total signatures	1172111

Table 3

To begin with, we will use general platform data (as shown on tables 2 and 3) to determine statistical results from users' e-participation experience.

¹⁰ Data retrieved from 公共政策網路參與平臺-眾開講(行政院版本). Available at: <https://data.gov.tw/dataset/58297>

Success rate: from proposal creation to the legislative process

Using platform data, I can assess the rate at which created initiatives are sent to the legislative process. On *Rahvaalgatus*, 87 out of 176 proposals (49%) successfully enter the legislative process, this represents almost half of proposals submitted to collect signatures after the co-creation phase.

However, the chance for such outcome seems scarce for the Taiwanese platform. On *Join*, 112 out of 7510 proposals reached the threshold, representing only 1.4% of potential proposals. The pie chart (see *figure 3*) shows general characteristics of *Join*'s open data within the observed 40-month period. We can note that, despite the larger number of successful cases, most proposals don't collect over 5000 signatures.

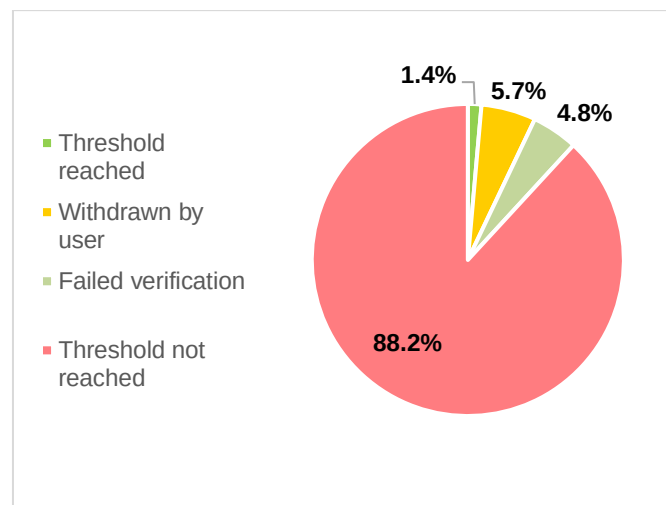


figure 3. General characteristics of Join's open data from January 2019 to April 2022.

Average number of signatures per proposal

On one hand, Estonia has an average of 1667 signature per proposal, while *Join* platform counts an average of 164 supporters per proposals, representing a tenth of the former result. Three possible explanations *Join* has 40 times more proposals sent to collect signatures (passed verification) than *Rahvaalgatus*, while only collecting 4 times more signatures.

There are many possible interpretations to these results: the Taiwanese threshold is too high to reach; there are relatively too many proposals sent to collect signatures; there aren't enough people on the platform.

B. E-proposals and e-signature's frequency

In a second quantitative analysis, I shall compare *Rahvaalgatus* and *Join* e-participation frequency within the 40-month period.

For this section, because no data is available to assess discussion, the quantitative analysis will focus on two other e-participation dynamics, namely proposal submission and electronic signatures from January 2019 to April 2022.

As we compare the e-participation frequency through the sole act of submitting proposal we notice that overtime, *Join*'s data (see appendix A) seems to be more consistent than those on *Rahvaalgatus* (see appendix B). For instance, in 2019, 100 proposals are monthly submitted on *Join*. The sole exception is toward the end of the year due to upcoming presidential elections. From January 2020 to April 2022, there is an average of 200 proposals submitted every month. On *Rahvaalgatus*, the monthly number of created initiatives seems to fluctuate more. For example, there are 5 initiatives created in September 2021, while the previous month saw 11, and the next one saw 12 creations.

We may interpret that Taiwanese model e-participation dynamics seems to be characterized through the submission consistency and quantity while *Rahvaalgatus* e-participation seems to be through other factors, for instance discussion and collective planning. These findings come to reinforce the hypothesis stated in our qualitative research regarding contrasting e-participation cultures between Taiwan's petitioning culture and Estonia's discussion culture.

C. *Rahvaalgatus* and *Join*: Towards (e-)democracy?

For the final part of quantitative section, we will measure the extent to which e-participation (signatures) is representative by the data in relation to the population (see *table 4*).

To respect the demographic proportion in our comparisons, we gathered yearly population statistics from governmental data portals, Estonia's *Statistikaamet*¹¹ and Taiwan's National Development Council¹². I also choose to focus on 2019, 2020 and 2021, as our 2022 datasets stops at April which would prevent me from having a complete yearly analysis.

	Estonia's <i>Rahvaalgatus</i>			Taiwan's <i>Join</i>		
Year	Population	Signatures collected	% of population	Population	Signatures collected	% of population
2019	1,324,820	19,917	1.5%	23,603,121	210,771	0.9%
2020	1,328,889	105,603	7.9 %	23,561,236	449,666	1.9%
2021	1,330,068	117,153	8.8%	23,357,314	456,309	2%

Table 4. : E.g. In 2020, *Rahvaalgatus* collected 105,603 signatures, representing 7.9% of the Estonian population. In 2021, *Join* collected 456,309 signatures, representing 2% of the Taiwanese population.

As we compare the different results in percentage of population from 2019 to 2021, *Rahvaalgatus* and *Join*'s number of signatures are increasingly representative of their own national population. We can observe a growth by 7.3 percentage points for Estonia and 1.1 percentage points for Taiwan. Despite significant gap in terms of pace between the two models, these results indicate positive prospects for e-democracy through e-participation platforms.

¹¹ Statistikaamet. Available at: <https://www.stat.ee/en/find-statistics/statistics-theme/population>.

¹² Population, National Development Council. Available at: https://pop-proj.ndc.gov.tw/main_en/dataSearch.aspx?uid=78&pid=78.

Conclusion

At the outset, the research intends to answer following questions: How e-participation instruments enable civil societies to be part of decision-making process? How different platform mechanisms can lead to different e-participation experience and results? What are the implications regarding the relationship between ICT and e-governance in a broader sense?

Findings

From national contextualisation to qualitative analysis to quantitative research, our paper concludes with a few take-aways.

The main implication drawn from the findings is that ICTs and Politics are part of a same e-participation ecosystem. Not only are they interdependent, but they are also mutually constitutive. From the ICT standpoint, digital participation infrastructure is purposely designed to encourage a certain civic participation dynamic, which may impact the political outcomes. On the other way around, institutionalization is key to guarantee such infrastructure's sustainability in society. By making proposals legally binding, C2G and G2C trust increases regarding the use of platforms' which results in greater number of users.

Today, the digital space and democratic space are interwoven in many aspects. In the political landscape, innovative uses of ICTs shorten the distance individuals and government to a point where "have come to share a similar ethos", we are therefore witnessing a "partial erasure" of the traditional citizen-government (Biberman, 2021).

To go deeper into analysis examining system mechanisms relationship with e-participation dynamics, the paper compared *Rahvaalgatus* and *Join*'s characteristics and observe the differences in outcomes considering specific mechanism and procedural steps of respective systems. *Table 5* resumes our findings.

	<i>Rahvaalgatus</i>	<i>Join</i>
E-participation experience	Collective	Individual
Proposal frequency	Low	High
Potential of getting to the legislative process	High	Low
Encouraged culture	Discussion	Petitioning
System design's approach	Qualitative	Quantitative

Table 5. Summary of findings

If we were to imagine proposal platforms as modern *Ekklesia*, on one hand *Rahvaalgatus* would be an assembly with dynamics characterised by its argument-based approach. Although in small quantity, initiatives sent to gather votes are fruits of collective debates and stand a great chance of being considered by the parliament. On the long run, this system nurtures a discussion culture, where participation is based on argumentation and interaction.

On the other hand, Taiwan would be a larger assembly hosting many more citizens participating and plenty of ideas proposed. Nevertheless, proposals are initiated individually, and as the threshold is high, they stand little chance of entering to the legislative process. Policy suggestions therefore really need to be convincing and motivating to gather enough supporters. This

system design results in petitioning culture, where participation is significantly reflected by proposals and voting.

Limits to our study

Despite our findings and implications on the impact of proposal portals' system design upon e-participation dynamics, our study presents limits to have a grasp of e-participation in Estonia and Taiwan.

First of all, portals only constitute a part of e-participation activities in respective societies. In Taiwan, like in Estonia, hackathons are also considered a form of e-participation practice. As such, this research doesn't provide a global view of e-participation dynamics outside of *Rahvaalgatus* and *Join*. A second and third limit to our study is the lack of qualitative analysis regarding platform content and profiles. Past scholars like Glencross analysed former platform TOM's most popular topics, while Huang retrieved data regarding users such as gender, age, etc to assess e-participation with a sociological approach. On one hand, content analysis would require us to study the topics of proposals made on *Rahvaalgatus* and *Join* while providing us elements to perceive the kinds of demands citizens have through initiative portals. Content analysis would also be a great way to see how diverse these proposal's themes are. On the other hand, profile analysis requires more of a sociological approach to platform analysis. We could gather information about users' sociological background, such as their gender, age, etc to have inspect another dimension of Estonia and Taiwan's e-participation.

Finally, as there are still significant gaps in the literature, it is difficult to confirm the viability of our findings. We will need to have more examples and case studies, perhaps more datasets to work with in the next few years and decades in order to validate the results we obtained throughout our research. Nevertheless, the paper makes a first step and hopes to serve current literature's loopholes.

E-democracy

Overall, from a democratic perspective, both *Rahvaalgatus* and *Join*'s growing ratio of signatures to population sends out positive signs for e-democracy potential. As Taiwanese digital minister Audrey Tang puts it, e-democracy is about "enabling a government that works not just for the people but **with** the people." By providing a space where policy making is no longer a matter reserved to political actors, *Rahvaalgatus* and *Join* subscribe to this idea of inviting citizens to be part of the e-democratic journey.

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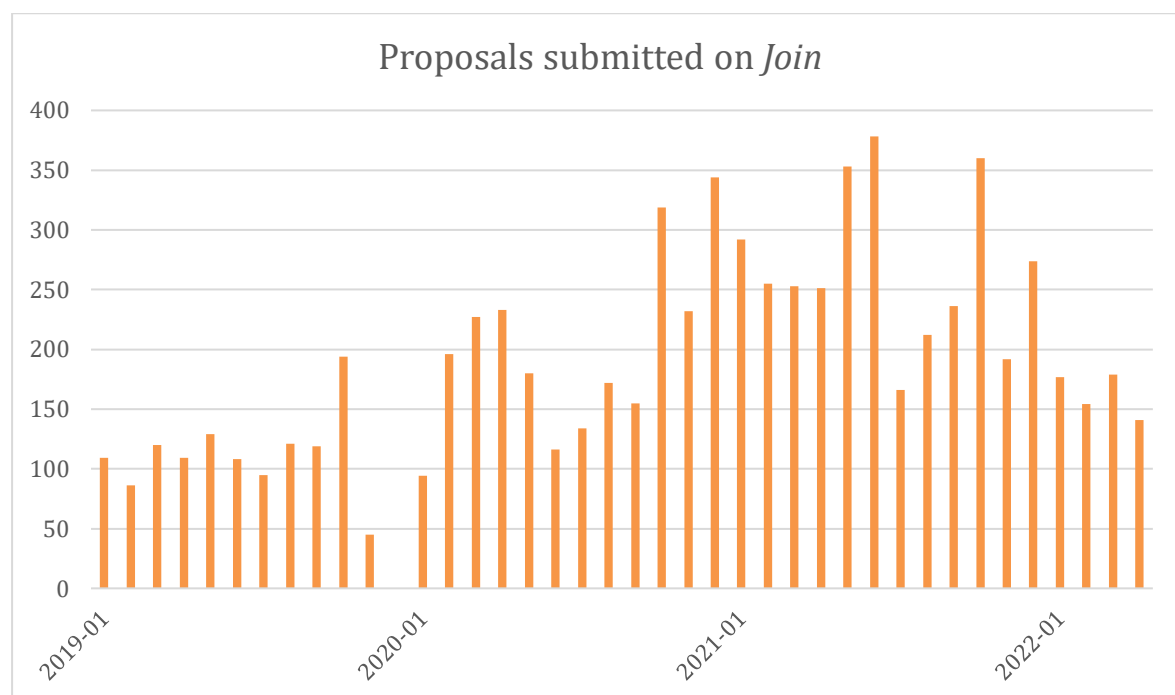
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Appendices

Appendix A



Appendix B

