

COMPANY COMPETITIVENESS THROUGH INTELLECTUAL PROPERTY

The aim of this article is to present the author's thesis for company competitiveness based on intellectual property /IP/.

The author presents definitions for the following terms: company competitiveness, IP, IP portfolio

1. *Company competitiveness – a general review.*
2. *Intellectual property as a content and as a business factor.*
3. *IP portfolio for the company competitiveness – theoretical base and methods.*
4. *Good practices in Bulgaria.*

First of all the author presents hers point of view for company competitiveness and the matrix for its evaluation including economic and noneconomic indicators such as purchases, turnover and profit, revenues from IP and profitability. Special attention is paid to IP as a factor of company competitiveness and IP portfolio of the company - list and structure, expert assessment of their value.

Then the author presents the relations between IP and company competitiveness through revelation of the aspects: IP as innovations and IP as business indicators and then IP as a market factor and as a factor of consumer behavior.

The final part of this article is focused on the IP portfolio of the company as a content and as a factor of company competitiveness following the points:

1. *Identification of IP portfolio as elements and characteristics.*
2. *Analysis of current status of the IP portfolio of the company.*
3. *Presenting of IP portfolio as a factor for obtaining and sustain the company competitiveness*

The practical issue of this thesis is presented as examples from the Bulgarian successful companies.

JEL: K49

1. Introduction

The purpose of this article is to present intellectual property (IP) of the company as a factor of company competitiveness and as an important factor for the national economic growth.

The business activity in IP rights depends on the business environment as a stimulating or not factor to IP implementation in business depends on it.

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The importance of IP rights for the economic development as general macroeconomic indicators such as employment and contribution.

The EUIPO report published on the official website shows that for the last 10 years IPR-intensive industries contribute 26% of employment and 39% of GDP in the EU as average.

In details: The real contribution of IP rights to the European economy on average over this 10 years period, 56.5 million Europeans were employed by IPR – intensive industries, out of a total employment of approximately 218 million. In addition, another 20 million jobs were generated in industries that supply goods and services to the IPR – intensive industries. Taking indirect jobs into account, the total number of IPR-dependent jobs rises to just under 77 million (35.1%).

Over the same period, IPR intensive industries generated almost 39% of total economic growth (GDP) in the EU, worth €4.7 trillion. IPR-intensive industries contribute to economic output, as measured by Gross Domestic Product (GDP). Overall, almost 39% of EU GDP is generated in IPR-intensive industries, with trademark-intensive industries accounting for 34%, design-intensive industries for 13%, patent-intensive industries for 14% and copyright and GI-intensive industries for smaller proportions.²

Following the presented purpose the author of this article reveals hers point of view for the discussed practical and scientific terms: company competitiveness, intellectual property and IP portfolio as a content and as a factor of company competitiveness. The article presents theoretical base and methods to create and improve an IP portfolio for the company competitiveness.

The final part of this article is focused on the application and registration activity in IPR of Bulgarian companies and their successful participation in the EU operational program “Innovation and competitiveness” (OPIC).

2. Research Methodology

2.1. Company Competitiveness as a Content and Indicators

First of all the author is to present a definition for the term ‘company competitiveness’ and the matrix for its evaluation.

The methodological base of the author’s thesis is M. Porter’s understanding of the company competitiveness based on the valuable differences in the company market offer.

The main author’s point of view is the following:

Company competitiveness means positive economic result of the company activities as a marketplace and business results. Business results are divided into: something and something and are measured by economic and noneconomic indicators. The main valuable

² www.euipo.europa.eu/publications

source for a company difference and for achievement of positive economic results is the company IP – IP in innovations and IP in business indicators.

The matrix for evaluation of the company competitiveness includes economic and noneconomic indicators:

A. Economic indicators:

- Purchases - volume, turnover and profit; for the purchases of the products based on IP, revenues from IP – implemented in own business field and from license agreements;
- Profitability – expenses for a production and marketing in the company for a defined period, the sales revenue, margin and operating profit;
- Efficiency - the ratio of costs of transactions, operations, ratio of costs, efficiency ratio of income from the activity, ratio of the efficiency of the revenue.

B. Non-economic indicators:

- Market position and share, direct competitors, trends in a specific business area;
- Consumer loyalty based on obtained company image and in relation to the IP;
- Company capital – resources, human and material; IP rights - list and structure.

2.2. Intellectual Property as a Content and as a Business Factor

2.2.1. Intellectual property as a content

Generally, the term ‘Intellectual property’³ includes **objects** – the result of human intellectual work and creativity, and **relations**, that are established during the process of creation, implementation and realization of those results in the business: in production, on the market and in trade.

As general IP objects are the following: objects of **copyright** and related rights called ‘**art property**’: artworks and performances. In particular: literary, music and artistic works, drawings, paintings, films, architectural projects and works, etc., performances of the artists, phonograms and broadcasting according to the Bern Convention, 1886; objects of **industrial property**: patents for inventions, utility models, industrial designs, trademarks, geographical indications, protection against unfair competition, according to the Paris convention, 1883; new objects: creation of new technologies and knowledge, results of intellectual activities in scientific, industrial and cultural fields.⁴

For every object of IP exists an opportunity to obtain rights of intellectual property. This opportunity is based on the legislation in intellectual property (IP): international

³ The already mentioned in this study regulations in IP incl. Convention for the establishment of WIPO, 1967, are accessible on the site of WIPO World intellectual property organization - www.wipo.int and on the site of EPO /European patent office: www.epo.org.

⁴ For more information: Borissov, B., Vl. Borissova, (2015) Intellectual property, PC ‘Stopanstvo’, Sofia.

conventions, regulations. European regulations and directives, national laws of the countries-members of WIPO. Those rights are called IP rights. Intellectual property rights are like any other property right. They allow the creators or owners of patents, trademarks or copyrighted works to benefit from their own work or investment in a creation of the intellectual result. IP rights in art property arise automatically, no requirements for applying, registration or deposits of copies, regarding the copyright legislation. IP rights in industrial property arise following the specific legal procedure for applying, examination and obtaining a document granted the exclusive IP rights: the right to use and to license for the owner of those rights and to prohibit other persons to exercise those rights.

There are many international and regional regulations for the protection of patents, industrial designs and trademarks. Most important of them are the following Patent Cooperation treaty – PCT (1970), European Patent Convention – EPC (1977), Agreement of the trade-related aspects of IP rights – TRIPS (1994), Madrid system for trademarks – Madrid agreement (1891) and Protocol (1989), Hague agreement for industrial design (1925), etc.⁵

Following the subject and the purpose of this study we focus on the objects of IP called ‘industrial property’ with a direct influence to the innovations, their implementation in business and influence to the company competitiveness. Especially:

1. IP rights for the protected innovations (patent for inventions /P/, utility model /UM/, industrial design /ID, plant variety, animal breed, topology on the integrated circuits, etc.).
2. IP rights for the protected business indicators /BI/ (trademarks /TM/, geographical indications /GI/, domain names, logos and others).
3. Company know-how (based on the knowledge and skills of the company staff and information) and factual relations (IP as the established good relations with consumers, business units and institutions).

The focus of this study is IP in the field of innovations as patent, UM, ID and on IP in the field of business indicators as TMs and we not pay attention to other BI and to the company know-how and/or established business relations.

A. IP in the field of innovations⁶

Legal options for obtaining IP rights in innovations are the following: patents for inventions, utility models, industrial design, plant varieties and animal breeds, topography

⁵ For more information: www.bpo.bg, www.wipo.int, www.epo.org

⁶ The author’s point of view for innovation is clarified in the article ‘Management of company innovations as IP’, published in ‘Ec. Alternatives’, 2013, N 1. , based on IP theory and on the source ‘Management of the firm innovations and investment’. The common definition of innovation is: a creation of new consumer value through solutions that serve to meet the customer needs and market needs in new or modified ways. Innovations could refer to the product, process or organization as a whole. Some of innovations can be protected as industrial property: patents, UM, ID, etc.

of the integrated circuits.⁷ The author presents main legal point for the objects patents for inventions, UMs and ID.

• **Patents for inventions**

As Bulgarian patent law⁸ envisages: Patents shall be granted for inventions in any field of technology, which are new, involve an inventive step and are susceptible of industrial application. The invention may be protected by the patent. The protection conferred by the patent is limited in time and the term of validity of a patent shall be 20 years from the date of filing of the application (art. 16 of LPUMR). To obtain a patent the inventors should follow a legal procedure for the patenting of their invention, which should meet several criteria to be eligible for patent protection. Hence an invention must be:

1. World novelty

An invention shall be considered to be new if it does not form part of the state of the art. (art. 8 of LPUMR) The state of the art shall be held to comprise everything made available to the public by means of a written or oral description, by use, or in any other way, anywhere in the world, before the filing date or the priority date, as appropriate, of the application. Novelty is a fundamental requirement of patentability.

2. Exhibit a sufficient "inventive step"

An invention shall be considered to involve an inventive step if, having regard to the state of the art it is not obvious to a person skilled in the art. (art. 10 of LPUMR)

With regard to the requirement of inventive step (also referred to as "non-obviousness"), the question as to whether or not the invention "would have been obvious to a person having ordinary skill in the art" is perhaps the most difficult standard to determine in the examination as to substance.

3. Industrial application

An invention shall be considered susceptible of industrial application if it can be made or used repeatedly in any branch of industry or agriculture. (art. 9 of LPUMR)

Nowadays methods of manufacturing can reproduce an invention. "Applicability" and "industrial applicability" are expressions with a specific meaning in IP. The term "industrial" should be considered in its broadest sense, including any kind of industry.

If the invention meets the criteria for patentability, the patent office issues a patent.

A patent is a document, issued by a government office (or a regional office acting for several countries), Patent office in Bulgaria, which describes an invention and creates a

⁷ State gazette, N 27, 1993 – Law on patents and utility models, State gazette N 81, 1999 Law for industrial design. The author presents main legal point for the objects patents for inventions, UMs and ID. Plant varieties and animal breeds, topography of the integrated circuits are legal options for innovations in agribusiness and microelectronics. They are subjects of another study.

⁸ Law on patents and utility models registration (LPUMR).

legal situation in which the patented invention can normally only be exploited (manufactured, used, sold, imported) with the authorization of the patent owner.

The patent's term of validity shall be 20 years from the date of filing of the application. The patent is valid on the territory of the country, the patent office of which issues the patent. The Bulgarian patent office (BPO) issues the patent, which is valid on the territory of Bulgaria.

The exclusive right in an invention shall comprise: the right to use the invention, the right to prohibit other persons from using it without the consent of the patent owner and the right to dispose of the patent, including licensing. (art. 12 of LPUMR)

The right to use an invention shall comprise the following cases: the making, offering for sale, putting on the market, import included, proper use or warehousing of the product for the purpose of offering, putting on the market or use thereof.

The effect of a patent shall not extend to: use of the patented invention for non-commercial purposes with a view to private needs, where such use does not cause significant material prejudice to the owner of the patent; use of the invention for experimental or research and development purposes relating to the subject matter of the patented invention; extemporaneous preparation for individual cases in a pharmacy of a medicine in accordance with a medical prescription; use of the patented invention on board any foreign land vehicle, vessel or aircraft, which temporarily or accidentally enters the territory, waters or airspace of the country, provided that the patented invention is used exclusively for the needs of such means of transport.

• **Utility Model**

At the lower creative level the product innovation should be protected as a utility model (UM). In a number of countries inventions are also protectable through registration under the name of "utility model" or "short-term patent."

The requirements for legal protection (art. 73-78 of LPUMR) are not as strict as those for patents, in particular in respect of the duration of protection, which is shorter, but otherwise the rights under the utility model or short-term patent are similar. The fees are lower. Utility models are intended for products, not methods. In the Bulgarian patent law the certificate for the utility model shall be granted for utility models which are new, obtain inventive step and are industrially applicable.

Utility model protection shall be available to objects with structural and technical features related to the improvement of the shape or layout of the elements of products, tools, devices, apparatus or their parts, materials, etc., designed for use in production or in everyday life, and that satisfy the requirements mentioned above.

A utility model certificate shall not be granted for the methods and the objects that are non-patentable as inventions. A certificate having a term of 10 years maximum as of the filing date shall provide legal protection for utility models and its duration is 4 years as a start – filing date plus 2 periods of 3 years. At the applicant's request, an application for a patent of invention may be converted into an application for a utility model certificate until a decision is taken on the application.

- **Industrial Design**

The new outlook, esthetical or ornamental decisions for the existing product can be protected as an industrial design (ID) (Markova, 2010; Markova, 2008). Generally speaking, industrial design is the ornamental or aesthetic aspect of a useful article. Such particular aspect may depend on the shape, pattern or color of the article. The Bulgarian ID law (Law on the protection of the industrial design – LPID) says: "Industrial design means the appearance of the whole or a part of a product resulting from the specific features of the shape, lines, contours, ornamentation, colors, or combination of such.

Product means any industrial or handicraft article, including parts intended to be assembled into a complex article, sets or compositions of articles, packaging, graphic symbols and typographic typefaces, but excluding computer programs. (art. 9 of LPID)

The right in a design shall be acquired by registration with the Patent Office as from the date of filing an application for registration. The design shall be registered if it is new and has an originality (individual character).

1. Novelty

A design shall be considered new if, before the filing date or the priority date, as appropriate, of the application no identical design has been made available to the public by means of publication, use, registration or otherwise disclosed anywhere in the world (art. 12 of LPID). Designs shall be considered to be identical if their specific features differ only in immaterial details that do not influence the overall perception of the design. Novelty is object of assessment by the patent expert.

2. Originality (individual character)

A design shall be considered to have an individual character if the overall impression it produces on the informed consumer differs from the overall impression produced by a design that has been made available to the public before the filing date or the priority date, as appropriate, of the application (art. 13 of LPID). Originality is object of assessment by the informed consumer – expert in the specific design area and business.

A design must meet both of the criteria to be eligible for a protection. The design must be at once a world novelty and original in nature.

A design shall not be registered if:

- the design is contrary to public policy or to accepted principles of morality.
- the technical or functional features of the product solely determine the specific features of the design.
- the specific features of the design are solely determined by the necessity for the product in which the design is incorporated or to which it is applied to be mechanically assembled or put in, around or against another product, so that both products realize their technical function, with the exception of a design serving the purpose of allowing the multiple assembly or connection of interchangeable products within a modular system.

A registered design shall confer on its holder the right to use and transfer the design and the right to prevent any third party without the holder's consent from copying the design or commercially using the design included within the scope of protection. As a result the rights of the registered ID are exclusive rights such the rights conferred by a patent.

The exclusive right in a design shall comprise: the right to use the design; the right to prohibit other persons from using it and the right to dispose of the registered design.

The right to use the registered design shall comprise: the making the product on the registered design; offering for sale; putting on the market of the subject matter of the design; import included; proper use or warehousing of the product for the purpose of offering, putting on the market or use thereof.

The term of protection for a registered design shall be 10 years as from the filing date of the application. The registration may be renewed for three successive periods of 5 years each, within maximum of 25 years.

Certificate for ID is valid on the territory of Bulgaria. (Registered community design – on the territories of the 28 EC – countries). The right of the ID shall not extend to cases in which using the design for private or for experimental purposes or using the design for the purpose of making annotations or teaching, provided that such use is compatible with fair trade practice and does not unduly prejudice the normal exploitation of the design and that the source is quoted.

Using the design on foreign land, air and naval transportation means when they temporarily or accidentally enter the territory of the country and in which the design is used exclusively for their own needs, as well as the importation of spare parts and accessories for the purpose of repairing such transportation means.

B. IP in the field of indicators

Legal options for obtaining IP rights in indicators are the following: as trademarks, as industrial designs in the Locarno classes: class 32 'Graphic symbols and logos, surface patterns, ornamentation' and class 14-04 'Screens display and icons'.⁹

• Trademarks TM

According to the Law of trademarks and geographical indications in Bulgaria¹⁰, art. 9: 'Marks are signs that are capable of distinguishing the goods or services of one person from those of other persons and can be represented graphically. Such signs may be words, including the names of persons, or letters, numerals, drawings, figures, the shape of goods

⁹ According to the Locarno classification (international classification in IDs), 9-th edition and it is accessible on [www. www.wipo.int/classifications/locarno/en](http://www.wipo.int/classifications/locarno/en).

¹⁰ State gazette N 81, 1999, Law of trademarks and geographical indications /LTMGI/. The author presents main legal point for the object TM. The legal options for registration of logos and web designs as ID, classes 32 and 14 of the Locarno ID classification, will be not on the focus of attention of this study.

or of their packaging, a combination of colors, sound signals or any combination of such elements.’

A mark may be a trademark, a service mark, a collective mark or a certification mark.

The rights in a mark shall be acquired by registration as of the filing date of the application.

The first to file shall have the right to register. The right to a mark shall be an exclusive right.

Registration of TM could meet the requirements called grounds for refusal of registration of TM.

Absolute Grounds for Refusal of TM Registration (art 11 of LTMGI)

The following shall not be registered:

- signs which are not marks within the meaning of marks which are devoid of any distinctive character;
- marks which consist exclusively of signs or indications that have become customary in the current language or in the established practices of the trade in the Republic of Bulgaria with respect to the goods or services filed for registration;
- marks which consist exclusively of signs designating the kind, quality, quantity, intended purpose, value, geographical origin, time or process of production of the goods or the manner of rendering of the services, or other characteristics of the goods or services;
- signs which consist exclusively of: the shape which results from the nature of the goods themselves; the shape of goods which is necessary to obtain a technical result; the shape which gives substantial value to the goods;
- marks which are contrary to public policy or of accepted principles of morality;
- marks which may deceive the consumers as to the nature, quality or geographical origin of the goods or services;
- marks which consist of or include escutcheons, flag s or other emblems of States party to the Paris Convention, or imitations thereof, as well as escutcheons, flags or other emblems or the full or abbreviated official names of international intergovernmental organizations;
- marks which consist of or include official control and warranty signs and stamps where such signs and stamps are used to mark identical or similar goods;
- marks which consist of or include the name or a representation of historical and cultural monuments of the Republic of Bulgaria, as specified by the Ministry of Culture;
- mark, through use, has become distinctive in relation to the goods or services for which registration is sought.

As relative grounds of refusal of TM registration: A mark shall not be registered (art.12 of LTMGI):

- if it is identical with an earlier mark, and the goods or services of the mark applied for registration and those of the earlier mark are identical;
- if because of its identity with or similarity to an earlier mark and the identity or similarity of the goods or services covered by the two marks there exists a likelihood of confusion on the part of the consumers; the likelihood of confusion includes the likelihood of association with the earlier mark;
- if it consists of a geographical designation or derivatives thereof.

The term "earlier mark" means: a registered mark with an earlier filing date or an earlier priority date as appropriate; a mark applied for registration with an earlier filing date or an earlier priority date, as appropriate, if it is registered; a mark which is well known in the territory of the Republic of Bulgaria on the filing date or priority date, as appropriate.

A mark shall not be registered if it is identical with or similar to an earlier mark and is intended for goods or services that are not identical with or similar to those for which the earlier mark is registered, where that earlier mark is well known in the territory of the Republic of Bulgaria and where use without due cause of the mark applied for registration would take unfair advantage of, or be detrimental to, the distinctive character or repute of the earlier mark.

According to the art. 13 of LTMGI the right in a mark shall comprise the right of its holder to use it and dispose of it, and to prevent third parties not having his consent from using in the course of trade:

- any sign which is identical with the mark in relation to goods or services which are identical with those for which the mark is registered;
- any sign where, because of its identity with or similarity to the mark and the identity or similarity of the goods or services covered by the mark and the sign, there exists a likelihood of confusion on the part of the consumers; the likelihood of confusion includes the likelihood of association between the sign and the mark;
- any sign which is identical with or similar to the mark in relation to goods or services which are not identical with or similar to those for which the mark is registered, where the earlier mark has a reputation in the territory of the Republic of Bulgaria and where use of that sign without due cause would take unfair advantage of, or be detrimental to, the distinctive character or the repute of the earlier mark.

The term "using in the course of trade" means: affixing the sign to the goods or to the packaging thereof; offering the goods, placing them on the market or stocking them for these purposes under that sign, or offering or supplying services thereunder; importing or exporting the goods under that sign; using the sign on business papers and in advertising.

The exclusive right shall have effect with regard to third bona fide parties as from the date of publication of the registration.

A mark shall not entitle the proprietor to prohibit a third party from using the following in the course of trade, provided that such use is not contrary to the honest practices of the trade:

- his own name or address;
- indications concerning the kind, quality, quantity, intended purpose, value, geographical origin, the time of production of the goods or of rendering of the services, or other characteristics of the goods or services;
- The mark where it is necessary to indicate the intended purpose of the goods or services, in particular as accessories or spare parts.

Applications that meet the formal requirements shall be published in the Official Bulletin of the Patent Office. In BPO a subject of special expertise is only the mentioned before absolute grounds of refusal of TM registration. The relative grounds are not considered in the BPO examination procedure. The relative grounds can be object of opposition procedure according to the Law on TMs and GIs.¹¹ Certificate for TM is valid on the territory of the Bulgaria. (Registered EU mark for the territories of the 28 EC – countries) for the term of 10 years period which can be renewed for the next 10 years period. Practically unlimited in time till lose of distinctiveness or economic interest to maintain this registration.

2.2.2. Intellectual property as a business resource

Intellectual property is a company's business resource which generates future revenues for the company.

This specific study of intellectual property is focused on IP in the field of innovations as patent, UM, ID and on IP in the field of business indicators as TMs.

To not lose the focus of the article we will not pay attention of the company know-how and/or established business relations.¹²

The IP objects mentioned above patents, UM ID and TM are divided into two main groups: IP in innovations and IP in indicators caused of their legal nature, product implementation and market results.

• **Intellectual property in innovations**

Undoubtedly, the products manufactured in a new project, model, design or other innovative solution add a value to the basic utility of the product at the level 'functionality'

¹¹ For more information: Law on TMs and GIs. Art. 36b: Within a period of two months following the publication date of the application, any person may file an objection against the registration of the mark on the ground of Articles 11 and 12. The objection shall be in writing and shall contain a statement of grounds and arguments.

¹² For more information: Markova, M., 'Know-how– legal and factual identification', 'Property and law', 2010, N10

usually done through invention or UM and increase the additional utility of the product at the 'symbolism' and 'aesthetics', which is most often done through design. The user gets a new level of functionality and use, new experience and pleasure by "possession of the product", which is attributed to a certain socio-cultural level and also increases his 'self-assessment' and this possession is a certain form of "self-realization". What is more this is most often achieved throughout user information and through image effect as a component of realized innovation or brand loyalty: the signs 'P' – invention, protected by a patent; ID – protected design, UM – certified utility model. The signed product provides a greater total utility, and therefore it increases the beneficial effects as one of the indicators of the analysis of the relationship "product – competitiveness".

- **Intellectual property in indicators**

This point of intellectual property as a business indicator (communication and image value) will be presented in terms of the following two functions **"corporate identity"** and **"differentiation"** (Markova, 2010).

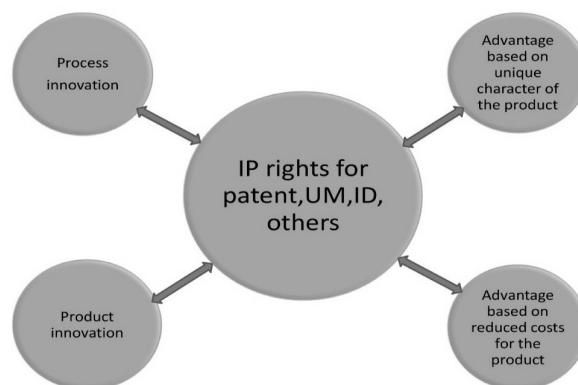
Understanding the term **'identity'** as a set of methods, tools and programs through which the company is presented to the public, the author of this article accepts the thesis that 'identity' is achieved mostly by the company's products and the company's communication strategy. Undoubtedly, the product as a tool of the corporate activity is focused on the implemented innovative projects, protected as inventions, utility models, designs, or other objects. The company creates its identity throughout a deliberate program that is intended to impose identity using communication means for instance – names, signs, symbols, atmosphere and events. Identity is established through the following business indicators: brands, logos, slogans and others protected most often – such as trademarks, designs, geographical indications or domain names.

'Differentiation' is "a set of significant differences that distinguish the firm's offers from those of the competitor's." The real or imaginary design parameters of the company's products is the grounds for distinction, qualification and these parameters make preferable certain company's products to others. Based on the fact that today the markets of consumers and producers are growing internationally and that the competitive struggle is no longer carried out on the level "quality – price", we could infer that today's competition at the market is majorly in the field of corporate identity and company differentiation.

Generally, based on IP rights the company can obtain a company competitiveness based on advantages as results of implementation in the business of new product and/or process innovations.

The next figure illustrates the author's view for the IP rights and company competitiveness through competitive advantages.

Figure 1

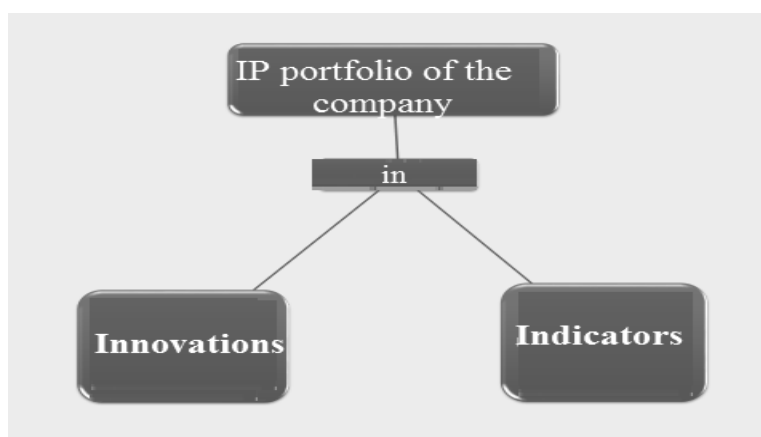


2.3. Intellectual Property Portfolio for the Company Competitiveness

Intellectual property portfolio (IPP) comprises of patents for invention, certificates for the registered utility models, industrial designs, trademarks, new plant varieties and many other results of human intellectual work in the fields of science, arts, technique, technology and design. All of the above IPR are intellectual property of the company. These IP rights are good base to achieve positive business results of the company activity, company competitiveness and positive image.

IP in a company differed into IP in innovations and IP in business indicators as a current IP rights form a current IP profile of the company. This IP profile is not a status, it's under development and upgrading as an answer of the dynamic business environment and the company possibilities in the obtaining new IP rights and in the sustaining of the already achieved IP rights.

Figure 2



The great scientist M. Porter defines (Porter, 2004) two ways in which a company can achieve competitive advantage over its rivals: cost advantage and differentiation advantage. Cost advantage is when a business provides the same products and services as its competitors at a lower level of costs. Differentiation advantage is when a business provides better products and services as its competitors. In Porter's view, strategic management should be concerned with building and sustaining competitive advantage.

The understanding of intellectual property portfolio as a key factor of competitiveness will be focused on two elements of the IP portfolio and will be analysed towards determining the consumer behaviour and through generating and maintaining the product and company competitiveness. In today's global market, the user accepts 80% of the oriented towards him information by his eyes. This information is a set of elements and expressions of business identifiers of the company and is primarily expressed in the company's products as a high scientific and technological level, with new design as aesthetic and functional form, good and attractive packaging, accomplished with prestigious signs of granted IP rights; patents, UM or ID.

All of the achievements in the aspect of corporate identity and differentiation are becoming a significant market factor that affects consumer attitudes and evaluations such as highly defined consumer behaviour and choice. Of course, do not underestimate the importance of factors such as brand, price, service, commercial and other techniques.

Competitiveness of the product is an economic indicator representing the ability of the product to be distinguished based on the competitive advantage held among other products on the market and this is the base to be preferred by consumers.

The second indicator of our analysis is the market price. The price is an economic indicator which informs the consumers of the company competitive strategy. Here, there are phenomena such as 'price differentiation' and 'price inelasticity'. This illustrates the inelastic demand so-called "abnormal demand curve" which is based on the unique, possessing distinctive parameters of the company offer launched on the market, signed with P, UM, ID, TM or other signs for possessing IP rights.

The last but not least indicator of the analysis is the potential of the business indicators to attract and to sustain of the consumer attention to the company offer and to be a factor of the consumer choice at the nowadays global and technological business area.

The author's point of view for the IP portfolio as a management term is based on the understanding of business model as a tool for the realization of the long-term business strategy of the company and the theoretical model of M. Porter for the competitive company strategy based on the unique product and/or market differentiation.

The author's view for management of the IP portfolio (IPP) includes the following steps:

1. Identification of IPP as elements and characteristics.
2. Analysis of current status of the IPP as general.
3. Plan a future IPP for a development of the company competitiveness.

The analysis and the plan of the IPP start with a review of the business environment.

The company management should assess the current factors of the business environment:

- dynamics of processes; dynamics of communications based on new technologies – computer and communication; dynamics of business relations
- speed of identifying new possibilities – as a result of IP rights in the same/ related business areas; speed of reaction to the market need, speed of upgrading of the staff skills;
- high level of innovations protected as IP rights in new (modern) perspective scientific areas of human creativity.

Complex analysis is provided by the following popular marketing techniques: SWOT analysis, matrix of Boston consulting group, GE analysis, analysis of the competitors, etc.

The company management should take into consideration the most important current factors of the business environment mentioned before.

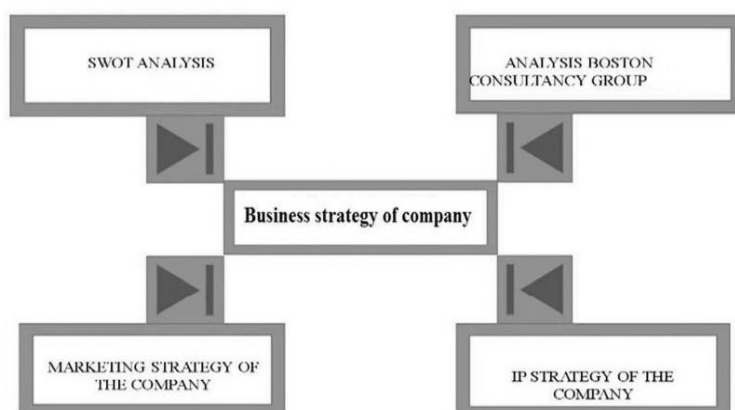
The company management should obtain a complex picture /information of the portfolio of IP rights of the company, the quantitative assessment and perspectives.

The company management should rise and take an answer of the following questions:

- what is the portfolio of the IP of the company: innovations and BI;
- what are the main characteristics of the product/technology profile of the company and the place of IP in them;
- what are the main characteristics of the business environment of the company;
- what is the achieved company image and the future planned image?

The general view for this conceptual model is presented in the next figure.

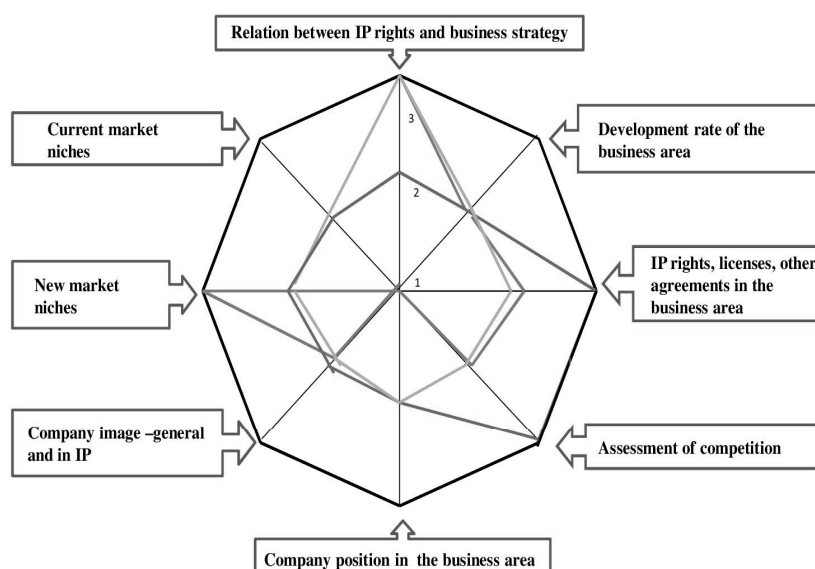
Figure 3



Based on complex SWOT analysis, BCG analysis and GE analysis and achieved IP portfolio to the moment of assessment the company management should form strategies based on IP for the future. When implementing the formed business model based on IP portfolio the company management has to take into consideration the risk factors, the business environmental factors and the company resources so that they could provide adoptable business model and achieve good economic results through this model.

The core of this model is the assessment instrument called by the author of this article IP assessment instrument (based on IP score of EPO) and its implementation for all protected as IP rights objects of IP portfolio of the company according the author's point of view and application of adapted model of EPO for patented technology for all IP rights for protected innovations in company – for product or technology.

Figure 4



Legend: 1 – weak, 2 – average, 3 – strong position. Colours: blue – patents and UMs; red – IDs, green – TMs

Based on a number of factors selected for evaluation, IP assessment instrument can be a basis to calculate the company financial results, focusing on how protected innovations can potentially change the company current financial profile and company competitiveness.

This is a way of estimating and calculating cost of protected product/technology when it is put into use in a given sphere of business based on a number of simple and common economic principles. This model shows the following metrics:

- Effect of protected product/technology on turnover;
- Effect of protected product/technology on costs;
- Effect of protected product/technology on investment.

4. Good Business Practices in Bulgaria

Related to the mentioned above the method of this article and case study of the Bulgarian innovation activity and the participation of Bulgarian companies in the Operational program for innovations and competitiveness (OPIC) has led to the following general conclusion:

The successful company has developed innovation and has put the focus on the innovations for their long-term competitive business strategy. As a result of the implemented company strategy based on innovations protected as IP rights the companies have pursued and have realized an effective competitive business strategy based on the owned or licensed intellectual property in product and technological innovations.

That is the reason for application and registration of patents, UMs and IDs very actively in the last 10 years in BPO especially for the purpose of participation in the European programmes related to the Innovations and competitiveness.

Analysing the specific results of the already completed operational programs focused on the competitiveness of the Bulgarian companies we have indicated the following measures:

- high level of applications and registration activities in P/UM/ID of Bulgarian innovators;
- high level of the registration activity in TM/GO of Bulgarian companies;
- more than 2 protected as IP innovations are found in each of the projects that are ranked and implemented in OPIC business projects for a period 2007-2016¹³.
- more than 2 registered TMs in each business projects indicated in the programme 'Brandico' of the Ministry of the economy of Bulgaria.

The author has provided this research in IP literature based on the digital publications and there are presented data and facts for the application activity in IP rights by the Bulgarian innovators for 10 years period.

¹³ www.mi.government.bg

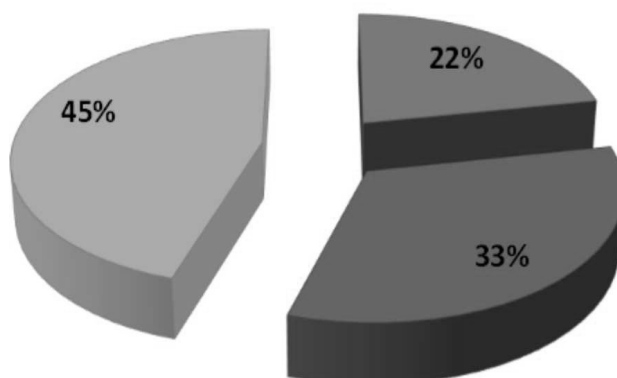
Table 1

IP rights	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Patent application ¹⁴	210	250	243	243	264	245	282	218	280	241
Registered UM	214	135	178	167	205	190	363	220	265	453
Registered ID	356	270	292	201	189	221	273	218	197	166
Registered TM	6873	6357	4578	4335	4058	3844	3068	4215	4101	apr.4600

During the period 2007-2016 approximately 40 innovations by the Bulgarian creators have been applied for PCT patent and around 4550 industrial designs have been registered in EUIPO for the Bulgarian proprietors.

This statistics shows that Bulgarian companies have a growing knowledge in the field of IP rights as a legal protection of innovations as patents, UM and ID as a stable and effective way of protection of their innovations¹⁵ and as a legal protection of company signs as trademarks.

Figure 5

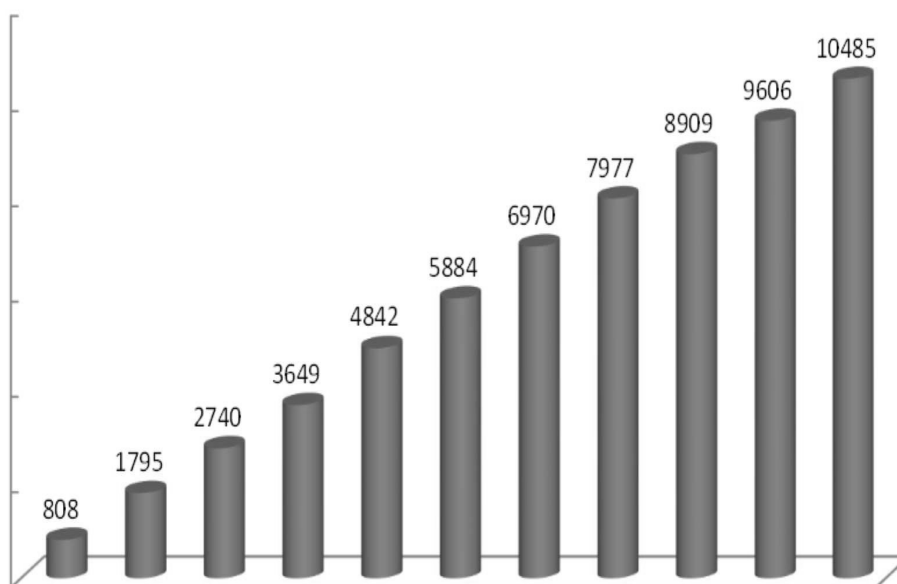


The most active area of innovative activity for the Bulgarian inventors for 2016 field are: machine building – 45% patent applications, electrical engineering and electronics – 33% of patent applications and chemistry and pharmacy – 22% – patent applications.

¹⁴ In this table patent applications are mentioned due to the long period for examination of the criteria of patentability (more than 2 years) and the fact that patent application is an object of business in each aspects as patent (document for the patented invention). The statistic of BPO shows that approximately 32% of patent applications achieve the legal document 'patent'. At the same time the patent application is considered as a result of innovation process.

¹⁵ All figures and facts are accessible on the official web sites: www.bpo.bg, www.epo.org and www.euipo.europa.eu.

Figure 6



There is a positive trend in the number of EP validation for the Bulgarian territory as 13 times approximately for a period 2006-2016.

There is a positive trend in the number of application of utility model as 2 times approximately for a period 2006-2016 (approximately around 460 for 2016).

There is a negative trend in the number of national applications for industrial designs as 2 times approximately for a period 2006-2016 (approximately around 170 for 2016), which is offset by the high level of activity of the Bulgarian applicants for EU registered design within European Union intellectual property office (EUIPO) granted for the whole territory of EC countries.

It should be taken into account that to a large extent the application activity in the last 5 -6 years for patents, UMs and IDs is the result of provided for the companies opportunity to apply to the EU finance projects, governed by Ministry of the economy of the Republic of Bulgaria.

Through the mentioned before business environment and good IP practice, Bulgarian companies should define and implement business strategy successfully based on IP portfolio.

According to the honest practices within the patent attorney services realized by the author of this article there are going to be presented some examples from the Bulgarian practice, undoubtedly supporting the idea for a successful competitive strategy achieved through

innovation protected as intellectual property seen in the form of investment of the company for their implementation and marketing.

Example 1: Product innovation of "Telesat" Ltd. "Management system cable networks", developed and protected as utility model under N BG 1936 has led to successful participation in the competition session 2007-2013 "Competitiveness" of the Ministry of economy, which has provided investment resources for its implementation.

This innovation has been implemented in the company's own business cycle owner of UM and unexclusive license to use this innovation has been given to another company. This acting license agreement is registered under number 1293686 with the Patent Office of the Republic of Bulgaria. Thus, the company – owner of product innovation, protected by a utility model realizes the economic benefit as both use in their business and by receiving royalties from the licensee company.

Example 2: The inventor A. Gonov creates innovation "Equipment for the production of electricity from wind-driven generator" protected simultaneously as an useful model for the territory of Bulgaria under N BG 1498 2011 and as a registered Community Design for EU with N RCD 002 590 455 2014.

At the beginning of 2015 the established by the inventor A. Gonov's company has started producing electrical generators based on the innovation protected by the mentioned above IP rights with good perspective for signing a license agreement with other companies from Europe.¹⁶

The companies mentioned above can be accepted as examples of good business practices in the area of product innovations based on IP rights and these companies have achieved significant positive economic results in their business sphere due to the IP rights. These results are reflected in better financial and non-financial indicators and are forming investment strategies for these product innovations, protected by intellectual property and there are expectations presuming to ensure the maintenance of this trend for the future.

5. Conclusions

The company management should have a complex information about the current portfolio of IP rights its quantitative assessment and perspectives in the purpose to achieve and to sustain company competitiveness based on the planned IP portfolio.

The company management should assess the current factors of the dynamic business environment using a complex analysis which is provided by the following popular marketing techniques: SWOT analysis, BCG analysis, GE analysis and analysis of the competitors.

¹⁶ www.bpo.bg, www.euipo.europa.eu.

The current and periodic audits and upgrading of IP portfolio of the company leads to a stable company competitiveness due to the achieved competitive advantage based on differentiations in offered products related to the obtained IP rights.

References

- Borisov, B., Borisova, Vl. (2010). Intellectual property. PC 'Stopanstvo', Sofia.
- Georgiev, I., Tzvetkov, Tz., Blagoev, D. (1997). Management of the firm innovations and investment. PC "Stopanstvo", Sofia.
- Markova, M. (2008). Protection of ID in country and abroad. OHIM and BPO edition, Sofia.
- Markova, M. (2010). Design management. PC "Stopanstvo", Sofia.
- Markova, M. (2010). Know-how – legal and factual identification. – Property and Law, N 10.
- Markova, M. (2013). Management of company innovations as IP. – Economic Alternatives, N 1.
- Porter, M. (2004). The competitive advantage of nations. Classic style, Sofia.
- www.mi.government.bg Accessed 15th February, 2018.
- www.bpo.bg.
- www.epo.org.
- www.euipo.europa.eu.
- www.wipo.int.
- Law on patents and UM registration, State gazette N 27, 1993.
- Law on industrial design, State gazette N 81, 1999.
- Law on trademarks and geographical indications, State gazette N 81, 1999.