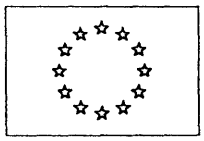

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GREEN PAPER

The Protection of Utility Models in the Single Market

(presented by the Commission)

Contents

Summary and questions

Legal protection of industrial property (patents, trademarks, design rights and utility models) in the single market has an important role to play: it has to promote innovative activity in the European Union, so as to ease the path from the initial idea to the successful translation of that idea into practice. The simpler and clearer such arrangements are for the user, the more they will facilitate innovation, providing effective protection for inventions. At the same time they ensure that competitors are kept informed of new developments by publication of the protected invention. This increases the competitiveness of European companies and helps to achieve the objectives of free movement of goods and undistorted competition.

A "utility model" is a registered right which confers exclusive protection for a technical invention. It resembles a patent in that the invention must be new - it must possess "novelty" - and must display a measure of inventive achievement - it must involve an "inventive step", though frequently the level of inventiveness required is not as great as it is in the case of patents. Unlike patents, utility models are granted without a prior search to establish novelty and inventive step. This means that protection can be obtained more rapidly and cheaply, but that the protection conferred is less secure. Utility model protection is at present entirely a matter of domestic law.

The Commission has been looking into whether the establishment and operation of a single market requires measures to be taken in respect of utility models at Community level, and if so what measures are needed to harmonize the law on utility models in the interests of the single market.

The need for action

Some form of utility model protection exists in France, Belgium, Portugal, Ireland, Italy, Spain, Germany, Denmark, Greece, the Netherlands, Finland and Austria. There are no comparable rights in the United Kingdom, in Sweden or in Luxembourg. A comparison of the national systems shows that there are wide differences between the requirements for utility model protection; the differences are such that as things stand it would not be practicable to apply those systems in a cross-border context.

No steps have so far been taken at Community level. This means that for inventions involving only a small inventive step no Community-wide protection is available; indeed no proper protection at all is available in the countries where utility models have not been legislated for. The Commission has accordingly studied the economic significance of utility model protection in order to establish whether these differences have a negative impact on the objectives of free movement of goods and undistorted competition.

The economic significance of utility model protection now and in future

In order to arrive at an estimate of the economic significance of utility model protection the Commission has considered the rate of utilization of the existing systems (looking at frequency, size of firm, and reasons for applying), and developments in innovative activity.

The first observation to be made is that utility models provide a very popular form of protection. There are roughly as many applicants for utility models as there are for patents. A comparison of the various national systems shows that greater use is made of systems which require only a small inventive step than is made of those where the inventive step required is the same as what would be needed for a full-scale patent. As the single market is consolidated we can expect an increase in demand for utility models and especially in cross-border applications.

An industry-by-industry breakdown of utility model applications in the European Union shows that the industries most often concerned are mechanical engineering, electrical engineering, and precision instruments and optics. Interest is even higher among small businesses and individual inventors than it is in big industry.

In a study of applications for utility models the main reasons cited for seeking this form of protection were as follows:

- quick, simple registration;
- less stringent requirements than for patents;
- low cost;
- temporary protection pending the grant of a patent.

The spectrum of reasons is thus very broad. The utility model is sometimes preferred where the applicant is not at all sure he will be able to market the invention, and therefore wants to keep his costs as low as possible. But it is also used for inventions which are particularly exposed to the danger of imitation and consequently of great importance to the performance and competitiveness of the applicant company. And the utility model is used where a patent would provide only inadequate protection or no protection at all, for example because it would take too long to obtain, or because the inventive step is too small. This means that whatever the size of the firm the perceived effects of a utility model are very positive: in the first place an improved market position and in the second place a direct increase in earnings.

An analysis of the perceived importance of inventions reveals that small businesses are particularly conscious of the need to intensify their innovative activity to stand up to increased competition. They feel that inventions involving small inventive steps or short periods of exploitation will grow in importance in future; this would bring an expansion in demand for protection which can best be met by utility models. Only a small proportion - no more than 10% - of those questioned in firms of all sizes and in all industries expected a fall in the proportion of such "petty" inventions in future.

In view of the results so far it is not surprising that manufacturers, inventors and patent lawyers all see a great economic need for a unified system of utility models in the European Union. A breakdown by size of firm shows that there is particularly strong interest among smaller businesses with 500 employees or less.

Effects on the common market

Member States are basically free to design utility model systems as they will, provided the measures they take are not a means of arbitrary discrimination or a disguised restriction on trade between Member States. At present, therefore, different rules may be enacted in different countries, and Member States may decide to do without utility model protection altogether.

An intellectual property right conferred by the law of a Member State provides protection only on the territory of that State. In the absence of any unification of the law, therefore, the holder of such a right can prevent third parties from importing protected goods which have been produced and marketed without his consent. Thus the intellectual property rights conferred by the Member States can of their nature be used to hinder the free movement of goods.

The differences between the systems of protection are outside the control of the right-holder and force him to avoid markets in which he cannot obtain equivalent protection for his invention. Given the economic significance of utility models, this erects barriers between markets inside the European Union. Thus the differences which exist have a direct adverse effect on trade within the Community, and on firms' capacity to treat the common market as a single setting in which to do business. The free movement of goods is obstructed, with practical disadvantages for those concerned.

If firms are to take advantage of the fundamental freedoms laid down in the EC Treaty, the intellectual property rules must allow fair competition between them. Given the differences which exist at present, companies or individual inventors wanting to exploit an invention in several States have to familiarize themselves with a number of different systems or take expensive advice in each of the Member States concerned.

The situation may be bearable in the case of big companies that can invest large sums of money in the promotion and protection of their inventions. For individual inventors and for small businesses the differences they have to deal with and the consequent need for legal advice are an administrative problem and often an insuperable cost factor. This restricts innovative activity on the part of such businesses and consequently distorts competition.

It is not surprising, then, that companies and individual inventors should complain that they encounter serious difficulties in the cross-border enforcement of utility model protection. The problems are growing with increasing export intensity.

Community objectives and economic need

In view of the great economic need the maintenance of the existing situation would not be desirable; it would run counter to the idea of a Europe which is drawing closer together. It would not allow the achievement of free movement of goods and undistorted competition.

To ensure that the single market becomes a reality and operates smoothly, the Commission must respond to the present and future economic need.[1] The development of innovative activity in the European Union, which has been marked by a trend towards smaller inventive steps, greater cost-sensitivity, shorter production and marketing cycles and a shorter lifetime for inventions, is generating increased demand for a form of protection that offers fast, simple and inexpensive protection for technical inventions in the European Union.

To remedy these shortcomings, measures are needed at Community level, with the following main objectives:

- protection to be provided for short-lived technical inventions,
- protection to be provided for technical inventions which involve only a small inventive step,
- protection to be obtainable rapidly,
- protection to be obtainable simply,
- protection to be inexpensive, and
- publication to be rapid, so that the public is informed quickly.

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1 This approach has already produced measures to protect new technologies, as in the case of biotechnology, and to adapt existing systems of protection to changing needs, as in the case of pharmaceuticals.

Measures required

The European Commission is required to put forward those proposals for the approximation of laws which are needed for the establishment of the internal market. The Commission has accordingly considered both the form which any legislation might take and the substance of any Community-level arrangements in respect of utility model protection.

Form of legislation to harmonize utility model protection

Several options are open here.

Firstly, the national systems of protection could be brought into line by means of a directive. Harmonization of this kind would not be confined to removing the differences between the existing rules, but would also introduce utility model protection in those countries where it does not currently exist. This would establish a package of national rights. Each of these rights would continue to be confined to the territory of one Member State.

The results so far obtained in surveys of patent lawyers acting as advisers and of companies and individual inventors show that a majority would like to see a user-friendly system whereby protection could be secured in three to five Member States by means of a single application. This cannot be achieved simply by aligning national law.

The Commission takes the view, therefore, that harmonization of national systems would go some way towards improving the situation, but would not solve all the problems which arise.

The Commission accordingly feels that consideration should be given to measures which go beyond straightforward harmonization.

One possibility would be to supplement the harmonization of domestic law with mutual recognition of the protection granted by Member States. National rights and national registration offices would continue in being, but cross-border protection in the European Union could now be obtained by means of a single application.

Another possibility would be to adopt a regulation establishing a new Community protection right; as Community law, such a regulation would rank above the national systems, but would not replace them. A right obtained under Community law would be valid directly in all Member States. Protection throughout a territory comprising all the Member States could then be secured by means of one application and one set of proceedings at one Community office.

But it must be borne in mind that the unification of the common market is a process which is still going on, particularly as the European Union has been recently enlarged to take in Austria, Sweden and Finland. A combination of different possibilities might be the best way of ensuring that a future system was even better tailored to the needs of the single market. As with trade marks and designs, then, a directive harmonizing national systems of protection might be combined with a regulation establishing a new single utility model right.

Substance of Community-level protection of utility models

Utility model protection exists in twelve out of fifteen Member States. All these systems provide for a registered right for technical inventions without prior search to establish novelty and inventive step. The Commission is of the opinion that these common features should form the basis of a Community-level scheme.

In other respects the existing systems differ widely, and the Commission takes the view that here all the possibilities will have to be considered. The critical points are the level of inventiveness; the three-dimensional form requirement; excluded inventions; novelty; industrial applicability; procedure;effect of the protection right; transfer; continuance; infringement; and dual protection (where an invention is protected both by a patent and by a utility model).

At this stage in its inquiries the Commission feels it would be reasonable to deal with these points as follows :

- The level of inventiveness required could be lower than in the case of patents; this is the only way of allowing for the changing demands of inventive activity.
- The three-dimensional form requirement could be abolished: the reasons for its introduction are historical, and it does not meet any modern need.
- Compositions of substances could be eligible for utility model protection; as regards substances proper, and process inventions, the Commission proposes to await the reaction of interested parties.
- The novelty of an invention could be determined by reference to the state of the art; this should not be restricted to the territory of a particular Member State, as that would run counter to the objective of a single market.
- There could be a twelve-month grace period for novelty, along the lines of Article 8 in the Community design proposal.
- Industrial applicability could be regulated in accordance with Article 57 of the European Patent Convention.
- The procedure for the grant of the right could be based on Articles 78 to 85 of the European Patent Convention; there would be no prior search to establish that all the requirements are met, but the application would be examined to establish that *prima facie* it may qualify for protection.
- An optional search would be possible, however, in order to increase certainty as to the legal position.
- Rights of use and of prohibition and their exhaustion could be regulated in line with what is done in patent law in the Member States; a limit to the number of claims might be envisaged.
- A registered right could be transferred without restriction.
- The grounds for extinction and nullity could be regulated in line with patent law in the Member States.
- The term of protection should be short: the maximum duration could be 10 years, which could be reached by renewal in steps of several years. This would be an effective way of offsetting the less stringent admissibility requirements.
- Where it is claimed that a utility model has been infringed it should be open to the court to order a search report, in order to establish whether the disputed invention qualified for protection; this would help to fill the gap left by the absence of a prior search.
- In order to avoid placing the right-holder in too strong a position, there could either be a prohibition on dual protection by both a patent and a utility model, or a ban on invoking the two successively.

The scheme being proposed here is intended for inventions where the innovative element is fairly modest. The inventive step may be small; or the period of protection needed may be short; or the possibility of industrial application may be limited.

The Commission takes the view that a system of this kind would be a useful complement to patent protection, and would help to boost innovative activity and hence the competitiveness of European companies doing business on the single market. This would further improve the operation of the single market.

The Commission has not yet reached a definitive view. The results arrived at so far will have to be discussed with interested parties before the Commission takes any further action at Community level.

Questions to interested parties are set out below; full answers to these questions will enable the Commission to make a better assessment of whether any action should be taken at Community level, and if so what form it should take.

The Commission therefore asks interested parties to take the trouble to answer the questions carefully.

__QUESTION 1:__ On the basis of its inquiries so far the Commission has come to the following assessment of the economic significance of utility model protection.

__(a) System of protection:__ Among the existing systems of protection, the one most readily accepted is that which calls for a smaller inventive step than does a patent and which largely dispenses with the requirement that the invention be embodied in three-dimensional form.

__(b) Economic sector:__ Utility model protection is most frequently taken advantage of in the mechanical engineering, electrical engineering and precision instruments and optics industries.

__(c) Size of firm:__ Interest in utility model protection is somewhat greater among small and medium-sized firms and individual inventors than it is among large companies.

__(d) Reasons for applying:__ Studies have identified the following as the main reasons for seeking utility model protection:

* quick, simple registration
* less stringent requirements than for patents
* low cost
* temporary protection pending the grant of a patent.

__(e) Future developments:__ In the industries which file most utility model applications, the protection of inventions involving only a small inventive step and with a short lifetime will grow in importance in future, especially for small and medium-sized businesses, but for large companies too.

The Commission asks interested parties to comment.

__QUESTION 2:__ The Commission asks interested parties to say whether in their view the wide discrepancy between the economic significance of utility models in different Member States, and the differing rules governing them, obstruct the free movement of goods and distort competition in ways which cause them practical disadvantage.

__QUESTION 3__: In the Commission's view the development of innovative activity in the European Union is generating a growing need for a form of protection which would complement patent protection by providing a rapid, simple and inexpensive form of protection for technical inventions.

The Commission asks interested parties to comment.

__QUESTION 4__: If action is in fact needed, there are a number of possibilities open to the Commission.

(a) The first course would be to seek an alignment of the various national systems by means of a directive, which would also mean introducing this form of protection in countries which do not possess it; this would produce an array of similar national systems of utility model protection.

(b) Such a directive might also provide that Member States were to recognize the rights conferred by one another's systems. National protection rights and national registration offices would continue to exist, but cross-border protection valid throughout the European Union could be obtained by means of a single application.

(c) A further possibility would be to enact a regulation creating a new Community protection right governed by Community law, which would have precedence over national systems of protection but would not replace them. This would allow protection which was valid throughout the European Union to be obtained in a single set of proceedings at a joint registration office.

(d) Lastly, as in the case of trade marks and design, the alignment of national law could be combined with the creation of a new single protection right, in order to tailor the new system even better to the requirements of the internal market.

The Commission asks interested parties to say which of these systems would best ensure the operation of the single market.

QUESTION 5: If action is needed at Community level, and if it is to take the form of European Community legislation, it has to be decided what the substance of utility model protection should be. All of the existing systems provide protection for technical inventions by means of a registered right which requires no examination of novelty and inventive step.

The Commission asks interested parties to say whether these common features could form the basis of a scheme of utility model protection at Community level.

QUESTION 6: The existing systems of utility model protection differ in their substance.

The Commission asks interested parties to say whether the following points should be included in a Community system of utility model protection:

- *The level of inventiveness required should be lower than in the case of patents.*
- *Three-dimensional form should not be required.*
- *Process inventions and substances should be excluded.*
- *The novelty required should be determined by reference to the state of the art, which should be restricted to the territory of the European Union.*
- *There should be a twelve-month period of grace for novelty.*
- *There should be an industrial application requirement, based on Article 57 of the European Patent Convention.*
- *The procedure for applications should be based on Articles 78 to 85 of the European Patent Convention.*
- *There should be a formal check on protectability but no general examination of compliance with the requirements.*
- *Optional searches should be possible.*
- *Rights of use and of prohibition and their exhaustion should be based on the existing rules of patent law.*
- *The term of protection should be renewable in steps of several years, the maximum term being ten years.*
- *A search report would be drawn up in the event of legal proceedings for infringement.*
- *So as to avoid conferring too great a measure of protection, combined use of patent and utility model rights for the same invention should be ruled out.*

I. INTRODUCTION

The achievement of a single market was for a long time the European Community's main aim. The conditions for the functioning of the single market were established over a period which ended on 31 December 1992[2]. The internal market can and it must be improved further, if we are to have the certainty that goods will be able to move freely, and that competition will not be distorted. The date of 1 January 1993 was not the end; it was the beginning of a long-term process, in the course of which further changes will be needed in the legal structures and administrative practices we are used to in our own countries.

At the end of 1993 the Commission took the decision to publish a Strategic Programme for the single market, in order to establish clear priorities for the years to come.[3] Priorities had to be set if the potential offered by the single market was to be properly harnessed so as to boost economic growth, competitiveness and employment.[4]

Without a common market in goods a "single" market or "internal" market is unthinkable.[5] A common market in goods requires free movement of goods and fair competition. But even today free movement can be obstructed and competition can be distorted by the rules which may apply in this or that Member State. Industrial property rights, for example, often have to be applied for in the individual country, and confer exclusive protection only on that country's territory. Member States are free to decide whether they wish to provide such protection, and if so what form it should take. The terms of competition may vary as a result, and this can lead to distortion. It can happen, too, that holders of industrial property rights will avoid certain markets where no adequate protection is available. This has an adverse effect on trade and restricts the free movement of goods.

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2 Article 7a of the EC Treaty.

3 *Making the Most of the Internal Market: Strategic Programme*, COM(93) 632 final, 22 December 1993.

4 European Commission, *The Internal Market in 1993 - Summary*, Official Publications Office of the European Communities, Luxembourg, ISBN 92-826-7644-7.

5 Judgment of the Court of Justice in Case 78/70 *Deutsche Grammophon v Metro* [1971] ECR 487, paragraph 6, last sentence.

Given the close cross-border cooperation there is between companies in the European Union it is particularly important that industrial property rights should be brought more closely into line. This is the only way to eliminate the difficulties under which businesses have to suffer if there are wide discrepancies between different systems. In almost all areas of industrial property, therefore, action has been taken or has at least been initiated at Community level .[6] Nothing has been done with respect to the "utility model", the industrial property right which forms the subject-matter of this Green Paper.

A "utility model" is a registered right which confers exclusive protection for a technical invention.[7] It resembles a patent, in that the invention must be new - it must possess "novelty" - and must display a measure of inventive achievement - it must involve an "inventive step", though frequently the level of inventiveness required is not as great as it is in the case of patents. Unlike patents, utility models are granted without a prior search to establish novelty and inventive step. This means that protection can be obtained more rapidly and cheaply, but that the protection conferred is less secure. Utility model protection is at present entirely a matter of domestic law.

Different Member States have different schemes, which call the rights they confer by a variety of names: "utility model", "utility certificate", "six-year patent", "short-term patent", "petty patent" or "utility model certificate". As one might imagine from the range of terms used, the systems diverge widely, but they all provide protection for technical inventions alongside what is available under patent law. All the schemes in existence are intended to boost the innovative capacity of companies.

Legally speaking there is no objection to Member States' operating different systems of utility model protection, always provided they are not misused.[8] But the present situation is not consistent with the objectives of free movement of goods and undistorted competition. And it discourages innovative activity in European companies. A high

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6 E.g. Council Regulation (EC) No 40/94 of 20 December 1993 on the Community trade mark (OJ No L 11, 14.1.1994); amended proposal for a Council Directive on the legal protection of biotechnological inventions (COM(92) 589 final; OJ No C 44, 16.2.1993); Council Regulation (EEC) No 1768/92 of 18 June 1992 concerning the creation of a supplementary protection certificate for medicinal products (OJ No 182, 2.7.1992); proposal for a European Parliament and Council Regulation on Community design (COM(93) 342 final; OJ No C 29, 31.1.1994).

7 This distinguishes utility models from design rights, which protect the outward form of an object rather than a technical invention embodied in it.

8 See the second sentence of Article 36 of the EEC Treaty.

level of innovative activity gives a business a technological advantage, which is an important factor in its competitiveness. [9] Today, the competitiveness of European companies is more important than ever before.

It is important, then, that measures be taken to promote innovative activity, so as to ease the path from the initial idea to the successful translation of that idea into practice. The legal protection available in the single market has a major role to play.[10] The simpler and clearer such arrangements are for the user, the more they will facilitate innovation, providing effective safeguards for inventors while at the same time ensuring that the public is kept informed of new developments. This would increase the competitiveness of European companies and help to achieve the objectives of free movement of goods and undistorted competition.

In the last four years five more countries have introduced a system of the kind under discussion,[11] thus bringing to twelve out of fifteen the number of Member States in which such a system exists; and against this background voices have being raised in industry and trade associations calling for harmonization of utility model protection.[12] In the course of 1994 the European Parliament's interest in the matter was reflected in written questions asking the Commission to draw up proposals.[13] In its Strategic Programme[14] the Commission accordingly undertook to put forward a Green Paper on utility model protection.

This Green Paper seeks to assess the need for action by the European Union with respect to utility models, and to set out a number of options; the Commission will be in a position to decide between these possible courses once it has had a chance to study the comments of interested parties.

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9 *European Industrial Policy for the 1990s*, Supplement 3/91 - Bulletin of the European Communities, p.23.

10 Alongside such things as the technological development programmes of the European Union and of the Member States.

11 Ireland, Denmark,Greece, Finland and Austria.

12 E.g. *Action européenne pour l'Éducation, l'Invention et l'Innovation*, petition to the European Parliament, No 1012/93; International Federation of Industrial Property Attorneys (FICPI), Resolution No 6, September 1994.

13 Written Questions Nos 1552/94 and 2536/94, Hearing on the petition to the European Parliament, No 1012/93.

14 *Making the Most of the Internal Market: Strategic Programme*, COM(93) 632 final, 22 December 1993.

Building on the approach outlined here in Chapter I, Chapter II examines the need for action at Community level. Bearing in mind the scope of the powers transferred to the European Community, it studies the economic significance of utility model protection and the negative impact on the common market of the differences which currently exist.[15] Chapter III then goes on to discuss the type of legislation which would be suitable and the form which a Community scheme might take.

The results of two studies are drawn upon throughout the Green Paper to provide evidence of adverse effects on the free movement of goods and fair competition and an empirical foundation for the possible form of any Community action. An initial pilot study asked a total of 905 patent attorneys in Germany, France, Spain and the United Kingdom for their views on the economic significance of the existing systems and of possible developments.[16] In the full-scale study which followed, 3 793 industrial companies and independent inventors were questioned, and statistics were drawn up and evaluated.[17]

The Green Paper begins with a summary of the most important findings and a questionnaire on the need for Community action and the form any Community action might take.

The Commission asks all interested parties to take an active part in this consultation process.

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15 See the comparative study of the law in Annex 1.

16 Weitzel, G., Ifo Institute, *Pilotstudie - Die Wirtschaftliche Bedeutung des Gebrauchsmusterschutzes*, C.1, p.9.

17 Weitzel, G., Ifo Institute, *The Economic Impact of the Legal Protection of Utility Models on Enterprises in the European Union*, 2.1.

II. THE NEED FOR ACTION AT COMMUNITY LEVEL

The Commission has to assess the need for action at Community level in terms of the establishment and functioning of the single market. It has accordingly considered whether the differences between the national systems of utility model protection hinder the achievement of these objectives.

The Commission has likewise studied the economic significance of this type of protection. It has to be determined whether the differences in the schemes operating in some countries, and the absence of similar schemes in others, have adverse effects on the common market; and a finding that utility model protection was of considerable economic significance in the single market would support this hypothesis. In the Commission's view the degree of economic importance of utility models and the scale of any adverse effects on the single market will affect the answer to the question whether harmonization is needed and if so to what extent.

A. The establishment and functioning of the single market

The Community is required to take measures "with the aim of progressively establishing the internal market". This internal market (or "single" market or "common" market) is to comprise an area without internal frontiers in which the free movement of goods, persons, services and capital is ensured. This definition does not mention undistorted competition as an objective, but the concept of an internal market itself means that the provision is comprehensive in scope.

In the field of industrial property the establishment and functioning of a common market is primarily a matter of removing any remaining obstacles to the free movement of goods and services, and further improving the system of undistorted competition.[18]

Systems of utility model protection which differ from one country to another may interfere with the free movement of goods and undistorted competition. In that event the Community is called upon to take the necessary measures to approximate the provisions laid down by law, regulation or administrative action in Member States in order to remove the obstacles and further to improve the functioning of the common market.

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[18] See Article 7a TUE.

B. The present situation in the Member States

Some form of utility model protection exists in *France, Belgium, Portugal, Italy, Spain, Germany, Denmark, Ireland, Greece, Austria, Finland and the Netherlands*; these systems sometimes differ quite widely. The introduction of a similar system is under consideration in the United Kingdom, in Luxembourg and in Sweden.

All of these systems protect technical inventions, so that they can be described as forms of *"additional protection for technical inventions"*. All of them permit registration without the need for examination to establish novelty and inventive step, which makes them quick and inexpensive to obtain.

There are wide differences in their requirements, which allow them to be divided into three groups.

The first group comprises rights which do complement patent law but whose requirements are the same as those for patents. The inventive step required here would also qualify the invention for patent protection ("full inventive step requirement"). Whether or not the invention possesses novelty is determined by reference to the state of the art internationally ("absolute novelty"). Embodiment in three-dimensional form is not a fundamental requirement.

Systems of this kind are the French *certificat d'utilité*, the Belgian *brevet de courte durée*, the Dutch *zesjarig octrooi*, and the "second-tier patent" which was at one time proposed in the United Kingdom.

The second group comprises those rights whose requirements are different from those of patent law. Here the inventive step required is smaller, allowing protection to be extended to minor inventions ("diminished inventive step requirement"). The number of inventions qualifying is reduced by a requirement that the invention be embodied in three-dimensional form.

Systems in this group are the Greek utility model certificate, the Spanish *modelo de utilidad*, the Portuguese *modelo de utilidade*, the Italian *brevetto per modelli di utilità* and the Finnish *nyttighetsmodell*. These systems can be graded further on the basis of the

degree of novelty called for: absolute novelty is required in Italy, Portugal, Finland and Greece, while relative novelty is sufficient in Spain.

The third group likewise has a diminished inventive step requirement. But here the three-dimensional form requirement plays only a secondary role , or is absent entirely, so that protection is available both for process inventions and for all those inventions where the inventive step is only small.

This group includes the German *Gebrauchsmuster*, which was subject to a three-dimensional form requirement in the past: the legislation has recently been amended, and no longer makes any reference to such a requirement, so that the right is available for all minor inventions, including process inventions. The Danish *brugsmodèl*, the Austrian *Gebrauchsmuster* and the Irish "short-term patent" fall into the same category. Unlike the other systems, the German system requires only relative novelty.

These are all systems which grant a registered right without prior examination; but the differences between them are such that as things stand it would not be practicable to allow them to apply on a cross-border basis.

No steps to improve the situation have so far been taken at Community level. Nothing is yet planned in the context of the unification of intellectual property law, nor is there any other right which might cover the same area. This means that particularly for inventions involving only a small inventive step no Community-wide protection is available; indeed no proper protection at all is available in those countries where utility models have not been legislated for.

The Green Paper on the Protection of Industrial Design describes this as a "lacuna [which] represents a major problem in establishing a Community system of protection of industrial property".[19]

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[19] Commission staff working paper, point 11.5.2.3, p. 155.

C. The economic significance of utility model protection

The study of the economic significance of utility model protection can begin with innovative activity among firms in the single market. A high level of innovative activity gives a business a technological advantage, which is an important factor in its competitiveness.[20] Today, the competitiveness of European companies is more important than ever before. Innovation as a catalyst of competitiveness has accordingly been made a component in European industrial policy for the 90s.[21]

The level of innovation among firms in the common market is reflected in the rate of utilization of property rights for technical inventions, which are intended to promote and reward innovation.[22] This investigation first looks at the utilization of utility model protection in the individual Member States and across their borders. These figures are then compared with those for patents, in order to clarify the importance of utility models in the individual countries.

The study then examines the types of firm and the particular industries which make most use of utility model protection, and considers the possible reasons.

The section ends with an industry-by-industry analysis of the development of innovative activity. This allows a forecast to be made of the likely economic significance of utility model protection in the future.

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20 *European Industrial Policy for the 1990s*, Supplement 3/91 - Bulletin of the European Communities, p. 23.

21 *Industrial Policy in an Open and Competitive Environment: Guidelines for a Community Approach*, COM(90) 556.

22 *Promoting the Competitive Environment for the Industrial Activities based on Biotechnology within the Community*, SEC(91) 629.

1. The utilization of utility model protection in the European Union

In looking at the rate of utilization a distinction has to be drawn between domestic applications and cross-border applications. The latter show the level of interest in utility model protection in industry in the common market in general, outside the borders of the particular country.

(a) The national applications statistics

An important indication of the economic significance of utility models in the individual Member States is provided by the national applications statistics. They show which systems arouse particular interest among business people. For many countries figures of this kind can be found in the annual statistics published by WIPO[23] and in the databases of the European Patent Office.[24] Only for France and Belgium are no such figures available.[25] This may be due to the different classification in the Paris Convention, in accordance with which utility model protection in France and Belgium is governed by the rules on patents and is not classed with "utility models" within the meaning of the Convention.[26] For this study, however, figures for applications for short-term patents were been obtained from the Belgian Patent Office. In the case of France the figures for applications at least in 1988, 1989 and 1990 were assembled by means of inquiries at the annual meeting of the *Fédération des Conseils en Propriété Intellectuelle*. Ireland and Denmark introduced utility model protection only in 1992, and no official figures are yet available. According to the Danish Patent Office, however, more than 1 000 applications were received between July 1992, when the utility model was introduced, and 1 June 1993. The following picture emerges:[27]

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23 The World Intellectual Property Organization, based in Geneva.

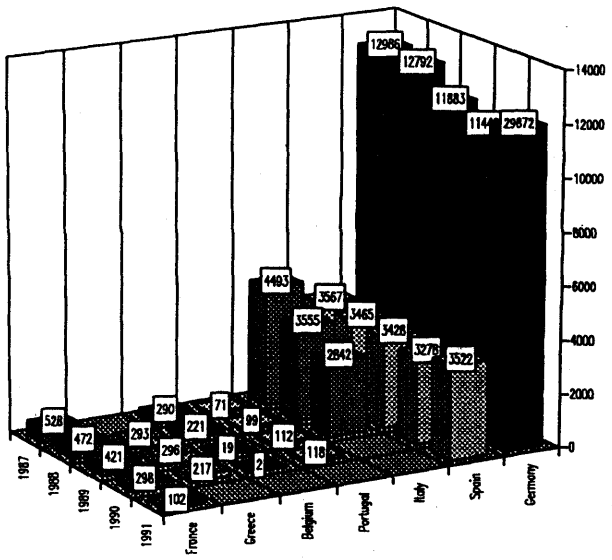
24 The Epidos and Inpadoc bases.

25 According to information supplied on 4 August 1992 by Mr Ludwig Baeumer, Director of WIPO's Industrial Property Division, WIPO's figures for applications in Belgium include patents. France has so far supplied no data on utility certificate applications and registrations. It can be assumed that the figures for patents include utility certificates.

26 See Annex 1, the comparative study, at point A.2(a).

27 The Italian statistics include applications from abroad. The Belgian statistics were kindly provided by the Belgian Patent Office; the figures for applications in 1990 show the position at 30 November 1990. The French INPI was unable to supply any figures for utility certificate applications. The statistics for Greece are taken from the annual reports of the Industrial Property Organization, the OBI.

Statistics for utility model applications in the EU Member States



(Source: European Patent Office, Epidos/Inpadoc, position at 9.7.1993, and Ifo patent statistics)

It will be seen that Germany, Spain and Italy are the countries with the highest numbers of applications. The systems in these countries have a diminished inventive step requirement. Greece also has such a system, but there the figures are less significant, as the system was introduced only in 1987. All the newer systems have the diminished inventive step requirement,[28] so that without going any further into the reasons at this stage one can say that systems with a diminished inventive step requirement have greater appeal than those where the inventive step requirement is the same as that for a patent.[29]

(b) Cross-border applications

Figures showing the extent to which existing systems are used domestically do not tell us whether applications for such rights are being made across borders. As has been explained above,[30] given the variations between utility model systems in the European Union a large number of cross-border applications is not to be expected.

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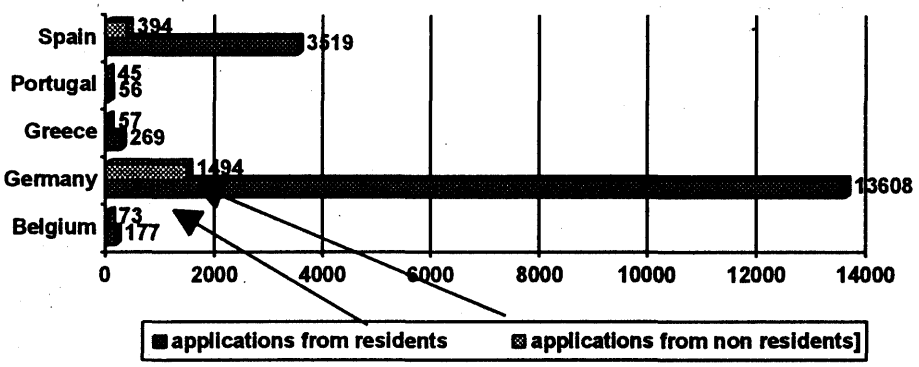
28 The most recent being those introduced in Ireland, Denmark, Austria and Finland.

29 The reasons for this preference are considered in Chapter III at B.2.

30 See Chapter II at D.3, "Effects on industrial companies and independent inventors".

The following table shows the numbers of utility model applications from residents in the home country in comparison with the number of applications from other EC countries, from 1987 to 1991:



(Source: Industrial Property Statistics, publication A and B, WIPO, and Belgian Patent Office)

The fact that the number of registrations is so small is to be attributed to the difficulties which stand in the way of cross-border applications.

(c) A change in the behaviour of applicants in the European Union

When firms engage in innovative product development as a way of improving their competitiveness, they will need cross-border protection for their inventions. It can be difficult to make a realistic estimate of future, long-term sales potential, and at the same time of any additional competition which may emerge. Questions put to firms here are for the most part hypothetical. In a survey of patent attorneys, however, questions were nevertheless asked about the possible repercussions of the single market on the procedure for utility model applications, in an attempt to obtain some indication of future trends.[31]

Despite the present situation the results show that at least in Germany and Spain there is a majority of patent attorneys which expects the number of utility model applications in other EU countries to increase as a result of the single market; both large and small firms would be involved, in roughly equal measures. In the United Kingdom the results are not quite so clear-cut: 56% of the respondents expected an increase, but 44% said they expected no increase. French patent attorneys were distinctly sceptical: given the present

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[31] Weitzel, G., Ifo Institute, *Pilotstudie - Die wirtschaftliche Bedeutung des Gebrauchsmusterschutzes in der Europäischen Union*, 2.6, p. 26.

situation 76% expected no increase in applications, and consequently did not anticipate that the firms they advised would be needing greater protection.

But the patent attorneys expressed very positive expectations in the event that the fundamental legal position were to change. A clear majority of the German, Spanish and French attorneys questioned, 82% on average, expected an increase in applications if protection could be secured in several EC Member States by means of a single application. A decisive simplification of the process of obtaining utility model rights along these lines, according to the survey results, would lead to greater utilization of the utility model, the size of the firm being of little importance. The position was different in the United Kingdom, where only 56% of the patent attorneys questioned expected a development of this kind. These are plausible figures, given that there are no utility models to apply for in the United Kingdom, so that the utility model may be unknown to firms.

2. The significance of utility models in comparison with patents

The significance of the utility model as compared with the patent is to a great extent dependent on the way the system is designed. A comparison of national figures for applications for patents and utility models in Germany, France, Italy and Spain gives the following picture:[32]

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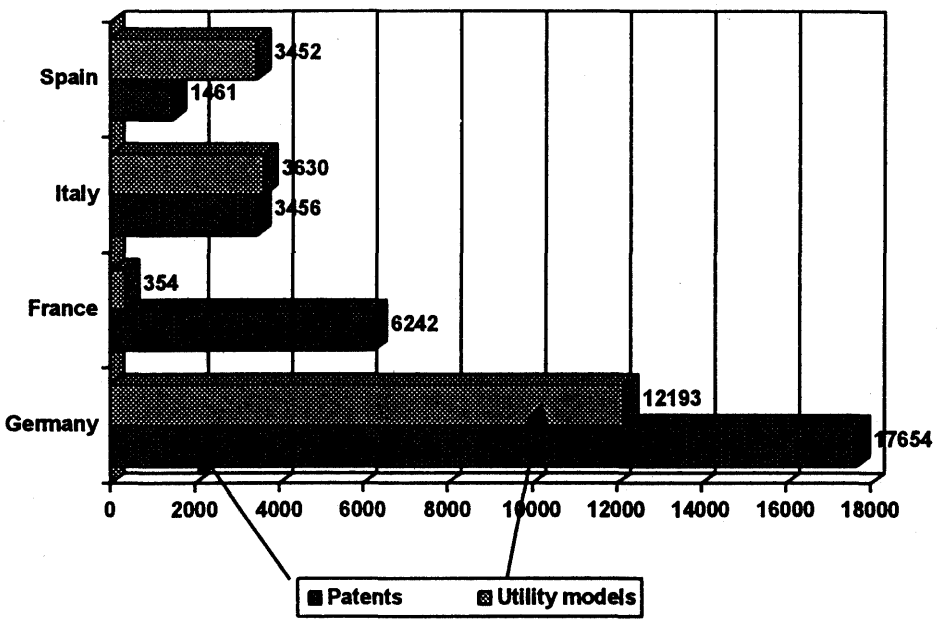
[32] No comparable figures were available for other countries.



(Source: European Patent Office, Epidos/Inpadoc, position at 9.7.1993; Ifo patent statistics; and European Commission calculations)

It will be seen that in the case of Germany, Spain and Italy, where the inventive step required for a utility model is smaller than what is needed for a patent, the utility model plays a more important role by comparison with the patent than it does in the case of France, where the inventive step requirement is the same as that for a patent.

The reason is that in the systems where the inventive step looked for is smaller the requirements which must be satisfied in order to qualify for protection are lower; each of the two types of right then has its own *raison d'être*.

Utility model systems with the same requirements as patents have less appeal because they are in competition with patents, which many applicants prefer because of their greater security.

3. The significance of utility model protection by reference to the size of the firm

Utility model protection is not equally important to all firms: it depends where the firm's interests lie. A study of the relationship between the German patent system and

innovative activity in firms has been carried out in Germany,[33] which among other things looks at the importance of industrial property rights[34] in relation to the size of the firm.[35] The study finds that of these industrial property rights utility model protection is third in order of importance after patents and trade marks. When applicants are sorted by type of business, utility model protection is second in order of importance, after patents, among independent inventors and craft firms. Among industrial and manufacturing companies and research institutes it ranks at least third. It is striking that for all categories of applicant industrial design protection came in last place.[36] When applicants are sorted by size of business, it is found that there is higher demand for utility models among firms with an annual turnover of ECU 5 million or less, that is to say among small and medium-sized enterprises.[37] In this category utility model protection comes in second place after patents. But even among companies with a turnover up to ECU 1.25 billion and over utility models are in third place. In Germany, then, utility models are of importance especially to small and medium-sized industry with an annual turnover of up to ECU 5 million. The reasons cited are for the most part to do with savings in costs, time and administration. These are arguments which hold good for all the existing utility model systems, and in the Commission's view it can be concluded that utility model protection is useful to big industry, but even more so to small and medium-sized industry.

4. Significance in particular industries

After the rate of utilization and the importance of utility models to firms of different sizes, the Commission has attempted to establish which industries make particularly frequent use of utility model protection. The results obtained allow developments in individual industries to be studied and inferences to be drawn regarding the behaviour of applicants in future. An industry-by-industry analysis of applications for utility model

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33 Täger, U.C.,with the collaboration of Seyler, H., *Probleme des deutschen Patentwesens im Hinblick auf die Innovationstätigketen der Wirtschaft*, study carried out by the Ifo Institute for the German Federal Ministry of Economic Affairs, May 1989.

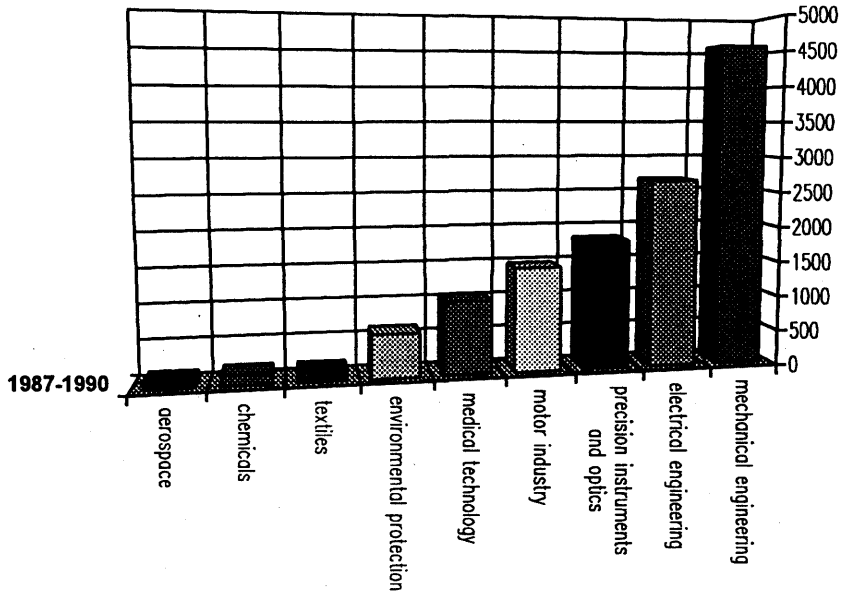
34 Patents, utility models, industrial designs and trade marks.

35 *Loc. cit.*, p. 142, at 7.3.

36 *Loc. cit.*, p. 144.

37 See European Commission, *Report from the Commission to the Council on the Definitions of Small and Medium-sized Enterprises (SMEs) used in the context of Community Measures*, SEC(92) 351 final.

protection in the European Community, ignoring differences between systems, gives the following picture:



(Source: European Patent Office, Vienna Sub-office, position at 8 January 1993)

The industry which makes most use of utility models is thus mechanical engineering. This also bears out the results of a survey of firms in Denmark which was conducted with a view to the introduction of such a system.[38] That survey found that utility model protection would be used mainly in mechanical and electrical engineering. After the mechanical engineering industry the main users are electrical engineering, precision instruments and optics, and the motor industry.

5. Reasons cited for seeking utility model protection

The reasons cited for seeking utility model protection are an important factor in a proper assessment of its economic significance.They provide concrete evidence of the features of the system which are regarded as particularly useful. In a survey of industrial

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[38] 'Legal and Economic Significance of Protection by Utility Models', in *AIPPI Yearbook* 1986, 1-4, Q 83, pp. 45-47.

companies, independent inventors[39] and patent attorneys[40] in Germany, France, Italy, the United Kingdom and Spain the main reasons cited for seeking this form of protection were:

- quick, simple registration
- limited requirements
- low cost
- temporary protection pending the grant of a patent.

(a) Quick, simple registration

An applicant has to wait an average of four years for a European patent,[41] and an average of two and a half years for a national patent,[42] but the average wait for the registration of a utility model is sixth months, as no examination has to be carried out to establish novelty and inventive step. Of the reasons given by firms, independent inventors and patent attorneys for seeking utility model protection, by far the most frequently cited is quick and simple registration and protection against imitation.

This reason was most often cited by SMEs (67%), and only half as often by larger companies (33)%. The result tends to confirm that quick and simple registration is one of the main features which patent attorneys and firms demand of a serviceable utility model system. If registration is in fact quick and simple, therefore, that will be the main perceived advantage over patents.

Rapid protection against imitation is not an end in itself. Its main purpose is to consolidate a competitive position and to safeguard any competitive lead. This enables the producers of investment goods and consumer goods to pursue a marketing policy based on quality. Protection against imitation plays a particularly important role in Germany (where 58% regard it as "very important"). Spain and France follow. In Italy

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39 Weitzel, G., Ifo Institute, *The Economic Impact of the Legal Protection of Utility Models on Enterprises in the European Union*, 2.7.

40 Weitzel, G., Ifo Institute, *Pilotstudie - Die wirtschaftliche Bedeutung des Gebrauchsmusterschutzes in der Europäischen Union*, D, 2.1, p. 12.

41 Annual Report of the European Patent Office 1991, Chapter III, 1, p. 28.

42 Where a prior examination is carried out.

and the United Kingdom only a little over a third of respondents cite this reason. This may be partly due to the somewhat limited protection available under their legislation or administrative practice. A breakdown by size of firm shows that smaller firms are especially inclined to cite protection against imitation as a very important reason for applying for utility model protection.

In the case of large companies protection against imitation is somewhat less important. This may be because large companies are more often in a position to make effective use of the whole range of available legal weapons to protect their position against competitors.

Rapid registration leading to rapid commercial exploitation - whether under licence or by the applicant himself - is rated as "very important" or "important" by about 40% of respondents. This is the second most frequently cited reason. The assessment is broadly the same for all sizes of firm.

Utility model protection is thus a competitive weapon in its own right; it is used by firms of all sizes primarily as an indirect way of protecting or strengthening a market position, but also as a direct way of improving the commercial exploitation of inventions.

(b) Limited requirements

Among the main requirements for patentability are inventive step and absolute novelty. Most utility model systems require a smaller inventive step than is needed for patentability, and also limit the concept of novelty, so that the requirements are easier to satisfy. This is another important reason for seeking utility model protection.

The survey shows that inventions which involve only a minor inventive step are important not only to small firms but to large ones too. This was borne out by the patent attorneys questioned: a large majority considered the lower inventive step requirement an important reason for seeking utility model protection. The differences in the results here are reasonable given that patent attorneys are often confronted with legal problems of this kind in the day-to-day work of handling applications.

In France and the United Kingdom the question on the reasons for applying for utility models had to be hypothetical: if such a system existed, why might you apply? It was difficult to answer, because firms and independent inventors only very rarely had any

practical experience of applying for utility models abroad. Nevertheless, the answers do reflect the different legal background in the two countries adequately for present purposes.

Thus in the United Kingdom, where the only protection available for technical inventions is the patent, which necessitates prior examination, while functional designs qualify for the unregistered design right introduced in 1988, 50% of respondents regarded the less stringent legal requirements as a "very important" or "important" reason for a hypothetical application.

As an important interim finding, then, we can say that there is clearly an economic need for a form of protection with requirements less stringent than those for patentability.

(c) Low cost

Unlike patents, utility models are granted without a prior examination to establish novelty and inventive step. This makes them cheaper to obtain than patents. The following table summarizes the costs which will be incurred under the various national utility model schemes.

Fees for filing, grant and renewal (for ten years, in ECU)

	Filing (~ECUs)	*Grant (~ECUs)*	*Renewal (~ECUs)*	*Total (~ECUs 10 years)*
Germany	24.5		906.5	**931**
Spain	52.21	20.9	586.04	**659.15**
Italy	13.65	319.8		**333.45**
Portugal	19.6		151.2	**170.8**
Greece	60	40	162	**262**
Belgium	48		182.4	**230.4**
Denmark	260		650	**910**
France	37.5	97.5	136.5	**271.5**

(Based on the national fee regulations[43, 44, 45, 46, 47, 48, 49, 50], ECU: 1.5.1993)

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[43] Germany: Patent Office and Patent Court Fees Act of 18 August 1976 as amended on 7 March 1990.

[44] France: Fundamental rules on fees are to be found in various provisions of the Patents Act, an example being Section 41. These are clarified by Regulation No 79-822, at Article 94 *et seq.* The precise amounts of fees are determined by on Order of 17 December 1985 on fees charged by the National Industrial Property Institute (INPI).

[45] Spain: Under Sections 454 and 160(1) of the Patents Act, fees are to be regulated in accordance with the schedule to the Act.

[46] Italy: under Article 11(1) of the Industrial Models Order, filing and grant fees are to be paid for utility models. The amounts of these fees are regulated by schedules A and C to the Order. Act No 60 of 14 February 1987 increased the fees substantially. Under Article 12 of the Order the grant fee may be paid in its entirety or in two instalments, the first providing protection for five years and the second for another five. Article 12 states that in other respects utility model fees are to be subject to Article 46 of the Patents Order. Article 46(1) of the Patents Order provides that the filing fee, at least the first half of the grant fee, and the printing fee are to be paid before the application is filed.

[47] In Portugal the fees for the registration of a utility model are set afresh each year in a special order (Section 255 of the Industrial Property Code). Section 257 of the Code lays down the rule that periodic fees for the renewal of the registration of a utility model are to be paid every five years.

[48] Greece: Fees Order, DS/A/2/89 of 26 January 1989.

[49] Belgium: Sections 71 and 72 of the Patents Act are supplemented by a Royal Order of 18 December 1986, amended in 1990.

[50] Denmark: Østerburg, 'Endlich ein Gebrauchsmuster- modellgesetz in Dänemark', in *GRUR Int.* 6/1993, p. 453.

Low cost is the third most frequently cited reason for seeking utility model protection. Particularly those firms which attempt to protect themselves as comprehensively as possible against the danger of imitation can find that a large number of applications generates problems of cost. From patent statistics it is well known that the policy of submitting large numbers of applications is especially important in the patent field. Large companies in particular may apply for over a hundred patents in one year at home and abroad. In Germany, for example, these big applicants account for over 20% of all patent applications, even though in the nature of things there are not very many of them - about 30 German and foreign firms. Utility models are completely different in this respect. With a few exceptions, even large companies apply for no more than thirty utility models a year.[51]

However, uncertainty as to the commercial value of inventions tends to increase the number of utility model applications, because of the low cost of applying. Putting an invention to use can involve a considerable commercial risk, because the new product or process will often fail to establish itself on the market. Where the success of an invention is very uncertain, therefore, the low cost of applying for a utility model will be a decisive factor in the choice of this form of protection.

SMEs have particular difficulty in determining the sales prospects of new products, and thus the value of inventions, because they have inadequate information from market observation and market research. Big companies can make use of tried and tested planning and forecasting machinery; this does not mean that they never have product failures, but they can limit their risk to some extent at least.

The distinctions are clearly reflected in the survey results. Among large companies only 11% of respondents cited the uncertain commercial value of an invention as a "very important" reason applying for utility model protection, while in small firms with 100 employees or less the figure was 26%.

Because utility model applications are inexpensive, therefore, this form of protection can serve to reduce the risk of launching an invention, and thus lead to increased innovative activity.

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[51] Weitzel,G., Ifo Institute, *The Economic Impact of the Legal Protection of Utility Models on Enterprises in the European Union*, 3.1.

(d) Temporary protection

Rapid registration means that a utility model can be used to bridge the relatively long period which passes before a patent is granted, always supposing that the invention qualifies for both forms of protection. In answers to the survey this reason for applying is given roughly the same measure of importance as the low cost of application where the applicant is uncertain of the invention's commercial value.

Temporary protection is useful mainly in countries where a comprehensive examination is carried out in order to establish novelty and inventive step before a patent is granted. In countries where there is no automatic examination temporary protection is largely unnecessary, as it does not usually take long to process a patent application, and a patent can be obtained almost as quickly as a utility model.

6. Economic assessment by users

In Germany, Italy and Spain, where utility model protection already exists, industrial companies and independent inventors were asked to assess the this form of protection from an economic point of view.[52] The question specifically asked respondents to consider both costs and benefits.

The overwhelming majority of both companies and inventors confirm that the effects of utility model protection are seen as positive; this applies across the board, with little variation between firms of different sizes (from 87% to 96%), or between the three countries (from 73% to 89%).

The main positive effect cited is an improvement in market position. Once again there are no great differences between firms of different sizes or between countries. An average 60% of respondents marked the statement outlining this effect "true", 24% as "partly true", and only 2% "false".

According to the survey results companies and inventors are already aware that they can hold on to a competitive lead only by invoking legal measures to keep their competitors

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[52] Weitzel, G., Ifo Institute, *The Economic Impact of the Legal Protection of Utility Models on Enterprises in the European Union*, 2.7.

from imitating their innovations for a certain time, for example by applying to register their inventions as utility models. Through their innovations in products and processes they seek to display originality and to distance themselves from the competition, so that customers develop a positive image of their technological capability. In addition, 40% of respondents believe that utility model protection improves earnings directly, which allows the cost of innovation to be recovered more quickly and makes research and development more profitable.

7. Prospects for the economic significance of utility models

On the basis of the analysis of the existing situation the Commission has considered changes and developments in innovative activity in order to arrive at a forecast of the economic need for utility models in future.

Inferences regarding the further development of innovative activity can be drawn from changes in spending on research and development, the nature of new inventions, production cycles, the time when a protected product is marketed, and the lifetime of inventions.

(a) Changes in spending on research and development

Beginning in the United States in the 1950s, research and development ("R&D") in the individual firm and in the economy as a whole has become a focus of economic research. It was realized that there was a chain of causality which started with R&D and which largely determined how much and what sort of innovation would take place; this in turn to a great extent decided the pace of technological progress and ultimately of economic growth.One section of this chain stretches between R&D at one end and innovation at the other.

The survey of companies firms and independent inventors[53,54] suggests that R&D spending will tend to hold firm in future, which is in line with the answers to questions on the future significance of minor inventions; this firmness is particularly clear in the case of high-technology industries and big companies. Thus in mechanical engineering, vehicles and accessories, electrical/electronics and precision mechanics, optics and medical engineering, between 50% and 58% of respondents felt that the level of R&D spending would remain the same in future. Given the intensive efforts to cut costs currently being made in all branches of industry, a stable level of R&D is to be welcomed.

Scope for increasing R&D spending is discernible in the packaging and materials handling industry, in the wood and furniture products industry, and among manufacturers of domestic appliances. The last two in particular are rather "low-tech" industries, which according to the respondents have fallen behind in R&D and have some catching up to do. When the figures are broken down by size of firm a similar pattern emerges for smaller firms. About one third of respondents in this category expect an increase in R&D spending in future; the figure for large companies is 17%.

This clear trend suggests that utility model protection will indeed grow more important in future.

(b) Changes in product life cycles, times to market and the lifetimes of inventions

A Japanese study has found that product life cycles are shrinking worldwide. Leaving aside the possible reasons, time-lags between invention, marketing and the next generation of products are growing shorter. A comparison of product life cycles between 1981 and 1991 gives the following picture:[55]

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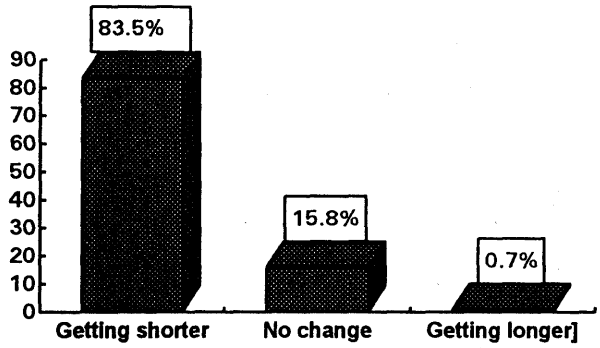
53 Weitzel, G., Ifo Institute, *The Economic Impact of the Legal Protection of Utility Models on Enterprises in the European Union*, 2.4.

54 The Ifo Institute has been carrying out a regular innovation survey since 1979; since the mid-80s this proportion has remained within narrow bands "around the 5.5% mark" in all the industries studied. In the other EU countries studied in the survey this average is probably somewhat lower: Schmalholz and Penzkofer (1993), p. 88.

55 *Questionnaire relating to Legal Protection of the Fruits of R&D*, Japan Institute of Intellectual Property, 1991.

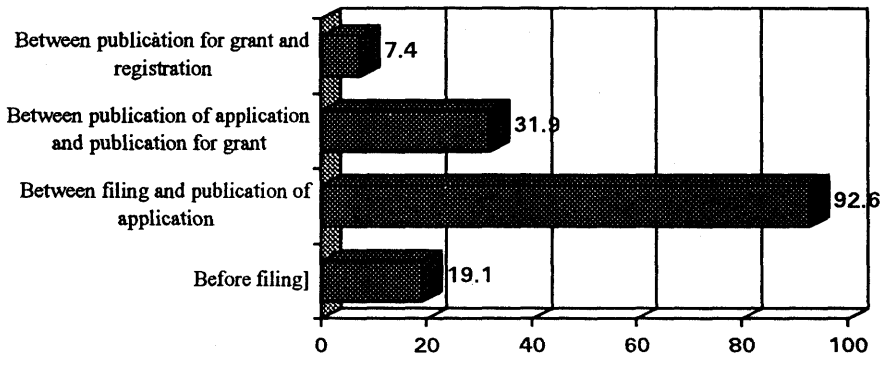
Changes in product life cycles between 1981 and 1991



(Source: Japan Institute of Intellectual Property, 1991)

This shortening of product life cycles creates a need for rapidly obtainable protection; it is less important that the protection obtained should last for a long time. In Japan, therefore, the marketing of articles protected by utility models usually begins in the interval between application and publication.[56]

Marketing of utility-model protected goods, in %



(Source: Questionnaire relating to Legal Protection of the Fruits of R&D, Japan Institute of Intellectual Property, 1991)[57]

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[56] *Questionnaire relating to Legal Protection of the Fruits of R&D*, Japan Institute of Intellectual Property, 1991.

[57] The total exceeds 100%, as more than one answer was possible.

Searches to establish novelty are accordingly to be done away with in Japan in the near future. This is the only way to meet the need for quick protection of short-lived inventions.[58]

In the United States the US Patent Office has carried out a study of changes in the lifetimes of inventions. The figures are broken down industry by industry, and show percentage changes in the time in which a firm will replace a generation of inventions by new inventions. The greater the value shown for the change the more the industry is tending to shorten the generation replacement time.[59]

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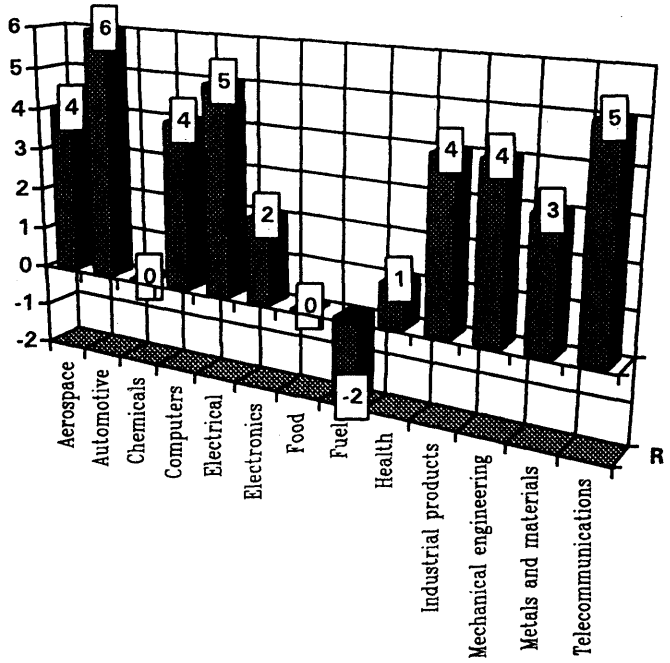
[58] *Subcommittee Report on Patent and Utility Models Laws and their Practices leading to International Harmonization*, Industrial Property Council of MITI, 1991.

[59] *Business Week, Science and Technology*, 3 August 1992, McGraw-Hill Inc.

Trend towards shorter lifetimes for inventions, 1987-91, in %[60]



(Source: *Business Week, Science and Technology*, 3 August 1992, CHI Research Inc.)

These figures show that in all industries with the exception of fuel, food and chemicals there is a tendency for new inventions to be developed more rapidly.

The result is that the average lifetime of an invention today is not more than six years.[61] A study of innovation among the world's largest companies confirms these figures:[62]

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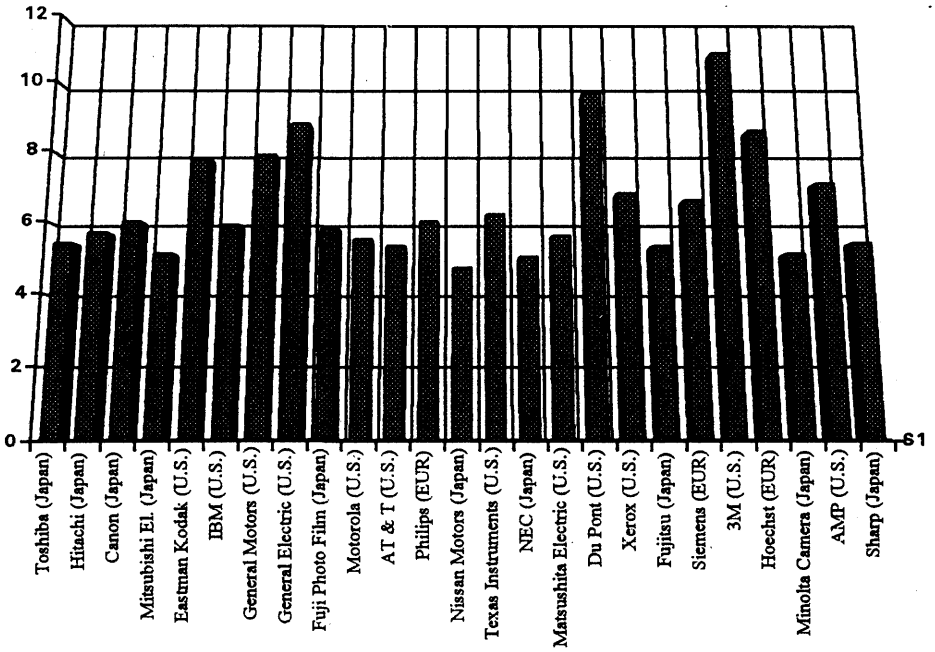
60 The lifetime of an invention ends with a new invention which technically supersedes the old one. Thus the lifetime of an invention is frequently shorter than the duration of the patent, which can be maintained for longer.

61 *Business Week, Science and Technology*, 3 August 1992, CHI Research Inc.

62 *Business Week, Science and Technology*, 3 August 1992, CHI Research Inc.

Lifetime of inventions, in years



(Source: Business Week, Science and Technology, 3 August 1992, CHI Research Inc.)

If one tries to bring these shorter product life cycles and invention lifetimes into relation with the industries which make most use of utility model protection, one finds a striking degree of correlation. Not only do mechanical engineering, electrical engineering and the automotive industry account for the most utility model applications: they are also the industries in which there is the strongest trend towards further reduction of product life cycles and the lifetimes of inventions.

In 1991 the time which elapsed between submission of a patent application to the European Patent Office and the grant or refusal of a patent after examination was 44 months in half of all cases.[63] If we compare this figure with the average lifetime of inventions,we can conclude that innovation cycles will shorten still further in future, and that this will increase demand for a form of protection which can be obtained quickly for short-lived inventions, separately from patent protection. The utility model provides the best way of meeting this demand.

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63 Annual Report of the European Patent Office, 1991, p. 28.

(c) Changes in the scale of innovation and the length of exploitation of inventions in the European Union

In order to obtain a clearer picture of the protection needed by industrial companies and independent inventors, they were asked how they graded the inventive step involved in their inventions - high, medium or low - and whether short-term protection and short-life products were involved.[64]

Large companies in particular (over 1 000 employees: 6% of those surveyed) expect the proportion of inventions involving a small inventive step or a short period of exploitation to remain the same. Thus these companies do not for the most part expect innovative activity to increase substantially, over and above the regular renewal of their product ranges, or product lifetimes to fall any further.

Smaller firms take a different view: they accept that they need to do more in this area if they want to hold their own in competition. A majority consequently expects an increase in the proportion of "small" inventions and inventions with a short period of exploitation.

SMEs often express the view that given the tougher competition they must intensify their innovative activities. They therefore feel that inventions involving a small inventive step or having a short period of exploitation will play a greater role in future, so that the need will grow for an appropriate form of protection, which can best be provided by the utility model.

For an assessment of future needs it must be noted that only a small proportion of respondents in all sizes of firm and all industries (not more than 10%) expected the proportion of "small" inventions to fall.

(d) Usefulness of Community utility model protection to industrial companies and independent inventors

Against the background of developments in innovative activity, industrial companies and independent inventors in France, Spain, Germany, the United Kingdom and Italy were asked whether they would be interested in a specific form of protection to facilitate

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[64] Weitzel, G., Ifo Institute, *The Economic Impact of the Legal Protection of Utility Models on Enterprises in the European Union*, 2.3.

marketing their "minor" inventions which compared with patents would make less stringent requirements for protection, which would not involve examination and would consequently be cheaper, but which would afford protection for a shorter time.[65]

The survey results leave no doubt that there is fairly strong demand for such a form of protection. An average 39% said they would be "very much" interested, 32% said they would be "moderately" interested and only 20% said they would have "little" interest. "Don't knows" amounted to 9%, which is a small proportion.

A breakdown by size of firm shows that interest is greatest among smaller firms with up to 500 employees. Here almost every second firm questioned would be very interested. Interest is somewhat lower among big companies with over 1 000 employees.

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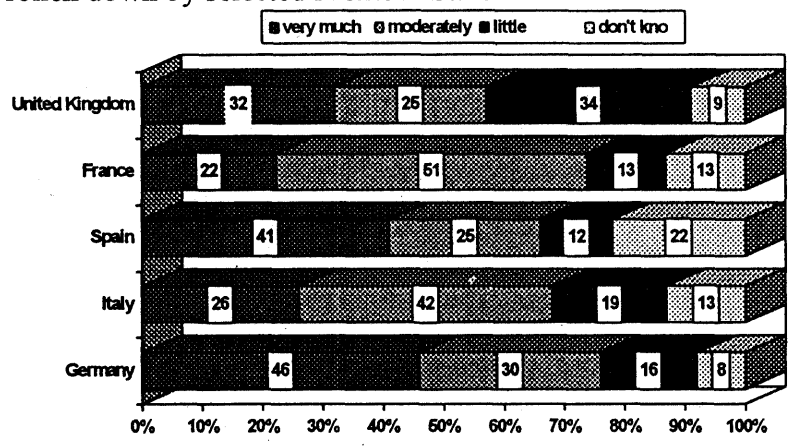
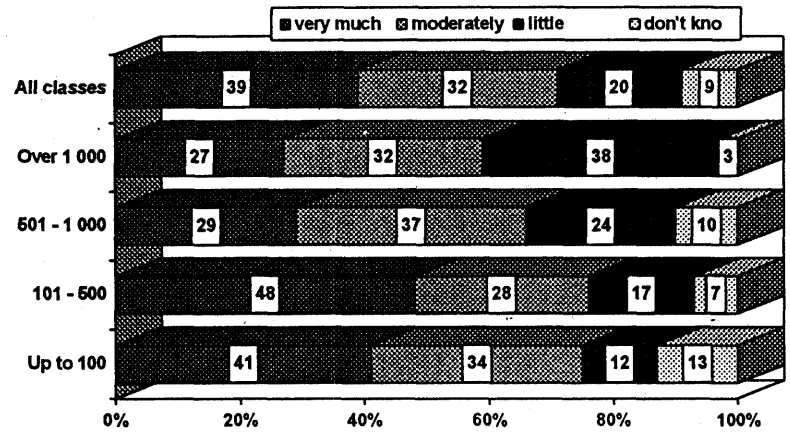
[65] Weitzel, G., Ifo Institute, *The Economic Impact of the Legal Protection of Utility Models on Enterprises in the European Union*, 2.10.

Interest in utility model protection in the European Union (%)

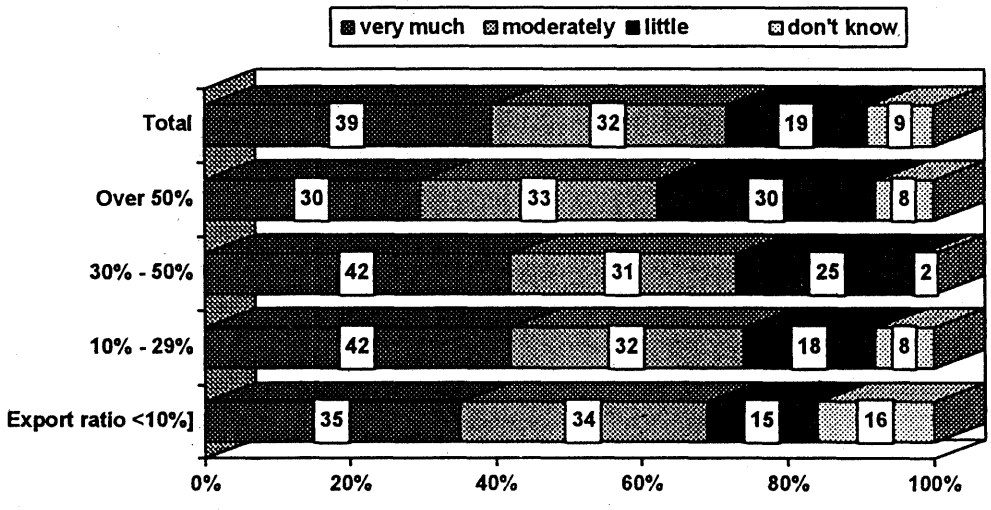
Broken down by selected Member State



Broken down by size of firm



By export ratio



(Source: Ifo Institute survey in selected EU countries in 1993; European Commission calculations, 1994)

(7)

The country-by-country breakdown shows that interest in a special right additional to patent protection is particularly strong in Germany. Of German firms and independent inventors 46% said they would be very interested, and a further 30% would be moderately interested. The results in Spain are similar. Such a form of protection would be fairly well received in both countries. One contributory factor is no doubt the fact that in these countries utility model systems already have long traditions behind them, and are intensively used. Respondents already have practical experience, and are better able to imagine an extension of protection to other EU countries and to evaluate its usefulness in their marketing activities abroad.

In the other selected EU countries respondents who said they would be "very much" interested in utility model protection are somewhat less well represented. But if we add the figures for "very much" interested and "moderately" interested together, there is no appreciable difference between the results for different countries.

Only in the United Kingdom is there a noticeable polarization in views offered. About one third of industrial companies and independent inventors would be "very much" interested, and about the same proportion would have "little" interest. This may be due to the fact that utility models do not at present exist in the United Kingdom. Firms can see the economic advantages, but are sceptical at the idea of a European arrangement because they have no experience in the area.

A breakdown by the proportion of exports to the firm's total sales shows that firms with a ratio of between 10% and 50% are only slightly more likely to be very interested than firms which export less and have an export ratio of less than 10%. Thus interest in EU utility model protection is largely independent of export ratio.

This uniform response suggests that regardless of what sales they may have at present in the single market, industrial companies and independent inventors want at least to keep open the option of expanding their market in the future, and are interested in EU-wide utility model protection for that reason.

D. Effects of the discrepancies on the common market

The economic significance of utility model protection means that the discrepancies between the existing national schemes have practical repercussions; the Commission has

accordingly considered whether this causes obstacles to the free movement of goods and distortions of competition which stand in the way of the establishment of the internal market called for in Article 7a of the EC Treaty.

1. Obstacles to the free movement of goods

Free movement of goods and a customs union are the basis of the Community. They are intended to facilitate the achievement of the objectives set out in Article 2 of the EC Treaty by establishing a single market[66] in which the markets of the separate countries are fused and the economic policies of the Member States are gradually aligned. A common market is inconceivable without a single market in goods. The Treaty provisions on the free movement of goods seek to promote integration by freeing private parties to move goods across borders as they see fit, with as little hindrance as possible. The EEC Treaty therefore listed the free movement of goods among the "foundations of the Community". The Court of Justice has spoken of "the essential purpose of the Treaty, which is to unite national markets into a single market".[67]

A national intellectual property right registered under the law of a Member State provides protection only on the territory of that State. In the absence of any unification of the law, therefore, the holder of such a right can prevent third parties from importing protected goods which have been produced and marketed without his consent. Thus the intellectual property rights conferred by the Member States can of their nature be used to hinder the free movement of goods.

This conflict between industrial property rights and the principle of the free movement of goods has been resolved by the Court of Justice in its interpretation of Articles 30 and 36 of the EC Treaty. The central finding in this interpretation is that the Treaty does not affect the *existence* of the industrial and commercial property rights conferred by national law, but that their *exercise* can be restricted by the prohibitions imposed by the Treaty: the free movement of goods may be restricted only where this is "justified for the

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66 See Article 7a of the EC Treaty.

67 Case 78/70 *Deutsche Grammophon v Metro* [1971] ECR 487, paragraph 6, last sentence.

purpose of safeguarding rights that constitute the specific subject-matter" of the property right.[68]

Utility model protection confers additional protection for technical inventions, and by analogy with patent protection[69] it can be included in the "industrial and commercial property" referred to in Article 36 of the EC Treaty. Given the differences which exist between the protection conferred by the various national schemes, however, there are a number of special features in the way the free movement principles apply.

Member States are basically free to design utility model systems as they will, provided the measures they take are not a means of arbitrary discrimination or a disguised restriction on trade between Member States.[70] A country may do without utility models altogether, as the United Kingdom, Sweden and Luxembourg have done, and where it does provide a system of utility model protection it may lay down requirements different from those of its neighbours. An invention involving a small inventive step is protectable only in those countries where utility model protection exists. The relative novelty which suffices in Spain means that inventions which have already been published in other Member States will nevertheless qualify for utility model protection in Spain. Even a right acquired under these circumstances falls within the scope of the exceptions to the free movement principle in Article 30 which are allowed by Article 36 .[71] The differences between the systems of protection are outside the control of the right-holder, and force him to avoid markets where he cannot obtain equivalent protection for his invention. Since the new design right was introduced in the United Kingdom[72] it has not been possible to register a right in goods whose form is determined solely by their technical function.[73] This creates a barrier between the UK and other markets.

Thus the differences which exist have a direct adverse effect on trade within the Community, and on firms' capacity to treat the common market as a single setting in

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68 See e.g. Case 192/73 *Van Zuylen v Hag* [1974] ECR 731, and Case 15/74 *Centrafarm v Sterling Drug* [1974] ECR 1147.

69 E.g. *Centrafarm, supra.*

70 Case 53/87 *Consorzio Italiano v Renault* [1988] ECR 6039, paragraph 12.

71 Case 35/87 *Thetford v Fiamma* [1988] ECR 3585.

72 Copyright, Designs and Patents Act 1988.

73 Cornish, *Intellectual Property*, 1989, Chapter 14, 14-106.

which to do business.[74] *The free movement of goods is obstructed and, as the Court of Justice has repeatedly remarked, this is an unavoidable consequence of the lack of harmonization of the law.*[75]

2. Distortion of competition in the common market

Article 3(g) of the EC Treaty calls for the establishment of a system ensuring that competition in the internal market is not distorted. This objective is related to the phrase in Article 2 which requires "a harmonious and balanced development of economic activities" throughout the Community.[76] If firms are to take advantage of the fundamental freedoms laid down in the EC Treaty, the intellectual property rules must allow fair competition between them.[77]

Given the differences which exist at present, companies or individual inventors wanting to exploit an invention in several Member States have to familiarize themselves with a number of different systems or take expensive advice in each of the Member States concerned. The situation may be bearable in the case of big companies that can invest large sums of money in the promotion and protection of their inventions. For individual inventors and for SMEs the differences they have to deal with and the consequent need for legal advice are a source of administrative difficulty and often an insuperable cost factor. This restricts innovative activity on the part of such businesses and consequently distorts competition.

In those countries which demand the same level of inventiveness for utility models as they do for inventions, there is no proper protection for inventions whose level of inventiveness is small. In the United Kingdom, Sweden and Luxembourg there is no utility model protection at all. In countries without adequate protection goods can be imitated, and no redress is available.

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74 From the Commission's White Paper on Completing the Internal Market, June 1985, paragraph 145: "Differences in intellectual property laws have a direct and negative impact on intra-Community trade and on the ability of enterprises to treat the common market as a single environment for their economic activities."

75 E.g. Case 53/87 *Consorzio Italiano v Renault, supra*, paragraph 10, with further references.

76 Manfred Zuleeg in Groeben, *Kommentar zum EWG-Vertrag*, fourth edition, Rdnr. 9 zu Artikel 3.

77 Langheine in Grabitz, Art. 100a, Rdnr. 20; Pipkorn in Groeben, Art. 100a, Rdnr. 17.

Copies can usually be manufactured more cheaply than the originals,because the manufacturer does not need to cover the innovation costs, and they can consequently be sold more cheaply than the originals too.[78] There is thus a danger that in countries with low levels of protection the imitation may secure a larger share of the market than the original. And as the single market grows more integrated it may well become easier to import the imitation into Member States where the level of protection is high. Indeed the importer may be acting quite innocently, and be unaware of the differences between the two systems of protection. The right-holder's only remedy is then to bring legal proceedings against parties who will often have been acting in good faith.

This runs counter to European Union policy, which seeks to prevent the misappropriation of rights resulting from the creative effort of European inventors and substantial investments on the part of European business,[79] and constitutes a distortion of competition.To prevent it the terms of competition must be the same for all enterprises doing business in the common market.[80]

3. Effects on industrial companies and independent inventors

The national patent systems in Europe have generally been aligned on European patent law. The European Patent Convention was specifically designed to leave the national systems unaffected, but there followed a process of voluntary harmonization[81] which has greatly simplified the practical requirements for cross-border applications.

The position with regard to utility models is very different. There is a wide variety of utility model systems in the European Union. They are used primarily by domestic applicants, less often by applicants from other countries in the single market, and still less often by applicants from non-member countries.

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78 Green Paper on the Legal Protection of Industrial Design, June 1991, 3.3.4, p. 31.

79 Green Paper on the Legal Protection of Industrial Design, June 1991, point 3.5, p. 33.

80 Green Paper on the Legal Protection of Industrial Design, June 1991, point 3.3.1, p. 31.

81 See van Benthem in *Grur Int.*, 1993.

Given that international trade in goods is increasing, as the international division of labour grows stronger, this is not what one might have expected. There ought to be an increase in the number of applications for patents and other forms of protection for technical inventions, not just in the applicants' own countries but on foreign markets as well. Information is also being exchanged more and more rapidly, with international fairs providing an important platform for the presentation of innovations, and this creates an even greater need for protection against competitors who are prepared to imitate a manufacturer's product.

But in fact European Union applicants rarely seek utility model protection on markets outside the Union, and the same applies in the opposite direction. An analysis of applications in Asiatic countries which have provision for utility model protection shows that European firms make no use of it . Asian firms likewise make only very limited use of the possibilities offered by European utility model schemes. Even on markets in which they are very interested, such as the German market for example, they account for very few utility model applications.

Comparison of domestic and foreign utility model applications in 1991

	From residents	From non-residents
Germany	13920	1633
Korea	25125	770
China	33157	125
Japan	113340	1334

(Source: Intellectual Property Statistics 1991, publication A, WIPO, Geneva)

Country-by-country breakdown of applications made abroad

	Applications by German firms in	Applications by Japanese firms in
Germany	-	64
Japan	145	-
Spain	48	5
Portugal	20	-
Brazil	1	5
China	4	14
Mexico	2	-
Poland	3	-

(Source: Industrial Property Statistics 1991, publication A, WIPO, Geneva)

In the Commission's view, therefore, utility model protection has to be looked at in terms of the domestic market. In the European Union the domestic market is fast becoming a Union-wide single market rather than the market of the particular Member State.

But even in the single market cross-border applications are fairly exceptional. In order to investigate the causes of the small number of cross-border applications, industrial companies and independent inventors in selected EU countries were asked whether the differences between the national utility model systems gave rise to practical difficulties when seeking protection.[82]

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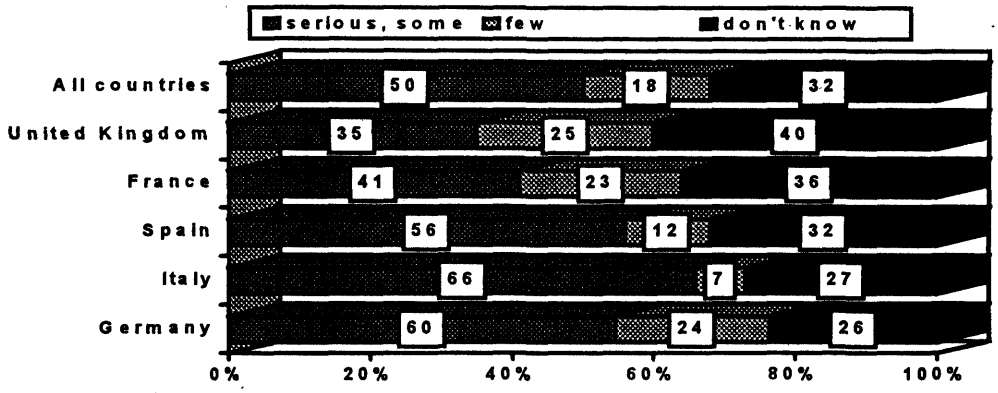
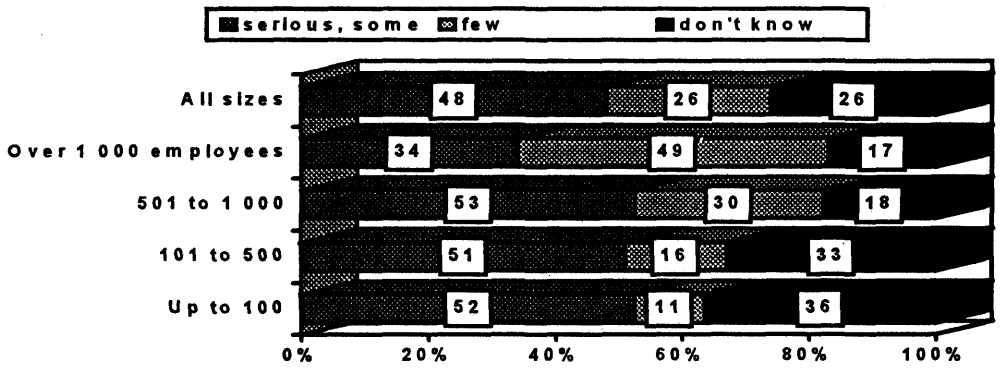
[82] Weitzel, G., Ifo Institute, *The Economic Impact of the Legal Protection of Utility Models on Enterprises in the European Union*, 2.7.

Difficulties with the protection of innovation caused by varying utility model laws in the European Union (%)

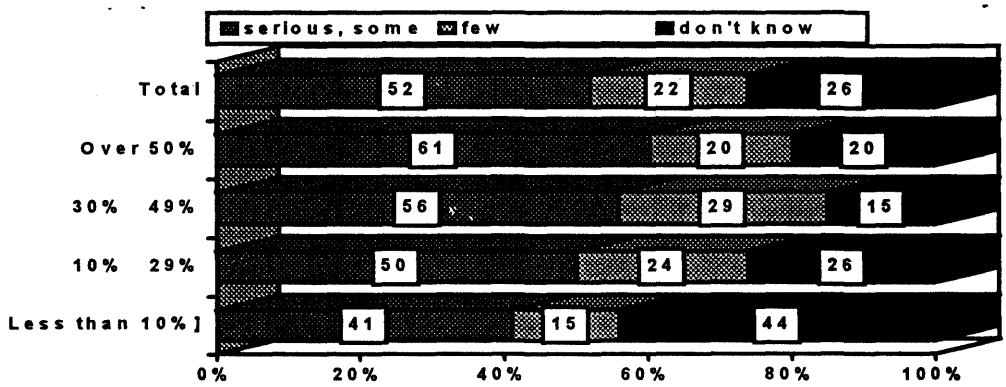
By selected EU country



By size of firm



By export ratio of firm



(Source: Ifo Institute survey in selected EU countries, 1993; European Commission calculations, 1994)

An average 50% of all firms questioned reported "serious" or "some" difficulties with cross-border applications for utility models in the single market.

It is striking that the number of "don't knows" is fairly high. This is due to the fact that the different systems vary so widely in their effects that companies and independent inventors are unable to form an opinion. The number of don't knows is accordingly highest in the United Kingdom and France. In the United Kingdom the only protection available is the patent, which necessitates a prior examination, or the registered design right for functional designs, and in France the *certificat d'utilité* takes a form largely identical to that of the patent; firms in those countries often have no very clear idea of a scheme of protection which stands alongside the patent system and can be used either alone or in addition to a patent to protect technical inventions involving a small step in development or a short period of exploitation.

Despite this there is still a substantial proportion of respondents in the United Kingdom and France who consider that the current situation causes difficulty (United Kingdom 35%, France 41%).

The breakdown by size of firm shows that there are difficulties with the protection of innovation in the opinion of something over 50% of firms with up to 1 000 employees, but only 34% of very large companies with more than 1 000 employees. The smaller the enterprise the more frequently it considers that the present situation is causing it difficulty. The reason may be that small businesses do not have the necessary expertise inside the firm, and for reasons of cost can have recourse to outside consultants only in special cases. The patent departments of large companies clearly have less difficulty in applying for utility models wherever the system exists and the market position makes it necessary.

It is also true that small businesses are more likely to express no opinion, while large companies have already formed a view of the question.This suggests that small firms and independent inventors in the European single market have not yet developed any great need for protection, because they continue to sell primarily to established local markets.

This view of the matter is borne out when the answers to the question are broken down by the export ratio of the firm questioned. As the export ratio rises, the firm will more and more frequently report difficulties with the protection of innovations. There is a very strong correlation between export ratio and size of firm, so that it is mainly large companies which are affected. Nevertheless, even in the category with a low export ratio (proportion of exports to total sales below 10%), 41% of respondents reported difficulties.

In the view of the respondents, therefore, the variations between utility model schemes make it more difficult to protect innovation in the single market. These difficulties also go a long way towards explaining why the use of the systems which already exist remains confined to domestic markets.

E. European Union policy and economic need

It has become clear, then, that the Member States have different systems of utility model protection, and that utility model protection is of considerable economic significance now and will continue to be so in future. The differences between the national systems are an obstacle to the free movement of goods and undistorted competition. The present situation is undesirable, and to maintain it would run counter to the concept of a Europe which is drawing closer together.

The European Community has a duty to take steps to remedy a situation which is detrimental to the single market, and thus to improve the operation of the market.

In the Commission's view, however, any harmonization undertaken in order to establish a single market and ensure that it functions properly must respond to present and future economic need. The development of innovative activity in the European Union, which has been marked by a trend towards smaller inventive steps, greater cost-sensitivity, shorter product and marketing cycles and a shorter lifetime for inventions, is generating increased demand for a form of protection that offers fast, simple and inexpensive protection for technical inventions in the common market.

The national schemes of utility model protection do not achieve this. The Member States are in no way to blame: first, they are free to design their systems as they will; and second, the difficulties noted here do not emerge clearly inside the confines of the individual Member State, but rather in cross-border dealings in the single market.

In order to ensure that the single market becomes a reality and operates smoothly, therefore, steps should be taken to remedy these shortcomings at Community level, with the following main objectives:

- protection to be provided for technical inventions which involve only a small inventive step,
- protection to be provided for short-lived technical inventions,
- protection to be obtainable rapidly,
- protection to be obtainable simply,
- protection to be inexpensive, and
- publication to be rapid, so that the public is informed quickly.

III. WHAT MEASURES SHOULD BE TAKEN?

This investigation has found, therefore, that the variety of the forms taken by utility model protection has an adverse effect on the establishment and the functioning of the single market. The conclusion was that only a harmonization of the different systems of protection would adequately meet the needs of the economy and satisfy the requirements of a common market. If it is accepted that Community action is needed, it has then to be considered what options are open; there are two aspects to be looked at here:

- what form any legislation should take, and
- the substance of the arrangements to be introduced.

A. The appropriate form of legislation

Harmonization must aim not only at removing the disadvantages caused by the differences between the rights of protection available which we have noted: it must also seek to improve the general level of protection of industrial property. Various kinds of harmonization are possible here.

The Commission is required to bring forward the "measures" needed for the realization of a single market. The "approximation of laws" is not confined to removing discrepancies between existing laws: it is concerned with the removal of conflicts between regulatory systems in general.[83] This may mean introducing a right of protection in a Member State where no such right existed before, if that will help to achieve a single market. A harmonization "measure" may take the form of any of the acts listed in the EC Treaty, especially the regulation and the directive.

In the case of utility models the first option to be considered is a directive aligning the national schemes of protection, and thereby introducing utility model protection in those countries where it does not as yet exist. If companies and independent inventors were interested in being able to secure protection in several Member States at once by means of a single application, measures would have to be taken which went beyond a straightforward harmonization of national systems of protection. One possibility would be to broaden the scope of the alignment by providing for mutual recognition of the protection granted by other Member States. Another possibility would be to create a uniform European protection right, which as a Community right would rank above the national systems of protection but would not replace them. Lastly, a combination of different options might be envisaged if that would produce an arrangement better tailored to the needs of the single market.

1. Aligning the national schemes

In the European single market most industries now operate on markets which stretch beyond national borders. There is no need to consider the factors at work in detail here. Since the single market was established and customs borders disappeared in 1993 the geographic markets for many products have grown larger than ever. This tendency will

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[83] Pipkorn in Groeben, Art. 100a, Rdnr. 25, 41.

intensify in future. The borders which still exist at present will no longer be an obstacle in the way of the market. For the time being, however, unnatural borders still exist between compartments demarcated by intellectual property law. Before one can say that a single market has genuinely been achieved, it is not enough that physical border controls should have been abolished; it must be possible to recognize the single market as such. That is difficult to do when there are differences in respect of particular intellectual property rights which are so wide that an applicant in one country will see no point in applying for corresponding rights in other Member States.[84] Differences between entitlements create administrative problems which all applicants, but especially SMEs and independent inventors, have difficulty in overcoming. This acts as a curb not only on the innovative capacity of industry but also on the achievement of a single market.

Harmonization of the existing schemes of protection by means of a directive, so as to arrive at fifteen similar but separate systems of protection, requires two things: the introduction of utility model protection in countries where nothing of the sort yet exists, and the alignment of the substance of the rules which do already exist.

(a) Introduction of new rights

At present there is no utility model protection in the United Kingdom, in Sweden or in Luxembourg. Harmonization in the European Union would require the introduction of utility model rights in these countries. In Luxembourg there is no experience with this so far, but in the United Kingdom a proposal for a "second-tier patent" was abandoned in 1986.[85]

In a recent survey , however, UK companies and independent inventors expressed a clear view that the introduction of such a right would be a valuable addition to patent protection granted after prior examination.[86]

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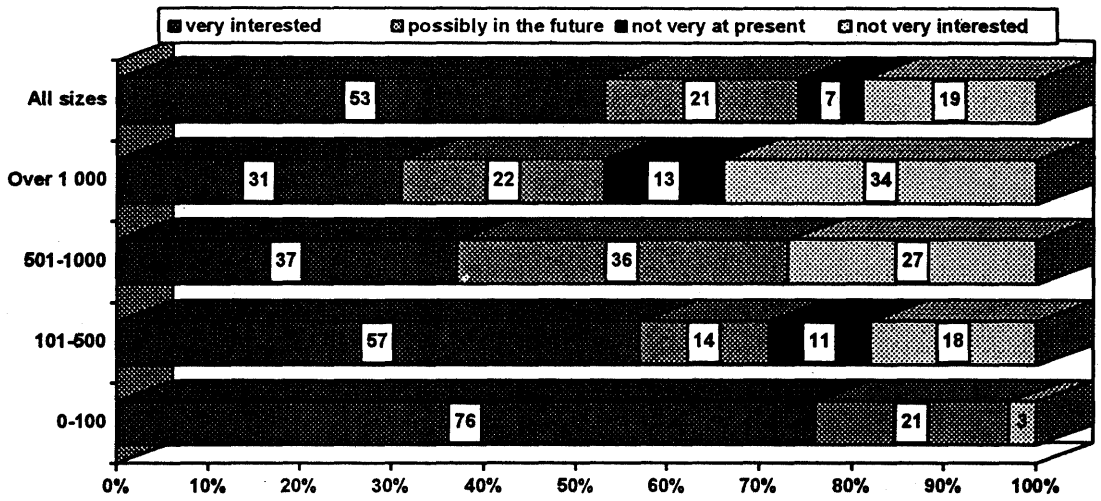
84 From the Commission's White Paper on Completing the Internal Market, June 1985, paragraph 145: "Differences in intellectual property laws have a direct and negative impact on intra-Community trade and on the ability of enterprises to treat the common market as a single environment for their economic activities."

85 White paper on *Intellectual Property and Innovation*, April 1986, 3.6.

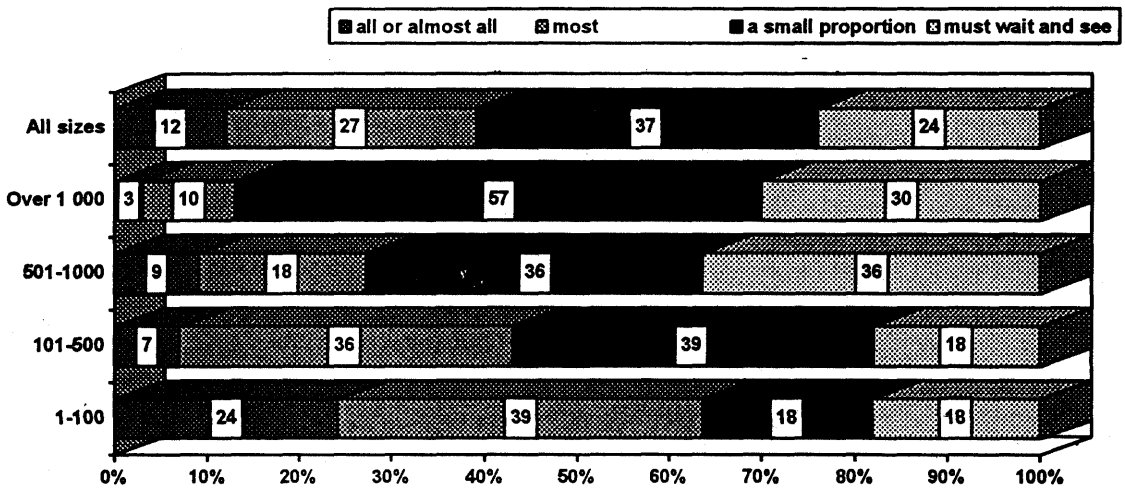
86 Weitzel, G., Ifo Institute, *The Economic Impact of the Legal Protection of Utility Models on Enterprises in the European Union*, English version May 1994, 2.9.3, Innovation protection in the United Kingdom

Interest in a utility model in the United Kingdom

Interest, by size of firm (%)



Future use of utility models, by size of firm (%)



(Source: Ifo Institute survey in selected EU countries, 1993; European Commission calculations, 1994)

An average 53% of the United Kingdom industrial companies and independent inventors questioned said they would be "very interested"; the distribution between large and small companies is typical. Small firms (up to 100 employees), at 76%, are a great deal more interested than very big companies (over 1000 employees), of whom 31% nevertheless say they are very interested. Only a few of the small businesses questioned - 3% - were "not very interested", while this figure rose to 34% in the case of big companies.

Respondents in the United Kingdom also made it clear that utility model protection, if it existed, would have an appreciable role to play even now . The group which could see it taking on importance only in the future, at 21%, is relatively small.

Not only did the respondents see a relatively strong economic interest in utility model protection, they would also make frequent use of the system for their inventions. Here too there are considerable differences in the proportion of applications depending on the size of the firm. Small firms were much more disposed to apply than big companies. Of small firms 24% would actually apply in respect of "all or almost all" their inventions, while in other categories the number of firms who would seek such intensive protection amounted to only 3% to 9%.

It is worth noting that in the United Kingdom big companies were more inclined to take a wait-and-see attitude than small firms were. Of big companies 30% said they would have to wait and see; the figure for small firms was 18%. This positive reaction among United Kingdom industrial companies and independent inventors needs to be complemented by information on Luxembourg and Sweden before a final decision is taken on the economic interest in the introduction of a system of this kind.

(b) Aligning the substance of national utility model law

If utility model protection is introduced in those countries which do not at present possess it, and the existing systems in other Member States are aligned, there will then be fifteen similar national protection rights in existence alongside one another.

A right-holder can be sure that he will find an equivalent right in all Member States, and will no longer have to concern himself with a multiplicity of different rights. Whether he applies for protection in one country only or throughout Europe, he will know the main requirements and the scope of the protection granted. This will reduce costs and simplify applications in other Member States. Once systems of protection have been harmonized by directive, so that a portfolio of similar national rights can be obtained, the advantage to be secured from cross-border applications will be much greater. This should produce a further increase in innovation.

Such an alignment will doubtless include substantive provisions concerning what is protected, the requirements to be met, the scope and duration of protection, grounds of refusal or nullity, and the exhaustion of rights. This should reduce the number of conflicts in the way of a single market; but it will not remove the cause.

2. A broader alignment

Such a directive would align the substantive national law to establish a set of parallel national rights; it would not remove those restrictions on free trade and competition which derive from the independent nature of the national rights, and from the way the territorial principle is consequently understood in the Member States. Even after a harmonization of this sort borders would continue to exist, as would the possibility of conflicting rights granted under separate systems.

A more far-reaching directive might go beyond the alignment of substantive law to provide that the Member States were to amend their own legislation to allow the applicant to request that the effects of his domestic utility model should be valid in other Member States - with special reference to creation, application, registration, transfer and protection - and to give similar effect to utility models granted in other Member States.

Legal steps taken by an authority in any one country would then be given effect in other Member States on the basis of the harmonized legislation in force there. They would be mutually recognized. Procedures for application and registration would have to be aligned completely.

De jure, then, utility models and rights arising out of them would continue to be a matter of national law. But they would have effect across borders.

Of course the individual Member States have no power to make law with extra-territorial force in other Member States. But they have got power to provide in the law applicable on their own territory that as far as that law is concerned utility models granted and legal acts done under that law are to have extra-territorial effect in the other Member States; this would amount to a claim that the rights arising out of utility models granted and legal acts done by their own authority should be recognized in other Member States too. For these extra-territorial effects to be valid in the law of those other Member States, the separate Member States would have to recognize them as far as their own territories were concerned. In practice a directive would be needed to ensure that all Member States introduced the same system. It would have to provide for far-reaching alignment of substantive and procedural law.

For the practical implementation of mutual recognition of this kind there would have to be coordination of the work of the relevant authorities in each country, perhaps through the medium of an advisory committee [87]. There might then be a simplified administrative procedure under which an application could be made to the domestic office responsible to have a utility model registered in other Member States too.

3. The introduction of a Community right

There are a number of difficult problems which would arise as a result of the very comprehensive alignment of the substantive and procedural law of utility models, and consequently also of the work of the responsible offices in each Member State, which would be required in order to ensure that the offices' utility models and legal acts could have Community-wide effect.

The responsible offices would not readily be able to administer their Europeanized utility model laws uniformly, effectively and without additional staff and administrative resources. Both for individual inventors and for industrial companies such a Europeanized but still nationally administered system might well be a great deal less attractive than a full-blown Community right. The vital considerations for users are simplicity, clarity and legal certainty.

Consideration could also be given, therefore, to the possibility of adopting a regulation introducing a Community utility model right. A right obtained under Community law would be valid directly in all Member States. Protection throughout a territory comprising all the Member States could then be secured

- by means of one application to one Community office
- in one set of proceedings
- under one body of law.

This course could secure a steady reduction in the obstruction and distortion which afflict Community cross-border trade and competition in articles which are the fruit of human invention, as compared with domestic trade and competition in the same goods.

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[87] For a similar view see the legal opinion by Ivo Schwartz, Special Adviser on the Approximation of Laws, *Can the Draft Council Regulation on the Community Design Be Based on Article 100a of the EEC Treaty?*, III/5327/91-EN, August 1991.

4. A combination of alignment of laws and the introduction of a Community right

The integration of the single market is not yet complete. There will continue to be companies which need utility model protection but whose business is confined to regional market. Harmonization is especially important to smaller businesses, but in the first place the advantage they can gain from covering the entire common market will be small.

But it must be borne in mind that the unification of the common market is a process which is still going on. A combination of different possibilities might be the best way of ensuring that a future system was even better tailored to the needs of the single market: As with trade marks and designs, a directive harmonizing national systems of protection might be combined with a regulation introducing a new single utility model right.

There would then be fifteen harmonized national systems of utility models, capped by a Community system. Applicants could choose between one or more purely national rights and a Community right covering the whole of the territory of the European Union.

5. The views of industrial companies and independent inventors

That there is commercial interest among companies and inventors in obtaining protection simultaneously in several Member States of the European Union can be clearly seen from the study covering France, Spain, Germany, the United Kingdom and Italy, in the answers given to a question asking in how many EU countries they would file utility model applications at the same time if that were possible.[88]

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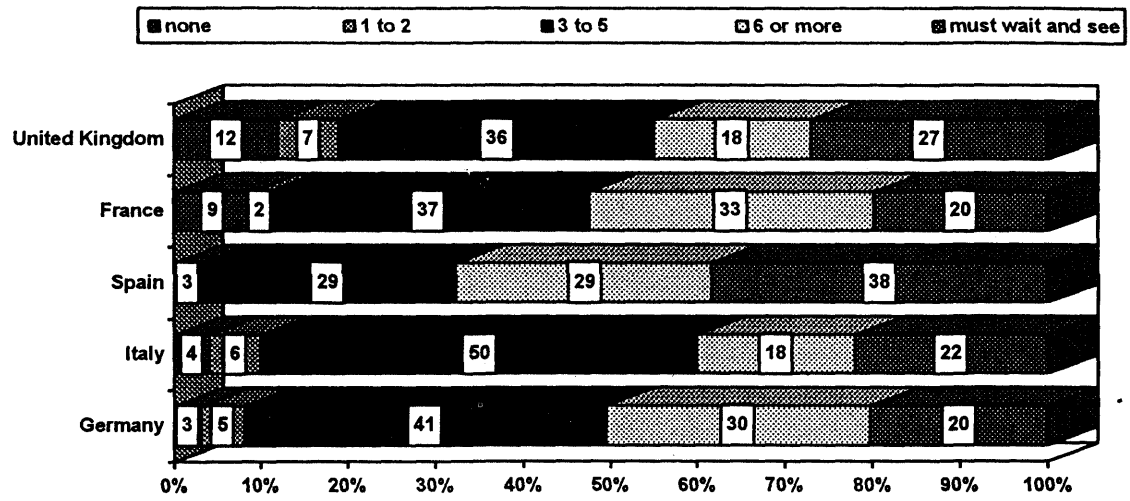
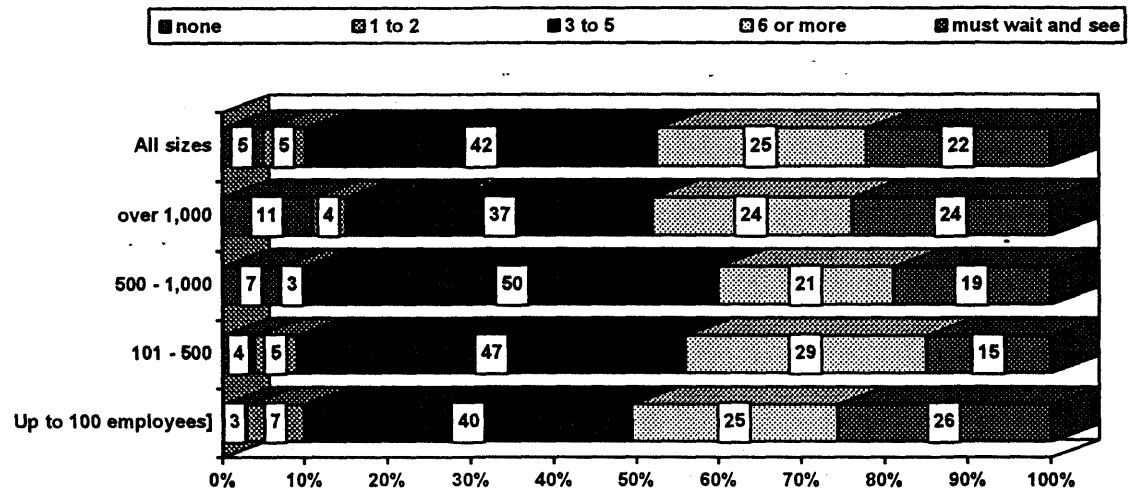
[88] Weitzel, G., Ifo Institute, *The Economic Impact of the Legal Protection of Utility Models on Enterprises in the European Union*, 2.10.

Number of countries designated if there were a Community utility model in the EU

By selected EU country (%)



By size of firm (%)



(Source: Ifo Institute survey in selected EU countries, 1993; European Commission calculations, 1994)

Only a very small proportion (5%) would not apply in respect of any EU country. Answers most often fall in the three-to-five range (42% of respondents); a further 25% would apply in respect of six or more countries, while 22% are undecided and say they must wait and see.

6. The views of patent attorneys

The following picture emerges from the survey of patent attorneys in Germany, France, the United Kingdom and Spain, in which they were asked about the shape to be taken by utility model protection in the European Union in future.[89]

Assessment of legislative options (selected EU countries*)

		Germany		Spain		France		United Kingdom	
		a)	b)	a)	b)	a)	b)	a)	b)
Single European utility model systems	important	77	69	100	67	50	75	50	50
	not so important	23	31		33	50	25	50	50
	No. of respondents	17	16	3	3	6	4	6	4
Harmonization of national rules	important	78	71	100	100	50	50	100	100
	not so important	22	29			50	50		
	No. of respondents	9	7	3	4	4	2	5	5
Harmonization and single systems	important	79	74	87	88	85	69	71	83
	not so important	21	26	13	12	15	31	29	17
	No. of respondents	98	68	31	24	20	16	34	29
No such measures	important			33	25	17	25	40	14
	not so important	100	100	67	75	83	75	60	86
	No. of respondents	16	9	3	4	4	6	7	5

*) More than one answer was allowed here.
a) Small and medium-sized enterprises (SMEs)
b) Large companies

Source: Ifo Institute survey of patent attorneys in selected EC countries, 1992.

There was obviously considerable interest in hearing the views of patent attorneys in the four Member States surveyed on the question which of the legislative options was most urgent in terms of the needs of the firms they advised. The answers "important" and "not so important" were offered rather than "yes" and "no" in order to establish priorities. But in the event a large majority of the respondents favoured a single European utility model law and the harmonization of national rules at the same time.

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89 Weitzel, G., Ifo Institute, *Pilotstudie - Die wirtschaftliche Bedeutung des Gebrauchsmusterschutzes in der Europäischen Union*, D, 2.7, p.30.

According to these results only very few patent attorneys in the four EU countries surveyed are of the opinion that either a single European system of utility model law or a harmonization of national rules would be sufficient. Clearly a large number of them could not or would not commit themselves to a single strategy because that might be to the advantage of only certain categories of applicant. The results do not show any difference in choice depending on size of firm, so that one cannot say for example that a Community utility model system is more desirable for large companies and a harmonization is more desirable for smaller businesses. According to the patent attorneys questioned both options should clearly be available; there was a very broad consensus on this point in the four countries surveyed.

Among patent attorneys and among industrial companies and independent inventors, then, there is agreement on the need for utility model protection in the European Union. There is a clear interest in the possibility of a single application which would secure protection in at least three to five countries, alongside the protection available domestically under harmonized national rules.

In the Commission's view, therefore, an alignment of the national systems would be a sensible first step towards improving the present situation, but it would not overcome all the problems which currently exist. As the Commission understands the matter at present, consideration should also be given to the question whether

- *mutual recognition of harmonized national rights,*
- *the introduction of a Community right, or*
- *a combination of the alignment of laws and the introduction of a Community utility model*

are measures which could help to ensure a steady reduction in the obstruction and distortion of cross-border Community trade and competition in goods incorporating inventions.

B. The substance of Community-level protection of utility models: principles

On the basis that there is a need for harmonization of utility model protection if the single market is to work properly, then, a two-tier system could be created consisting of an array of national utility model rights and a Community utility model right, forming an effective combination of the instruments available.

Given the economic importance of the existing systems, the changing character of innovative activity in the single market, and the economic need for such systems, a system of protection which aimed at ensuring that the single market became a reality and operated smoothly should have the following features:

- protection to be provided for technical inventions which involve only a small inventive step,
- protection to be provided for short-lived technical inventions,
- protection to be obtainable rapidly,
- protection to be obtainable simply,
- protection to be inexpensive, and
- publication to be rapid, so that the public is informed quickly.

The substance of a utility model system introduced in order to make a reality of the single market must meet genuine needs, without going beyond them. The Commission has therefore begun by examining the existing arrangements to establish how suitable they might be for a future Community-level system.

1. Basic design

Utility model protection exists in twelve out of fifteen Member States; alongside very wide discrepancies these systems also display similarities which might serve as a basis for a Community-level utility model.

The core of the various systems is a right of protection for technical inventions, additional to patent protection, which is registered without an examination to establish novelty and inventive step. Before studying the differences between the individual national schemes, therefore, the Commission has considered whether these common features can provide the basis for a Community-level system or whether new arrangements are needed which would differ from the existing ones.

The points looked at here are whether the right should protect the technical form rather than the invention; whether registration can be dispensed with; and whether before the right is granted there should be a prior examination in order to establish that the requirements are met.

(a) Protection of form or of invention?

Bearing the objective in mind, the Commission has considered whether a Community-level system of utility model law should protect the technical form or the technical invention. This is more than just a matter of determining exactly what is protected: the answer will be a fundamental option for the entire system.

A comparison of the national arrangements shows that in some countries it can be difficult to determine precisely what is protected.[90] In Italy and Portugal, for example, the three-dimensional form requirement is so strong that careful interpretation is needed before it can be decided that it is the invention which is protected. It is fair to ask, therefore, whether the functional product itself should be protected under a future system. In the course of the development of utility model protection there have in fact been periods in some countries when it was not the invention but the resulting object which was protected.[91]

Whatever view is taken of the need for embodiment in a three-dimensional form, it is always the functional character of an object which is protected under the schemes discussed here, rather than its appearance, which may of course be protected by legislation on designs or copyright. This functional character is something intangible, like directions for a technical process, or the solution to a technical problem. Copyright protection is not usually available for functional objects because of the level of originality or creativity it requires.

Utility model protection may subsequently be restricted by a three-dimensional form requirement, but this is a further requirement that must be satisfied in order to qualify for protection rather than the actual subject-matter of protection. It is difficult to see how

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90 See Annex 1, comparative study, A.2.

91 In Germany, for example, the legislature at one stage took a step backwards by declaring that protection was available for the three-dimensional concept incorporated into tools and utensils (Bl. 36, 116); but in Germany too it is now the technical invention itself which is protected.

that subject-matter could be protected by copyright, or integrated into legislation on industrial design. The concept of invention is the only way of doing justice to this functional character.

It would appear, therefore, that it is the technical invention which should be protected by a Community-level utility model system.

(b) Dispensing with registration

All the Member States which have a utility model system have made provision for registration. The introduction of a similar system was suggested but rejected in the United Kingdom: industry in particular feared that it would leave firms unsure of their legal position, since it would produce large numbers of registered but untested rights which conferred no definitive entitlement on the holder or anyone else.[92] The Government took the view that merely limiting the maximum duration to ten years would not be enough to mitigate this legal uncertainty.

One might ask whether these difficulties might be overcome by dispensing with registration. But this would leave inventors even less certain of their legal position than does the registration of untested rights. It would be very difficult to establish who had secured protection, when, and for what. Enforceability would suffer enormously.

However, there is no reason to expect a flood of untested rights in a system of registration. In Member States which already possess such a system there is an equilibrium between utility models and patents: the absence of prior examination means that the legal certainty conferred by a utility model is limited, so that a patent will often provide more effective protection. In most Member States, too, a cursory examination is made at the time of registration to ensure that the invention is *prima facie* protectable; this acts as some sort of filter and avoids the necessity of registering all inventions.

Registration also enables the holder to invoke his rights more effectively. Very often a protected invention will not be directly recognizable by outsiders, unlike an object which is protected on the basis of its external form, and the fact that there is a registration to point to increases the attractiveness of utility model protection. The publication

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92 White paper on *Intellectual Property and Innovation*, Presented to Parliament by the Secretary for Trade and Industry by Command of Her Majesty, April 1986, 3.6.

associated with registration helps to ensure that the public is informed quickly, and facilitates further innovation.

It would appear that a Community-level utility model system ought to provide for registration.

(c) Examination to ensure that requirements are met

The absence of any examination for novelty and inventive step was one of the main objections which led to the rejection of this form of protection in the United Kingdom.[93] It cannot be denied that a prior examination clarifies the legal position considerably. Indeed Japan, which has a very intensively used utility model system, departed from the German model when it introduced that system by providing for examination before registration in order to establish that the requirements were met.[94]

But the fees charged for such an examination substantially increase the cost, and prolong the time taken to register the right. As became clear in the study of the economic importance of the utility model, there is strong demand in the European Union for a right which can be obtained quickly and inexpensively.[95] Speed and cost were the reasons most often cited for applying for a utility model.

A survey of innovative activity on the part of firms in Germany has found that applications for patents are falling.[96] About 55% of the firms surveyed say that a major cause of the fall is the time taken for processing applications, which they feel is excessively long. Small businesses are generally more inclined to criticize the time taken before the final grant, and consequently do not apply even in respect of inventions which have a strong chance of obtaining a patent.

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93 White paper on *Intellectual Property and Innovation*, Presented to Parliament by the Secretary for Trade and Industry by Command of Her Majesty, April 1986, 3.6.

94 *Guide to Patents and Utility Models in Japan*, Chapter I, p. 12, at (4)(ii).

95 See above, Chapter II, "The need for action at Community level".

96 Täger and Seyler, Ifo Institute, *Probleme des deutschen Patentwesens im Hinblick auf die Innovationstätigkeiten der Wirtschaft (insbesondere kleiner und mittlerer Unternehmen) und Vorschläge zu deren Lösung, Schlußbericht*, May 1989.

The low cost of registering a utility model can be particularly attractive where the commercial value of the invention cannot be determined with precision. Putting an invention to use can involve a considerable commercial risk, because the new product or process will often fail to establish itself on the market. Where the success of an invention is very uncertain, therefore, the low cost of applying for a utility model will be a decisive factor in the choice of this form of protection.

SMEs have particular difficulty in determining the sales prospects of new products, and thus the value of inventions, because they have inadequate information from market observation and market research. Big companies can make use of tried and tested planning and forecasting machinery; this does not mean that they never have product failures, but they can limit their risk to some extent at least. If a patent attorney represents an applicant for a utility model his fees may be much the same as they would be for a patent, but the services of patent attorneys are less often engaged here than they are in the case of complicated patent applications. And because there is no prior examination the fees payable to the office registering the utility model are substantially lower.

Introducing a prior examination would bring a gain in terms of legal certainty, but it would mean giving up the objective of speed and low cost. The many years of positive experience built up in the countries which possess this form of protection show that the lower degree of legal certainty has no great practical repercussions.[97]

Furthermore, the utility model would now be distinguished from the patent only provided the inventive step required was lower.Utility model protection would be less important by comparison with patent protection: it would simply be an extension of the patent, covering largely the same ground, and could be integrated fully into patent law.[98] The cost and slowness associated with the patent system would be unavoidable.

Lastly, the need for legal certainty can also be provided for by limiting the lifetime of the utility model in comparison with that of the patent[99] and by providing that in the event of infringement there would be an examination in order to establish whether or not the

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97 Union of European Practitioners in Industrial Property, *Bulletin* No 21, March 1992, p. 9.

98 This argument led the Japanese Government to put an end to prior examination.

99 This is done in all Member States which operate a utility model system.

requirements were met. Prior examination would run counter to the objective of quick and inexpensive utility model protection, and would tend to reduce innovative activity particularly among small businesses.

It would not appear desirable, therefore, to provide for an examination to ensure that the requirements are met before registration.

(d) Principles

The system which has been outlined here provides a form of protection for technical inventions which is additional to patent protection, and which is registered without prior examination for inventive step and novelty; these principles should form the basis for action at Community level.

All of the systems introduced in recent years follow this scheme, which confirms its effectiveness.[100] The United Kingdom has no such system at present; patent attorneys there have been asked what would be the attitude of the firms they advise to the introduction (at domestic level) of a form of utility model protection for technical inventions which would involve registration without prior examination for novelty and inventive step.[101]

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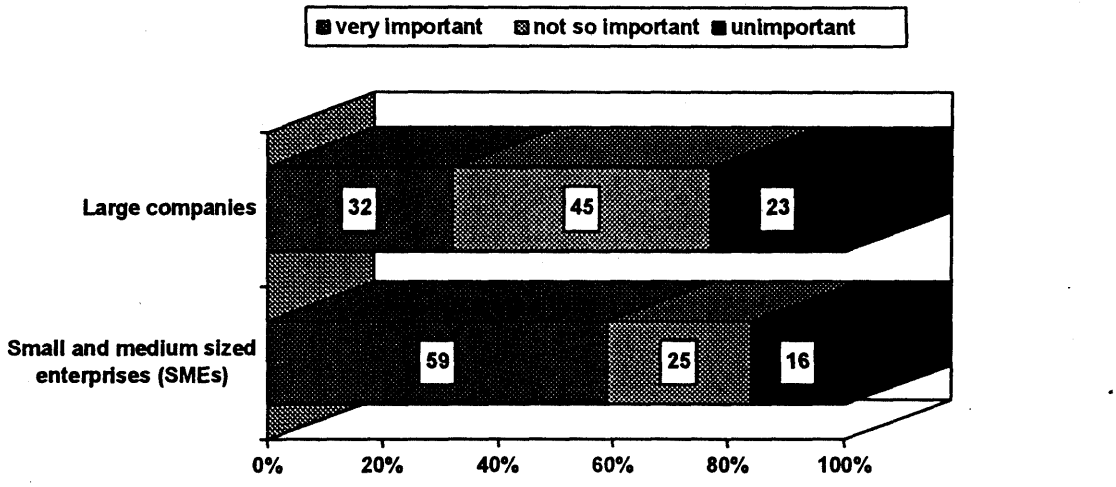
[100] In Ireland, Denmark, Greece, Austria and the Netherlands.

[101] Weitzel, G., Ifo Institute, *Pilotstudie - Die wirtschaftliche Bedeutung des Gebrauchsmusterschutzes in der Europäischen Union*, D, 2.7.1, p.32.

United Kingdom: economic need for the introduction of a registered utility model system for technical inventions without prior examination for novelty and inventive step
by size of firm (%)



Source: Ifo Institute survey of patent attorneys in selected EC countries, 1992.

Just under 60% of the UK patent attorneys questioned felt the introduction of such a right would be "very important" for SMEs (the figure for large companies was 32%), and only 16% felt that as far as SMEs were concerned a "new" right of this kind would be "unimportant", that is to say unnecessary. Thus there was a majority in favour of introducing a utility model, primarily in the interests of small businesses.

2. More detailed rules

There are substantial differences between the existing utility model systems with regard to inventive step, three-dimensional form, excluded inventions, novelty, industrial application, procedure, effects, transfer, duration, infringement, and dual protection. The Commission has accordingly considered the various arrangements adopted in order to see which would be most suitable for a Community-level system.

(a) Inventive step

One of the main differences between the existing utility model schemes is the size of the inventive step they require.

Sometimes the same inventive step is required as for a patent, but in the majority of cases a smaller inventive step is sufficient. Protection is thus available for inventions incorporating an inventive step which would not qualify them for a patent.[102] This means that the vertical spread of inventions for which protection is available is greater than in the case of patents.[103] Experience in countries with systems of this kind shows that a sizeable proportion of technical progress is attributable to small inventions.

In Germany and Japan, countries with high volumes of patent and utility model registrations, the fall in patent applications is partly due to a fall in the number of patentable inventions.[104] As competition in innovation grows more intense, there is greater development in the field of continuous improvement.[105]

Inventions involving only a small inventive step are frequently very useful and of considerable commercial importance too: "small" inventions are not necessarily less important commercially than those involving an inventive step which would qualify them for patent protection.[106] The innovation these inventions represent can sometimes be just as great as that of a patentable invention even if they do not qualify for protection. As we saw when we considered the economic significance of utility model protection, the importance of "ordinary" technological development can be expected to grow in future by comparison with "extraordinary" development.[107]

In the systems which protect inventions with only a small inventive step, inventions are publicized which would otherwise have been kept from the public for reasons of

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[102] See Annex 1, comparative study, A(3)(b), "Inventive step".

[103] As opposed to the *horizontal* spread, which may be more restricted, as a result of a three-dimensional form requirement for example.

[104] Germany: Täger and Seyler, Ifo Institute, *Probleme des deutschen Patentwesens im Hinblick auf die Innovationstätigkeiten der Wirtschaft (insbesondere kleiner und mittlerer Unternehmen) und Vorschläge zu deren Lösung, Schlußbericht*, May 1989, p. 127;

Japan: discussion with specialists in Japanese utility model law, Tokyo, March 1992.

[105] Weitzel, G., Ifo Institute, *Pilotstudie - Die wirtschaftliche Bedeutung des Gebrauchsmusterschutzes in der Europäischen Union*, 2.3.

[106] Täger and Seyler, *op. cit.*, p. 55, I.

[107] 'Importance juridique et économique de la protection des modèles d'utilité', in *AIPPI Yearbook* 1986, Q 83, Allemagne, p. 6, I.1.

confidentiality. This enables other inventors to build on the initial invention. They in their turn have an effective way of protecting their own developments.

Thus a lower inventive step requirement promotes "ordinary" technical development.[108] This is in line with the needs of the changing pattern of inventive activity. It is not surprising, then, that as long ago as 1986 interest groups[109] in France and Belgium, the very countries where a smaller inventive step is not acceptable, called for the introduction of a utility model with an inventive step requirement lower than that of a patent.[110] And to judge by numbers of applications, the systems which have a lower inventive step requirement are a great deal more popular than those which demand the same inventive step as for patents.[111] Surveys of industrial companies, independent inventors and patent attorneys confirm this picture.[112]

It would appear, therefore, that Community-level measures regarding utility models ought to allow a smaller inventive step than is required for patents. The demarcation line between patent and utility model would have to be formulated in a way which meets the needs of users, competitors and the lawcourts in equal measure.

(b) Three-dimensional form requirement

From the comparison of the different utility model schemes in the Member States it emerges that in a number of systems the invention must be embodied in three-dimensional form. Systems in this group are the Greek utility model certificate, the Spanish *modelo de utilidad*, the Portuguese *modelo de utilidade*, and the Italian *brevetto per modelli di utilità*.

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108 *Loc. cit.*

109 Representatives of the French and Belgian branches of the AIPPI.

110 'Importance juridique et économique de la protection des modèles d'utilité', in *AIPPI Yearbook* 1986, Q 83, France, p. 81: "Le modèle d'utilité n'a pas à être soumis au même degré d'activité inventive que le brevet, mais il doit remplir d'autres conditions que celle d'activité inventive".

111 See above, Chapter II.C.1(a) and (b), national and cross-border applications.

112 Weitzel, G., Ifo Institute, *The Economic Impact of the Legal Protection of Utility Models on Enterprises in the European Union*, 2.6; Weitzel, G., Ifo Institute, *Pilotstudie - Die wirtschaftliche Bedeutung des Gebrauchsmusterschutzes in der Europäischen Union*, D, 2.7.2.

The three-dimensional form requirement derives from the history of utility model protection, which was originally confined to tools and utensils.[113] The intention was to provide an easily obtainable form of protection appropriate to the technical and commercial importance of the many innovations developed by independent inventors, craft firms and small businesses.This was an area which was not covered by industrial design law or by patent law, so that as well as easing the load on the patent office the new right was intended to close a gap.[114] Even at that time the possibility of extending utility model protection to all inventions was discussed, as a more drastic way of relieving the burden on the patent office.[115] But it was decided to require a three-dimensional form nevertheless, on the ground that the overwhelming majority of the small inventions of that time were artefacts: the invention was embodied in an object. Furthermore, only simple inventions were to qualify for utility model protection.[116] Complicated inventions which could not readily be understood by the layman or by the lawcourts had to be subject to prior examination, and would consequently be protectable by patent alone.[117]

This situation no longer obtains today. An invention which is embodied in an object need not nowadays be a simple one. In Germany the courts have accepted since the end of the 1930s that complex devices may be protected by utility models.[118] On the other hand, although the utility model was intended for small and short-lived inventions, to serve as a back-up to patent protection, for a long time now many such inventions have in fact been excluded as a rule by the three-dimensional form requirement;[119] these include:

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[113] Beier, 'Gebrauchsmusterreform auf halbem Wege: die überholte Raumform', in *GRUR* 1986, Heft 1, p. 1, p. 3, left-hand column.

[114] Beier, *loc. cit.*; Asendorf, 'Herkunft und Entwicklung des Raumformerfordernisses im Gebrauchsmusterrecht', in *GRUR* 1988, Heft 2, p. 83, p. 84 at point 3.

[115] Shorthand reports of the proceedings of the inquiry into the revision of the Patent Act of 25 May 1887, footnote 15 in Beier, *loc. cit.*, p. 4, left-hand column.

[116] Beier, *loc. cit.*, p. 4, right-hand column.

[117] Asendorf, *loc. cit.*, p. 88 at VI. Asendorf argues that the three-dimensional form requirement owes its existence to Kohler's criticism of the division between design and utility model law. Kohler maintained that patent law had to do with the use of motive power, while design and utility model law were concerned with physical form.

[118] Beier, *loc. cit.*, p. 5, left-hand column, with further references in footnote 22.

[119] Beier, *loc. cit.*, p. 6, left-hand column.

- chemicals and other substances without a solid form;
- foodstuffs, drink and tobacco, and medicines;
- electrical circuits where the invention lies in a purely functional aspect; and
- working methods and methods of use, including new uses for articles which are already known.

Thus the grounds for introducing the three-dimensional form requirement do not correspond to present needs.[120]

It would not appear desirable, therefore, to include a three-dimensional form requirement in a future utility model scheme.

(c) Excluded inventions

The changed situation may justify doing away with the three-dimensional form requirement on the grounds that it is anachronistic;[121] but it does not automatically follow that all inventions should be eligible for utility model protection. The Commission has accordingly studied present needs for utility model protection, in order to establish whether some inventions should not continue to be excluded from utility model protection.

(1) Unprotectable inventions

In all the existing utility model systems there are exclusion clauses which are based on the European Patent Convention and borrowed from patent law.

Under Article 52(2) of the Convention, for example, the following are not considered protectable inventions:

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[120] Beier's view is shared by Olbricht, 'Raumerfordernis', in *GRUR* 1986, p. 435 at 3, and Bühling, 'Gebrauchsmusterreform auf halbem Wege: die überholte Raumform', in *GRUR* 1986, p. 434; for a different view see Fischer and Pietzcker, 'Gebrauchsmusterreform auf halbem Weg - eine Erwiderung', *GRUR* 1986, Heft 3, p. 208, p. 210, right-hand column.

[121] Fischer, '25 Jahre Patent- und Gebrauchsmusterreform - ein Rückblick', in *GRUR Int.* 1989, Heft 9, p. 717, p. 722, left-hand column.

- *discoveries, scientific theories and mathematical methods;*
- *aesthetic creations;*
- *schemes, rules and methods for performing mental acts, playing games or doing business, and programs for computers;*
- *presentations of information.*

And under Article 53 the following are not protectable either:

- *Inventions the publication or exploitation of which would be contrary to ordre public or morality, provided that the exploitation shall not be deemed to be so contrary merely because it is prohibited by law or regulation in some or all of the Contracting States;*
- *plant or animal varieties or essentially biological processes for the production of plants or animals; this provision does not apply to microbiological processes or the products thereof.*

These exclusion clauses should be taken over in a Community-level system of utility model protection.

(2) Substances and compositions of substances

Alongside these international exclusion clauses, the exclusion of substances and process inventions has often been discussed.

Examples of *compositions of substances* are the sealing compounds, adhesives, compounds of polymer binding agents, sizing agents, emulsions and dispersions which are widely used in the foodstuffs, pharmaceutical and cosmetics industries,[122] and additives used with textiles, leather and paper.[123] Such products can be manufactured quickly and marketed quickly. They need a form of protection which can be obtained quickly.[124]

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[122] Bühling, 'Zum Raumerfordernis bei Gebrauchsmustern', in *GRUR* 1988, Heft 1, p. 15, p. 16, right-hand column.

[123] Dörries, 'Zum Raumerfordernis beim Gebrauchsmuster', in *GRUR* 1987, Heft 9, p. 584, p. 589, left-hand column.

[124] Dörries, *loc. cit.*, p. 589 at 2.3.

The same applies to *substances* in general, with the exception of substances which need long preparation before they can be marketed. Examples of these are plant protection products, medicinal products, and active pharmaceutical ingredients.[125] But to limit utility model protection in these cases would be to introduce an unnecessary distinction. A measure which allows the protection of substances may serve no purpose in some cases; but that does not mean that protection should be refused in other cases where it would be necessary and reasonable.[126] There is a further argument against the inclusion of substances and compositions of substances, which is concerned with verifiability in the lawcourts. Given the complexity of these inventions and the lack of any prior examination, it is said, it might be asking too much of the courts to expect them properly to assess whether the requirements were met. But the difficulty is not specific to this type of invention: with the rapid rate of technical development it is encountered across all forms of innovative activity. One can hardly pretend nowadays that a judge should be able himself to evaluate novelty and inventive step in all classes of invention. The problem cannot be resolved by refusing protection to particular classes of invention; it has to be tackled by improving the methods of verification available in the event of litigation, for example by requiring that a search be carried out in such cases or that the opinions of specialists or of patent offices be taken.

It would appear necessary, therefore, to include compositions of substances in the scope of utility model protection. It is difficult to say whether all substances should be covered. But there should not be a blanket exclusion of substances in general on the sole ground that utility model protection would serve no useful purpose here.

(3) Process inventions

The question of "process inventions" is more difficult. "Big" process inventions, those which are patentable, have already demonstrated their value. In countries which have the full inventive step requirement, so that utility model protection is available only for patentable inventions,[127] the protection of process inventions is not in dispute.In Germany and more recently in Denmark, however, there has been extensive discussion of this point in connection with the amendment or indeed the introduction of the utility

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[125] Dörries, *loc. cit.*, p. 588 at 2.2.

[126] For a different view see Dörries, *loc. cit.*, p. 588, right-hand column.

[127] France, the Netherlands and Belgium.

model system, because there a lower inventive step requirement means that "small" process inventions can be protected too. Small process inventions belong to the technical expertise usually termed "know-how".The improvement of the efficiency of production cycles until the optimal process is achieved is often the result of a succession of process inventions.[128] Very often it cannot be seen from the product ultimately marketed whether a particular process invention was used in its manufacture. Registered rights in such processes can lose their practical relevance as a result, because the holder will have great difficulty in proving any infringement; and process inventions are often kept secret as a result, in order to avoid direct imitation by competitors.[129] But it is conceivable that small businesses or independent inventors might nevertheless have a substantial interest in protecting such inventions. And even in big companies the prospect of reward for employees' inventions can encourage a greater readiness to innovate. The argument that applications might be made in blind reliance on the utility model right, and that this would be followed by an increase in imitation, is unconvincing. Ireland is so far the only country in which process inventions involving only a small inventive step are protectable. The possibility has existed only since 1992, so that there is no practical experience available as yet. Anyone considering an application for an invention of this kind will tend to be sceptical, and if in doubt will adopt the course taken in the past, namely that of secrecy.This lack of experience also makes it difficult to judge how important such protection might be in practice. The behaviour of applicants in Ireland will doubtless help to clarify the question in time.

Thus no final judgement can be made on the question whether process inventions should be excluded from utility model protection.

(d) Novelty

Novelty is a requirement in all Member States with a utility model system. In most of them novelty is to be determined by reference to the "state of the art", a concept borrowed from patent law.[130] There are differences, however, in what is understood by the state of the art. According to the patent-law definition in Article 54(2) of the European Patent Convention, the state of the art comprises "everything made available to

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[128] Dörries, *loc. cit.*, p. 586, right-hand column.

[129] *AIPPI Yearbook* 1986, Q 83, France, p. 82.

[130] Portugal is an exception: see Annex 1, comparative study, Chapter A.3(a), "Novelty".

the public by means of a written or oral description, by use or in any other way, before the date of filing of the European patent application". It is this international state of the art which is referred to in nine Member States. In Spain disclosure[131] will destroy novelty only if it takes place on Spanish territory.[132] Only the domestic state of the art will be looked at. In Germany only a written description will destroy novelty.[133] By contrast with patent law, merely oral publication is no obstacle. Written descriptions from anywhere in the world will be considered in determining novelty, whereas an instance of use must be within the area of application of the German Act. In Portugal the state of the art is international in geographical terms, but its substance is restricted, in that reference will be made only to knowledge and use among specialists.[134] In Portugal and Germany, therefore, the state of the art is international but restricted in different ways.

In a European system, based on the establishment and operation of a single market and consequently on the unification of separate markets, it would not be desirable to restrict the novelty criterion to the territory of one Member State. But because the utility model right is registered without prior examination, there might be difficulties with an absolute novelty requirement, a requirement referring to the state of the art worldwide.[135] Right-holders and others would have great difficulty in determining whether or not the invention formed part of the state of the art.

Traditionally utility model protection has been confined to domestic markets, and thus to the territory of the individual Member States. As the single market develops into a unity, markets have expanded over national borders. The concept of novelty might therefore refer to the state of the art in the territory of the European Union.

Disclosure of the invention before a utility model is applied for should not destroy novelty if the invention is disclosed by the inventor or his successor in title, or in consequence of an abuse in relation to the inventor or his successor in title. This period

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131 "Disclosure" here means making an invention available to the public, publication.

132 Section 145(1) of the Patents Act.

133 Section 3(1) of the Utility Models Act.

134 Section 37 in conjunction with Section 51 of the Industrial Property Code.

135 Such a requirement had majority support at the round table conference held by the Union of European Practitioners in Industrial Property in March 1992: *Bulletin* No 21, March 1992, at 3.

of grace, borrowed from Article 8 of the proposal on Community design, should last for 12 months.

It would accordingly be reasonable to apply a concept of novelty which refers to the state of the art, and which is not confined to the territory of a single Member State. A grace period of twelve months should be allowed for novelty, along the lines of Article 8 of the proposal on Community design.

(e) Industrial application

Industrial application is currently a requirement everywhere but in Italy, Spain and Portugal.[136] In its place these countries have a requirement of "usefulness". The main reason is that the three-dimensional form requirement is a very important one in their systems. The usefulness requirement then serves to distinguish the protected matter from the mere form of the object as such.[137] Industrial applicability is no longer a necessary requirement, because it must in the nature of things be a feature of an invention which is embodied in a three-dimensional form.[138] The position is different in countries where utility model protection is available for all inventions, and a three-dimensional form is not needed. There is then no need to distinguish the utility model from a right which protects just the form. But such an invention might not have an industrial application: inventions without a three-dimensional form, such as electrical circuits for example, may well need to be converted in some way before they can be marketed. In the Commission's view, therefore, the industrial application requirement is necessary in order to establish a link between the abstract protection of inventions and practical usability.

Community-level action on utility models should consequently dispense with any usefulness criterion, and instead require industrial applicability in line with Article 57 of the European Patent Convention.

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[136] See Annex 1, comparative study, Chapter A.3(d), "Industrial application".

[137] Segade in *GRUR Int.* 1988, Heft 2, p. 99, p. 113.

[138] The German case may be cited in support of this view. When the three-dimensional form requirement was relaxed there, industrial applicability was made a requirement at the same time.

(f) Procedure

Procedure for the granting of utility models can be broken down into filing, examination and decision stages. In the existing systems it tends to follow the pattern of the domestic patent rules, and these in their turn correspond to Articles 78 to 85 of the European Patent Convention. The same procedure should be adopted in a future utility model scheme.

As far as the examination and decision stages are concerned, it has to be borne in mind that none of the existing systems provides for any examination to ensure that the requirements are met. In the scheme outlined here there would be no examination for novelty and inventive step. But a check should at least be made to ensure that the formal conditions for protectability are satisfied.[139] This would also eliminate inventions which are excluded from protectability by the wording of the law.[140, 141] The absence of prior examination for novelty and inventive step means that utility models do not confer the same legal certainty as patents, which are granted after a comprehensive official examination has established that the invention is patentable.[142]

Between a right conferred after examination and a right conferred without examination, the Commission feels that a compromise in terms of legal certainty can be achieved by allowing patent offices to carry out searches on request. Applicants - and if the law so provides others too - would then be able to have a search carried out to establish the state of the art; they could then form a better opinion of whether the requirements were met, and the right obtained would be more secure.

The survey of industrial companies and independent inventors in Italy, Spain, Germany, France and the United Kingdom shows that weighing the advantage of greater security against the disadvantage of extra cost only a small proportion (an average 12%) feel that

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139 This would correspond to the examination for patentability.

140 Where the law specifically excludes the class of invention from patentability, for example, or where the law itself declares that that class of invention does not satisfy one of the substantive requirements, see Article 52 § 4 EPC.

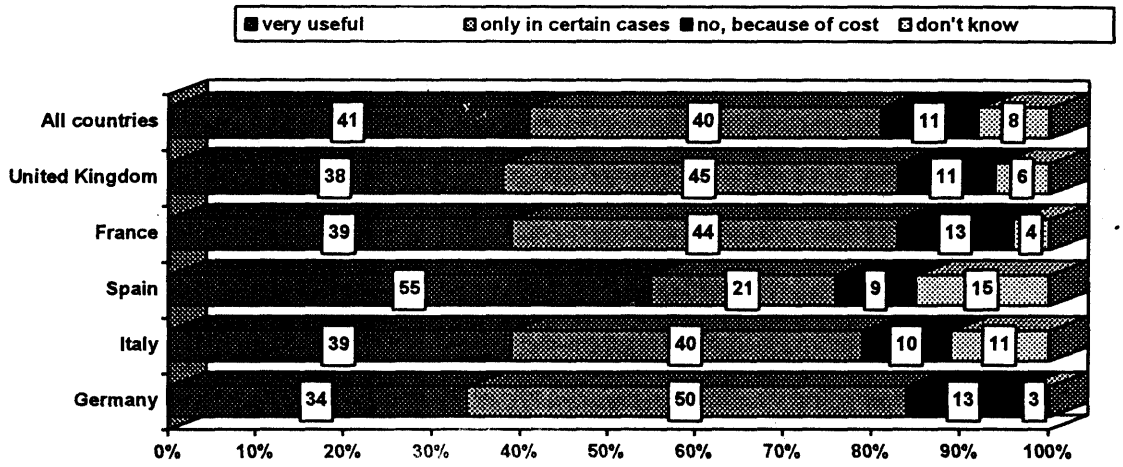
141 Such an examination for protectability is at present carried out in all Member States but Belgium.

142 Despite this prior examination, after the patent has been granted an objector may file an opposition against it or apply to have it revoked, so that here too the fact that the right has been granted does not mean that it can be relied upon absolutely.

optional searches would not be useful.[143] One third feel that such protection would generally be useful, and just under half feel it would be useful in certain cases. This largely positive assessment is shared roughly equally by large and small firms.

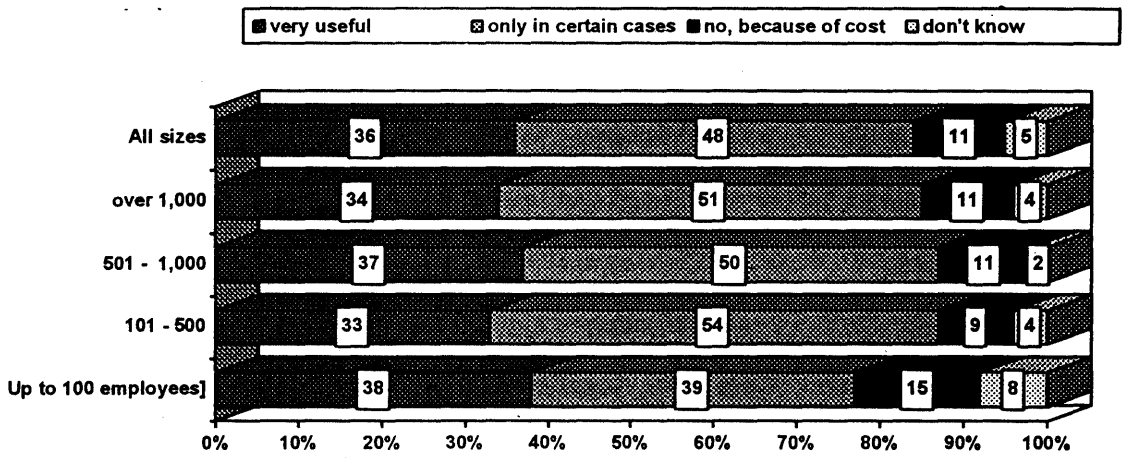
Opinion of optional searches, bearing in mind advantages and disadvantages

By selected EU country (%)



(Source: Ifo Institute survey in selected EU countries, 1993; European Commission calculations)

By size of firm (%)



(Source: Ifo Institute survey in selected EU countries, 1993; European Commission calculations)

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[143] Weitzel, G., Ifo Institute, *The Economic Impact of the Legal Protection of Utility Models on Enterprises in the European Union*, 2.8.

The country-by-country analysis agrees very well with the results of the survey of patent attorneys in Spain (attorneys 63% "very important"/ firms 55% "very useful"), France (45%/ 39%), and the United Kingdom (43%/ 38%). In these countries official searches will not at present be carried out on demand,[144] so that there is no experience available on this point, and yet in the opinion of the respondents there is an appreciable need for an optional search system. The widest differences are to observed in Germany. There 78% of patent attorneys think optional searches are "very important": only 34% of firms regard them as "very useful", though 50% say they are useful in certain cases. The opinion of the German companies and inventors surveyed corresponds closely to current practice. The German Patent Office has been carrying out searches since 1987, when the Utility Models Act was amended to allow this. The number of requests for searches rose without interruption from 1 002 in the first year (6.4% of applications) to 1 468 in 1990 and 2 288 in 1992 (13.5% of applications).[145] Thus the facility offered by the legislature, allowing the legal security of utility models to be protected to some extent at least, has been well received by applicants for utility models.

On the question of priority, utility model law can follow the provision in the Paris Convention. Under Article 4.A and Article 4.C of that Convention, any person who has duly filed an application for the registration of a utility model in one of the countries of the Union established by the Convention is to enjoy a right of priority for the purpose of filing in the other countries; this right is to last twelve months.[146] Article 4.E(2) allows a utility model to be filed in a country by virtue of a right of priority based on the filing of a patent application, and vice versa. Here too Article 4.C(1) sets the duration of the priority at twelve months.

It would appear necessary, therefore, to base the procedure on the patent-law rules in Articles 78 to 85 of the European Patent Convention. At the examination and decision stage there should be no general vetting to ensure that the requirements are met. But there should be at least a formal check for protectability, and provision for optional searches.

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[144] With the exception of France, where a search automatically leads to a patent.

[145] See *Blatt für Patent-, Muster und Zeichenwesen*, March 1993.

[146] Article 4.C(1) of the Convention.

(g) Effects and transfer

All the utility model schemes borrowed their provisions on rights of use and prohibition and on exhaustion from patent law; they correspond to Articles 29, 30, 31 and 32 of the Community Patent Convention.[147]

Under Article 69(1) of that Convention the extent of the protection conferred by a patent is to be determined by the terms of the claims made in the application. In the case of utility models it might be advisable to restrict the number of claims in order to limit the extent of protection.[148] This could be an effective way of offsetting the absence of prior examination.

All the national schemes allow the unconditional transfer of rights. There is no reason to depart from this principle in a Community scheme.

Thus it would appear reasonable to design the rights of use and prohibition and the rules governing exhaustion along the lines of the existing provisions of patent law. As regards the extent of protection, it might be appropriate to restrict the number of claims.

(h) Duration

The grounds for extinction and revocation have been taken over from patent law and are largely uniform in the Member States,[149] so that they can be regulated in the same way here; alongside them there is the question of duration, which is particularly important in utility model protection, because it can serve as a corrective to the lighter admissibility requirements.

A patent confers protection for 20 years; the term should be substantially shorter for a utility model. If small inventions are also to be protected, as they would be in the

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147 Germany, Section 12a of the Utility Models Act; Belgium, Section 26 of the Patents Act; Greece, no explicit provision, but accepted; Italy, application of the patent-law rules; France, Section 28(1) of the Patents Act; Denmark, information supplied by Mrs Joergensen of the Danish Patent Office; Ireland, Part III, Section 63(6), and Part II of the Patents Act 1992; Spain, Section 60(1) of the Patents Act.

148 As is done in Australia, for example.

149 See Annex 1, comparative study, Chapter A.8(b) "Other grounds of extinction" and (c) "Nullity".

European scheme proposed here, the term of protection must reflect the short lifetime of the invention and the small inventive step required. A period of eight to ten years would be reasonable: it would maintain a sufficient distance from the patent system, and would keep the utility model system within reasonable limits, without robbing it of its proper role.

Six Member States already have a term of ten years;[150] we can accordingly rule out the possibility of a shorter period, in order to keep to a minimum the legal uncertainty caused to applicants by a change in the present domestic arrangement. Shorter terms should be renewable up to ten years in steps of several years at a time.

It would appear reasonable, therefore, that the duration of the right conferred by a future utility model system should be renewable up to ten years.

(i) Infringement

The European utility model system outlined here would protect technical inventions, as the patent system does. The types of infringement and the conflicts of interest which may arise can for the most part be handled in the same way.

There is one feature of utility model protection which has to be borne in mind, however. The scheme here proposed makes no provision for prior examination to ensure that a utility model meets all the requirements. This may cause difficulty where a complaint of infringement is made; a search could be carried out in those cases. As a preliminary step in such proceedings, then, the protectability of the disputed invention would have to be clarified. In the Commission's view it should be a matter for the court to determine whether such a search should be carried out; it should not be an obligation automatically imposed on the plaintiff or the defendant. In the survey of patent attorneys a majority was in favour of calling for a search report as a condition for a complaint of infringement.[151]

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[150] Spain, Germany, Italy, Ireland, Austria and Denmark.

[151] Weitzel, G., Ifo Institute, *Pilotstudie - Die wirtschaftliche Bedeutung des Gebrauchsmusterschutzes in der Europäischen Union*, D, 2.7.2, p. 41.

In a Community-level utility model scheme, therefore, it is the Commission's view that it should be open to the court to order a search report, in order to establish whether the disputed invention qualified for protection.

(j) Dual protection

The system proposed here would stand alongside the patent system, and would not replace it. With two parallel systems in operation it might be possible to obtain both forms of protection in respect of the same invention ("dual protection").

This question of dual protection will arise only where an application is made to register a utility model for an invention which would also be patentable.

There might be an advantage in securing dual protection if the applicant

- wants temporary protection pending the grant of a patent;
- is not sure whether his invention will qualify for a patent; or
- hopes to secure particularly strong protection for his invention by obtaining two different kinds of right over it.

In all three case it may happen that a combination of patent and utility model protection for the same invention will place the right-holder in a disproportionately strong position.

One way of avoiding the difficulty this would cause to aggrieved parties, who might find themselves having to proceed against two separate rights, would be to lay down the rule that there may not be simultaneous patent and utility model protection for the same invention. An applicant might perhaps be permitted to convert a pending patent application into a utility model application, and vice versa.

But if dual protection is allowed, there would have to be a ban on invoking the two rights successively. Otherwise a right-holder who failed in an action on the basis of one right would be free to bring fresh proceedings on the basis of the other.

The same ban on invoking two rights successively might also apply as between national and Community utility models.

In order to avoid placing the right-holder in too strong a position, therefore, a Community-level utility model scheme should either prohibit dual protection by a patent and a utility model or impose a ban on invoking the two successively.

(k) Relationship to patent law

Patent law and utility model law both set out to protect technical inventions, so that friction between the two systems cannot be ruled out. The Commission has tried to design the principles of the European utility model scheme which it has proposed here in such a way as to ensure a proper balance between the two systems.

A comparison between the proposed utility model system and the existing patent system will show that the scheme proposed is intended for inventions where the innovative element is fairly modest. The inventive step may be small; or the period of protection needed may be short; or the possibility of industrial application may be limited.

The system of patent law and its operation in practice mean that there is no equivalent protection available for such inventions at Community level. Patent protection demands a greater inventive step, and the prior examination of applications to ensure that all the requirements are met increases costs and lengthens the time taken before the patent is granted.

On the other hand a patent provides greater legal certainty than utility model protection does, and the term of protection is longer. Where the invention is a major one, or where development will take some time, the patent remains the most important form of protection.

The scheme proposed here would complement patent protection and should help further to improve the operation of the common market and to boost innovative activity.

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