Chapter 6 – Conclusion, Recommendations and Suggestions

The significance of intellectual property rights and how vital it is to an organisations commercial well-being is a foregone conclusion. The society as consumers of the intellectual creativity of businesses also greatly benefit when protection is afforded to companies for their creations. Intellectual property protection enables the consumer to rely on quality products and services through identification of the creator, it gives an incentive for further creation and development and in turn society is the beneficiary again. This cycle helps us advance technologically, creatively and provides us with a plethora of products and services to choose from.

Organisations that have considered the practical implications of efficiently utilizing their intellectual property have seen commercial gains which in turn benefits the economy of a nation on the whole.

At the heart of this study lies the premise that managing intellectual property in an organisation should not only be seen as a one-off activity but rather as a holistic system. The optimum benefit of a company’s intellectual assets can only be obtained if its management is considered from a comprehensive and integrated view point.

While literature on the subject of intellectual property management largely focused on particular types of IP and more so on patents, in the Indian context the literature was more or less non-existent. The research undertaken through this study has aimed at providing a framework on managing IP for Indian firms and organisations. The organisations, especially the sectors that do not invest adequate capital on information technology products, would find the framework of creating an intellectual property management system in light of ontological processes as an enabler to lay the foundation for such as system.

This chapter shall summarise the thesis in light of the hypotheses and research questions, discuss the contribution and implications of the study in the context of India while addressing the limitations of the research and conclude by making suggestions and recommendations for further research.
6.1 Summary

The first chapter of the study had introduced the foundation for which this research was needed to be undertaken. While intellectual property is critical for business success the fact that it too needs to be efficiently managed should be brought into focus of an organisations activities. Given the significance of intellectual property in domestic and international trade, in knowledge intense economies intangible assets of an organisation are its most valuable resources.

The chapter highlighted some of the previous studies undertaken with regards to the management of intellectual property and addressed in brief what the main focus of each of those studies were. While there are numerous studies on managing IP, research found that almost all studies had a strong patent focus. This was perhaps on account of the fact that patenting activities seem to be the most revenue intensive amongst the various forms of IP. The chapter outlined the research methodologies and listed the six primary aims and objectives of the study, while framing the research questions and hypotheses.

The second chapter titled ‘Overview of intellectual property and introduction to ontology’ researched and detailed the very nature and understanding of intellectual property. The overview of intellectual property helped us understand the various types and forms of IP and the tools which are used for their protection. The section on the historical perspectives on IP in the international context studied the genesis of IP protection which dates back to the time of the ancient Greeks. It has been seen that even historically intellectual property has been seen as a tool for commercial gain while passing the benefits of creation/innovation on to the consumers. The chapter then went on to explore and trace intellectual protection in the United Kingdom, significant as IP laws in India were initially heavily adopted from the British system.

The framework for the international cooperation of protecting intellectual property was studied from a historical perspective as well. The manner in which the various international treaties and conventions came about, including TRIPS were researched in this chapter.

The next section in the chapter then went on to study the genesis of intellectual property legislation in India. Needless to say, being a British colony the intellectual property laws enacted at the time in India were merely imported from the United Kingdom. The study then
delves into the post-independence efforts on IP related legislation in India and how the country thereafter charted its own course vis-à-vis IP laws. The section then concludes with the present-day situation on laws relevant to intellectual property legislation, including elements from India’s obligations under the TRIPS agreement.

The chapter proceeds then to the discussion on the economic and commercial benefits of intellectual property. This section of the research starts by first clearly differentiating between the term ‘invention’ and ‘innovation’. This distinction is important for organisations to help better understand the nuances of managing intellectual property.

The study provides examples of companies that have benefitted commercially from their intellectual property as also highlights examples of those companies that lost potential revenue by not having managed their intellectual property effectively. The example of efficient use of IP in the Indian context is highlighted through the case study of JET Home Care Products Ltd., which saw more value in its trademarks as a focus of its IP strategy than the technology in itself. A brief portion of the research also highlights innovation in rural areas of India.

The third and final section of chapter two then proceeds to discuss the elements of philosophy and what the study of philosophy generally entails. It briefly touches upon Indian philosophy and the limitations of applying those principles to the study.

The research then seeks to explore the rich body of knowledge that is philosophy and what specific components of philosophy could be applied to intellectual property management. It is relevant to note here that while specifics tools of IP management were outside the frame of reference in this study, a need was felt to help define methods that could be utilised in the creation of a sound process of managing intellectual property. In light of this understanding, the concept of ontology was explored to better understand if this branch of metaphysics could be applied to the creation of an IP management system.

Ontology is the study of being or existence in philosophy, and reference was then made to the non-philosophical context in which ontology is being applied to computers and information sciences. The research to consider ontology in light of creating an IP management process was undertaken to enable organisations to see process creation as a task which could easily be
achieved through this concept. The chapter then concluded by outlining the benefits of using an ontological approach to the creation of an intellectual property management system.

The third chapter simply titled ‘Intellectual Property Management’ undertakes the study with first stating why there is a need for managing intellectual property. Based on research on Indian companies the study finds that there is slowly but surely a shift in how organisations are looking to start disclosing their intangible assets, a positive sign of things to come vis-à-vis IP in India.

The Kodak case is then detailed in the study as an example of how poor managerial decisions with respect to the company’s intellectual property was one of the major factors which led to it filing for bankruptcy. The next section of the chapter touched upon the importance of intellectual property management with an example of expensive litigation for a shoe manufacturer. The research then ventures into what the term ‘Management’ necessitates and is seen from different definitions. Consideration is thereafter given to how efficient management of intellectual property in certain cases provided benefit to companies, the case of Gillette Razors is given as an example in this respect.

The third section of the chapter thereafter looks into the current practices regarding intellectual property management in India. The Indian Council of Agricultural Research (ICAR) model is discussed briefly as is the study on the Intellectual Property Management System (IPMS) of the Indian Institute of Technology, Bombay. A note is made on the use of software specific to intellectual property management and how there are problematic areas with its use and implementation. Data on use of information technology in Micro, Small and Medium Enterprises (MSME) in India suggests that deployment of technology resources is low while their innovative capacities are large. These findings are in tune with the hypotheses as will be discussed later in this chapter.

The chapter then detailed the primary data collected by the researcher through the questionnaire sent out to various organisations. The analysis of the findings is again in line with the researcher’s hypothesis and answers the research questions raised in this study.

The research then makes a case for a holistic system of managing intellectual property through examples of international organisations which saw success by adopting a comprehensive system. A hypothetical example of a generic manufacturing concern with its various
departments is then considered from the IP management perspective. The functions of those departments and their role in the managing intellectual property is analysed and detailed. The chapter then outlines how the ontological approach as suggested in the previous chapter can be applied to lay the foundation for a strong intellectual property management system in an organisation.

The fourth chapter, on the legal and policy analysis, commenced with defining and clarifying what is meant by policy and how it is instrumental to an organisations functioning. This chapter outlines the role of legislation and how the same gives force to policy initiatives from a Government perspective. The critical role a policy document plays in the running of an organisation is studied in this chapter.

The chapter then goes on to analyse legislation that had stated the need for intellectual property management systems to be incorporated under the now withdrawn Protection and Utilisation of Public Funded Intellectual Property (PFIP) Bill, 2008. The reason for the bill having been introduced and later withdrawn is studied in the context of earlier policies of the Government of India. However, the bill may yet again be introduced by the current Government. Furthermore, it is the suggestion of this researcher that this bill be enacted and given the force of law so that the process of managing intellectual property as envisaged in the bill become a reality. This would perhaps give a further impetus to the study and development of the concept of an integrated IP management system in India.

The chapter proceeds to analyse the various other pieces of legislation that would provide a thrust or encourage innovation in the country. Other initiatives of the Government of India such as the setting up of the Atal Innovation Mission under the NITI Aayog and the current National Intellectual Property Rights policy are discussed in detail to outline efforts to encourage innovation in the country.

The chapter further goes on to discuss as to the need for a policy that would enable implementation of intellectual property management systems. Specifically, a suggestion is made regarding the creation of IP management standards on the lines of what China has done back in 2013. It is important to note here that it was not the aim of the research to outline how standards are to be created and therefore the idea of an IP management system has only been made by way of a suggestion.
The chapter concludes with the researcher having detailed guidelines on the creation of an intellectual property policy that would enable the conceptualization and implementation of an Intellectual Property Management process within organisations.

Chapter Five of this study takes into consideration the existing legislative and regulatory mechanisms that are available for companies to consider, in order to provide a legal basis for the creation of an intellectual property management system.

In the context of the various tax incentives and deductions as well as the accounting standards, companies would need to be better prepared to understand the various types of intellectual property and other intangible assets that they own or make use of in their businesses. Furthermore, the fact that mandatory reporting and disclosures are required under the companies act, albeit not specific to intellectual property at the moment organisations should nevertheless consider an integrated and cross functional system of managing their IP for the benefit of the organisation.

6.2 Contributions

This study contributes to the literature on managing intellectual property which has so far addressed specific types and forms of intellectual property and lays the framework for considering IP management in more a comprehensive manner. The theoretical application of the study with a focus on India would enable intellectual property practitioners, educators and policy makers to start taking an all-inclusive view to the management of intellectual property as a discipline in itself.

Having provided a framework for managing IP holistically, organisations may consider the practical application by using the components and guidelines to implement the system in their respective organisations.

It is the researchers understanding that the introduction of the ontological approach to creating an IP management process is new to this field of study and that it would fuel greater interest for organisations not equipped to use technology for managing IP, but yet wanting and feeling the need to consider its thorough implementation.
The use of ontology in the first instance could eventually lead to the creation of proprietary systems that companies can further develop into information technology systems unique to their requirements of managing intellectual property. The data analysis, when extrapolated, provides an insight as to how organisations view intellectual property issues on the whole and cater to the various components integral to a complete intellectual property management system.

The survey and research findings can also help policy makers and practitioners in better understanding where organisations stand vis-à-vis IP issues in the country today. The implications in this regard, especially for policy makers could be vast in its scope and application by helping them create more robust systems that enable organisations to view IP seriously, including the creation of standards.

**6.3 Implications and Limitations**

The research on the aspects of reports and disclosures, especially in the context of Corporate Social Responsibility provides a context on how intellectual property and other intangible assets can be considered as an element of a CSR activity. Furthermore, considering the intellectual property risk management is also an area that needs to be addressed the current legislation should ideally take into account IP risk as a policy as well.

This study limited itself to understanding intellectual property management, the ontological approach to its creation, and to see how Indian firms view the components necessary to a robust system of IP management. The creation of IP management ontologies in itself and specifics of how a holistic management system would operate was left out of the scope of this study deliberately to ensure focus on key aspects alone.

**6.4 Findings**

Based on the objectives and scope of this research the specific findings in light the research questions raised are:

1. **What is the intrinsic nature of IP and the development of the legislative mechanisms governing IP?**
The research in this study outlines that the very nature of intellectual property is such that it provides its creators with economic benefits while the consumers of IP reap the benefit of knowledge. The system of IP through its various regulatory frameworks allows for a system of reward to the holders of such intellectual property while at times also considering the greater public good.

Although the development of the legislative mechanisms for the protection of intellectual property as evidenced in chapter two have their genesis in colonial systems it has been seen that India nevertheless has charted its own course and did not keep adhering to the IP legislations as had been handed down to us by the British.

The case study of JET Home Care in the Indian context as detailed in Chapter 2 is an example of how a different form of IP could provide with more bargaining power as long as its management is aligned with the company’s business goals. On the other hand, the case of Kodak as outlined in Chapter 3 highlights how poor business decisions cost the company to lose its leadership position.

The fact that intellectual property has various forms its efficient management is a process that would be specific to organisations. International cooperation, growing trade and the shrinking global knowledge economy necessitate that all organisations make every effort to address IP issues within organisations in line with their business goals. Xerox Corporation failed to fully capitalize on its IP and not all its inventions made it through as innovative offerings. A more structured approach to having understood its intangible assets could have possibly prevented this from happening.

2. Is the application of ontology for the creation of an IP management system viable?

The application of ontology can be considered in the creation of a comprehensive process of intellectual property management. The research and findings in chapters two and three indicate that ontology should be used as a tool in the process creation of a holistic intellectual property management system. A holistic approach requires that all departments within an organisation contribute to, and play a vital role in, IP issues. Given cross functional responsibilities and
tasks, the use of ontology seems to be ideally suited to bring them all together through a common understanding.

The fact that ontology is being used and applied in the non-philosophical context in the creation of computer applications and software suggests that it is a useful tool for process creation where many different concepts need to be linked to arrive at a logical outcome. Ontology helps in creating a common understanding of various concepts.

Through the use of ontology classifying functions, roles, and corresponding tasks can be easily identified by the organisation and thereby making the IP management process a simple and logical task.

Management of intellectual property has thus far been primarily undertaken as a piece-meal activity and it is feasible to view the process holistically. After having undertaken the research and based on the study of literature available the researcher can state there is indeed a need for the management of intellectual property to be considered holistically based on the ontological approach, however industry specific studies should be undertaken to be determine conclusively its efficacy.

3. What are the views of businesses and organisations in India in relation to issues pertaining to IP management?

The majority of Indian firms who responded to the questionnaire do not seriously consider various issues relating to the management of intellectual property and do not have any robust system to help manage their IP.

The survey conducted by the researcher on Indian firms supports the understanding that organisations in this country do not consider the myriad of issues that are essential to the overall management of intellectual property.

It may also be stated here that a large number of firms in India do not have any robust systems on managing intellectual property within their organisations. The fact that 75% of the respondents in the survey did not even have an intellectual property policy confirms that no effective and efficient system exists that can help them manage their IP comprehensively.
While sector specific studies on intellectual property would further provide detailed insights to the attitude of firms towards the integrated management of intellectual property it is the finding of this research, when extrapolated, that Indian firms need to start focusing on IP related functions in a more comprehensive manner.

4. **Can an integrated approach that includes legal and management principles be incorporated into an IP Management Policy?**

Any integrated outlook to IP management requires that an organisation consider adopting a policy that takes into consideration all aspects that can help it determine how such a management system could be adopted. Addressing the rights and responsibilities, outlining the legal and administrative parameters and generally addressing issues pertaining to IP from the idea stage through to commercialization and exploitation should be clearly outlined in its IP policy. Furthermore, the cross functional nature of the IP system within organisations warrants that intellectual property not remain solely in the domain of legal practitioners.

Chapter 4 of this study has provided a guideline for a model policy that envisages all aspects of an IP Management system. The model policy is more on the lines of a guidance on the various and important elements that should be incorporated in an IP Management policy.

5. **Can legislative mechanisms facilitate and provide a legal basis for the management of intellectual property within organisations?**

and policy initiatives of the Government can indeed give force to intellectual property management in India. From the research and analysis of the various policy and legislative initiatives of the Government it can be argued that managing intellectual property is a process which could be facilitated through legislation in India. While the main body of a piece of legislation can outline the mechanism required for IP management, it is entirely feasible that the rules and regulations can define the various processes to be undertaken for managing intellectual property.

It is however the understanding of this researcher that any such legislative mechanism can only be implemented when fiscal or other such incentives are provided to organisations as was the
case with the proposed Public Funded Intellectual Property Bill, the discussion and passage of which should ideally be revived and brought in at the earliest.

Having said that, considering the introduction of the patent box regime as also provisions under the Income Tax Act, 1961 the incentives for the creation of IP Management systems do exist and perhaps would need to be further emphasized so that small businesses may also take note and move towards creating and developing intellectual property to avail such benefits.

The Government may also consider the tweaking of requirements under the Corporate Social Responsibility scheme as outlined in the Companies Act, 2013. Currently the mechanism exists where a CSR spend is in the nature of average profits of the company.

Given that cash liquidity for small and medium business is important to sustain itself, the Government should develop and implement a scheme which permits companies to part with their research outcomes as part of their CSR initiatives. A minor amendment to the legislation can help facilitate the bringing in of intangible assets as a CSR spend.

Furthermore, as is the case with the Enterprise Intellectual Property Management Standards of the Chinese State Intellectual Property Office (SIPO), due regard may even be given to the creation of standards for IP Management in the Indian context.

6.5 Recommendations

Based on the findings, the researcher makes the following recommendations in terms of law, policy and management:

A. Law and Policy
   
   The National Intellectual Property Rights Policy, 2016 should be reconsidered and amended keeping in mind the balance needed between IP right holders and the social and economic welfare of the Society at large.

   The Public Funded Intellectual Property Bill should be reintroduced by the Government of India and the provisions as outlined under section 10 in the
withdrawn bill pertaining to the management of intellectual property be considered in light of an integrated approach.

- The amendment to Section 135(5) of the Companies Act, 2013 that deals with CSR should be amended as follows:
  
  “The Board of every company referred to in sub-section (1), shall ensure that the company spends, in every financial year, at least two per cent. of the average net profits of the company made during the three immediately preceding financial years or an equivalent value thereof, in pursuance of its Corporate Social Responsibility Policy”

- Given the various initiatives of the Government of India on innovation at the very least organisations in India should adopt an Intellectual Property Policy that takes into account all stakeholders.

B. Management

- Companies and Organisations should use Ontology as a tool for the creation of an intellectual property management system. The detailed approach that Ontology enables would provide the organisations with the requisite tools to structure and maximise their IP creation, development and exploitation.

- Organisations should approach IP management as an integrated and cross functional process rather than as a stand-alone system. Companies should also consider that intellectual property issues are no longer solely a legal function and therefore ensure that all stakeholders are involved in decisions pertaining to its creation, development, protection and utilisation.

6.6 Scope for further Research

This thesis having contributed to the body of knowledge on intellectual property management has led to opening this area of study to a wide variety of research that may be further undertaken. The suggestions and recommendations for further research are:
1. Apply and implement the outcomes of this study to specific industry types to see its resourcefulness in real world scenarios. This can be further built upon by segmenting the industry types so that a model framework for IP management can be created which caters to specific industries.

2. Studies may be undertaken in the creation of ontologies of intellectual property management. Defined ontologies for managing intellectual property would be useful as it would help those in this field of study identify the various components and refine those components to build upon a robust system of IP management.

3. Through creating ontologies and building industry wise segments for holistic IP management research can also be undertaken to consider creating standards in this field which are specific to Indian businesses.

4. Studies may also be undertaken to identify and further suggest the most practical and appropriate intellectual property management strategies with respect to the various industry types.

5. Research on an inclusive system of managing IP can be considered from a legislative and policy framework to see how thrust on innovation can be further fuelled through such initiatives.

6. The patent / innovation box regime has been very recently introduced in India and research on its benefits can be undertaken to outline how such incentives work in the Indian context and if they do indeed have a significant impact on research and development and overall innovation in the country.

Implementation of a holistic intellectual property management system which is intrinsically tied into an organisations overall business goals and strategies would provide tremendous benefits to such entities. Ignoring an IP management process may in itself be a business strategy, however it is one which may prove costly in the long run.