# Unconstitutional Supranational Arrangements for Patent Law: Leaving Out the Elected Legislators and the People’s Participatory Rights

Dimitris Xenos\*

*School of Law and Social Sciences, University of Suffolk, Ipswich, UK*

## Abstract

Substantive economic law in the context of patents creates industrial property rights and monopolies in almost all fields of technology, affecting considerably the economic and social well-being of the state and its people. The mass nationalisation of the international patents of the European Patent Office (EPO) has long raised serious questions about democratic control, in view of the reality that most of its patents are taken by large companies and corporations from a small number of states, mostly from outside the EU. The EU has recently expanded this system by creating a federal (unitary) patent framework consisting of the EPO and a new international court, the Unified Patent Court (UPC), that abolishes the already limited national control. But how can national control ever be totally abolished, especially in such an important social-economic context? And, can the EU exercise effective democratic control of the federal system that it has created? The observed constitutional asymmetries of a federal/unitary patent system that is created in the absence of a federation and is based on two non-EU bodies (EPO, UPC) no longer guarantee the democratic participatory rights of the people for whose benefit economic rules and property rights are justified, regulated and applied.

**Keywords**: Democratic governance, EPO, UPC, unified patent court, unitary patent, IP, separation of powers, economic law

'Today’s world is not divided by ideology, but by technology. It is a world of innovation and adoption, but also of exclusions and divides.'

‘[P]atent policy has now entered the political arena, is held up to public scrutiny, and is obliged to justify its own existence and its own choices.'[[1]](#footnote-1)

Manuel Desantes

## 1. Introduction: the democratic constitutional structure of separation of powers and the patent system

The current study undertakes a constitutional examination of the patent system in Europe in order to evaluate democratic safeguards in the functioning of that system. Such institutional safeguards are particularly necessary in the determination and application of economic policies to which the patent system is connected and which it serves. Applying constitutional standards to the organisational framework and functioning of the patent system reveals broader issues of democratic governance, institutional interoperability, the participatory rights of the people, and the continuous downsizing of the fundamental democratic powers of the state.

The focus of the study is on the institutional structure of the patent system, as it is influenced by international and supranational systems, which are very extensive in European continent. It looks at both the current patent system in Europe and the new institutional arrangements of the EU. In general, constitutional safeguards can concern every legal system and area of law. In the context of substantive economic law, such as patent law, their examination goes also to the core function and purpose of patents and their impact on the society and national state. The element that links everything in substantive economic law in general, and in patent law in particular, is economic policy (including considerations of the economic impact of the patent system itself) that serves as both the starting and concluding point of patent law developments, amendments and application of its rules. A constitutional law inquiry can target this element by examining the institutional structures of the patent system in order to identify and evaluate the democratic safeguards of separation of powers and, especially, the role of elected legislators, through whom the participatory rights of the people can influence the element of economic policy and exercise control of the patent system. In simple language, this means that since the main political-economic purpose of patent law and the development and application of its substantive legal rules are inextricably linked to the element of economic policy, that element cannot escape the democratic control of the elected representatives of the people. Such a constitutional question examines whether constitutional safeguards are effectively implemented by the substantive economic law system of patents, and also inescapably provides food for thought about the relevance and future of constitutional law in the face of the continuous trend towards denationalisation of key institutional structures and powers of national state systems.

Certain general points should be explained in this introductory section for reference purposes and in order to make the subject more accessible to the journal’s readership base. Starting from the basics, it is stressed that patents have a dual nature as industrial property rights-monopolies that are granted for inventions in almost all fields of technology. In general, the main justification of patents is that they encourage technological innovation and strengthen productivity and competitiveness. What is more, patents create exclusive rights of use of a technological solution (invention), and in this sense they are technological monopolies that can potentially restrict business activities in entire industrial sectors. The monopoly effect of patents can be associated with market failures where patent-dependent industries and markets are dominated by a small number of economic actors (patentees). Consequently, legislative control is required to determine and re-adjust patent rules and standards by evaluating and balancing the costs and benefits of the patent system that can primarily be observed and estimated within the actual economic and social conditions of the national state.[[2]](#footnote-2)

The rules of patent law embody a definitional element of economic policy which is determined and adjusted through various legal tests, thresholds of inventiveness and scope of patentability of technological inventions that the main institutions of powers (legislative, judicial, administrative) set, apply and continuously develop. In all instances, the element of economic policy is always reflected in legislative rules, judicial decisions and administrative/executive practice of patent offices. The way by which these rules are set and applied always creates an economic effect, which can change or be different, if a different approach, legal principle or rule applies. In this respect, the relativity and subjectivity of development and application of patent law is juxtaposed by the objectivity of its observed economic impact, as connected to legal choices and application of patent rules.

As markets and socio-economic conditions vary considerably between the member states of the EU and between them and non-EU member states, it becomes evident that national evaluation and input is inescapable in practical economic terms – that is, without considering fundamental constitutional safeguards of democratic governance.

Democratic control of the patent system has become a particularly pressing and pertinent issue because patents affect almost all industrial sectors and markets, as there is hardly any human professional activity that is not dependent on technology. It is also a historical fact that the emergence and survival of states has always been linked to technology, and it is an economic fact that technology has always been a very important aspect of business and is increasingly its economically most important aspect and the key factor that affects, positively or negatively, productivity, competitiveness, and employment.[[3]](#footnote-3) As a result, the way patents emerge and are enforced as industrial property rights-monopolies, affects (positively or negatively)[[4]](#footnote-4) the economic development and sustainability of the national state and its people.[[5]](#footnote-5) Due to the high economic significance of patents and the cross-sectional use of technology to which patents relate, their impact is felt in the social sphere also, and therefore patents have a social impact as well. A more focused or sectorial approach can explain this more clearly, since technological inventions for which patents are granted include medicines, clean energy and the intermediate sector of computer programs, with all these industrial sectors having a substantial and direct impact on the social, educational and security systems of the state and their users (industrial players and consumers).[[6]](#footnote-6) As the development of patent law is not and cannot be an aimless exercise but pursues both general and specific socio-economic policies, it must be duly evaluated and updated through the constitutional framework of separation of powers of a democratic state that allows the participation of the people on whom economic rules are imposed and for whom they are determined.[[7]](#footnote-7)

The same applies, to a certain extent, to the functioning of the supranational organisation of the EU whose legislative and executive competences in economic matters are placed within a wider socio-political framework. By way of example, when the EU Commission announced its socio-economic policies in its white paper ‘Together for Health: A Strategic Approach for the EU 2008–2013’,[[8]](#footnote-8) would it be reasonable to expect that it would have been included and taken into account in the subsequent impact assessment that the EU Commission prepared for its legislative proposals on a new unitary patent few years later? This is a reasonable requirement if one considers that patent monopolies may block access to medicines and burden heavily state budgets on which entire social welfare systems depend. Although it is stressed that patents encourage innovation and, by extension, pharmaceutical innovation, the monopoly effect of patents is a pertinent issue that needs to be tackled also. Accordingly, issues such as what can be patented or claimed as a monopoly and what the quality of a technological invention should be reflect relevant patent criteria and tests whose legal determination, application and development, need due consideration of wider socio-economic policies, and hence a close inter-institutional co-operation whose base lies in the democratic structure of separation of powers.

All these issues should be evaluated within the existing and new institutional arrangements of the patent system that operates increasingly and largely outside the state’s structures. It should be mentioned that the patent system is influenced and accordingly restrained by an international harmonisation of substantive patent law rules of the WTO’s Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).[[9]](#footnote-9) At the regional, European level, such harmonisation has been accommodated and supplemented by an international convention, the European Patent Convention (EPC) and its administrative body, the European Patent Office (EPO).[[10]](#footnote-10) This international administrative body grants international patents (hereinafter the EPO or European or international patent) that are subsequently transformed to nationalised industrial property rights in those contracting states that are designated by the applicant. To a certain extent, the harmonisation of general rules of substantive economic law is desirable for the facilitation of international trade and investment. However, the element of economic policy that is the key determinative of substantive economic law (e.g. artificial rules and standards of patent law) cannot possibly suit all states in all instances, and for this reason national parliaments and other state bodies (courts, patent offices) may need to adjust patent rules and norms to the particular needs of the state and its people.

Additional international co-operation exists between the world’s five largest patent offices, those of the US, Japan, South Korea, China and the EPO.[[11]](#footnote-11) The role and function of patent offices is very crucial, since the patent emerges as an actual property right-monopoly from the patent office. The four largest national patent offices, as well as all other patent offices in the rest of the world outside Europe, are controlled directly by the representatives of the people. In contrast, the EPO does not represent any particular country because of its international nature and function. As the EPO grants annually dozens of thousands of patents (currently more than 100,000 pa) – the majority of which are granted to corporations that are not based in the EU (see detailed statistical information in following section) – there is a direct impact on national markets, industries, social welfare and administrative systems, which are confronted with a mass import of industrial property rights-monopolies that a body operating outside the national constitutional law framework grants in massive numbers.

The creation of industrial property rights which are imported from the EPO results in an apparent democratic deficit, because the other and hierarchically higher institutions of power, that is the Parliament and the judiciary, cannot directly influence the EPO’s economic choices when this international administrative body interprets, applies and develops patent rules, despite the fact that it is the national state which is directly affected by the mass import and nationalisation of EPO patents.

As such peculiar institutional arrangements have long been known and criticised, one would reasonably expect that they would have been addressed at some point by the EU which has continuously self-asserted and expanded its competence in the area of intellectual property rights within which patents fall. As is the institutional practice everywhere else in the world, it would seem constitutionally natural that the existing EU agency, the Intellectual Property Office of the EU (EUIPO), could include a patent office so as to bring the European patent system within the democratic checks and balances of the EU’s constitutional structures. This did not happen. Instead, the political initiative of the EU Commission was to push for a federal, and yet international, system that builds on and amplifies the existing democratic deficit surrounding the EPO system.

In particular, amid the severe economic crisis in the critical period 2011-2012 when a good number of European states were being forced into bailout financial programmes of austerity,[[12]](#footnote-12) the push of the EU Commission to federalise and internationalise the patent system in Europe passed largely unnoticed. With political debates and media attention turned elsewhere, the EU organs, using the very exceptional mechanism of enhanced co-operation, passed relatively easily two EU Unitary Patent Regulations[[13]](#footnote-13) that impose the existing international system of the EPO as a central, administrative body for the granting of patents which can automatically be validated in 25 member states (NB: few states did not participate).[[14]](#footnote-14) This is the new (additional) federal effect of the EPO patent that is called EPO patent with a unitary effect (EPO-UE). These EU Regulations have set up the constitutional design of the new European patent system connecting the EPO patents to a new, federal, judicial branch of power, the Unified Patent Court (UPC), for their judicial enforcement. By way of an intergovernmental, EU-member-states-only agreement that the EU sponsored (hereinafter UPC Agreement),[[15]](#footnote-15) (NB: few states did not sign it),[[16]](#footnote-16) the new judicial body is given exclusive jurisdiction to deal with the EPO patent (with/without a unitary effect) under its various court divisions (local, regional, central) and appellate level – thereby abolishing the existing jurisdiction and involvement of national courts.[[17]](#footnote-17) As a result, a new international court is created, to whichthe CJEU is also remotely connected – if, and when, there may be a referral about an issue relating to few, peripheral, EU legal instruments which are listed in the UPC Agreement.[[18]](#footnote-18)

The following sections (excluding section 2) subject the European/international patent system to a constitutional examination of its institutional structure and interoperability framework in order to ascertain if and to what extent democratic control can effectively be exercised by the elected representatives of the people. Part I looks solely at the existing European patent system that involves mainly the EPO. This scope of study is necessary because, first, the existing system has not been replaced yet and will remain valid for those states that did not sign or will not ratify the UPC Agreement, and, second, the new European patent system that the EU has created builds on and expands the existing system. Part II follows up the analysis of Part I and looks at the expansion of the existing system and its transformation to a federal and yet, international, patent system that retains the international patent office, the EPO, as its central base, which is now supplemented by a new international judicial body, the UPC. In the current study, the main standard of assessment at all jurisdictional and institutional levels is the pertinent issue of democratic control of the patent system, having in mind also its socio-economic impact. Where such control is found not to meet essential constitutional standards and safeguards, the analysis continues in order to identify and analyse the exact degree of democratic control that has been left, however limited it might be.

Before going to Part I, a general section is included to juxtapose key points of economic impact about the ever-increasing, mass nationalisation of EPO patents with relevant economic information of patent data and statistics. Such objective evidence reveals current conditions and realities about economic capacities and risk exposure of national states that help the reader appreciate the need for a constitutional enquiry regarding democratic control of the patent system.

## 2. Economic evidence about the nationalised international patent of the EPO

Because of the dual nature of patents as industrial property rights and monopolies of technical solutions/inventions, patents can have both a positive and negative impact. There is no static, neutral or positive-only situation about the impact of the patent system, in the sense that those who benefit most by successful patent monopolies tend to acquire bigger market shares, pushing out gradually and constantly those who cannot use the monopolised technological inventions. In addition, the more patent monopolies that enter the national markets, the more difficult it is to compete in innovation and the relevant industrial markets and sectors and acquire patents when much of the technological territory of inventions and solutions is already taken. The issue of how many patents should enter the national markets depends, to a great extent, on decisions of economic policy about the desirable quality of patents – which the law can define by adjusting the relevant legal thresholds of innovation accordingly. Controlling patent quality equates to an effective control of the flow rate of patents (how many patents should enter/be afforded in the national market) so as to mitigate, as far as possible, any negative monopoly effects of patents.

As a great or the greatest number of patents that are enforceable at national level are granted by the EPO, it transpires that the principal decision-maker and creator of ‘national’ proprietary rights is an international organisation. Consequently, democratic control of patent monopolies cannot be realised without effective institutional control of the EPO and its policies –an issue that is not merely economic but constitutional also.

Moving beyond general points of economic and institutional theory of the patent system, the need for democratic control of its policies and practices can best be appreciated by looking at relevant patent data of the EPO’s work. The starting reference period can be the critical time when the legislative proposals on the new, Unitary Patent system were submitted to the EU Parliament for its approval in 2012. In that year, the EPO granted 65,687 patents.[[19]](#footnote-19) This annual number was added to the hundreds of thousands of pre-existing international patents of the EPO system. In 2017 the EPO announced a record number of granted patents for the patent year 2016 that reached almost 96,000, an increase of 40% from the previous year due to a push by the EPO management.[[20]](#footnote-20) The patent volume can be used to understand how many patent monopolies enter the national markets as ‘nationalised’ industrial property rights, as subdivided by the technological sector(s) concerned.

The risk exposure of national states to the mass nationalisation of international patent monopolies can be estimated in relation to the national origins of EPO patents and the patent share of the economic actors involved. In 2012, the year of the EU Unitary Patent Regulations, 55% of the total patents that the EPO granted went to companies that were not based in the EU. For 22 member states (not including Croatia which had not yet joined the EU), their combined share was just 8.4%. The corresponding share of France, Italy, the UK and the Netherlands taken together was 16.4%. Notable is Germany’s share, 20.3%, which is close to the total share of the rest of member states.[[21]](#footnote-21) The same picture is also observed in the following years[[22]](#footnote-22), while the subsequent inclusion of Croatia as an EU member state is indifferent due to the country’s very low patenting activity. The statistics show a very unbalanced picture that reflects the sharp differences in economic and technological capacities which exist between member states and between them and non-EU states.

More vulnerable to the monopoly effect of patents are the SMEs (small and medium size enterprises) whose sustainability is particularly important, in view of the economic fact that 99% of all businesses in Europe are SMEs.[[23]](#footnote-23) The position of SMEs needs particular attention, since their development and sustainability occupies a central and regular place in the political communication narratives of EU organs, including those for the new unitary patent system (see discussion in Part II below). These economic actors are particularly important for a good number of states because their innovative capacities depend, to a good extent, on SMEs. It is difficult to maintain that SMEs can generally benefit from the patent system as they can have a very small presence only in that system. In fact, a recent EU study has revealed that only 0.8% of SMEs hold at least one patent, and only 0.1% of them hold an EPO patent.[[24]](#footnote-24) For this very small portion of SME patentees, their respective position should be appreciated vis-à-vis their main competitors, the large companies and corporations, which have long dominated technological markets. In 2014, Eurostat also published, albeit ex post (ie. after the EU Unitary Patent Regulations had been enacted), a relevant study showing that the share of EU-based SMEs in EPO patent applications is around 17%, compared to 79% for large companies and corporations.[[25]](#footnote-25) In our more recent university study that looked at the actual granted patents (as opposed to just patent applications), the share of EU-SMEs drops to 10%, while for large firms is 82%.[[26]](#footnote-26) The weak position of SMEs can be explained by the lack of access to finance and R&D facilities which condition technological innovation in the current global conditions of fierce technological competition and the first-come-first-served legal rules of the patent system (meaning that the question often is not if innovation is possible but when i.e. how fast?)[[27]](#footnote-27) In addition, as the technological territories of inventions for which patents are granted are increasingly, continuously and massively taken by large companies and corporations, the room for innovation, let alone for a fast one, is proportionally reduced. Moreover, patent litigation being very expensive can be used as a vexatious patent strategy by some corporations[[28]](#footnote-28) and has become also an industry in its own right, attracting companies that merely acquire patents in order to sue and exhort license fees from others (aka ‘patent trolls’).[[29]](#footnote-29) All these negative issues create adverse conditions for the sustainability of SMEs or for young companies trying to enter patent-dependent technological markets.[[30]](#footnote-30)

The risk exposure of SMEs to the patent system affects and determines correspondingly the national risk exposure, especially of those states whose patenting activity is dependent, to a good extent, on the patenting activity of SMEs. For example, Germany and Finland are less affected by pressures on SMEs, as their dependency on patenting SMEs is only around 10% in the total number of patents that their nationally-based companies get from the EPO, compared to say Italy and Poland, that rely on SMEs by 37.1% and 34.0%,[[31]](#footnote-31) respectively – a notable difference explaining the more sceptical political stance of these states towards the EU’s unitary patent package.[[32]](#footnote-32)

The statistical evidence and patent data presented above show notable imbalances that are observed in the national patent export-import ratio of EPO patents and in the respective patent shares of SMEs and large companies and corporations. In such an unbalanced economic reality, the rules, decisions and practices of the patent system need a reasonable re-adjustment to avoid or mitigate the negative effect of patent monopolies and to allow fair room for development and sustainability of national economic actors, and especially the SMEs. Accordingly, parliamentary control is required, first in order to guide and control the choices and policies of the responsible patent office when they interpret, apply and develop patent law and second, to intervene effectively in order to mitigate and/or correct any undesirable economic effect associated with the patent system.

## Part I: The Current System (its Last Phase for Some?)

## 3. Legislative power and the patent system: general points of constitutional relevance

In patent law, the question of whether there are good or bad rules, standards and decisions, is a matter of practical assessment that is usually undertaken ex post vis-à-vis the adopted economic policies and impact of patent law. Such assessment can only take place or matter in relation to the particular socio-economic conditions and needs of the state and its people. The role of constitutional law is to make sure that the most democratic branch of state powers, the Parliament, is able to perform its essential democratic function and define an economic policy which will enable the elected representatives of the people to review existing rules and practices, including those developed frequently by the other institutional bodies of power (ie. courts and patent office) and intervene where necessary.

Patent laws and rules change when economic and social policies and conditions change and/or the representatives of the people change. In these terms, the development and continuity of patent law is neither neutral nor static but constitutes an implementation of an ever-changing economic and social policy that suits the economic development and social welfare of the people in a given period of time. This basic democratic explanation in the context of substantive economic law, in general, and of patent law, in particular, has been reminded in *Dranez Anstalt v Hayek* where the English and Welsh Court of Appeal has pointed out that

[t]he grant or registration of a patent confers a monopoly. The statutory monopoly can be justified on the grounds that it is necessary (for a limited time) in order to encourage inventors, and those who fund them, to apply their skills and resources in developing products and processes from which the public will benefit. But *the* *balance* between the benefits which will accrue to the public from permitting monopolies in order to encourage invention and the detriment which may be suffered by the public from monopolistic practices *is struck by the patent legislation*.[[33]](#footnote-33)

This passage confirms the basic point that wider economic considerations influence the shaping of substantive economic law, because there are costs and benefits that need to be balanced.

As with other areas of law, patent law is an amalgam of patent legislation, judge-made legal developments, and administrative decisions, principles, rules and standards. The choices made at any institutional level of power always reflect an economic policy because they always have an economic impact – which can differ depending on the adopted choices for the given rule or standard. For example, rigorous legal tests and rules usually raise the bar of patent quality and by extension that of patentability.[[34]](#footnote-34) Where a rigorous test is set by the court or patent office, it becomes more difficult for companies and inventors to establish it and as a result, it influences directly (by reducing) the number of industrial property rights/monopolies entering the market. Whether or not an explanation of economic policy accompanies the development of patent rules, an economic policy and impact is always reflected in patent rules and decisions. In such context, the democratic function of legislators is not only seen when they pass laws but also when they monitor, evaluate and intervene to correct the effect of any changes in the interpretation or development of patent rules and standards that other institutional bodies have effectuated. In this respect, neither the patent system nor the Parliament work in isolation but all branches of state powers interact within a constitutional framework that allows the requisite institutional interoperability guaranteeing the participatory rights of the people and the necessary democratic checks and balances.

An illustration of these points can be given with reference to the explanation of Manuel Desantes, then-Vice President of the EPO’s international affairs, who has pointed out that ‘neither technological progress, nor the patent system is a neutral device, and it is only natural that policy issues are controversial.'[[35]](#footnote-35) As the patent system is not and cannot be neutral, and the development, interpretation and application of patent rules are policy-dependent, it is likely that a controversy will arise from the effect of patent rules when some economic actors benefit more than others and hence, at the expense of others, due to the monopoly effect of patents. Although controversies in the patent system are seen as ‘natural’,[[36]](#footnote-36) any unwarranted effects can and must be addressed by the elected representatives of the people who must be able to scrutinise the work of the courts and patent offices and step in accordingly. In that way any controversy, disagreement or misinterpretation over economic policies of patent rules and system can perceivably be remedied, mitigated or addressed promptly by the Parliament – depending of course on the effectiveness of its scrutiny mechanism and the people’s ability to exercise effective control of and pressure on their representatives (e.g. public debate, media coverage, specialised fora, academic research). For this purpose, an interactive, constitutional framework needs to be secured to guarantee the democratic operation of the patent system and the direct and effective involvement of the people’s elected representatives.

## 4. National legislative power and the nationalised international patent: can the former effectively control the latter?

Dealing with issues or controversies about economic policies and impact (positive or negative) of the patent system or, simply, trying something different in pursuit of a better economic result, appears difficult when the industrial property rights and monopolies that the patent system creates in the national market originate from the international organisation, the EPO. Although the EPO is an international administrative body, the relevance and effect of its work is similar or the same to that of the national patent office. It examines patent applications for technological inventions and grants or not the patent in accordance with the EPC and its self-developed rules and principles. As the international patent of the EPO is subsequently transformed to a national industrial property right/monopoly in the states designated by the applicant, it produces immediate, legally binding effects and can be used as a business asset to expand the activities of the company concerned, and/or to extract licensing fees or sue others (from the great number of competitors). As a result, the binding legal effect of the nationalised EPO patent monopoly may restrict business activities or innovation prospects of other companies and entire industrial sectors, in certain circumstances.

Although the international patent of the EPO is imported and planted in the national market, the rules and principles that the EPO employs when examining patent applications do not take into account the economic capacities, development and sustainability needs of the national state. The element of economic policy, which is the key determinative of patent law, may still be discerned but is disconnected from the national economic and social conditions and needs. Thus, on one hand, actual property rights and monopolies are created (imported) at national level in the very important field of technologies and, on the other, the legislators and, the people they represent, cannot influence directly the patent rules and underlying economic policies of the ‘nationalised’ proprietary rights, and the incoming flow rate of patent monopolies in the national system.

The patent data used in section 2 above has shown an unbalanced situation resulting from the choices of the EPO in interpreting and developing the rules of the EPC. States with a substantial patent deficit, as seen in their patent import-export ratio, do not usually benefit from the continuous and mass import of dozens of thousands of foreign-owned, industrial property monopolies that are added annually to the pile of thousands of patents which already exist in the national market from previous years. In such conditions, and taking into account that patents may determine, to a certain extent, market shares in industrial and commercial sectors, it appears increasingly difficult to secure a sustainable position and a reasonable innovation activity for the nationally-based companies and fair opportunities for young companies.[[37]](#footnote-37) Where an unbalanced situation exists, the basic and obvious mitigating approach is to reduce the number of patent imports. This can be achieved by raising the standards of patentability, such as the legal tests for the interpretation and application of the EPC. When patenting becomes less easy, the number of industrial monopolies entering the national markets is proportionately reduced. A more targeted and selective approach can also be taken in relation to specific fields of technology that are particularly vital for state economy and social welfare systems (e.g. medicines).

However, as the national state has no jurisdiction over the international patent office, it cannot dictate or influence directly the rules and function of the EPO. In this respect, the one and only economic policy that underlies the applicable patent rules and standards that determine the ‘nationalised’ industrial property rights-monopolies is that of the Munich-based, international patent office.

In such institutional design, the requisite constitutional link between the national Parliament and the administrative body which is responsible for the creation of industrial property rights/monopolies at national level does not exist. As a consequence, the focus of the current study is forced to shift to more basic and compromised positions. As the question of whether the Parliament can exercise its full constitutional and democratic role and guarantee the participatory rights of the people in the context of patents and technologies is answered in the negative, a residual area of inquiry is left as to whether the people’s representatives have any role to play however small or indirect it might be. This looks at whether there is any form of control of the EPO patents that enter the national system.

To the extent that the national Parliament cannot directly control the EPO, the whole issue of legislative control has only an ex post facto relevance – that is, it can only be considered at the post-granting stage when the EPO patent has already emerged as a ‘national’ property right and monopoly. At that ex post-level, the Parliament retains an indirect role through its interaction with the other institutional bodies of the patent system, that is the national patent office and the courts, which, however, operate under a more limited institutional function compared to legislative powers.

The indirect role for the Parliament is mainly sought in circumstances where the EPO patent is enforced in court actions between litigant parties in individual disputes concerning enforcement of patents. The indirect role of the Parliament is available, as follows: the legislators exercise control by enacting and amending patent laws and rules, which national courts subsequently apply in legal actions involving national (and nationalised) patents. Although the law of legislators is heavily influenced by the EPC and TRIPS, there is still room for differentiation and manoeuvre through a targeted adjustment of relevant standards, principles and thresholds of patent law.[[38]](#footnote-38) However, the courts’ involvement is only possible in individual cases only, if and, more importantly, when, a legal dispute may reach the courts. Considering that less than 1% of all patents become the subject of litigation,[[39]](#footnote-39) it is reasonable to assert that the role of the courts and through them that of national Parliament remains minimal. What is more, the most effective judicial power which can target directly administrative bodies, including patent offices, that is the known mechanism of judicial review, which is a constitutional cornerstone of a sound democratic legal system,[[40]](#footnote-40) is not available because the international organisation, the EPO, is beyond the reach of national courts.[[41]](#footnote-41) Therefore, the only available means of indirect control that the Parliament possesses is through its institutional interaction with the national courts whose role is restricted to a case-by-case only examination of the nationalised international patent on the rather limited occasions of patent litigation between private individuals.

Confined to such circumstances only, legislative control of the nationalised EPO patent is exercised through parliamentary oversight and the possibility of ex-post intervention over the effect of judicial decisions. Such control takes place mainly by consolidating or rejecting judge-made legal developments and interpretations when amending or enacting relevant patent laws of the state.[[42]](#footnote-42) This kind of constitutional interaction between the legislators and the judiciary is pertinent in economic law where policy evaluations and decisions are necessary. In such a context, economic policy considerations in judicial reasoning are indispensable and desirable on the categorical condition that a last check can be performed by the Parliament.[[43]](#footnote-43)

From the foregoing discussion, it can be concluded that the role of the people’s representatives in controlling the mass import and nationalisation of the EPO’s international patents has only been possible indirectly, through the Parliament’s institutional interaction with the national judges, who have only a limited, ex post and ad hoc involvement, in relation to the very small percentage of patents that ever reach the courts.

## Part II: The Creation of a Federal Patent System in the Absence of a Federation

## 5. The EU’s involvement: creating a federal system based on non-EU, international bodies – and, can a federal system ever be international?

The international patent that the EPO grants and which is subsequently nationalised (ie. becomes a national proprietary right) in certain designated states will be upgraded to a federal patent. As noted in the introductory section, the EU organs enacted two EU Unitary Patent Regulations (especially Regulation No 1257) that render automatic the nationalisation of the EPO patent to 25 member states of the EU and link it to a new international court, the UPC, which has been set up by an EU-sponsored, intergovernmental agreement of 25 member states. As the administration and enforcement of the EPO patent will no longer involve national institutions of power, the federalisation of the patent system will be absolute: both the granting of the nationalised EPO patent (i.e. the actual emergence of the proprietary right) and its judicial enforcement will be made by centralised institutions, the EPO and UPC, respectively. As these institutions are non-EU international bodies, and no national institutions will be involved,[[44]](#footnote-44) the new patent system that the EU has created is not only federal but international also – an oxymoron, since a federal system cannot be international. Indeed, the EU has created a powerful, international institutional system in one of the most or the most crucial areas of real economy that negates its raison d’être and shows that after so many decades of political-economic integration and the associated communicative narratives, its function has been hijacked and has caused a new, unprecedented loss of national sovereignty whose justification is no longer connected to any political purpose or ideal but rather to, what is basically, an adversarial system only (patent monopolies, exclusive use of technology, and court actions) that mainly benefits a small number of states, mostly from those outside the EU and their large companies and corporations.[[45]](#footnote-45)

In this new institutional and political reality, the constitutional questions of the participatory rights of the people, as they are asserted through their interaction with and control of their elected representatives, should be re-considered and re-examined with regard to the unitary patent system that the EU has created. The first of the following sections opens with commentary of economic-political information that EU institutions have officially used – and not used. Having secured such background information as a point of reference, the study moves on to critically examine the role of legislature and the participation rights of the people at both national and supranational levels.

The discussion and arguments of Part I of this study remain relevant since the new federal system builds on and expands the current patent system in Europe. The previous sections have also an independent, individual relevance because the new, unitary patent system has not yet taken effect at the time of the article’s submission, although its ratification may be close. In addition, a good number of national parliaments have not ratified, and may never ratify, the UPC Agreement, although their governments have signed it at the European level and are still bound by the EU Unitary Patent Regulations. For these states, the analysis of Part I will continue to apply, as their national courts retain their jurisdiction in the case-by-case only enforcement of the nationalised EPO patent. But, as they are bound by the EU Unitary Patent Regulations, the new much wider, automatic and federal territorial coverage that these EU Regulations give to the EPO patent will involve a very substantial increase in patent monopolies, as is seen in section 7 below.[[46]](#footnote-46)

## 6. Preliminary issues of EU competence and the economic-political justifications of the new unitary patent system

The EU’s involvement in substantive economic law in the area of patents should first be approached as an issue of jurisdictional competence. The enactment of the EU Unitary Patent Regulations in December 2012 rested on Article 118 of the Treaty on the Functioning of the EU (TFEU) that is included in its Chapter 3 (Approximation of Laws). That Article, introduced with the TFEU for the first time, allows for harmonisation of laws in the area of intellectual property. As the EU had already self-asserted its competence in that area, the insertion of Article 118 in the TFEU was basically an ex post consolidation and recognition of a pre-existed political practice. It should be noted however, that unlike other intellectual property rights, such as trademarks and designs, only very few patent-related legislative instruments, of limited/peripheral scope, have passed in the pre- and post-Article 118 period.[[47]](#footnote-47)

Harmonisation of intellectual property laws under Article 118 requires a unanimous EU Council, a requirement that was circumvented by way of enhanced co-operation to open the way for the EU Unitary Patent Regulations.[[48]](#footnote-48) A careful reading of that Article shows that its provisions do not say that a non-EU organ, the EPO, which is a key focus of the EU Unitary Patent Regulations, can be used for ‘authorisation, coordination and supervision arrangements’.[[49]](#footnote-49)In addition, these EU Regulations are inextricably linked to the new court, the UPC, and they cannot enter into force without it. However, there is nothing in Article 118 that provides for or hints anything about judicial enforcement or any kind of judicially-related work. Indeed, there is a separate Treaty provision under Article 262, TFEU (ex Article 229a TEC) that allows – naturally – only the involvement of the Court of Justice of the EU (CJEU) in the adjudication of intellectual property disputes. It should also be observed that Article 118 is included in the part of the Treaty that guarantees ‘approximation *of laws*’ and not of institutions (emphasis added). In short, the EU organs did not produce any patent laws, as such, under Article 118, but negotiated and created a federal– international patent system, which consists of two, non-EU bodies: an international administrative body, the EPO, and a new, international court, the UPC – despite the express limitations of the Treaty provisions concerned.

The involvement of the EU in substantive economic law, such as intellectual property, is not without controversy. Article 345, TFEU (ex Article 295, TEC) incorporates an express limitation to EU competences: ‘[t]he Treaties shall in no way prejudice the rules in Member States governing the system of property ownership.’[[50]](#footnote-50)In reality, however, an advanced framework of intellectual property rules and systems have already been developed by the EU. The reference to Article 345 is not made here merely to point out that its provision has been ignored but to explain its relevance in practical, economic-political terms.

A clear illustration of a very advanced IP system is the EU’s federal trademark system, which was set up without looking at the limitation of Article 345. It may be contended that that system has benefited both individual companies and state economies. Its relative success and established operation has had gradually a spill-over effect on all intellectual property rights, which are all now approached in similar policy terms despite the considerable differences that exist between the various IP rights, and especially between trademarks and patents. Clearly, there is an economic reason why the duration of trademark monopoly is infinite, while patents can only last for twenty years. This is mainly because a patent concerns the very business or production of a company and, possibly, of an entire industrial sector, while a trademark is not a business, as such, is just a sign[[51]](#footnote-51) – which is, subsequently, attached to a business and serves as an indicator of origin of its products or services. As a result, trademarks do not affect the business of others and the economic and social well-being of the country, the way that patents do.

In this respect, Article 345 TFEU is a reminder of the nature, political arrangements and current reality that the EU is a supranational organisation and not a state or a federation of states. As the raison d'être of substantive economic law, such as patent law, is the pursuit of an ever-changing economic policy, which constantly reflects the state’s capacities and needs in economic development, social welfare, defence, renewable energies, etc., and considering the dual nature of patents as property rights–monopolies, it can be difficult to define uniform patent rules and standards for all member states in all circumstances. The poor record of few EU laws in the area of patents proves this point. Thus, although Article 345’s limitation of EU competences has been neglected, the elected representatives of the people have had reasonable chances to consider, accept or resist legislative proposals in the area of patents. It is reasonably asked, therefore, how parliamentary control can be maintained when the new institutional, federal design that the EU has created involves two non-EU, international organisations. This pertinent question is examined in detail in the following sections.

In the previous decade, the EU federalised the trademark system under a relatively fair constitutional structure of separation of powers, consisting of: i) legislative bodies, including an elected organ, the EU Parliament; ii) the judiciary, the CJEU; and iii) the executive organs, the EU Commission and the administrative body, the EUIPO[[52]](#footnote-52) – all being EU institutions and, as such, reviewable and accountable under a fairly coherent constitutional interactive system of separation of powers. The EU trademark federal system is in close co-operation with national institutions, especially national courts – whose involvement is vital for the interpretation and application of EU trademark law, and the role of national judges constitutes also a core implementation mechanism and fundamental of the whole system of EU law and its conceptual, political purpose and political acceptance.[[53]](#footnote-53) In addition, the views of national and local actors (consumers, industry players, associations) are an integral part of the evidential assessment of the application and enforcement of EU trademark law.

In contrast for patents, which are extreme monopolies compared to trademarks, and which affect directly entire industries and the economic and social well-being of whole countries, the EU and, certain member states, which pushed the unitary patent package, did not find absolutely necessary to guarantee the same constitutional framework of separation of powers that is currently observed and practiced for the EU’s federal intellectual property systems in the area of trademarks and designs. The unpresented decision to rely on an international organisation, the EPO, rather than on the established EU agency, the EUIPO, was made in circumstances when it had already been known that there was a serious democratic deficit surrounding the EPO system and a very unbalanced patenting landscape to which its economic policies and work had contributed, as shown by the relevant patent data and statistics in section 2 above.

To elaborate a bit more, it is worth seeing the official economic-political justifications of the federalisation of the patent system in Europe. At the general level, the EU has treated patents as trademarks. As such, the narrative that is publicly communicated is simple: the aim is to have a common patent that is administered and enforced by centralised institutions for federalisation purposes. As noted, however, unlike trademarks, the federalisation of the patent system rests mainly on non-EU institutions. At a more specific level, the EU’s economic policy has aimed at the development and sustainability needs of SMEs.[[54]](#footnote-54) The economic rational and promise was that the costs of the patent system could be reduced and, as a result, SMEs would benefit. The main problem with this narrative is that it frames the debate within one economic factor only (i.e. the cost of the patent system), thereby excluding all other considerations and, more seriously, the very large costs that are associated with the monopoly effect of patents and the existing, very unbalanced patent export-import ratios.

Looked at more closely, the EU organs’ underlying logic is that by reducing the costs of the patent system, SMEs can get more patents. This policy clearly suits trademarks. In the context of patents, however, administrative costs are only relevant at stage B, that is the patent application stage, but to have a patent application, SMEs need first to pass stage A, which to come up with a technological invention that is considered at the global level of technological competition. In such context, a great number of pre-existing patent monopolies can block the innovative and sustainability prospects of SMEs.[[55]](#footnote-55) Thus, even if patent fees are nominal, say, 1 Euro,[[56]](#footnote-56) patent activity still primarily depends on: first and foremost, R&D facilities, state capacities in technology, education, funding, and tax and fiscal programmes[[57]](#footnote-57) – none of which have been federalised at EU level, and second, the existing patent portfolios and capacity of SME competitors, which are the large companies and corporations with established and considerable market shares which, in turn, guarantee economies of scale and access to finance and R&D for these big economic actors.[[58]](#footnote-58)

In substance, what is being federalised and internationalised is an adversarial system where patent monopolies are asserted and judicially enforced against other parties, especially SMEs, which have only a very small share in patenting activity. Their position can become even more difficult if the patentee is given room for forum shopping and foreign litigation[[59]](#footnote-59) against the defendant party. This unfavourable treatment of non-patentees (especially SMEs) is exacerbated by Article 3(1) of the EU Unitary Patent Directive No 1260/2012 that abolishes the translation of the EPO patent, as well as by the possibility of language discrimination regime in patent litigation.[[60]](#footnote-60) Consequently, thousands of companies can be threatened and dragged into foreign litigation for a legal document that they could not read.[[61]](#footnote-61) The use of English language as one of the official languages of the EPO does not save the situation, since the patent specification, which is the lengthiest technical part of the patent, appears only in one of the three official languages, German, English, French.[[62]](#footnote-62) Thus, a specification in German or French language remains untranslated. The language discrimination issue arising from the Unitary Patent Directive No 1260/2012 was challenged unsuccessfully in the case of *Spain v. Parliament and Council*.[[63]](#footnote-63) Regrettably, the constitutional right of fair trial that is given to everyone (‘*Everyone* is entitled to a fair and public hearing) (emphasis added) under Article 47 of the EU Charter of Fundamental Rights and Article 6 of the European Convention of Human Rights, was not raised by the applicant state neither was it examined by the CJEU in its own initiative (jura novit).

All these arrangements involve unfavourable conditions for SMEs which are particularly vulnerable to litigation pressure that affect, in turn, the economic development of a great number of states. The economic study that the EU Commission presented to the MEPs did not examine the impact of the UPC system on SMEs, despite the fact that the SMEs’ sustainability and development was the main official policy of the EU at both the EU Commission’s and EU Parliament’s levels and of the legal instruments on which the unitary patent institutional system rests.[[64]](#footnote-64) It was only after the formal arrangements for the unitary patent system had been concluded that the EU Commission published a very short and narrow paper admitting that ‘[t]he cost exposure for IP rights and particularly patent litigation is significant, *hits SMEs disproportionately hard* and acts as a serious deterrent for SMEs to engage in patenting in the first place.’[[65]](#footnote-65) It should be noted that in the pre-legislative period, the UK House of Common’s European Scrutiny Committee had also warned about ‘the prohibitive expense of using the unitary patent and UPC, particularly for SMEs’.[[66]](#footnote-66)The most comprehensive study that had appeared in the period before the EU Parliament’s voting session of the EU Unitary Patent legislative proposals was the economic study of the multinational Deloitte, which examined the impact of unitary patent system (EPO-UE patent and UPC) on the Polish economy. It estimated, based on the current patenting activity of Poland-based companies that the discounted benefits are calculated at only €0.7 billion until the year of 2043 compared to costs of €36.1bn.[[67]](#footnote-67)Following that report it was not surprising that the state’s representatives walked away from the UPC Agreement.

The current section has given vital background information and analysis shedding light on important parameters and facts for a better appreciation of the wider economic-political picture and the EU’s decision-making capacities in the context concerned. In the end, what matters is the democratic institutional safeguards that guarantee the participatory rights of the people and, by extension, of their elected representatives. Since the EU has now exercised or self-asserted its competence, it is pertinent to see the results of its actions. In practice, the constitutional inquiry remains the same: what is the role of the elected representatives of the people? If the patent system has changed masters, can the new masters (EU legislators and especially the elected body, the EU Parliament) define and control the element of economic policy which is the key determinative underlying the development and application of substantive economic law (patent law) and the ensuing industrial property rights and monopolies that affect entire states and the economic and social well-being of their people?

## 7. National parliamentary control and the nationalised international patent under the unitary patent system

The ongoing, mass nationalisation of the EPO patents is expected to increase dramatically under the new, federal patent system as this is the federal purpose of the EU Unitary Patent Regulation No 1257/2012 giving the EPO patent a unitary effect (EPO-UE) that extends its territorial coverage from a current average of 3-6 states (not necessarily EU states)[[68]](#footnote-68) to its automatic validation and nationalisation in 25 member states of the EU. For example, in 2012, the national and nationalised patents that were in force in Poland were 38,000, a figure comprising the total number of patents of the previous twenty years.[[69]](#footnote-69) Under the new unitary patent system, this number will be surpassed easily within one year, as the number of patents that the EPO granted in 2017 was 105635.[[70]](#footnote-70) In addition, a good percentage of the hundreds of thousands of the existing EPO patents are expected to switch to the new EPO-UE package in order to benefit from its wider territorial coverage. As a result, the substantial increase and import of hundreds of thousands of mostly foreign-owned patent monopolies poses serious challenges to the economic sustainability and development prospects of the people’s businesses and the state’s systems. In such a challenging new environment, where the need for national control is more pressing than ever, the involvement of national institutions is abolished.

As explained in Part I, the democratic deficit that has characterised the nationalisation of the international patent that the EPO grants, has already left the national Parliament in a residual and indirect role which is only available through its constitutional interaction with the national court, which has a say only in the case-by-case adjudication of private disputes involving nationalised EPO patents. With the new federal system, this already compromised institutional situation not only does not improve but becomes absolute, since the role of national courts and, by extension, that of the Parliament is replaced by the new international court, the UPC, which is given exclusive jurisdiction to enforce the nationalised EPO patent, be it with or without a unitary effect.

There are some additional points that relate to the UPC Agreement which include references to ‘national’ systems and institutions that may cause some confusion. In particular, the UPC Agreement labels the UPC, as ‘a court common to the Contracting Member States’.[[71]](#footnote-71). As it has no constitutional and working relationship with the national courts system and the other branches of state powers, it is an international ‘court common’ to all contracting, member states. In this respect, the national legislators cannot exercise any form of control of the EPO patent through the UPC. Thus, the position of the people’s elected representatives, who have so far been confined to a limited, indirect role through the jurisdictional competence of their national courts, as discussed in Part 1 above, can no longer be sustained, as that competence is taken over by an international court, the UPC.

Another confusing point is the inclusion of national law as one of the sources of law that the UPC can use.[[72]](#footnote-72) As a matter of practical reality, with the UPC being the enforcement level of EPO patents, the dominant source of law is expected to be the EPC and the legal rules and principles that the EPO’s board of appeals generate and implement.[[73]](#footnote-73) In addition, the UPC is not connected to the national courts system so as to understand its national law and case-law and be reviewed by the national system in case of errors. It is also unthinkable that a defendant party that is dragged into patent trials in a foreign country can ever be subjected to the national law of a foreign state with which it has no relationship (i.e. local or business activities, base, nationality). If foreign, national law is taken into account, the people of State A will be subjected to the authority of the foreign parliament of State B for business activities they undertake in their national base, in State A. In such circumstances, national Parliament is replaced by a foreign, Parliament whose laws (and the economic policies that underlie them) prevail.

In short, the already very limited role – in both law and practice – that the national Parliament has had over the nationalised EPO patent comes to an end when it ratifies the UPC Agreement. Thus, on one hand, the role of the people’s representatives is taken away and, on the other, the volume of nationalised international patents entering the national market is skyrocketing to unprecedented levels.

## 8. European parliamentary control and the nationalised international patent under the unitary patent system

Legislative control of the Unitary Patent system by the EU is mutually exclusive to the constitutional framework of national state. Indeed, where EU control applies, this is a confirmation that national control has been reduced or abolished. In this section, the role of the EU Parliament is only examined in relation to a secondary question of whether there is somewhere, *some* parliamentary control of the nationalised international patent. As the EU has federalised the patent system in the EU-zone (excluding few states) and abolished the existing, limited national control and involvement, it is legitimately asked whether they can exercise democratic control of the federal, unitary patent system that they have created.

In the context of economic law, policy and decision-making requires impact assessment studies, data gathering and analysis at pre- and post-legislative stages. In order to have a sense of current institutional realities in the EU, few preliminary points should be stated in relation to the actual practice of the EU’s legislative monitoring system. This can be illustrated with reference to major institutional changes – and the federalisation of the patent system is clearly such a major change. As already noted above, both the EU Commission and the EU Parliament’s Rapporteurs justified politically and economically the federalisation of the patent system in pursuit of the development interests of SMEs – an inescapable focus, since they represent 99% of all businesses and form an important part in the innovation capacities of entire states.[[74]](#footnote-74) However, the European economic study on UPC that the EU Commission presented to the MEPs,[[75]](#footnote-75) who are not patent experts, was not a ‘European’ study, since it covered only a handful of the most developed states and not the substantial majority of member states and especially those that are adversely affected (e.g. those being dependent to a good extent on SME-patenting activity).[[76]](#footnote-76) What is more, that pre-legislative study had nothing to do with SMEs, the main economic-political, policy objective of the new Unitary Patent System. Paradoxically, although the rather irrelevant study was advertised as ‘economic’, as seen in its title also, it was only examined by a non-economic committee of the EU Parliament (that of Legal Affairs), while the EU Commission excluded all other studies on the subject.[[77]](#footnote-77)

With this brief background information about the realities and effectiveness of legislative monitoring capacities of EU legislators, the discussion continues with an analysis of whether and, to what extent, European (supranational) parliamentary power exists and can be exercised in the new federal, unitary patent system that they have set up.

## 8. 1. *Legislative amendment of patent rules: possibilities and standards of effectiveness*

It is fundamental to the system of democratic control that the elected representatives of the people can pass laws with requisite speed in pursuit of an economic policy[[78]](#footnote-78) and in order to control the effect of interpretation, development and application of patent rules by the courts and patent office that are mostly involved in the actual, daily business of the patent system. The standard of speed is absolutely necessary in economic contexts, such as industrial property and technology where economic and technological conditions change rapidly and where any change (or non-change) of rules, by the court or administrative office, may directly affect entire industrial sectors and thousands of businesses.

The EU has pushed the federalisation of the patent system in Europe in this institutionally, very demanding and economically, very significant context, when it is known that the EU Parliament cannot intervene in its own motion to review and correct, where appropriate, the effect of administrative and judicial decisions, because it lacks the institutional power to initiate laws, let alone to pass them with the necessary speed. This serious institutional deficiency seriously undermines parliamentary control and the people’s participatory rights, and leaves exclusive competence to the non-elected, EU Commission, whose policy and decision-making process is far from efficient and transparent, as explained in the previous section, above.[[79]](#footnote-79) In other words, the EU continuously expands its competence and pushes for major federal projects and laws, in the most important economic areas on which public prosperity depends, when it is only equipped with institutional structures of limited constitutional and democratic capacities that had originally been designed for less demanding and peripheral arrangements – and hence, the oxymoron of federalisation of the patent system in the absence of a federation and of federal (as opposed to international) institutions of power.

## 8.2. *The poor record of patent laws at EU level: the exception proves the rule*

Economic policy, being the main determinative of interpretation and development of substantive economic law, such as patent law, is difficult and, often also, economically undesirable to define and determine for all member states, in all fields of technology, in all circumstances. As the EU is not a federation of states, it is difficult to see how the federalisation of the patent system for uniform, one-size-fits-all rules and standards, can reflect an economic policy that continuously suits all member states in view of the sharp differences in economic and technological development and social welfare that exist between them.[[80]](#footnote-80) As Joseph Stiglitz, the known Nobel economist, has explained:

[T]he answers to questions of what should be patented and how broad and how long the patent should be are not obvious, and there is no reason that answers that are right for one country, for one sector, for one period, should be right for another.[[81]](#footnote-81)

This economic reality is reflected in the EU’s legislative record which shows that only few patent-related legislative instruments, of rather peripheral or narrow scope, have ever been agreed by the EU institutions and, especially, the EU Parliament.[[82]](#footnote-82) A notable rejection of legislative proposals, which the EU Commission pushed, concerned the patentability of computer programs.[[83]](#footnote-83) The EU Commission’s legislative attempt to enhance the patentability of computer programs is a serious incident, since computer programs relate to an intermediate industrial sector on which a great number of other industrial and commercial sectors increasingly depend, including also the state’s administrative system.[[84]](#footnote-84) If patent monopolies in that sector increased, as had been the intention of the EU Commission’s legislative plans, the monopoly effect of such patents would have been felt not only in the computer programs sector but in all sectors of economy and state administration in which software products are of essential use.

The EU Parliament’s rejection of the EU Commission’s legislative proposals for computer program patents has shown that it is often difficult, as is undesirable, to have uniform patent rules. Considering also that the EU Parliament cannot change its own laws, the whole system is inherently inflexible, especially in the context of patent law, where flexibility and speediness of Parliamentary intervention is a pre-requisite – if one appreciates the wide range of industrial sectors and very high number of businesses that are concerned.

## 8.3. *EU parliament and the EPO: are there any constitutional links between the sources of power?*

The basic and, yet, very important role of elected politicians in scrutinising and determining directly the work of administrative bodies cannot be performed by the EU Parliament, since it has no jurisdiction over the non-EU body, the EPO, which grants the nationalised international ‘European’ patent, including that with a unitary effect, which the relevant EU Regulations impose. This constitutional deficiency is observed in contextual circumstances where the patent system is mainly sustained and administered by the EPO which has hundreds of thousands of patents in its system.

The inability of MEPs to influence democratically the work of the EPO can again be illustrated with reference to the EU Commission’s legislative proposals for increased patentability of computer programs which had been put forward in order to legitimise the EPO’s constant erosion of patentability limitations for computer-implemented (aka software) inventions.[[85]](#footnote-85)As the EU Parliament rejected, with a sweeping majority, the patentability of computer programs, as noted above, it essentially rejected the EPO’s growing expansion of software patents in its system. At no point, however, the EU Parliament’s decision, and the economic policy that underline it, has had any impact on the subsequent practice of the EPO which has continuously and increasingly expanded the patentability of computer programs under its system – with these patents entering continuously and massively the national markets.[[86]](#footnote-86)

## 8.4. *EU parliament and the UPC: are there any constitutional links between the sources of power?*

Judicial competence for the enforcement of the EPO patent with/without a unitary effect patent is not given to the CJEU, as required by Article 262 of the TFEU, but to a new, non-EU, international body, the UPC. Thus, in addition to the various institutional problems mentioned in sub-sections 8.1-3, above, the role of the EU Parliament is further restricted by the absence of a direct institutional relationship with the main judicial organ of the new patent system.

Some connection exists between the UPC and the CJEU in the limited circumstances when a small number of mostly narrow EU laws might be relevant in the judicial adjudication of the patent dispute concerned – and if, and when, the UPC decides to make a referral.[[87]](#footnote-87) This leaves in theory (ie. without considering the institutional problems described in sub-sections 8.1-3, above) a small window for a remote, indirect control by the EU Parliament in limited circumstances – which is a double indirectness, as it already concerns an indirect control that the EU legislators exercise through the EU judicial organ, the CJEU, which, in turn, has only a very limited role to play.

However, it should be noted that this very limited and remote institutional relationship, in both law and practice, between the CJEU and UPC, through which the EU Parliament may have some remote and indirect role is further undermined by the fact that the EU’s referral mechanism under Article 267, TFEU is only available to ‘a court or tribunal of a Member State’. Although the UPC Agreement puts a sign on the tin by naming the UPC, ‘a court common to the Contracting Member States’,[[88]](#footnote-88) this artificial labelling does not change the fact that the UPC has no institutional connection and co-operation with the national judicial system and the other branches of state powers. Such an indispensable constitutional/institutional interaction is ultimately reflected in the content of law and national practice that underlie the questions that national courts can subsequently address to the CJEU – opening in that way the possibility for a simultaneous development of both national and EU law that reviews and builds on a national state’s practices. The referral questions and suggestions of national courts involve judicial reflections of legal practices that have usually and frequently their basis and origins in the institutional interaction of all state powers through which policy reasoning, tested national impact and interdisciplinary political-economic-social debates can be taken into account. In this respect, the theoretical possibility that an international court, the UPC, which is ‘common to all Contracting Member States’ – a tautology, since an international court is by definition common to those states that are contracted to it – *may* decide (if and when) to address a question to the CJEU in the very limited circumstances, where few, patent-related and of limited scope EU laws, may be relevant, has very little to do with the fundamental institutional purpose and scope of the referral system under Article 267.

The general observation is that the whole issue with the nationalised international industrial property rights and monopolies, which the EPO generates, is moving completely outside national control. Leaving behind a situation where the national Parliament has so far had some limited indirect role to play through its constitutional interaction with national courts, parliamentary control of the ‘nationalised’ EPO patent is now sought outside the national state, and only at EU level. In such a new institutional landscape, there is no democratic control because the EU Parliament is not the Parliament of the national state in whose markets the EPO patents enter in very large numbers. What is more, unlike the constitutional partnership of national Parliament and courts that has allowed some limited control of the EPO patents, the EU Parliament does not have its EU court, since exclusive judicial jurisdiction for the enforcement of the nationalised EPO patent is given to a non-EU court, the UPC. Thus, to the known democratic deficit regarding the lack of direct control of the EPO by the EU Parliament, a new institutional problem is added concerning the absence of the indispensable, direct constitutional relationship between legislators (EU Parliament) and courts (the UPC). To the extent that the main work of the new patent system is carried out by two non-EU bodies, the EPO and UPC, and there is only a very limited control of the UPC by the CJEU, and only a limited control that the EU Parliament can exercise over the CJEU, it can reasonably be maintained that the EU has created one of the biggest federal patent systems in the world consisting of bodies that are largely outside the control of the EU and of its only elected legislative body.

## 9. Conclusion

The key determinative of patent law is economic policy that looks at current economic conditions, development and sustainability capacities as well as at social welfare, defence and other needs of the national state. In such context, the constitutional question of the national legislators’ role through which the participatory rights of the people are secured and exercised does not simply relate to a general discussion on democratic governance but to the pressing practical issue about the constant determination and control of economic policy to which the development and application of patent law is connected – which in turn, affects national economy and public prosperity. In this respect, the impact of patent law on the relevant markets and state’s systems is linked to the reflected policies of its rules and practice as well as to the ability of the people to influence them within the constitutional framework of separation of powers.

At a general level, patent law is situated within the international harmonised framework of the WTO’s TRIPS and the regional international system of the EPC. The regional European system is administered by the international patent office, the EPO, that grants and administers patents which are subsequently transformed to national industrial property rights-monopolies in certain designated states. As dozens of thousands of such nationalised international patents are created by the EPO annually, and considering that a careful balance should be achieved between the costs and benefits of patents, the question of national legislative control of these patents has become a pertinent constitutional issue.

Nationalised international industrial property rights and monopolies and in particular, of large patent volumes, do not exist in states outside Europe. Thus, they do not exist in the US, Japan, South Korea and China, that is the countries which dominate technological markets and get most of the EPO patents. Although the EPO forms part of an association of the five largest patent offices in the world, those of the states mentioned above, the EPO is not a national body, and as such the reflected economic policies of its practices do not represent the needs of all EU states that are members of its organisation. The fact that 23 member states of the EU get only 9% of all annual EPO patents, and a good number of these states have a very or extremely low patenting activity, means that the prolonged unbalanced patent export-import deficit poses serious challenges to the innovation and competitive prospects of various European states, a situation that often leads to market failures and the ever-expanding dominance of technological markets by non-EU-based large companies and corporations, which get most of the European patents in any given year.

Monopolistic practices and market failures, associated with the observed, very unbalanced patent import-export ratios, can be mitigated by adjusting the various patent rules, tests, standards and thresholds, including the scope of patentability, in such a way so as to reduce the flow rate of patents in the national markets in accordance with the economic conditions and capacities of national economic actors and the specific and general needs of the state. As the preliminary condition is democratic control of the patent system, the constitutional role of national legislators is essential. In addressing this question in this current study, parliamentary control has been examined, first, in relation to the current system of nationalisation of EPO patents. Additionally, since the EU has recently stepped in to federalise the patent system in Europe by building on and expanding the EPO system, including the creation of a new international patent court, the UPC, the role of the elected legislators in the new institutional arrangements is examined at both national and EU levels.

Addressing the constitutional question of legislative control of the industrial property rights and monopolies which are imported from the EPO and become ‘national’ rights, certain aspects have been looked at: whether a national Parliament can directly review and influence the work of the administrative body, the EPO, and whether it can review the work of national courts when dealing with the nationalised patents and the EPO. It has been found that the only form of control that has so far been made available to the Parliament regards its constitutional interaction with the national courts, when the legislators review and respond to the effect of judicial decisions and developments arising from the judicial enforcement of EPO patents at national level. However, the role of the Parliament which is indirect, as it is channelled only through the national courts, is further restricted by the inability of national courts to perform a judicial review of the administrative body concerned, which is the EPO. As the main form of judicial control of administrative bodies is judicial review and this public law fundamental is not available to the courts, their power is confined only to a case-by-case judicial adjudication of patent litigation between private parties. The very limited role of the courts and, by extension, of the Parliament, is exacerbated by the practical reality that less than 1% of all patents ever reach the courts – a situation that is attributed also to the very high cost of patent litigation that further restricts the participatory rights of the people.

In such a reality, the economic policies surrounding the work of the EPO are felt at national level. The impact of the EPO practices on national states varies according to existing technological strengths and weaknesses and affects considerably those states with low patenting activity and/or with a great degree of dependency on the patenting activities of SMEs, which are vulnerable to monopolistic pressures and vexatious litigation strategies of large companies and corporations. Consequently, the need for effective democratic control of the EPO remains pertinent and unresolved.

In the current institutional reality, certain issues are known: first, there is a clear democratic deficit characterising the mass nationalisation of the EPO’s international patents, second, a very disproportionate patent export-import ratio is observed for a great number of EU member states, and for SMEs, that is the actors representing the overwhelming majority of all businesses in Europe and on whose innovation and patenting activities a good number of states depend, and third, there are sharp differences in economic and technological capacities, and educational and social welfare systems between members states and between them and non-EU states in the current conditions of global technological competition. Without dealing with and solving these issues, new institutional arrangements have been made by the EU to set up a federal, ‘unitary’ patent system in Europe.

As a matter of institutional precedent at EU level, the federalisation of substantive economic law in the general area of intellectual property has existed with the creation of a federal, EU trademark system. However unlike trademarks, which are just signs attached to the companies’ business but are not the companies’ business as such, patents are extreme monopolies connected to the core business of technological industries. In this respect, a similar expansion by the EU in the context of patents is not uncontroversial. It is difficult to see how absolute uniformity of rules of a federal patent system is justified or can help member states in view of the well-known, sharp differences in technological capacities between member states, as they are also reflected in their respective patent export-import ratios. As the federalisation of the patent system in Europe has being undertaken in the absence of a federation of states, significant differences in patent import-export ratios can lead to a constant transfer of wealth from less developed to more developed states as well as to a loss of opportunity to catch up. The fact that most ‘European’ patents are taken by non-EU companies means that the benefits of the centralisation of the patent system are mostly shared by a small number of states, most of which are outside the EU – when, in contrast, these non-EU states retain the constitutional safeguards, flexible institutional reflexes and participatory rights of their people for all patents existing in their national base.

If a comparison is made with another area of intellectual property, trademarks, it is can easily be observed that the EU trademark system has rested on a constitutional structure of separation of powers, involving EU institutions at all levels of power (executive/administrative, judicial, legislative) and, primarily of course, national courts. Paradoxically, for patents which are extreme monopolies compared to trademarks, and knowing already that there is a serious democratic deficit surrounding the EPO system, the EU has federalised the patent system for 25 member states by setting up a new institutional framework that operates mainly outside the EU. Giving the EPO patent a unitary effect covering 25 EU member states and facilitating an intergovernmental, EU-members-only agreement for a new international court, the UPC, the EU organs have internationalised the federal system that they have created.

Under this new regime, the known problem of mass nationalisation of international patents is aggravated by the new, much wider territorial coverage of EPO patents with a unitary effect that increases from the current average of 3-6 designated states to 25 member states. Consequently, the corresponding increase in the number of (mostly foreign-owned) patent monopolies, from dozens of thousands to hundreds of thousands within a short period of time, will reasonably put local companies and SMEs under great pressure, considering that their sustainability prospects are increasingly reduced in patent-dependent markets due to global technological competition and the ever-growing dominance of large companies and corporations. It is noted that such a federal system operating in the absence of a federation in a core area of substantive economic law that consists mainly of international bodies exists in no other place in the world and has been practiced in no period of the history of independent democratic states. In such peculiar institutional design, it is reasonable to ask how the participatory rights of the people are secured.

The new European, unitary patent system abolishes the involvement of national bodies of power and ends the already limited role of national courts and, through them, the indirect role of the national Parliament, because exclusive jurisdiction for enforcement of EPO patents is given to the new international court, the UPC. To the extent that there will be no longer any meaningful involvement of national institutions of power, there will, as a result, be no constitutional framework of separation of powers that could secure the participatory rights of the people who face passively the daily nationalisation of a great number of international patent monopolies. In such a new compromised political and institutional landscape, the focus is forced to shift to a residual constitutional question of whether the elected representatives of the people in the European Parliament are able to exercise an effective control of the unitary patent system that they have created.

For the purpose of this assessment, the examination has been based on the same points of constitutional inquiry that have been applied to the question of national control, as mentioned above, regarding the constitutional interaction between the legislators and the other branches of power. It has been found that the federalisation of the patent system in Europe has been attempted in circumstances where it is known that the European Parliament cannot initiate legislation, and therefore it cannot introduce new laws, amend previous ones and, most importantly, step in through legislative measures to correct the effect of the decisions and law-making practices of the other institutional branches involved. In addition, the EU’s legal and economic monitoring system does not involve a coherent impact assessment practice in the pre- and post-legislative decision-making periods so as to aid effectively the work of MEPs. As the EU is not a state or a federation, and there are sharp differences in economic and technological capacities and social and economic conditions between member states, it remains difficult, and to a certain extent undesirable, for the European Parliament to push industrial property rules for all member states for all fields of technology, in all circumstances. As the European Parliament’s legislative record proves, only few patent-related laws of mostly narrow and peripheral scope have ever been agreed by the MEPs. Thus, even before approaching the main institutional problems of the unitary patent system, which is based on two non-EU bodies, it becomes evident that the EU legislators do not have essential institutional resources of a real and genuine federal system that would enable them to perform effectively the indispensable constitutional role of the elected legislature in the economically very important area of industrial property.

Moving to the institutional interaction between the legislature and the other branches of power of the unitary patent system, the analysis has shown that the position of the EU legislators is worse than that of the already limited and indirect role that the national Parliament has had over the nationalised EPO patent in the current, pre-unitary patent period. This transpires from the observation that it is not open to EU legislators to have any meaningful institutional interaction with the EU’s judicial organ, since the CJEU is only remotely connected to the unitary patent system in the very limited circumstances where the few patent-related EU laws may be relevant – and if and when the UPC decides to make a referral. What is more, as the UPC is not an EU institution, the institutional problems are no longer confined to the inability of the European Parliament to perform an effective (or any kind of remote and indirect) role vis-à-vis EPO patents. Indeed, an additional source of power is created, that of UPC’s, whose decisions remain, as explained, largely beyond the reach of EU legislators, in both law and practice.

In essence, the beginning and end of the patent system is the economic effect that its law and practice have on the people and their national state. For this reason, the constitutional law approach is inescapable, since it targets the policy and decision-making structures through which the participatory rights of the people can be guaranteed. As the underlying element of substantive economic law is economic policy, its determination cannot legitimately be effectuated without the people’s participatory rights and democratic control. The new federal system of the nationalised international patent, with/without a unitary effect, ends the democratic involvement of national institutions of power and of the elected legislators, and strips the people of their democratic control in an economic context on which public prosperity and the economic and social well-being of the entire state depends. In the end, evidence about the economic impact of the mass nationalisation of international patent monopolies exists and explains current economic conditions, market failures, state’s capacities, needs and sustainability prospects.

Closing with a political and practical observation, it will not be possible to argue that the solution to the observed problems of institutional design can be achieved by bringing the new, federal-international, unitary patent system that the EU has created within its own, established institutional structures. This is because first, it is too late for that, and second, its existing structures are also characterised by a known democratic deficit (as analysed also above), which may have not caused many problems to other areas of substantive economic law, such as trademarks, but they will be more evident and serious in the more demanding, complex, policy-dependent and national market-related context of industrial property. In general, the EU’s unitary patent package confirms the growing realisation that its system and inner circles are continuously pushing for an ever-increasing political and economic federalisation based on the existing, limited institutional structures that were initially designed to manage more basic and smaller or peripheral projects. Neither has there been any political evolution and transformation of the EU to a state or federal state so that federal or uniform rules which maintain or exacerbate existing imbalances in import-export ratios (including those of patents) could be offset by the existence of one federal state, with one common system for the fiscal, educational, social, defence, etc., needs of state administration. In contrast, the creation of an unprecedented federal patent system by the EU, in the absence of a federation, which will operate mainly outside its institutional structures, suggests that the main aim and current political trend is not democratic governance or political and economic integration but centralisation and denationalisation of state powers at all cost. In view of this observation, the issue is much bigger than the perceived economic costs associated with a mass import of mostly foreign-owned, international patent monopolies. The ineffective functioning of constitutional structures undermines essential democratic safeguards and the participatory rights of people in areas which are vital to the economic and social well-being of the state and its people. Such realisation invites the input of constitutional law in economic areas that matter most, asking it to prove its relevance, and by extension, that of a democratic state.

1. Manuel Desantes, ‘The Patent System: Current and Future Policy Challenges: A View from the European Patent Office’ in Organisation for Economic Co-operation and Development (OECD) (ed.), *Patents, Innovation and Economic Performance* (OECD 2004) 309, 311 and 354. [↑](#footnote-ref-1)
2. For a detailed approach, see [US] Federal Trade Commission, *To Promote Innovation: The Proper Balance of Competition and Patent Law and Policy* (2003) <http://www.ftc.gov/os/2003/10/innovationrpt.pdf>. [↑](#footnote-ref-2)
3. OECD (ed.), *Technology and the Economy: the Key Relationships* (OECD 1992); David Landes, *The Unbound Prometheus: Technological Change and Industrial Development in Western Europe from 1750 to the Present* (2nd edn, CUP 2003); Eric Brynjolfsson and Andrew McAfee, *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies* (Norton 2014); Klaus Schwab, *The Fourth Industrial Revolution* (Crown Business 2017). [↑](#footnote-ref-3)
4. Stephen A. Merrill, Richard C. Levin, and Mark B. Myers (Committee on Intellectual Property Rights in the Knowledge-Based Economy) (eds), *A Patent System for the 21st Century* (National Research Council 2004), 1: ‘Since its creation more than 200 years ago, the U.S. patent system has played an important role in stimulating technological innovation’; Sandro Sideri and Pantaleo Giannotti, ‘Patent System, Globalization, and Knowledge Economy’ (2003) Centro di Ricerca sui Processi di Innovazione e Internazionalizzazione Paper 136. Cf. Daron Acemoglu and James A. Robinson, *Why Nations Fail: The Origins of Power, Prosperity, and Poverty* (Crown 2011), 53: ‘Inequality in the modern world largely results from the uneven dissemination and adoption of technologies’; Michele Boldrin and David K. Levine, *Against Intellectual Monopoly* (CUP 2008); The Economist’s editorial, ‘Intellectual Property – A Question of Utility’ *The Economist* (London, 8 August 2015): subheading: ‘Patents are protected by governments because they are held to promote innovation. But there is plenty of evidence that they do not’ <http://www.economist.com/node/21660559>. [↑](#footnote-ref-4)
5. Desantes (n 1) 313: ‘the decisions [on patent rules] to be taken are relevant to public prosperity.’ [↑](#footnote-ref-5)
6. See, eg, *United Nations Secretary-General’s High-Level Panel on Access to Medicines*, *Promoting Innovation and Access to Health Technologies* (2016), 9: ‘Recommendations: IP laws and access to health technologies… Calling for patentability rules “that are in the best interests of the public health of the country and its inhabitants.”’ <http://www.unsgaccessmeds.org/s/UNSG-HLP-Report-FINAL-12-Sept-2016.pdf>; Michael A. Heller and Rebecca S. Eisenberg, ‘Can Patents Deter Innovation: The Anticommons in Biomedical Research’ (1998) 280 (5364) Science 698; Matthew Rimmer, *Intellectual Property and Climate Change: Inventing Clean Technologies* (Edward Elgar 2011). [↑](#footnote-ref-6)
7. Dean Baker, *Rigged: How Globalization and the Rules of the Modern Economy Were Structured to Make the Rich Richer* (Center for Economic and Policy Research, Washington DC 2016), 77: ‘technology does not determine who “owns” the technology. The people who write the laws determine who owns the technology.’. [↑](#footnote-ref-7)
8. Communication of the EC Commission, ‘Solidarity in Health: Reducing Health Inequalities in the EU’, COM (2009) 567 final. [↑](#footnote-ref-8)
9. See, eg., Christoph Bellmann, Graham Dutfield and Ricardo Melendez-Ortiz (eds), *Trading in Knowledge: Development Perspectives on TRIPS, Trade and Sustainability* (Erthscan 2003); Boldrin and Levine (n 4). [↑](#footnote-ref-9)
10. For a good introduction of the EPO system, see, eg, Antonina Bakardjieva Engelbrekt, ‘Dilemmas of Governance in a Multilevel European Patent System’ in Hans Henrik Lidgard (ed.), *National Developments at the Intersection of Intellectual Property and Competition law* (Hart 2011). [↑](#footnote-ref-10)
11. IP5 is the institutional patent forum of the five largest patent offices in the world <http://www.fiveipoffices.org/about.html>. [↑](#footnote-ref-11)
12. See, e.g., Jonathan Hopkin, ‘Technocrats Have Taken over Governments in Southern Europe. This is a Challenge to Democracy’ (*EUROPPBlog,* 24 April 2012) <http://blogs.lse.ac.uk/europpblog/2012/04/24/technocrats-democracy-southern-europe/>. [↑](#footnote-ref-12)
13. EU Parliament and Council Regulation (EU) 1257/2012 implementing enhanced cooperation in the area of the creation of unitary patent protection [2012] OJ L361; EU Council Regulation(EU) 1260/2012 implementing enhanced cooperation in the area of the creation of unitary patent protection with regard to the applicable translation arrangements [2012] OJ L361. [↑](#footnote-ref-13)
14. These states are: Spain, Italy, and Croatia. [↑](#footnote-ref-14)
15. EU Council, Agreement on a Unified Patent Court (11 January 2013) [2013] OJ C175. [↑](#footnote-ref-15)
16. Spain, Poland and Croatia did not sign the Agreement. Italy signed it under the coalition government of the recently resigned, prime minister, Matteo Renzi, despite opposition by the Italian Confederation of SMEs, that is the economic actors for whose benefit the UPC was politically justified, see the letter of the president of CONFIMI, the Italian Confederation of SMEs on 23 February 2015 <http://www.confimi.it/notizie-comunicati-stampa/236-lettera-del-presidente-agnelli-al-mise-adesione-italiana-al-brevetto-europeo-con-effetto-unitario-e-al-tribunale-unificato-dei-brevetti>. A similar situation was observed with the then-coalition government of the UK under its prime minister, David Cameron that pushed relevant legislation despite the conclusions of the House of Common’s Parliamentary Committee that the new system would likely to hinder, rather help SMEs ‘the main intended beneficiaries’, see European Scrutiny Committee, *The Unified Patent Court: Help or Hindrance?* (HC 2010-12, 65-I) paras 135, 186 and page 41 (para 4 of the conclusions) and (n 66), below. [↑](#footnote-ref-16)
17. UPC Agreement (n 15), Article 1: ‘A Unified Patent Court for the settlement of disputes relating to [EPO] European patents and [EPO] European patents with unitary effect is hereby established.’ [↑](#footnote-ref-17)
18. Ibid, Article 27, and footnotes 1-9 and 11-14. [↑](#footnote-ref-18)
19. EPO Annual Report 2012 (Granted patents) <https://www.epo.org/about-us/annual-reports-statistics/annual-report/2012/statistics-trends/granted-patents.html#tab2>. [↑](#footnote-ref-19)
20. The increased number of granted patents is due to EPO management decisions and policies, including additional recruitment of patent examiners, rather than to new patent applications which remained at the level of previous year’s filings. See EPO Annual Report 2016 <https://www.epo.org/about-us/annual-reports-statistics/annual-report/2016.html>. [↑](#footnote-ref-20)
21. See Dimitris Xenos, ‘The European Unified Patent Court: Assessment and Implications of the Federalisation of the Patent System in Europe’ (2013) 10(2) SCRIPTed - Journal of Law, Technology & Society 246, 250 and the references therein. [↑](#footnote-ref-21)
22. See Dimitris Xenos, ‘The Impact of the European Patent System on SMEs and National States and the Advent of the Unitary Patent’ (forthcoming). [↑](#footnote-ref-22)
23. See, eg, the EU Commission’s website for the Department of Internal Market, Industry, Entrepreneurship and SMEs: ‘[SMEs] are the backbone of Europe's economy. They represent 99% of all businesses in the EU.’, opening sentences <https://ec.europa.eu/growth/smes\_en>. [↑](#footnote-ref-23)
24. EUIPO, *Intellectual Property Rights and Firm Performance in Europe: an Economic Analysis* (Firm-Level Analysis Report) (2015), 40, section 5.3.2: IPR ownership by firm size, table 8 <https://euipo.europa.eu/ohimportal/en/web/observatory/ip-contribution#ip-contribution\_2>. [↑](#footnote-ref-24)
25. Eurostat, *Patent Statistics at Eurostat: Mapping the Contribution of SMEs in EU Patenting* (2014), 36, table 11 <https://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/KS-GQ-14-009?inheritRedirect=true>. Although it was published in 2014, its research sample may be old as it covers also and mostly the years before the severe financial crisis which started in 2008. [↑](#footnote-ref-25)
26. Xenos (n 22), section 4. [↑](#footnote-ref-26)
27. See, the legal criterion of novelty, European Patent Convention (16th ed., 2016), Article 54. [↑](#footnote-ref-27)
28. EU Commission, *Executive Summary of the Pharmaceutical Sector Inquiry Report* (COM 351, 2009), 10–15. [↑](#footnote-ref-28)
29. Mackenzie Weinger, 'Patent Trolls Rear their Ugly Heads in Courtrooms around the World' *Financial Times* (London, 9 June 2016). See also Gene Sperling, ‘Taking on Patent Trolls to Protect American Innovation’ (*The White House blog*, 4 June 2013) <https://obamawhitehouse.archives.gov/blog/2013/06/04/taking-patent-trolls-protect-american-innovation>. [↑](#footnote-ref-29)
30. Bronwyn Hall, Christian Helmers, and George von Graevenitz, ‘Patent Thickets and First-Time Patenting: New evidence’ (*VOX Centre for Economic Policy Research's Policy Portal*, London, 23 April 2016): ‘Patent thickets decrease entry (i.e. first time patenting in an area) by 20%, which is substantial bearing in mind that the average probability of entry into a technology area is only about 1.5%.’ <http://voxeu.org/article/patent-thickets-and-first-time-patenting-new-evidence>. [↑](#footnote-ref-30)
31. Eurostat (n 25), 36. [↑](#footnote-ref-31)
32. Poland did not sign the UPC Agreement because of the negative economic results found by its national impact assessment study showing a very unbalanced patent import-export ratio. It is worth noting that Poland was the only state that produced a comprehensive economic study on the matter. Italy singed the Agreement with a delay of 3 years without, however, conducting a national study to evaluate relevant data and evidence. [↑](#footnote-ref-32)
33. *Anstalt & Ors v Hayek & Ors* [2002] EWCA Civ 1729 [25] (emphasis added). See, also, UK Royal Society, *Keeping Science Open: The Effects of Intellectual Property Policy on the Conduct of Science* (2003), para 3.19: ‘the problem is that the monopolistic nature of patents means that there is a risk of their being abused by their owners. … governments, as custodians of the public interest, should closely monitor the activities of patent owners and be prepared to intervene actively with counter-measures where necessary.’ [↑](#footnote-ref-33)
34. Xenos (n 21), 258. [↑](#footnote-ref-34)
35. Desantes (n 1), 313. [↑](#footnote-ref-35)
36. Ibid. [↑](#footnote-ref-36)
37. Hall, Helmers, and Graevenitz (n 30). [↑](#footnote-ref-37)
38. TRIPS, Articles 7 and 8. See, also, Ingrid Schneider, ‘Can Patent Legislation Make a Difference? Bringing Parliaments and Civil Society into Patent Governance’ in Sebastian Haunss and Kenneth C. Shadlen (eds), *The Politics of Intellectual Property: Contestation over the Ownership, Use, and Control of Knowledge and Information* (Edward Elgar 2009) 129. [↑](#footnote-ref-38)
39. EU Commission, *Impact Assessment – Accompanying Document to the Proposal for a Regulation of the European Parliament and the Council Implementing Enhanced Cooperation in the Area of the Creation of Unitary Patent Protection and Proposal for a Council Regulation Implementing Enhanced Cooperation in the Area of the Creation of Unitary Patent Protection with Regard to the Applicable Translation Arrangements* (COM 215; 216, 2011), 32 <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52011SC0482>. This is an official study which was submitted to the EU Parliament as supportive evidence for the EU Commission’s legislative proposals on the EU unitary patent Regulations. It deals mostly with patent fees and not with the UPC, for which the relevant study is cited in (n 75), below. [↑](#footnote-ref-39)
40. See, eg, William Wade and Christopher Forsyth, *Administrative Law* (11th edn, OUP 2014), part VII; Colin Turpin and Adam Turpin, *British Government and the Constitution* (7th edn, CUP 2011), section 10; Ian Loveland, *Constitutional Law, Administrative Law and Human Rights* (6th ed, OUP 2012), part 4. [↑](#footnote-ref-40)
41. See, generally, Susana Borrás, 'The Governance of the European Patent System: Effective and Legitimate?' (2006) 35 Economy & Society 594; Peter Drahos, *The Global Governance of Knowledge: Patent Offices and their Clients* (CUP 2010); Schneider (n 38). [↑](#footnote-ref-41)
42. For such institutional interaction between the Parliament and the courts, see, generally, Lord Steyn, ‘Deference: a Tangled Story’ [2005] Public Law 346. See also Turpin and Tomkins, ibid, 764. [↑](#footnote-ref-42)
43. For an exemplary legislative monitoring of patent case-law and judge-made developments, see [US] Federal Trade Commission (n 2); See also, [US] Council of Economic Advisers Issue Brief, ‘The Patent Litigation Landscape: Recent Research and Developments*’* (White House, March 2016), 6, advising that ‘[m]ore research on the effects of *Alice* [case] and the other decisions is warranted’; Fact Sheet: ‘White House Task Force on High-Tech Patent Issues – Legislative Priorities & Executive Actions’ (White House, June 2013) <https://obamawhitehouse.archives.gov/the-press-office/2013/06/04/fact-sheet-white-house-task-force-high-tech-patent-issues>. [↑](#footnote-ref-43)
44. Cf. In federal systems, the local level participates in the initial stages of the process. The same applies to the supranational system of the EU, where the first institutional access system is mainly the national courts that can co-operate subsequently with the CJEU. [↑](#footnote-ref-44)
45. For relevant patent data and statistics, see section 2 above. [↑](#footnote-ref-45)
46. The only state that signed the UPC Agreement but is not bound by the EU Unitary Patent Regulations, is Italy. [↑](#footnote-ref-46)
47. (n 18). [↑](#footnote-ref-47)
48. In the joined Cases 274/11 and 295/11 of *Spain and Italy v Council* [2013] ECR 240, the CJEU dismissed the legal challenges against the Council’s decision authorising enhanced cooperation in the area of the creation of unitary patent protection. [↑](#footnote-ref-48)
49. Article 118, TFEU. [↑](#footnote-ref-49)
50. See also Hector MacQueen, Charlotte Waelde, Graeme Laurie and Abbe Brown, *Contemporary Intellectual Property: Law and Policy* (OUP 2011) 384. [↑](#footnote-ref-50)
51. Unlike patents, which depend on strong R&D facilities and the state’s economic, educational and technological capacities, trademarks are relatively easy to get. It was easy for the young entrepreneur Steve Jobs to take the word ‘Apple’ out of the public domain in the areas in which the then-start up and now giant, high-tech, US corporation does business – as the music band, the Beatles, had done previously with their Apple records. The sign Apple does not mean anything or much without Job’s and Beatles’ creativity and innovation in their respective actual business. [↑](#footnote-ref-51)
52. Before 2016, it was known as Office for Harmonization in the Internal Market. [↑](#footnote-ref-52)
53. Aida Torres Pérez, *Conflicts of Rights in the European Union: A Theory of Supranational Adjudication* (OUP 2009), part III: Judicial Dialogue. [↑](#footnote-ref-53)
54. See Regulation (EU) 1257/2012 (n 13), Recitals 19 and 22, Article 12; UPC Agreement (n 15), second paragraph of the opening page; EU Commission, *Impact Assessment* (n 39); EU Commission, *Europe 2020 Flagship Initiative Innovation Union* (COM 546, 2010), 18: 'the EU Patent should dramatically reduce the cost of patenting in Europe, *particularly for SMEs*' (emphasis added) <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52010DC0546&qid=1485437180296&from=EN>; For the same policy of the EU Parliament’s Rapporteurs, see Xenos (n 21), section 5. [↑](#footnote-ref-54)
55. See, eg., Hall, Helmers and Graevenitz (n 30). [↑](#footnote-ref-55)
56. The proportion of SMEs holding at least one national patent that is granted by the national patent office, which is considered cheaper than the EPO’s patent with/without a unitary effect, is just 0.5% (see EUIPO, n 24). This evidence proves that the main problem of SMEs’ low patenting activity is not the cost of the patent system. [↑](#footnote-ref-56)
57. William Lazonick and Mariana Mazzucato, 'The Risk-Reward Nexus in the Innovation-Inequality Relationship’ (2012) Finance, Innovation & Growth (FINNOV) Paper 2/11 <http://www.finnov-fp7.eu/publications/finnov-discussion-papers/risks-and-rewards-in-the-innovation-inequality-relationship.html>; Mariana Mazzucato, *The Entrepreneurial State: Debunking Public vs. Private Sector Myths* (Anthem Press 2013); Mark Buchanan, 'Who Created the IPhone, Apple or the Government?’ *Bloomberg*(NY, 19 June 2013) <https://www.bloomberg.com/view/articles/2013-06-19/who-created-the-iphone-apple-or-the-government->; Erik S. Reinert (ed.), *Globalization, Economic Development and Inequality: An Alternative Perspective* (Edgar Elgar 2014); Vince Cable, 'Innovation and the UK's Knowledge Economy' (*Department for Business, Innovation & Skills*, 23 July 2014) <https://www.gov.uk/government/speeches/innovation-and-the-uks-knowledge-economy>. [↑](#footnote-ref-57)
58. See Xenos (n 22). [↑](#footnote-ref-58)
59. UPC Rules of Procedure (18th edn, latest draft as updated in March 2017), Rule 13(1): 'The claimant shall lodge a Statement of claim with the [UPC] division *chosen by him* [Article 33 of the Agreement]', (emphasis added, reference to Article 33 in the original) <https://www.unified-patent-court.org/news/draft-rules-procedure-updated-march-2017>. [↑](#footnote-ref-59)
60. Ibid, Rule 13(1) in conjunction with Rule 14(2) and Article 49(1), (6), 50 of the UPC Agreement (n 15). See also D. Xenos, ‘Comments on the Preliminary Set of Provisions for the Rules of Procedure of the European Unified Patent Court’ (30 September 2013), sections 3 and 4(i), <https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2498521>, as part of the public consultation on the UPC Rules of Procedure. [↑](#footnote-ref-60)
61. See, also, patent data in section 2 above about the national origins of EPO patentees to estimate the dimension of the language issue that concerns them. [↑](#footnote-ref-61)
62. The order of citing the official EPO languages is that of the actual text of the EPC (n 27). [↑](#footnote-ref-62)
63. Case 147/13 *Spain v Parliament and Council* [2015] ECR 299. [↑](#footnote-ref-63)
64. (n 54). [↑](#footnote-ref-64)
65. EU Commission, *A Single Market Strategy for Europe - Analysis and Evidence* (COM 550, 2015) (emphasis added), 71 <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:52015SC0202&qid=1485438520140&from=E>. It has also been suggested that an IP insurance system would be helpful but it has also been recognised that such a system does not exist in most national states. Commentators have pointed out that the UPC’s negative impact on SMEs had already been known to the EU Commission before its legislative proposals in 2011-12, see Ingve B. Stjerna, ‘“Unitary Patent” and Court System – A poisoned Gift for SMEs' (20 April 2016) <https://www.stjerna.de/files/Unipat-SMEs.pdf>. See also Xenos (n 22). [↑](#footnote-ref-65)
66. European Scrutiny Committee, *Business Failure and Insolvency* (HC 2012-13, 33) para. 8.28. See also (n 16). [↑](#footnote-ref-66)
67. Deloitte, *Analysis of Prospective Economic Effects Related to the Implementation of the System of Unitary Patent Protection in Poland* (Deloitte Polska, October 2012). It is currently available in English by the Slovenian Intellectual Property Office <www.uil-sipo.si/uploads/media/UPP-Analiza-PL.pdf>. For a shorter presentation of the main points and findings of that study, see Xenos (n 21), 268. [↑](#footnote-ref-67)
68. Jochen Pagenberg, ‘Die EU-Patentrechtsreform – Zurück auf Los?’ (2012) 114(6) Gewerblicher Rechtsschutz und Urheberrecht 582, 583; See also the conference notes of Bartosz Krakowiak, ‘The EU Patent Package – How Poland Changed its Tune’ (VI Fórum Associação Portuguesa dos Consultores em Propriedade Intelectual, Lisbon, 12 February 2014), slide 15 <http://www.acpi.pt/wp-content/uploads/2014/02/BKrakowiak\_Patent-Package\_Lisbon-2014-final2.pdf>. [↑](#footnote-ref-68)
69. Deloitte (n 67), 3; Krakowiak, ibid, slide 11. [↑](#footnote-ref-69)
70. EPO, Annual Report 2017 (Granted patents) <https://www.epo.org/about-us/annual-reports-statistics/annual-report/2017/statistics/granted-patents.html#tab1>. [↑](#footnote-ref-70)
71. Article 1, UPC Agreement (n 15). [↑](#footnote-ref-71)
72. Ibid, Article 24(1)(e). [↑](#footnote-ref-72)
73. The preponderance of the EPC is also evident in latest Draft of UPC Rules of Procedure (n 59). [↑](#footnote-ref-73)
74. (n 23) and the text corresponding to (n 31) and (n 32). [↑](#footnote-ref-74)
75. Dietmar Harhoff, ‘Economic Cost-Benefit Analysis of a Unified and Integrated European Patent Litigation System’ (2009) <https://pdfs.semanticscholar.org/b880/e410a540cb368f97c1de90b11ded03f9efb8.pdf>. This is the official study of the EU Commission on the UPC (Tender No. MARKT/2008/06/D 1) and, yet, this document no longer appears on EU’s web portal. [↑](#footnote-ref-75)
76. Xenos (n 21), section 4.1.3. [↑](#footnote-ref-76)
77. See the EU Commission’s official response to the relevant question of a Greek MEP, ibid, footnote 40. For some of the studies that the EU Commission did not take into account, see (n 16), (n 66) and (n 67). [↑](#footnote-ref-77)
78. See, generally, Lord Steyn (n 42). [↑](#footnote-ref-78)
79. See also, e.g., Dimitris Xenos, 'Comments on the Composition of EU Commission Expert Groups’ (30 April 2014) <https://papers.ssrn.com/sol3/papers.cfm?abstract\_id=2498560>. It is part of the relevant public consultation of the European Ombudsman. [↑](#footnote-ref-79)
80. See patent data and statistics in the second section above that serve as standard indicators. See also, World Economic Forum, *‘*The Europe 2020 Competitiveness Report’ (2014), 18: ‘Aggregate numbers, however, mask the big differences between EU Member States in progress made towards Europe 2020 goals.’, at 18, ‘Looking at comparisons between EU Member States, a persistent knowledge divide between “innovation rich” and “innovation poor” economies prevails.’, at vii), ‘comparatively low patent application numbers—half of the activity in the United States and over half of the activity of advanced Asian economies’ <http://reports.weforum.org/europe-2020-competitiveness-report-2014/>. [↑](#footnote-ref-80)
81. Joseph E. Stiglitz, *Making Globalization Work* (Penguin 2006), 114; See also Boldrin and Levine (n 4); Peter Drahos and John Braithwaite, *Information Feudalism. Who owns the Knowledge Economy?* (Earthscan 2002); Graham Dutfield, ‘The Limits of Substantive Patent Law Harmonization’ in Ruth L. Okediji and Margo A. Bagley (eds) *Patent Law in Global Perspective* (OUP 2014). See also ‘The Future of Patent Governance in Europe’, the scientific report of the proceedings of the European Science Foundation-Workshop on ‘The Future of Patent Governance in Europe’ (2014) <www.biogum.uni-hamburg.de/3pdf-med/esf-scientific-report.pdf> citing Professor Margo Bangley for the point that ‘substantive patent harmonization is not in the best interests of many developing countries.’, at 13; EPO, *Scenarios for the Future: How Might IP Regimes Evolve by 2025? What Global Legitimacy Might Such Regimes Have?* (2007), 59: ‘“One size fits all” IP doesn’t work.’ [↑](#footnote-ref-81)
82. They are listed in the UPC Agreement, see (n 18). [↑](#footnote-ref-82)
83. EU Commission’s Proposal for an EU Directive on the Patentability of Computer Implemented Inventions (2002/0047/COD); Tobias Buck, Maija Pesola and Raphael Minder, 'EU Software Patent Directive Rejected' *Financial Times* (London, 07 July 2005). See more generally, Sebastian Haunss and Lars Kohlmorgen, ‘Lobbying or Politics? Political Claims Making in IP Conflicts’ in Sebastian Haunss and Kenneth C. Shadlen (eds) (n 38). [↑](#footnote-ref-83)
84. Brian Kahin, ‘What Patents on Software and Services Reveal about the System’ in OECD (ed.) (n 1) 209, 225: ‘Patents on software and business methods have extended the reach of the system into virtually every sector of the economy.’; EPO (n 80), 89: ‘“The blueprint for each new product is basically software”’ quoting Professor Joachim Henkel from University of Munich. [↑](#footnote-ref-84)
85. Sigrid Sterckx and Julian Cockbain, *Exclusions from Patentability: How Far Has the European Patent Office Eroded Boundaries* (CUP 2012). [↑](#footnote-ref-85)
86. See, e.g., Ip-Watch Brief, ‘EPO Official Aggressively Promotes Software Patents at CEBIT Fair’ (*Ip-Watch.org,* 22 March 2017); Roy Schestowitz, 'EPO Continues to Disobey the Law on Software Patents in Europe' (*Techrights*, 16 November 2017) <http://techrights.org/2017/11/16/cii-dodge-at-epo/>; FFII, 'EPO Software Patents Continue Despite 10th Anniversary of the European Parliament Vote' (*FFII.org*, 24 September, 2013) <https://blog.ffii.org/epo-software-patents-continue-despite-10th-anniversary-of-the-european-parliament-vote/>; Benjamin Henrion, 'FFII: EPO Seeks to Validate Software Patents without the European Parliament’ (*LWN.net*, 17 March 2009) <https://lwn.net/Articles/324022/>; Richard Stallman, 'Patent Absurdity' *The Guardian* (London, 23 June 2005) <https://www.theguardian.com/technology/2005/jun/23/onlinesupplement.insideit>. [↑](#footnote-ref-86)
87. Article 21, UPC Agreement (n 15). [↑](#footnote-ref-87)
88. (n 71). [↑](#footnote-ref-88)