

**Intellectual Property Business Protection during a Company Survival Stage: An
Inside-Out Approach.**

by

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Abstract.

Hopefully this is useful for the young entrepreneur.

Lawyers and businessmen work closely together every day. Despite the increasing value of patents and trademarks for companies, it is important to keep in mind that Intellectual Property law and contractual law provide for much more types of protection than statutory rights (patents, trademarks, copyright). Business and company developments are no longer linear. Flexibility plays a key role in the journey a company has to travel to reach success, especially in the case of entrepreneurs and sole proprietorship companies. New businesses going through the “*death valley*”¹ will need to be as flexible as possible to succeed. It is only fair for their attorneys to meet such flexibility standard. For these purposes, understanding different industries, stages of business developments, and Intellectual Property contractual and statutory rights becomes an essential matter to properly assess which kind of protection should and can be used for a particular scenario, on a specific time and on a limited budget.

In general terms, Intellectual Property literature presents different types of Intellectual Property management schemes making use of patents, trademarks, design models, copyright, etc. individually considered and mainly referring to statutory or agency granted rights. These mainly and usually refer to case law and /or jurisprudence (as applicable) and international conventions. However, despite the ever increasing number of articles addressing each of these rights, little reference is made to their strategic use within the context of a specific company’s business development stage or business needs they are aiming to protect. When reflecting on success cases, not many details are published regarding the “partnership agreements”, “employment contracts”, “services agreement” entered into by a company, or the Intellectual Property policies implemented by it while developing its business. On the other hand, when addressing the Intellectual Property portfolio, authors seem to refer to patents, trademarks and copyright as the big (or even core)

¹ [Free Translation] 90 % of start-ups fail during their survival stage. Musso R & Echeopar G, 2012; p.xiii. El Valle de la Muerte. ISBN 13:978-1478373346. (First edited in Amazon.com).

concerns. Consequently, what matters should an entrepreneur identify and address from an Intellectual Property standpoint when starting a business? The most common answer has been: I am just starting and not anywhere near to a patent, so that is not for me.

Each Intellectual Property statutory right functions independently, notwithstanding the possibility of using a combination of them. However, these rights can be used for more than one purpose.

This dissertation describes the legally granted privileges (focused on patents, trademarks, copyright) and the role these play, just as one of the tools entrepreneurs have to protect their Intellectual Property business. It describes and explains other available contracting tools as part of a comprehensive Intellectual Property protection and business development strategy.

The three layered *inside-out approach* protection proposed in this dissertation provides useful insight to the legal tools entrepreneurs should keep at hand and be aware of during their path to developing their business –from the moment they form their sparking idea to develop it --- and not after such business has been put in motion. It aims to assist people involved to understand and remember that Intellectual Property can and should be protected differently depending on the particular needs of a technology and/or the stage of business development.

This dissertation is based on data gathered from various books, international agencies and offices guides, cases, Chilean and South African Acts, articles, newspapers, magazines, journals and websites. In addition it is also based on practical experience and solutions reached by lawyers and entrepreneurs working together.

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I. Introduction

1. Intellectual Property Business today.

Intellectual Property refers to creations of the mind² and can be anything from a particular manufacturing process to plans for a product launch, a trade secret like a chemical formula, or a list of the countries in which your patents are registered. It may help to think of it as intangible proprietary information. Intellectual Property includes, but is not limited to, proprietary formulas and ideas, inventions (products and processes), industrial designs, and geographic indications of source, as well as literary and artistic works such as novels, films, music, architectural designs and web pages.³ It also covers content, information and processes, as well as know-how.⁴ According to the World Intellectual Property Organization, Intellectual Property is broadly divided into two categories: (i) Industrial Property including patents for inventions, trademarks, industrial designs and geographical indications; and (ii) Copyright covering literary works (such as novels, poems and plays), films, music, artistic works (e.g., drawings, paintings, photographs and sculptures) and architectural design. Rights related to copyright include those of performing artists in their performances, producers of phonograms in their recordings, and broadcasters in their radio and television programs.⁵

Intellectual Property is protected to secure innovations that are attributed to and owned by their creator, so he/she can *exclusively* benefit commercially from such innovation for a limited period of time.⁶ As a consequence, the innovation market has certain specific features, among which relevant ones for the purposes of this

² World Intellectual Property Organization [WIPO], 2014. "What is Intellectual Property?" Available at: http://www.wipo.int/edocs/pubdocs/en/intproperty/450/wipo_pub_450.pdf [21 January 2015].

³ Slater D, 2004, updated 2012. "Intellectual Property Protection: The Basics". Available at: <http://www.csoonline.com/article/2138380/loss-prevention/intellectual-property-protection-the-basics.html?null> [11 January 2015].

⁴ Khota I A & Stern A, 2005. Leveraging intellectual property for strategic advantage in product development. *South African Journal of Information Management*. Peer Reviewed Article Vol.7 (4) December 2005. Available at: <http://connection.ebscohost.com/c/articles/20215358/leveraging-intellectual-property-strategic-advantage-product-development> [26 December 2014].

⁵ WIPO, What is IP, 2014. Op. cit.

⁶ International Chamber of Commerce [ICC], 2012. "Intellectual Property Basics". Available at: <http://www.iccwbo.org/advocacy-codes-and-rules/areas-of-work/intellectual-property/intellectual-property-basics/> [20 January 2015].

dissertation are, (i) the fact that legally available monopolies of protection are available to *inventors / creators* if statutory rights are granted by the relevant agency (e.g. as in trademarks and patents) or certain legal conditions are met (as in copyright), and (ii) ‘it is a market for innovative control’ in which rights holders may determine the use of their inventions. ‘Patents thus are transferable assets representing investment projects with random outcomes’.⁷

Intellectual Property Rights are today considered as trading assets. Their success will thus depend on the possibility of commercially/economically exploiting such rights, regardless of legal protection status.⁸ The existing importance of Intellectual Property’s and companies’ intangible assets protection continues to increase in importance as a part of governments policies, both national and international, especially in developed and advantaged developing countries,⁹ where only ‘stronger intellectual property systems engender higher levels of economic

⁷ Spulber D F, 2014. How Patents Provide the Foundation of the Market for Inventions (June 26, 2014). *Northwestern Law & Econ Research Paper* No. 14-14. Available at SSRN: <http://ssrn.com/abstract=2487564> or <http://dx.doi.org/10.2139/ssrn.2487564> [17 January 2015].

⁸ Bilen-Katić B & Radovanović N, 2013. The Role of Intellectual Property in Developing a Knowledge-Based Society. *Management Journal for Theory and Practice Management. Intellectual Property Office of the Republic of Serbia*. UDC: 347.77/.78. DOI: 10.7595/management.fon.2014.0007. Available at: http://www.management.fon.rs/management/e_management_70_english_08.pdf [2 December 2014].

⁹ Oficina Española de Patentes y Marcas (Spanish Patent Office) [OEPM], 2013. “Estrategia 2012-2014 en Materia de Propiedad Industrial para Empresas y Emprendedores”. Available at: http://www.oepm.es/export/sites/oepm/comun/documentos_relacionados/PDF/Estrategia_2012_2014def.pdf [20 December 2014]; and

Lall, S, 2003, “Indicators of the Relative Importance of IPRs in Developing Countries.” Intellectual Property Rights and Sustainable Development, UNCTAD-ICTSD Project on IPRs and Sustainable Development, Issue Paper No. 3. Available at: http://www.ictsd.org/sites/default/files/research/2008/06/cs_lall.pdf [23 May 2015]. It states: ‘By categorizing countries according to different schema, based on technological activity, industrial performance and technology imports, the study concludes that countries will face different outcomes from strengthening IPRs (in particular patents), not just at different levels of development, but even at similar levels of income, depending on their pattern of technology development and imports. While there is no clear case that most developing countries below the newly industrializing economy stage will gain in net terms from TRIPS, the least-developed countries (LDCs) are most likely to lose. The gains that might accrue through increased technological inflows are likely to be realized over the long term, while the costs for the domestic industry (in terms of increased difficulties to copy or reverse engineer foreign technology) will accrue immediately. The paper stresses, however, that more evidence is needed before a positive link between foreign direct investment and the licensing of technology to domestic firms on the one side and IPRs on the other side can definitely be established.

complexity', in which the countries with an initial above-average level of development and complexity will enjoy the effect of policies fostering innovation.¹⁰

Intellectual Property licensing revenue approached USD 90 billion as early as 2003. In 2006, Intellectual Property-related damage awards and settlements in the United States of America amounted to USD 3.4 billion. By 2007, United States workers employed in manufacturing jobs had fallen below 10 per cent. While 30 years ago only 20 per cent of a company's value came from intangible assets, today their largest component of assets refers to intangible intellectual property.¹¹ Consequently, intangible assets have become an essential component for businesses to perform in this competitive environment while evolving into innovation-based, new technologies and knowledge models.¹² The knowledge based economy is today a reality. Evidence of this is the fact that Microsoft's largest asset is considered to be its knowledge. A substantial part of its business success lays on defending and securing its intellectual property. Bill Gates illustrates this properly, becoming the first *knowledge worker* in history to be considered the world's wealthiest person.¹³

Companies' innovations are used to create competitive advantages by adding or increasing the value of products or services. The intellectual capital is basically a company's human capital. It could be described as including its employees, founders, and management know-how,¹⁴ ideas, plans, contacts, as well as their know-why, drivers, team and strategic management which adds value within such company's business purposes. Companies try to create value and improve their

¹⁰ Mehlig C & Sacha D, 2015. "Do Stronger Intellectual Property Rights Increase Innovation?" [Abstract]. *World Development*, Vol. 66, p.665–677. February 2015. Available at: <http://www.sciencedirect.com/science/article/pii/S0305750X14002630> [23 May 2015].

¹¹ Millien R & Laurie R, 2008. A Summary of Established & Emerging IP Business Models. Inflexion Point Strategy LLC, Palo Alto, CA, The Sedona Conference. The Eighth Annual Sedona Conference on Patent Litigation. 12 October 2007, Sedona, Az. Also published in "Meet the Middleman". *Intellectual Asset Management*, February/March 2008:53. Feature: Intermediaries. Available at: <http://www.iam-magazine.com/> and <http://www.concap.cc/wp-content/uploads/2012/03/IP-Business-Models.pdf> [20 December 2014].

¹² Khota I A & Stern A, 2005. Op. cit.

¹³ Thurrow L C, 1997. Needed: A New System of Intellectual Property Rights. Competing in the Information Economy. Squeezing today's innovation into yesterday's system simply won't work. *Harvard Business Review*. Reprint 97510. Available at <https://hbr.org/1997/09/needed-a-new-system-of-intellectual-property-rights> [19 December 2014].

¹⁴ Vidrascu P A, 2014. Debates on Intellectual Property Rights. *Hyperion Economic Journal*. Year II, No.3(2), September 2014. P.74. Available at: [http://hej.hyperion.ro/articles/3\(2\)_2014/HEJ%20nr3\(2\)_2014_Y4Vidrascu.pdf](http://hej.hyperion.ro/articles/3(2)_2014/HEJ%20nr3(2)_2014_Y4Vidrascu.pdf) [11 December 2014].

business processes through the adequate use and management of intellectual capital.¹⁵ '[K]nowledge circulates at every level of a business: human, structural, customers'.¹⁶ These include a product/service business' special features which make it special, unique and/or effective.¹⁷ 'Skills and knowledge are sources of long-term competitive advantages. Intellectual property lies at the centre of the modern company's economic success or failure'.¹⁸ Companies must properly manage and exploit their intellectual capital to succeed.¹⁹ This sort of capital and assets have become the most important resources of companies and in many cases become the foundations of their competitive edge.²⁰

The 'Banking on IP Report' prepared for the United Kingdom Intellectual Property Organization states that the Big Innovation Centre summarised the current market relevance of intangible assets as follows:

*"Our empirical evidence reveals that intangible assets held by firms are increasing substantially, revealing the importance of knowledge in an increasingly information-based and data driven economy. Particularly, young and micro high growth firms are increasing their investment in intangible assets, and yet they are also the most likely to not be able to access funds to finance their growth."*²¹

To properly assess, protect and benefit from their Intellectual Property, while pursuing innovation, companies 'should understand the nature of technology and

¹⁵ Saif S & Bahrami S, 2014. The impact of intellectual capital on the banks and financial institutions accepted in Tehran Stock Exchange. *Academic Journal of Research in Business & Accounting*. V. 2, No.10, p57-62. Available at: http://ajrba.newscienceseries.com/files_site/paperlist/Journal2-10-150117150858.pdf [25 January 2015].

¹⁶ Fragouli, E 2010. 'Intellectual capital and organizational advantage: an economic approach to its valuation and measurement'. Paper presented at 9th Annual Meeting of the EEFS International Conference, Athens, Greece, 3/06/10 - 6/06/10. Available at: <http://www.eefs.eu/conf/athens/Papers/626.pdf> [17 January 2015].

¹⁷ Swartz K G, 2013. *Protecting Intangible Assets - They May Be Your Most Valuable Ones*. Available at <http://www.spacecoastbusiness.com/protecting-intangible-assets/> [27 December 2014].

¹⁸ Thurow L C, 1997. Op. cit.

¹⁹ Fragouli, E 2010. Op. cit.

²⁰ Eniola A & Entebang H & Sakariyau O B, 2015. Small and medium scale business performance in Nigeria: Challenges faced from an intellectual capital perspective [Abstract]. *International Journal of Research Studies in Management*. V.4 No.1. Available at: <http://www.consortiacademia.org/index.php/ijrsm/article/view/964> [20 January 2015]; and

Vidrascu P A, 2014. Op. cit.

²¹ Brassell M & King K, 2013. "Banking on IP? The role of Intellectual Property and Intangible Assets in facilitating business finance." Summary of a report for the United Kingdom Intellectual Property Office. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/312018/ipresearch-bankingip-sum.pdf [2 December 2014].

manage their technological fundamentals to create competitive advantage'.²² For this purpose, it is also necessary to understand the nature of their business and their correlation with Intellectual Property rights. Further, companies should know and understand the Intellectual Property system which would enable them to maximize possible market advantages.²³ To the extent that a company is able to become the owner of its innovations, and sustain such ownership in time, it will be able to obtain profits and survive in the long term.²⁴ However, companies' businesses grow and survive based on their decisions. Investments on intangible assets – without proper awareness and control -- 'can be frequently undervalued and not fully protected'.²⁵ If not properly protected, Intellectual Property will not enable wealth generation or sufficient reward for their owners or high salaries for their employees, and may probably be lost to larger corporations.²⁶

Research, patents, licensing, business models, trials, infractions and everything related to intellectual capital and Intellectual Property Rights, play a critical role in the innovation business. For example, Polaroid and Kodak settled a patent infringement case for almost USD 1 billion; Texas Instruments has earned more than USD 1,5 billion in licensing fees; Intel has a big legal budget to defend their patents and acquire others; Digital Equipment Corporation filed a damages patent suit against Intel, which if successful could be in the billions figures, etc..²⁷ The on-going legal fight between Samsung and Apple in respect on design and utility patents infringements as well as trade dress, wherein the latter requested USD 2.5 billion in damages, and ended up getting a USD 1 billion (initial) ruling.²⁸ In 2012

²² Yoko I, 2014. Research Trend of Technology Management. *RISUS - Journal on Innovation and Sustainability*, Sao Paulo, v.5.n.2, p.78- 86. ISSN: 2179-3565. Available at: <http://revistas.pucsp.br/index.php/risus/article/view/18265/13588> [19 January 2015].

²³ Bilen-Katić B & Radovanović N, 2013. Op. cit.

²⁴ Oficina Española de Patentes y Marcas (Spanish Patent Office), 2013. Op. cit.

²⁵ Swartz K G, 2013. Op. cit.

²⁶ Thurow L C, 1997. Op. cit.; and

Singh S & Chaudhary S & Arora M, 2014. Intellectual Property Rights in Sole Proprietorship Form of Business. *International Journal of Advanced Research in Management and Social Sciences*. ISSN: 2278-6236. Vol. 3, No. 6, June 2014. Available at: <http://www.garph.co.uk/IJARMSS/June2014/2.pdf> [20 December 2014].

²⁷ Thurow L C, 1997. Op. cit.

²⁸ These figures seem to be decreasing, at least in the United States. 'In some ways, 2013 appeared to be a moderating year in patent infringement litigation. The "mega" verdicts of prior years (2012 saw three cases that resulted in damages awards of over \$1 billion) were missing, with the largest new award falling to just over \$200 million.1 Four of the ten largest awards from previous years were

Ericsson sued Samsung Electronics Co on the grounds of patents infringement, and by 2014 settlement on the dispute involved Samsung Electronics Co agreeing to pay Ericsson USD 650 million along with years of royalties to end the process.²⁹ In 2013, Pfizer won a USD 2.15 billion settlement with Teva Pharmaceuticals and Sun Pharma for patent-infringement related to its acid-reflux drug Protonix. In 2014, the United States based Marvell Technology Group was ordered to pay nearly USD 1.54 billion to Carnegie Mellon University for selling billions of semiconductors that infringed hard disk drive patents.³⁰

Each year intellectual property theft costs United States companies about USD 300 billion.³¹ Even though contested certain studies suggest that the average cost of developing a pharmaceutical product can even exceed USD 800 million.³² According to Ernst & Young, mergers and acquisitions global technology deals worldwide in the ‘third quarter of 2014 set a new post-dotcom-bubble era record of USD 73.7 billion’ and ‘the aggregate value for technology deals in 2014 already totalled USD 192.7 billion’.³³

The Intellectual Property market is significantly more competitive and appetite for intangible assets has increased accordingly. The internet, access to information, globalization, technology, consumer associations, public awareness, and entrepreneurship success histories have all provided for a much more competitive

settled, overturned, modified or remain under appeal in 2013. And the median damages award continued its gradual downward tapering, to \$4.3 million in the most recent four-year period.’ For more information, please refer to:

PWC, “2014 Patent Litigation Study As case volume leaps, damages continue general decline”, available at: http://www.pwc.com/en_US/us/forensic-services/publications/assets/2014-patent-litigation-study.pdf [22 May 2015].

²⁹ Johnson S, 2014. “UPDATE 2-Samsung to pay Ericsson \$650 mln plus royalties to end patent spat”, Reuters. Available at: <http://www.reuters.com/article/2014/01/27/ericsson-samsung-idUSL5N0L10H620140127> [23 May 2015].

³⁰ New York Times, 2014. “Marvell Ordered to Pay \$1.54 Billion in Patent Suit”, Business Today, Reuters. Available at: http://www.nytimes.com/2014/04/02/business/marvell-ordered-to-pay-1-54-billion-in-patent-suit.html?_r=1 [23 May 2015].

³¹ Slater D, 2004, updated 2012. Op. cit.

³² Wagner S & Wakeman S, 2014. “What do patent-based measures tell us about product commercialization? Evidence from the pharmaceutical industry”. ESMT Working Paper, No. 14-01, Available at: <http://nbn-resolving.de/urn:nbn:de:101:1-2014021113834> [8 December 2014].

³³ Chitilian H, 2014. “Technology M&A on the rise in 2014”, Blog Deal Law Wire. Available at: <http://www.lexology.com/library/detail.aspx?g=4644bee8-6d47-4021-8504-300e5f6c862c> [21 January 2015].

market, and every player entering the field wants a piece of it. Partnerships (whether national or international) are critical to fostering growth in such a knowledge-based economy. With lessening physical and technological barriers, partners will seek rewards arising not only from their input to a joint venture but also from the synergies of working with others, being aware of any unintended value that may arise from such partnership and its regulation. Hence, Intellectual Property has been described as the "currency of the knowledge-based economy."³⁴

The rising speed and dynamism of developments, theories about the exponential growth of technology (singularity, Moore's law, history, etc.), and human creativity, compared to the generally slow process of enacting a law or multinational treaty, provides sufficient grounds to deem that innovation will evolve faster than legal regulations, regardless of the status of developed, developing or undeveloped country, technology evolves faster than law. Thus, the challenge continues to be safeguarding these intellectual assets through available statutory rights and contractual tools in country specific and international context, within the dynamic innovation market.

2. Business is Business: Business Purpose.

Intellectual Property Law was created to protect Intellectual Property and to incentivise research and development. Nations, companies and international organizations recognized the value of knowledge for their own and global development. In this context, Intellectual Property Law is a tool that enables companies to fulfil their purposes. Regardless of what these may be, a company's long term existence will require it to at least cover its costs -- break-even -- to then hopefully, and probably on most owners or founders original thoughts, also create revenue which they will assign to the purposes they deem appropriate (wealth, social

³⁴ Knowledge Transfer Working Group of the European Research Area Committee, 2012. "European Research Area Guidelines on Intellectual Property (IP) Management in International Research Collaboration Agreements between European and Non European Partners". Available at: http://ec.europa.eu/research/innovation-union/pdf/international_cooperation_guidelines_erac_kt_group.pdf [2 January 2015].

causes, health improvement, environmental awareness, etc.) However, if there is no business, there is no company.

In the described innovation competitive market, despite technological advances decreasing communications and connectivity costs, new companies, usually referred to as entrepreneurs and start-ups, still maintain the same concern and objective: create value while obtaining economic benefits.³⁵ Private companies actually expect big rewards from creating innovations.³⁶

Common elements when defining entrepreneurs refer to, innovation, risks, added value, commitment (undertaking), discovery and the exploitation of opportunities:

*“[P]ersons (business owners) who seek to generate value, through the creation or expansion of economic activity, by identifying and exploiting new products, processes or markets”.*³⁷

*“An individual who undertakes (from the French *entreprendre* to undertake) to supply a good or service to the market for profit. The entrepreneur will usually invest capital in the business and take on the risks associated with the investment. In most modern capitalist economies the initiative of entrepreneurs is regarded as an important element in creating a society's wealth; governments are therefore led to establish conditions in which they will thrive”.*³⁸

³⁵ Musso R & Echeopar G, 2012. Op. cit.; p.5.

³⁶ Thurow L C, 1997. Op. cit.

Further, on the subject of the “reward approach” being properly considered for policy purposes, Spulber, 2014 states: ‘Patents are forward-looking: they perform most of their economic functions in the market for inventions after they are granted. The market foundation role of patents stands in stark contrast to the common view that patents provide “rewards” for inventors. The “rewards” view is backward-looking; patents complete most of their economic functions at the time they are granted. The “rewards” view of patents is highly misleading for public policy because it does not accurately describe public and private institutions’. ‘The “rewards” view considers patents as sources of residual returns for IP owners rather without considering that ownership provides the basis for innovative control. Based on the “rewards” view, some researchers recommend weakening patents through antitrust, limits on litigation, compulsory licensing, government ownership, price controls, taxes, and subsidies. These regulatory approaches would stifle or eliminate the economic benefits that result from markets for invention.’ Please refer to:

Spulber, D F, 2014. Op. cit.

³⁷ Ahmad N & Seymour R G, “Defining Entrepreneurial Activity: Definitions Supporting Frameworks for Data Collection”. OECD; para.30. Available at: <http://www.oecd.org/std/business-stats/39651330.pdf> [10 January 2015].

³⁸ Oxford Reference, 2015. Available at: <http://www.oxfordreference.com/view/10.1093/oi/authority.20110803095753147> [23 January 2015].

“Joseph Schumpeter’s definition of an entrepreneur in 1934 ‘equates entrepreneurship with innovation in the business sense; that is identifying market opportunities and using innovative approaches to exploit them’.³⁹

“The literature describes entrepreneurial process as a multidimensional and complex phenomenon. Most conceptual frameworks advocate that the entrepreneurship is a function of the opportunity and the individual entrepreneur, his or her characteristics and actions. A knowledge-based perspective suggests that entrepreneurship can be thought of as a function of knowledge and attitude”.⁴⁰

‘Start-up is an innovation in search of a business model’⁴¹

The latter is probably the most common element from an entrepreneurial stand point, specifically at the starting point of a company’s endeavour, where all it has is an idea or solution to a problem, which it aims to convert and develop into a profitable business. However, a long process exists between the moment the idea/solution/innovation sparked and the start of a business based on it, for which there are several stages the start-up must undergo. Different authors describe a different number of stages before it may become a (successful) business, some of which are: identifying possibilities for crisis, encountering problems, and the need of flexibility in the earlier stages of a company’s life. This early phase is usually referred to as the *survival stage*.

In essence, the general stages of a successful company could be described as: (i) idea/solution generation; (ii) existence: where a decision has been made to pursue the business endeavour, and product/service creation and delivery, and clients are its main concerns; (iii) survival: the company is stressed under the need of breaking even and obtaining sufficient cash flows to stay in business; (iv) success: exploitation and/or expansion of business; and (v) take off and maturity: company has benefited and decided a strategy regarding growth and corporate structure.⁴²

³⁹ Ahmad N & Seymour R G, Op. cit.; para.5.

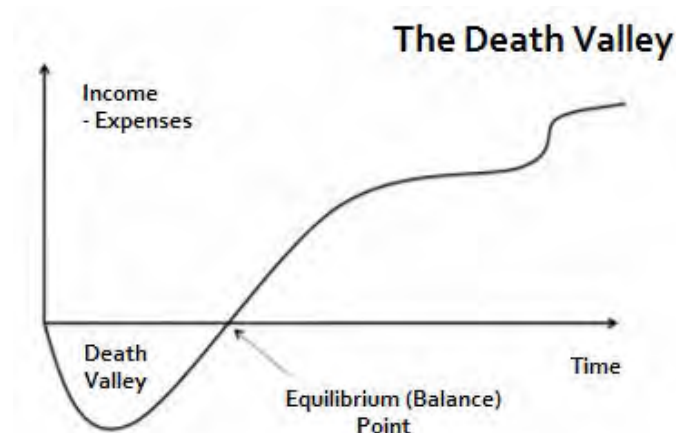
⁴⁰ Cabrita M & Cabrita C & Matos & Muñoz Dueñas, 2015. Entrepreneurship Capital and Regional Development: A Perspective Based on Intellectual Capital [Abstract]. *Entrepreneurship, Human Capital, and Regional Development International Studies in Entrepreneurship*. Vol. 31, p. 15-28. Available at: http://link.springer.com/chapter/10.1007/978-3-319-12871-9_2 [10 January 2015].

⁴¹ [Free Translation] Musso R, 2013. Presentation: XI Congreso Chileno de la Innovación. La innovación al poder, 2013 año de la innovación. Presentation Available at: <https://www.youtube.com/watch?v=BEjOKXFn92U> [19 January 2015].

⁴² Lewis V L & Churchill N C, 1983. The Five Stages of Small Business Growth [Abstract]. *Harvard Business Review*. Vol. 61, Issue 3, p. 30-50 1983. Available at SSRN: <http://ssrn.com/abstract=1504517> [30 January 2015];

3. Problems and Failure of Companies in their Early Stages.

New companies' beginning stages are the hardest ones. There they will go through and endure critical challenges.⁴³ Almost all models consider a period in which unforeseen problems will arise before companies are able to break even (*See figures 1, 2 and 3*). These initial stages are referred to as *The Death Valley* by Musso & Ehecopar⁴⁴ the Finish Business Angels Network [FIBAN],⁴⁵ Startup Commons,⁴⁶ and *Angel FFF Funded Stage*.⁴⁷



Addison & Co, 2014. Where are you in the 7-stage cycle? Available at: <http://www.addisonandco.co.uk/the-7-stages-of-business/#1> [23 January 2015];

Steinmetz L L, 1969. Critical stages of small business growth: When they occur and how to survive them [Abstract]. *Business Horizons*. Vol. 12, Issue 1, February 1969, p. 29–36. Available at: <http://www.sciencedirect.com/science/article/pii/0007681369901074> [20 January 2015];

Harnish T, 2011. “Recognize And Manage The 5 Stages Of Small Business Growth”. *American Express Open Forum*. Available at: <https://www.americanexpress.com/us/small-business/openforum/articles/recognize-and-manage-the-5-stages-of-small-business-growth/> [20 January 2015]; and

Scott M &, Bruce R, 1987. Five stages of growth in small business [Abstract]. *Long Range Planning*. Vol. 20, Issue 3, June 1987, p. 45–52. Available at: <http://www.sciencedirect.com/science/article/pii/0024630187900719> [20 January 2015].

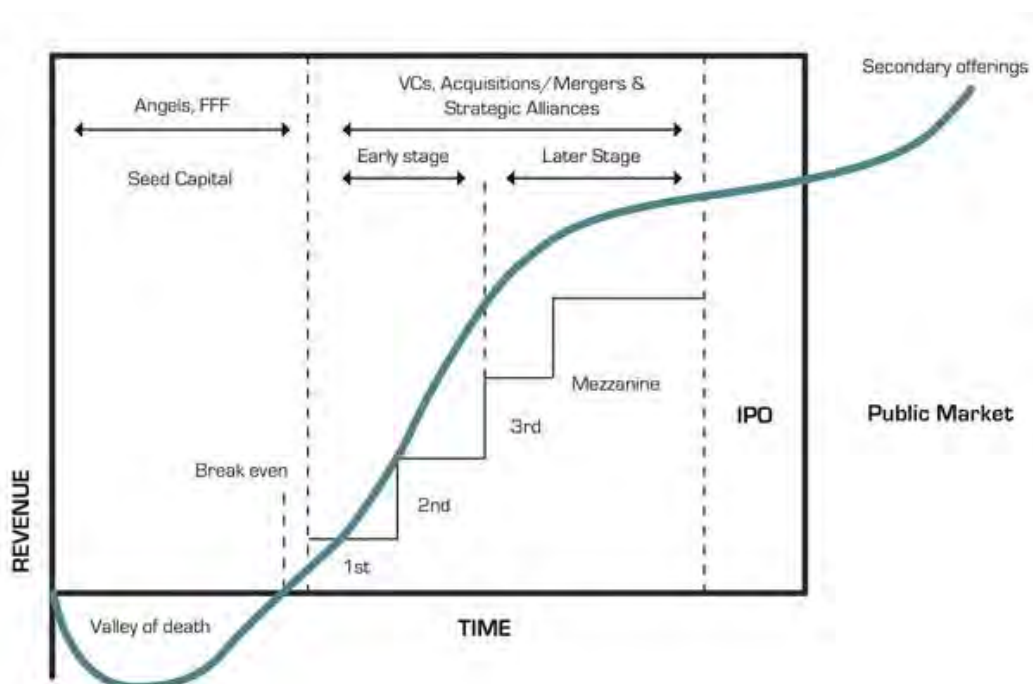
⁴³ Steinmetz L L, 1969. Op. cit.

⁴⁴ Musso R & Ehecopar G, 2012. Op. cit.

⁴⁵ Finish Business Angels Network [FIBAN], 2014. Business Angels - Private High-Growth Investors. Available at, <https://www.fiban.org/investors>. [20 January 2015].

⁴⁶ Startup Commons. Startup Development Phases. 2014. Available at: <http://www.startupcommons.org/startup-key-stages.html> [23 January 2015].

⁴⁷ Finish Business Angels Network [FIBAN], 2014. Op. cit.

Figure [1] free translation from El Valle de la Muerte.⁴⁸Figure [2] from Startup Commons.⁴⁹Figure [3] from Finish Business Angels Network.⁵⁰

⁴⁸ Musso R & Echeopar G, 2012. Op. cit.; p.5.

⁴⁹ Startup Commons. Startup Development Phases. 2014. Op. cit.

⁵⁰ Finish Business Angels Network [FIBAN], 2014. Op. cit.

Despite being common knowledge and regardless of proper planning to survive a stressed initial stage as shown in previous *Figures 1, 2 and 3*, the rate of start-up failures⁵¹ or bankruptcies⁵² during their initial stage is high. In Chile, for instance, according to Musso and Echeopar,⁵³ 90 per cent of business projects fail. They also argue that reality is usually tougher than foreseen, and overcoming *The Death Valley*, i.e., breaking even, will probably take longer than planned. As companies start their operations they most certainly will be driven away from the initial plan, and will be exposed to various hazards including: (i) that the parameters upon which its business model was built are not met in reality; and (ii) the unexpected arrival of external problems. The following chart reflects the initial stages of a company that is closer to reality in the majority of cases.⁵⁴

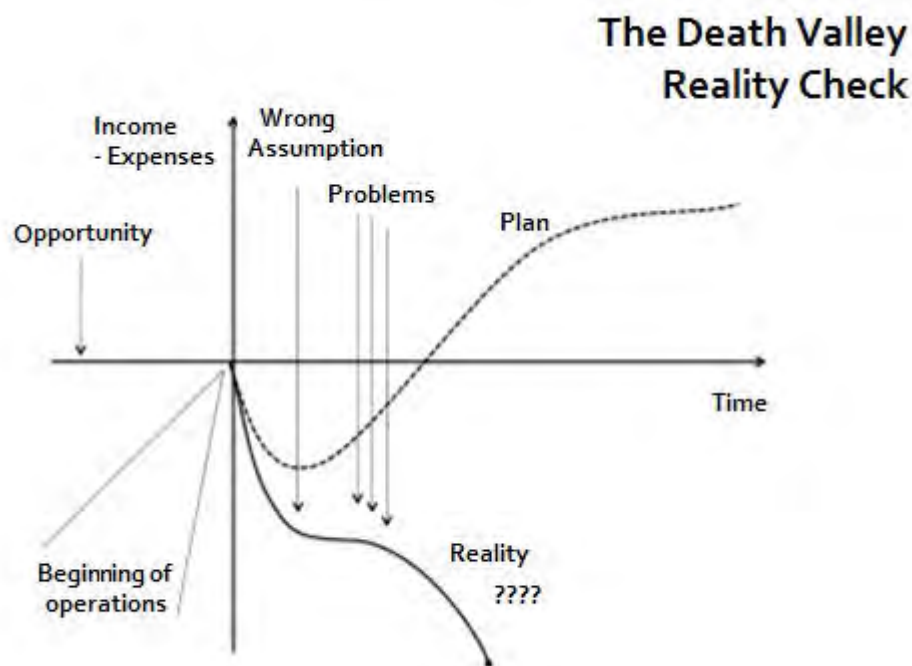


Figure [4] free translation from *El Valle de la Muerte*.⁵⁵

⁵¹ Peña I, 2002. Intellectual capital and business start-up success [abstract]. *Journal of Intellectual Capital*, Vol. 3 Iss: 2, p.180 – 198. Available at: http://www.researchgate.net/publication/235262899_Intellectual_capital_and_business_start-up_success [30 January 2015].

⁵² Harnish, 2011. Op. cit.

⁵³ Musso R & Echeopar G, 2012:p.xiii. Op. cit

⁵⁴ Musso R & Echeopar G, 2012. Op. cit.

⁵⁵ Musso R & Echeopar G, 2012. OP. Cit.: p.10.

Amongst the causes identified for start-up failure, are: (i) basing their business on defective products/services or mistaken problems; (ii) operational, economic, or personal problems;⁵⁶ (iii) underestimating its funds and time to market,⁵⁷ including running out of initial capital⁵⁸; (iv) not attracting, identifying or having enough customers or product capability, not being able to provide services;⁵⁹ (v) The ‘tendency to overestimate less relevant cues and, conversely, underestimate the more relevant ones’;⁶⁰ and (vi) owners performing every task of the business, including supporting the company capital and financial requirements.⁶¹

4. Survival: Flexibility and business needs.

The main challenge of companies facing the above listed problems will be to remain in business, to keep the company alive, in summary: to survive.⁶² They need to gather sufficient funds to break even, covering their costs.

At this stage, flexibility from a company’s original plans and needs is of the essence. Today’s business planning models and tools provide dynamic and flexible options, enabling companies the possibility to ‘manipulate business models to create new strategic alternatives.’⁶³ Survival is a matter of flexibility and adaptability,⁶⁴ requiring companies to change and adapt.⁶⁵ How a company addresses and

⁵⁶ Inc. Com, 2009. “How to Protect Your Invention. Advice and tips on how to protect a new invention from copycats and competitors”. Available at: <http://www.inc.com/guides/legal/patents.html> [15 January 2015].

⁵⁷ Addison & Co, 2014. Op. cit.

⁵⁸ Lewis V L & Churchill N C, 1983. Op. cit.

⁵⁹ Lewis V L & Churchill N C, 1983. Op. cit.; and Harnish, 2011. Op. cit.

⁶⁰ Miettinen M & Niskanen M, 2015. Lender evaluations of start-up business prospects [Abstract]. *Managerial Finance*. Vol. 41 Iss: 1, p.102 – 120. Available at: <http://www.emeraldinsight.com/doi/abs/10.1108/MF-10-2013-0284> [30 January 2015].

⁶¹ Lewis V L & Churchill N C, 1983. Op. cit.; and Harnish, 2011. Op. cit.

⁶² Addison & Co, 2014. Op. cit.; Lewis & Churchill, 1983. Op. cit.; and Harnish, 2011. Op. cit.

⁶³ Osterwalder A & Pigneur Y, 2009:p15. Business Model Generation. ISBN: 978-2-8399-0580-0. Summary available at: http://businessmodelgeneration.com/downloads/businessmodelgeneration_preview.pdf [20 December 2014].

⁶⁴ Musso & Ehecopar Presentation, 2013. Op. cit.

⁶⁵ Scott & Bruce, 1987. Op. cit.

overcomes unexpected problems with their limited budgets matters⁶⁶ and will be a material factor for its success.

Human capital plays a key role for a new company's 'survival and growth'⁶⁷ and its final success. However, it has been found that small and micro companies' innovative and creative capabilities are not fully exploited. This is due to the fact that many of these companies are unaware of the protection the intellectual property system can provide for their innovations. If innovation is kept unprotected, stronger/bigger competitors will make them their own, without enabling the micro and small innovators to commercially benefit from them.⁶⁸

Adequate protection of intellectual property is a crucial step during the process of turning ideas into business 'assets with a real market value'.⁶⁹ Considering that start-ups and entrepreneurs not only drive innovation, but are also major job creators.⁷⁰ Intellectual Property protection during the business survival stage which is a period with limited funds, but in which the material *idea* or *innovation* is already existent and on its path to become a business, becomes crucial. Recognizing the development stage a company is in should help attorneys to reach better and more informed decisions and choices when their assistance is required; enabling them to understand the challenges a company is facing from a business perspective.⁷¹ It is rare for entrepreneurs to seek legal advice as soon as they form their idea, that is, within the early stages of its company process. There is plenty of ground for this to become a more regular problem. Chile and South Africa have great potential to improve and become more efficient in innovation. Both rank with

⁶⁶ Hampel-Milagrosa A & Loewe M & Reeg C, 2014. The Entrepreneur Makes a Difference: Evidence on MSE Upgrading Factors from Egypt, India, and the Philippines [Abstract]. World Development, Vol 66. Available online 14 September 2014. Available at: <http://www.sciencedirect.com/science/article/pii/S0305750X14002332> [30 January 2015].

⁶⁷ Peña, 2002. Op. cit.

⁶⁸ Oficina Española de Patentes y Marcas (Spanish Patent Office), 2013. Op. cit.

⁶⁹ Singh & Chaudhary & Arora, 2014. Op. cit.

⁷⁰ Oficina Española de Patentes y Marcas (Spanish Patent Office), 2013. Op. cit.

⁷¹ Lewis V L & Churchill N C, 1983. Op. cit.

just a 0.68 innovation efficiency rating in the World Intellectual Property's, 2014 Global Innovation Index ranking.⁷²

During a company's *Survival Stage*, ideas and innovations must be protected from their inception. Innovators and innovation at this stage are almost the same – intellectual capital is, at least at this stage, the future company's most important asset, and needs to be properly guarded and protected. A key question is whether Intellectual Property statutory rights provide sufficient protection during the survival stage?

⁷² World Intellectual Property Organization. "Global Innovation Index Ranking, 2014." Available at: http://www.wipo.int/export/sites/www/econ_stat/en/economics/gii/pdf/2014/gii_2014_rankings.pdf#page=2 [24 January 2015].

II. Intellectual Property Statutory Rights

1. Business Purpose of Intellectual Property Protection.

The International Chamber of Commerce's definition of Intellectual Property emphasizes the rights it grants to its holder, referring to control, ownership, and possibilities of sharing.⁷³ Patents protect inventions and products, trademarks grant protection to product names, logos, shapes and jingles, and copyright protects literary and other creative works including art and photography, etc. Additionally, other types of Intellectual Property protection are available and vary depending on the subject matter of protection: (i) certain objects shapes may be protected by design rights; (ii) geographical indicators and trade secrets; (iii) plant varieties; and (iv) integrated circuits and databases which are also protected in certain countries.⁷⁴ In general terms Intellectual Property Law strives to protect human creativity and originality.⁷⁵

Intellectual property rights are granted under the national laws of each country. Additionally and due to globalization, countries have entered into several international intellectual property treaties,⁷⁶ which aim to harmonize their protection and enforcement regime.⁷⁷ In South Africa as well as in Chile, protection of Intellectual Property is regulated mainly by legislation,⁷⁸ both countries being

⁷³ International Chamber of Commerce [ICC], 2012. Op. cit.

⁷⁴ Id.; and

GOV.UK, 2014. "Intellectual property and your work". Available at: <https://www.gov.uk/intellectual-property-an-overview/overview> [10 January 2015].

⁷⁵ Spoor & Fisher, 2001. Op. cit.

⁷⁶ 'For substantive issues, the most important treaties are the Paris Convention for the Protection of Industrial Property (1883) and the WTO Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS) (1994), while the main patent treaties for procedural issues are the Patent Cooperation Treaty (1970) and the Patent Law Treaty (2000). The European Patent Convention (1973) sets out rules for obtaining European Patents which, when granted, split up into national patents in the designated countries. The revised version of the Convention (EPC 2000) and Implementation Regulations which came into force on 2007.' Please refer to: International Chamber of Commerce, 2012. Op. cit.

⁷⁷ International Chamber of Commerce, 2012. Op. cit.

⁷⁸ According to the World Intellectual Property Organization, South Africa's main acts regulating Intellectual property are the: (i) Intellectual Property Laws Amendment Act 2013 (Act No. 28 of 2013) (2013); (ii) Intellectual Property Rights from Publicly Financed Research and Development Act 2008 (Act No. 51 of 2008) (2008); (iii) Patents Amendment Act 2005 (Act No. 20 of 2005) (2005);

signatories to a number of international agreements, and as World Trade Organization members, both countries are bound by the World Trade Organization Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).

As part of an overall description of Intellectual Property rights, they provide the inventor or creator of a work/innovation an exclusive right to commercially exploit it for a defined period of time.⁷⁹ The exclusive rights granted are *property* related rights: possession, use, enjoyment and disposition (possibility to transfer), through which commercial exploitation can be achieved.⁸⁰

Consequently, the granted rights provide companies a commercial monopoly over such work/innovation for a determined period of time, in which they are enabled to exclusively sell, license or otherwise ‘hold, rent, test, donate’,⁸¹ and time the exercise of any of these, to exploit an innovation, claim or take legal action in

(iv) Patents Act 1978 (Act No. 57 of 1978, as amended up to Patents Amendment Act 2002) (2003); (v) Merchandise Marks Act 1941 (Act No. 17 of 1941, as amended up to Merchandise Marks Amendment Act 2002) (2003); (vi) Performers’ Protection Amendment Act 2002 (2002); (vii) Copyright Act, 1978 (Act No. 98 of 1978, as amended up to Copyright Amendment Act 2002) (2002); (viii) Intellectual Property Laws Amendment Act 1997 (Act No. 38 of 1997) (1997); (ix) Designs Act 1993 (Act No. 195 of 1993, as amended by Intellectual Property Laws Amendment Act 1997) (1997); (x) Intellectual Property Laws Rationalization Act 1996 (Act No. 107 of 1996) (1996); (xi) Plant Breeders' Rights Amendment Act 1996 (Act No. 673 of 1996) (1996); (xii) Plant Breeders’ Rights Act 1976 (Act No. 15 of 1976, as last amended by Plant Breeders’ Rights Amendment Act 1996) (1996); (xiii) Trade Marks Act 1993 (Act No. 194 of 1993) (1993); (xiv) 'Vlaglied' Copyright Act 1974 (Act No. 9 of 1974) (1974); (xv) Performers' Protection Act 1967 (Act No. 11 of 1967) (1967); and (xvi) 'Stem Van Suid-Afrika' Copyright Act 1959 (1959).

Furthermore, in Chile the main IP acts are the following: (i) Law No. 20.569 amending Law No. 19.039 on Industrial Property (2012); (ii) Law No. 19.039 on Industrial Property (Consolidated as 2012) (2012); (iii) Law No. 20.435 amending Law No. 17.336 on Intellectual Property (2010); (iv) Law No. 17.336 on Intellectual Property (2010); (v) Law No. 20.254 on the Creation of the National Industrial Property Institute (2008); (vi) Law No. 20.243 establishing Moral and Economic Rights of Performers in their Fixed Performances in Audiovisual Media (2008); (vii) Law No. 20.160 amending Law No. 19.039 on Industrial Property (2007); (viii) Law No. 19.996 revising Law No. 19.039 on Industrial Property (2005); (ix) Law No. 19.342 on Plant Breeders' Rights (1994); and (x) Law No. 19.072 of July 25, 1991 Granting Public Honor to Pablo Neruda and Amending Indicated Legal Texts (1991).

World Intellectual Property Organization. Available at: <http://www.wipo.int/wipolex/en/profile.jsp?code=ZA> (South Africa), and <http://www.wipo.int/wipolex/en/profile.jsp?code=CL> (Chile) [23 January 2015].

⁷⁹ ICC. 2012. Op. cit.

⁸⁰ Vidrascu, 2014. Op. cit.; and

Codigo Civil: Art.582. Chilean Civil Code. Available at: <http://www.leychile.cl/Navegar?idNorma=172986> [24 January 2015].

⁸¹ Vidrascu P A, 2014. Op. cit.

case infringement, breach, robbery or copy ,⁸² offer and import patented goods, or to ‘reproduce, adapt, distribute, perform and publicly display copyrighted work’.⁸³ It further *prevents* others from doing the same without the authorization of the holder company.⁸⁴

For business purposes, these granted statutory rights increase ‘transaction efficiencies and stimulates competition by offering exclusion, transferability, disclosure, certification, standardization, and divisibility’.⁸⁵ Companies will seek to protect their Intellectual Property and exercise their corresponding rights to: (i) properly exercise the legally granted monopoly to benefit economically, to the extent possible; (ii) stop competitors from stealing or having similar or same goods, or claiming their goods are actually similar; (iii) identify their products’ services as well as the innovation added value; (iv) advertise and inform consumers; (v) relate their success to one or more products or to the innovator himself; (vi) avoid duplication of names; (vii) increase consumer demand by prestige and fame as well as quality improvements;⁸⁶ (viii) ‘invoke the power of the state to exercise its rights’;⁸⁷ and (ix) most importantly to secure ownership of their work and created innovation.

2. General Overview. References to Chilean and South African Regulations.

Intellectual Property protection statutory rights usually refer to patents, trademarks, copyright, which will briefly be addressed below, being the most used and commonly known rights to entrepreneurs, but not the core of the initial stage protection suggested for start-ups in this dissertation. However, Intellectual property also includes providing protection to and through, among other things, industrial

⁸² GOV.UK, 2014. Op. cit.

⁸³ Bell A & Gideon P, 2014. "Reinventing Copyright and Patent". Faculty Scholarship. Paper 1017, Available at: http://scholarship.law.upenn.edu/faculty_scholarship/1017 [20 December 2014].

⁸⁴ International Chamber of Commerce, 2012. “Intellectual Property Basics”. Op. cit.

⁸⁵ Spulber D F, 2014. Op. cit.

⁸⁶ Halabi S, 2015: p.395. Reconciling international obligations to protect health and trademarks: A defense of trademarks as property. *International Intellectual Property Law*. Ed. Daniel Gervais. Cheltenham United Kingdom: Edward Elgar, 2015. p.389-406. Available at: http://works.bepress.com/cgi/viewcontent.cgi?article=1036&context=sam_halabi [15 December 2015].

⁸⁷ Id. : p.398-399

designs and integrated circuits, geographical indications and traditional cultural expressions.

a. Patents.

Description. A patent is an intellectual property right exclusively granted by a State through a government agency to protect an invention. It is usually granted after submitting a provisional or complete patent application, which in general is reviewed by the relevant patents office, e.g. Chile, United States, European Union, Australia, India, etc. This review usually extends for more than a year --in Chile this process requires between three and five years-- and includes the invention description publication and a term for third parties opposition. However, in the case of South Africa - despite section 25 of the Patents Act requiring novelty, inventiveness and applicability in trade, industry or agriculture requirements --the country has a non-examining patent office, meaning no substantive assessment is being performed. In other words, as long as all formal requirements are met, patents are usually granted, typically within 3 months.⁸⁸ Once granted, a patent provides a statutory monopoly over the patented invention.

Subject Matter. The TRIPS Agreement requires member countries to make ‘available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application’.⁸⁹

In South Africa, a patent may be granted for any new invention that involves an inventive step and that is capable of being used or applied in a trade, industry or in agriculture. However, it expressly excludes discovery; a scientific theory; a mathematical method; a literary, dramatic, musical or artistic work or any other aesthetic creation; a scheme, rule or method for performing a mental act, playing a

⁸⁸ Visagie P, 2013. “South Africa: Examining Examination”, Mondaq. Available at: <http://www.mondaq.com/x/267672/Patent/Examining+Examination> [23 May 2015]; and

Pienaar D & Blignaut H, 2014. “Business brief 2014: South Africa”, World Intellectual Property Review. Available at: <http://www.worldipreview.com/article/business-brief-2014-south-africa> [23 May 2015].

⁸⁹ WTO Trips:Art.27.1. Op. cit.

game, or doing business; a program for a computer; or the presentation of information, as matters being subject of patent protection.⁹⁰ The World Trade Organization, Agreement on Trade-Related Aspects of Intellectual Property Rights, with 160 contracting countries including South Africa and Chile since 1995,⁹¹ sets three additional limitations (which will apply to the extent TRIPS – including them -- is recognized or incorporated by national law):⁹² (i) inventions contrary to order public or morality; diagnostic, therapeutic and surgical methods for the treatment of humans or animals; and (iii) plants and animals other than micro-organisms and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes (however states must grant a *sui generis* protection).⁹³

Chilean law stipulates that patents protect inventions, which are defined as any solution to a technical problem arising from industrial work. An invention may be a product, a process or be related to them.⁹⁴

Requirements. In both South Africa and Chile, to be granted a patent, the invention must fulfil criteria's of novelty, utility or industrial application and non-obviousness or involve an inventive step.⁹⁵

⁹⁰ Patents Act No. 57 of 1978 (as last amended by Act No.49 of 1996: Ch.V:S25(1&2)). South Africa. Available at: <http://www.wipo.int/edocs/lexdocs/laws/en/za/za026en.pdf> [25 January 2015].

⁹¹ World Intellectual Property Organization, 2014. "Other IP Treaties". Available at: http://www.wipo.int/wipolex/en/other_treaties/parties.jsp?treaty_id=231&group_id=22 [25 January 2015].

⁹² "It has been held, that TRIPS "does not require an actual ban of the commercialization as a condition for exclusions; only the necessity of such a ban is required. In order to justify an exclusion under Article 27 (2) TRIPS, a Member state would therefore have to demonstrate that it is necessary to prevent – by whatever means – the commercial exploitation of the invention. Yet, the Member would not have to prove that under its national laws the commercialization of the invention was or is actually prohibited".

Please refer to Borges Barbosa D & Grau-Kuntz K, 2010. UNCTAD-ICTSD. Resource Book on TRIPS and Development. New York: Cambridge University Press, 2005, p. 377. World Intellectual Property Organization, 3. Exclusions from Patentable Subject Matter and Exceptions and Limitations to the Rights Biotechnology. Available at: http://www.wipo.int/edocs/mdocs/scp/en/scp_15/scp_15_3-annex3.pdf [30 September 2015]

⁹³ World Trade Organization Agreement on Trade-Related Aspects of Intellectual Property Rights: Arts.27.2 & 27.3(a)(b)). Available at: http://www.wto.org/english/tratop_e/trips_e/t_agm3_e.htm#2 [20 January 2015].

Article 27 complete wording is subject to revision.

⁹⁴ [Free Translation] Ley Sobre Propiedad Industrial No. 19.039, as amended 2012:Art.31. Chile. Available at: http://www.inapi.cl/portal/normativa/603/articles-631_recurso_1.pdf [25 January 2015].

⁹⁵ Bell & Gideon, 2014. Op. cit.; and

Novelty: This implies the invention must be new – it must never have been published or publicly used before.⁹⁶ An invention is considered novel when it is different from all previous inventions (prior art) which have been made available to the public (in any country), whether by written publication in tangible form, oral description, sale or marketing by use or in any other way. An invention would not be deemed novel if published or disclosed or publicly used prior to the date of the patent application.⁹⁷ This means that during the process of creating an invention or before obtaining a patent, relevant information should not be disclosed.⁹⁸

Utility or Industrial Application: The invention should be subject to industrial application. This means that it must be possible for the invention to be applied, made or used within any industry.⁹⁹

Non-obviousness: This is a subjective criterion. The invention must not be obvious to a skilled person within the field of its invention, in the sense that such person would consider it as unexpected or surprising in a specific manner.¹⁰⁰

Rights granted. In Chile and South Africa a patent grants exclusive rights for up to 20 years since the patent application filing¹⁰¹ to the titleholder to act as the sole owner and prevent anyone else from infringing its rights within the country the patent has been granted. The owner can also register the same invention in other countries. According to the Paris Convention for the Protection of Industrial Property a legal entity or person filing a patent (including for these purposes a utility

South African Institute of Intellectual Property Law [SAIPL], 2014. “Patents”. Available at: <http://www.saiipl.org.za/introip/71-patents> [25 January 2015].

⁹⁶ International Chamber of Commerce, 2012. Op. cit.

⁹⁷ SAIPL, 2014. Op. cit.;

Nolo.com, 1999. “Qualifying for a Patent”. Available at: <http://www.inc.com/articles/1999/10/14696.html> [15 December 2014]; and

Instituto Nacional de Propiedad Industrial [INAPI] (Chilean Trademark and Patent Office), 2014. “What is a Patent?” Available at: <http://www.inapi.cl/portal/institucional/600/w3-article-1580.html> [10 January 2015]

⁹⁸ Please refer to trade secrets and confidentiality obligations in section IV.2.

⁹⁹ ICC, 2012. Op. cit.; and INAPI, 2014. Op. cit.

¹⁰⁰ INAPI, 2014. Op. cit.

¹⁰¹ Minnaar and Smit 1999. Op. cit.

model, or of an industrial design, or even a trademark) in any *Union member state*, shall have a priority to file such same patent within other *Union member state* for twelve months for patents and utility models, and six months for industrial designs and trademarks. However, the patent being granted in a member state does not ensure it will be granted in another member state.¹⁰²

South Africa and Chile, jointly with 146 other countries, are parties to the Patent Cooperation Treaty (PCT).¹⁰³ This treaty enables legal entities or persons domiciled or with residence in a contracting state to submit an international PCT application at their local Patent Office.¹⁰⁴ If a patent is granted, such application would provide protection from the international PCT application's filing date in all the other PCT contracting states in which the applicant decides to finally pursue protection.

In practice, among other business uses, patented inventions can be sold, licensed, subject to several forms of national and international trade, valued in the financial statements and balance sheets, etc. From a defensive side, patents prevent other persons from using inventions or exercising in any manner rights over them, including making, using, offering for sale, selling, or importing the patented product or process,¹⁰⁵ as applicable, without the patent holder's consent.

¹⁰² Paris Convention for the Protection of Industrial Property of March 20, 1883, as revised at Brussels on December 14, 1900, at Washington on June 2, 1911, at The Hague on November 6, 1925, at London on June 2, 1934, at Lisbon on October 31, 1958, and at Stockholm on July 14, 1967, and as amended on September 28, 1979: Art.4A & C. Art 4bis(1). Available at: http://www.wipo.int/treaties/en/text.jsp?file_id=288514#P83_6610 [23 December 2014].

¹⁰³ World Intellectual Property Organization, 2014. "Administered Treaties". Available at: http://www.wipo.int/treaties/en/ShowResults.jsp?lang=en&treaty_id=6 [25 January 2015].

¹⁰⁴ 'The PCT system is a patent "filing" system, and is not a patent "granting" system. There is no "PCT patent". The PCT system provides for: An international phase comprising: i. Filing of the international application; ii. International search; iii. International publication and; vi. International preliminary examination (optional).

The decision on granting patents is taken exclusively by national or regional offices in the national phase. Only inventions may be protected via the PCT by applying for patents, utility models and similar titles.' Please refer to:

Companies and Intellectual Property Commission, 2015. Available at: <http://www.cipc.co.za/index.php/trade-marks-patents-designs-copyright/patents/> [30 September 2015].

¹⁰⁵ WTO Trips: Art.28.1. Op. cit.

Limitations. The exclusive monopoly awarded by the relevant patent office when granting a patent may not always tend to meet the ultimate goal of the patent system to enhance the public welfare by fostering competition and making technology available to society. Balance between patent holders interests, state, and third parties is often modified and limited by national patent regulations. According to the WIPO provisions aiming to attain such balance through patent legislation vary from one country to another, however WIPO has identified that ‘many countries provide some or all of the following exceptions and limitations to patent rights: (i) private and/or non-commercial use; (ii) experimental use and/or scientific research; (iii) extemporaneous preparation of medicines; (iv) prior use; (v) use of articles on foreign vessels, aircrafts and land vehicles; (vi) acts for obtaining regulatory approval from authorities; (vii) exhaustion of patent rights; (viii) compulsory licensing and/or government use; and (ix) certain use of patented inventions by farmers and breeders’.¹⁰⁶

b. Trademarks (Business and domain names.)

Description. Trademarks are distinctive features – such as words, symbols, smells, sounds, colours, names, phrase, signs and shapes – which allow consumers, business or market participants to identify certain product or services to which they are associated or attached.¹⁰⁷

Subject matter. The South African Trade Marks Act defines trademark as a:

*‘mark used or proposed to be used by a person in relation to goods or services for the purpose of distinguishing the goods or services in relation to which the mark is used or proposed to be used from the same kind of goods or services connected in the course of trade with any other person’.*¹⁰⁸

Chilean law’s definition states that a trademark includes any sign which can be graphically represented and is capable of distinguishing products, services or industrial or commercial establishments in the market. Such signs may consist of

¹⁰⁶ World Intellectual Property Organization, 2015. “Exceptions and Limitations to Patent Rights.” Available at: http://www.wipo.int/patents/en/topics/exceptions_limitations.htm [23 May 2015].

¹⁰⁷ International Chamber of Commerce, 2012. Op. cit.

¹⁰⁸ Trade Marks Act No 194 of 1993: Part.I s2 ss1. South Africa. Available at: <http://www.wipo.int/edocs/lexdocs/laws/en/za/za009en.pdf> [25 January 2015].

words, including personal names, letters, numerals, figurative elements such as images, graphics, symbols, colour combinations, as well as any combination of such signs. Where signs are not inherently distinctive, registration may be granted if they have acquired distinctiveness through its use in the domestic market. Advertising slogans or publicity, to the extent they are attached to the product, service or commercial or industrial establishment trademark in which they will be used can also be registered. The nature of the product or service to which a mark is applied shall in no case be an obstacle to registration of the mark.¹⁰⁹

The TRIPS Agreement provides that any sign, or any combination of signs, capable of distinguishing the goods and services of one undertaking from those of other undertakings, must be eligible for registration as a trademark, provided that it is visually perceptible.¹¹⁰

Marks that other market participants would reasonably need to use in connection with a specific commerce or trade or good or service, are not subject to being registered. Purely descriptive words cannot be registered.¹¹¹

Requirements. In most countries, a trademark has thus to be registered in a national office to be used with a specific good or service. This requires it to undergo a similar process to patents (including publication and opposition terms) and which in Chile takes a period between two to eight months. However, the Paris Convention does not regulate conditions, terms or trademark filing requirements, all of which are determined by each country's domestic law.¹¹² Countries may subject registration of trademarks to use.¹¹³ Although use is not a requirement to file,

¹⁰⁹ [Free Translation] Chile LPInd: Art.19. Op. cit.

¹¹⁰ WTO Trips:Art.15. Op. cit.

¹¹¹ Norton Rose Fulbright, 2014. "*Doing Business in South Africa*". Available at: <http://www.nortonrosefulbright.com/files/za-a-guide-to-doing-business-in-south-africa-pdf-112673.pdf> [20 January 2014].

¹¹² Paris Convention: Art.6. Op. cit.

¹¹³ WTO Trips: Art.15. Op. cit.

maintain or renew a trademark in Chile, there is Bill in Congress in which this is being discussed.¹¹⁴

According to the South African Trademark Act, a trademark will be considered as permitting a distinction of products or services, if it inherently allows distinguishing or allows for distinction by reason of its prior use at the date of application for registration.¹¹⁵

In Chile and South Africa, registration is applied for particular goods or services which fall in one or more particular classes of the International (Nice) Classification of Goods and Services.¹¹⁶ Protection granted to the relevant trademark is determined by the classification in force at registration date. Further, protection will be granted for the specific use corresponding to the classes in which protection was applied for.¹¹⁷ The nature of the goods or services to which a trademark is to be applied shall in no case form an obstacle to registration of the trademark.

Rights granted. As with patents, the owner will have a preference to submit a trademark for registration in other Paris Convention member states, although registration or rejection of a trademark in other member countries will nevertheless be independently evaluated.

Registration grants territorial protection and is limited to the country of registration. Trademark protection lasts for 10 years after registration and can be renewed an indefinite number of times for successive periods of 10 years. In Chile

¹¹⁴ Boletín 8907, 2013. “Sustituye las leyes N° 19.039, sobre propiedad industrial y N° 20.254, que crea el Instituto Nacional de Propiedad Industrial.” Available at: <http://www.senado.cl/appsenado/templates/tramitacion/index.php#> [25 January 2015].

¹¹⁵ Trademark Act: Part III s9 ss1&2. Op. cit.

¹¹⁶ ‘The Nice Classification consists of a list of classes together with explanatory notes and an alphabetical list of goods and services’, [including] 34 classes of goods and 11 classes of services. The class headings describe in very broad terms the nature of the goods or services contained in each class. The explanatory notes of a given class describe in greater detail the types of products or services included in that class. The most detailed level of the Classification is the alphabetical list which contains around 10,000 indications of goods and 1,000 indications of services’. Please refer to: World Intellectual Property Organization, “Frequently Asked Questions: Nice Classification”. Available at: http://www.wipo.int/classifications/nice/en/faq.html#accordion__collapse__05 [23 May 2015]

¹¹⁷ Trademark Act: Part III s11ss1. Op. cit.; and Chile LPInd: Art.23. Op. cit.

it is illegal to use the ® sign without the brand being registered in the Chilean Patent and Trademark Office (INAPI), and is subject to a fine of up to USD 67,000 approximately and USD 137,000 in case of recidivism.¹¹⁸ Likewise, in South Africa, it is an offence under the Trade Marks Act¹¹⁹ to use the ® sign with a mark which is not registered.¹²⁰

The trademark owner has the right to control its use and exercise its rights in the same manner as described for patents: trademarks can be commercialized, licensed, encumbered, and are ‘regularly assigned a monetary value’.¹²¹

The use of a trademark in the course of trade should not be unjustifiably encumbered by any special requirements.¹²² The owner of the trademark cannot forbid third parties from using products rightfully commercialized in any other country with the same trademark (unless it is also the owner of the trademark registry in such other country).¹²³

Trademarks are ‘used more than any other form of intellectual property’.¹²⁴ This protection enables goods or services of the trademark’s owner to be distinguished from competitors, which allows managing a company brand, products and services names, quality, performance guarantee, etc.¹²⁵

Companies and domain names. Trademarks are not directly linked to domain or business names in South Africa or Chile. A company’s corporate and domain names are both valuable asset for any business, which enables its identification and recognition in both the physical and online markets. For this purpose, companies aim to register and use company and domain names identical to

¹¹⁸ Chile LPInd.: Art. 28. Op. cit.

¹¹⁹ Trade Marks Act No 194 of 1993: Part.XIV s62 ss1. Op. cit..

¹²⁰ De Cock Attorneys, 2010. “Advertising your trade mark”. Available at: <http://www.decock.co.za/advertising-trade-mark/> [23 May 2015].

¹²¹ Halabi, 2015. Op. cit.

¹²² WTO Trips: Art.20. Op. cit.

¹²³ Chile LPInd: Art.19bisD. Op. cit.

¹²⁴ International Chamber of Commerce, 2012. Op. cit.

¹²⁵ Khota I A & Stern A, 2005. Op. cit.

or including their trademarks under top level domains relevant to their businesses.¹²⁶ The fact that the processes for registration of a company name and domain name are not linked to trademark registries, and the ICANN first come-first served principle, makes this a difficult objective.

Company names, trademarks and domain names are essential for the identity of a business and company. Steps for their registration should be included in companies' business plan.¹²⁷

Limitations. Despite the trademark being granted by the relevant trademark office of country, the right holder still needs to be aware of certain limitations: (i) protection is limited to the area of specific country, and needs to be registered in all countries wherein the owner would like to seek protection;¹²⁸ (ii) protection is limited to the service or good category in which it was registered. In some countries, like in South Africa, a registration filing per class of service or good is required, making registration more expensive; and (iii) Parallel imports, which is usually solved through exhaustion or first sale doctrines being recognized by their national regulations, which provide that if a trademarked product legally entered the market somewhere, reselling the product anywhere in the world is not infringement. Under this type of regulations, grey markets and parallel imports are entirely legal.¹²⁹

c Copyright.

Description. Copyright protects original creations in the fields of literature, arts, paintings, music, films and records as well as software.¹³⁰ It encourages these types

¹²⁶ E.g. [trademark].co.za in South Africa and [trademark].cl in Chile.

¹²⁷ World Intellectual Property Organization, 2014. "Practical IP Issues in Developing a Business Plan". Available at: http://www.wipo.int/sme/en/ip_business/managing_ip/business_planning.htm [14 December 2014].

¹²⁸ RocketLawyer, 2015. "What Are the Limitations of Trademark Law?". Available at: <https://www.rocketlawyer.com/article/limitations-of-trademark-law-ps.rl> [23 May 2015].

¹²⁹ Ius Mentis, 2015. "Crash course on trademarks: Limitations on trademark rights". Law and Technology Explained. Available at: <http://www.iusmentis.com/trademarks/crashcourse/limitations/> [23 May 2015].

¹³⁰ International Chamber of Commerce, 2012. Op. cit.

of creations, rewarding ‘artistic expression by allowing the creator to benefit commercially from his work’ while fostering society’s access to such works.¹³¹

Subject matter. Copyright law protects expressions and productions in the literary, scientific and artistic fields. South Africa and Chile are signatories to the Berne Convention for the Protection of Literary and Artistic Works of 1886. This convention, together with several other international instruments such as the TRIPS Agreement, sets minimum standards, in which its signatory states, through their own legislation shall provide copyright protection to works originating in the member countries:

*‘literary and artistic works’ shall include every production in the literary, scientific and artistic domain, whatever may be the mode or form of its expression, such as books, pamphlets and other writings; lectures, addresses, sermons and other works of the same nature; dramatic or dramatico-musical works; choreographic works and entertainments in dumb show; musical compositions with or without words; cinematographic works to which are assimilated works expressed by a process analogous to cinematography; works of drawing, painting, architecture, sculpture, engraving and lithography; photographic works to which are assimilated works expressed by a process analogous to photography; works of applied art; illustrations, maps, plans, sketches and three-dimensional works relative to geography, topography, architecture or science’.*¹³²

Requirements. Copyright law requires work to be original and to be expressed in a fixed form.¹³³ It protects expressions, but not ideas, procedures, or mathematical or operating methods¹³⁴ and does not need to be registered. Notwithstanding, a few countries have optional registration systems which provide additional benefits, which mainly refer to the person registered being deemed as its author and the work being at least created by the registration date.¹³⁵ All of which is useful as evidence against third parties in case of a dispute arising in respect of creation date and authorship.

Rights granted. Copyright protection is granted at the time of the work’s creation. As previously stated, in countries where the option of registration is available it is useful as evidence against third parties. The Berne Convention

¹³¹ Slater D, 2004, updated 2012. Op. cit.

¹³² Berne Convention for the Protection of Literary and Artistic Works of 1886 [Berne Convention]: Art.2 s1ss1). Available at: http://www.wipo.int/treaties/en/text.jsp?file_id=283698#P85_10661 [25 January 2015].

¹³³ Bell & Gideon, 2014. Op. cit.; and Slater D, 2004, updated 2012. Op. cit.

¹³⁴ WIPO Trips: Art. 9.2. Op. cit.

¹³⁵ Slater D, 2004, updated 2012. Op. cit.

provides minimum standards of protection for literary and artistic works. Subject to certain exceptions and limitations, the following are recognized as exclusive rights of authorization vested on the owner: the right to

*‘(i) translate; (ii) make adaptations and arrangements of the work; (iii) perform in public dramatic, dramatico-musical and musical works; (iv) the right to recite literary works in public; (v) communicate to the public the performance of such works; (vi) broadcast; (vii) make reproductions in any manner; (viii) use the work as a basis for an audiovisual work; and (ix) reproduce, distribute, perform in public or communicate to the public that audiovisual work. It also provides moral rights, that is, the right to claim authorship of the work and the right to object to any mutilation, deformation or other modification of, or other derogatory action in relation to, the work that would be prejudicial to the author's honor or reputation.’*¹³⁶

In South Africa and Chile, as a general rule, the author of a work is deemed to be the person who appears as such at the time of the work's disclosure, and consequently the (first) owner. In Chile, this creator also appears as such in the Registry of Intellectual Property.¹³⁷ However, in the case of computer programs, Chilean law presumes the existence of “work for hire”, which means that intellectual property rights are vested on the natural person or the legal entity whose employees or contractors have developed the software for the first party, unless otherwise provided by written agreement.¹³⁸ In South Africa, in circumstances where a work is created in the course and scope of the author's employment, the owner of the copyright is the employer or a person who commissions the work.

Copyright protection enables the owner *inter alia* to enjoy and enforce its exclusive right in the same manner as in the case of patents and trademarks. It grants these rights for the lifetime of the author and additional 50 years which have

¹³⁶ World Intellectual Property Organization, 2104. “Summary of the Berne Convention for the Protection of Literary and Artistic Works (1886)”. Available at: http://www.wipo.int/treaties/en/ip/berne/summary_berne.html [10 January 2015].

¹³⁷ Ley N° 17.336 sobre Propiedad Intelectual. Chile [Chile LPI]: Art.8,. Available at: <http://www.leychile.cl/Navegar?idNorma=28933> [10 January 2015]; and

The Copyright Act 98 of 1978 as amended by the Amendment Act 56 of 1980, Copyright Amendment Act 66 of 1983, Copyright Amendment Act 52 of 1984, Copyright Amendment Act 39 of 1986, Copyright Amendment Act 13 of 1988, Copyright Amendment Act 61 of 1989, Copyright Amendment Act 125 of 1992, Intellectual Property Laws Amendment Act 38 of 1997 and Copyright Amendment Act 9 of 2002, [Copyright Act]: Ch.1 s21.

¹³⁸ Chile LPI:Art.8. Op. cit.

different starting points depending on the type of protected work, in the case of South Africa¹³⁹ and 70 years after the author's death in the case of Chile.¹⁴⁰

Limitations. Not all works are subject to copyright protection, i.e., acts, facts, ideas, systems, or methods of operation, although it may protect the way these things are expressed, but not the underlying idea.

As in the case of patents, aiming for balance between the interests of right holders and users of protected works, copyright laws allow certain limitations on economic rights, which also vary per country. ‘International treaties acknowledge this diversity by providing general conditions for the application of exceptions and limitations and leaving to national legislators to decide if a particular exception or limitation is to be applied and, if it is the case, to determine its exact scope’.¹⁴¹ Amongst the most relevant exceptions and limitations included in South African and Chilean Law in respect of literary and musical works, allow their use for purposes of research or private study, of reporting current events, of judicial proceedings, etc.¹⁴²

3. The One Size Fits All Problem.

The optimal patent and protection scheme is not the same in every industry, market or company type. It will vary depending on the types of innovations involved. For example, the short term demand periods that exist in the electronics industry cause

¹³⁹ Khota & Stern, 2005. Op. cit.; and

Copyright Act:Ch.1s3ss2. Op. cit. Each term of protection will be counted as follows, dependin on the type of protected work: (a) literary or musical works or artistic works, other than photographs, the life of the author and fifty years from the end of the year in which the author died; (b) cinematograph films, photographs and computer programs, fifty years from the end of the year in which the work is made available to the public with the consent of the owner of the copyright, or is first published, whichever term is the longer, or failing such an event, fifty years from the end of the year in which the work is made; (c) sound recordings, fifty years from the end of the year in which the recording is first published; (d) broadcasts, fifty years from the end of the year in which the broadcast first takes place; (e) programme -carrying signals, fifty years from the end of the year in which the signals are emitted to a satellite; (f) published editions, fifty years from the end of the year in which the edition is first published. In the case of a work of joint authorship the preceding references to the death of the author shall be taken to refer to the author who dies last.

¹⁴⁰ Chile LPI: Art.10. Op. cit.

¹⁴¹ World Intellectual Property Organization, 2015, Exceptions. Op. cit.

¹⁴² Ley Sobre Propiedad Industrial No. 19.039, as amended 2012 [Chile LPInd.]: Arts 71A to 71S. Op. cit.; and the Copyright Act 98 of 1978 [Copyright Act]: Ch.1 s12. The Copyright Act 98 of 1978, as amended. Op. cit.

owners not to be worried about the long term protection of their innovations, but rather require a rapid access to the market to collect their earnings. On the other hand, a pharmaceutical product, which must undergo several trials, clinic tests, and long research, needs and requires a much longer protection to justify and allow the creator to recuperate its investment.

The previously described statutory rights provisions, considered on their own, were ‘designed more than 100 years ago to meet the simple needs of an industrial era, it is an undifferentiated, one size fits all system.’¹⁴³

The first approach of most entrepreneurs and/or inventors in Chile towards Intellectual Property is that everything is based on a patent. However, patents are only one of the legal tools available for intellectual property protection.¹⁴⁴ Intellectual Property rights are different and each category serves a different purpose. Products may simultaneously be subject to protection by more than one type of statutory intellectual property rights.¹⁴⁵ E.g., a company name or logo may be registered as a trademark, the product shape may be protected by a design patent, and drawings and plans subject to copyright.¹⁴⁶ This is the case of Coca-Cola. The bottle shape, which is protected by design patents, was registered as a federal trademark in 1960, while the names “Coca-Cola” and “Coke” are also registered trademarks. Its publicity and advertising are protected by copyright and its secret formula by trade secrets.¹⁴⁷

The intellectual property system must enable companies to protect their intellectual capital. Intellectual Property protection is not an end in itself; instead, Intellectual Property protection serves the underlying business needs, success and standing. Statutory rights, other than copyright, need to be registered and granted by

¹⁴³ Thurow L C, 1997. Op. cit.

¹⁴⁴ Cabanellas, G., 2004. *Derechos de las Patentes de Invención*. 2nd edition Buenos Aires (Argentina): Heliasta, 2004. V1, p864 (derecho Económico Empresarial). ISBN 950-885-053-1.

¹⁴⁵ International Chamber of Commerce, 2012. Op. cit.

¹⁴⁶ GOV.UK, 2012. Op. cit.

¹⁴⁷ Purvis S A, 2013. *“What Every Small and Medium Sized Business Should Know About Intellectual Property. Myths, Mysteries, Mistakes – Debunked, Unveiled, Corrected”*. U.S. Patent and Trademark Office, Department of Commerce. Available at: <http://www.uspto.gov/about/offices/ous/121110.pdf> [3 December 2014].

an official government agency and are enforced through courts. Those processes consume time and funds. Further, less than two percent of patent holders get involved in litigation in case of infringement.¹⁴⁸ If analysed, these rights' main objective is to regulate how the owner of an invention or creation relates with society as a unit, without addressing its relation to specific entities or individuals. While statutory rights have proven their worth and utility in this regard, the questions that arise from a business perspective are: Will the company continue to exist when these rights are granted (i.e., will it survive the *Death Valley*)? Will it be able to afford them? What must be done before being granted statutory rights? What happens with the intellectual capital during the survival stage? Are these the only and most effective tools to protect, foster and secure a company's intellectual capital during the survival stage? Is society the only and primary contact of an entrepreneur business during the survival stage? Are these the only tools? The following chapter will address some of these questions.

¹⁴⁸ Weatherall, K & Webster E, 2014. Patent Enforcement: A Review of the Literature [Abstract]. *Journal of Economic Surveys*. Vol. 28 Iss.2, p.312 to 343. Available at: <http://onlinelibrary.wiley.com/doi/10.1111/joes.12009/abstract;jsessionid=B4E903511E30A10A0A483DD566742627.f02t02?deniedAccessCustomisedMessage=&userIsAuthenticated=false> [30 January 2015].

III. Business Intellectual Property Concerns and Management.

1. Concerns at the Survival Stage. Intellectual Property Protection for the business.

A start up going through preparation for and the survival stage itself is usually focused on its business plan, product and/or service, to acquire customers and funding. Little time and attention is allocated to properly analyse intellectual property, especially if it is understood as being comprised just by statutory rights. As a specialist attorney on crowd funding states, ‘early stage companies often focus on operations and sales, items that are a necessity in the short term’. However, long term investors ‘are looking for security in the future and without IP protection the investment can become questionable and riskier’.¹⁴⁹ Further, ‘many entrepreneurs delay even thinking about I[ntellectual] P[roperty] until it’s too late, because they do not believe they have anything worth protecting. But this is a mistake.’¹⁵⁰ Any idea, concept, work or process, or even management strategy, which is created or applied in an original or specific manner provides a market or commercial advantage to a company business, should be considered intellectual capital and property subject of being protected through legal means. Even without referring to it as intellectual property, companies want to own or at least control the *information* which allows them to succeed or get the market’s attention: *market relevant information*. It is in the best interest of any entrepreneur to properly identify any intellectual creation which adds value to its current, envisaged or resulting business venture. Once a company acknowledges the relevance of appropriately managing such *market relevant information*, which intrinsically constitutes an intellectual asset and capital, their main concerns refer to:

¹⁴⁹ Juetten, M, 2014. “Crowdfunding And Intellectual Property: Tips From An Entrepreneurial Attorney”, Forbes, Entrepreneurs. Available at: <http://www.forbes.com/sites/maryjuetten/2014/07/10/crowdfunding-and-intellectual-property-tips-from-an-entrepreneurial-attorney/> [23 May 2015].

¹⁵⁰ Juetten, M, 2014. “Keeping Your Intellectual Property Safe and Sound”, Entrepreneur, Technology. Available at: <http://www.entrepreneur.com/article/231309> [23 May 2015].

Identification of the information. Start-ups are aware that business evolves and that information is important. However, it is common that during their initial stages they have not properly focused on and analysed which of its information provides them with market advantage or leverage, and to what extent. It is of the utmost importance to identify any new internal ideas/information during the early stages.¹⁵¹ This includes the task of reviewing how information is currently used, future applications or if it does not provide any material difference.¹⁵²

Information that grants a competitive edge, business leverage or encumbers the entry of competitors should be considered information worth protecting. A thorough analysis should be performed to identify the specific element(s) or configuration of them, which provide such an advantage. Protection should be centred in this specific information and or configuration, and not all related information or complete processes.

Information identified as a determinant factor for a company's success should be protected.

Eligibility for protection and awareness. Not allocating resources to identify intellectual property market relevant information is due to entrepreneurs and start-ups not being properly informed and the lack of legal and business teamwork during the company early stages. Which information should and can be legally protected? The first and main part of the answer to this question should be a commercial one and addressed by the start-up, which knows its market and company strengths over competitors. The second one, referring to the possibility and available protection, should arise from legal and business teamwork. Thus, providing the attorney a better understanding of commercial (as opposed to legal) concerns and needs, and the start-up a better understanding of the legal framework and how can aspects which are not commercially relevant, end up being the base of statutory right

¹⁵¹ Struß J M, Mandl T, Schwantner M & Womser-Hacker C, 2014. Understanding Trends in the Patent Domain. User Perceptions on Trends and Trend Related Concepts. Published at Ceur-ws.org, Proceedings of the First International Workshop on Patent Mining and Its Applications (IPAMIN). Hildesheim. Oct. 7th. 2014. At KONVENS'14, October 8–10, 2014, Hildesheim, Germany. Available at: http://ceur-ws.org/Vol-1292/ipamin2014_paper9.pdf [10 December 2014].

¹⁵² WIPO Practical, 2014. Op. cit.

protection. This combination should enable the creation of an overall protection strategy, including statutory rights and tailor-made contractual protection, but being business oriented and budgeted.

Market relevant commercial information should and can be protected. As stated, the first analysis shall come from the company. If it identifies its market as being *patents* oriented (e.g. pharmaceutical and technological), a patent attorney must be included in the project as soon as possible.

The relevance of understanding legal requirements to successfully trade in a market wherein competition is mainly based on patented products will be difficult without a legal advisor (patent attorney), who can provide a different perspective. E.g., a start-up designed a wooden cutlery service (fork, knife and spoon) which were embodied in a single resistant rectangular-shaped piece of wood. Commercially, its biggest advantage resulted from its design (making the cutlery perform better and more appealing), and its materials (biodegradable), all which provided market advantage. Analysed, by the patent attorney, the design and materials were considered not sufficient to submit a patent application. However, the fact that the cutlery was embodied in a single piece which needs to be divided to be used for their purpose provided sufficient grounds to claim the invention was a hygienic solution. If this inventors' fork, knife and spoon were presented separately, it meant that they had been used or handled before.¹⁵³ Becoming aware of this legal issue enabled the company to pursue another market.

Nonetheless, many different creations are not subject to statutory rights protection, including business ideas, scientific theories, formulas, etc. It must be emphasized, that they can nevertheless be legally protected. Once a company has

¹⁵³ Patent application No. US8 938 833 B2 was accepted and published by the United States Patent and Trademark Office on 27 January 2015. Compact Cutlery Kit which manifests its previous use through release of its parts.



identified the commercial relevant information it wants to protect, it will allow proper analyses of contractual forms of protection.

With the relevant information identified, companies can address ownership matters focusing on: (i) who is creating or has created it?; (ii) what was actually created?; (iii) where was it created?; (iv) if and how is it internally registered or recorded?; and (v) how is it or will it be implemented?

Ownership of information. Once the protectable information has been identified, a main concern is to secure ownership of the information, as intellectual capital and assets that are being generated in the course of business, or as a result of it. Key questions include:

Who owns the: (i) marketing strategy if the company outsourced its creation?; (ii) innovations developed with funds acquired in public or private tenders; (iii) processes created by employees?; (iv) *improvements or* new application to a device a company obtained from a supplier or created in a meeting with clients?

In this context, it is not unusual for service contracts, tender rules, supplier agreements, and permits to enter into manufacturing plants, laboratories, offices or universities, to include assignments of rights in respect of intellectual property.

It is suggested here that ownership of information is the most important matter a company entering into business should be aware of, especially in the field of innovation. From a business standpoint, companies should spend their resources and funds for their own benefit or at least according to their own business purpose. Companies should secure rights over results from their business activity, whether created by employees, suppliers' and/or financiers interaction, etc.

The effectively control information, access and disclosure of information, outsourcing, and clients relations, all parties involved should be informed about policies and strategies which aim to secure ownership and confidentiality of relevant information, as applicable.

Liability. During the survival stage, start-ups are usually not financially strong. Developing and commercializing innovations imply a greater risk than traditional industrial transactions. As previously explained, considering the novelty requirement of patents and the amount of time they take to be granted, they can, and are usually applied for before all concepts or results embodied in their application have been tested. In such cases, companies' liability risks stemming from commercializing untested products is bigger. For instance, software that introduces a virus, a device that explodes, a machine that does not perform, etc., may cause irreparable damages to consumers, for which the company could be held liable.

Oftentimes, start-ups use third party intellectual property. The start-up should thus secure rights to legally use such third party intellectual property to avoid jeopardizing the company's prestige and funds resulting from being subjected to third party legal actions due to unauthorized use of intellectual property.

A company's business concern lies in properly balancing the speed in which its business is developed and the liability it is subject to. 'Accurately identifying related risks and liabilities' will provide grounds to 'obtain a competitive advantage in the marketplace'.¹⁵⁴

Protection of Intellectual Property in commerce. A company commercializing Intellectual Property rights should also take measures to secure rights over possible new inventions arising from their Intellectual Property, including improvements and/or modifications, as well as restricting and minimizing possible reverse engineering or modifications. Third parties should be forbidden of taking advantage of the service or product the company developed, which should be used (exclusively) for the purpose it was created for.

Companies' business models as well as agreements including covenants, representations and warranties can help to regulate these matters. Likewise, security

¹⁵⁴ Noto A, 2011. Mergers & Acquisitions. The IP Factor. ACG. Themiddlemarket.com. Available at: http://www.acg.org/UserFiles/file/global/MAJ/MAJ_Nov2011.pdf [10 January 2015].

handbooks and physical guides, protocols and policies regarding products/information access, duplication, reproduction, are also helpful tools.

Monitoring, enforcement and cost effectiveness. Even if statutory rights are granted, it is the owners' duty to control and monitor their use,¹⁵⁵ and it is usually the company who must prosecute and enforce its rights in court if its rights are infringed.

As a consequence of international trade and the globalization of markets, countries and international agencies have made efforts to harmonize intellectual property regulations. However, despite existing international treaties signed by a large number of members or signatory states and comparable domestic regimes between them, 'Intellectual Property is poorly protected in many countries'.¹⁵⁶ Even among states party to the same international Intellectual Property instruments, outcomes, costs and local enforcement results can vary substantially.¹⁵⁷

Pursuing statutory protection during a company survival stage or allocating funds for it is a difficult task. The initial stage of a company varies depending on each company and its relevant market. However, the business decision and concern relies on cost effectiveness of statutory protection in this stage and business predictions. It may be even possible that a patent application is filed, and the company might not exist long enough to pursue it. There are other and more accurate forms of protecting intellectual property and business concerns which arise during the survival stage, which can protect the company in the short term and initial legal relations. These other forms of protection include trade secrets, contractual agreements, de facto measures etc. Choosing the appropriate mode of protection will depend on the specifics of the traded good, product or technology.¹⁵⁸

¹⁵⁵ Weltman B, 2008. Safeguarding Intellectual Property. Available at: http://www.inc.com/law-and-taxation/2008/01/safeguarding_intellectual_prop.html [10 December 2014].

¹⁵⁶ Jandhyala S, 2010. De Facto Protection for Intellectual Property: Evidence from Software Piracy. International Business Department. George Washington University. 18 January 2010. Preliminary draft. Available at: https://www.gwu.edu/~igis/assets/docs/Jandhyala_Paper.pdf [20 December 2014].

¹⁵⁷ Id.

¹⁵⁸ ICC, 2012, Op. cit.; and

Generating Value from and Managing Intellectual Property. Even at the beginning of the survival stage, the question of success or value of an idea, work, technology or innovation is always present. Will it actually add value? Will that value transform into a business and profit? Is the timing right? The following facts have been identified as relevant to determine the *value* and/or importance of an intangible asset for a company business purpose:¹⁵⁹ (i) management abilities and capacity of the owner or licensor to design and implement a company policy to increase the intangible asset value; (ii) market saturation; and (iii) *copies* regulation.¹⁶⁰ The management factor is the only one the company can control. Intellectual Property must be optimally managed at every level of business.¹⁶¹

2. Intellectual Property Management.

Intellectual Property management can create intangible value for a company.¹⁶² It involves more than just applying for and registering statutory rights. It is not unusual for companies of different sizes not to realize that the information on which they base their business and management, is one of their most valuable intellectual assets. Intellectual capital, either in the form of granted statutory rights or relevant market, production or servicing information needs to be identified, protected (according to applicable requirements), properly exploited and valued (internally) to

Fisher III W W & Oberholzer-Gee F, 2013. Strategic Management of Intellectual Property – an Integrated Approach. *California Management Review – Special Issue on Intellectual Property Management: In Search of New Practices, Strategies and Business Models*. February 17, 2013. Available at: <http://www.law.harvard.edu/faculty/faculty-workshops/fisher.faculty.workshop.summer-2013.pdf> [7 December 2014].

¹⁵⁹ While not aiming to value of how information is managed internally and its value within the company, it must be noted that, according to Chaplinsky, the companies/patents valuation methods commonly used include the: (i) Income Approach; (ii) Discounted Cash Flow Method, (iii) Venture Capital Method; (iv) Relief from Royalty Method; (v) Real Options Method; (vi) Market Comparable; (vii) Historic Costs; (ix) Replacement Costs; and (x) Replications Costs (Chaplinsky, 2002). Please refer to:

Chaplinsky S, 2002. “Methods of Intellectual Property Valuation”, Darden University of Virginia. Available at:

http://faculty.darden.virginia.edu/chaplinskys/PEPortal/Documents/IP%20Valuation%20F-1401%20_watermark_.pdf [23 May 2015].

¹⁶⁰ Moreno J A, 2010. Los activos intangibles protegibles en la empresa: la propiedad intelectual e industrial. Jornada Formativa sobre Innovación y Propiedad Industrial e Intelectual Cámaras de Comercio – año 2010. Available at: <http://www.innocamaras.org/metaspaces/file/46854.pdf> [10 December 2014].

¹⁶¹ Noto, 2011. Op. cit.

¹⁶² Vidrascu P A, 2014. Op. cit.

be considered an asset. Alternative methods will need to be used to protect information not subject to statutory right protection. Intellectual Property management should not be considered an isolated topic, but should be integrated into a company's general 'business plan and marketing strategies'¹⁶³ to maximize commercial benefit.¹⁶⁴ Start-ups must be able to convey to investors and suppliers, the existence of their Intellectual Property, its ownership, and the value it adds to the start-ups' business.

Companies engaged in managing intellectual property assets can improve their market position. This may be reflected in several ways, including increasing the company value, solid entry into other markets (national or international), hampering copying and creating work-arounds by competitors, being able to create a record of the company's Intellectual Property and relying on it for future developments, achieving market recognition for the company, a product or technology, using Intellectual Property to improve its access to venture capital, etc.¹⁶⁵

Legally, Intellectual Property relates to: (i) Commercial Law, especially in contractual matters (licensing franchise, brokerage, partnerships, joint ventures, etc.); (ii) Corporate Law at the time of the incorporation of a company (it is not unusual that patents, know-how, clients, and intangible assets are injected or contributed as capital or in exchange of interest in companies or corporations); (iii) Labour Law, to regulate the ownership of inventions developed by employees, and their possible use of protected information; (iv) Civil Law regarding the authorities and representatives' capacity to execute agreements; it is also relevant because Intellectual Property forms part of the total net worth of a company for liability (security) purposes; (v) Tax Law in respect of certain benefits and special rates governments have implemented aiming to foment innovations, deductions as necessary expenses, amortization, etc.¹⁶⁶ Furthermore, Intellectual Property

¹⁶³ World Intellectual Property Organization, 2014. "Managing the Intellectual Property Assets of Your SME". Available at: http://www.wipo.int/sme/en/ip_business/managing_ip/managing_ip.htm [14 January 2015].

¹⁶⁴ Khota I A & Stern A, 2005. Op. cit.

¹⁶⁵ Oficina Española de Patentes y Marcas (Spanish Patent Office), 2013. Op. cit.

¹⁶⁶ Cabanellas, 2004. Op. cit.

management is intertwined with many other areas of traditional management: human resources (employment matters), legal, research and development, ethics, etc.¹⁶⁷

Consequently, in already established companies, a multi-disciplinary team including lawyers, engineers, accountants, sales, IT and marketing persons is usually in charge of Intellectual Property management. All of them should understand the commercial relevance of intangible assets and information, their uses within and for the company's benefit, as well the legal implications and strategies to be implemented.¹⁶⁸ Intellectual Property management is no longer exclusively just a lawyers' matter (which it probably should not have been at any stage.) The different backgrounds and competences of persons involved in this task are useful to illustrate that Intellectual Property is cross-cutting and present at every level of a company. Its protection should also be recognised at all those levels, even during a company's survival stage. Controlling Intellectual Property will enable a company to put it to work to its benefit.¹⁶⁹

Polczynski (2004)¹⁷⁰ suggests that three external and one internal environment should be addressed to analyse and plan an Intellectual Property management strategy. These are: (i) the legal environment; (ii) the cultural environment; (iii) the business environment; and as a different matter, which should be included as the fourth environment the internal technical environment. Interaction between these four environments should be considered as the 'initial decision space for Intellectual Property protection decision makers'.

The Legal Environment (external) refers to the legal standing of Intellectual Property protection in a specific country. It addresses whether any mechanisms of Intellectual Property protection exist, and whether or not they can or are being

¹⁶⁷ Yoko I., 2014. Op. cit.

¹⁶⁸ Khota & Stern, 2005. Op. cit.; and

Polczynski M H, 2004. Protecting Intellectual Property in a Global Environment. *Intellectual Property Journal*. Vol. 18, No. 1, p.83-95. Available at: <http://www.technologyforge.net/MHPCV/GlobalPatentIPJ.pdf> [19 January 2015].

¹⁶⁹ Blum J, 2011. "How to Protect Your Intellectual Property Rights", *Entrepreneur.com*. Available at: <http://www.entrepreneur.com/article/220039> [14 December 2014].

¹⁷⁰ Polczynski, 2004. Op. cit.

actually enforced? This environment implies more than just patent regulations. It also considers a country or region's political, legal and economic stability, government and business ethics, as well as working conditions. In short, it refers to the complete legal framework in which the company and the product/service elaboration, manufacture, preparation and/or commercialization and intended use will take place.

The Cultural Environment (external) addresses a specific social perception of Intellectual Property. As previously explained, despite international agreements and similar commitments adopted by nations, there are still several countries, most of them parties to those conventions, in which society's respect for Intellectual Property is in practice very poor. According to Lampel, Bhalla and Jha (2007):

*'The list of the 'top five countries with the most favourable intellectual property environments (i.e. the set of legislative, enforcement, and public awareness dimensions that together make up the intellectual property system of a particular country), survey respondents ranked the U[nited] S[tates of] A[merica] highest (followed by the U[nited] K[ingdom], Germany, France and Japan)'. A good I[n]tellectual P[roperty] environment rankings are primarily based on two elements: firstly, an effective role of the media in raising public awareness of the importance of combating piracy and counterfeiting, and, secondly, strong public cooperation with enforcement agencies in combating piracy and counterfeiting. The list of the top five countries with the least favourable environments was headed by China (followed by Russia, India, Brazil and Indonesia). The main factors contributing to an unfavourable environment rating were: firstly, the country's unwillingness to fulfil its international I[n]tellectual P[roperty] obligations; secondly, local media disregard for the importance of combating piracy and counterfeiting, and, thirdly, lack of cooperation of the public with I[n]tellectual P[roperty] enforcement agencies.'*¹⁷¹

People's conduct does not immediately change to reflect the enactment of a law or signature of a treaty. The social understating of the purpose of any such regulations must be shared by a substantive part of society members. The sooner such regulations and their corresponding purposes are understood, and hopefully shared, the faster conduct may change. This has an impact on different markets e.g. music, books, movies and/or other and content illegally downloaded from the internet, all of which are conducts that still frequently occur in many countries. The

¹⁷¹ Lampel J & Bhalla A & Jha P, 2007. Global Survey on Counterfeiting and Piracy. International Chamber of Commerce Business Action to Stop Counterfeiting and Piracy (BASCAP). WIPO, IP Use and Awareness, Main Findings. Available at: <http://www.wipo.int/ip-outreach/en/tools/research/details.jsp?id=156> [24 May 2015].

business development in any of those areas should consider this type of conducts which can affect its targeted market.

The Business Environment (external) puts emphasis on the level of development and size of the Intellectual Property market in a determined country, society or niche, as well as entrepreneurs' levels of innovation and support network. Polczynski¹⁷² further suggests that 'certain innovative and entrepreneurial business environments where it is difficult to protect Intellectual Property are more likely to be rich in new talent, companies and customers seeking for it'.

Finally, *the Technical Environment* (internal) is the only environment that looks inwards. As suggested previously in this dissertation, it requires the company to identify its core technologies and intellectual or intangible assets (technology, product, process, information, layout, etc.) and select those which are relevant for its business success. Maintaining long term ownership of those assets should be a core orientation of the Intellectual Property management.

Following a different approach, Goldrian (2013)¹⁷³ focuses on the type of technology a company operates and the approximate number of inventions it produces during a year. Goldrian divides companies into the following categories:

- (i) companies which work with state of the art technology and produce less than 5 inventions per year approximately;
- (ii) companies which are oriented to product development and that would probably produce less than 15 inventions per year approximately; and
- (iii) companies which perform research and development, as well as products and can probably produce more than 15 inventions per year.

¹⁷² Polczynski, 2004. Op. cit.

¹⁷³ Goldrian H, 1993. "WIPO Academy English, Session. Geneva, October 4 to 15, 1993. The Management and exploitation of intellectual property rights by small and medium-sized industries". Lecture WIPO/ACAD/E/93/12. Available at: http://www.wipo.int/export/sites/www/sme/en/activities/meetings/pdf/acad_93_12.pdf [3 December 2014].

Goldrian suggests that participation of an attorney is required from a lesser to a major degree, based on the number of inventions which are produced on a yearly basis. The role of legal advisors may start with explaining to management how the Intellectual Property legal framework works. However, this role depends on each type of company. For example there are certain companies in which their in-house counsels work with Intellectual Property external experts, as there are other companies in which their in-house counsel manages the company Research and Development or Intellectual Property department.

Khota and Stern (2005)¹⁷⁴ reference a ‘two-tier strategy’ contained in the WIPO ‘LIPP Project 2003’ which varies depending on the position of the company in the supply chain of a product. If the company manufactures its own end product, it should seek protection immediately. However, if it acts as another company supplier (intermediary) it should first test the product with its buyer, to be certain of its (market) conformity, and then seek protection. The latter implies a bigger exposure, because during testing the innovation would not be protected by a patent filing or statutory Intellectual Property rights.

Seidel et al. (2015)¹⁷⁵ suggest that for focusing on Intellectual Property awareness, management should understand that ‘value creating processes comprises both well-structured transactional parts and often highly creative parts.’ Creativity ending up in an idea or result which adds value can arise from company implemented processes or during an informal meeting, discussion, business lunch, etc. The important issue and emphasis is placed on the company being aware that these ideas and results exist. Additionally, according to Tseng et. al. (2015)¹⁷⁶ ‘value creation is influenced by both intellectual capital and financial capital’, which jointly with the

¹⁷⁴ Khota and Stern, 2005. Op. cit.

¹⁷⁵ Seidel S & Shortland K & Court D & Elzinga D, 2015. Creativity-Aware Business Process Management: What We Can Learn from Film and Visual Effects Production [Abstract]. Handbook on Business Process Management 2. International Handbooks on Information Systems. 2015, p.715-739. Available at: http://link.springer.com/chapter/10.1007/978-3-642-45103-4_30 [27 January 2015].

¹⁷⁶ Tseng K A & Lin C I & Yen S W, 2015. Contingencies of intellectual capitals and financial capital on value creation: Moderation of business cycles [Abstract]. *Journal of Intellectual Capital*. Vol.16 No. 1 p.156- 73. Available at: <http://www.emeraldinsight.com/doi/abs/10.1108/JIC-04-2014-0042> [27 January 2015].

macroeconomic context ‘should be considered in strategic management and value creation management.’

From a company standpoint, it is the market (not governments or regulations) that will allow them to survive and succeed in their line of business. Consequently, the analysis of intangible resources plays a major role in strategic and organizational management, all which can impact a company’s effectiveness.¹⁷⁷ In the United Kingdom, already in 1992 according to Hall (1992),¹⁷⁸ ‘employee know-how and reputation were perceived as the resources which made the most important contribution to business success.’

Regardless of the approach, a company’s management of Intellectual Property will need to at least address the previously outlined concerns of identification of information, eligibility for protection and awareness, ownership of the information, company intellectual property liability, protection of information in commerce, monitoring, enforcement and cost effectiveness, as well as generating value from Intellectual Property.

During the survival stage, business plans are dynamic. A company regularly finds itself in a position to know where, how and when its business will start, while being uncertain as to where, if, and how it will finish. Going back to the definition of a start-up as an innovation in search of a business model, understanding current trends in business models will help to determine how to address Intellectual Property and the different roles it plays in any particular transaction or operation. Business models are a commercial manner through which Intellectual Property can be protected. The form in which any legal monopoly --granted by the state in case of statutory rights, or obtained in practice through use of secret market or contractual tools -- or competitive relevant information is exploited will produce a reaction in

¹⁷⁷ Horvat J & Bobek S, 2014. Mutual Impacts of Human Resources Management and Knowledge Management: Issues of Functions and Effective Factors [Abstract]. *Managing in Recovering Markets*. Springer Proceedings in Business and Economics 2015, p.395-402. Available at: http://link.springer.com/chapter/10.1007%2F978-81-322-1979-8_31 [20 January 2015].

¹⁷⁸ Hall R, 1992. The strategic analysis of intangible resources. *Strategic Management Journal*. Vol. 13 p.135–144. Available at: <http://onlinelibrary.wiley.com/doi/10.1002/smj.4250130205/pdf> [27 January 2015].

customers, clients and society. That reaction can minimize or incentivize the recognition, copy, misuse, unauthorized use, abuse, etc. of Intellectual Property.

3. Business Models: Commercial Protection of Intellectual Property.

*“The most often considered opportunity, using I[n]tellectual P[roperty] protection to preclude competitors from gaining access to these [Intellectual Property] assets and drive up prices, is often less desirable than more inclusive arrangements in which value is shared more broadly”.*¹⁷⁹

The economic use of intellectual assets, such as know how or patents, is usually determined by understanding the consequences of holding and exercising the rights and exclusivity granted by Intellectual Property in a determined manner. Intellectual Property holders must note that for every action there is a consequence in the market. As announced, the reaction will depend on how the market power is exercised. According to Fisher III and Oberholzer-Gee (2013)¹⁸⁰ the following should be considered:

(i) When a company has communicated it is in a position to exercise its exclusivity privilege, it should consider what its costs are. Its entry into the market could cause a change in competition and/or prices, be an incentive for competitors to innovate or even generate a market for complements. For example, today there are millions of applications running on Apple’s iOS and Android systems,¹⁸¹ all of which would not exist or have a market without such operative systems. In turn, when a competitor is aware that there is a new market entrant with new technology, it could decide to challenge the validity of the Intellectual Property rights, and/or realise that it is already using a technology that has been using technology not of his property but of the newcomer, and still be prepared to defend its use, regardless if it wins or loses.¹⁸² This would cause a problem for the newcomer, which would have to afford costs of legal battle, or once again adapt its business plans;

¹⁷⁹ Fisher III & Oberholzer-Gee, 2013;p14. Op. cit.

¹⁸⁰ Id. Op. cit.

¹⁸¹ ‘As of May 2015, Android users were able to choose between 1.5 million apps. Apple’s App Store remained the second-largest app store with 1.4 million available apps.’ Statista, 2015. The Statistics Portal. Available at: <http://www.statista.com/statistics/276623/number-of-apps-available-in-leading-app-stores/> [24 May 2015].

¹⁸² Please refer to the Sony and napster examples regarding first-mover or first-to-market in number (v) below.

(ii) When aiming to sell a company, problems could arise due to the uncertainty of the buyer, or the fact that the company may be holding incomplete or not fully secured Intellectual Property rights, despite being the right time to market. On the opposite end, non-Intellectual Property holders which might consider copying or competing will assess the possible impact of the newcomer's products/services sale in competition, the costs of inventing around the company innovation (avoiding it), the thickness of the newcomer's legal protection (Intellectual Property and general corporate, tax liabilities), and regulatory costs;

(iii) Entering into license agreements is also an issue subject to analysis before being implemented. On the one side it enables the rights holder to increase its capacity, distribution network, and discourage the licensee of inventing around and reinforce the company ownership rights. By executing these agreements licensees admit they are not entitled to the use of its innovation without the company's consent. However, the same license agreement may mean that its rents could be reduced vis-a-vis a monopoly exploitation. Non-Intellectual Property holding licensees could benefit of this permission by being able to access the market faster (no need to conclude their own research and innovation processes) and there could be fewer chances of infringements. However this would depend on the scope and limitations of use of the licensed technology, and the terms of the license agreement. If the licensee believes the possible license deal to be abusive, it will go back to analyse the same concerns singled out in number (ii) above.

According to Jianwei & Kazuyuki (2014)¹⁸³, there is evidence that smaller companies are licensing their technologies to multiple licensees, which would make them less vulnerable profit wise. In turn, patented technologies would be less likely to be licensed to multiple licensees. If this trend is confirmed, smaller companies will need to execute more Intellectual Property license agreements than larger companies. This evidences the importance of the contractual protection of

¹⁸³ Jianwei D & Kazuyuki M, 2014. Get Pennies from Many or a Dollar from One? Multiple Contracting in Markets for Technology. The University of Tokyo. The University of Tokyo / Research Institute of Economy, Trade and Industry. Research Institute of Economy Trade and Industry. Discussion Paper Series 14-E-006. January 2014. Available at: <http://www.rieti.go.jp/en/publications/summary/14010010.html> [15 December 2014].

Intellectual Property awareness for smaller companies, thus enabling them to avoid putting at risk its technology in the multiple license agreements they enter into.

(iv) When entering into collaborative agreements, the Intellectual Property holder could add value to its product/service by allowing other market players to actively participate and benefit from an aligned interest. The holder could even enter into collaboration agreements with competitors which, for example, can be useful to set standards. It can also enter into these types of agreements with developers for complementing the product/service, e.g. the mentioned App developers for the iOS software, and/or with customers which can provide insight and live feedback on products. Non Intellectual Property holders not party to these agreements can be expectant of new developments that arise from them, and be willing to challenge their validity and claim infringements or ask for cross licensing; and

(v) In some cases, companies even donate their developments, whether for strategic reasons such as reducing the risk of excessively holding up a product and avoiding the copies concerns described in number (ii) above, encourage complements or position themselves as innovators before the market. E.g., during 2014, Tesla Motors announced that following the spirit of the open source movement, it ‘will not initiate patent lawsuits against anyone who, in good faith, wants to use [its] technology’.¹⁸⁴ On the other hand, there have been cases of companies, which being aware of their possible intellectual property infringements, market their product aiming to obtain a dominant or important position in a market very quickly, before any action is initiated against them, to use such market position as defence in court, if any legal action is finally brought against them. In other words, before any legal action is initiated, the *infringing* product has already reached the entire market, which is used as a defence in court. There are successful cases like Sony and the VCR¹⁸⁵ and unsuccessful uses of this defence, like Napster.¹⁸⁶

¹⁸⁴ Musk, 2014. “All Our Patent Are Belong To You”. Tesla Motors. Available at: <http://www.teslamotors.com/blog/all-our-patent-are-belong-you> [25 January 2015].

¹⁸⁵ Even though it might not have been the key argument in this case, ‘six years elapsed between the introduction of VCRs and the final decision by the United States Supreme Court concerning their legality. By that time, approximately 11% of American households (and some of the Supreme Court justices) owned VCRs. Familiarity with the technology and its benefits undoubtedly contributed to the

Another common business model for Intellectual Property business is the *'first to market'* or *'lead time'* approach. There is no use to having a patent, trademark, product or intellectual asset which a company aims to commercialize if the time and opportunity for successfully commercializing is limited in time, e.g. a world cup souvenir's success would probably depend on the possibility of it being sold during the duration of the world cup. However, not in all cases a company is certain that every four years it will have such a big event with a two month window of opportunity and can plan in advance like FIFA does. In the software industry, there are so many developers globally working at the same time to solve the same problems, that usually they are just one slight step ahead of each other. This forces them to obtain results and implement ideas faster than and before a competitor reaches the same product or conclusion. Even though protected under copyright since their creation, the *invention* in which the software may be embodied in or a part thereof could be also subject to patent protection. However, innovators can often not afford to wait for statutory right protections, or just rely on copyright protection – which still allows another person to create the same work at the same time at another place, arguing (s)he did not know anything about the work created on another country, and which may end up on a contested matter relating to date of creation, originality and ownership. Business demands certain agility that needs to be met by legal practitioners with the available tools. In this scenario, contractual Intellectual Property provisions become important. Companies in this position usually have a purely economic approach, aiming to place the company in a market position that allows them to reimburse their investments in developing the product as soon as possible, while leading the competition through a customer base obtained as a result of entering the market ahead of all others.¹⁸⁷ More than a model, the described scenario reflects a fact pattern wherein: (i) a demand for certain technology is

willingness of a bare majority of the justices to stretch the doctrines of secondary liability in copyright law enough to legitimate the machines. Sony, the company that took and won this gamble, stood to benefit enormously (although it subsequently forfeited its leading position by underestimating the importance of a crucial complement to VCR technology, the broad availability of recorded movies).⁷ Fisher III & Oberholzer-Gee, 2013; Ch.III s5. Op. cit.

¹⁸⁶ Fisher III & Oberholzer-Gee, 2013; Ch.III s5. Op. cit.

¹⁸⁷ Kerschberg B, 2012. How Intellectual Property (IP) Enables and Protects Open Innovation Platforms. Available at: <http://www.forbes.com/sites/benkerschberg/2012/04/23/how-intellectual-property-ip-enables-and-protects-open-innovation-platforms/> [5 December 2014].

identified in the market;(ii) such demand rapidly increases – but there is no certainty for how long; and (iii)the technology which will be created to address such market demand is funded by venture capitalists who want the fastest possible return of investment (ROI), and need the product in the market immediately. This has led to believe that current venture capital practices are better suited for developed countries instead of smaller markets.¹⁸⁸

According to Sawicki (2015),¹⁸⁹ *acquihire* is a trending transaction (business model) since 2011 in Silicon Valley. It consists of a consolidated firm acquiring a start-up, then discarding all its assets and only keeping its patents and engineering team. His relevant finding refers to the fact that ‘existing and future patent rights typically follow the engineers to the buyer’. Further, for a company buying or selling Intellectual Property, it is important to know that investigators and inventors will continue to work on the topics they enjoy and with which they have been most involved. It is a common trend or practice for an investigator to follow his/her line of investigation regardless of his workplace: be it a company, university, laboratory, or any changes between them. Especially when investigators have devoted long periods of time working only on a specific subject or area. This must be considered when contracting or firing employees which were engaged in research and development.

Another common practice are joint ventures – which can be a prelude to a probable merger – between competitors who decide to further benefit from synergies in a well known or new market. The case of Euler Hermes Seguros de Crédito S.A. and Mapfre Garantías y Crédito Compañía de Seguros S.A., two international insurance companies entering into a joint venture at a multi country level both in Spain and Latin American countries, provides a useful example. Both insurance companies are in the business of writing insurance. Mapfre’s extensive commercial

¹⁸⁸ Allahar H, 2014. The Search for a Venture Capital Model Appropriate to Small Emerging Countries. *The SIJ Transactions on Industrial, Financial & Business Management (IFBM)*. Vol. 2, No. 10, December 2014. Available at: <http://www.thesij.com/papers/IFBM/2014/December/IFBM-02091080101.pdf> [20 January 2015].

¹⁸⁹ Sawicki A, 2015. Buying Teams. *Seattle University Law Review*. Vol. 38. University of Miami Legal Studies Research Paper No. 15-2. Available at: <http://ssrn.com/abstract=2549253> [27 January 2015].

network and Euler Hermes' credit risk analysis software and experienced team (having the credit analysis know-how), provided for a combination which was identified as a possibility to further expand in specific markets,¹⁹⁰ therefore becoming the main cause of the joint venture. Companies have understood that partnerships sometimes provide for the best and fastest business alternatives. 'Companies like Procter & Gamble have realized that they cannot invent everything in the world',¹⁹¹ and have entered into agreements and outsourced certain needs to smaller companies with specific know-how or innovation capabilities, but which require the broader market of bigger companies to position their products or innovation. Intellectual Property ownership resulting from collaborative business ventures must be properly and clearly addressed by all participating parties. If patents arise from such collaborations, Belderbosa et. al. (2014)¹⁹² suggests that co-ownership of patents by partners who take part of the same market is a controversial issue due to their 'overlapping interests'. This would not occur in the case of co-owners which operate (with a same technology) in different industries or when the co-owner is a university. Identifying such risks involved in these types of agreements is relevant to properly define the specific scope and purpose of collaboration, ownership, rights of use of resulting Intellectual Property products/results and investigation findings, as well as publications and disclosure of findings, and should be clearly established during negotiations between the involved parties, and reflected at a contractual level.¹⁹³ As discussed, Intellectual Property is not just about exercising negative or restrictive rights.¹⁹⁴ Collaboration with external sources, which do not share company vision, ethics or deal understanding, involves risks related to information disclosure.

¹⁹⁰ Solunion, 2013. "Solunion Official Launch; Euler Hermes, Mapfre, Trade Credit Insurance Joint Venture". Available at: <http://www.eulerhermes.com/mediacenter/news/Pages/solunion-official-launch-euler-hermes-mapfre-trade-credit-insurance-joint-venture-.aspx> [10 January 2015].

¹⁹¹ Kerschberg, 2012. Op. cit.

¹⁹² Belderbosa R & Cassimana B & Faemsa D & Letena B & Van Looya B, 2014. Co-ownership of intellectual property: Exploring the value-appropriation and value-creation implications of co-patenting with different partners [Abstract]. *Research Policy. Open Innovation: New Insights and Evidence*. Vol. 43 Issue 5 p.805-926. Available at: <http://www.sciencedirect.com/science/article/pii/S0048733313001583> [27 January 2015].

¹⁹³ Knowledge Transfer Working Group of the European Research Area Committee, 2012. Op. cit.

¹⁹⁴ Kerschberg, B. 2012. Op. cit.

Friese et. al. (2006)¹⁹⁵ suggests a three step approach. A company should first get a picture of where its stands on Intellectual Property issues, determine what its strengths and weaknesses are, then evaluate if it is maximizing the potential strategic and market value of it while improving its weaknesses, and lastly, prepare and implement a new strategy, which would need involvement of senior management for its success.

The scope of Intellectual Property-based business models has changed. Every day new players enter the market. Business models no longer focus on just, and the options available are now broader than just selling or licensing. Moreover, intermediaries have appeared and show no signs of disappearing again. Millien and Laurie (2004)¹⁹⁶ counted 13 Intellectual Property intermediaries business models: (i) '*Patent licensing and enforcement companies (LECs)*' companies which notify third parties of the existence of a patent, offer the notified party to execute a non-exclusive license, and in case the notified party does not accept to enter into such an agreement they sue for patent infringement. Already in 2004 this business model involved sums over three billion USD yearly; (ii) '*Institutional Intellectual Property aggregators/acquisition funds*' which are entities which act as partners of a limited partnership and raise funds from institutional and individual investors, which are promised above average ROI from selective, targeted or large-scale patent purchases aiming to allocate licensing programs and/or arbitration strategies.; (iii) '*Intellectual Property/technology development companies*' are entities involved in research and development, which develop technology or innovations that may be licensed to one or more parties. They usually also provide implementation and consultancy services; (iv) *Licensing agents* which may act on finders' fees basis and search for licensees or licensor of a particular technology; (v) '*Litigation finance/investment firms*' which in practice are similar to LECS, but where the owner of the technology is a third company (LLC) which is created for 'the purpose of asserting its rights'; (vi) '*Intellectual Property brokers*' which prepare and provide pitches to a technology buyer and/or seller and provide advice on offensive or defensive patent

¹⁹⁵ Friese J & Jung U & Röhm T & Spettmann R, 2006. Intellectual Property: An underestimated and undermanaged asset? *Journal of Business Chemistry*. Vol. 3, Iss. 1 p.42. Available at: <http://connection.ebscohost.com/c/articles/19577075/intellectual-property-underestimated-undermanaged-asset> [25 January 2015].

¹⁹⁶ Millien & Laurie, 2004. Op. cit.

strategies, and assist their clients in relevant negotiations; (vii) '*Intellectual Property based Mergers and Acquisitions advisory*' which are entities that advise technology companies in respect of Intellectual Property assets on complex corporate transactions where Intellectual Property plays a major role. They may even search and identify target companies; (viii) '*Intellectual Property auction houses*' which as their name suggests, act as auction houses for Intellectual Property, where it can be offered in lots. These aim to provide more liquidity to patents market; (ix) '*Online Intellectual Property/technology exchanges, clearing houses, bulletin boards and innovation portals*' which provide an information exchange centre, and validates the role of a public (free) or private (with a cost) classified adverts of Intellectual Property; (x) '*Intellectual Property-backed lending*'. Consisting of specialized firms which provide or obtain loans for technology or innovation companies which place their Intellectual Property as security of those loans; (xi) '*Patent analytics software and services*'. These companies provide the service of advanced patent searches. The results are useful for businesses in search of a determined technology and for innovators performing prior-art searches; (xii) '*University technology transfer intermediaries*' specialized in and focused on working with universities which jointly work as any of the previous models described but centred on universities; (xiii) '*Technology/Intellectual Property spin-out financing*'. In this case as a result of a venture capital investment in a larger company a non-core technology of the latter is taken to another company which will place it in the market; etc.¹⁹⁷

4. What about start-ups' Intellectual Property management?

The management theories and Intellectual Property business models described above provide useful insight into what the concerns of companies are and should be. Start-ups, however, are an innovation in search of a business model when they begin. Thus, while their predefined concept and development structure is useful, there most

¹⁹⁷ Millien & Laurie, 2004. Op. cit.; and

Alvarado L K, 2010. The Patent Transactions Market – Established and Emerging Business Models. Thesis in the Master Degree Program Department of Technology Management and Economics. Chalmers University of Technology, Göteborg, Sweden. Available at: <http://publications.lib.chalmers.se/records/fulltext/128224.pdf> [28 January 2015].

certainly will be a change to the original plan. This is why start-ups must be aware of the different Intellectual Property protection options that exist. Even though they might fit into any of these models, start-ups will probably have a better picture of it once they have already passed or began their way out of the Death Valley.

Most of the business models and management advice are based on or make reference to patents, and are prepared based on a business and/or companies that are already set, that are a reality and have managed to survive. Practical advice to entrepreneurs going through the survival stage, is, however, missing. The implications of properly protecting information and intellectual assets from the inception of a project should be a continuous concern. There is very relevant intellectual property to protect before even applying for a patent. The start-up's planning and ideas should be safeguarded as a market or business secret. 'All patentable inventions begin as trade secrets'.¹⁹⁸

There is no one best way to manage Intellectual Property. No one secret formula can assure success. As explained, businesses are dynamic and the failure rate of start-ups is high. The analysis of long and short term risks and benefits will vary on a case by case basis, as will the need for seeking advice.

Lack of information regarding intellectual property and the role it plays for a company's business, the perception of overly expensive fees on Intellectual Property protection costs-- as a result of being associated mainly with patents and patent court proceedings--, insufficient manpower to carry out the necessary groundwork of reviewing a specific company's intellectual property, are all issues a start-up management must overcome. It is clear that Intellectual Property needs to be protected from the start of a business venture, especially in today's knowledge economy, where differences are made through intellectual capital. A proper

¹⁹⁸ Brant J & Lohse S, 2014. Trade Secrets: Tools for Innovation and Collaboration. Research Paper 3. Innovation and Intellectual property series. International Chamber of Commerce. Available at: <http://www.iccwbo.org/Advocacy-Codes-and-Rules/Areas-of-work/Intellectual-Property/Innovation-and-intellectual-property/> [30 January 2015].

management strategy will permit companies not to lose business opportunities. Failing to timely protect Intellectual Property can cost a company business.¹⁹⁹

The previously described business models and management systems provide sound theoretical positions and a good starting point to assess business Intellectual Property matters. In the next chapter, a three layered²⁰⁰ inside-out Intellectual Property management approach is suggested for start-ups, which should be useful even during the survival stage.

¹⁹⁹ Fisher III & Oberholzer-Gee, 2013. Op. cit.; Oficina Española de Patentes y Marcas (Spanish Patent Office), 2013. Op. cit.;

World Intellectual Property Organization, 2014. “How can Your SME Acquire and Maintain Intellectual Property Protection?”. Available at: http://www.wipo.int/sme/en/ip_business/acquire_protection.htm [14 January 2015]; and

National Association of Music Merchants Inc., 2014. “*Intellectual Property Rights: Six Cost-Effective Steps on How to Protect These Intangible Assets*”. Available at: <https://www.namm.org/content/ip-six-steps> [23December 2014].

²⁰⁰ Osorio, C. & Carey, G., 2011. Módulo 10: Protección de los activos intangibles. Curso legislación para nuevos negocios. *La Tercera* (Santiago, Chile). 12 December 2011. [Newspaper].

IV. The *Inside-Out Approach*.

The inside out approach is legally based on utilizing trade secrecy combined with contractual agreements and provisions regarding ownership, confidentiality, liability, competition, control and tax benefits. This thesis proposes a three-layered approach.

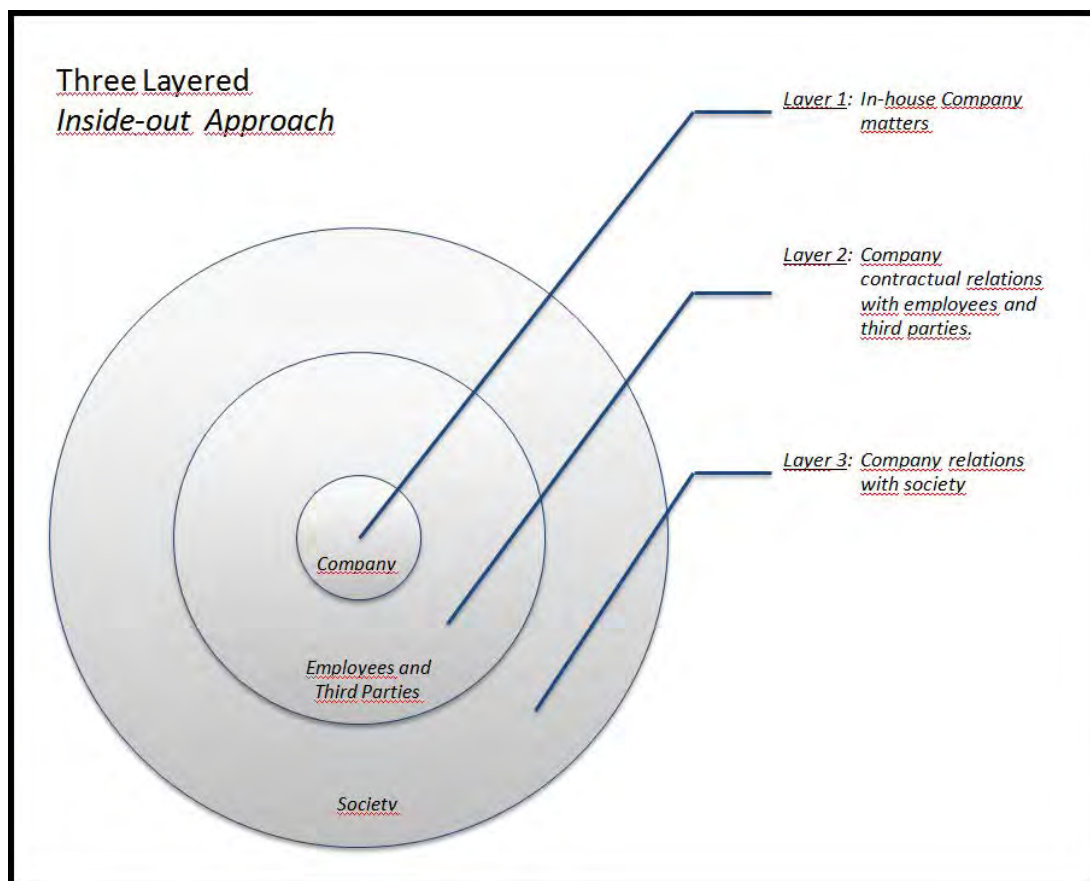


Figure [4] “What we achieve inwardly will change outer reality.” —
*Plutarch*²⁰¹

Firstly, the *Company* layer focusses on matters they can control directly, i.e., internal matters or In-house company matters. These include legal decisions that can be addressed even before entering the survival stage. This layer is concerned with the regulation of the start-up itself and only depends on its decisions.

²⁰¹ Plutarch is deemed as the autor of this quote in several websites, but no source is cited. Available at: <http://www.goodreads.com/quotes/61218-what-we-achieve-inwardly-will-change-outer-reality> [26 January 2015]

Regardless of whether there are uncertainties in the business model, there are several actions that can be taken to improve the chance of business success and reduce innovators liability risks. Within this layer, the company's decisions usually lead to direct and causal results, e.g. incorporating a legal entity, applying to a specific available tax regime or Intellectual Property related benefit or fund, etc.

The second layer, *Employees and Third Parties*, addresses matters which, while still dependant on the company, involve parties which will be contractually bound to the company. These are the direct relations that the company enters into with employees and third parties such as suppliers, service providers, and are or should be usually dealt with in a written agreement. Thus, the company still has some level of control and should thus be able to negotiate and include Intellectual Property provisions into those contracts which play a key role in as far as intellectual property protection is concerned.

Finally, the third layer ("*Relations with Society*") refers to the company's or its products and services indirect relation with third parties without direct legal agreements. Activity in this layer cannot be controlled by the company alone, and it is the level in which statutory Intellectual Property rights become particularly important.

I have used this approach while working with other attorneys and entrepreneurs and it has helped to address the question of how to protect and manage Intellectual Property from a practical point of view, especially during a company's starting period. In the following pages, each of the aforementioned layers is described in more detail while addressing the previously mentioned business concerns (liability, generating value, ownership, protection of information in commerce, and cost effectiveness).

1. *In-house Company Matters*. Description and examples
 - a. Liability: Setting up a legal entity.

The first task for an entrepreneur is to incorporate or otherwise create a legal entity which limits the owner's liability.²⁰² The first reason is that companies exist as a different entity than its owner (innovator), allowing such owner to remain unaffected in case something goes wrong. Consequently, in case of the company's debt or bankruptcy, the owner's assets are not considered different to those of the company, and could be attached for collection, affecting much more than just the affected company's business.²⁰³ This said, in some countries, like South Africa, the *sole proprietor structure* is not deemed as a different entity of the owner.²⁰⁴ In such a case, the innovator would sometimes need to have a partner to incorporate a limited liability company to accomplish the limitation of liability purpose. However, South Africa allows for profit companies to have a single shareholder, and thus a partner would not be needed to accomplish the mentioned limitation of liability purpose. Likewise, in Chile there are two different types of companies which allow sole proprietorship ownership and are considered for all legal purposes, different to their owner: sole proprietorship companies (Empresa Individual de Responsabilidad Limitada) and companies by shares (Sociedad por Acciones) which is a mixture between a private limited liability company and a corporation.²⁰⁵

²⁰² This is advisable, despite the fact than in many countries a new entity with no banking record would struggle to get funding from traditional financial institutions (excluding public innovation funds, crowdfunding, etc.), mainly because: (i) the usual requirements by financial institutions in this cases has been to require the owner or innovator to become jointly and severaly liable to to any credit provided to the new company. However, this can be limited in the contract and does not extend to all obligations of the new company; and (ii) even if no limitation is obtained from banks, and theowner has become liable for all creditsof the company with the bank. Liability is still restricted to bak debt. Thus, potential damages caused by or arising from products, services and/or prototypes testing, trials, market entry, etc. will be allocated to the company and not the owner. Considering the speed of innovation and non linear development of business, an entity should be incorporated, as no one knows when any of the mentioned accidents may occur.

²⁰³ NRF, 2014. Op. cit.; and

Bizempire (South Africa), 2014. "*Helping you start and build your small business empire*". Available at: http://www.bizempire.co.za/html/types_of_business_structures.html [27 January 2015]

²⁰⁴ Companies Act 71 of 2008, as amended 2011. South Africa. Available at: <http://www.justice.gov.za/legislation/acts/2008-071amended.pdf> [29 January 2015].

²⁰⁵ Ley No. 19.857 Autoriza el establecimiento de Empresas Individuales de Responsabilidad Limitada[LEIRL], 2003. Available at: <http://www.leychile.cl/Navegar?idNorma=207588> [28 January 2015]; and

In both Chile and South Africa, incorporation is not a particular difficult or expensive process. No minimum capital is required (to the extent it exists), and companies are required to register with the corresponding revenue service to be a fully operative company.

Additionally, while perhaps not suitable for all entrepreneurs, and depending on the stage and funds of the business, another risk-mitigating measure regarding intellectual property can be established through company structures and agreements. An operating company could be created just for such purpose, and placed below a wholly owned (or 99 per cent owned) subsidiary or even one of the holding company partners (preferably a legal entity), the latter of which would be holder to title of Intellectual Property. The operating company could be entitled to use the technology by virtue of a (limited) license agreement, enabling it to use, exploit and/or sublicense the technology. The agreement could also include immediate termination provisions in case of change of control, sale or bankruptcy²⁰⁶ of the operating company. In this case, even if the subsidiary operating company business went wrong, ownership of the technology would not be in danger as the holding company – a different legal entity – would remain as owner, and the license agreement would not be enforceable against it (terminated).

Depending how the venture begins, on occasions the start-up team is formed by persons who contribute capital/funds and others which contribute know how and Intellectual Property assets. Intellectual Property may be contributed as capital (pursuant to country internal revenue services' rules of valuation), and is a way in which innovators can assign all the Intellectual Property from the start to a new legal entity of their choice. This would also apply to improvements and new intellectual property created by, in or for the company. At this stage we will assume that all partners at the beginning of the start-up process are *friendly*. Other alternatives

Codigo de Comercio (Chilean Commerce Code); Arts.424 to 446. Available at: <http://www.leychile.cl/N?i=1974&f=2014-10-10&p=> [28 January 2015].

²⁰⁶ Enforceability and effects of immediate termination due to bankruptcy would need to be reviewed according to the relevant country bankruptcy regulation.

regarding original Intellectual Property protection when dealing with investors or financiers are explained in the *Third Party Relations* section below.

b. Generating Value: Tax incentives/ reorganization provisions.

Whenever a business is launched or prepares for launch it expects to get the biggest possible return on its investment. Intellectual property business is no exception.

As described before, in today's knowledge economy, governments have identified that value added services and innovation have an impact on market growth, and consequently in job creation and countries' economic standing. As a consequence, governments have created tax benefits which aim to attract innovation companies and foster research and development and innovation into their countries. Consequently, in addition to available small and medium sized enterprises tax benefits, most countries introduced, during the last decade, Intellectual Property specific benefits and incentives. Hence, if a service provider or manufacturer provides its product or service based on Intellectual Property, and its competitors do not, just because of Intellectual Property tax benefits it could have a competitive advantage over such competitors.²⁰⁷

If Intellectual Property is contributed to the company upon incorporation or if it is created during business, one of the first decisions the company will face, is where to locate such IP. Intellectual Property tax optimization policies and planning should be considered. Reducing tax liabilities and obtaining tax savings for the

²⁰⁷ Košťuřiková I & Chobotová M, 2014. "New Trends in Intellectual Property and Tax Burden of Innovative Corporations" [Abstract]. "Procedia - Social and Behavioral Sciences. The 2nd International Scientific conference. *Contemporary Issues in Business, Management and Education*. Vol.110. p.93-102. Available at: <http://www.sciencedirect.com/science/article/pii/S1877042813054918> [28 January 2015];

PWC, 2014. "Managing intangible assets". Available at: http://www.pwc.es/es_ES/es/legal-fiscal/assets/gestion-de-los-activos-intagibles-en.pdf [2 January 2015]; and

Griffith R & Miller H & O'Connell M, 2014. Ownership of intellectual Property and Corporate Taxation. *Journal of Public Economics* 112 (2014) 12-23. Available at: <http://www.sciencedirect.com/science/article/pii/S0047272714000103> [12 December 2014].

company and/or possible investors can only improve the company chances in the market.

Nowadays, many countries have followed the paths of Scandinavian countries which during the 90's decade reduced tax rates. Italy followed in 1998, Germany during 2001,²⁰⁸ and the United Kingdom recently enacted a Patent Box benefit 'which allows for a reduced 10 per cent rate of corporation tax on global profits arising from patents'.²⁰⁹ Similarly, South Africa and Chile provide alternatives for certain tax benefits for research and development: (i) 150 per cent deduction in expenditure for research and development, and certain reimbursements and funds provisions under the Support Program for Industrial Innovation in the case of South Africa; and (ii) credit deduction of 35 per cent of payments made for research and development against corporate tax and the remainder 65 per cent may still be deducted as tax expense. In both countries, certain research and development conditions must be met which are analysed by the relevant government agency; i.e., the Department of Science and Technology in South Africa²¹⁰ and the Corporación de Fomento de la Producción in Chile.²¹¹ In Chile either the research and development centre or the project must be authorized by the relevant authority to use this benefit. In case research and development is contracted away from the centre, it is the payer of such service who will benefit from the tax incentive and not the research centre.

²⁰⁸ Griffith & Miller & O'Connell, 2014. Op. cit.

²⁰⁹ Ellis J, 2014. "UK patent tax break fails to impress SMEs", Available at: <http://www.iam-magazine.com/blog/Detail.aspx?g=6d06c495-9ae7-41e9-8212-9e433b954118> [10 January 2015].

²¹⁰ PWC Managing, 2014. Op. cit.;

Deloitte, 2014. "South Africa Highlights 2014". International Tax, Available at: <http://www2.deloitte.com/content/dam/Deloitte/global/Documents/Tax/dttl-tax-southafricahighlights-2014.pdf> [17 January 2015];

Deloitte Touche Yohmatsu Limited, 2014. "Taxation and Investment in South Africa 2014 - Reach, relevance and reliability". Available at: <http://www2.deloitte.com/content/dam/Deloitte/global/Documents/Tax/dttl-tax-southafricaguide-2014.pdf> [27 December 2014]; and

KPMG South Africa, 2013. "Investing in South Africa and Africa". Available at: https://www.kpmg.com/Africa/en/IssuesAndInsights/Articles-Publications/Press-Releases/Documents/China%20desk%20brochure_English2.pdf [11 January 2015].

²¹¹ Ley No. 20.241. Establece un Incentivo Tributario a la Inversión en Investigación y Desarrollo, as amended by Act. 20 570. Available at: <http://www.leychile.cl/Navegar?idNorma=268637> [29 January 2015].

Even if the benefit is not for the company but for future clients, it will provide benefits for possible investors and could be a source of competitive advantage. The core task of many innovation companies is to invest their resources and funds in performing their own research and development. There could be a possibility of benefiting and for costs to be less than initially foreseen if Intellectual Property tax benefits are available. Analysing the possibility of getting a company or one of its projects registered or any other tax benefits available are options that should be explored.

Companies going international should be concerned to find the best location to set up the company holding its Intellectual Property. Taxation will play a role but there are other criterias that matter. Such a location should balance tax benefits and Intellectual Property protection. Among other variables the company should analyse if the product will be commercialized in such location or not, if research and development will be performed there or abroad, cross border and capital gain taxes, etc. This said, during the survival stage the focus should be on research and development and benefits available to the company. The difficulty of selecting a location, especially when the final business model has not been decided on, is the reason why contracts entered into with the company buyers or start-up investors should include provisions which allow the target company to be able to freely reorganize its corporate structure for tax optimization purposes. These types of clauses usually have a limited time period to be implemented. In some regimes, subject to local companies' reorganization rules, transfer of Intellectual Property may even be possible between group companies without being levied by taxes.

c. Identification of information: Ownership and Awareness.

The following are some of the most important questions when it comes to creating in-house awareness about ownership of company information: What is the company business material information? Which piece, content or configuration of information or process provides the company with a market advantage? Are these its most valuable intangible assets? Is the company including elements which are related to its image when disclosing such information, i.e. trademarks, domain

names, patents, integrated circuits, geographic indicators, drawings, utility models; Is it keeping control of confidential and undisclosed information; databases, etc.?

Once these questions have been answered, the company must identify its components that, if missing, would harm the company the most. It should also assess its exposure of its intellectual assets being stolen,²¹² followed by analysing if those intellectual assets are subject to legal protection or not, while preparing an overall Intellectual Property strategy or policy to protect its business right from the beginning.²¹³

From the outset the owner/inventor/entrepreneur should aim to learn more about Intellectual Property. If possible he or she should try to schedule monthly meetings with an attorney for guidance regarding Intellectual Property matters and opportunities. Additional information is readily available online, from government agencies and law firms.

d. Protection of information in commerce: Trade Secrets.

Trade Secrets are recognized as Intellectual Property statutory rights in certain countries like the United States (most of the states) and Chile, but are not recognized as such in South Africa or the European Union, where protection is provided *via* liability rules (tortious liability) or unfair competition regulation.²¹⁴

Generally, trade secrets protect any information that is not "commonly known" and which a company or individual has reasonably attempted to keep confidential or secret. The World Intellectual Property Organization defines trade secrets broadly as "any confidential business information which provides an enterprise [with] a competitive edge".²¹⁵

²¹² Slater D, 2004, updated 2012. Op. cit.

²¹³ NAAM, 2014. Op. cit.

²¹⁴ Reichman J H, 2003. Saving the Patent Law from Itself: Informal Remarks Concerning the Systemic Problems Afflicting Developed Intellectual Property Regimes. Available at: http://hoohila.stanford.edu/Commercializing%20Innovation/Intellectual%20Property%20and%20Innovation-Book_files/GEN_50_CH15.pdf [20 December 2014].

²¹⁵ World Intellectual Property Organization, 2014. "What is a Trade Secret?". Available at: http://www.wipo.int/sme/en/ip_business/trade_secrets/trade_secrets.htm [27 January 2015].

In Chile, trade secrets are expressly regulated in the Industrial Property Act.²¹⁶

Article 86 defines a trade secret as any knowledge of industrial products or processes which by being kept undisclosed provide the holder an improvement, advancement or competitive advantage.

Article 87 stipulates that the following conducts are considered an infringement of trade secrets: (i) illegitimate acquisition, (2) disclosure or use without the owners' authorization and (iii) disclosure or use of information accessed legally, but subject to confidentiality obligations, in case such disclosure or use has been performed with the intent of obtaining benefit for oneself or a third party or the intention to harm the owner. Finally, article 88 applies criminal sanctions to such infringements.

Other sources of trade secrets protection in Chile include the Agreement on Trade-Related Aspects of Intellectual Property Rights, which provides that:²¹⁷

“Natural and legal persons shall have the possibility of preventing information lawfully within their control from being disclosed to, acquired by, or used by others without their consent in a manner contrary to honest commercial practices so long as such information: (a) is secret in the sense that it is not, as a body or in the precise configuration and assembly of its components, generally known among or readily accessible to persons within the circles that normally deal with the kind of information in question; (b) has commercial value because it is secret; and (c) has been subject to reasonable steps under the circumstances, by the person lawfully in control of the information, to keep it secret.

*It also provides that “For the purpose of this provision, “a manner contrary to honest commercial practices” shall mean at least practices such as **breach of contract, breach of confidence and inducement to breach, and includes the acquisition of undisclosed information by third parties who knew, or were grossly negligent in failing to know, that such practices were involved in the acquisition** [emphasis added by the author].*

For reference purposes, considering that there is no specific trade secret regulation in South Africa, aiming to extend the specific concept recognized by certain regulations, it must be noted that in United States of America more than forty of its states have adopted a version of the Uniform Trade Secrets Act, which defines a trade secret as:

*“Information, including a formula, pattern, compilation, program device, method, technique, or process, that: (i) derives independent economic value, actual or potential, from not being generally known to, and not being readily ascertainable by proper means by, other persons who can obtain economic value from its disclosure or use, and (ii) is the subject of efforts that are reasonable under the circumstances to maintain its secrecy”.*²¹⁸

²¹⁶ [Free Translation] Chile LPInd.; Arts. 86 to 88. Op. cit.

²¹⁷ WIPO Trips; 7 Art.39p2. Op. cit.

²¹⁸ Uniform Trade Secrets Act s 1(4) (amended 1985), 14 U.L.A 536 (1985). Available at: http://www.uniformlaws.org/shared/docs/trade%20secrets/utsa_final_85.pdf [30 January 2015].

This is complemented by the Section 757 of the Restatement (First) of Torts which set the general liability standard for use of another's trade secrets:²¹⁹

'§757. Liability For Disclosure Or Use Of Another's Trade Secret—General Principle One who discloses or uses another's trade secret, without a privilege to do so, is liable to the other if: (a) he discovered the secret by improper means, or (b) his disclosure or use constitutes a breach of confidence reposed in him by the other in disclosing the secret to him, or (c) he learned the secret from a third person with notice of the facts that it was a secret and that the third person discovered it by improper means or that the third person's disclosure of it was otherwise a breach of his duty to the other, or (d) he learned the secret with notice of the facts that it was a secret and that its disclosure was made to him by mistake.'

Furthermore, sections 40 and 43 of the Restatement (third) of Unfair Competition define misappropriation of trade secrets as the:²²⁰

'§40. Appropriation Of Trade Secrets. One is subject to liability for the appropriation of another's trade secret if: (a) the actor acquires by means that are improper... information that the actor knows or has reason to know is the other's trade secret; or (b) the actor uses or discloses the other's trade secret without the other's consent and, at the time of the use or disclosure, (1) the actor knows or has reason to know that the information is a trade secret that the actor acquired under circumstances creating a duty of confidence owed by the actor to the other...; or (2) the actor knows or has reason to know that the information is a trade secret that the actor acquired by means that are improper...; or (3) the actor knows or has reason to know that the information is a trade secret that the actor acquired from or through a person who acquired it by means that are improper... or whose disclosure of the trade secret constituted a breach of a duty of confidence owed to the other; or (4) the actor knows or has reason to know that the information is a trade secret that the actor acquired through an accident or mistake, unless the acquisition was the result of the other's failure to take reasonable precautions to maintain the secrecy of the information.'

'§ 43. Improper Acquisition Of Trade Secrets "Improper" means of acquiring another's trade secret under the rule stated in § 40 include theft, fraud, unauthorized interception of communications, inducement of or knowing participation in a breach of confidence, and other means either wrongful in themselves or wrongful under the circumstances of the case. Independent discovery and analysis of publicly available products or information are not improper means of acquisition.'

South Africa does not have a specific piece of trade secret law, but allows protection of trade secrets from unauthorized acquisition, use, and publication by competitors and current or former employees. To be protected by courts as trade secret, information must satisfy the following requirements: (i) it must apply to trade and industry, (ii) not be within public knowledge (and be more than just trivial and in fact

²¹⁹ Restatement of the Law — Torts Restatement (First) of Torts. Interference With Business Relations Part 1. By Trade Practices. Ch. 36. Miscellaneous Trade Practices. s.757. Liability For Disclosure Or Use Of Another's Trade. Secret—General Principle. Available at: http://www.wipo.int/wipolex/en/text.jsp?file_id=130065 [30 January 2015].

²²⁰ Restatement (Third) of Unfair Competition current through June 2009 Chapter 4. Appropriation of Trade Values Topic 2. Trade secrets; s.40 & 43. Available at: <http://www.wipo.int/edocs/lexdocs/laws/en/us/us216en.pdf> [30 January 2015].

secret); and (iii) have an economic value. It must be pointed out, however, that trade secret protection would only be granted in respect of competitors and current or former employees.²²¹

Considering trade secret regulation is different in Chile, for reference purposes, and to further extend the explanation of how trade secret protection works based on unfair competition and tortious liability, it must be noted that in Europe, different countries use different terminology and often lack written, exclusive definitions²²². According to Czapracka,²²³ despite stating that trade secrets deserve ‘very special protection’, the European Court of Justice has issued contradictory decisions which have undermined their protection, thereby avoiding to discuss the Intellectual Property nature of these rights and opting to apply competition laws. Further, European Commission has defined what constituted *non-protectable know-how* and what the acceptable means of its exploitation are (i.e., in the case of certain restrictions of use imposed in technology and know-how licensing agreements, after termination of such agreements, limitations were found not to be applicable in respect of certain know-how). The European Commission has even asserted that

²²¹ Dlamini R, 2012.” South Africa: Can You Keep A Secret?”. Mondaq Connecting Knowledge & People. Available at: <http://www.mondaq.com/x/180550/Trade+Secrets/Can+You+Keep+A+Secret> [28 January 2015]; and

Law Library of Congress, The, 2015. “Protection of Trade Secrets: South Africa”. Available at: <http://www.loc.gov/law/help/tradesecrets/southafrica.php> and http://www.loc.gov/law/help/tradesecrets/2013-009821_FINAL_2.pdf (2013) [28 January 2015].

²²² “Taken there are no EU standards for trade secrets protection, what follows are some general observations about protection of trade secrets in various European jurisdictions to set the field for the discussion of trade secret protection in the EU. Confidential information is known under many different names in various EU jurisdictions: "know-how", "trade secret", "confidential information", or "businesses secret" are among them. No clear distinction can be made between these notions and they are often used interchangeably. For example, § 17 of the German Unfair Competition Law (UWG) 139 uses the terms *Geschäftsgeheimnisse* (trade secrets) and *Betriebsgeheimnisse* (industrial secrets) to describe secrets of technical nature rather than "know-how", but these terms are effectively interchangeable. Nor is the distinction clear in France, where the terms "savoir-faire" (know-how), "secrets de fabrique" (manufacturing secrets) and "secrets de commerce" (commercial secret) are used. English courts have been referring to confidential information, trade secrets, and know-how. In Poland, the terms *tajemnica przedsiębiorstwa* (trade secret) and know-how are in use. To complicate the situation even more, legal definitions of these terms are scarce and there is little agreement in the doctrine as to their precise meaning.” Please refer to:

Czapracka K A, 2007. Antitrust and Trade Secrets: The U.S. and the EU Approach. *Santa Clara High Technology Law Journal*. Vol.24 Iss2 Art1. Available at: <http://digitalcommons.law.scu.edu/cgi/viewcontent.cgi?article=1447&context=chtlj> [28 January 2015]

²²³ Czapracka K A, 2007. Op. cit

trade secrets were not Intellectual Property and that they did not deserve the same level of protection.

Trade secret protection includes potentially any type of information and knowledge. Information that can result from study or observation, can be learned arbitrarily or by chance, can be positive (to do) or negative (not to do), something that provides a competitive advantage,²²⁴ including customer lists, sales data, proposals, tender prices, products specifications,²²⁵ technical, commercial and financial information, distribution methods, ingredients, a formula, etc.²²⁶ Consequently, what is and is not deemed a trade secret is to be determined on a case by case basis and will depend on the information and the fact of being kept secret. This determination would come as a result of having performed the identification of information previously described, and which should be done by the businessmen of the start-up who are best suited to identify which information provides the company its competitive advantage.

Other arguments for relying on possible trade secret protection or to begin with this type of protection (even when considering patent protection) are:

(i) Not all information is subject to patents or copyright protection; (ii) even if subject to patent protection, there are still subjective elements (non-obviousness) criteria to fulfil and processes to comply, which results (even if expected) may not be as predicted. The patent process includes the publication of information and claims regarding the company innovation. If not granted, such publication may harm the company, which would not have the possibility to then guard it as trade secret; (iii) even if a patent was to be granted, the time lapse between *invention* and the time of publication, information should be kept secret not to jeopardize the possibility of the patent being granted. Before a patent is being granted innovations should be managed as trade secret; (iv) a patented invention may comprise just a part of a broader context of knowledge in which a product is developed. Information not

²²⁴ Carvalho D, 2010; p569. The Trips Regime of Patent Rights. America. 3rd ed. America Kluwer Law International.

²²⁵ Law Library, 2015. Op. cit.

²²⁶ International Chamber of Commerce, 2012. "Intellectual Property Basics Op. cit.

included in the patent may also be subject to trade secret protection;²²⁷ (v) the kind of know-how included in the information, its scope and form of use, as well as the term of expected advantage that it will grant in the market, and capability of actually being capable of keeping information secret, should be considered, when deciding on Intellectual Property protection; (vi) reverse engineering possibilities: There are some inventions which are subject to patent protection, but for which patents do not provide any advantage, whether legal or commercial. E.g., if a company which invents or discovers a process which allows it to reach a final product which in turn provides a market advantage. However, for example in the case of an additive which is used for improving road construction or a cooked product. It might be that the original additive inventor will only realize of a copy or replica of its product is being used when it becomes aware of the final road or cooked product in which the copied additive was used. However, it may face that once the copied road and/or cooked product is analysed it is almost impossible to prove that the copied additive and not the original was used. In this case, even if the inventor of the original additive held a patent, such fact would not have changed that (s)he would not have been able to prove the use of an infringing product, and enforce its patent, hence a patent in this regard could be ineffective means of protection of this type of additive.. A patent application in this case could even harm the company business, by disclosing its process as a consequence of the publication included in the patenting process; and (vii) the main differences between patents and trade secrets, which based on Cabanellas (2004), Brant & Lohse (2014), Reichman(1994) and IPR Helpdesk (2012)²²⁸are described in Table [1] below:

²²⁷ Cabanellas, 2004. Op. cit.

²²⁸ Cabanellas, 2004. Op. cit.; Brant & Lohse, 2014. Op. cit.;

Reichman J H, 1994. Legal Hybrids between the Patent and Copyright Paradigms. Columbia Law Review. Vo.:94:2432. Available at: http://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=1075&context=faculty_scholarship [10 December 2014]; and

European IPR Helpdesk, 2012. "How to manage confidential business information." Fact Sheet. Available at: https://www.iprhelpdesk.eu/sites/default/files/newsdocuments/How_to_manage_confidential_business_information.pdf [20 December 2014]

| Patents | Trade secret |
|---|--|
| Grant defined rights for a definite period of term. | Protection depends on measures taken by the owner. Even if effective, it cannot preclude third parties from legally developing the same technology or innovation. |
| It grants exclusive rights in respect of society, limited to the territory of the country in which it has been granted. | It protects from illegal access to or disclosure of information, however this is non-exclusive protection. |
| Once granted, disclosure of information is irrelevant. Information is public at least since the patent publication. | Burden of keeping information secret relies on its holder, which needs to impose confidentiality obligations to his employees and third parties. |
| Protection is granted against any third party who illegally uses the protected invention. | Protection from unrelated third parties is not conclusive, and can be based on competition law or espionage provisions. |
| Protection is subject to application fees and exploitation obligations not to lose the patents. | Not subject to such expenses and limitation. |
| Requires registration on countries where protection will be sought. | Does not require registration. Protection varies depending on national trade secret laws. |
| Very high litigation costs | Variable costs. |
| Enforcement available. Patents provide a more organized system of Intellectual Property protection, despite the differences in enforcement in different countries. | Enforcement variable. International scenario of trade secret regulation is less developed and less harmonized. There is no over-reaching agreements which define between its application as 'proprietary right' versus 'liability for unfair or illegal use' I believe this matter will be regulated and |

| | |
|--|---|
| | <p>harmonized, because the transfer of unpatented technology, needs to be protected. There is too much innovation which is not subject to patent protection. The stronger the protection, the bigger incentive to foster such types of technology transfer.</p> |
|--|---|

Table [1].

In general and as stated in this thesis, practical experience shows that both forms of protection coexist and complement each other. According to Cabanellas (2004),²²⁹ it has been estimated that 70 per cent of the value of companies' intellectual assets are represented by trade secrets.

Despite differences in definitions and legal systems, the majority of regulations seem to include three vital elements for information to be considered a trade secret and granted protection. It should encompass: (i) valuable information which confers some sort of competitive advantage; (ii) the value of the information shall derive from the fact of not being publicly known (not only from the content of the information); and (iii) its holder must have taken reasonable steps to keep it a secret. Regarding the last step, generating a duty of confidentiality and informing the relevance of the secret to employees or persons who have access to it, and taking measures to prevent unauthorized persons access to such information provide a stronger legal standpoint in case of a claim of infringement, misuse or breach of trade secrets.²³⁰

Identification, ownership and use of information are key for trade secret protection and its value.²³¹ Taking appropriate measures, which means to create internal company policies or manuals, are *de facto* conducts that must be adopted by start-ups to have protection when sharing information (even within its organization)

²²⁹ Cabanellas, 2004. Op. cit.

²³⁰ Brant & Lohse, 2014. Op. cit.

²³¹ Olson D, 2010. Valuation of Software Based Trade Secrets Part 5:TSV (ICS). *les Nouvelles Journal of the Licensing Executives Society International*. Vol. XLV No.1.

and third parties. This is a comprehensive system which is further strengthened through contractual tools including, confidentiality, non disclosure, non compete provisions, as expressed in the second layer explanation below.

e. Cost-effectiveness: Early advice.

The actions and suggestions described in sub-sections a. to d. above do not address the interaction of the company with any third party. They are Intellectual Property legal regimes that can be used to obtain market advantage based on the company innovation. Starting by identifying the company activities in which knowledge is generated or those which add value, will allow to determine the relevant intellectual assets that provide market edge from a business standpoint. The company will then be in a position to prioritize which of those should be protected. This will be useful to prepare the company's overall Intellectual Property strategy.

Business models, in which intellectual property is not shared at all, are becoming less effective as a consequence of fast evolution of knowledge, worldwide communications and interconnection.²³² The original model in which the owner/developer creates a new company around a new development is no longer the most common business model today. Sharing protected IP through licensing, franchising and distribution agreements (among other types of business models already described in section I.2 above), has enabled fast growth and internationalization of products, trademarks and technologies, without requiring the developer to bear all costs of such expansion. Risks and benefits of products and markets should be properly balanced.²³³

Intellectual Property must be protected from the beginning. Once a product or service is already in the market, it might be too late. Failing to timely protect could mean that relevant information is disclosed (even accidentally), which would

²³² Llewelyn, D. & Williamson, P.J., 2014. Strategies for Surviving in China's Intellectual Property Minefield. (2014). Research Collection School Of Law. Available at: http://ink.library.smu.edu.sg/sol_research/1298 [20 December 2014].

²³³ "The International Entrepreneur – 5 Smart Ideas for Protecting IP in International Markets", 2014. Available at: <http://www.the-international-entrepreneur.com/the-international-entrepreneur-5-smart-ideas-for-protecting-ip-in-international-markets/> [16 December 2014].

imply losing the chance of protection as trade secrets and patents, and even worse that the business' competitive advantage may have been lost upon disclosure.

Early legal advice is required, and legal fees at this stage should not be too high. The cost of a report describing local applicable tax benefits for the company's particular business, trade secret and other regulations (see section 2 below: *Relations with Third Parties*) and a company incorporation process, should be far from those related to patenting application, litigation and enforcement fees. The start-up will do most work concerning the identification of relevant business information. These costs should be included in the survival stage business plan. It is relevant to start and assure that the work performed will be for the benefit of the company owning the Intellectual Property.

2. Contractual Relations: Employees and Third Parties.

a. Who is your team? How are you working with?

Once the company has been set up, Intellectual Property was contributed to the company and the entrepreneur has identified key business information available and hopefully its trade secrets, it will probably start to hire employees.

Due to the small size of a start-up in its early stages, trade secrets and confidential information are usually managed by the complete team (one to four members are an average number I have gotten to see in Chilean start-ups). Because of costs and depending on the company's original business plan, a common practice is to lease or sublet work rooms or small offices were other start-ups or companies are already working; outsource certain services and rent computers and IT systems which may require external data storage (e.g. public servers, cloud computing). A start-up will also commence negotiations with suppliers, and search for funds, either from direct investors, *family, fools and friends* (FFF), universities or government agencies, etc. These activities require entering into agreements with third parties and company employees.

On this second level of the inside out approach introduced in this thesis, the final outcome is not completely controlled by the start-up, but it does have some leverage and control, depending on the nature of the relation (stronger when hiring employees, and less strong when requiring services.) Ultimately, the company can decide whether or not to commence negotiations and analyse the consequences for its Intellectual Property resulting from employment contracts and service providers' agreements. As explained in section 1 above, understanding the Intellectual property regime and rules is crucial for the start-up to properly assess its decision while building its team, setting up its operation and deciding how and when to enter into agreements with third parties and employees.

b. Protection from and by Employees:

While the key issues remain the same, they are now addressed from a *company team* perspective. Employees are probably the weakest link in the company's Intellectual Property protection scheme,²³⁴ not least because employee mobility and job hopping are now national and international realities.

i. Ownership: Work for Hire and Assignment.

*'Microsoft can fire all of its programmers, but still have its intellectual property.'*²³⁵

It is not uncommon for entrepreneurs to assume that *any work* created during the term of an employment agreement by employees is the company's property. This assumption is, however, not always correct with potentially dire consequences for the company if Intellectual Property is not owned by the company or remains unprotected. As previously stated, a start-up must make sure that benefits arising from creations and innovations of its employees benefit and are owned by the company. These concerns are usually addressed in *work for hire* and *assignment* obligations included in the relevant employment agreements, allowing the company to be the owner of the existing and future IP generated by its employees.

²³⁴ Sheikh T. "Trade Secrets and Employee Loyalty". WIPO SMEs Division, Intern. http://www.wipo.int/sme/en/documents/trade_secrets_employee_loyalty.html [30 January 2015].

²³⁵ Noto;2011 p.20. Op. cit.

The general rule applicable to Intellectual Property rights is that the person who creates a work is the owner of such creation. However, this is subject to many exceptions which vary depending on the type of right (copyright, patent, trademark, trade secret, etc.) and creation (artistic and literary work, inventions, ideas, designs, names, signs, etc.). A main exception under which ownership of work/invention may not be held by the person creating the relevant work (creator/inventor) applies to *work-for-hire* and employment contract scenarios. Ownership of IP by the employer may need to be expressly included in an employment contract, or can be a direct result of the applicable law. In South Africa, for example, in the case of copyright, the author is usually deemed the copyright owner. However, there are certain exemptions to this rule. For instance, according to s21(1)(d) of the Copyright Act, the employer is ‘the owner of any copyright subsisting in the work’ if the ‘work was made in the course of the author’s employment by another person under a contract of service’. Furthermore, ownership of works which were made ‘by or under the direction or control of the state’ initially vests in the state and not in the author (s 21(2)).²³⁶ See also *King v SA Weather Service* (716/2007); para.9.²³⁶

If works and innovations are by law not owned by the employer, this situation can, of course, be modified by contracts.

If necessary, employers may also make use of assignment agreements to become owner of the relevant innovation or creation. Requirements for such assignment agreements do, however, vary from country to country for the different kinds of IP (e.g. patents, trademarks and copyright may need registration of the assignment, and the assignment itself could be subject to certain formalities like execution before a notary public).

In South Africa, assignment of Intellectual Property is generally permitted.²³⁷

²³⁶ *King v SA Weather Service* (716/2007) [2008] ZASCA 143 (27 November 2008). Available at: <http://www.saflii.org/za/cases/ZASCA/2008/143.html> [30 January 2015].

²³⁷ NRF, 2014. Op. cit.; and

Under Chilean Intellectual Property Law, work for hire clauses are not expressly recognized, except for the specific case of software created by an employee within its employment relationship, in which copyright is vested in the employer company directly (unless otherwise agreed). In all other different situations, the company will not become the owner of its employee creations merely by the fact of having an employment relationship. Specific work for hire and/or assignment provisions should thus be included for this purpose in the employment agreements.

However, work for hire and intellectual property rights assignments have different consequences. When a work is done as work for hire, the intellectual property rights are vested originally in the employer. The Intellectual Property rights never belong to the individual that made the relevant work. As a consequence, the commissioning party is free to use the work as its own. When a work is not commissioned as work for hire, but is subject to an assignment of rights, then the original ownership is vested on the individual that made the work and then passed on to the principal.

Despite the foregoing, innovations created by employees subject to work-for-hire provision may still require the participation of the author or creator for being fully *owned* and effective against third parties by the employer. E.g. when registering a statutory right, like a patent, as an employer, the company does not want an employee to contest or object an application or registration nor allow the employee to have a *de facto* control because his/her additional signature for application is required.

The recommendation is to expressly include an express work-for-hire provision on employment contracts jointly with the obligation for the employee to subscribe any additional required documents in favour of the employer to confirm or register the employer rights over the inventions.

From lessons learned in the United States case of *Board of Trustees of the Leland Stanford Junior University v. Roche Molecular Systems*,²³⁸ it is important that an Intellectual Property assignment agreement is carefully drafted to reflect an immediate assignment of all future creations, and not an obligation to assign creations in the future. Assignment obligations of the employee should be worded as “*hereby assigns*” and not “*agrees to assign*” or “*is obliged to assign*”.

The following provisions that should also be included to secure ownership of works by the employer: (i) the obligation of employees to facilitate and not to oppose to any statutory rights application or registration by the employer; and (ii) to waive all moral rights to the extent permitted by local regulations. The possibility of granting the company (employer) a power of attorney to execute certain Intellectual Property privileges application documents on the relevant employee working contract may also be considered.

In summary, properly drafted employment agreements are material for properly addressing the important issue of Intellectual Property ownership in employer/employee relationships as well as in relation to third parties.

ii. Protection in commerce: Trade Secrets and Confidentiality.

Effective protection of company trade secrets will rely on a proper policy being implemented, employees being educated and understanding of its nature and internal and legal regulation. The internal policy framework regarding trade secrets should include limited access to trade secret information. In particular, access to such information must be physically and digitally locked or restricted, and only managed

²³⁸ An employee of the Stanford university in his employment contract had “agreed to assign” inventions created during his employment. During this same time, allowed by the university it went to research to a laboratory, Roche. To work at the laboratory it signed an agreement which stated that he assigned his innovations created while at Roche to Roche (“hereby assigns). Court held that among other explanations, because the Stanford contract was a future obligation, the assignment executed with Roche was valid, as the property of inventions at that stage relied on the inventor. There was no assignment agreement to Stanford executed at the time the professor signed the Roche assignment. Please refer to:
Stanford v. Roche, 563 U.S. ____ (2011); Available at: <http://www.supremecourt.gov/opinions/10pdf/09-1159.pdf> [30 January 2015].

on a need to know basis.²³⁹ Locking, physically securing (either by placing in a vault, locked, or hidden place, etc.), as well as the application of passwords, special configurations and/or fragmentation of the information content are all valid options of restricting access and fulfilling the requirement of doing reasonable efforts to keep information secret, granting the chance to opt for legal trade secret protection. This could sound overzealous at the early stages of a start-up but when the company subsequently enters the Death Valley phase creating this type of policies will become less of a priority than actually surviving. Therefore, this is an effort that should already be done at the initial and planning stage.

The relevance of protecting trade secrets is of such importance that according to the United States National Security Agency, United States companies lose approximately 'USD 250 billion per year due to cyber theft of trade secrets' while United Kingdom businesses lose approximately GBP 21 billion per year due to Intellectual Property theft and espionage.²⁴⁰ In this context, interaction by employees and third parties becomes an issue. Once information is disclosed, it can no longer be considered confidential or a trade secret.

As suggested above, once the access to the trade secret information has been regulated (usually on a need to know basis), necessary disclosures of the trade secret need to be addressed. This is best done by way of introducing confidentiality obligations. These obligations can either be included in labour/employment agreements (which I believe is the most practical and cost effective approach) or spelled out in a separate agreement.

It is important to understand, however, that not all business information is confidential, and that not all confidential information is necessarily a trade secret, as captured in the following graphic.

²³⁹ Maloney M & Woley A, 2009. The Intellectual Property Deskbook for Lawyers : a Transactions-Based Guide to Intellectual Property Law. Chapter 2 Intellectual Property Issues in Employment Law. 2nd ed.: American Bar Association. Available at: <http://www.liskow.com/PublicationFiles/IPD2%20chapter%202.pdf> [30 January 2015].

²⁴⁰ Brant & Lohse, 2014. Op. cit.

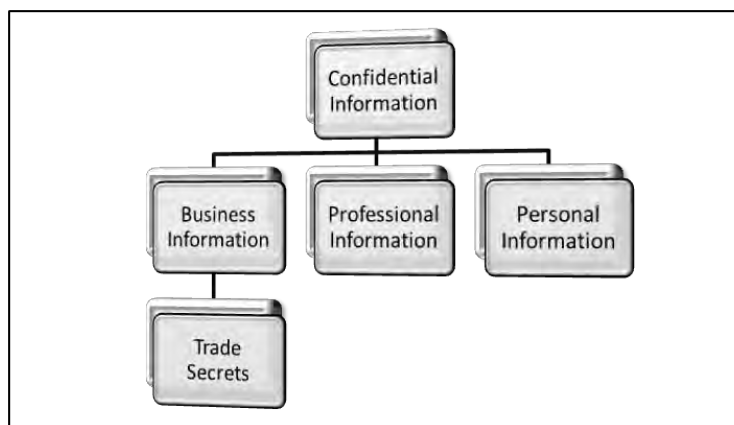


Figure [5] adapted from European IPR Helpdesk (2012).²⁴¹

Confidential information must be the specific piece of information, configuration, data, etc. which actually provides market advantage. For instance, bank account numbers, tax obligations, and certain information used in-house during the regular course of business is confidential information and should thus not be disclosed - but such information is not a trade secret. A company should not state that all its information is confidential or a trade secret. Trade secrets need to be identified to be protected. A restrictive obligation of confidentiality will not be enforced by courts unless it is necessary to protect a trade secret.²⁴²

In the English *Faccenda Chicken v. Fowler* [1987] Ch. 117 case, J Goulding made a distinction of three classes of information an employee has access to during the course of their employment: (i) *public not confidential information*, which employees are free to use or disclose; (ii) *confidential information* which the employee should treat as such because (s)he has been so instructed or because it is clear from its character that it is confidential. This information, however, is learnt and becomes knowledge of the employee. Further, this information cannot be disclosed to third parties during the employment relation of such employee, but there is generally no restriction on the employee using such information once his employment has been terminated; and (iii) *trade secrets* which are the most confidential information. Even if such information is known to the employee it cannot be lawfully used for any purpose other than the employer's (or former employer) benefit. If a non-disclosure agreement exists, it is this document which

²⁴¹ European IPR Helpdesk, 2012; p2. Op. cit.

²⁴² Swarb.co.uk, 2015. *Faccenda Chicken Ltd -v- Fowler CA 1986*. Available at: <http://swarb.co.uk/faccenda-chicken-ltd-v-fowler-ca-1986/> [30 January 2015].

usually governs confidentiality obligations, thus avoiding interpretations by courts of the extent of disclosure obligations arising from the nature of the job and the contract of employment.²⁴³

Despite the applicable regime, i.e., if confidentiality duties are deemed included in an employment agreement, or an express provisions in this regard is required (as provided by applicable domestic laws), the start-up position improves if confidentiality obligations are included in the employment contract because in addition to being bound to keep information confidential: (i) the employee acknowledges and accepts that the Confidential Information is of the start-up's property; (ii) is now (more) aware or reminded of its obligation and knows that breach of these are a cause of termination of his employment contract; (iii) the company may use this agreement to let employees know that they will have access to this type of information due to the trust the company has in them, and thus helping to develop employee loyalty; (iv) the employee expressly accepts that such disclosure can cause harm (irreparable, in the case of trade secrets) to the company; and (v) enforcement of trade secrets is analysed on a case by case basis and depends on a particular case set of facts. Taking this measures enable the company to protect its competitive advantage through trade secrets.²⁴⁴

Confidentiality obligations of an employment agreement should include provisions aiming to: (i) define the scope of information to which the obligations apply (e.g. which can refer to a specific industry, related to a specific field, include all intellectual property of the employer, etc.) and to keep confidential information strictly confidential and take all (reasonable) steps necessary to maintain confidentiality; (ii) use the confidential information only for the company's benefit; (iii) not disclose any confidential information to any person other than certain authorized persons defined by the employer; (iv) limit any copying of confidential information to the copies reasonably needed for the scope of its duties in the business; (v) forbid the confidential information of being copied, reproduced, transmitted, communicated or otherwise made accessible to a third party without

²⁴³ [1987] Ch 117, [1986] 1 All ER 625; Available at: <http://www.saflii.org.za/za/cases/ZAGPJHC/2011/1.pdf> [30 January 2015].

²⁴⁴ Maloney & Woley, 2009. Op. cit.

express written consent of the employer; (vi) bind the employee to accept the confidentiality policies and obligations to prevent unauthorized access to confidential information, and to notify the employer if it becomes aware of any possible disclosure or attempt to access it by third parties; and (viii) make the employee, subject to applicable law, indemnify and hold harmless the employer of, from and against any claims, demands, causes of action damages, liabilities, judgments, costs and expenses against or incurred by the employer as a result of his breach or violation of or failure to comply with the confidentiality obligations.

Confidentiality obligations should survive the employment contract, to the longest term permitted by applicable law. This is closely related to non-competition provisions described in the next section. Confidentiality obligations will help protect trade secrets by forbidding disclosure of confidential information and preventing its use for any purpose other than the company's benefit. Employees or any person that may handle or have access to trade secret information must be bound by confidentiality obligations.

Any documents containing trade secrets should be marked as "*Proprietary Confidential Information.*" Meetings in which this type of information might be addressed should begin and end with a notice of confidentiality (keeping written minutes is also advised). Employees should be made aware that knowledge that is generated within the company may qualify as confidential information, and that the company has taken measures to protect its secrecy and avoid employees' intended or unintended disclosures. Employees should also be reminded not to talk about sensible business information or data in public places (including websites, chats, mobile applications, and the internet in general).

In addition, the start-up should generate documents or records of the training and information granted to its employees in this regard. This may include records of attendance of relevant in-house or external lectures, classes or training, as well as periodic signatures and acknowledgements concerning the company's Intellectual Property manual or policy, ideally every *few* months. Keeping a record of Intellectual Property related matters will provide a better chance to prevail in subsequent disputes over intellectual property rights. The company should also

acknowledge that knowledge may arise not only from formal but also from informal meetings. The company should try to identify where and when knowledge generation occurs and periodically conduct formal reviews to establish whether any new developments, processes or useful business information were created, and the extent to which this impacts and/or adds value to the company's business. This is important because only once the company knows this, it will be able to assess whether it is worth protecting and how.²⁴⁵

Once the company has defined its Intellectual Property protection policy, principles and culture, it should put emphasis on making employees aware of it and simultaneously create proper incentives for adhering to these policies and principles.²⁴⁶

iii. Exclusivity and Non-Compete / Restrain of Competition.

Companies usually want their employees to work exclusively for them, and not to engage in any action or business which competes with the company (employer). Any employee who knows about the start-up's trade secrets potentially becomes a threat once the employment ends. It is in the company's best interest to avoid a competitor having access to its confidential information, and especially to its trade secrets. This is best achieved through exclusivity and non-compete provisions. As well as confidentiality obligations, these provisions should also be included in the relevant employment agreements. Importantly, the company would want the non-compete obligation to survive the employee's working contract.

The South African Constitution guarantees people the right to choose their 'their trade, occupation or profession freely'.²⁴⁷ Likewise in Chile, its Constitution

²⁴⁵ Olson, 2010. Op. cit.; and Slater D, 2004, updated 2012. Op. cit.

²⁴⁶ Llewelyn & Williamson, 2014. Op. cit.; and

Federal Bureau of Investigation. "Intellectual Property Protection: Safeguard Your Company's Trade Secrets, Proprietary Information and Research. US Department of Justice – Federal Bureau of Investigation". Available at. http://www.fbi.gov/about-us/investigate/counterintelligence/intellectual_property_protection [30 January 2015].

²⁴⁷ Constitution of the Republic of South Africa, 1996, as amended; s22. Available at: http://www.saflii.org/za/legis/num_act/cotrosa1996423/ [30 January 2015].

guarantees every person the freedom of work and its protection. In Chile, no kind of work may be forbidden, except for those which are against the moral and public policy; or if the law allows such prohibition. In addition, the Chilean Constitution guarantees the right to carry out any economic business or activity.²⁴⁸ A case in which the law allows the prohibition of a certain work is the possibility of the employer to include a prohibition for the employee - in the employment contract - to carry out work within the scope of the employer's business.²⁴⁹ Therefore, there is no inconvenience including non-compete obligations of the employee with its employer's business, in employment contracts and for those obligations to be in force during the term of such contract. Furthermore, unlawful competition is a cause for dismissal without severance.

After the termination of the employment contract the enforceability of such restrictions is questionable. Traditionally, non competition provisions were considered illegal and unenforceable as a limitation of the constitutional rights of freedom of work and freedom of commerce. Still, many companies chose to include these restrictions, expecting to make their cases in the courts or at least as a moral argument over the employee. However, there have been court decisions (which are not binding under the Chilean legal system but are used as guidance on future court decisions) that acknowledged the validity of these covenants, considering them a legitimate way for a company to prevent competition from former employees who managed sensitive and strategic information of the business. In the cases where courts have admitted the legality of these covenants, they were applied in respect of key employees who during their employment received special training by the company, received a significant compensation and/or had access to the client's key and/or confidential information. However, for non-compete obligations to be enforceable, Chilean courts have stated in their decisions that the following requirements should be met: (i) the scope of the restriction should be reasonable, being limited to the Company's specific line of business, so that the employee still has the possibility to provide services to other employers; and (ii) the duration of the

²⁴⁸ Consitucion Politica de la Republica de Chile, 1980; Art.19 Nos. 16 & 21. Available at: <http://www.leychile.cl/Navegar?idNorma=242302> [30 January 2015].

²⁴⁹ Codigo del Trabajo de la Republica de Chile (Labour Code); Art. 160 No.2 Available at: <http://www.leychile.cl/Navegar?idNorma=207436> [30 January 2015].

restriction must be justified by the interest of the company. In other words, it must not be indefinite or excessively long. In general terms, the restriction period will depend on each particular case, but in no case should exceed 1 or 2 years from the termination of the relevant agreement.

In addition, in Chile it is not a requirement to pay employees an additional compensation for invoking the non-compete obligation --the compensation received during the employment is considered enough. Nonetheless, as a practical incentive, some companies pay former employees for non-competing, but only once the non-competition term has expired and the employee has indeed fulfilled these obligations.

In the case of South Africa, a non-compete or *restraint of trade* provision may be also included in the employment agreement. Like in Chile, the Constitutional right as well as public interest and public policy are limitations for this kind of provisions. Further, in the *Basson v Chilwan and Others*²⁵⁰ case South African courts have defined the following set of questions to determine the validity of restraint of commerce obligations: (i) does the employer have an interest that deserves protection after termination of the employment agreement?; (ii) is that interest threatened by the other party or could the former employee prejudice such interest?; (iii) is the employer's interest qualitatively and quantitatively weighed over the interest of the employee not to be economically inactive and unproductive?; and (iv) does public policy (regardless of the parties relation) require that the restraint be maintained or rejected? If the interest of the restrained employee outweighs the employers' interest, the non-compete obligation will be deemed unreasonable and unenforceable.²⁵¹

In light of the above, non-compete obligations should not be a general restriction for all company employees. It should only be included in employment

²⁵⁰ *Basson v Chilwan and Others* (332/1991) [1993] ZASCA 61; 1993 (3) SA 742 (AD); [1993] 2 All SA 373 (A) (17 May 1993). Available at: <http://www.saflii.org/za/cases/ZASCA/1993/61.html> [30 January 2015].

²⁵¹ Law Library Protection, 2013. Op. cit. and

Ainslie K, 2013. "Business connections and trading secrets: are your restraints enforceable?" *Global Workforce Insider*. Available at: <http://www.globalworkplaceinsider.com/2013/06/business-connections-and-trading-secrets-are-your-restraints-enforceable/> [30 January 2015].

agreements of those employees that due to their position manage trade secrets and extremely sensitive, strategic information and which implies a risk to the company if it were to compete directly. If used, such obligation should allow the former employee to continue to work, just not in direct competition with the former company.

From the start-up company's side, when hiring a team, it should confirm that the new and potential employees are not currently bound or restricted by any confidentiality or non-compete obligations with former employers as this could cause a potential intellectual property and/or unfair competition liability for the company.

Finally, when firing employees or in case of resignations, exit meetings should be conducted to again remind these employees of their confidentiality and non-compete obligations.

iv. Policies and enforcement.

The previously discussed concepts of trade secrets, confidentiality, Intellectual Property ownership, exclusivity, non-competition or restraint of commerce, should be a part of and inform the company culture. It is the company's duty to educate its employees in this regard, to guide them and set minimum standards, and to constantly repeat and communicate its policy and its importance to its employees. Especially at the Survival Stage, when offices and services are often shared, elements that may be considered in such policy may include: having a clean desk policy, promoting responsible and limited use of electronic resources, and conducting a periodic review of who has access to confidential information, monitoring the use of such information (while respecting privacy), etc. It is important that these policies are actually enforced to create a company culture of compliance. In addition, keeping records of documents in which the policy and its acceptance and acknowledgement is evidenced, as well as the employment contracts including work for hire, assignment, confidentiality and non compete provisions will improve chances of succeeding in case a legal dispute arises.²⁵²

²⁵² WIPO Managing, 2014. Op. cit.

In practice, the smaller size of start-ups may be considered as a positive trait. It should be easier to generate employee loyalty. In fact, keeping employees motivated might be the best advice. Start-ups are usually more flexible than big corporations in this regard. Extra days off, work from home, stock options or equity incentives may fulfil this purpose without affecting the start-up's cash flow during the Survival Stage.

c. Protection by and from Third Parties:

Start-ups relations with third parties will vary depending if it is the supplier or service provider or the principal or receiving party of the relation. However, similar provisions as proposed for employees can be used *vis-a-vis* suppliers because the Intellectual Property concerns are essentially the same: the concern ownership, competition, cost effectiveness. Protection of the company in its relations with third parties can be achieved through contractual tools.

The first requirement for Intellectual Property protection in respect of third parties is to have written contracts with all third parties the company interacts with. Despite most consensual verbal agreements being legally valid, the only way to have a record of agreements in respect of Intellectual Property is to have them written down, and as (hopefully) stated in the company policy, keep a copy (record) of them.

The second advice is to let the third party know that the company owns and utilises Intellectual Property, that it complies with Intellectual Property laws and that it expects the third party to do the same.²⁵³

The third advice is to only disclose information that this particular third party needs (need to know policy), and not all the information.

²⁵³ International Chamber of Commerce, 2011. Intellectual Property Guidelines for Business. Business Action to Stop Counterfeiting. Available at: <http://www.iccwbo.org/Data/Documents/Bascap/IP-guidelines/IP-guidelines-English/> [16 January 2015].

In addition to the employees' confidentiality, work for hire and assignment obligations which *mutatis-mutandis* apply to third parties, the following positive and negative covenants should be included in third party agreements to sufficiently protect the company's Intellectual Property.

i. Positive covenants.

Acknowledgment of ownership of confidential information and intellectual property. One of the most important provisions a start-up should consider including in its agreements with third parties, especially in the case of suppliers and investors, is an acknowledgement of third parties that the Intellectual Property (trade secrets and confidential information) they will have access to is and remains the property of the start-up. This recognition of Intellectual Property ownership has similar effects for the relationship between the company and third parties as patents have in respect of society. The company would stand as such Intellectual Property owner in respect of the party that recognized it, and be entitled to exercise all proprietary rights in its respect. Such recognizing party would make very difficult for itself to later argue that it developed or owned such an Intellectual Property, going against its own previous statement and conduct. Considering that suppliers and investors/financiers will have direct contact with trade secrets, confidential information, part of products technology, designs, etc., they are one of the biggest threats in terms of misuse of such information or copying of the products or services that embody the company's trade secrets and intellectual property. If the third party breaches the confidentiality, work for hire, assignment, or any other obligation towards the company, the signed agreement containing such provision would certainly improve and be a material proof of ownership in case of ownership and misappropriation disputes in court.

The duty of care of the third party regarding information should be raised as much as possible. It should be at least the same degree of care to prevent the unauthorized use, disclosure or publication of confidential information, as the third party uses to protect its own confidential information, but in any case no less than a reasonable degree of care.

Work for hire and ownership regarding improvements. All contracts with third parties should include work for hire and assignment provisions in favour of the company. In addition, it is proposed here that contracts should also state that any and all improvements, inventions, applications or developments which arise from the services rendered to the company or the latter's trade secrets or which turns out from meetings should be expressly considered as work for hire and of the exclusive benefit and ownership of the company.

The counterparty should also be obliged to assist the company in any registration process regarding improvements and products described to which the company is entitled as a consequence of this agreement.

These provisions should be accompanied by company declarations that reinforce the company proprietorship of the Intellectual Property. E.g. provisions stating that: (i) the disclosure of any confidential information does not grant nor transfer any rights to the counterparty; (ii) the agreement does not transfer any title to or interest in any industrial or intellectual property rights other than the right to use the confidential information for the purposes of the agreement; and (iii) no term of the agreement should be construed as to limit the right of the company to sell or otherwise to dispose of any products or services or to conduct similar discussions or negotiations or to conclude any similar agreement with any third party.

Even though ownership is the strongest right, in certain cases the company may only a royalty-free and possibly exclusive license to use the improvements. This should be assessed on a case by case basis.

Return of information and protection of disclosure. The agreement should include the third party's obligation to notify the company if it becomes aware or has any reason to assume that an unauthorized person has accessed confidential information, wrongfully used such information, or is aware of a breach of contract. Further, the third party should be obliged to return to the company and/or delete on their side all confidential information and its copies once this information is no longer needed or the contract is terminated. Even if requested or obliged by statute to disclose confidential information to any public authority or agency or to any court,

the counterparty should first be obliged to notify the company within a reasonable timeframe. Thus, allowing the company to take possible legal or practical measures to reduce disclosure related risks as much as possible.

Limitation of Liability. Non disclosure agreements are also useful to protect the start-up's liability arising from its own intellectual property and strategy. As previously stated, not all trade secrets should be disclosed, but rather only the necessary pieces of information to close deals and conduct business. The agreement should include provisions that mitigate the company's liability, therefore, the agreement should, for instance, not include any obligation or undertaking by the company: (i) to disclose any particular items of information; (ii) that any item of confidential information is free of third-party rights; (iii) that the confidential information is accurate or complete; (iv) to purchase, sell, license, transfer or otherwise dispose of any technology, services or products, intellectual property; (v) to conclude any further agreements, despite binding the two parties to negotiate on a *bona fide* basis. In addition, the company should also make clear that it will not be liable for any loss suffered by the counterparty as a result of the use of erroneous or incomplete confidential information.

Moreover, the start-up should consider including a third party obligation to indemnify and hold the company harmless in cases of breach of contract, in a similar manner as proposed above for employment agreements. In this case, however, the parties can agree upfront on a contractual penalty for misuse of confidential information, in addition to general damages (from which the contractual penalty may have to be deducted depending on the applicable law).

Another way of limiting or even transferring liability is the following: In certain fields of innovation, Intellectual Property is tested on prototypes before proceeding to commercial scale. In certain cases, start up's should thus explore the possibility of transferring the liability to the third party upon successful trial of the prototype. In other words, the start-up only assumes liability for the results of the smaller scale *prototype* test. Upon successful prototype testing, the start-up shall no longer be liable or responsible for the larger or industrial escalation and commercial version of the prototype. Such limitation of liability regime, if chosen, is usually

included in technology licensing and intellectual property companies purchasing agreements.

Marketing obligations. Yet, another tool to protect the company's intellectual property and business is to include third party obligations according to which the third party is obliged to use the company, their product or service trademark in all their marketing campaigns. This is useful in cases where the innovation of the company is part of a larger product or project. For instance, Intel micro processors are internal and usually invisible parts of computers, but when advertising or selling computers, computer manufacturers have to display the Intel logo. This obligation increases visibility to the company and firmly positions it in the market, while protecting the product and trademark and embodied Intellectual Property.

Other commercial provisions. In case of collaboration agreements cross-licensing agreements, agreements to share future innovations, as well as agreements to transfer technology subject to a staged plan, are also ways to protect ownership, use and market presence of Intellectual property. Additionally, especially in licensing and distribution agreements, provisions authorizing the company to audit or designate an external auditor to review the third party's relevant accounting books, can provide useful insight to control and monitor compliance of contract obligations.²⁵⁴

ii. Negative Covenants.

Limited use Confidential Information. The confidential information and Intellectual Property disclosed to third parties is in practice limited to a specific purpose. Whether it is to analyse a possible investment (in an investment pitch), obtain certain raw materials or services, negotiating a manufacturing agreement, etc., the purpose of such disclosure should be clearly defined in each agreement. The use of the confidential information and intellectual property should be limited to just that specific purpose and any other use should constitute a breach of the agreement and a

²⁵⁴ Llewelyn & Williamson, 2014. Op. cit.

cause for early termination of the agreement. The third party should acknowledge that uses beyond the agreed purpose could cause irreparable harm to the company. Documents containing confidential information should be dated and marked as such and additionally include the phrase “prepared exclusively for [the third party]”.

Not only should the purpose of the confidential information be defined, but the confidential information itself should be defined when dealing with third parties, assuming not all the company’s trade secrets or confidential information have been disclosed. The definition can be broad, include exceptions and transfer the burden of proof of the exception to the third party. For instance, confidential information can be defined as any and all information of whatever nature (whether stated to be confidential or not) relating to the relevant innovation which has been or will be made available to the counterparty by the company or any such information which the counterparty has obtained or will obtain in the course of any meeting, examination or demonstration, etc. However, such a clause should exclude information which: (i) at the time of disclosure to the counterparty, or thereafter becomes part of the public domain for any cause other than breach of the agreement by the counterparty; (ii) the company has authorized in writing its disclosure to any third party; (iii) was already in the possession of the counterparty prior to disclosure by the company and has not been acquired directly or indirectly from the company; (iv) is disclosed to the counterparty by a third party which did not obtain it under any confidentiality obligation directly or indirectly from the company; or (v) was independently developed by or for the counterparty without reference to confidential information disclosed by the company or its affiliates. The burden of proof demonstrating that any of the exceptions set forth from (i) to (v) apply should lie with the third party.

The third party should only grant access to the company’s confidential information to select personnel, on a need to know basis, provided such access is necessary to perform their duties in respect of the agreement. The counterparty should expressly assume responsibility for its employees’ actions. If trade secrets are being shared, a confidentiality agreement with similar terms to the one executed between the company and the third party, should be required to be executed between

the third party and its employees, and a copy of such agreement should be provided to the company.

It should further be clarified that regarding Intellectual Property and confidential information, the third party is subject to: (i) a prohibition on reverse engineering, (ii) non-compete obligations; (iii) exclusivity (if possible). It may be easier for a start-up to negotiate the obligation of not working with or for competing projects, companies or businesses; (iv) an obligation of not applying for any intellectual property rights connected with the company business; (v) a prohibition on copying or imitate in any manner any of the company's products or services whether or not protected by Intellectual Property rights.

Restraint to contract company employees. The third party should not be allowed to contract any start up employee while the agreement is in force and, if possible, such restraint such survive the agreement for as long as possible.

Deal structuring and funding. At the time of structuring deals there are many alternatives to protect the Intellectual Property and company business. Usually a start-up businessman who understands the Intellectual Property system can help lawyers with creative commercial alternatives which benefit the company business and protect its Intellectual Property. These alternatives can only be created on a case by case basis. Examples are: (i) to include in the Memorandum of Understanding or Letters of Intent binding confidentiality obligations and ownership acknowledgement provisions as stated above; (ii) when entering into collaboration agreements or on a staged sale of Intellectual Property, stating the difference between the *original* Intellectual Property owned by the start up and future *joint* Intellectual Property, to be developed and owned by the two parties. This might be very useful for the party contributing the *original* Intellectual Property, especially if the Joint Intellectual Property requires the *original* Intellectual Property to work or be commercially exploited. In this scenario the negotiating position of the start up improves at the time of addressing prices and licenses royalties, because it is the sole owner of part of the technology which is valuable to the market. Further, the *original* Intellectual Property remains under the control of the company; (iii) Vertical Integration. To protect the product supplied to the market, the company may create

a component or service which is constantly needed by the technology or Intellectual Property users. The company can structure the business in such a way that if the products and maintenance services determined by the company are not used, the technology or Intellectual Property guarantee is lost. Even if not owned by it, the company may state that guarantee is subject to purchasing certain products or services to its authorized suppliers. This supplier may be an authorized supplier because of a long standing relation with the company which does not endanger the company Intellectual Property and/or because they have a commercial agreement with it, or both; (iv) When start ups are looking for funds, private and public tender as well as venture capitals are common options. In all these cases, but particularly in public tenders, detailed attention should be given to the tender rules concerning intellectual property and/or ownership provision. For publicly funded entities and organizations specific laws may apply, and being awarded funds from such entities may mean that innovations resulting from the use of such funds are to be shared with the relevant public entity. In case something remains unclear, companies should not only try to answer any questions themselves (e.g., with the help of legal counsel) but should also consider to submit such questions while the relevant tender questions and answers period is still open. In public tender processes, answers to these questions are usually deemed part of the tender rules, and are incorporated by reference to the final awardees agreement. Properly drafted questions could effectively end up modifying the relevant funding contract and protecting the company Intellectual Property; and (v) in certain countries, including Chile, certain specific consumer protections provisions regarding *abusive* clauses, are also applicable to SMEs. Therefore, certain provisions ‘forced into’ start-up contracts might end up not being valid.

e. Cost-effectiveness.

As stated above, early legal advice is required to prepare employment contracts and third party agreements. Legal fees for these tasks should not be significant, and templates of agreements may be requested to be prepared. These costs should be included in the survival stage business plan. It is relevant to assure that since the works begin, these are in benefit of the company. The company shall own and

protect the Intellectual Property to maximize its benefit. This is how, when and where it starts materializing its company Intellectual Property strategy.

3. Relations with Society.

a. Statutory rights.

As stated in Chapter II, statutory rights are important when it comes to a company's relationship with society. Patents become particularly relevant in the globalized markets due its relatively harmonized international and national regulation. Statutory rights are one of the cornerstones of intellectual property transfer from private to public ownership and to allow public/society access to technology.

b. De facto protection.

As stated above there are numerous tools for protection which complement statutory rights. These tools are not limited to in-house company matters or company contracts with its counterparties. Some *de facto* Intellectual Property protection measures are necessary to protect Intellectual Property from third parties with which the company does not have directly dealings with. Legal initiatives are not enough and need to be complemented with pragmatic and creative measures and strategies.²⁵⁵ Among others, the following measures should be considered:

Public enforcement of policies. Companies should advertise and publicly enforce their Intellectual Property policies to generate awareness of them, in its relevant business and client environment.²⁵⁶

Decoys in commercialized goods. Companies may include, as applicable, in their products decoys with the only purpose of distracting competitors or third parties trying to copy the Intellectual Property protected product. This will make it more

²⁵⁵ Llewelyn & Williamson, 2014. Op. cit.

²⁵⁶ Id.

difficult for third parties to figure out a product's functionality, and if the decoy is included in a copy, this copy can be easily identified as such.

Long term relations. As described in the scenario of vertical integration, the company can provide, even for free, maintenance and/or implementation and/or support services in situ, with the purpose of: (i) generating a relation with its client; and (ii) being able to verify and review whether the Intellectual Property is being used for its purpose or, if not, how it is actually being used.

Market presence. To the extent possible companies should aim to establish physical presence in the market/ region where their products and services are being commercialized and are at risk of being copied. If this is identified, it should focus its vigilance efforts in the correct use of their products and services, as well as relevant market behaviour and new products.

Alignment with Government Policy. As suggested by Llewelyn & Williamson (2014),²⁵⁷ company policy should be in line with the relevant Government policy on Intellectual Property. In Chile for example, it is common practice for companies importing products into the country to teach the National Customs Service personnel about original products' specific features so they can recognize counterfeit or copied products. Companies can also provide the National Customs Service with contact details and should the customs service thereafter identify counterfeit products, it will notify the companies and keep such products in storage for a limited term for inspection. Based on such inspection, companies may then decide whether or not they wish to pursue legal actions.

²⁵⁷ Id.; p.19.

V. Summary, Conclusions and Recommendations.

1. Summary of findings.

The main findings in this thesis can be summarised as follows:

- a. There are legal tools other than statutory rights to protect Intellectual Property and the underlying business.
- b. These tools are dispersed in different areas of law and there is limited literature linking and relating the different types of Intellectual Property protection to the different business stages companies go through.
- c. A high percentage of start-ups do not overcome the Death Valley phase. During the survival stage companies' needs and business models change.
- d. Statutory IP rights fulfil the purpose of granting protection to IP holders, and are recognized and enforced by domestic laws and courts. Patent legislation is the most harmonized category of IP protection internationally. Nonetheless, costs associated with patent enforcement remain high and results vary depending on domestic legislation.
- e. Most Intellectual Property management articles reviewed assume companies are an existing entity with a consolidated business position and refer to patents to structure theories and cost allocation analysis.
- f. Intellectual Property management seems to be linked to statutory rights and especially to patents. This, together with the high costs associated to patent protection, creates the perception that Intellectual Property protection is very expensive and focussed on patents;
- g. The lack of a harmonized international framework for trade secrets makes it difficult to analyse, measure and encourage the transfer of non-patented and non-patentable technology protected through trade secrets;

h. Not enough emphasis is on the fact that (i) before being granted patents are trade secrets; (ii) patent or trade secret protection requires the company to comply with certain legal thresholds, including positive actions to keep information confidential and that such information actually provides a commercial advantage, etc. If awareness of these requirements only occurs after disclosure, it will be too late; and (iii) the costs of trade secret protection are low;

i. There is not sufficient awareness that Intellectual Property Law is connected to and not independent from other areas of law. Only if other branches of law are considered – such as corporate, tax, labour and competition laws - can companies articulate comprehensive Intellectual Property management strategies.

j. Statutory rights alone provide insufficient Intellectual Property protection and thus need to be complemented by contractual Intellectual Property provisions, such as work for hire, assignment, acknowledgement of ownership, non-compete, etc., and *de facto* Intellectual Property protection measures, such as Intellectual Property policies, which must be enforced among employees, service providers, suppliers, clients and third parties.

2. Conclusions.

a. Not all Intellectual Property related conflicts and problems can be avoided or risks be eliminated. However, many of these problems and conflicts can be prevented by taking action right from the inception of a start-up. Taking such action early on will increase the chances of the start-up to overcome the Death Valley phase.

b. During the Survival Stage business needs and plans change. Entrepreneurs and attorneys must be flexible enough to understand this and remember that there are different strategies and tools. More specifically, problems must be addressed with the legal mechanisms and tools that sufficiently take into account the stage in which the company is currently in. Furthermore, drafts of employment contracts as well as non disclosure agreements can be prepared before entering the survival stage, funds

allocated for tax planning and available intellectual property regimes and benefits should also already be considered during the planning stage. Awareness of when and where innovations are created within the company should be a key concern of a start-up. Layers of protection allow the company to identify possible solutions and consider the degree of control the company may have in respect of their results. This will allow the company to make informed and cost-efficient decisions about what should be protected and how and when.

c. The main concerns regarding Intellectual Property from a business standpoint are: (i) Ownership of the Intellectual Property; (ii) Confidentiality obligations; (iii) Company Liability; (iv) Generating value from Intellectual Property; (v) Protection of Intellectual Property in commerce, (vi) Enforcement; and (vii) Cost effectiveness.

d. All these IP-related concerns can be addressed through: (i) Statutory rights; (ii) Contract Law; and (iii) De facto measures. This is in addition to other laws and regulations, e.g. criminal law, and unfair competition legislation.

e. Proper Intellectual Property management is not a just an issue concerning lawyers.

f. During the survival stage start-ups must identify their intellectual property assets and trade secrets

g. Early legal advice is crucial to protect the business, the entrepreneur's liability, the company ownership of Intellectual Property and to generate value. Such legal advice should be geared towards providing a specific overview and directions regarding possible tax benefits, corporate and intellectual property protection options, as well as forms of non disclosure, employment and suppliers agreements during different stages. Costs of such legal advice during the Survival Stage are usually moderate and definitely less than a patent application and/or trial. To keep legal costs down, start ups should request fixed quotes or offer part of their equity or success schemes in return for such advice as permitted by applicable regulations.

h. There is no one one-size-fits-all recipe or formula for managing Intellectual Property. A business-oriented understanding of the Intellectual Property system and teamwork between those running the business and their attorneys can generate creative and appropriate solutions.

i. **The “inside-out approach” describes the type of relations from which Intellectual Property business concerns arise for a company. These relations are then linked to the degree of control the company has to address them. The inside out approach is legally based on trade secrets and contractual agreements and provisions on the subjects of ownership, confidentiality, liability, competition, control and tax benefits. With a commercial focus its starts with the company relations and tasks a start-up controls directly and which results rely only on its decisions. These mainly refer to incorporation of a proper legal entity and application to legal tax benefits, the use of agreements templates, policies and directions, as well as creating awareness about relevant business information (intellectual property) creation within the company.**

Then the second layer addresses the start up’s direct relation with third parties and employees. Usually bound with them through contracts, which should be in written agreements, provisions relating to work for hire, non compete, acknowledgment of ownership, non-disclosure, intellectual property policies, trade secrets, etc. will play a key role in the intellectual property protection, business results of the company as well as its relations with clients, suppliers and employees.

Finally on the third layer this approach focuses on the company’s indirect relation with society, which depends greatly on the legal framework of statutory rights and cannot be controlled by the start up. Additional *de facto* measures including in-house and public enforcement of intellectual property policies, as well such policy alignment with the relevant government Intellectual Property policy is also encouraged, among other measures which do rely on a company decision.

j. Business models, deal structuring, contractual tools and trade secret management are essential when it comes to Intellectual Property management. These are all matters a company is in a position to address during the survival stage. The inside-out approach as outlined above helps understand that many of the initial Intellectual Property protection measures can in fact be performed during the survival stage, such as securing Intellectual Property ownership and minimizing Intellectual Property risks exposure, while still generating value.

3. Recommendations.

a. Always make business success the top priority and remember that a business' core purpose is to generate profit. Consequently, companies do not need Intellectual Property rights which they cannot commercially exploit or from which they cannot commercially benefit.

b. Entrepreneurs and lawyers should get involved and work together to develop suitable business models and IP protection strategies which will benefit the company as a whole.

d. Lawyers should maintain constant communication with start-ups to understand the business needs and the stage of business the company is going through before suggesting an Intellectual Property protection strategy.

e. In particular, the following legal issues should be considered:

i. In respect of ownership:

In the *first or company layer*, the start-up must identify key business information (Intellectual Property) and contribute it to the company. Its management shall understand trade secrets and identify principles of its future Intellectual Property strategy. Such strategy shall aim to create an awareness culture, so that ownership of any Intellectual Property arising from its key business information is vested in the start-up.

In the second or *employees and third party relations layer*, work for hire, assignment, non-compete and exclusivity obligations should be included, to the extent possible, in the relevant working, supply and services agreements. Supply and services agreements with third parties must be in writing. Express written acknowledgement of the start-up (i) ownership of its confidential information, Intellectual Property and any improvement arising therefrom; as well as (ii) Intellectual Property policy, guidelines or principles, should be included in contracts with employees and third parties. Any use of confidential information by employees and third parties should be limited to a specific purpose. A use for other purpose than agreed one should be considered a material breach of the relevant agreement, subject to fines and injunctive relief. Further, prohibitions to third parties and resigned employees to contract the start-up employees during the term of the relevant agreement or within a period of time after it has been terminated or expired, should be also included, subject to applicable laws.

Further, attention should be placed to Intellectual Property provisions included in public and private tender rules in which the company make take part of, ensuring ownership of their developments are kept of their own, or the start-up is aware of assignment or sharing Intellectual Property requirements involved in its participation of such tender.

In the *third or society layer* the start-up Intellectual Property policies should be (publicly) enforced. These, should be aligned with the relevant government, region or municipality Intellectual Property. Statutory rights provide the strongest protection once products have reached the market; however, they are not sufficient. Certain *de facto* measures such as, the use of decoys of on end products could be analysed, training to public official (to the extent possible), or through publicity and adverts to relevant market, can help society be ware of the unique characteristics of an original product or service, etc.

ii. Liability:

In the *first or company layer*, the start-up shall incorporate a legal entity to limit the liability to the company and not include the innovator's estate. Further, one or more legal entities may be incorporated, with a holding and operating company structure. The latter should be entitled to *use* the Intellectual Property of the holding company property through a licensing agreement, including automatic termination in case of bankruptcy or if the business went wrong, without putting at risk control and ownership of the Intellectual Property.

In the second or *employees and third party relations layer*, provisions including the obligation to return to the company its proprietary information, as well as indemnity and *hold harmless* obligations and policy compliance duties shall be included in employment agreements. All of these in addition to penalties for breach of third party intellectual property rights, as well as limits and transfer of liability provisions should be included in agreements with employee and third parties

In the *third or society layer*, including limitation of liability provisions as well as *avoiding fit for purposes* provisions on general terms and conditions of the start-up product or service, may be useful in this regard.

iii. Generating value from and Cost Effectiveness of Intellectual Property.

In the *first or company layer*, the start-up shall investigate for available tax benefits relating to research and development and intellectual property based companies, as well as available public funds. Also related to the set up of a legal entity, investigation regarding its relevant market regulation (if different from its own country) is encouraged. Applicable tax benefits depending on the service or product being internationally commercialized and or the legal entity domicile may provide business advantages. The earlier this advice is obtained, the more cost-effective it will be.

In the second or *employees and third party relations layer*, the company shall make sure all Intellectual Property created as a result of its relation with employees and third parties is of its ownership, regardless of the form in which it is created. That research and product development investments shall inure in the benefit of the company. Thus, early legal

advice to provide templates of employment and suppliers and clients agreements is required.

Further, third party agreements should include marketing obligations in which the start-up name or product must be displayed on such third party service or good being commercialized, thus obtaining further ownership and product recognition in the relevant market.

Business models with such third parties may provide an incentive for them to keep the company Intellectual Property protected (exclusive service providers, guarantees, joint ventures, etc.).

All of these subjects should be embodied in the company Intellectual Property Policy.

In the *third or society layer* the company should aim for long term relations with its customers. If possible, loyal and regular clients should be rewarded and even recognized, if they bring *to the company's* attention a copied product or service.

v. Protection in commerce:

One of relevant aspects of Intellectual property protection for companies, is to actually enforce their Intellectual Property policies, all around, meaning at an inhouse, employees and third parties, as well as society layers. Awareness of their positive and negative covenants in each of their agreements and relations is of the essence. Timely enforcement, as well as communication within the relevant layer of protection can help prevent and set a precedent of how strong and decided the company acts in respect of its Intellectual property protection.

BIBLIOGRAPHY.

1. [1987] Ch 117, [1986] 1 All ER 625; Available at:
<http://www.saflii.org/za/za/cases/ZAGPJHC/2011/1.pdf> [30 January 2015].
2. Addison & Co, 2014. Where are you in the 7-stage cycle? Available at:
<http://www.addisonandco.co.uk/the-7-stages-of-business/#1> [23 January 2015].
3. Ahmad N & Seymour R G. “Defining Entrepreneurial Activity: Definitions Supporting Frameworks for Data Collection”. OECD. Available at:
<http://www.oecd.org/std/business-stats/39651330.pdf> [10 January 2015].
4. Ainslie K, 2013. “Business connections and trading secrets: are your restraints enforceable?” Global Workforce Insider. Available at:
<http://www.globalworkplaceinsider.com/2013/06/business-connections-and-trading-secrets-are-your-restraints-enforceable/> [30 January 2015].
5. Allahar H, 2014. The Search for a Venture Capital Model Appropriate to Small Emerging Countries. The SIJ Transactions on Industrial, Financial & Business Management (IFBM). Vol. 2, No. 10, December 2014. Available at:
<http://www.thesij.com/papers/IFBM/2014/December/IFBM-02091080101.pdf> [20 January 2015].
6. Alvarado L K, 2010. The Patent Transactions Market – Established and Emerging Business Models. Thesis in the Master Degree Program Department of Technology Management and Economics. Chalmers University of Technology, Göteborg, Sweden. Available at:
<http://publications.lib.chalmers.se/records/fulltext/128224.pdf> [28 January 2015].
7. Basson v Chilwan and Others (332/1991) [1993] ZASCA 61; 1993 (3) SA 742 (AD); [1993] 2 All SA 373 (A) (17 May 1993). Available at:
<http://www.saflii.org/za/cases/ZASCA/1993/61.html> [30 January 2015].

8. Belderbosa R & Cassimana B & Faemsa D & Letena B & Van Looya B, 2014. Co-ownership of intellectual property: Exploring the value-appropriation and value-creation implications of co-patenting with different partners [Abstract]. Research Policy. Open Innovation: New Insights and Evidence. Vol. 43 Issue 5 p.805-926. Available at: <http://www.sciencedirect.com/science/article/pii/S0048733313001583> [27 January 2015].
9. Bell A & Gideon P, 2014. "Reinventing Copyright and Patent". Faculty Scholarship. Paper 1017, Available at: http://scholarship.law.upenn.edu/faculty_scholarship/1017 [20 December 2014].
10. Berne Convention for the Protection of Literary and Artistic Works of 1886 [Berne Convention]: Art.2 s1ss1). Available at: http://www.wipo.int/treaties/en/text.jsp?file_id=283698#P85_10661 [25 January 2015].
11. Bilen-Katić B & Radovanović N, 2013. The Role of Intellectual Property in Developing a Knowledge-Based Society. Management Journal for Theory and Practice Management. Intellectual Property Office of the Republic of Serbia. UDC: 347.77/.78. DOI: 10.7595/management.fon.2014.0007. Available at: http://www.management.fon.rs/management/e_management_70_english_08.pdf [2 December 2014].
12. Bizempire (South Africa), 2014. "Helping you start and build your small business empire". Available at: http://www.bizempire.co.za/html/types_of_business_structures.html [27 January 2015]
13. Blum J, 2011. "How to Protect Your Intellectual Property Rights", Entrepreneur.com. Available at: <http://www.entrepreneur.com/article/220039> [14 December 2014].

14. Boletín 8907, 2013. “Sustituye las leyes N° 19.039, sobre propiedad industrial y N° 20.254, que crea el Instituto Nacional de Propiedad Industrial.” Available at: <http://www.senado.cl/appsenado/templates/tramitacion/index.php#> [25 January 2015].
15. Borges Barbosa D & Grau-Kuntz K, 2010. UNCTAD-ICTSD. Resource Book on TRIPS and Development. New York: Cambridge University Press, 2005, p. 377. World Intellectual Property Organization, 3. Exclusions from Patentable Subject Matter and Exceptions and Limitations to the Rights Biotechnology. Available at: http://www.wipo.int/edocs/mdocs/scp/en/scp_15/scp_15_3-annex3.pdf [30 September 2015]
16. Brant J & Lohse S, 2014. Trade Secrets: Tools for Innovation and Collaboration. Research Paper 3. Innovation and Intellectual property series. International Chamber of Commerce. Available at: <http://www.iccwbo.org/Advocacy-Codes-and-Rules/Areas-of-work/Intellectual-Property/Innovation-and-intellectual-property/> [30 January 2015].
17. Brassell M & King K, 2013. “Banking on IP? The role of Intellectual Property and Intangible Assets in facilitating business finance.” Summary of a report for the United Kingdom Intellectual Property Office. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/312018/ipresearch-bankingip-sum.pdf [2 December 2014].
18. Cabanellas G, 2004. Derechos de las Patentes de Invención. 2nd edition Buenos Aires (Argentina): Heliasta, 2004. V1, p864 (derecho Económico Empresarial). ISBN 950-885-053-1.
19. Cabrita M & Cabrita C & Matos & Muñoz Dueñas, 2015. Entrepreneurship Capital and Regional Development: A Perspective Based on Intellectual Capital [Abstract]. Entrepreneurship, Human Capital, and Regional Development International Studies in Entrepreneurship. Vol. 31, p. 15-28. Available at: http://link.springer.com/chapter/10.1007/978-3-319-12871-9_2 [10 January 2015].

20. Carvalho D, 2010. *The Trips Regime of Patent Rights*. America. 3rd ed. America Kluwer Law International.
21. Chaplinsky S, 2002. "Methods of Intellectual Property Valuation", Darden University of Virginia. Available at:
http://faculty.darden.virginia.edu/chaplinskys/PEPortal/Documents/IP%20Valuation%20F-1401%20_watermark_.pdf [23 May 2015].
22. Chitilian H, 2014. "Technology M&A on the rise in 2014", Blog Deal Law Wire. Available at: <http://www.lexology.com/library/detail.aspx?g=4644bee8-6d47-4021-8504-300e5f6c862c> [21 January 2015].
23. Codigo Civil. Chilean Civil Code. Available at:
<http://www.leychile.cl/Navegar?idNorma=172986> [24 January 2015].
24. Codigo de Comercio (Chilean Commerce Code). Available at:
<http://www.leychile.cl/N?i=1974&f=2014-10-10&p=> [28 January 2015].
25. Codigo del Trabajo de la Republica de Chile (Labour Code). Available at:
<http://www.leychile.cl/Navegar?idNorma=207436> [30 January 2015].
26. Companies Act 71 of 2008, as amended 2011. South Africa. Available at:
<http://www.justice.gov.za/legislation/acts/2008-071amended.pdf> [29 January 2015].
27. Companies and Intellectual Property Commission, 2015. Available at: <http://www.cipc.co.za/index.php/trade-marks-patents-designs-copyright/patents/> [30 September 2015].
28. Constitution of the Republic of South Africa, 1996, as amended. Available at:
http://www.saflii.org/za/legis/num_act/cotrosa1996423/ [30 January 2015].
29. Consitucion Politica de la Republica de Chile, 1980. Available at:
<http://www.leychile.cl/Navegar?idNorma=242302> [30 January 2015].

30. Czapracka K A, 2007. Antitrust and Trade Secrets: The U.S. and the EU Approach. Santa Clara High Technology Law Journal. Vol.24 Iss2 Art1. Available at:
<http://digitalcommons.law.scu.edu/cgi/viewcontent.cgi?article=1447&context=chtlj>
[28 January 2015].
31. De Cock Attorneys, 2010. “Advertising your trade mark”. Available at:
<http://www.decock.co.za/advertising-trade-mark/> [23 May 2015].
32. Deloitte, 2014. “South Africa Highlights 2014”. International Tax, Available at: <http://www2.deloitte.com/content/dam/Deloitte/global/Documents/Tax/dttl-tax-southafricahighlights-2014.pdf> [17 January 2015].
33. Deloitte Touche Yohmatsu Limited, 2014. “Taxation and Investment in South Africa 2014 - Reach, relevance and reliability”. Available at:
<http://www2.deloitte.com/content/dam/Deloitte/global/Documents/Tax/dttl-tax-southafricaguide-2014.pdf> [27 December 2014].
34. Dlamini R, 2012.” South Africa: Can You Keep A Secret?”. Mondaq Connecting Knowledge & People. Available at:
<http://www.mondaq.com/x/180550/Trade+Secrets/Can+You+Keep+A+Secret> [28 January 2015].
35. Ellis J, 2014. “UK patent tax break fails to impress SMEs”, Available at:
<http://www.iam-magazine.com/blog/Detail.aspx?g=6d06c495-9ae7-41e9-8212-9e433b954118> [10 January 2015].
36. Eniola A & Entebang H & Sakariyau O B, 2015. Small and medium scale business performance in Nigeria: Challenges faced from an intellectual capital perspective [Abstract]. International Journal of Research Studies in Management. V.4 No.1. Available at:
<http://www.consortiacademia.org/index.php/ijrsm/article/view/964> [20 January 2015].

37. European IPR Helpdesk, 2012. "How to manage confidential business information." Fact Sheet. Available at:
https://www.iprhelpdesk.eu/sites/default/files/newsdocuments/How_to_manage_confidential_business_information.pdf [20 December 2014].
38. Federal Bureau of Investigation. "Intellectual Property Protection: Safeguard Your Company's Trade Secrets, Proprietary Information and Research. US Department of Justice – Federal Bureau of Investigation". Available at:
http://www.fbi.gov/about-us/investigate/counterintelligence/intellectual_property_protection [30 January 2015].
39. Finish Business Angels Network, 2014. Business Angels - Private High-Growth Investors. Available at, <https://www.fiban.org/investors>. [20 January 2015].
40. Fisher III W W & Oberholzer-Gee F, 2013. Strategic Management of Intellectual Property – an Integrated Approach. California Management Review – Special Issue on Intellectual Property Management: In Search of New Practices, Strategies and Business Models. February 17, 2013. Available at:
<http://www.law.harvard.edu/faculty/faculty-workshops/fisher.faculty.workshop.summer-2013.pdf> [7 December 2014].
41. Fragouli, E 2010. 'Intellectual capital and organizational advantage: an economic approach to its valuation and measurement'. Paper presented at 9th Annual Meeting of the EEFS International Conference, Athens, Greece, 3/06/10 - 6/06/10. Available at: <http://www.eefs.eu/conf/athens/Papers/626.pdf> [17 January 2015].
42. Friese J & Jung U & Röhm T & Spettmann R, 2006. Intellectual Property: An underestimated and undermanaged asset? Journal of Business Chemistry. Vol. 3, Iss. 1 p.42. Available at:
<http://connection.ebscohost.com/c/articles/19577075/intellectual-property-underestimated-undermanaged-asset> [25 January 2015].

43. Granstrand O & Holgersson M, 2014. Multinational technology and intellectual property management – is there global convergence and/or specialisation? [Abstract]. *International Journal of Technology Management*. Vol. 64, No. 2. Available at: <http://inderscience.metapress.com/content/b5u633767n167w68/> [20 December 2014].
44. Goldrian H, 1993. “WIPO Academy English, Session. Geneva, October 4 to 15, 1993. The Management and exploitation of intellectual property rights by small and medium-sized industries”. Lecture WIPO/ACAD/E/93/12. Available at: http://www.wipo.int/export/sites/www/sme/en/activities/meetings/pdf/acad_93_12.pdf [3 December 2014].
45. GOV.UK, 2014. “Intellectual property and your work”. Available at: <https://www.gov.uk/intellectual-property-an-overview/overview> [10 January 2015]
46. Griffith R & Miller H & O’Connell M, 2014. Ownership of intellectual Property and Corporate Taxation. *Journal of Public Economics* 112 (2014) 12-23. Available at: <http://www.sciencedirect.com/science/article/pii/S0047272714000103> [12 December 2014].
47. Hampel-Milagrosa A & Loewe M & Reeg C, 2014. The Entrepreneur Makes a Difference: Evidence on MSE Upgrading Factors from Egypt, India, and the Philippines [Abstract]. *World Development*, Vol 66. Available online 14 September 2014. Available at: <http://www.sciencedirect.com/science/article/pii/S0305750X14002332> [30 January 2015].
48. Halabi S, 2015. Reconciling international obligations to protect health and trademarks: A defense of trademarks as property. *International Intellectual Property Law*. Ed. Daniel Gervais. Cheltenham United Kingdom: Edward Elgar, 2015. p.389-406. Available at: http://works.bepress.com/cgi/viewcontent.cgi?article=1036&context=sam_halabi [15 December 2015].

49. Hall R, 1992. The strategic analysis of intangible resources. *Strategic Management Journal*. Vol. 13 p.135–144. Available at: <http://onlinelibrary.wiley.com/doi/10.1002/smj.4250130205/pdf> [27 January 2015].
50. Harnish T, 2011. “Recognize And Manage The 5 Stages Of Small Business Growth”. American Express Open Forum. Available at: <https://www.americanexpress.com/us/small-business/openforum/articles/recognize-and-manage-the-5-stages-of-small-business-growth/> [20 January 2015].
51. Horvat J & Bobek S, 2014. Mutual Impacts of Human Resources Management and Knowledge Management: Issues of Functions and Effective Factors [Abstract]. *Managing in Recovering Markets*. Springer Proceedings in Business and Economics 2015, p.395-402. Available at: http://link.springer.com/chapter/10.1007%2F978-81-322-1979-8_31 [20 January 2015].
52. Inc. Com, 2009. “How to Protect Your Invention. Advice and tips on how to protect a new invention from copycats and competitors”. Available at: <http://www.inc.com/guides/legal/patents.html> [15 January 2015].
53. Instituto Nacional de Propiedad Industrial [INAPI] (Chilean Trademark and Patent Office), 2014. “What is a Patent?” Available at: <http://www.inapi.cl/portal/institucional/600/w3-article-1580.html> [10 January 2015].
54. International Chamber of Commerce, 2012. “Intellectual Property Basics”. Available at: <http://www.iccwbo.org/advocacy-codes-and-rules/areas-of-work/intellectual-property/intellectual-property-basics/> [20 January 2015].
55. International Chamber of Commerce, 2011. *Intellectual Property Guidelines for Buisness. Business Action to Stop Counterfeiting*. Available at: <http://www.iccwbo.org/Data/Documents/Bascap/IP-guidelines/IP-guidelines-English/> [16 January 2015].

56. Ius Mentis, 2015. “Crash course on trademarks: Limitations on trademark rights”. Law and Techonology Explained. Available at:
<http://www.iusmentis.com/trademarks/crashcourse/limitations/> [23 May 2015].
57. Jandhyala S, 2010. De Facto Protection for Intellectual Property: Evidence from Software Piracy. International Business Department. George Washington University. 18 January 2010. Preliminary draft. Available at:
https://www.gwu.edu/~igis/assets/docs/Jandhyala_Paper.pdf [20 December 2014].
58. Jianwei D & Kazuyuki M, 2014. Get Pennies from Many or a Dollar from One? Multiple Contracting in Markets for Technology. The University of Tokyo. The University of Tokyo / Research Institute of Economy, Trade and Industry. Research Institute of Economy Trade and Industry. Discussion Paper Series 14-E-006. January 2014. Available at:
<http://www.rieti.go.jp/en/publications/summary/14010010.html> [15 December 2014].
59. Johnson S, 2014. “UPDATE 2-Samsung to pay Ericsson \$650 mln plus royalties to end patent spat”, Reuters. Available at:
<http://www.reuters.com/article/2014/01/27/ericsson-samsung-idUSL5N0L10H620140127> [23 May 2015].
60. Juetten, M, 2014. “Crowdfunding And Intellectual Property: Tips From An Entrepreneurial Attorney”, Forbes, Entrepreneurs. Available at:
<http://www.forbes.com/sites/maryjuetten/2014/07/10/crowdfunding-and-intellectual-property-tips-from-an-entrepreneurial-attorney/> [23 May 2015].
61. Jeutten, M, 2014. “Keeping Your Intellectual Property Safe and Sound”, Entrepreneur, Technology. Available at:
<http://www.entrepreneur.com/article/231309> [23 May 2015].
62. Kerschberg B, 2012. How Intellectual Property (IP) Enables and Protects Open Innovation Platforms. Available at:

<http://www.forbes.com/sites/benkerschberg/2012/04/23/how-intellectual-property-ip-enables-and-protects-open-innovation-platforms/> [5 December 2014].

63. Khota I A & Stern A, 2005. Leveraging intellectual property for strategic advantage in product development. South African Journal of Information Management. Peer Reviewed Article Vol.7 (4) December 2005. Available at: <http://connection.ebscohost.com/c/articles/20215358/leveraging-intellectual-property-strategic-advantage-product-development> [26 December 2014].

64. King v SA Weather Service (716/2007) [2008] ZASCA 143 (27 November 2008). Available at: <http://www.saflii.org/za/cases/ZASCA/2008/143.html> [30 January 2015].

65. Knowledge Transfer Working Group of the European Research Area Committee, 2012. “European Research Area Guidelines on Intellectual Property (IP) Management in International Research Collaboration Agreements between European and Non European Partners”. Available at: http://ec.europa.eu/research/innovation-union/pdf/international_cooperation_guidelines_erac_kt_group.pdf [2 January 2015].

66. Košťuríková I & Chobotová M, 2014. “New Trends in Intellectual Property and Tax Burden of Innovative Corporations” [Abstract]. “Procedia - Social and Behavioral Sciences. The 2nd International Scientific conference. Contemporary Issues in Business, Management and Education. Vol.110. p.93-102. Available at: <http://www.sciencedirect.com/science/article/pii/S1877042813054918> [28 January 2015].

67. KPMG South Africa, 2013. “Investing in South Africa and Africa”. Available at: https://www.kpmg.com/Africa/en/IssuesAndInsights/Articles-Publications/Press-Releases/Documents/China%20desk%20brochure_English2.pdf [11 January 2015].

68. Lall, S. June, 2003, “Indicators of the Relative Importance of IPRs in Developing Countries.” Intellectual Property Rights and Sustainable Development, UNCTAD-ICTSD Project on IPRs and Sustainable Development, Issue Paper No. 3.

Available at: http://www.ictsd.org/sites/default/files/research/2008/06/cs_lall.pdf [23 May 2015].

69. Lampel J & Bhalla A & Jha P, 2007. Global Survey on Counterfeiting and Piracy. International Chamber of Commerce Business Action to Stop Counterfeiting and Piracy (BASCAP). WIPO, IP Use and Awareness, Main Findings. Available at: <http://www.wipo.int/ip-outreach/en/tools/research/details.jsp?id=156> [24 May 2015].

70. Law Library of Congress, The, 2015. "Protection of Trade Secrets: South Africa". Available at: <http://www.loc.gov/law/help/tradesecrets/southafrica.php> and http://www.loc.gov/law/help/tradesecrets/2013-009821_FINAL_2.pdf (2013) [28 January 2015].

71. Lewis V L & Churchill N C, 1983. The Five Stages of Small Business Growth [Abstract]. Harvard Business Review. Vol. 61, Issue 3, p. 30-50 1983. Available at SSRN: <http://ssrn.com/abstract=1504517> [30 January 2015]

72. Ley No. 20.241. Establece un Incentivo Tributario a la Inversión en Investigación y Desarrollo, as amended by Act. 20 570. Available at: <http://www.leychile.cl/Navegar?idNorma=268637> [29 January 2015].

73. Ley Sobre Propiedad Industrial No. 19.039, as amended 2012. Chile. Available at: http://www.inapi.cl/portal/normativa/603/articles-631_recurso_1.pdf [25 January 2015].

74. Ley N° 17.336 sobre Propiedad Intelectual. Chile. Available at: <http://www.leychile.cl/Navegar?idNorma=28933> [10 January 2015].

75. Ley No. 19.857 Autoriza el establecimiento de Empresas Individuales de Responsabilidad Limitada[LEIRL], 2003. Available at: <http://www.leychile.cl/Navegar?idNorma=207588> [28 January 2015].

76. Llewelyn, D. & Williamson, P.J., 2014. Strategies for Surviving in China's Intellectual Property Minefield. (2014). Research Collection School Of Law. Available at: http://ink.library.smu.edu.sg/sol_research/1298 [20 December 2014].
77. Maloney M & Woley A, 2009. The Intellectual Property Deskbook for Lawyers : a Transactions-Based Guide to Intellectual Property Law. Chapter 2 Intellectual Property Issues in Employment Law. 2nd ed.: American Bar Association. Available at: <http://www.liskow.com/PublicationFiles/IPD2%20chapter%202.pdf> [30 January 2015].
78. Mehlig C & Sacha D, 2015. “Do Stronger Intellectual Property Rights Increase Innovation?” [Abstract]. World Development, Vol. 66, p.665–677. February 2015. Available at: <http://www.sciencedirect.com/science/article/pii/S0305750X14002630> [23 May 2015].
79. Miettinen M & Niskanen M, 2015. Lender evaluations of start-up business prospects [Abstract]. Managerial Finance. Vol. 41 Iss: 1, p.102 – 120. Available at: <http://www.emeraldinsight.com/doi/abs/10.1108/MF-10-2013-0284> [30 January 2015].
80. Millien R & Laurie R, 2008. A Summary of Established & Emerging IP Business Models. Inflexion Point Strategy LLC, Palo Alto, CA, The Sedona Conference. The Eighth Annual Sedona Conference on Patent Litigation. 12 October 2007, Sedona, Az. Also published in “Meet the Middleman”. Intellectual Asset Management, February/March 2008:53. Feature: Intermediaries. Available at: <http://www.iam-magazine.com/> and <http://www.concap.cc/wp-content/uploads/2012/03/IP-Business-Models.pdf> [20 December 2014]
81. Moreno J A, 2010. Los activos intangibles protegibles en la empresa: la propiedad intelectual e industrial. Jornada Formativa sobre Innovación y Propiedad Industrial e Intelectual Cámaras de Comercio – año 2010. Available at: <http://www.innocamaras.org/metaspaces/file/46854.pdf> [10 December 2014].

82. Musk E, 2014. "All Our Patent Are Belong To You". Tesla Motors. Available at: <http://www.teslamotors.com/blog/all-our-patent-are-belong-you> [25 January 2015].
83. Musso R & Echeopar G, 2012; p.xiii. El Valle de la Muerte. ISBN 13:978-1478373346. (First edited in Amazon.com).
84. Musso R, 2013. Presentation: XI Congreso Chileno de la Innovación. La innovación al poder, 2013 año de la innovación. Presentation Available at: <https://www.youtube.com/watch?v=BEjOKXFn92U> [19 January 2015].
85. National Association of Music Merchants Inc., 2014. "Intellectual Property Rights: Six Cost-Effective Steps on How to Protect These Intangible Assets". Available at: <https://www.namm.org/content/ipr-six-steps> [23December 2014]
86. New York Times, 2014. "Marvell Ordered to Pay \$1.54 Billion in Patent Suit", Business Today, Reuters. Available at: http://www.nytimes.com/2014/04/02/business/marvell-ordered-to-pay-1-54-billion-in-patent-suit.html?_r=1 [23 May 2015].
87. Nolo.com, 1999. "Qualifying for a Patent". Available at: <http://www.inc.com/articles/1999/10/14696.html> [15 December 2014].
88. Norton Rose Fulbright, 2014. "Doing Business in South Africa". Available at: <http://www.nortonrosefulbright.com/files/za-a-guide-to-doing-business-in-south-africa-pdf-112673.pdf> [20 January 2014].
89. Noto A, 2011. Mergers & Acquisitions. The IP Factor. ACG. Themiddlemarket.com. Available at: http://www.acg.org/UserFiles/file/global/MAJ/MAJ_Nov2011.pdf [10 January 2015].
90. Oficina Española de Patentes y Marcas (Spanish Patent Office), 2013. "Estrategia 2012-2014 en Materia de Propiedad Industrial para Empresas y

Emprendedores”. Available at:

http://www.oepm.es/export/sites/oepm/comun/documentos_relacionados/PDF/Estrategia_2012_2014def.pdf [20 December 2014].

91. Olson D, 2010. Valuation of Software Based Trade Secrets Part 5:TSV (ICS). *les Nouvelles Journal of the Licensing Executives Society International*. Vol. XLV No.1.

92. Osorio, C. & Carey, G., 2011. Módulo 10: Protección de los activos intangibles. Curso legislación para nuevos negocios. La Tercera (Santiago, Chile). 12 December 2011. [Newspaper].

93. Osterwalder A & Pigneur Y, 2009. *Business Model Generation*. ISBN: 978-2-8399-0580-0. Summary available at:
http://businessmodelgeneration.com/downloads/businessmodelgeneration_preview.pdf [20 December 2014].

94. Oxford Reference, 2015. Available at:
<http://www.oxfordreference.com/view/10.1093/oi/authority.20110803095753147> [23 January 2015].

95. Paris Convention for the Protection of Industrial Property of March 20, 1883, as revised at Brussels on December 14, 1900, at Washington on June 2, 1911, at The Hague on November 6, 1925, at London on June 2, 1934, at Lisbon on October 31, 1958, and at Stockholm on July 14, 1967, and as amended on September 28, 1979. Available at: http://www.wipo.int/treaties/en/text.jsp?file_id=288514#P83_6610 [23 December 2014].

96. Patents Act No. 57 of 1978 (as last amended by Act No.49 of 1996: Ch.V:S25(1)). South Africa. Available at:
<http://www.wipo.int/edocs/lexdocs/laws/en/za/za026en.pdf> [25 January 2015].

97. Peña I, 2002. Intellectual capital and business start-up success [abstract]. *Journal of Intellectual Capital*, Vol. 3 Iss: 2, p.180 – 198. Available at:

http://www.researchgate.net/publication/235262899_Intellectual_capital_and_business_start-up_success [30 January 2015]

98. Pienaar D & Blignaut H, 2014. "Business brief 2014: South Africa", World Intellectual Property Review. Available at:

<http://www.worldipreview.com/article/business-brief-2014-south-africa> [23 May 2015].

99. Polczynski M H, 2004. Protecting Intellectual Property in a Global Environment. Intellectual Property Journal. Vol. 18, No. 1, p.83-95. Available at: <http://www.technologyforge.net/MHPCV/GlobalPatentIPJ.pdf> [19 January 2015].

100. Purvis S A, 2013. "What Every Small and Medium Sized Business Should Know About Intellectual Property. Myths, Mysteries, Mistakes – Debunked, Unveiled, Corrected". U.S. Patent and Trademark Office, Department of Commerce. Available at: <http://www.uspto.gov/about/offices/ous/121110.pdf> [3 December 2014].

101. PWC, 2014. "Managing intangible assets". Available at: http://www.pwc.es/es_ES/es/legal-fiscal/assets/gestion-de-los-activos-intangibles-en.pdf [2 January 2015].

102. PWC, "2014 Patent Litigation Study As case volume leaps, damages continue general decline", available at: http://www.pwc.com/en_US/us/forensic-services/publications/assets/2014-patent-litigation-study.pdf [22 May 2015].

103. Reichman J H, 1994. Legal Hybrids between the Patent and Copyright Paradigms. Columbia Law Review. Vo.:94:2432. Available at: http://scholarship.law.duke.edu/cgi/viewcontent.cgi?article=1075&context=faculty_scholarship [10 December 2014].

104. Reichman J H, 2003. Saving the Patent Law from Itself: Informal Remarks Concerning the Systemic Problems Afflicting Developed Intellectual Property Regimes. . Available at:

http://hoohila.stanford.edu/Commercializing%20Innovation/Intellectual%20Property%20and%20Innovation-Book_files/GEN_50_CH15.pdf [20 December 2014].

105. Restatement of the Law — Torts Restatement (First) of Torts. Interference With Business Relations Part 1. By Trade Practices. Ch. 36. Miscellaneous Trade Practices. s.757. Liability For Disclosure Or Use Of Another's Trade. Secret— General Principle. Available at:

http://www.wipo.int/wipolex/en/text.jsp?file_id=130065 [30 January 2015].

106. Restatement (Third) of Unfair Competition current through June 2009 Chapter 4. Appropriation of Trade Values Topic 2. Trade secrets; s.40 & 43. Available at: <http://www.wipo.int/edocs/lexdocs/laws/en/us/us216en.pdf> [30 January 2015].

107. RocketLawyer, 2015. “What Are the Limitations of Trademark Law?”. Available at: <https://www.rocketlawyer.com/article/limitations-of-trademark-law-ps.rl> [23 May 2015].

108. Saif S & Bahrami S, 2014. The impact of intellectual capital on the banks and financial institutions accepted in Tehran Stock Exchange. *Academic Journal of Research in Business & Accounting*. V. 2, No.10, p57-62. Available at: http://ajrba.newscienceseries.com/files_site/paperlist/Journal2-10-150117150858.pdf [25 January 2015].

109. Sawicki A, 2015. Buying Teams. *Seattle University Law Review*. Vol. 38. University of Miami Legal Studies Research Paper No. 15-2. Available at: <http://ssrn.com/abstract=2549253> [27 January 2015].

110. Scott M &, Bruce R, 1987. Five stages of growth in small business [Abstract]. *Long Range Planning*. Vol. 20, Issue 3, June 1987, p. 45–52. Available at: <http://www.sciencedirect.com/science/article/pii/0024630187900719> [20 January 2015].

111. Seidel S & Shortland K & Court D & Elzinga D, 2015. Creativity-Aware Business Process Management: What We Can Learn from Film and Visual Effects Production [Abstract]. Handbook on Business Process Management 2. International Handbooks on Information Systems. 2015, p.715-739. Available at: http://link.springer.com/chapter/10.1007/978-3-642-45103-4_30 [27 January 2015].
112. Sheikh T. "Trade Secrets and Employee Loyalty". WIPO SMEs Division, Intern. http://www.wipo.int/sme/en/documents/trade_secrets_employee_loyalty.html [30 January 2015].
113. Singh S & Chaudhary S & Arora M, 2014. Intellectual Property Rights in Sole Proprietorship Form of Business. International Journal of Advanced Research in Management and Social Sciences. ISSN: 2278-6236. Vol. 3, No. 6, June 2014. Available at: <http://www.garph.co.uk/IJARMSS/June2014/2.pdf> [20 December 2014].
114. Slater D, 2004, updated 2012. "Intellectual Property Protection: The Basics". Available at: <http://www.csoonline.com/article/2138380/loss-prevention/intellectual-property-protection-the-basics.html?null> [11 January 2015].
115. Solunion, 2013. "Solunion Official Launch; Euler Hermes, Mapfre, Trade Credit Insurance Joint Venture". Available at: <http://www.eulerhermes.com/mediacenter/news/Pages/solunion-official-launch-euler-hermes-mapfre-trade-credit-insurance-joint-venture-.aspx> [10 January 2015].
116. South African Institute of Intellectual Property Law [SAIIPL], 2014. "Patents". Available at: <http://www.saiipl.org.za/introip/71-patents> [25 January 2015].
117. South African Institute of Intellectual Property Law. "Copyright". Available at: <http://www.saiipl.org.za/introip/74-copyright> [30 January 2015]

118. South African Institute of Intellectual Property Law [SAIIPL], 2014. “Patents”. Available at: <http://www.saiipl.org.za/introip/71-patents> [30 January 2015]
119. South African Institute of Intellectual Property Law, 2014. “Trademarks”. Available at: <http://www.saiipl.org.za/introip/21-trademarks> [30 January 2015]
120. Spulber D F, 2014. How Patents Provide the Foundation of the Market for Inventions (June 26, 2014). Northwestern Law & Econ Research Paper No. 14-14. Available at SSRN: <http://ssrn.com/abstract=2487564> or <http://dx.doi.org/10.2139/ssrn.2487564> [17 January 2015].
121. *Stanford v. Roche*, 563 U.S. ____ (2011); Available at: <http://www.supremecourt.gov/opinions/10pdf/09-1159.pdf> [30 January 2015].
122. Startup Commons. Startup Development Phases. 2014. Available at: <http://www.startupcommons.org/startup-key-stages.html> [23 January 2015].
123. Statista, 2015. The Statistics Portal. Available at: <http://www.statista.com/statistics/276623/number-of-apps-available-in-leading-app-stores/> [24 May 2015].
124. Steinmetz L L, 1969. Critical stages of small business growth: When they occur and how to survive them [Abstract]. *Business Horizons*. Vol. 12, Issue 1, February 1969, p. 29–36. Available at: <http://www.sciencedirect.com/science/article/pii/0007681369901074> [20 January 2015].
125. Struß J M, Mandl T, Schwantner M & Womser-Hacker C, 2014. Understanding Trends in the Patent Domain. User Perceptions on Trends and Trend Related Concepts. Published at Ceur-ws.org, Proceedings of the First International Workshop on Patent Mining and Its Applications (IPAMIN). Hildesheim. Oct. 7th. 2014. At KONVENS’14, October 8–10, 2014, Hildesheim, Germany. Available at: http://ceur-ws.org/Vol-1292/ipamin2014_paper9.pdf [10 December 2014].

126. Swarb.co.uk., 2015. Faccenda Chicken Ltd -v- Fowler CA 1986. Available at: <http://swarb.co.uk/faccenda-chicken-ltd-v-fowler-ca-1986/> [30 January 2015].
127. Swartz K G, 2013. Protecting Intangible Assets - They May Be Your Most Valuable Ones. Available at <http://www.spacecoastbusiness.com/protecting-intangible-assets/> [27 December 2014].
128. Teece D J, 2015. Intangible Assets and a Theory of Heterogeneous Firms [Abstract] . Intangibles, Market Failure and Innovation Performance. P.217-239 Available at: http://link.springer.com/chapter/10.1007/978-3-319-07533-4_9 [25 January 2015].
129. The Copyright Act 98 of 1978 as amended by the Amendment Act 56 of 1980, Copyright Amendment Act 66 of 1983, Copyright Amendment Act 52 of 1984, Copyright Amendment Act 39 of 1986, Copyright Amendment Act 13 of 1988, Copyright Amendment Act 61 of 1989, Copyright Amendment Act 125 of 1992, Intellectual Property Laws Amendment Act 38 of 1997 and Copyright Amendment Act 9 of 2002. WEB DATE
130. “The International Entrepreneur – 5 Smart Ideas for Protecting IP in International Markets”, 2014. Available at: <http://www.the-international-entrepreneur.com/the-international-entrepreneur-5-smart-ideas-for-protecting-ip-in-international-markets/> [16 December 2014].
131. Thurow L C, 1997. Needed: A New System of Intellectual Property Rights. Competing in the Information Economy. Squeezing today’s innovation into yesterday’s system simply won’t work. Harvard Business Review. Reprint 97510. Available at <https://hbr.org/1997/09/needed-a-new-system-of-intellectual-property-rights> [19 December 2014].
132. Trade Marks Act No 194 of 1993: Part.I s2 ss1. South Africa. Available at: <http://www.wipo.int/edocs/lexdocs/laws/en/za/za009en.pdf> [25 January 2015].

133. Tseng K A & Lin C I & Yen S W, 2015. Contingencies of intellectual capitals and financial capital on value creation: Moderation of business cycles [Abstract]. *Journal of Intellectual Capital*. Vol.16 No. 1 p.156- 73. Available at: <http://www.emeraldinsight.com/doi/abs/10.1108/JIC-04-2014-0042> [27 January 2015].
134. Uniform Trade Secrets Act s 1(4) (amended 1985), 14 U.L.A 536 (1985). Available at: http://www.uniformlaws.org/shared/docs/trade%20secrets/utsa_final_85.pdf [30 January 2015].
135. Vidrascu P A, 2014. Debates on Intellectual Property Rights. *Hyperion Economic Journal*. Year II, no.3(2), September 2014. P.74. Available at: [http://hej.hyperion.ro/articles/3\(2\)_2014/HEJ%20nr3\(2\)_2014_Y4Vidrascu.pdf](http://hej.hyperion.ro/articles/3(2)_2014/HEJ%20nr3(2)_2014_Y4Vidrascu.pdf) [11 December 2014].
136. Visagie P, 2013. "South Africa: Examining Examination", *Mondaq*. Available at: <http://www.mondaq.com/x/267672/Patent/Examining+Examination> [23 May 2015]
137. Wagner S & Wakeman S, 2014. "What do patent-based measures tell us about product commercialization? Evidence from the pharmaceutical industry". ESMT Working Paper, No. 14-01, Available at: <http://nbn-resolving.de/urn:nbn:de:101:1-2014021113834> [8 December 2014].
138. Weatherall, K & Webster E, 2014. Patent Enforcement: A Review of the Literature [Abstract]. *Journal of Economic Surveys*. Vol. 28 Iss.2, p.312 to 343. Available at: <http://onlinelibrary.wiley.com/doi/10.1111/joes.12009/abstract;jsessionid=B4E903511E30A10A0A483DD566742627.f02t02?deniedAccessCustomisedMessage=&userIsAuthenticated=false> [30 January 2015].

139. Weltman B, 2008. Safeguarding Intellectual Property. Available at: http://www.inc.com/law-and-taxation/2008/01/safeguarding_intellectual_prop.html [10 December 2014].
140. World Intellectual Property Organization, 2014. “Administered Treaties”. Available at: http://www.wipo.int/treaties/en/ShowResults.jsp?lang=en&treaty_id=6 [25 January 2015].
124. World Intellectual Property Organization. Chile. Available at: <http://www.wipo.int/wipolex/en/profile.jsp?code=CL> (Chile) [23 January 2015]
141. World Intellectual Property Organization, 2015. “Exceptions and Limitations to Patent Rights.” Available at: http://www.wipo.int/patents/en/topics/exceptions_limitations.htm [23 May 2015].
142. World Intellectual Property Organization, “Frequently Asked Questions: Nice Classification”. Available at: http://www.wipo.int/classifications/nice/en/faq.html#accordion__collapse__05 [23 May 2015]
143. World Intellectual Property Organization. “Global Innovation Index Ranking, 2014.” Available at: http://www.wipo.int/export/sites/www/econ_stat/en/economics/gii/pdf/2014/gii_2014_rankings.pdf#page=2 [24 January 2015].
144. World Intellectual Property Organization, 2014. “How can Your SME Acquire and Maintain Intellectual Property Protection?”. Available at: http://www.wipo.int/sme/en/ip_business/acquire_protection.htm [14 January 2015].
145. World Intellectual Property Organization, 2014. “Managing the Intellectual Property Assets of Your SME”. Available at: http://www.wipo.int/sme/en/ip_business/managing_ip/managing_ip.htm [14 January 2015].

146. World Intellectual Property Organization, 2014. "Other IP Treaties". Available at:
http://www.wipo.int/wipolex/en/other_treaties/parties.jsp?treaty_id=231&group_id=22 [25 January 2015].
147. World Intellectual Property Organization, 2014. "Practical IP Issues in Developing a Business Plan". Available at:
http://www.wipo.int/sme/en/ip_business/managing_ip/business_planning.htm [14 December 2014].
148. World Intellectual Property Organization. South Africa. Available at:
<http://www.wipo.int/wipolex/en/profile.jsp?code=ZA> (South Africa) [23 January 2015].
149. World Intellectual Property Organization, 2104. "Summary of the Berne Convention for the Protection of Literary and Artistic Works (1886)". Available at:
http://www.wipo.int/treaties/en/ip/berne/summary_berne.html [10 January 2015].
150. World Intellectual Property Organization, 2014. "What is a Trade Secret?". Available at:
http://www.wipo.int/sme/en/ip_business/trade_secrets/trade_secrets.htm [27 January 2015]
151. World Intellectual Property Organization, 2014. "What is Intellectual Property?" Available at:
http://www.wipo.int/edocs/pubdocs/en/intproperty/450/wipo_pub_450.pdf [21 January 2015].
152. World Trade Organization Agreement on Trade-Related Aspects of Intellectual Property Rights. Available at:
http://www.wto.org/english/tratop_e/trips_e/t_agm3_e.htm#2 [20 January 2015]
153. Yoko I, 2014. Research Trend of Technology Management. RISUS - Journal on Innovation and Sustainability, Sao Paulo, v.5.n.2, p.78- 86. ISSN: 2179-3565.

Available at: <http://revistas.pucsp.br/index.php/risus/article/view/18265/13588> [19 January 2015].