MYTHS AND REALITIES IN IP QUALITY, VALUATION AND ITS BRANDING

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Abstract

Understanding the quality, value and brand of intellectual property is often a puzzling and contrary to what common sense would suggest. Adding to the disarray are the myths that have emerged over the past decade about what makes intellectual property of superior quality, valuable and branded and how to measure that value. Managers involved in quality, valuing and branding and extracting value from their establishment's intellectual property are often challenged by questions and erroneous assertions about value and valuation that are based on these myths. This paper identifies few of the most frequently encountered myths and explains why they are myths, not realities. The principles and methods of uplifting the quality, value and brand for intellectual property right comes into picture to determine the pluses and minuses of its quality, valuation and brand.

The paper primarily focuses on what do we know about patent value. The first step is to define what is meant by the term. The paper lays down the myths and realities of patent value and patent valuation. The value of the intellectual property needs to be assessed in a balanced way, acknowledging that it has both costs and benefits, and that the balance of costs and benefits is likely to differ markedly in diverse circumstances. The objective is to review different valuation factors and to analyze how they can be used in practice to weight or rank patents over a large international database. To do so, one therefore needs some pieces of data that would inform on the potential value of a patent to weight each observation accordingly. Such measures considered in this paper include grant decisions, renewals, families, citations, and legal challenges in the form of oppositions and their outcomes.

Keywords

Patents, myths, value, quality, indicators

1. Introduction

Understanding the value of intangibles (patents) is often a confusing and counterintuitive process. Adding to the confusion are the myths that have emerged over the past decade about what makes intangibles (patents) valuable and how to measure that value (Patrick H. Sulivan and Alexander J Wurzer, 2009). The valuation of patents is important in many contexts, such as mergers and acquisitions, research and development, corporate taxation and infringement litigation (Ted Hagelin, 2004). In this paper we identify most commonly found myths about value and myths about valuation and explain why they are myths, not reality.

Kenneth Arrow, famously 'resolved' the information paradox in the valuation of information that stymies the free flow of information between inventors and producers and justified property rights in non-rivalorous goods (K.J.Arrow, 1962). In a typical scenario, an innovator owns patentable innovations, and a producer owns the resources essential for commercial exploitation of such patentable innovations. The dynamics between an innovator and a producer is usually a tense one, as the innovator would avoid disclosing his invention in full in the absence of any property rights in return, and on the other hand, the producer would abstain from investing in the innovation unless he has been exposed to the invention in totality so as to avoid investing in the invention in case it turns out later to be an ill-defined idea. Thus the value of the information regarding the invention, for the producer is unknown till he has the information, but then he would have acquired it without any cost (Sivaramjani Thambisetty, 2007). While an objective of this paper is to analyze different valuation factors to weigh or rank patents, in order to separate those patents that are of potential value, one needs certain pieces of patent information that highlight such potential value of a patent. Such pieces of patent information include, decisions leading to the grant of a patent, its forward citations, oppositions to the grant of a patent, patent infringement suits and their outcomes. As some of the aforementioned information, indicate the costs incurred by a patentee to obtain and maintain a patent, they are used to produce value estimates based on the investments they represent, the underlying assumption being that, patent applicants would incur these costs only when they deem their patents of sufficient value to recoup from them (N van Zaabroeck, 2009). The paper looks at certain quality indicators and their skewed relationships.

As India has been progressing rapidly over the last decade, investors and MNCs have looked upon her as a promising platform for enforcing and commercializing their patent rights

through various financial contracts such as joint ventures, technology transfers, mergers and acquisitions and the like. Hence valuation of intellectual property rights becomes extremely critical for legal entities seeking to enter into such financial mergers, where a lot of possibilities and opportunities lie hidden.

2. Analysis

A firm that is managing its intangibles (patents) on the basis of myths will be unable to exploit the value of their intangibles (patents) assets fully, as myths are assumptions that are not always true. Hence the false assumptions on which the myths are based ought to be revealed in order to enable the firm to make a well-informed business decision regarding commercializing its intangible assets.

2.1 Myths about value

Myth 1: Value is a well-defined and well-understood term

In the world of intangibles (patents), there are at least five very different business definitions of the word value commonly in use:

- The worth or value of a patent to an individual or a legal entity.
- The price a patent owner asks in lieu of selling his rights over a patent.
- The price at which a patent is actually transacted for in a sale involving patent rights.
- The price a patent owner expects for selling his patent rights
- An estimation of the worth or current value of a patent to an individual or a legal entity.

Hence the reality is that there isn't one well-understood and agreed definition of value

Myth 2: The value of an intangible (patent) is the price offered by a buyer

To understand this myth, one must understand two things: the concept of tangible versus intangible value; and the assumptions underlying the idea that value is equal to transacted price. While for tangibles the value or worth of an item is generally the price a buyer pays for its sale, for intangible items, the value of a patent is rarely equal to its transacted price. The above myth holds good only in narrowly defined circumstances where a heavy R&D investment leads to an innovation that can be commercially developed in numerous ways. It

has been an observation that patents that turn out to be commercially viable in a number of ways is not always those patents that had high R&D and patenting costs.

Myth 3: The cost of creating an item means the value of intangible

The invention development and patenting costs may be substantial and IP practitioners have observed that their most valuable patents are those that can be exploited in multiple ways in the marketplace, not those with the highest R&D and patenting costs. Only under these narrowly defined circumstances can cost be considered as a valid approach for estimating the value of an intangible.

Myth 4: Each intangible (patent) has only one value

In reality a patent can have several values depending on the owner of the patent or the market in which the patent is sought to be exploited. As the resources and ability of different owners to commercialize a patent differ, the patent accordingly assumes various commercial values.

Myth 5: A large patent value signifies higher value of the intangible assets of a company

Patent help give a clear title to the intangible assets of a company; which later help in obtaining financing options from investors such as venture capitalists. Hence once could conclude that a company that holds a large patent portfolio, having overlapping and close patents, owns intangible assets of high worth. However the reality is debatable. The licensing solution for an innovative product comprising of multiple patent inputs might fail due to the huge transaction costs involving a large number of patent holders of the multiple patents within the patent portfolio. If the patents are essential complements, a royalty stacking problem would occur, wherein each patent holder would hold out for the entire surplus value associated with the invention, thereby making it difficult to reach a bargaining solution (Lemley, M.A., 2007). On the other hand, even though the individual patents in a large patent portfolio of a complex technology such as semiconductors, computers, and software, is usually minimal, the large patent portfolio primarily helps a company to negotiate and bargain a cross license agreement as a large portfolio can potentially threaten the opponent. For instance, an innovation survey conducted across several firms to figure out industries that consider patents as an important means to secure returns to an innovation activity revealed that, the pharmaceutical industry followed by the specialized machinery and instruments are foremost in patenting any innovative product as these sectors contain technologies that are

relatively well-defined by a patent document, and where an innovative product can be covered by one or a few patents (Bronwyn H. Hall, 2009).

2.2. Myths about valuation

In general, the valuation of intangibles (patents) is based on circumstances (Shigeki Kamiyama, et al, 2006) and it is an act of estimating the value of an item, either in the marketplace or to a specific person or entity. It involves methods, processes, judgments, information, data and justification. Following are some myths about valuation.

Myth 1: The balance sheet of a company is a reliable source of information regarding the value of intangible assets

International regulations governing public companies are not consistent. For example, US Generally Accepted Accounting Principles (GAAP)[1] says that assets may be placed on the balance sheet only when their presence presupposes their acquisition at a transacted price; self-created intangibles may not be included on the balance sheet because they have no historical transacted price. In contrast, International Financial Reporting Standards (IFRS)[2], that are mandatory for most European companies, require both self-created assets and externally purchased assets to be listed on the balance sheet on a cost or last-transacted-price bases. But in both cases the balance sheet still contains no information about the worth of a company's intangibles because accounting cannot measure value in context or future economic benefits.

Myth 2: The market value of a company is a potentially useful determinant for the valuation of intangibles

Fair market value is an accounting construct defining the hypothetical price that is expected to be paid for an object in the marketplace under a fixed set of conditions: an arm's length transaction; neither party under compulsion to transact; the parties include a willing buyer and a seller. It is a construct that works well where the items are either undifferentiated or partially differentiated because a market for them already exists. But for items that are wholly differentiated and unique such as patents, there are usually only a small set of buyers amongst whom the value of the item differs substantially from buyer to buyer.

[1] Available at http://cpaclass.com/gaap/gaap-us-01a.htm; last accessed on 22nd October, 2011
[2] Available at http://www.ifrs.com/updates/aicpa/Backgrounder_pdf.html,

Myth 3: There should be a universally acknowledged method for valuing intangibles

Although there are three classic approaches to estimating value – the cost approach, the market approach, and the income approach, each approach has a large number of variations. Utilizing only one of these methods for valuation, would imply coming to an apriori agreement regarding the dimensions involved in valuations.

Myth 4: For an estimation of a future price of an intangible to be accurate, the estimate must eventually equate to the transaction price

An estimate of a future price is usually based on current pieces of information and judgments of the future. Extrapolation of the existing information into the future is done in the absence of a reliable alternative estimate. While such a future estimate could be accurate for tangibles, it's seldom accurate in the case of intangibles due to their complex characteristics.

Myth 5: Intangibles cannot be valued credibly because each one is unique

There are two fallacies underlying this myth. The first is that the value of intangibles is less possible to estimate than the value of tangibles. The second is that intangibles cannot be credibly values because of the complexity of the valuation process. The two major differences that affect their valuation are these: intangibles have value only in context, and they are capable of generating multiple simultaneous value streams.

Myth 6: The value of a company's intangibles (patents) is the difference between its market value and the value of its tangible assets

The value of the firm's tangible assets is based on the prices of assets that are bargained by a set of different negotiators in various markets at various points of time and on past transaction prices. These negotiators may have no knowledge of the company's intangible assets. Hence the fair market value of a company and the value of its tangible assets are numbers that are incommensurable. A company's market capitalization depends on the market information about the company and the expectations of its future performance by a section of people who have no knowledge about the intangible assets of the company. Further, the valuation methods used for valuation of tangibles are different in comparison to

the valuation methods employed in IP management.[3] This being evident from the US GAAP rules for intangibles.[4]

Myth 7: A patented technology is a benchmark of commercial success

The commercial viability of a patent is affected by several factors apart from the market acceptance. In certain cases, the commercial value of a patent is even lesser than its registration and maintenance fees. It is estimated that less than 80 percent of patents worldwide are utilized (Meir Perez Pugatch, 2009). The commercial viability of exploitation of a patent hence is totally uncorrelated to the opinion of the patent office that grants it keeping in view the patentability of a technological innovation.

3. Issues in Patent Valuation

It is well known that the private value distribution of patents is highly skewed. There are some patents which provide substantial private value to the patent assignee (George Chandrakis et al, 2011). Such patents are merely a fraction of other patents, therefore just counting numbers of patents of a firm or country to calculate their patent stock without paying attention to their value can be misleading. (Bronwyn Hall et al, 2010) As is the case with economic models that admit the complexity of the world, the theoretical literature on patents produces ambiguous results with respect to incentives that they provide. In the simplest case, where a patent corresponds to a single product and knowledge is not very cumulative, it is clear that patents will encourage innovation (Hall, B. H., 2007). The value of a patent consists of two parts (Bronwyn Hall, 2009):

1. The value of inventions per se; and
2. The value of patent rights, in a sense of incremental value of patenting the inventions

However it is difficult to separate the two empirically. The distinctions lie between the value of the invention to the firm without a patent being issued, and the extra value that the patent generates to the firm. (Arora Ashish, 2008) The relevance of this distinction arises from the finding by, among others, that a substantial number of inventions are not patented, but are protected by other means (e.g., secrecy and lead time) (Levin et al, 1987). Estimating key parameters, and relying upon the literature to specify others notably the difference in

[3] Key differences between IFRSs and US GAAP available at, http://www.iasplus.com/0406ifrsus.pdf. visited on 20th Oct, 2011.
[4] http://www.ifrsclass.com/gaap/ias/ias-38.htm, last visited on 20th Oct, 2011.

imitation rates for patented versus unpatented innovations), several authors conclude that eliminating patent protection would reduce R&D and economic growth. (Eaton, J., et al, 1999) It is found that the value of patenting is estimated to be almost half the discount of the invention since demerits of patenting such as information disclosure outweighs the merits of invention protection. (Anthony Arundel, 2000) Therefore a firm does not patent all inventions.

Overall, it eventuates that some patents are important whereas other patents are not as important. Therefore, one should not attend them in the same way. Unfortunately, the growing size of the patent databases exploited by scholarly researchers and of the patent portfolios managed by practitioners makes it impossible to manually screen patents in search of the more important ones and raises the need for affordable approaches to produce value-weighting schemes for patent counts or to automatically scan a large set of patents and select candidates for a more careful analysis. (N van Zeebroeck, 2009) The literature on patent value has proposed various features that have been found to be positively correlated with the value of patents and could be used to produce value-weighted counts. (Trajtenberg, M., 1990)

3.1. Patent Quality Indicators

3.1.1. Forward Citations

Technological progress is cumulative so that inventors stand on the shoulders of others for further progress. (Marc Scheufen, 2011) In this sense, a large number of forward citations mean that the patent serves as a giant shoulder for many other subsequent innovations. It also means that such a patent tends to yield more profit for the inventing firm, since the invention is technologically more important and it may have wider applications. Forward citations can also be used as an indicator of the social value of a patent, because an inventor of subsequent innovations might have saved the R&D costs by learning from the technological contents of the cited patent. (Hall, B., et al 2001) The search reports produced as part of the grant procedure provide for each patent application or grant the list of references it makes to the list of posterior patent publications making references to it. (N van Zeebroeck, 2009)

3.1.2. Renewal Information

Under the patent system, a patent holder has to pay periodic fees to maintain her patent rights. Using renewal data to estimate the value of a patent right is in many ways the preferred way is on the value of obtaining a patent. The idea of this approach is to note that in most cases, the fees for renewing a patent rise over time, so that one can get an idea of the distribution of the value of patent coverage in a particular jurisdiction by looking at how many patents are renewed at different lifetimes. (Schankerman, M., et al, 1986) Therefore, one can assume that the longer a patent right is kept; the greater is its economic value. In most countries, the patent renewal fee increases over time after the year of the patent grant (Groenquist C., 2007) Only small numbers of valuable patent are kept until the patent expiration date, in this sense, the patent renewal information is useful to estimate patent value. The patent renewal data from the France, Germany and United States is employed in the model of patent value, taking into account both the current return to patent protection and option value associated with the future use of patents. (Lanjouw, J., et al, 1999) As a patent gets older the option value decreases as the intrinsic value of the patent gradually becomes known and the remaining patent term becomes shorter. However, most patents have little or no value and as such patent holders cease to renew them. Therefore, the distribution of patent value becomes more skewed towards the later stage of the patents life. Once important implication from this study is the private value of a patent does change over time.

3.1.3. Patent Family size

The number of countries for which the same invention is patented is also an important indicator of the patent quality. International patenting is costlier than domestic applications. Therefore, given the costs required to file and enforce patents in many countries, only those with sufficient expected value to their owners will be extended abroad, denoting an expected market for the patented technology. (Hall, B., 2001)In addition the fact that a patent holder wants to secure patent protection in various countries and regions, implies that he/she has a higher expectation of return from the patent. (Lanjouw, J., 1998) Such group of patents protecting the same innovation or its 'family' are also referred to as parallel patents. It is a fact that there exists only a small fraction that finds it worthwhile to patent widely. International agreements give inventors at most 30 months to file applications worldwide, so family size captures information available to the patentee up that date. (Bronwyn Hall, et al,

2010) Several patent databases provide information on the patent family information of the patent.

3.1.4. Oppositions and Litigation Information

Opposition to patent grants and patent litigation information can be used as a patent quality indicator as well. Such actions are not free, and the opposing party must see some economic value greater than the legal cost (Harhoff, et al, 2003). Firms that face a decision of filing a suit for infringement, either negotiate their differences in an out of court settlement, or take the tedious and expensive process of litigating a full trial. Patentees are more likely to go to court to protect only those patents that form the base of a cumulative chain, or technological trajectory (Marco, Alan C., 2005). This suggests that the ability of firms to appropriate rents from their subsequent, 'improvement" inventions, either through direct manufacturing or licensing, hinges on their control over the initial invention. Reputation building plays a role in the decision to litigate. Specifically, corporate patentees are likely to prosecute the infringement of a patented innovation when subsequent citations to the patented invention belong to firms that are prevalent in closely related technological fields. But when such technological "overlap" is smaller, and there is thus less benefit to building a reputation for aggressively protecting property, we find that firms are no more likely to litigate than individual patentees, a patent is significantly more likely to be cited by other inventors shortly after it is litigated as compared to other patents of the same age involved in litigation longer ago. (Jean O. Lanjouw, et al, 2001).

Existing theoretical models identify the following four key determinants of litigation (Lawrence M. Spizman, 1995):

(i) The probability of litigation increases with the occurrence of an infringement of patent rights as detected by a patent owner.

(ii) The probability of litigation is increasing in the asymmetry of information or the divergence in parties' expectations about the outcome of a trial, which is more likely in emerging technology areas where patent protection is new or where legal procedure itself is changing.(Katrin Cramers, 2011)

(iii) The probability of litigation rises with the size of the stakes. The stakes could include the value of the patent and other benefits that accrue on filing a lawsuit, such as strengthening of the reputation and bargaining power of the litigant.

(iv) The probability of litigation declines when the cost of a trial is greater to the cost of settlement. When a foreign entity is involved, differences usually arise between national and foreign patentees, and corporate and individual patentees.

4. Conclusion

Grandstand says that a patent is not, strictly speaking, a technical invention but a legal right with a possible economic value (Grandstand, 2000). As an obvious consequence of increasing importance of patent as means to appropriate innovation rents, a rising interest in reliable methods for assessing returns and risks associated with these assets, that overcome traditional investment criteria, has often characterized the literature in the economics and management of innovation. Indian economy has been consistently growing to rank within the world's largest developing economies. The increase in technological capability of industries in India is evident from the rise in patent ownership of entities residing within India. As a result a number of Indian firms have emerged as competitive suppliers of various innovative products in the world. A classical example is the Indian pharmaceutical companies, that have grown to become one of the world's major suppliers of innovative generic drugs. Thus, placing reliance on the importance of real-time valuation, there is an immediate need to capture incremental cash flows related to R&D activities during the evaluation period and the risk and uncertainty associated to such flows through customized accounting practices.

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