

A legal based evaluation and discussion of the gender discrepancy in the intellectual property industry.

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DECLARATION

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GLOSSARY OF ACRONYMS

Commission for Gender Equality	CGE
Companies and intellectual property commission	CIPC
Convention on the Elimination of All Forms of Discrimination against Women	CEDAW
Indigenous Knowledge Systems	IKS
Intellectual Property	IP
Intellectual Property rights	IPR's
Inter-ministerial committee on intellectual property	IMCIP
International Covenant on Economic, Social and Cultural Rights	ICESCR
International Labour Organization	ILO
National Development Plan	NDP
National Development Plan	NDP
Science, Technology, Engineering and Mathematics	STEM
South Africa	SA
The Department of Science and Technology	DST
The Department of Trade and Industry	DTI
The Department of Women, Youth and Persons with Disabilities	DoW
The Intellectual Property Laws Amendment Act 28 of 2013	IPLAA
The United States of America	USA
Trade-Related Intellectual Property Agreement	TRIPS
United States Patent and Trademark Office	USPTO
Universal Declaration of Human Rights	UDHR
Women Empowerment and Gender Equality	WEGE
World Intellectual Property Organisation	WIPO

ABSTRACT

Intellectual property (IP) is protected by the law.¹ The law grants an individuals' creation a monopoly as a return for their creativity.² It generates incentives for creativity, for the benefit of both the creators and the society at large.³ Intellectual property rights (IPR's) are imperative to foster innovation and creativity in society. The protection allows for individuals to embrace the originality of what they have invented or created as recognition and gain from whatever financial benefit could occur. Therefore, the purpose of IP law would fail if it failed to identify creators. There is growing evidence that current IP laws and policies have failed to identify and prioritise many creators, including women.⁴

Although being an international issue, South Africa (SA) has a greater gender discrepancy within the IP industry and very little improvement is shown compared to other countries.⁵ Africa is a continent that has been seen to be patriarchal and lack gender equity.⁶ Therefore, in specifically African and patriarchal countries, like South Africa, it is important to encourage IP regulation, to increase the participation and rights of women in the IP industry. Ultimately, aiding towards a decrease in the gender discrepancy in the IP industry. Findings will show that more can and should be done by the legislature for a faster progression.

The following dissertation aims to discuss policy reform and development with reference to IP law. It suggests that the progress to eliminate the gender discrepancy seen in the IP industry is too slow and focuses on IP policy development. Additionally, the historical treatment of women, past laws, and current statistics will be discussed. Understanding this will guide an appropriate suggestion towards successful policy reform and implementation.

Moreover, the IP industry, as per the title of this dissertation, encompasses all aspects of IP, such as the ownership, inventorship, and legal aspects of the field. Additionally, there are

¹ S Gregory 'Intellectual Property Rights and South Africa's Innovative Future' (2008) 23 *Trade Policy Report*.

² Ibid.

³ D L Burk 'Bridging the gender gap in intellectual property', available at https://www.wipo.int/wipo_magazine/en/2018/02/article_0001.html, accessed on 7 August 2021.

⁴ Ibid.

⁵ J Berger and A Rens 'Innovation and Intellectual Property in South Africa: The Case for Reform' April 2018, available at <https://www.tralac.org/documents/news/1917-innovation-and-intellectual-property-in-south-africa-the-case-for-reform-accessibsa-april-2018/file.html>, accessed on 1 March 2021.

⁶ The World Bank 'Gender Equality: Why it Matters, Especially in a Time of Crisis' 2020, available at <http://www.worldbank.org/en/news/opinion/2020/04/13/gender-equality-why-it-matters-especially-in-a-time-of-crisis>, accessed on 3 May 2021.

various factors that differentiate women including race, disability, economic circumstances and social circumstances, to name a few. In terms of this dissertation women will be discussed as a group. However, consideration will be given to women from developing countries when appropriate.

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CHAPTER 1: INTRODUCTION AND OBJECTIVE OF THE DISSERTATION

1.1 Introduction

Intellectual property rights⁷ (IPR's) are legal tools that aim to protect property that constitute creations of the mind such as marks of origin, inventions, musical works, artistic works, and designs.⁸ The importance of these rights in fostering innovation and facilitating fair and equitable trade practices have long been recognised. The advent of the internet and digitisation have placed intellectual property (IP) protection at the forefront of many legal trade-related debates pertaining to “industrial policy, public health, biotechnology, biodiversity, environmental protection, information technology, the entertainment and media industries, and the widening gap between the income levels of the developed countries and the developing countries”.⁹ Further, with more and more attention being placed on the fostering and promotion of knowledge-based societies, IPR's have never been more economically and politically important.

The impact of gender¹⁰, or rather gender discrepancies, in the creation and protection of rights and laws has for many decades attracted attention and academic discussion. Sadly, there has been little research on gender related issues in the field of IP law. Empirical research has demonstrated that gender bias exists in many countries. In 2018, a study¹¹ showed that South Africa (SA) had one of the greatest gender gaps¹² in the world regarding patent applications in the IP industry.¹³

⁷ Intellectual property is protected in terms of Section 25 of the Constitution of the Republic of South Africa, which states that: ‘(1) No one may be deprived of property except in terms of law of general application, and no law may permit arbitrary deprivation of property; (2) Property may be expropriated only in terms of law of general application: (a) for a public purpose or in the public interest; and (b) subject to compensation, the amount of which and the time and manner of payment of which have either been agreed to by those affected or decided or approved by a court; (3) ;(4) For the purposes of this section—(b) property is not limited to land.’ (See: The Constitution of the Republic of South Africa, 1996.)

⁸ B Thomas, DJ Murphy, BG Murray *Encyclopedia of applied plant sciences* (2016)

⁹ Ibid.

¹⁰ ‘Gender is the culturally specific set of characteristics that identifies the social behaviour of women and men, the relationship between them, and the way it is socially constructed. Because it is a relational term, gender must include both women and men.’ (See: Canadian Cataloguing in Publication ‘Gender-bases analysis: a guide for policy-making’ 996, available at http://www.pacificwater.org/userfiles/file/IWRM/Toolboxes/gender/gender_based_analysis.pdf, accessed on 2 January 2022.)

¹¹ J Berger and A Rens (note 5 above).

¹² Also referred to as gender discrepancy.

¹³ J Berger and A Rens (note 5 above).

Additionally, there are many definitions of the term ‘gender gap’. Generally, the term refers to a divide or negative space indicating an inequality in the treatment of women (as opposed to men) in relation to participatory levels, access, opportunities and profit. The identification of the existence of such a gap attests to issues and problems experienced by women in gaining full and equal recognition and status in the dispensation of IP law.

This dissertation aims to discuss how gender insights from non-IP doctrine can be applied to bridge the gender gap in IP law to facilitate the formulation and implementation of policy development, change, and reform. It suggests that the progress to decrease the gender discrepancy in the IP industry is currently moving far too slowly in Africa in particular. This research aims to establish that women face persistent, institutionalised challenges in enjoying equal access to and participation in the IP industry, which key role players, policy makers and stakeholders in industry fail to heed, let alone prioritise. Additionally, the historical treatment of women, past property laws, and statistics of the gender discrepancy in the IP industry will be discussed. Understanding these will enable the conceptualisation of appropriate recommendations for policy changes to foster equitable systems of encouraging innovation and creativity. Finally, this dissertation will present recommendations to address these by considering the policy-making process.

1.2 Background and outline of the research problem

Historically, men’s and women’s experiences of engaging with law, including IP law, have differed based on their ability to access resources or levels of education.¹⁴ In the last hundred years, a woman’s role in society has been redefined and diversified, exemplified by the fact that women in the workplace and pursuing higher education is now the norm rather than the exception.¹⁵ A great deal of effort has been put into ensuring institutions create rules that promote gender equality.¹⁶ However, where gender inequalities persist a reconsideration of

¹⁴ DL Burk ‘DO Patents have Gender?’ (2011) 19(6) *American University Journal of Gender, Social Policy & the Law* 880-919.

¹⁵ Ibid.

¹⁶ Gender equality means that women and men enjoy the same status. Gender equality means that women and men have equal conditions for realizing their full human rights and potential to contribute to national, political, economic, social and cultural development, and to benefit from the results. (See: Canadian Cataloguing in Publication ‘Gender-bases analysis: a guide for policy-making’ 996, available at http://www.pacificwater.org/userfiles/file/IWRM/Toolboxes/gender/gender_based_analysis.pdf, accessed on 2 January 2022.)

concepts, laws, and strategies in place to promote women's dignity and rights is needed.¹⁷ Law and policy reform is a process that involves making changes to the law and the enforcement of law.¹⁸

In 2021, SA was 18th out of 156 countries globally in terms of its gender gap index score.¹⁹ The above statistic indicates that SA is seemingly better than many other countries in terms of addressing gender imbalances. However, despite this progress, significant discrepancies regarding the equitable participation between men and women persist, particularly in the areas of science and technology. On close inspection, it is apparent that IP creation, regulation, and ownership has been substantially male orientated, and continue to remain so, despite significant shifts in societal and legal norms.²⁰ Although this issue is an international issue, SA is one of the countries that has had the least progression.²¹

According to the 2017 annual statistics released by the World Intellectual Property Organization (WIPO), 'only 17% of the applications from Africa named at least one-woman inventor'.²² SA is also 'among the countries with the greatest gender discrepancy in the use of patent systems' and very little improvement in shown.²³ Factors that have been shown to challenge the advancement of women in the IP industry include, insufficient data to acknowledge the nature of the gender discrepancy, the lack of understanding the value of IP law, rights and how the system operates, financial barriers in the IP system, for example, the patent application process, and the fact that women are less likely to obtain opportunities for development in IP intensive fields.²⁴

¹⁷ A Rao and D Kelleher 'Unravelling Institutionalised Gender Inequality' (2002) *Gender at Work, Occasional Paper 8*.

¹⁸ MM Katopola 'The Role of Law Reform in Strengthening Legislative Processes: The Malawi Experience', available at https://www.justice.gov.za/alraesa/conferences/2011malawi/role-of-law-reform_katopola.pdf, accessed on 14 October 2021.

¹⁹ Statista 'Gender gap index in South Africa 2016-2021' available at <https://www.statista.com/statistics/1253971/gender-gap-index-in-south-africa/>, accessed on 2 November 2021.

²⁰ D Halbert 'Feminist Interpretations of Intellectual Property' (2006) 14(3) *American University Journal of Gender, Social Policy & the Law* 431-460.

²¹ Global Citizen 'Tell the Gender Commission: South African Women Deserve Real Equality', available at <https://www.globalcitizen.org/en/action/email-the-gender-commission/>, accessed on 21 August 2021.

²² C Guibourg and N Stylianou 'Why are so few women inventors named on patents?' 2 October 2019, available at <https://www.bbc.com/news/technology-49843990>, accessed on 5 June 2021.

²³ J Van Harmelen 'Patents: let's correct the gender imbalance' 5 November 2019, available at <https://www.mondaq.com/southafrica/patent/864026/patents-let39s-correct-the-gender-imbalance>, accessed on 18 December 2021.

²⁴ S Stute, *The Gender Gap in Patents: An Exploration of Bias Against Women in Patent Attainment and "Blockchain" As Potential Remedy* (Unpublished LLM thesis, Wright State University, 2019).

The South African government has recently approved the country's IP policy,²⁵ which aims to stimulate the development of the knowledge economy. This objective is part of the government's broader National Development Plan (NDP) to improve the productivity, innovation, and competitiveness of its industries.²⁶ The issue seen from a legal point of view is that drafters of legislation and SA's IP policy²⁷ have failed to consider the gender discrepancy in field of IP law as a priority. An example of this can be seen in the first phase of the South African IP policy.

SA's IP policy²⁸ aims to contribute and promote socio-economic development. Thus, the policy is intended to 'promote local manufacturing, utilise and preserve resources, encourage innovation and empower domestic stakeholders' to benefit from the IP industry.²⁹ What is absent from the most recent version of this policy is any mention or reference to the promotion of women's roles in IP creation, protection, and regulation.

Moreover, of particular reference to this research is the importance of a discussion on the South African laws protecting traditional and indigenous. There is an important link between traditional knowledge, women's rights, IPR's, women, and socio-economic development. There should be a greater awareness of the gender aspects of traditional knowledge. There are many policies and initiatives that ignore the gender aspects of traditional knowledge in their development and implementation. This can have serious impacts on the survival and development of local communities and indigenous peoples. The significance of traditional knowledge and its trade value makes it a valuable resource for women's economic empowerment and in line with the World Trade Organization's (WTO's) Declaration on Trade and Women's Economic Empowerment.

For example; African countries would need to protect their traditional cultural expressions from unauthorised use, therefore the enactment of *sui generis* laws is relevant. The IP Laws Amendment Act 28 of 2013 (IPLAA) and the Protection, Promotion, Development, and

²⁵ Intellectual Property Policy of The Republic of South Africa.

²⁶ R Pereira and G Lombard 'PHASE 1 OF SOUTH AFRICA'S IP POLICY | WHAT YOU NEED TO KNOW' available at <https://www.adams.africa/intellectual-property/phase-1-south-africas-ip-policy-need-know/>, accessed on 2 November 2021.

²⁷ Intellectual Property Policy of The Republic of South Africa.

²⁸ Ibid.

²⁹ INTELLECTUAL PROPERTY POLICY OF THE REPUBLIC OF SOUTH AFRICA PHASE I, available at https://www.gov.za/sites/default/files/gcis_document/201808/ippolicy2018-phasei.pdf accessed on 14 October 2021.

Management of the Indigenous Knowledge Act of 2019 are two recent Acts that indicate the South African government's recognition of the significance of protecting indigenous and traditional knowledge.

Moreover, in historically patriarchal groups as seen in Africa, IP policies should be revised to include a focus on protecting the rights of women in particular, and not just be of neutral language. While SA has a robust IP policy, it is not always clear that its international positions are coordinated with a clear understanding of our country's obligations or that SA is fully taking advantage of the opportunities that globalisation presents.³⁰

Reform should occur to ensure that the various frameworks and regulations protecting women's rights to IP are consolidated and harmonized.³¹ Legislation and policies should remove or modify provisions that contradict existing legislation in various areas of law. This ensures that a consistent legal framework is maintained to promote women's human rights and gender equality within the IP industry.³² There is a need to base suggestions for new policies or policy development that will guarantee that social and monetary benefits of innovation are shared equally and inclusively. This will be addressed along with intention of the Department of Science and Innovation (DSI), and the Department of Science and Technology (DST) in tackling this issue. Laws and policies related to IPR's should be reviewed to ensure they are in line with international trade-related guidelines.³³

This dissertation will provide an analysis of the government's IP policy vision as well as of various legislation. In doing so, various factors will be addressed to include how policy process and drafting can be guided by such standpoints towards legal reform. For example, understanding the prejudice women have faced in the past- and laws that had implemented such- will also be able to guide policy reform. Additionally, considering statistics of the gender discrepancy in the IP industry is also relevant for policymakers to understand. Therefore, in discussing these aspects this dissertation will come to a conclusion that provides solid recommendations for policy reform, to address the gender discrepancy in the IP industry.

³⁰ INTELLECTUAL PROPERTY POLICY OF THE REPUBLIC OF SOUTH AFRICA PHASE I (note 29 above).

³¹ UN 'Realising women's rights to land and other productive resources', available at <https://www.ohchr.org/documents/publications/realizingwomensrightstoland.pdf>, accessed on 7 August 2021.

³² Ibid.

³³ Ibid.

1.3 The rationale for the study

Research on gender issues has influenced many areas of the law.³⁴ However, only recently has research been done on the possibility of IP law having a gender bias.³⁵ Even though there is no obvious discrimination in the IP system, if there is an unintentional creation of a situation where the legal system has entailed some type of bias, it is a cause for concern.³⁶

This is the reason policy reform is so important. Policy reform ‘foster well-functioning institutions, laws, and regulations to improve the business climate and create a level playing field, unlock investment opportunities and ensure the development of the private sector over the long term.’³⁷ This research will facilitate and promote a discussion to help identify policy and institutional transition challenges impacting the gender discrepancy in the IP industry to support sustainable and inclusive growth.

My dissertation aims to enlighten the reader on this issue, to provide a fresh perspective and possible recommendations, relating to the lack of progression in the gender discrepancy seen in the IP industry.

In SA, the historical treatment of women and gendered legislative developments have impacted the role of women in IP at present. The promulgation of legislation has allowed for recognition that women have been historically oppressed based on gender and patriarchy.³⁸ The historical oppressive property laws placed on women, influenced an urgent need for gender-neutral laws in modern society.³⁹ In order to continue positive transformation, what is required is a revision of the law. My research will indicate a gap in South African law requiring reform. This will include a reference made to relevant legislation, such as the Women Empowerment and Gender Equality Bill, the Promotion of Equality and the Prevention of Unfair Discrimination Act 4 of 2000, the Employment Equity Act 55 of 1998, IP legislation, policies, and constitutional

³⁴ WIPO ‘Gender gap in innovation closing but progress is slow’ 8 March 2021, available at https://www.wipo.int/women-and-intellectual-property/en/news/2021/news_0002.html, accessed on 29 March 2021.

³⁵ Ibid.

³⁶ Ibid.

³⁷ INTELLECTUAL PROPERTY POLICY OF THE REPUBLIC OF SOUTH AFRICA PHASE I (note 29 above).

³⁸ DL Burk ‘Copyright and Feminism in Digital Media’ (2006) 14(3) *American University Journal of Gender, Social Policy & the Law* 519-54.

³⁹ D L Burk (note 3 above).

equality guarantees. Additionally, this dissertation will provide a discussion of national and international IP policy and laws in place and whether it has made any positive impact on the gender discrepancy in the IP industry.

Additionally, ‘despite the increase of constitutional democracies and the protection of human rights, parts of gender inequality still permeate societal relations between genders.’⁴⁰ This is why a critical evaluation of the historical treatment of women, with regards to property ownership, is important to understand how this issue became evident in the first place. Gender equality and empowerment laws have been implemented for decades, yet statistics still reveal that the progression and participation of women in the IP industry, are unequal.⁴¹ The rationale for this study is to evaluate the progression of the gender gap and why it is too slow, as well as identify how the law may be able to accelerate the decrease of the gender discrepancy in the IP industry. The type of redress that this dissertation aims to suggest is policy reform and revision of legislation, including IP legislation and policies, which can be done successfully if drafters consider such aspects.

This topic would not only contribute to the legal field, but it would also have meaning to the women of our world. The contribution would be to provide a South African perspective on the topic by enriching knowledge on the issue. This research aims to evaluate gender regarding its relevance with IP law as well as to provide information regarding women in the IP industry, being a predominately male legal sector. It is important to note that the more women we have within the IP industry would allow for female representation to occur, research funding opportunities for women, and the encouragement of more women to enter the IP industry. Additionally, it would show growth from a society whose legal system is seen to be gender biased.

⁴⁰ D Halbert (note 20 above).

⁴¹ WIPO (note 34 above).

1.4 Literature Review

The gender discrepancy in IP has slowly decreased over recent decades, however, it is still noticeably evident.⁴² Very little research has been done examining SA's IP policy⁴³ from a gender point of view. The impact of gender on the IP industry has only briefly been explored until recently.⁴⁴ This is one aspect that should be considered during the policy-making process. Prior research internationally on the topic has been substantial but very little research on the abovementioned topic has been done in SA.

A Inniss in *Examining IP Rights, Innovation and Technology Within the Caricom Single Market and Economy*, stated that an understanding of the effects of IPR's and policies related to innovation and technology activities are important to the creation and implementation of policies that can support economic growth and development.⁴⁵ The UK Institute for Government report titled 'Policy-making In The Real World' stated that better policy process is needed and the key to improving policy is to build a more realistic process. Although policy making is complex, the institutions of government are responsible for introducing order where appropriate.⁴⁶ CB Ncube in *Harnessing IP for development: Some thoughts on an appropriate theoretical framework*, stated that 'an equitable IP policy can be utilized as an evaluative tool in both legislative and policy contexts. In order to ensure the enjoyment of the rights of users, policy makers have to analyse and balance competing interests.'⁴⁷ This is why it is important to go beyond the surface and discuss historical injustices and statistics.

Moreover, research also argues that the restrictions put on women hinder the opportunity to invent and innovate.⁴⁸ AM Wachira's dissertation on *Gender Dynamics and IP Law* shows how the gender discrepancy has been evident for decades because of such restrictions.⁴⁹

⁴² D Halbert (note 20 above).

⁴³ Intellectual Property Policy of The Republic of South Africa.

⁴⁴ D Halbert (note 20 above).

⁴⁵ A Inniss, *Examining Intellectual Property Rights, Innovation and Technology Within the Caricom Single Market and Economy* (Unpublished Doctoral Dissertation, Walden University, 2017).

⁴⁶ Institute for Government 'Policy Making In The Real World' (April 2011), available at <https://www.instituteforgovernment.org.uk/sites/default/files/publications/Policy%20making%20in%20the%20real%20world.pdf>, accessed on 14 October 2021.

⁴⁷ CB Ncube 'Harnessing Intellectual Property for development: Some thoughts on an appropriate theoretical framework' (2013) 16(4) *Potchefstroom Electronic Law Journal*.

⁴⁸ AM Wachira, *Gender Dynamics and Intellectual Property Law* (Unpublished LLB thesis, The University of Nairobi, 2000).

⁴⁹ Ibid.

Although some research findings outline the gender discrepancy within IP, several studies demonstrate a correlation between the gender discrepancy and women not pursuing STEM subject fields. For example, S Stutes's thesis on *The Gender Gap in Patents: An Exploration of Bias Against Women in Patent Attainment and "Blockchain" As Potential Remedy*,⁵⁰ evaluated the efficacy of current strategies used to narrow the gap. The paper additionally explored STEM education initiatives and the findings suggested that as more men pursue STEM fields the inventive patent ownership gender gap will broaden.⁵¹ Similarly, IP scholar J Hunt, in *Why don't women patent?* concluded that the underrepresentation of women in STEM fields explains the gender discrepancy in patent applications. Such findings were mirrored extensively in various other works of literature, which all should be considered during the policy-making process.

Furthermore, one of very few South African studies relevant to the topic, dealt with the empowerment of women entrepreneurs, through inclusive innovation in SA. DO Oriakhogba's recent article, *Working around the Gender Gap in IP Regimes*, sheds a positive light on how inclusive innovation and social entrepreneurship appear to be effective mechanisms for 'working around the IP gender gap.'⁵² The findings and recommendations in this study⁵³ contribute to the idea that women can create opportunities and conquer within this field. Although, his work focuses much on bead workers, as an example, the principles and relevant knowledge on gender equality are relevant.

The above studies have begun to provide insight into how the gender discrepancy within IP is created and maintained, as well as provide various recommendations. However, a South African perspective will provide research towards the development of women in IP, create awareness and inform scholars by the implementation of policy. This research is lacking in SA. My research will involve a continuation of previous research on the topic and will address areas where little research is available.

As mentioned, there have been international studies, surveys, and statistics on exploring the abovementioned topic. However, an analysis of history, gender and the law may provide

⁵⁰ S Stute (note 24 above).

⁵¹ Ibid.

⁵² DO Oriakhogba, *Working around the Gender Gap in Intellectual Property Regimes: Empowerment of Women Beadworkers through Open, Inclusive Innovation and Social Entrepreneurship property in KwaZulu-Natal, South Africa* (Unpublished working paper, 27 July 2020).

⁵³ Ibid.

reasons to why the gender discrepancy persists in the 21st century. An analysis of the progress of countries regarding gender discrepancy, with a reference to SA versus the United States of America will be provided. This will then allow appropriate policy approaches to be concluded in considering the above. I will lastly make suggestions on potential law reforms to protect, enforce and encourage women within IP.

This dissertation proposes a new regime of IPR's to relieve women of the barriers women face in the IP industry. Such as the access to patent protection. This dissertation will detail the challenges facing women in the IP industry and suggest legal remedies and potential solutions. Suggested remedies would not solve all of the issues women in the IP industry face. However, this discussion would benefit women by providing the importance of realizing the benefits of inventive efforts and legal rights.

1.5 Research problems, objectives, and key questions to be asked:

The following questions form the foundation of my dissertation. In undertaking these questions, I find that more can and should be done to overcome the gender discrepancy in IP. I aim to identify why the gender gap persists, the flaws that exist in certain countries, and additionally, identify possible solutions to a faster progression away from the gender discrepancy in patent applications.

The main questions that this dissertation will aim to provide knowledge on is:

1. How does one facilitate successful policy reform with a focus on gender related issues?
2. Do current policies provide sufficient legal mechanisms that aid in decreasing the gender discrepancy in the IP industry?
3. How does the historical treatment of women, with regard to property ownership laws, impact women's development and ownership in the IP industry today?
4. What are the trends of the gender discrepancy in the IP industry, with reference to patent applications and the law?
5. What recommendations for policy reform would support access to the IP industry for female innovators, creators, and entrepreneurs?

1.6 Research Methodology

This dissertation is a non-empirical study and will be based on desktop research of relevant primary and secondary sources.

Since there is little South African literature on IP sourcing from a gender perspective, a qualitative and quantitative evaluation will be offered in this dissertation. The qualitative investigation is based on thorough desktop research on a variety of primary and secondary sources. Sources include but are not restricted to national and international agreements, national and international statutes, legislation, case law, patent works in the public domain, patent databases, textbooks, journal articles, cyberspace sources, magazine articles, newspaper articles, interviews, presentations, news reports, and expert opinions. The quantitative research is based on statistics from the WIPO of the United Nations, as well as available empirical studies.

1.7 Structure of dissertation

The main body of this dissertation will include six chapters, in addition to the introduction and conclusion.

Chapter 1 is the introduction of the dissertation. It establishes the topic, and it consists of an overview of what will be discussed in this dissertation. Additionally, it offers a rationale, the objectives, and the relevance of the study. This chapter also contains the research questions to be evaluated, thereafter followed by a literature review of the key sources of work used in this dissertation.

Chapter 2 provides a general overview of policy reform with reference to gender and IP law. This chapter includes the importance of policy reform and briefly discusses the stages of policy reform. Additionally, factors to consider for successful policy reform will be mentioned. Understanding this will aid in identifying what should be considered when a revision of policies occurs. This will be further addressed by facilitating policy reform with a specific focus on gender related issues and IP law.

Chapter 3 provides a discussion of international and national law and policies. This includes SA's IP policy⁵⁴, the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)⁵⁵, trade law reform, traditional knowledge, and protecting rights of women. This chapter will include whether the law and policies in place adequately address the issue.

Chapter 4 refers to gender equality and the law. An outline of women's representation in the legal field and in the IP industry will be provided. Moreover, a brief discussion on the importance of STEM subjects will be evaluated, as well as the factors that challenge the advancement of women inventors and innovators. This chapter does this by providing a brief overview of certain barriers women traditionally have faced in male-dominated fields. Reference will be made to the history of women inventors and innovators, the historical treatment of women with regard to property ownership laws, and the impact it has on the development and ownership of patent applications, both nationally and internationally. Understanding the legal history and historical treatment of women may prove to be of importance to understand to guide policy reform.

Chapter 5 examines the current statistics and trends⁵⁶ of the gender discrepancy in IP, with reference to a specific area of IP being patent applications. This chapter includes relevant statistics offered by the WIPO of the United Nations, as well as available empirical studies. Reference will be made to IP trends seen by women and how the gender discrepancy is created and kept going. It additionally offers a comparison of the progress seen in SA and the United States of America (USA) with regard to the gender discrepancy and their laws. Considering current statistics and comparing them to another country may prove to be of importance to understand to guide policy reform.

Chapter 6 provides policy approaches to support access to the IP system for female innovators, creators, and entrepreneurs. This chapter will base its recommendations on what policy makers should consider during the policy process stages and how the previous chapters aid in doing so. This will ultimately aim towards a faster progression in the IP industry for women. Possible

⁵⁴ Intellectual Property Policy of The Republic of South Africa.

⁵⁵ The Agreement on Trade-Related Intellectual Property, 15 April 1994.

⁵⁶ The term 'trend' refers to how the characteristics of the gender discrepancy in the IP industry have changed over time.

recommendations to the above challenge will be made specifically for SA's legal system, however other countries may be able to benefit from the mentioned policy approaches too.

Chapter 7 being the final chapter comprises conclusions, a summary of the issues discussed as well as considerations for policy development and suggestions for future research.

CHAPTER 2: AN OVERVIEW OF POLICY REFORM WITH REFERENCE TO GENDER

2.1 Introduction

In 2018, the South African government authorized the first phase of SA's IP Policy.⁵⁷ Whilst SA currently has a robust IP regime, there are concerns that the current systems are in need of upgrade, redress and promotion of IP rights in key markets. To this end an inclusive policy, with a main aim of encouraging socio-economic development was needed.⁵⁸

This dissertation is centered around policy reform in IP law with reference to gender. Therefore, current policies will be critiqued, suggestions on what should be considered during the policy-making process will be made and recommendations towards policy reform will be provided. However, before this dissertation provides a critique on how the law and policy affect the gender discrepancy in the IP industry, it is useful to understand the characteristics of policy reform in general. This will allow one to understand what needs to be done and considered in the policy-making process. Thus, doing so will allow for an appropriate critique on whether current legislation and policy live up to fulfilling their goals. This is done by evaluating whether previous stages within the process were adequately accounted. Additionally, understanding the policy-making process will also aid in identifying what should be considered when revision or reform of a policy occurs and help to identify potential suggestions towards the gender discrepancy in the IP industry if current policy and legislation are insufficient.

This chapter will also discuss the stages of and importance of policy reform. Additionally, factors to consider for successful policy reform will be mentioned, and facilitating policy reform with a specific focus on gender-related issues and IP law will also be provided. SA's new IP policy⁵⁹ will also be mentioned when relevant, but the next chapter will provide a more critical analysis.

⁵⁷ X Carim 'Briefing of the Intellectual Property Policy (Phase 1)' 3 November 2020, available at http://www.thedtic.gov.za/wp-content/uploads/IP_Policy.pdf, accessed on 10 November 2021.

⁵⁸ Ibid.

⁵⁹ Intellectual Property Policy of The Republic of South Africa.

2.2 The stages of the policy-making process

Public policy can be defined as ‘a system of laws, regulatory measures, courses of action, and funding priorities concerning a given topic promulgated by a governmental entity or its representatives.’⁶⁰ In simple terms, public policy is a set of regulations, and other legal measures intended to address a topic or problem to achieve a specific goal or solution. A policy document aims to identify the various methods and principles that a government department or agency will use to achieve its goals. Although it is not law, it aids in identifying new laws to achieve its goals.⁶¹ By carefully studying the policy-making process, we gain a deeper understanding of how decisions are made and how they are affected by various constraints.⁶² For example, ‘shortage of time and resources, public opinion, and the Constitution.’⁶³

The policy-making process consists of five main stages, namely; ‘agenda setting, policy formulation, policy adoption, implementation, and evaluation.’⁶⁴ Each policy stage has its unique characteristics. The identification of a societal issue is the first step in the policy cycle. After coming up with a policy proposal, the relevant department and its officials are required to adopt it. The policy is evaluated in the last stage.⁶⁵

This guide breaks down the steps into five simple steps that helps one to understand how to formulate a public policy.⁶⁶

⁶⁰ DG Kilpatrick ‘Definitions of Public Policy and the Law’ 2000, available at <https://mainweb-v.musc.edu/vawprevention/policy/definition.shtml>, accessed on 16 December 2021.

⁶¹ ETU ‘The policy and law-making process’, available at <https://www.etu.org.za/toolbox/docs/govern/policy.html>, accessed on 16 December 2021.

⁶² C Knill and J Tosun ‘Policy Making’ 2008, available at https://www.researchgate.net/publication/30014974_Policy_making, accessed on 10 November 2021.

⁶³ The Constitution of the Republic of South Africa, 1996.

⁶⁴ Point Park University ‘The five stages of the Policy Making Cycle’ 27 May 2021, available at <https://online.pointpark.edu/public-administration/policy-making-cycle/>, accessed on 10 November 2021.

⁶⁵ AS Burke ‘4.3 The Stages of Policy Development’, available at <https://openoregon.pressbooks.pub/ccj230/chapter/3-3-the-stages-of-policy-development/>, accessed 16 December 2021.

⁶⁶ Point Park University (note 64 above).

2.2.1 Agenda Setting

Agenda setting is the first stage of the policy-making process. This entails identifying a problem.⁶⁷ The goal is to create a solution that can be implemented immediately. Most of the time, the agenda is set by elected public officials.⁶⁸

The agenda setting theory requires advocates to expand their interests with the intention of placing them on the public's agenda and by considering the extent their interests align with the public's needs.⁶⁹

Agenda setting usually goes through the following stages:

- Systemic Agenda: These are issues that public official feel is worth solving.⁷⁰
- Institutional Agenda: These issues are still on the systemic agenda but should be considered separately by policymakers.⁷¹
- Discretionary agenda: Comes from the various legislative bodies, not from the institutional or systemic agendas.⁷²
- Decision agenda: The final issues that are considered by policymakers.⁷³

With reference to the discussion of this dissertation, it is necessary to consider the gender perspective and incorporate it into the policy-making process. Additionally, the use of gender analysis⁷⁴ will assist individuals to analyse the impacts of gender roles and power dynamics.⁷⁵ The societal problem identified is the gender discrepancy in the IP industry, and the legal problem identified is that drafters of legislation and SA's IP policy⁷⁶ have failed to consider the

⁶⁷ C Knill and J Tosun (note 62 above).

⁶⁸ ETU (note 61 above).

⁶⁹ C Knill and J Tosun (note 62 above).

⁷⁰ Point Park University (note 64 above).

⁷¹ Ibid.

⁷² T Kapisa '5 Stages of the policy making process' 22 November 2021, available at <https://www.zambianguardian.com/stages-of-the-policy-making-process-2/>, accessed on 16 December 2021.

⁷³ Ibid.

⁷⁴ The gender analysis study explores the differences in the roles of men and women regarding their conditions, access to resources, development, control of assets, decision-making roles needs, and participation rates. It is necessary to implement and sustain a gender-responsive policy. (See: Canadian Cataloguing in Publication 'Gender-bases analysis: a guide for policy-making' 996, available at http://www.pacificwater.org/userfiles/file/IWRM/Toolboxes/gender/gender_based_analysis.pdf, accessed on 2 January 2022.)

⁷⁵ Women's Democracy Network 'Gender-responsive policy-making HANDBOOK', available at https://www.iri.org/sites/default/files/gender-responsive_policymaking_handbook.032720.pdf, accessed on 24 December 2021.

⁷⁶ Intellectual Property Policy of The Republic of South Africa Phase 1.

gender discrepancy in field of IP law as a priority. The goals of SA's IP policy aim to promote, solidify and consider development in the IP industry, however, drafters of the policy have failed to consider or find a solution towards a current and serious problem, being the gender discrepancy in the IP industry. This will be evaluated further in the next chapter.

2.2.2 Policy Formulation

The second stage of a policy cycle is called policy formulation. This stage entails the discussion of a plan of action to solve a policy problem.⁷⁷ Policy formulation is formulated with the objective of devising an action plan.⁷⁸ It is usually preceded by the preparation of various policy instruments and their settings.⁷⁹

In SA, policies are formulated at several conferences of the ruling party. These conferences are held to discuss and debate specific issues.⁸⁰ A policy is formulated after it has been debated by Parliament and considered by Cabinet. The final policy is issued as a White Paper. This is a comprehensive policy statement that usually forms the basis of legislation.⁸¹

With reference to this dissertation, what will be discussed is what gender considerations should be considered when formulating a policy based on gender and the gender discrepancy in the IP industry. For example, oppressive past property laws, gathering evidence and statistics. This will not only aid in identifying the cause of the issue but also guide a plan of action to resolve it.⁸²

⁷⁷ Cliffnotes 'The Policymaking Process', available at <https://www.cliffsnotes.com/study-guides/american-government/public-policy/the-policymaking-process>, accessed on 16 December 2021.

⁷⁸ The Public Policy Cycle 'Defining Policy Formulation' 11 July 2001, available at <http://profwork.org/pp/formulate/define.html>, accessed on 17 December 2021.

⁷⁹ C Knill and J Tosun (note 62 above).

⁸⁰ ETU (note 61 above).

⁸¹ Ibid.

⁸² A gender perspective will aid in mapping out the factors that influence a particular issue and develop effective policies to address them for women. (See: Canadian Cataloguing in Publication 'Gender-bases analysis: a guide for policy-making' 996, available at http://www.pacificwater.org/userfiles/file/IWRM/Toolboxes/gender/gender_based_analysis.pdf, accessed on 2 January 2022.)

2.2.3 Policy Adoption

Policy adoption is the third stage in the policy-making process. It is a process where the government approves a policy for future implementation.⁸³

Additionally, creating a gender-responsive communication strategy⁸⁴ would be valuable.⁸⁵ The media can also play a vital role in the adoption of policies. Generally, favourable media coverage can increase a policy proposal's chances of being adopted.⁸⁶

2.2.4 Policy Implementation

Policy implementation involves executing the elected public policy option.⁸⁷ It is carried out by officials who utilize the tools of government to influence the distribution of public goods and services.⁸⁸

Proper implementation of policies can transform law into a practical reality.⁸⁹ The success of a policy depends on how well the various components of the government implement it.⁹⁰ SA's IP policy⁹¹ is being implemented in a phased approach, with Phase 1 being introduced already.⁹²

With regards to gender, developing a gender-responsive implementation strategy will assist in monitoring and ensuring gender integration.⁹³ For example, raise gender awareness, team assessments on the gender perspective and organisational obligations to gender equality.

⁸³ Boundless 'Policy Adoption', available at <http://kolibri.teacherinabox.org.au/modules/en-boundless/www.boundless.com/political-science/textbooks/boundless-political-science-textbook/domestic-policy-15/the-policy-making-process-95/policy-adoption-515-6415/index.html>, accessed on 16 December 2021.

⁸⁴ A gender analysis will allow for the communication strategy reach both men and women. (See: Canadian Cataloguing in Publication 'Gender-bases analysis: a guide for policy-making' 996, available at http://www.pacificwater.org/userfiles/file/IWRM/Toolboxes/gender/gender_based_analysis.pdf, accessed on 2 January 2022.)

⁸⁵ Women's Democracy Network (note 75 above).

⁸⁶ Lumen 'The policy-making process', available at <https://courses.lumenlearning.com/boundless-politicalscience/chapter/the-policy-making-process/>, accessed on 10 November 2021.

⁸⁷ Newfoundland Labrador 'Policy Implementation', available at <https://www.gov.nl.ca/pep/policy-implementation/#:~:text=Policy%20Implementation%20is%20when%20action,with%20other%20organizations%20as%20required.>, accessed 16 December 2021.

⁸⁸ Point Park University (note 64 above).

⁸⁹ C Knill and J Tosun (note 62 above).

⁹⁰ TB Smith 'The Policy Implementation Process' (1973) 4(2) *Policy Sciences* 197-209.

⁹¹ Intellectual Property Policy of The Republic of South Africa.

⁹² Intellectual Property Policy of The Republic of South Africa Phase 1

⁹³ Women's Democracy Network (note 75 above).

2.2.5 Policy Evaluation

After a policy has been passed by the legislature, it undergoes evaluation. This stage is when the public's expectations and whether the policy would assist in achieving relevant long-term goals are evaluated.⁹⁴ Policy evaluation can additionally assist the public and private sectors to monitor the impact of a policy on their lives. This could lead to additional changes in how public policy is implemented.⁹⁵

Evaluation of policy is an effective tool for policymaking. It assists policymakers in pinpointing areas where they can improve, and it can also help them reframe an issue once decided on.⁹⁶ A gender-sensitive evaluation would be vital for gender-responsive policies to analyse how the policy assists to create gender equality.⁹⁷

SA's IP policy⁹⁸ aims for socio-economic development within the IP industry. Since SA's IP policy is currently being implemented and SA awaits Phase 2, perhaps it would be appropriate for the gender discrepancy in the IP industry to be considered, as that would aid towards greater socio-economic development for women within the industry.

This would make sense as results of an evaluation can lead to changes in the policy or termination of the policy. Policy termination should be initiated if evaluation studies disclose that the policy is dysfunctional.⁹⁹

⁹⁴ J Lohrey 'The five stages of the policy-making process' 8 November 2018, available at <https://bizfluent.com/info-10040221-five-stages-policymaking-process.html>, accessed on 17 December 2021.

⁹⁵ Point Park University (note 64 above).

⁹⁶ OECD 'How Can Governments Leverage Policy Evaluation to Improve Evidence Informed Policy Making?' 2020, available at <https://www.oecd.org/gov/policy-evaluation-comparative-study-highlights.pdf>, accessed on 17 December 2021.

⁹⁷ Women's Democracy Network (note 75 above).

⁹⁸ Intellectual Property Policy of The Republic of South Africa.

⁹⁹ C Knill and J Tosun (note 62 above).

2.3 The importance of policy reform

Laws are a ‘set out standards, procedures and principles that must be followed.’¹⁰⁰ Policies are ‘rules, principles, guidelines or frameworks that are adopted or designed by an organization to achieve long-term goals.’¹⁰¹ Reform is defined as ‘changes and improvements to a law, social system, or institution.’¹⁰² Therefore, it can be deduced that policy reform is the changes and developments made to evaluated and monitored policies, with the intention to better achieve desired goals. Similarly, legal reform is a process that involves revising laws to reflect the values that society values. Its role is to respond to the changes in society and to address the issues raised by them.¹⁰³ Values change over time and laws have to adapt to reflect the changes in society.¹⁰⁴ When policies and laws are not effective, they need to be reformed or amended.

Amending laws involves quite a different legislative process from changing policy. While policies can change under reform processes, laws are usually fixed for an extended time before they are amended.¹⁰⁵ Laws may be needed to be developed to support a policy’s plan of action, but policies can also be implemented to assist towards fulfilling legislative commitments.¹⁰⁶ Essentially policies and laws are drafted and realised in much the same way, the key difference is their impact or consequences. Therefore, the creation of relevant policy is a vital stepping-stone to changing and developing both existing and new legislation. The ability to change policy if and when needed is vital for any legal system and country. Policies should be implemented and achieve their goals and laws of a country cannot become static and must constantly adapt to the changes in society.¹⁰⁷

¹⁰⁰ ETU (note 61 above).

¹⁰¹ Safeopedia ‘Policy’ 31 July 2017, available at <https://www.safeopedia.com/definition/2878/policy>, accessed on 17 December 2021.

¹⁰² Collins ‘Policy Reform’, available at <https://www.collinsdictionary.com/dictionary/english/policy-reform>, accessed on 17 December 2021.

¹⁰³ Stage6 ‘Law Reform’, available at <http://stage6.pbworks.com/f/Law+Reform.pdf>, accessed on 10 November 2021.

¹⁰⁴ Ibid.

¹⁰⁵ British Ecological Society ‘An Introduction to Policy in the UK’ May 2017, available at <https://www.britishecologicalsociety.org/wp-content/uploads/2017/05/An-introduction-to-policy-making-in-the-UK.pdf>, accessed on 18 December 2021.

¹⁰⁶ Ibid.

¹⁰⁷ DSM Yunus, L Allen & Gledhill ‘Benefits of an Independent Law Reform Commission’, available at https://www.multilaw.com/Multilaw/Multilaw_News/Member_Firm_News/LH-AG__Benefits_of_an_Independent_Law_Reform_Commission.aspx, accessed on 10 November 2021.

Reform in this context, is a vital component of democracy, as it can help shape the political and legal environments for the future.¹⁰⁸ Additionally, it equips interested parties with the necessary tools to make their voices heard and address challenges, is a vital component of comprehensive development and is significant for the sake of economic development.¹⁰⁹

The consequences of a bad policy or an inadequate policy would mean that the policy does not live up to fulfilling its goals or be close to solving the identified problem. This would cause a delay in the issue that the policy was intended to advocate against and solve via its action plans. Unfortunately, there are areas of the law that are complex and opaque. This is why the formation of independent legal and policy reform body's is a vital step to improving the law.¹¹⁰ Laws must be reformed to accommodate the changes brought about by society.¹¹¹ This is particularly necessary for African countries, who inherited their outdated laws from the colonial era.¹¹² This point, in particular, is relevant to the study of the gender discrepancy in the IP industry, as the latter chapters of dissertation will discuss the historical treatment of women with regards to property ownership laws.

2.4 Factors to consider for successful facilitation of policy reform, with reference to gender related issues

The goal of any reform is to achieve its objective, and in other words, do so without major unintended prejudicial consequences.¹¹³ The key component of successful reform is having the potential to be sustainable.¹¹⁴ This means that the plan should be widely accepted by the public once it is introduced and that it should not be subjected to any significant changes. The following factors should be considered for successful policy reform:

¹⁰⁸ DCAF 'What is the role of legal and judicial reform in the development process?', available at <https://issat.dcaf.ch/Learn/Resource-Library/Policy-and-Research-Papers/What-is-the-role-of-legal-and-judicial-reform-in-the-development-process>, accessed on 17 December 2021.

¹⁰⁹ MM Katopola (note 18 above).

¹¹⁰ DSM Yunus, L Allen & Gledhill (note 107 above).

¹¹¹ MM Katopola (note 18 above).

¹¹² Ibid.

¹¹³ OECDiLibrary 'Ten Factors for successful reform', available at <https://www.oecd-ilibrary.org/sites/4470388b-en/index.html?itemId=/content/component/4470388b-en>, accessed on 10 November 2021.

¹¹⁴ Ibid.

2.4.1 Policies ought to support international standards

There are a variety of international standards that aim to address the various aspects of women's rights and gender equality. These standards provide a variety of tools to measure progress and identify areas of improvement.¹¹⁵

A commitment to these standards by political leaders and organizations can help advance women's economic empowerment. These standards help build evidence-base for gender equality and pressure governments to improve their performance.¹¹⁶

For example, international progress reports are valuable tools for further reforms, as they can help support efforts to improve global standards and provide guidance.¹¹⁷

Additionally, the OECD's recommendations on gender equality in education, employment, and entrepreneurship also call for 'increasing the number of women in managerial positions, reducing the gender wage gap, reducing the gender gap in entrepreneurship activity, and paying attention to women from disadvantaged minority groups.'¹¹⁸

The recommendations seen in various international standards have great moral force. Even if a country has not ratified a certain one or they are not legally binding on adherents, there is an indirect expectation that they will consider similar forms of implementation.

2.4.2 The evidence base

While governments regularly collect standard data to support their decisions, they also need to collect additional data to be able to provide more detailed information on gender equality.¹¹⁹ It is crucial to collect data on the current state of affairs in society to properly document the calls for policy reform.¹²⁰

¹¹⁵ ISO 'Standards provide boost to public policy process' 2 November 2015, available at <https://www.iso.org/news/2015/11/Ref2017.html>, accessed on 17 December 2021.

¹¹⁶ OECDiLibrary (note 113 above).

¹¹⁷ MM Katopola (note 18 above).

¹¹⁸ OECDiLibrary (note 113 above).

¹¹⁹ MM Katopola (note 18 above).

¹²⁰ OECDiLibrary (note 113 above).

Currently, there is very few studies and data available regarding a gender study on the types of IP, which could contribute further information regarding the statistics of participation in the IP industry.¹²¹ One of the greatest challenges towards are faster progression within the IP industry is that there is not enough data indicating the nature, impact, and more importantly, the extent of the gender discrepancy in the IP industry.¹²² WIPO, in the hope to achieve its goals, has now compiled a dictionary filled with worldwide gender names. Their hope with this is to be able to identify the gender of the individuals within IP applications.¹²³ Additionally, research and statistics on gender are now reported yearly.¹²⁴

The reason why there is insufficient data has proven difficult to address and is mostly wide-ranging. For example, most IP offices worldwide do not record the gender of applicants who apply for a patent or trademark.¹²⁵ Data is not collected regarding patent attorneys or examiners. For example, USPTO does not keep a record of gender with regards to incoming patent examiners or attorneys, this is similarly seen in other countries too.¹²⁶ This has said to be an indication of bias regarding patent examination.¹²⁷ American research has indicated that candidates with clear female names are less prone to be granted patents.¹²⁸ Therefore, it would be wise to collect more gender data on patent examiners to ensure there is an equal amount of women to men examiners. This diversity would prevent any possible underlying bias.

SA does not have a patent substantive examination system in place and use a depository system instead.¹²⁹ Although timely, it still causes a number of other issues, and the Department of Trade Industry and Competition (DTI) has identified the lack of substantive examination to be an issue.¹³⁰ This places SA even further behind in using data collection as a means to overcome the gender discrepancy in the IP industry. However, in 2013 in SA's draft IP policy a proposed

¹²¹ J Brant...et al, *Policy Approaches to Close the Intellectual Property Gender Gap - Practices to Support Access to the Intellectual Property System for Female Innovators, Creators and Entrepreneurs* (unpublished document, Development Agenda Project, 2019).

¹²² G Lax Martinez, J Raffo, K Saito Identifying the gender of PCT inventors (Working paper 33, November 2016).

¹²³ Ibid.

¹²⁴ Ibid.

¹²⁵ J Brant... et al (note 121 above).

¹²⁶ Ibid.

¹²⁷ A Motomura 'New Research on Gender Differences in Obtaining and Maintaining Patent Rights' 23 November 2018, available at <https://law.stanford.edu/2018/11/23/new-research-on-gender-differences-in-obtaining-and-maintaining-patent-rights/>, accessed on 18 December 2021.

¹²⁸ J Van Harmelen (note 23 above).

¹²⁹ U Baravalle 'Compelling case for patenting in South Africa' 21 November 2018, available at <https://www.kisch-ip.com/article/compelling-case-patenting-south-africa>, accessed on 17 December 2021.

¹³⁰ C Tomlinson...et al 'Reforming South Africa's procedures for granting patents to improve medicine access' (2015) 105(9) *SAMJ: South African Medical Journal* 741-743.

reform was the implementation of substantive research and examination.¹³¹ This shows that the IP policy¹³² has the potential to influence and improve the future legal system. If the drafters of SA's IP policy recognise issue, surely the gender discrepancy in the IP industry should be more pronounced and linked to such reform, promoting that gender-based data should be collected relative to the substantive examination system proposed.

Having enough detailed information obtained by using globally decided metrics would allow governments and institutions worldwide to have a healthier awareness of the challenge women experience when wanting to branch into IP as well as aid in implementing appropriate policy reform.¹³³

2.4.3 Achieving political commitment

To make reform happen, political commitment is necessary. This can create political momentum and increase public support.¹³⁴

2.4.4 Persistent advocacy and lobbying

Advocating and lobbying have been key factors in achieving women's economic empowerment.¹³⁵ Once a draft policy has been drafted, members of Parliament can be lobbied to support this reform. This process can be very effective if various actors collaborate to put pressure on governments.¹³⁶

¹³¹ B Zulu, M Phosiwa and M Ncube 'CIPC to introduce Substantive Search and Examination; 1 February 2018, available at <https://www.derebus.org.za/cipc-introduce-substantive-search-examination/>, accessed on 18 December 2021.

¹³² Intellectual Property Policy of The Republic of South Africa.

¹³³ J Brant... et al (note 121 above).

¹³⁴ LD Smith *Reform and Decentralization of Agricultural Services: A Policy Framework* (2001) Chapter 4.

¹³⁵ MM Katopola (note 18 above).

¹³⁶ OECDiLibrary (note 113 above).

2.4.5 Embracing multi-stakeholder approaches

Reforms for women's economic empowerment are often complex and require the participation of various interested groups. This process can be carried out in various ways to ensure that they are implemented properly.¹³⁷

For example, constitutions could provide for an 'inclusive policy framework that promotes multi-stakeholder participation.'¹³⁸ This suggestion was made in the WHO Action Plan.¹³⁹

2.4.6 Capacity-building and capability building

Capacity-building is defined as 'the process of developing and strengthening the skills, instincts, abilities, processes and resources that organizations and communities need to survive, adapt, and thrive in a fast-changing world.'¹⁴⁰

A range of skills is needed to implement reform on women's economic empowerment. Capacity-building is necessary for those involved in the various stages of the legal reform process.¹⁴¹ When discussing a draft law or policies, parliamentarians must have the right skills to evaluate it.¹⁴² For example, if drafting a policy relating to gender or where gender roles ought to be considered, gender roles and gender-sensitive¹⁴³ measures need to be understood.

Moreover, capability building refers to 'the skills and knowledge required for a particular task. An organization may have the capacity to change, but lack certain key capabilities.'¹⁴⁴

¹³⁷ OECDiLibrary (note 113 above).

¹³⁸ SF Mohamed...et al 'Facilitators and barriers in the formulation and implementation of tobacco control policies in Kenya: a qualitative study' (2018) *860 BMC Public Health*.

¹³⁹ Ibid.

¹⁴⁰ United Nations 'Capacity-building', available at <https://www.un.org/en/academic-impact/capacity-building>, accessed on 17 December 2021.

¹⁴¹ OECDiLibrary (note 113 above).

¹⁴² Ibid.

¹⁴³ 'This is when policies and programmes consider the particularities pertaining to the lives of both women and men, while aiming to eliminate inequalities and promote gender equality, including an equal distribution of resources, therefore addressing and considering the gender dimension.' (See: EIGE 'Gender-sensitive', available at <https://eige.europa.eu/thesaurus/terms/1211>, accessed on 2 January 2022.)

¹⁴⁴ Results Map 'Are we building capacity or capability?', available at <https://www.resultsmap.com/blog/are-we-building-capacity-or-capability>, accessed on 17 December 2021.

Training and coaching can help organizations address the gaps in their capability.¹⁴⁵ The National School of Administration in Tunisia has developed a gender module for its civil servants so that gender issues are addressed by trained policy makers.¹⁴⁶ This is an example of a training institution that is devoted to training people who are involved in the reforms process.

2.4.7 Peer understanding

Countries can learn a lot from one another on how to improve the legal status of women. Regional and global exchanges help people get inspired to improve the way reform works.¹⁴⁷

2.4.8 Tackling patriarchal social norms and stereotypes

The UN's Panel on Women's Economic Empowerment recognises that the main constraints to women's economic empowerment are social norms, such as limited access to assets and the entrenchment of patriarchal ideologies.¹⁴⁸ Addressing social norms and stereotypes is a challenging task. Reform can either precede or enshrine changes in social norms.¹⁴⁹ In many cases, religious authorities and political movements were not aligned in this direction. Leaders can help communities overcome social barriers by advocating for change.¹⁵⁰ This is especially relevant in SA because of the resistance to change that is firmly entrenched in patriarchal ideologies because of Africa's patriarchal society.

SA is a fairly new constitutional democracy based on progressive values that include freedom, human dignity, equality, non-racialism and non-sexism. However, some 25 years on, the protection of the rights of women remains a key focus area for development. Patriarchy remains deeply entrenched.

¹⁴⁵ Ibid.

¹⁴⁶ OECDiLibrary (note 113 above).

¹⁴⁷ AA Chapman 'Milton and Legal Reform' (2016) 69(2) *Cambridge University Press* 529-565.

¹⁴⁸ UN Women 'Final report of the UN High-Level Panel on Women's Economic Empowerment calls on leaving no one behind' 14 March 2017, available at <https://www.unwomen.org/en/news/stories/2017/3/new-final-report-of-the-un-high-level-panel-on-womens-economic-empowerment>, accessed on 17 December 2021.

¹⁴⁹ OECDiLibrary (note 113 above).

¹⁵⁰ Ibid.

2.4.9 An understanding of policy reform within society

People who are affected by a particular reform should be aware of its details. Without effective implementation, policy reform will have little value.¹⁵¹ The media plays a part in conveying what reform is about.¹⁵²

2.5 Facilitating policy reform with a focus on gender-related issues and IP law

In considering the policy reform process, and factors that should be considered when facilitating policy reform, it is safe to come to the following conclusions when facilitating policy reform with a focus on gender related issues and IP law. Since the gender discrepancy in the IP is such an issue, it would be appropriate for agenda setting to occur as it is a societal problem. This is a problem that has not found a solution within South African law as yet. However, phase one of SA's IP policy will have to be evaluated further to confirm this. This will be done in the next chapter of this dissertation.

Moreover, in understanding factors that will ensure successful policy reform it is vital for drafters to consider the following when considering reform in the IP legal system with regards to the gender discrepancy:

- Understanding oppressive property laws placed on women in the past,
- considering the historical treatment of women with regards to property ownership and development,
- considering women an historically disadvantaged group,
- and in understanding the current characteristics and statistics of SA's position compared to other countries.

This will aid in ensuring successful reform during the policy-making process with a focus on gender and IP law.

¹⁵¹ N Loayza and M Woolcock 'Designing good policies is one thing, implementing them is another' 5 March 2020, available at <https://blogs.worldbank.org/developmenttalk/designing-good-policies-one-thing-implementing-them-another>, accessed on 17 December 2021.

¹⁵² Lawgovpol 'The media and law reform', available at <https://lawgovpol.com/media-law-reform/>, accessed on 17 December 2021.

2.6. Conclusion

The ultimate goal of this chapter was to ensure that the reader understands the policy-making process and considers the factors needed for successful policy reform in reading the rest of this dissertation. This will assist in identifying factors that will promote successful reform in IP law with reference to gender. This chapter briefly mentioned SA's new IP policy¹⁵³, whereas the next chapter will provide a more detailed critique following from what was mentioned in this chapter. This will specifically identify the need for IP policy reform. Legislation relating to gender and gender policies will also be mentioned to support this case.

Moreover, understanding the policy-making process provides one with the understanding to be able to critically analyze certain policies implemented. The next chapter will provide a critical evaluation of SA's IP policy¹⁵⁴ and what it does for the gender discrepancy in the IP industry. In doing so and in considering the policy-making process this dissertation will conclude whether or not current policies in place are sufficient towards decreasing the gender discrepancy in the IP industry, being the societal issue in need of legal assistance.

¹⁵³ Intellectual Property Policy of The Republic of South Africa.

¹⁵⁴ Intellectual Property Policy of The Republic of South Africa.

CHAPTER 3: A GENDER-BASED DISCUSSION OF SOUTH AFRICA'S IPLAA, INTELLECTUAL PROPERTY POLICY AND OTHER INTERNATIONAL AGREEMENTS

3.1 Introduction

Researchers and policymakers sometimes ignore how valuable considering gender can be in researching and policy-making.¹⁵⁵ 'Gender is one of the primary means of social differentiation¹⁵⁶ amongst people.'¹⁵⁷ As a result, the skills offered by both men and women differ, including that of traditional/indigenous knowledge.¹⁵⁸ Therefore, the evident gender neutrality issue within our legal system is a cause for concern. Catherine Hill, a researcher and public policy professional with expertise in women and gender issues, argues that 'an understanding of the role of gender as well as of the intrinsic value of indigenous knowledge is crucial to the solution of situation-specific problems.'¹⁵⁹

Furthermore, it can be argued that the gender discrepancy seen in the IP industry is partially due to the lack of prioritizing gender within traditional knowledge legislation, policies, and other legal mechanisms. This is because evidence has shown that women bring an active contribution to aspects of traditional knowledge, and traditional cultural expressions, all have which have been found to be difficult for women to gain IP protection in the past.

This chapter will begin with an explanatory discussion of concepts related to traditional knowledge, and its pertinence to the research questions under scrutiny. This is followed by a discussion of international law, national law and policy relating to IP law from a gender perspective. This includes Phase 1 of SA's IP policy¹⁶⁰, SA's new IPLAA¹⁶¹ and the TRIPS

¹⁵⁵ M E Fernandez 'Gender and indigenous knowledge' August 1994, available at https://www.researchgate.net/publication/288877242_Gender_and_Indigenous_Knowledge, accessed on 21 December 2021.

¹⁵⁶ Gender differentiation occurs as a result of the specific experiences, knowledge, and skills that women and men develop from carrying out the productive and reproductive responsibilities assigned to them. (See: Canadian Cataloguing in Publication 'Gender-bases analysis: a guide for policy-making' 996, available at http://www.pacificwater.org/userfiles/file/IWRM/Toolboxes/gender/gender_based_analysis.pdf, accessed on 2 January 2022.)

¹⁵⁷ M E Fernandez (note 155 above).

¹⁵⁸ Ibid.

¹⁵⁹ Ibid.

¹⁶⁰ Intellectual Property Policy Of The Republic Of South Africa Phase 1.

¹⁶¹ The Intellectual Property Laws Amendment Act 28 of 2013.

agreement.¹⁶² This chapter will conclude the evaluation made of SA's IP policy and other relevant legislation, and whether the national and international law and policies in place adequately address the issue of the perceived gender discrepancy in the South African IP industry.

Moreover, legal protection for woman's traditional knowledge must be extended in keeping with feminist values of equality and dignity. Therefore, this research will present principles to be used in deciding how best to emphasise women's traditional knowledge and apply them to IP law.

3.2 Traditional knowledge with reference to the Intellectual Property Laws Amendment Act 28 of 2013.

3.2.1 Basic definitions

The IPLAA¹⁶³ defines traditional and indigenous knowledge as:

'Indigenous cultural expressions or knowledge means any form, tangible or intangible, or a combination thereof, in which traditional culture and knowledge are embodied, passed on between generations and tangible or intangible forms or creativity of indigenous communities, including but not limited to-

- a) phonetic or verbal expression such as stories, epics, legends, poetry, riddles, and other narratives, words, signs, names or symbols;
- b) musical or sounds expressions such as songs, rhythms, or instrumental music, the sounds which are the expressions of rituals;
- c) expressions by action, such as dances, plays, ceremonies rituals, expression of spiritual or religion, sports, traditional games, puppet performances, and other performances, whether fixed or unfixed; or
- d) tangible expressions, such as material expression of art, handicrafts, architecture, or tangible spiritual forms, or expressions of sacred places.'

¹⁶² The Agreement on Trade-Related Intellectual Property, 15 April 1994.

¹⁶³ The Intellectual Property Laws Amendment Act 28 of 2013.

¹⁶⁴ The Intellectual Property Laws Amendment Act 28 of 2013.

From this definition and in simple terms, ‘indigenous knowledge refers to the knowledge, innovation, and practices of local communities, is based on years of generational use and is adapted to local culture.’¹⁶⁵ Otherwise known as traditional knowledge,¹⁶⁶ it is regarded as a significant aspect of the traditional and intellectual legacy of indigenous people and is an integral part of their social and historical identity.¹⁶⁷

According to WIPO, traditional knowledge is defined as ‘a living body of knowledge passed on from generation to generation within a community.’¹⁶⁸ Despite the lack of an internationally accepted definition of traditional knowledge, it can be argued that it encompasses both the knowledge itself and traditional cultural expressions that are associated with it.¹⁶⁹

Traditional cultural expressions are defined as the product of generational, social and communal creative processes, through which the tradition, history, culture, and values of a particular indigenous or local community are represented.¹⁷⁰ These intangible components are integral to the cultural and local identities of indigenous communities and nations.¹⁷¹ For example, a form of song, stories, dances, designs, and crafts.

Traditional cultural expressions are traditionally associated with women,¹⁷² hence a candidate for both lack of respect and low economic support in capitalist patriarchal societies.¹⁷³ Since there is no neutral initial place for an investigation of cultural creation, intellectual property law

¹⁶⁵ CIPC ‘Indigenous Knowledge Systems’, available at <http://www.cipc.co.za/index.php/trade-marks-patents-designs-copyright/indigenous-knowledge-systems/>, accessed on 21 December 2021.

¹⁶⁶ Many indigenous peoples seek protection for their indigenous, traditional knowledge and traditional cultural expressions as intangible assets. According to WIPO, both traditional knowledge and traditional cultural expressions are forms of indigenous knowledge. They refer to the knowledge systems that are embedded in the cultural traditions and communities of local people. (See: CIPC ‘Indigenous Knowledge Systems’, available at <http://www.cipc.co.za/index.php/trade-marks-patents-designs-copyright/indigenous-knowledge-systems/>, accessed on 21 December 2021.)

¹⁶⁷ CIPC (note 165 above).

¹⁶⁸ P Kudngaongarm ‘B Indigenous Knowledge’ (2009) 1(12) Thailand Law Journal.

¹⁶⁹ Ibid.

¹⁷⁰ WIPO ‘Intellectual property and traditional cultural expressions/folklore’, available at https://static.pmg.org.za/docs/110817wipo1_0.pdf, accessed on 20 July 2021.

¹⁷¹ Ibid.

¹⁷² For example, many rural women are devoted to growing and harvesting native plants for inclusion in their diets. This practice has gained them a variety of nutrients and helps them maintain a healthy lifestyle for their families. Women also contribute to the food security of their and communities by taking on traditional knowledge related to land management. This knowledge can be used to improve the efficiency and profitability of farming. Women make special cloth for rituals. They tell their own stories and legends about their community and the environment when telling their children bedtime stories. Additionally, women play an important role in traditional medicine. Evidence suggests that they often perform different roles with regards to traditional and indigenous knowledge than men. (See: DO Oriakhogba (note 52 above).)

¹⁷³ DO Oriakhogba (note 52 above).

is preceded upon assumptions of creative work preferring men creators.¹⁷⁴ Intellectual property laws are formulated on and promote masculine notions of innovation and individualism, to which rural African women's innovation is not easily associated with.¹⁷⁵

There is a trouble of fitting traditional cultural expressions in intellectual property legal systems, particularly patents and copyrights.¹⁷⁶ Many argue that 'traditional cultural expressions, such as traditional art like Zulu women's beadwork, should find protection under existing intellectual property mechanisms such as trademarks, certification marks, designs, or by *sui generis*¹⁷⁷ tools.'¹⁷⁸

3.2.2 The link between gender and traditional knowledge

Traditional knowledge, and traditional cultural expressions, are traditionally associated with women.¹⁷⁹ Evidence suggests that women, especially rural women from developing countries like SA, are active contributors to traditional knowledge.¹⁸⁰ Women, especially in developing countries, play a key and indispensable role in the preservation and creation of traditional knowledge, and it is specifically relevant to such women because of the culture and society they live in. However, their presence and role are often denied to them not just by developed nations but more so by their own communities and societal structures.¹⁸¹ It is not uncommon that the responsibilities and activities pertaining to traditional knowledge to be along the 'gender line.'¹⁸² Assigned areas leads to specialization and a generation of knowledge.¹⁸³

Moreover, women's contributions to the development of traditional knowledge are recognised in a variety of international treaties and instruments,¹⁸⁴ such as the UN Declaration on the

¹⁷⁴ D Halbert (note 20 above).

¹⁷⁵ DO Oriakhogba (note 52 above).

¹⁷⁶ JT Cross 'Property rights and traditional knowledge' (January 2010) 13(4) *Potchefstroom Electronic Law Journal*.

¹⁷⁷ This is a Latin phrase that means 'of the same kind.' (Dictionary.com 'sui generis', available at <https://www.dictionary.com/browse/sui-generis>, accessed on 2 January 2022.)

¹⁷⁸ DO Oriakhogba (note 52 above).

¹⁷⁹ B Montanari and SI Bergh 'Why women's traditional knowledge matters in the production processes of natural product development: The case of the Green Morocco Plan' (November- December 2019) 77 *Women's Studies International Forum*.

¹⁸⁰ DO Oriakhogba (note 52 above).

¹⁸¹ UN Inter-Agency Network on Women and Gender Equality 'Opportunities and challenges for developing countries' 2004, available at https://unctad.org/system/files/official-document/edm20042_en.pdf, accessed on 11 November 2021.

¹⁸² M E Fernandez (note 155 above).

¹⁸³ Ibid.

¹⁸⁴ UN (note 31 above).

Rights of Indigenous Peoples¹⁸⁵ and the Convention concerning Indigenous and Tribal Peoples in Independent Countries of the ILO.¹⁸⁶ Women's contributions are often grouped into three categories, namely; biodiversity, cultural heritage, and family and community.¹⁸⁷

3.2.3 Issues with protecting traditional knowledge

There are different laws in SA relating to the protection of different types of intellectual property; namely patents, designs, trademarks and copyright.¹⁸⁸ In SA, intellectual property is protected by the common law, case precedent and are legislated through the Trademarks Act¹⁸⁹, Patents Act¹⁹⁰, Designs Act¹⁹¹, Plant Breeders' Rights Act¹⁹², Copyright Act¹⁹³, The Performers' Protection Act¹⁹⁴ and various other pieces of legislation, such as the Counterfeit Goods Act¹⁹⁵ and the Merchandise Marks Act¹⁹⁶. However, despite the various types of intellectual property protection available in SA there is a lack of research and empirical evidence regarding participation based on gender in the IP industry.¹⁹⁷ Additionally, it becomes difficult and problematic especially with regards to obtaining data for copyrights because there is no registration procedure.¹⁹⁸

The extent to which the intellectual property laws can offer protection for traditional cultural expressions is not clear.¹⁹⁹ However, in worthy circumstances, they may be protected under

¹⁸⁵ The United Nations Declaration on the Rights of Indigenous Peoples, 2007.

¹⁸⁶ The Convention concerning Indigenous and Tribal Peoples in Independent Countries of the ILO, 1989 (no. 169).

¹⁸⁷ S M Subramanian 'Traditional Knowledge in Policy and Practice: Approaches to Development and Human Well-being' October 2010, available at https://www.researchgate.net/publication/261145775_Traditional_Knowledge_in_Policy_and_Practice_Approaches_to_Development_and_Human_Well-being?enrichId=rgreq-ac7170ff3dd738a00411acb332489c40-XXX&enrichSource=Y292ZXJQYWdlOzI2MTE0NTc3NTtBUzoyOTgxOTkzMTYyMjE5NjRAMTQ0ODEwNzY2NTc2Ng%3D%3D&el=1_x_3&_esc=publicationCoverPdf, accessed on 11 November 2021.

¹⁸⁸ WIPO 'What is intellectual property?' 2020, available at https://www.wipo.int/edocs/pubdocs/en/wipo_pub_450_2020.pdf, accessed on 4 May 2021.

¹⁸⁹ The Trademarks Act 194 of 1993.

¹⁹⁰ The Patents Act 57 of 1978.

¹⁹¹ The Designs Act 195 of 1993.

¹⁹² The Plant Breeders' Rights Act 15 of 1976.

¹⁹³ The Copyright Act 98 of 1978.

¹⁹⁴ The Performers' Protection Act 11 of 1967.

¹⁹⁵ The Counterfeit Goods Act 37 of 1997.

¹⁹⁶ The Merchandise Marks Act 17 of 1941.

¹⁹⁷ The Commission on Gender Equality, *A framework for transforming gender relations in South Africa* (unpublished document, The Commission on Gender Equality, 2000).

¹⁹⁸ South African Government 'Register Copyright', available at <https://www.gov.za/services/intellectual-property/register-copyright>, accessed on 21 December 2021.

¹⁹⁹ DO Oriakhogba (note 52 above).

relevant intellectual property legislation.²⁰⁰ Nevertheless, this ‘may not be effective in promoting value for rural African women’s crafts, and in improving their economic circumstances, as intellectual property owners do not typically get empowered by just identifying their legal rights.’²⁰¹

There is no doubt that traditional knowledge should be better protected by the legal system, specifically for women. Unfortunately, this can only happen through the protection of the right.²⁰² This concept is becoming more prevalent as the IP protection of traditional knowledge becomes more prevalent, especially in Africa.²⁰³ However, traditional knowledge is not always protected by traditional IP systems.²⁰⁴

There is an evident lack of comprehensive and enforceable property rights for traditional knowledge in developing countries.²⁰⁵ Traditional knowledge needs better protection especially because of the increase in commercial exploitation of traditional knowledge globally.²⁰⁶ Existing intellectual property regimes do not provide sufficient protection given the communal nature of traditional knowledge. Many argue that this calls for the development of *sui generis* protection.²⁰⁷ *Sui generis* measures are focused on addressing the characteristics of a specific subject matter.²⁰⁸ The concept of fair and equitable sharing of knowledge related to traditional knowledge has been widely considered. This idea is supported by the international legal framework.²⁰⁹ Although the TRIPS²¹⁰ doesn’t prevent countries from enacting laws that protect IP, many of these laws would still need to comply with the minimum standards set by the Agreement.²¹¹

3.2.4 The Intellectual Property Laws Amendment Act 28 of 2013

²⁰⁰ Ibid.

²⁰¹ D O Oriakhogba ‘Empowering Rural Women Crafters in KwaZulu-Natal, South Africa: the dynamics of intellectual property, traditional cultural expressions, innovation and social entrepreneurship (2020) 1 *South African Law Journal* 145-172.

²⁰² UN Inter-Agency Network on Women and Gender Equality (note 181 above).

²⁰³ S M Subramanian (note 187 above).

²⁰⁴ WIPO ‘Traditional Knowledge, available at <https://www.wipo.int/tk/en/tk/>, accessed on 21 December 2021.

²⁰⁵ UN Inter-Agency Network on Women and Gender Equality (note 181 above).

²⁰⁶ M Nayak ‘The Misappropriation of Traditional Knowledge’ 30 April 2019, available at <http://djilp.org/the-misappropriation-of-traditional-knowledge/>, accessed on 21 December 2021.

²⁰⁷ UN Inter-Agency Network on Women and Gender Equality (note 181 above).

²⁰⁸ WIPO ‘Intellectual Property and traditional knowledge’, available at https://www.wipo.int/edocs/pubdocs/en/tk/920/wipo_pub_920.pdf, accessed on 11 November 2021.

²⁰⁹ M Nayak (note 206 above).

²¹⁰ The Agreement on Trade-Related Intellectual Property, 15 April 1994.

²¹¹ UN Inter-Agency Network on Women and Gender Equality (note 181 above).

The Indigenous Knowledge Systems (IKS) Policy is 'an enabling framework to stimulate and strengthen the contribution of indigenous knowledge to social and economic development in South Africa.'²¹² The importance of protecting this knowledge is evident in the amendments legislation that give effect to the IKS policy.²¹³ For example, the IPLAA²¹⁴ and the Protection, Promotion, Development and Management of the Indigenous Knowledge (IK) Act.²¹⁵ Although the IPLAA²¹⁶ and the IK Act²¹⁷ await proclamation in the Gazette, regulations have been under development.²¹⁸

The IP Laws Amendment Bill was drafted and published in 2007 by the DTI, following the implementation of the IKS policy²¹⁹, which did not provide any specific form of protection.²²⁰

The IK Act²²¹ 'focuses on bio piracy, misappropriation, promotes registration of indigenous knowledge, recognises prior learning of practitioners, benefit sharing for communities, facilitates research and development and creates mechanisms for dispute resolution for the communities.'²²²

SA's IPLAA²²³ focuses exclusively on indigenous knowledge. The IPLAA²²⁴ has been made to provide for the protection of various forms of indigenous knowledge. The Act²²⁵ creates new forms of IP which have no previous protection. These new forms of IP protection can be seen

²¹² The Indigenous Knowledge Systems Policy, November 2004.

²¹³ SABINET 'Intellectual Property Laws Act regulations in the pipeline' 9 March 2020, available at <https://www.golegal.co.za/ip-indigenous-knowledge/>, accessed on 21 December 2021.

²¹⁴ The Intellectual Property Laws Amendment Act 28 of 2013.

²¹⁵ A van der Merwe 'The old and the new: a concise overview of the Intellectual Property Laws Amendment Act' 1 September 2014, available at <https://journals.co.za/doi/pdf/10.10520/EJC156990>, accessed on 21 December 2021.

²¹⁶ The Intellectual Property Laws Amendment Act 28 of 2013.

²¹⁷ The Protection, Promotion, Development and Management of the Indigenous Knowledge Act 6 of 2019.

²¹⁸ SABINET 'Draft Regulations for IK Act on Track' 3 September 2020, available at <https://legal.sabinet.co.za/articles/draft-regulations-for-ik-act-on-track/>, accessed on 21 December 2021.

²¹⁹ The Indigenous Knowledge Systems Policy, November 2004.

²²⁰ Protection, Promotion, Development and Management of Indigenous Knowledge Systems Bill, available at http://www.nstf.org.za/wp-content/uploads/2016/05/Policy-Brief_-Indigenous-Knowledge-Bill_May2016_final.pdf, accessed on 21 December 2021.

²²¹ The Protection, Promotion, Development and Management of the Indigenous Knowledge Act 6 of 2019.

²²² A Van der Merwe 'Comments on the Protection, Promotion, Development and Management of the Indigenous Knowledge Systems Bill', available at <https://www.golegal.co.za/iks-bill-indigenousknowledge-systems/>, accessed on 27 August 2021.

²²³ The Intellectual Property Laws Amendment Act 28 of 2013.

²²⁴ The Intellectual Property Laws Amendment Act 28 of 2013.

²²⁵ The Intellectual Property Laws Amendment Act 28 of 2013.

as *res nova* as there have not been any previously existing laws for such types of IP.²²⁶ Additionally, the IPLAA²²⁷ adopted an approach which is to create new types of IP, by amendment of certain IP Acts instead of *sui generis* legislation.²²⁸ However, the IK Act²²⁹ introduces a *sui generis* approach to the protection of TK, creating a new type of protection.²³⁰

Nevertheless, the IPLAA²³¹ was questioned by various legal practitioners, including SCA judges, and was subject to severe criticism.²³² The cause of this criticism was that the amendment intended to give protection for indigenous or traditional cultural expressions as a type of IP.²³³ This was done by presenting new types of IP into SA's IP Acts via amendment. However, these new types are said to not rightfully belong to these IP Acts.²³⁴

SA's IP law was amended to recognize and protect certain terms and expressions that are indigenous. This amendment was made to ensure that these terms and expressions are protected under the law. The recognition of traditional knowledge 'as a cultural resource will benefit the country and will ensure that fair financial benefits will be received by indigenous communities', according to the preamble of the IPLAA.²³⁵

However, even in the IPLAA²³⁶, there is a clear lack and failure to prioritise women, and the language is gender neutral. This perpetuates the gender discrepancy in the IP industry. Africa is a patriarchal society, thus there is already an established line of ownership or creative IP rights. We live in a patriarchal community, and we have laws that protect traditional knowledge in terms of the already established lines of leadership. Therefore, there is an issue in having neutral language in our laws. Although we have a set of laws focusing on the protection of

²²⁶ <https://static.pmg.org.za/130912protection.pdf>

²²⁷ The Intellectual Property Laws Amendment Act 28 of 2013.

²²⁸ OS Sibanda 'Sue Generis Legislation for Geographical Indications Protections in South Africa: Prospects and Challenges' April 2014, available at https://www.researchgate.net/publication/267453687_Sue_Generis_Legislation_for_Geographical_Indications_Protection_in_South_Africa_Prospects_and_Challenges, accessed on 21 December 2021.

²²⁹ The Protection, Promotion, Development and Management of the Indigenous Knowledge Act 6 of 2019.

²³⁰ A van der Merwe (note 215 above).

²³¹ The Intellectual Property Laws Amendment Act 28 of 2013.

²³² Portfolio Committee on Trade and Industry 'Implementation of the Intellectual Property Laws Amendment Act, No. 28 of 2013' 4 March 2020, available at <http://www.thedtic.gov.za/wp-content/uploads/thedti-IPLAA.pdf>, accessed on 21 December 2021.

²³³ U Naidoo, A Comparative Assessment of South Africa's Proposed Legislation to protect Traditional Knowledge (Unpublished LLM thesis, University of Pretoria, 2019).

²³⁴ A van der Merwe (note 215 above).

²³⁵ The Intellectual Property Laws Amendment Act 28 of 2013.

²³⁶ Ibid.

indigenous and traditional knowledge, there is no focus on encouraging gender participation in this protection.

Additionally,

‘The patriarchal nature of our legal systems neglects the interests of women, creating a preventive environment in which they cannot choose or even create the circumstances under which they exist. Therefore, recognising the civic areas where women are not included and changing them to add women’s necessities in the law is the only way to enable women’s independence.’²³⁷

As many critiques have mentioned and which this research will support as a suggestion, is that an appropriate form of protection for traditional knowledge and traditional cultural expressions, would be *sui generis* legislation, instead of IP-based law, as traditional knowledge and traditional cultural expressions cannot meet the requirements established by the applicable IP Acts all the time.²³⁸

From a global perspective, SA supports the development of IP rights through the World IP Organization, being that *sui generis* legislation is the preferred form of protection.²³⁹ However, the concept of law-based legislation, such a SA’s current IPLAA²⁴⁰, is in contrast to the support for *sui generis* legislation; and conflicts with the principles of international trade.²⁴¹

In 2013, Dr. Wilmot James of the Democratic Alliance tried to introduce a Private Member’s Bill based on a *sui generis* model. However, the DTI Portfolio Committee decided not to entertain two simultaneous and conflicting Bills.²⁴²

The Swakopmund Protocol was adopted by the member states of Africa in 2010. This document is a *sui generis* legal document that enables protecting traditional cultural expressions and traditional knowledge separately. It provides a basis for *sui generis* regulation in SA. On the

²³⁷ We Rise ‘Different Kinds of Feminism’, available at <https://werise-toolkit.org/en/system/tdf/pdf/tools/Different-Kinds-of-Feminism.pdf?file=1&force=>, accessed on 20 July 2021.

²³⁸ N V Kumar ‘Protection of Traditional Knowledge: International and National Initiatives and Possible Ways Ahead’, available at <https://ssrn.com/abstract=2012724>, accessed on 1 August 2021.

²³⁹ A van der Merwe ‘The old and the new: A concise overview of the Intellectual Property Laws Amendment Act’ 1 September 2014, available at <https://www.derebus.org.za/old-new-concise-overview-intellectual-property-laws-amendment-act/>, accessed on 11 November 2021.

²⁴⁰ The Intellectual Property Laws Amendment Act 28 of 2013.

²⁴¹ Portfolio Committee on Trade and Industry (note 232 above).

²⁴² A van der Merwe (note 239 above).

other hand, it shows that our country is not in line with its neighbouring states when it comes to protecting its indigenous knowledge.

Additionally, according to WIPO, the distinction between traditional cultural expressions and traditional knowledge has been recognized. However, in the IPLAA²⁴³, these terms are applied somewhat freely and interchangeably.²⁴⁴ The distinction has not been adequately understood or applied in SA.²⁴⁵ This is a serious issue and perpetuates the gender discrepancy in the IP industry because such knowledge is associated with woman's work. If legislation concerning indigenous knowledge, traditional knowledge, and traditional cultural expressions are not able to do the simple task of fully identifying the differences between such, how can society have confidence in the legislature to ensure that they are considering women as an historically disadvantaged group compared to men. Surely the legislature should ensure there is some allowance provided due to the historical treatment of women, oppressive past property laws and statistics of the gender discrepancy in the IP. The fact that South African law has not sufficiently understood and applied the distinction between indigenous knowledge, traditional cultural expression, and traditional knowledge show that the drafters of South African legislation do not connect women to such knowledge. This indicates that woman's participation has not been a priority even within the process of implementing the new IPLAA.²⁴⁶

In SA, for instance, indigenous communities have the right to access and control their traditional knowledge, but it has no provision to ensure that indigenous women have equal access, control, and share in payments from the use of traditional knowledge.²⁴⁷ The rights of women to IP and to equitably share in the benefits of traditional knowledge are not protected under the terms of the commercial use of knowledge. This is because society has a patriarchal nature.²⁴⁸

There is still a lot of work to be done in addressing the biases and gender blindness. Although women and men have different contributions to traditional knowledge, the same is still true. Many people have gender-specific biases and beliefs when it comes to thinking and behaving. These habits are often unconscious and can lead to gender stereotyping. As external actors, we

²⁴³ The Intellectual Property Laws Amendment Act 28 of 2013.

²⁴⁴ A van der Merwe (note 239 above).

²⁴⁵ T Schonwetter, L Jansen, L Forster 'Protection, Promotion, Development and Management of Indigenous Knowledge Systems Bill', available at <https://naturaljustice.org/wp-content/uploads/2015/03/PPDM-Indigenous-Knowledge.pdf>, accessed on 1 February 2022.

²⁴⁶ The Intellectual Property Laws Amendment Act 28 of 2013.

²⁴⁷ S M Subramanian (note 187 above).

²⁴⁸ Ibid.

could be contributing to the reinforcement of gender inequality. Our own internalized notions of gender and knowledge system could contribute to this.²⁴⁹ Many academics are in support of repealing the IPLAA.²⁵⁰ They argue that there is an overlap within as the IK Act²⁵¹ also aims to promote and protect TK. The only relevant aspect in the IPLAA²⁵² is the ‘requirements of prior informed consent, disclosure of source of origin and benefit sharing agreement.’²⁵³

As a result of the serious criticisms about the transparency and fairness of the IP rights regime, many developing country governments have criticized the system as women’s rights are not explicitly protected, especially because of the gender-neutral wording of such laws.²⁵⁴ Whilst the implementation of such South African Acts are a step in the right direction, their focus is clearly on the protection of community interests and are not gender specific enough. This shows a lack of vital considerations by the drafters of legislation and policymakers in SA. Although the consideration of *sui generis* protection in the IKS Policy²⁵⁵ and IK Act²⁵⁶ is a step in the right direction, there is still a failure to consider gender as a social difference with regards to specifically indigenous knowledge in the IPLAA.²⁵⁷

3.3 Global laws protecting intellectual property

Internationally, IP rights are presented in the Universal Declaration of Human Rights (UDHR).²⁵⁸ The UDHR is not legally binding internationally. However, it does include various rights which are built on human rights standards that are protected in other international instruments that are legally binding.²⁵⁹ IP rights are presented in Article 27 of the UDHR which states that “everyone has the right to the protection of the moral and material interests resulting

²⁴⁹ S M Subramanian (note 187 above).

²⁵⁰ Parliamentary Monitoring Group ‘Science and Technology Protection, Promotion, Development and Management of the Indigenous Knowledge Systems Bill: University of Stellenbosch briefing’ 7 September 2016, available at <https://pmg.org.za/committee-meeting/23236/>, accessed on 21 December 2021.

²⁵¹ The Protection, Promotion, Development and Management of the Indigenous Knowledge Act 6 of 2019.

²⁵² The Intellectual Property Laws Amendment Act 28 of 2013.

²⁵³ WIPO ‘Traditional Knowledge and Intellectual Property Background Brief’, available at https://www.wipo.int/pressroom/en/briefs/tk_ip.html, accessed on 21 December 2021.

²⁵⁴ S M Subramanian (note 187 above).

²⁵⁵ The Indigenous Knowledge Systems Policy, November 2004.

²⁵⁶ The Protection, Promotion, Development and Management of the Indigenous Knowledge Act 6 of 2019.

²⁵⁷ L Schuler ‘Modern Age Protection: Protecting Indigenous Knowledge Through Intellectual Property Law’ (2013) *Michigan State International Law Review* 755.

²⁵⁸ Universal Declaration of Human Rights (adopted 10 December 1948 UNGA Res 217 A(III) (UDHR) art 5.

²⁵⁹ The Universal Declaration of Human Rights, 1948.

from any scientific, literary or artistic production of which he is the author.”²⁶⁰ This indicates again that everyone has a right to have their new creations and inventions be subject to their ownership, this includes women. IP rights ensure that the owners benefit by providing them with control over how their property is utilized. It is important to recognise this because historically, such a right was not afforded to women.²⁶¹ Today, when countries, such as SA implement equality laws, it reinforces the logic that women are to be provided with equal IP laws. This would aid towards the confidence that women have in the legal system to protect their property and rights. Ultimately, this type of reinforcement may aid in decreasing the gender discrepancy seen in the IP industry.

SA is party to various treaties and conventions that impact intellectual property rights. Such as the WIPO Performances and Phonograms Treaty and²⁶² the WIPO Copyright Treaty²⁶³. One of the more important ones being the agreement on Trade Related Aspects of Intellectual Property Rights, administered by the WTO. The agreement states the minimum intellectual property standards and requirements that member countries must endorse.²⁶⁴ Initiatives to protect intellectual property through international law began with the Paris Convention for the Protection of Industrial Property in 1883, administered by the WIPO, where the vitality of intellectual property was recognised.²⁶⁵ Additionally, the importance of intellectual property was also recognised in the Berne Convention for the Protection of Literary and Artistic Works in 1886, also administered by the WIPO. As one of the earliest treaties relating to IP, ‘the Berne Convention sought to make IP rights recognised in all the countries that took part in the convention.’²⁶⁶ Today, there are more than 25 international treaties on intellectual property administered by WIPO.²⁶⁷ SA being a signatory to such treaties needs to abide by the principles of gender neutrality and need to do more in terms of gender discrepancies in the country.

²⁶⁰The Universal Declaration of Human Rights, 1948.

²⁶¹ United Nations Human Rights ‘Declaration on Human Rights Defenders’, available at <https://www.ohchr.org/en/issues/srhrdefenders/pages/declaration.aspx>, accessed on 18 September 2021.

²⁶² WIPO ‘WPPT Notification No. 1 WIPO Performances and Phonograms Treaty Signatories, available at https://www.wipo.int/treaties/en/notifications/wppt/treaty_wppt_1.html, accessed on 21 December 2021.

²⁶³ WIPO Copyright Treaty, 20 December 1996.

²⁶⁴ WIPO (note 188 above).

²⁶⁵ WIPO ‘Cooperation’, available at <https://www.wipo.int/cooperation/en/>, accessed on 31 May 2021.

²⁶⁶ WIPO ‘Berne Convention for the Protection of Literary and Artistic Works’, available at <https://www.wipo.int/treaties/en/ip/berne/>, accessed on 5 January 2022.

²⁶⁷ WIPO ‘Paris Convention for the Protection of Industrial Property’, available at <https://www.wipo.int/treaties/en/ip/paris/>, accessed on 31 May 2021.

3.3.1 TRIPS and Trade law reform

Trade liberalisation is defined as:

‘The process of reducing or removing restrictions on international trade. This may include the reduction or removal of tariffs, abolition or enlargement of import quotas, abolition of multiple exchange rates, and removal of requirements for administrative permits for imports or allocations of foreign exchange, or at least simplification of the process of applying for them.’²⁶⁸

Understanding the complexity of the link between trade and gender equality is an important step in developing policies that can promote women’s equality. The international community commits to the equality of women. This commitment is evidenced by various mechanisms and treaties.²⁶⁹

The consequence of trade policy on financial and social interests tend to be unique between genders. This is because men and women have different economic and social positions and different use over assets. This is due to socio-cultural, political, and economic factors.²⁷⁰

The UN has been working on the issue of gender equality and women’s empowerment. Its various agencies and programs have invested heavily in this area. Unfortunately, the current trade policies can easily be undermined.²⁷¹ These policies are necessary for successful gender equality. The implementation of trade liberalisation and the agreements that enforce its global implementation have become the cornerstones of development policies.²⁷²

The TRIPS agreement is a framework for the protection of IP rights. It sets out the standards for IP protection that the WTO member states are obliged to provide.²⁷³ ‘The TRIPS agreement was established to ensure that participating countries would include protection and remedies

²⁶⁸ Oxford Reference ‘Trade Liberalisation’, available at <https://www.oxfordreference.com/view/10.1093/oi/authority.20110803105212327>, accessed on 21 December 2021.

²⁶⁹ M Williams ‘Gender and Trade: Impacts and Implications for Financial Resources for Gender Equality’ June 2017, available at <https://www.oecd.org/dac/gender-development/38831071.pdf>, accessed on 11 November 2021.

²⁷⁰ Women Watch ‘Gender Equality & Trade Policy’ 2011, available at https://www.un.org/womenwatch/feature/trade/gender_equality_and_trade_policy.pdf, accessed on 11 November 2021.

²⁷¹ M Williams (note 269 above).

²⁷² Ibid.

²⁷³ World Trade Organisation ‘Overview: the TRIPS Agreement’, available at https://www.wto.org/english/tratop_e/trips_e/intel2_e.htm, accessed on 11 November 2021.

for IP violations as part of their national laws.²⁷⁴ The WTO's adoption of the TRIPS in 1995 was widely supported by wealthy countries. Supporters of the system argued that it would promote global trade and provide protection for the IP industry.²⁷⁵ The comprehensiveness of the IP protections required under the TRIPS framework obligates developing nations to provide more stringent IP protections than those granted to developed countries.²⁷⁶

The TRIPS Agreement applies to everyone, including women. Its provisions do not single out women. The main factor that prevents women from participating in development processes is a country's collective unconsciousness regarding gender equality. Due to the existing inequalities, certain impacts from the TRIPS Agreement may be felt by women more than by men and there are concerns that the TRIPS will have negative effects on women.²⁷⁷ This includes the erosion of traditional knowledge about men and women and the availability of more readily available and potentially more beneficial products and solutions for women will have a specific impact on their domestic and community roles, this makes TRIPS specific to SA.²⁷⁸ Moreover, the implementation of the TRIPS and other trade agreements may result in the introduction of monopolistic rights regimes.²⁷⁹ IP rights can negatively affect women's ability to obtain needed resources and services. These rights can also encourage the privatization of certain kinds of assets.²⁸⁰ A comprehensive approach to protecting traditional knowledge should consider the various dimensions of the issue, such as the community, regional, national, and international levels.²⁸¹

While the concept of traditional knowledge is not specific to the TRIPS, its relationship with the standards has been the subject of debate. In 2001, the Doha Declaration instructed the Council to examine the protection of traditional knowledge and folklore.²⁸² It is appropriate to state that one reason why SA is so far behind other countries with regards to progressing and

²⁷⁴ Ibid.

²⁷⁵ Ibid.

²⁷⁶ Ibid.

²⁷⁷ Canadian International Development Agency 'Gender Equality and Trade-Related Capacity Building: A Resource Tool for Practitioners', available at http://www.sice.oas.org/Genderandtrade/CIDA_Trade-Related%20Capacity%20Building.pdf, accessed on 11 November 2021.

²⁷⁸ Ibid.

²⁷⁹ For example, this would affect the rights of women farmers and could also encourage the privatization of their products. IP rights can negatively affect women's ability to obtain needed resources and services. These rights can also encourage the privatization of certain kinds of assets. A comprehensive approach to protecting traditional knowledge should consider the various dimensions of the issue, such as the community, regional, national, and international levels.

²⁸⁰ Women Watch (note 270 above).

²⁸¹ WIPO (note 208 above).

²⁸² Ibid.

decreasing the gender discrepancy in the IP industry, is because such knowledge is specific to Africa.

Therefore, certain aspects of the TRIPS Agreement do perpetuate gender gaps. Concerns include the protection of traditional knowledge of both women and men and the failure to recognize that the cultural, economic, and sexual relationships between men and women vary according to the social, political, and religious factors that influence their behaviour. The TRIPS do not take into account the prejudice that women have experienced in certain areas, such as education and employment, this is because of the nature of its policymaking.²⁸³ Rectifying negative impacts of TRIPS should be the main responsibility of policy reform.

Women are more affected by the negative effects of trade liberalisation than men. This is mainly due to the huge number of opportunities that trade offers can provide women.²⁸⁴ Due to the gender biases in education, training, and employment, women are more likely to be affected by gender inequality in the distribution of income and resources. This inequality has a significant impact on the profitability of trade.²⁸⁵

As trade policies interact with other domestic and international factors, they need to be coordinated and gender-sensitive to reach development goals.²⁸⁶ One of the key factors that trade, and sustainable development are ensuring that trade liberalization is inclusive. This is why, despite the WTO's lack of specific gender-related provisions, various trade-related issues have been discussed in the organization.²⁸⁷

At the 2017 WTO's Ministerial Conference, various countries supported the Joint Declaration on Trade and Women's economic empowerment, calling for collaboration to make trade policies more gender responsive. The document aims to encourage women's participation in global trade.²⁸⁸ As part of the discussions on trade and gender, various regional trade agreements have been established. These provisions make explicit reference to gender.²⁸⁹

²⁸³ S Barwa, SM Rai 'Knowledge and/as Power: A Feminist Critique of Trade Related Intellectual Property Rights' (2003) 7(1) *Published in Gender, Technology and Development*.

²⁸⁴ Women Watch (note 270 above).

²⁸⁵ Ibid.

²⁸⁶ Ibid.

²⁸⁷ J Monteiro, *Gender-Related Provisions in Regional Trade Agreements* (unpublished document, Staff Working Paper WTO, 18 December 2018).

²⁸⁸ Ibid.

²⁸⁹ Ibid.

Moreover, the Williams 2018 SMART checklist is a tool used to assess the various aspects of gender-sensitive interventions.²⁹⁰ The checklist aims to align trade policies with national policies and programs that promote gender equality and development. It also encourages the inclusion of women in policymaking. It emphasizes the need for policies to be strategic, multifunctional, accountable, responsive, and transparent.²⁹¹

There is an urgent need to build trade agreements and policies that contribute to the goal of gender equality. This requires careful attention to the various aspects of these agreements and their impacts on domestic regulations and the quality of employment. This course is required for both the promotion of trade and policy reform as well as for the liberalization of trade agreements.²⁹²

Establishing gender-sensitive trade agreements and policies requires fleshing out the framework and exploring the various commitments in trade agreements. Doing so will help minimize the negative impacts on women and girls, and ultimately aid in decreasing the gender discrepancy in the IP industry.²⁹³

3.4 South Africa's Intellectual Property Policy

SA is currently in the process of policy reform within IP law. In 2018, the South African government authorized the first phase of SA's IP Policy.²⁹⁴ This policy aims to provide a framework for the development and enforcement of policies related to IP matters. It is based on the principles mentioned in the Bill of rights, section 25 and 27 of the South African Constitution.²⁹⁵

²⁹⁰ A Shaw & K Jobes 'Gender, Inclusion and Trade Thematic Brief Integrating Gender and Inclusion into Prosperity Fund Trade programmes' April 2019, available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/911530/Query-20-Gender-Inclusion-Trade-Brief.pdf, accessed on 11 November 2021.

²⁹¹ Ibid.

²⁹² M Williams (note 269 above).

²⁹³ Ibid.

²⁹⁴ X Carim (note 57 above).

²⁹⁵ The Constitution of the Republic of South Africa, 1996.

SA's IP policy²⁹⁶ was divided into phases: Phase 1, which is focused on addressing immediate issues, being public health and international IP cooperation; Phase 2, being an in-built agenda, which is focused on medium-term issues; and finally, a focus on evaluation and monitoring.²⁹⁷

The South African government has expected the policy to be the foundation of its broader NDP.²⁹⁸ The objective of the policy is to enable SA to take advantage of the opportunities presented by international patent regimes, regarding health and technology.²⁹⁹ The goal is to balance the protection of IP and the promotion of innovation.³⁰⁰ The IP policy³⁰¹ acknowledges that although SA has made significant progress in the protection of IP, the country still has a long way to go in developing a comprehensive and inclusive IP policy promoting socio-economic development.³⁰²

Additionally, Phase 1 'aims to promote local manufacture, utilize, and preserve the country's resources, encourage domestic innovation and improve public health.'³⁰³ It balances the rights of users and owners of IP. Creating a balance between protecting IP and promoting innovation is an essential part of any strategy to stimulate economic growth.³⁰⁴

Phase 2 of this policy aims to explore the use of intangible assets for the upliftment of communities in need. It will also explore the various ways of using the IP system to enable the informal sector of the economy to thrive.³⁰⁵ Additionally, phase 2 of the policy will also look at the various issues related to the management of natural heritage. Some of these include, how to reconcile provisions of the TRIPS³⁰⁶ that allow certain individuals to control the natural heritage of a region, without affecting the rights of the locals establishing farmer's rights and protecting the rights of citizens regarding the use of genetic information in agriculture.³⁰⁷

²⁹⁶ Intellectual Property Policy of The Republic of South Africa.

²⁹⁷ J Galvad and R Pereira 'Phase I of South Africa's IP Policy – What you need to know' 26 July 2018, available at <https://www.golegal.co.za/ip-policy-south-africa/>, accessed on 21 August 2021.

²⁹⁸ Ibid.

²⁹⁹ D O Oriakhogba 'Intellectual Property and Innovation for National Development: Lessons from South Africa' 7 August 2019, available at <https://www.afronomicslaw.org/2019/08/07/intellectual-property-and-innovation-for-national-development-lessons-from-south-africa>, accessed on 11 November 2021.

³⁰⁰ X Carim (note 57 above).

³⁰¹ Intellectual Property Policy of The Republic of South Africa.

³⁰² J Galvad and R Pereira (note 297 above).

³⁰³ R Pereira and G Lombard (note 26 above).

³⁰⁴ X Carim (note 57 above).

³⁰⁵ Draft Intellectual Property Policy of The Republic of South Africa Phase I 2017, available at https://www.gov.za/sites/default/files/gcis_document/201708/draft-intellectual-property-policy.pdf, accessed on 11 November 2021.

³⁰⁶ The Agreement on Trade-Related Intellectual Property, 15 April 1994.

³⁰⁷ Draft Intellectual Property Policy of The Republic of South Africa Phase I 2017 (note 305 above).

Nationally, the comprehensive IP policy will develop through a coordinated process that is informed by the various development imperatives identified by the South African government.³⁰⁸ This process will involve engaging with various stakeholder groups to develop a strategy that will advance SA's national interests.³⁰⁹

Key reforms in terms of the policy³¹⁰ include:

‘A coordinated approach to creating awareness about IP among South Africans, so as to protect nationally owned IP that is related to indigenous resources, traditional innovation and traditional knowledge and;

The creation of a system for protection for traditional knowledge which will guard against misappropriation and exploitation, as well as promote further research and development into products and services based on traditional knowledge.’

This may indirectly assist to alleviate the gender discrepancy in the IP industry because of the relation of traditional knowledge and women's contributions, however, it is not through enough regarding gender and more could still be done. For example, including gender in the discussion of key reforms.

In terms of this policy as a whole, even though SA has made progress in the protection and implementation of IP law, SA still needs an inclusive policy to encourage socio-economic development. The policy is intended to promote preserving the country's resources and encouraging innovation.³¹¹ However, there is nothing in this policy that is directly linked to gender. There is nothing in the policy that directly mentions women's participation with the IP industry. This is something that other countries have considered, and other countries are empowering women to be involved in through legislation. For example, the USA, which will be discussed in the latter chapters of this research.

Although a proper conclusion needs to be done on a case-by-case basis, it seems as if SA is behind regarding implementation of policy empowering women in the IP industry. Even phase

³⁰⁸ Ibid.

³⁰⁹ Ibid.

³¹⁰ Intellectual Property Policy of The Republic of South Africa Phase 1.

³¹¹ J Galvad and R Pereira (note 297 above).

2 of the policy makes no direct mention of the gender discrepancy in the IP. This suggests that the drafters of the policy do not see this issue as a priority, even though evidence shows that SA is one of the countries that have seen the least progression within the gender discrepancy in the IP industry.

3.5 Conclusion

With regards to women in the intellectual property industry, the equal participation of women is an evident issue. The question posed is whether the law denies economic power to women by refusing to award property rights in areas of work that involve the conventional women's ability to participate in the IP industry and how much society discriminates against women in such fields. It is argued that the intellectual property legal system in SA does not provide women easily available economic benefits, and this is something that needs to be considered during the policy implementation and drafting stage.³¹²

The TRIPS Agreement does not discriminate based on gender. Its provisions are designed to promote gender equality and inclusivity. The existence of gender inequalities in development processes is mainly due to national factors that allow for such inequality to continue in local contexts. Due to the existing inequalities, some of the impacts of the TRIPS Agreement may be felt more by women than men.

This chapter argues that if gender-sensitive policies are implemented in both national and international law and policies, progression would be seen within industries that produce gender discrepancies, this includes the gender discrepancy and the IP industry. International policies, in setting standards for national policies, should enforce the importance of gender sensitive mechanisms. There is no policy or legislation currently in place in SA that is gender sensitive regarding the gender discrepancy in the IP industry.

SA's IP policy³¹³ has not made provision for gender discrepancy. This suggests that the rule makers and stake holders lack cognisance of the gender discrepancy. This does not only show

³¹² DO Oriakhogba (note 52 above).

³¹³ Intellectual Property Policy of The Republic of South Africa.

that the legislature is not prioritizing the needs of women as it should but also their inefficiency of identifying a serious problem. This creates an issue for SA, as statistics indicate that SA is one of the countries that is progressing the least in decreasing the gender discrepancy in the IP industry. Policymakers and the drafters of legislation have failed to recognize or address this issue. In failing to do so they have not considered the unequal historic property laws placed on women, the disappointing statistics nor a gender sensitive perspective.

What is needed is a revisitation, alternatively, a refocus, of current national and international policies relating to IP law. SA is currently in the process of revisiting and developing IP in SA, but there is a clear gap within this policy development. The IP policy clearly identifies the objective as the need for the policy to contribute and promote to its socio-economic development, encourage innovation and empower domestic stakeholders. With regards to the gender discrepancy in the IP industry, the reason why we need to encourage equitable gender participation is to do the same thing by promoting socio-economic development, encouraging innovation and empowering domestic stakeholders. The drafters of the policy have failed to consider the gender discrepancy and implement steps to alleviate such. They aim to empower innovation, however including more women may fulfil that goal altogether.

The protection of traditional knowledge is an essential part of a country's development. It contributes to the social, economic, and environmental well-being of its communities.³¹⁴ However, developing countries are now implementing international agreements that aim to protect traditional knowledge associated with the exploitation of genetic resources. These agreements may affect how knowledge related to these 'resources is protected, and how their national interests' can be secured.³¹⁵

Therefore, SA has not done enough within the law to provide for adequate protection of property for woman within the IP industry. Legislation and policies in place do not do enough and they show that the gender discrepancy in the IP industry has not been considered sufficiently. This research suggests that policy development is needed within the South African IP industry as the failure to include gender specific provisions on our current IP regime,

³¹⁴ WIPO (note 208 above).

³¹⁵ WIPO (note 208 above).

perpetuates male dominance in the industry. Laws and policies should be reviewed to ensure protection of women's ability to participate in the IP industry.³¹⁶

The problem is 'not just the law itself, but also because of the lower socioeconomic status of women', but because of the law, the issue continues to persist on a greater scale. The law has the power to start a change.³¹⁷

This will ensure improvement of the institutional capacity of development patterns to implement the enabling framework successfully. Although this situation is not unlawful, it is unacceptable in a country that has empowered equality and democracy.

³¹⁶ UN (note 31 above).

³¹⁷ J Cutura 'Challenges for Women Inventors and Innovators in Using the Intellectual Property System - A Literature Review' July 2019, available at https://www.wipo.int/export/sites/www/ip-development/en/agenda/pdf/literature_review.pdf, accessed on 14 October 2021.

CHAPTER 4: GENDER INEQUALITY AND THE HISTORICAL TREATMENT OF WOMEN REGARDING PROPERTY OWNERSHIP

4.1 Introduction

As mentioned in chapter 2 tackling societal norms and stereotypes, supporting international standards, understanding past and future implementations of policy reform within society, promoting women's participation and control, and achieving political commitment are essential for successful policy reform. Considering and understanding gender inequality and the effect of the historical treatment of women regarding property ownership, within the policy development process, would allow for drafters of future policies to focus more on tackling societal norms and stereotypes, understand the need promote the participation of women, and understand past laws and the affect it has on women today. If such consideration is undertaken by drafters of policies in SA, this will enliven and enhance the consideration of gender related issues.

This chapter begins by providing an overview of gender inequality, with reference to IP law and women's engagement with justice. The chapter later provides a brief overview of certain barriers women traditionally have faced in male-dominated fields, as well as a synopsis of women's representation in the workforce in general, the legal field more specifically, and then in particular IP law. Reference will be made to the history of women inventors and innovators, the historical treatment of women with regard to property ownership, and the impact it had on the development and ownership in the IP industry, both nationally and internationally.

In compiling the experiences of women inventors in the past, one may find that the struggle to invent and own IP has been more apparent for women than men. Identifying how women have been treated in the past, regarding property ownership, is important to see how it may have impacted women today. This may provide more awareness on why there is a large gender discrepancy in the IP industry as well as provide insight to policymakers for future policy development.

4.2 Gender equality, the law, and the IP industry

Seemingly, IP regimes;

‘Are gender-neutral since they aim to promote innovation and creativity regardless of the gender of the innovator and creator. However, several studies have shown that IP law is not gender-neutral and that, accordingly, IP regimes can serve to establish gender inequality in domains driven by innovation and creativity.’³¹⁸

Gender equality refers to when both men and women, have ‘equal conditions to realise their full human rights and potential, are able to contribute equally to national, political, economic, social and cultural development, and benefit equally from the results.’³¹⁹ This means that the fight for gender equality aims for both, women and men to have equal opportunities, conditions, and treatment in the world and is based on women and men being partners in the home, community, and society.³²⁰

This definition is used within SA’s National Policy Framework for Women’s Empowerment and Gender Equality.³²¹ In accordance with numerous international mechanisms, for instance, the Protocol to the African Charter on Human and Peoples’ Rights on the Rights of Women in Africa 2003 and the Convention on the Elimination of all Forms of Discrimination against Women 1979, gender equality is seen as a fundamental human right.³²²

Furthermore, gender inequality is seen the most in developing countries and poverty-stricken societies.³²³ It is common for women in poverty and patriarchal societies to succumb to the patriarchal stereotypes that society has created. Despite the progress that has been made in addressing the gender equality issue, African cultures still have strong patriarchal foundations. In a patriarchal society, men are still able to exert control over how women live and how society operates. ‘As long as men are above women in the hierarchy of the legal system, women will

³¹⁸ DO Oriakhogba (note 52 above).).

³¹⁹ WIPO ‘WIPO Policy on Gender Equality’ 2014, available at https://www.wipo.int/export/sites/www/women-and-ip/docs/en/wipo_policy_gender_equality_en.pdf, accessed on 6 May 2021.

³²⁰ UNICEF ‘Glossary of Terms and Concepts GENDER EQUALITY November 2021, available at <https://www.unicef.org/rosa/media/1761/file/Gender%20glossary%20of%20terms%20and%20concepts%20.pdf>, accessed on 30 December 2021.

³²¹ The South African National Policy Framework for Women’s Empowerment and Gender Equality, 2000.

³²² WIPO (note 319 above).

³²³ OXFAM International ‘Why the majority of the world’s poor are women’, available at <https://www.oxfam.org/en/why-majority-worlds-poor-are-women>, accessed on 29 December 2021.

be subject to their control, and overlooked.’³²⁴ Within the transformative process, ‘the government fails to readdress and reconfigure the power dynamics that exist within these structures, which ensure that those in power continue to preserve the same narrative. Gender inequality will still occur unless the structures are changed, since a system of patriarchy was entrenched within them.’³²⁵

Moreover, the Constitution of the Republic of SA³²⁶ is unambiguous with regards to gender equality. Section 9 of the Constitution, specifically dealing with equality in SA, states that:

- ‘(1) Everyone is equal before the law and has the right to equal protection and benefit of the law.
- (2) Equality includes the full and equal enjoyment of all rights and freedoms. To promote the achievement of equality, legislative and other measures designed to protect or advance persons, or categories of persons, disadvantaged by unfair discrimination may be taken.
- (3) The state may not unfairly discriminate directly or indirectly against anyone on one or more grounds, including race, gender, sex, pregnancy, marital status, ethnic or social origin, colour, sexual orientation, age, disability, religion, conscience, belief, culture, language and birth.
- (4) No person may unfairly discriminate directly or indirectly against anyone on one or more grounds in terms of subsection 3. National legislation must be enacted to prevent or prohibit unfair discrimination.
- (5) Discrimination on one or more of the grounds listed in subsection (3) is unfair unless it is established that the discrimination is fair.’

However, despite this, today women are unequally represented within the IP industry. This includes women in the legal profession, as practicing attorneys, advocates, or judges. This is mostly seen in the area of IP law.³²⁷ IP law, compared to other areas of law is one of the most respected and aggressive legal areas.³²⁸ A study³²⁹ found that women are constantly underrepresented as lead counsel in IP cases.

³²⁴ Ibid.

³²⁵ Ibid.

³²⁶ The Constitution of the Republic of South Africa, 1996.

³²⁷ A G Ciccattelli ‘Are Women Under-Represented in IP Litigation?’, available at <https://www.ipwatchdog.com/2018/02/07/women-under-represented-ip-litigation/id=93243/>, accessed on 7 August 2021.

³²⁸ K Hagen ‘An Essay on Women and Intellectual Property Law: The Challenges Faced by Female Attorneys Pursuing Careers in Intellectual Property’ (1999) 15(1) *Santa Clara High Technology Law Journal* 139-158.

³²⁹ A Porter ‘Where are the Women? The Gender Gap within Intellectual Property’ (2020) 28 *Texas Intellectual Property Law Journal* 511-531.

Additionally, when looking at job vacancies, many job opportunities regarding employing an individual in the legal IP profession, require the candidate to have more than just a law degree. Such job advertisements, in addition to a law degree, require individuals to have some sort of engineering or technical degree. This could seemingly be a reason for the fewer number of women within the IP legal profession, practicing as legal personnel. This is because engineering and technical degrees are Science, Technology, Engineering and Mathematics (STEM) subjects. STEM subjects are subjects that women are in the minority of pursuing. Thus, it makes it hard for women, in particular, to be accepted as a patent attorney, trademark attorney, or broadly, into the IP legal profession, as they do not meet this basic requirement when applying for a job. This issue of gender inequality is most constant in the area of IP law.³³⁰ Other areas of law, such as corporate law and family law, have embraced gender diversity and a faster rate as women are now in a better position than they were before in these areas of law.³³¹

Moreover, legislation that gives effect to the provisions of Section 9 of the Constitution³³² is the Women Empowerment and Gender Equity Bill³³³ and the Promotion of Equality and the Prevention of Unfair Discrimination Act 4 of 2000 (PEPUDA). PEPUDA, also referred to as 'The Equality Act' defines equality to include "the full and equal enjoyment of rights and freedoms as contemplated in the Constitution³³⁴ and includes *de jure* and *de facto* equality and also equality in terms of outcomes".

Additionally, today, women's rights are protected by various national and international legislation and treaties. Specifically, the Convention on the Elimination of All Forms of Discrimination Against Women³³⁵ is an international agreement on women's human rights, adopted by the United Nations General Assembly in 1979. This is often described as an international Bill of Rights for women.³³⁶

Now more than ever, it is imperative that the world needs progressive legal policies for women.

³³⁰ A G Ciccattelli (note 327 above).

³³¹ Ibid.

³³² The Constitution of the Republic of South Africa, 1996.

³³³ The South African Women Empowerment and Gender Equality Bill, 2013.

³³⁴ The Constitution of the Republic of South Africa, 1996.

³³⁵ The Convention on the Elimination of All Forms of Discrimination Against Women, 1979.

³³⁶ Bureau of International Information Programs *Global Women's Issues: Women in the World Today, extended version* (2012) 186.

4.3 How is the gender gap in the IP industry kept going?

4.3.1 The connection between gender and the IP industry

The connection between gender and the IP industry mainly comes from first understanding the connection between gender, the law, STEM subjects, and male-dominated occupations. This is because the majority of IP ownership and inventorship is directly linked to STEM fields, which are the majority of the high tech, male-dominated, and high-paying jobs.³³⁷ In the past, women were not given the same opportunities as men. This includes educational opportunities which were enforced by legal prohibitions and social norms in communities. Women had not had the opportunity to fulfil their potential in such areas of work, ownership, and inventorship because of the laws implemented. Female-dominated jobs have included being a nurse, secretary, flight attendant, and social worker. Today, women are encouraged to take on blue-collar jobs, military jobs, and STEM programs.³³⁸

Moreover, women have traditionally faced various barriers in male-dominated fields. Research has shown that occupations that are male-dominated fields are all within the high-paying, and high-tech end of specialties.³³⁹ Although women today are seen to take on better opportunities and male-dominated fields of work, women in male-dominated fields are known to be subjected to societal expectations and beliefs about their abilities.

Noteworthy attention should be given to the IP industry as the more women we have applying for IP ownership and the more women that are inventing in STEM fields allows for female representation to occur in a male-dominated field. This shows a growth from a society that in the past, has been seen to be largely gender biased. Whilst the first patent awarded to a woman was recorded in America to Mary Kies only in 1809 for her method of weaving straw with silk, men owning patents are seen to have existed even before the 15th century.³⁴⁰

³³⁷ C Guibourg and N Stylianou (note 22 above).

³³⁸ 'Non-traditional careers for women', available at <https://www.learnhowtobecome.org/career-resource-center/underrepresented-careers-for-women/>, accessed on 3 May 2021.

³³⁹ Catalyst 'Women in Male-Dominated Industries and Occupations: Quick Take' 5 February 2021, available at <https://www.catalyst.org/research/women-in-male-dominated-industries-and-occupations>, accessed on 3 May 2021.

³⁴⁰ J Madhusoodanan 'Why Do Women Inventors Win Fewer Patents?' 9 April 2018, available at <https://insights.som.yale.edu/insights/why-do-women-inventors-win-fewer-patents>, accessed on 31 May 2021.

The Institute for Women's Policy Research³⁴¹ as a non-governmental organisation which aims to 'win economic equity for all *women* and eliminate barriers to their full participation in society.' According to them women have quintupled their representation as patent owners since 1977.³⁴² Whilst representation is increasing within the IP industry, a turning point for gender inequality will occur only when the participation of women in the IP industry increases.³⁴³

The WIPO acknowledges the injustices of legal systems of the past and has various initiatives today to help bridge the gender gap and positively impact IP development and ownership.³⁴⁴ The gender inequality that women have faced in the past and gender stereotyping have proven to kill a women's self-confidence, decreasing the number of women willing to expand their horizons, invent and take up more intricate roles in society.³⁴⁵ Increasing the number of women in the IP industry will expand knowledge, capacity and society will be able to celebrate the ingenuity of inventors. Successful policy reform would be an ideal solution to this issue.³⁴⁶

4.3.2 The importance of STEM subjects

STEM³⁴⁷ is known as 'a teaching philosophy that combines all four specialties collectively into one cross-disciplinary curriculum.'³⁴⁸ Science and Mathematics are important in because technology and engineering depend on them. Additionally, STEM requires a high level of application, creativity, critical thinking, and technical knowledge.³⁴⁹

³⁴¹ Institute for Women's Policy Research, available at <https://iwpr.org/>, accessed on 30 December 2021.

³⁴² A Lafrance 'Why Do Women Inventors Hold So Few Patents?' 21 July 2016, available at <https://www.theatlantic.com/technology/archive/2016/07/the-patent-gap/492065/>, accessed on 3 May 2021.

³⁴³ Ibid

³⁴⁴ WIPO 'Gender Equality and Intellectual Property', available at <https://www.wipo.int/about-ip/en/>, accessed on 15 May 2021.

³⁴⁵ OHCHR 'Gender stereotypes and Stereotyping and women's rights' September 2014, available at https://www.ohchr.org/documents/issues/women/wrgs/onepagars/gender_stereotyping.pdf, accessed on 30 December 2021.

³⁴⁶ WIPO (note 344 above).

³⁴⁷ STEM stands for Science, Technology, Engineering, and Mathematics. (See: W Dalton 'What is STEM?' 11 May 2019, available at <https://pearsonaccelerated.com/blog/stem>, accessed on 2 June 2021.)

³⁴⁸ W Dalton 'What is STEM?' 11 May 2019, available at <https://pearsonaccelerated.com/blog/stem>, accessed on 2 June 2021.

³⁴⁹ C O 'What is STEM?' 29 June 2021, available at <https://www.topuniversities.com/courses/engineering/what-stem>, accessed on 30 December 2021.

Additionally, STEM education is known to go beyond ordinary school subjects and people in STEM fields have been seen to do far better financially.³⁵⁰ The world has evolved to a point where science, technology, engineering, and mathematics have and continue to thrive. Merging these subjects has shown to develop the world and overcome challenges faced.³⁵¹ Science has allowed mankind to travel to space and one day perhaps colonize on other planets such as Mars. Technology has allowed mankind to keep in contact with family members around the world and provided a safe space during Covid-19. Engineering allows for the advancement in problem-solving skills and being able to apply theoretical education to real-life projects.³⁵² Mathematics allows for a person to make conscious decisions, remove errors and analyse work when designing.³⁵³ The importance of STEM subjects grows more and more within the current decade as STEM occupations are the future of our economy.³⁵⁴

Moreover, STEM education allows for individuals to become more employable, meet the current labour demands and succeed in high tech, high paying employment opportunities.³⁵⁵ The STEM approach fosters creativity and invention, it motivates the younger generation to invent fundamental technology needed to keep up with the demands and progress of the world. STEM education prepares our world for the advancement of the future, bringing with it innovations that may help save the environment, make life easier, and even save lives.³⁵⁶

The number of women in STEM fields compared to men is much less and strongly evident. Women make up only 28% of individuals in STEM fields. The importance of women in STEM fields becomes significant to a faster progression of the gender discrepancy in the IP industry.³⁵⁷ Additionally, giving women equal opportunities to pursue STEM professions would decrease the gender pay gap, would improve women's economic security, and would contribute to more

³⁵⁰ Study USA 'Why Is STEM Important? The Impact of STEM Education on Society' 19 November 2020, available at <https://www.studyusa.com/en/a/2157/why-is-stem-important-the-impact-of-stem-education-on-society>, accessed on 3 June 2021.

³⁵¹ Ryan 'Why is STEM Important? Why Do We Keep Talking About it?' 26 January 2018, available at <https://www.idtech.com/blog/why-is-stem-important#:~:text=STEM%20is%20important%20because%20it,variety%20of%20tasks%20and%20disciplines>, accessed on 30 December 2021.

³⁵² Study USA (note 350 above).

³⁵³ National Inventors Hall of Fame 'What is the Value of STEM Education' available at <https://www.invent.org/blog/trends-stem/value-stem-education>, accessed on 30 December 2021

³⁵⁴ Yeti Academy STEM '5 Reasons Why STEM Education is Important in 2021' 4 January 2021, available at <https://yetiacademy.com/reasons-why-stem-education-is-important-in-2021/>, accessed on 5 June 2021.

³⁵⁵ C O (note 349 above).

³⁵⁶ Yeti Academy STEM (note 354 above).

³⁵⁷ AAUW 'The STEM Gap: Women and Girls in Science, Technology, Engineering and Math', available at <https://www.aauw.org/resources/research/the-stem-gap/>, accessed on 28 June 2021.

diverse STEM personnel.³⁵⁸ More women in STEM would contribute to ideas, creativity, and inventions beyond what has been. Diversity allows for different perceptions and skills to be utilized, ultimately enhancing STEM fields and making the industry flourish.

Additionally, there will ultimately be less bias within the workforce as more women are representing in high-end fields because of pursuing STEM degrees.³⁵⁹ More women in STEM means inspiring future generations of little girls to break barriers and pursue intricate, high-level, worthy professions. This would foster their right to being equal and empower them to create opportunities for themselves. Stereotypes and biases hold many people back and even if a little girl is interested in a STEM field, they are undermined by what society categorises as ‘male-work’.³⁶⁰

Additional factors that challenge the advancement of women inventors and innovators in the IP industry includes; insufficient data to acknowledge the nature of the gender discrepancy, stereotypes, and patriarchy, the lack of understanding the value of IP rights and how the system operates, financial barriers in the patent application process, women are less likely to obtain opportunities for development in IP intensive fields.

It is important to identify why the above has been such a challenge for women. Even though the IP industry is linked with technical and scientific studies, there is a possibility that the IP system is subject to historically enforced cultural influences that are seemingly a barrier with regards to the participation of women in the IP industry. This is because the fundamental beliefs of science are gendered, and if the IP legal system is focused on those same assumptions or even if the legislature fails to provide for adequate policy reform, then the IP system may be unwelcoming to female participation.

³⁵⁸ E Brockwell ‘What is STEM and why is it important?’ 25 May 2018, available at https://careerswithstem.com.au/what-is-stem-and-why-is-it-important/?gclid=Cj0KCQiAq7COBhC2ARIsANsPATEA0FoHBG5L-ay26QzjSECs--Je8o3WkPP_1S_BulULJ1IOPxgW7ogaAtuOEALw_wcB#gsc.tab=0, accessed on 30 December 2021.

³⁵⁹ AAUW (note 357 above).

³⁶⁰ C Berwick ‘Keeping Girls in STEM: 3 Barriers, 3 Solutions’ available at <https://www.edutopia.org/article/keeping-girls-stem-3-barriers-3-solutions>, accessed on 20 December 2021.

4.4 The historical treatment of women with regard to property ownership, and its effect on the gender discrepancy in the IP industry.

4.4.1 Colonialism

Prior to the early 1900s, women faced legal restrictions purely because of the gender they were born as. Restrictions made it very difficult for women to even try new things let alone invent something to potentially own and benefit from. The opportunity to earn a salary, get an education, enter into contracts and even own property, including IP, was almost impossible for women. Even if a woman, despite the restrictions, had the opportunity to invent something, it was very unlikely that she would be credited for it or be able to solely own the property. In the past, laws across the world restricted women. Some laws gave a women's right to property and earnings to her husband.³⁶¹ Women were subject to the control of their husbands. A married woman would not be able to sell her IP rights, mortgage property to finance a business operation using IP or be able to sue for IP infringement.³⁶²

The Women, Business and the Law 2020 report³⁶³ provided results on how women's rights have changed in the last 50 years. At present, women have 25% more rights than they had in the 1970s.³⁶⁴ Sub-Saharan Africa had improved the most regarding the pace for a potential reform compared to other countries studied, and specifically, SA was a part of the top ten economies that have improved women's rights.³⁶⁵ However, throughout history women have fought for representation in various areas of life, whilst representation is improving, some are still fighting against an ancient social and cultural norm because of oppressive laws of the past. Additionally, some countries are consumed by social norms and ancient ideologies of how life should be lived and what a woman's true duties are because of these laws. Thus, for some, it will always be a long wait to progress.

³⁶¹ T Trumbic 'How have women's legal rights evolved over the last 50 years?' 3 March 2020, available at <https://blogs.worldbank.org/opendata/how-have-womens-legal-rights-evolved-over-last-50-years>, accessed on 3 May 2021.

³⁶² Ibid.

³⁶³ Women, Business and the Law 2020, available at <https://openknowledge.worldbank.org/handle/10986/32639>, accessed on 30 December 2021.

³⁶⁴ Women, Business and the Law 2020, available at <https://openknowledge.worldbank.org/bitstream/handle/10986/32639/9781464815324.pdf>, accessed on 30 December 2021.

³⁶⁵ Ibid.

In SA, gender issues today are not just because of how women were treated during apartheid nor because of recent history in SA. Gender issues today can be identified from laws before colonialism being established in SA, over a century ago.³⁶⁶ To be able to understand the issue of the gender discrepancy in the IP industry in SA, we need to understand the historical treatment of women with reference to the influence of the Dutch and British colonialism on the implementation of South African laws.

The word colony can be defined ‘as a country that is under the full or partial political control of another country and is occupied by the settlers from that country.’³⁶⁷ In the traditional sense of the meaning of colonialism, Africa as a continent has achieved independence and is for the most part self-governed. Most of the African states achieved democracy in the latter part of the 1990s.³⁶⁸ Despite adopting these liberal conditions within their respective states, a vast majority of the countries remained under the financial control of richer, more stable countries that had previously been responsible for colonising other states.³⁶⁹

During colonisation, Europeans were tasked with managing vast colonial territories. ‘Effective colonisation in Africa required a legal system to maintain control over the territories and resolve disputes within them.’³⁷⁰ Establishing a direct rule over colonies was a solution. This led to the establishment of a centralized European authority within a given territory. The exclusion of the native population from the colonial government led to the unrecognised institutions and indigenous communities not having access to certain rights.³⁷¹

In 1652, the Dutch East India Company in 1652 arrived in SA. They were the first European settlement. Prior to colonization, African women were devoted looking after the land, sowing seeds, harvesting and being caregivers within their homes. It gave them purpose in their

³⁶⁶ A M Lenser, *The South African Women's Movement: The Roles of Feminism and Multiracial Cooperation in the Struggle for Women's Rights* (Unpublished thesis, University of Arkansas, 2019) 5.

³⁶⁷ K Sheldon ‘Women and Colonialism’ 27 June 2018, available at <https://www.oxfordbibliographies.com/view/document/obo-9780199846733/obo-9780199846733-0067.xml>, accessed on 30 December 2021.

³⁶⁸ A Barratt and P Snyman ‘Researching South African Law’, available at https://www.nyulawglobal.org/globalex/South_Africa.html, accessed on 7 August 2021.

³⁶⁹ South African History Online ‘History of slavery and early colonisation in South Africa’ 3 December 2021, available at <https://www.sahistory.org.za/article/history-slavery-and-early-colonisation-south-africa>, accessed on 30 December 2021.

³⁷⁰ South African History Online ‘History of slavery and early colonisation in South Africa’ 3 December 2021, available at <https://www.sahistory.org.za/article/history-slavery-and-early-colonisation-south-africa>, accessed on 30 December 2021.

³⁷¹ South African History Online ‘The Impact of Colonialism’ 1 April 2020, available at <https://www.sahistory.org.za/article/impact-colonialism>, accessed on 30 December 2021.

households.³⁷² When the Dutch first came to SA, they suddenly took ownership of the land that women had harvested and cultivated.³⁷³ This changed their financial situation, access to food and became much more dependent on men, which enforced male supremacy. Moreover, the introduction of wage labor meant that women had to complete household duties to go and work, where they were often abused. This created a loss of self-esteem and female identity.³⁷⁴

The British arrived in SA in 1820.³⁷⁵ During this time, the British had their own ideas of gender roles, and the way women should behave in society. During the colonialist era, men slaves were primarily appointed work as laborers and women were appointed work as domestic workers.³⁷⁶ These roles were given to men and women by the European concept of gender roles and capabilities. Women being subordinate in the country left women vulnerable, in more ways than one and their legal status at the time forced them to be controlled by the superior male authority. These ideologies were influential and SA, after gaining its independence, was inevitably structured not only on the basis of race but also because of the British and European concepts of women and their gender roles.³⁷⁷

When the British took control, Roman-Dutch law stayed in force.³⁷⁸ The Roman-Dutch law is the uncoded law of Holland. Legal doctrines and the procedure of law can be traced to this civilian culture.³⁷⁹ English common law was adopted, and its influence can be seen in procedural law, substantive provisions, and adherence to precedent.³⁸⁰ Additionally, Roman-

³⁷² History Is Now 'The Netherlands in South Africa: Dutch Colonization in the 17th Century' 8 March 2020, available at <http://www.historyisnowmagazine.com/blog/2020/3/8/the-netherlands-in-south-africa-dutch-colonization-in-the-17th-century#.Ycx96mBBzIU>, accessed on 30 December 2021.

³⁷³ H Bradford 'Women, Gender and Colonialism: Rethinking the History of the British Cape Colony and its Frontier Zones, c. 1806-70' (1996) 37(3) *The Journal of African History* 351-370.

³⁷⁴ A Keet 'African Women and Colonialism' 25 May 2013, available at <https://www.fantasticafrika.org/african-women-and-colonialism/#.YcyCh2BBzIU>, accessed on 30 December 2021.

³⁷⁵ South African History Online 'The first 1820 British Settlers arrive in South Africa' 30 September 2019, available at https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwiE4-_VrYn1AhWagVwKHTZcDlsQFnoECBMQAw&url=https%3A%2F%2Fwww.sahistory.org.za%2Fdated-event%2Ffirst-1820-british-settlers-arrive-south-africa%23%3A~%3Atext%3DAfter%2520the%2520Napoleonic%2520wars%2520C%2520Britain%2CCChapman%2520on%252017%2520March%25201820.&usg=AOvVaw1X0rD1aZH2sCj4pdI6J94R, accessed on 30 December 2021.

³⁷⁶ O A Adesina 'Women and Colonialism Across Africa' 13 June 2020, available at https://link.springer.com/referenceworkentry/10.1007%2F978-3-319-77030-7_170-1, accessed on 30 December 2021.

³⁷⁷ H Cust 'The Dutch in South Africa' (1900) 170(159) *The North American Review* 198-211.

³⁷⁸ A Barratt and P Snyman (note 368 above).

³⁷⁹ Ibid.

³⁸⁰ Ibid.

Dutch Law did not provide for the obligations of the modern society, requiring legislative innovation, which was based on English law and understood by the use of English precedent.³⁸¹

The years between colonisation and the introduction of the South African Constitution³⁸² the country was run by predominantly white men who also had conservative views regarding the role of women in society. The government had strong views that women were mainly caregivers in society and for a number of years women were suppressed because of their gender. Since 1956,³⁸³ there has been much progress in achieving gender equality, however it was only until 1996 that there was an establishment of a Gender Unit in the Department of Justice. Thereafter, the first Gender Policy Statement³⁸⁴ was developed.³⁸⁵

Moreover, the Women's Charter for Effective Equality was presented to Parliament in 1994. The preamble to the Charter is an ideal example of gender consciousness. It reads:

‘We, the women of South Africa, wives and mothers, working women and housewives, African, Indians, European, and Coloured, hereby declare our aim of striving for the removal of all laws, regulations, conventions and customs that discriminate against us as women, and that deprive us in any way or our inherent right to the advantages, responsibilities, and opportunities that society offers to any one section of the population.’³⁸⁶

The inclusiveness and triumph of the Women's Charter validates that women in SA were able to tackle their oppressors, ensuring they were seen as equal. However, history shows that this is only something women had to do. Men never had to argue against gender inequality.

³⁸¹ Ibid.

³⁸² The Constitution of the Republic of South Africa, 1996.

³⁸³ ‘There is no doubt that South Africa has made significant progress towards achieving gender equality since 1956, when 20 000 women marched to the Union Buildings on 9 August in protest against the extension of Pass Laws to women.’ (See: StatsSA ‘Realising women's rights for an equal future on Women's Day’ 9 August 2021, available at <https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwjOnvuktIn1AhXxmFwKHQAQCCcQFnoECAMQAw&url=http%3A%2F%2Fwww.statssa.gov.za%2F%3Fp%3D14559&usg=AOvVaw26dpF5m35Syl3dXNBvgXBQ>, accessed on 30 December 2021.)

³⁸⁴ ‘The purpose of the Department of Justice's Gender Policy Statement is to bring a gender perspective into all aspects of planning, policy, legislation development, and the transformation of the justice system.’ (See: Department: Justice and Constitutional Development REPUBLIC OF SOUTH AFRICA ‘Gender Policy Statement’ 1999, available at <https://www.justice.gov.za/policy/1999-GenderPolicyStatement.pdf>, accessed on 30 December 2021.)

³⁸⁵ Department: Justice and Constitutional Development REPUBLIC OF SOUTH AFRICA ‘Gender Policy Statement’ 1999, available at <https://www.justice.gov.za/policy/1999-GenderPolicyStatement.pdf>, accessed on 30 December 2021.

³⁸⁶ P E Andrews ‘Striking the Rock: Confronting Gender Equality in South Africa’ (1998) 3 *Michigan Journal of Race and Law* 307-339.

The Constitution³⁸⁷ brought an encouraging transformation to the South African law legal system.³⁸⁸ SA's past property laws regarding women, meant that much had to be done to reform policies to consider the needs of the modern democratic society.³⁸⁹ The South African Constitution³⁹⁰ prescribes institutions such as the *Human Rights Commission* and the *Commission on Gender Equality (CGE)*, which are functioning.³⁹¹

It was only when the Bill of Rights was introduced that women in SA had received formal recognition of being equal citizens.³⁹² Women were previously labelled as second-class citizens³⁹³ and were usually under the control of a head male in their family, be it their husband, father, or brother. Patriarchy assumes that men are superior to women.³⁹⁴ Under customary law in SA many women's rights have been denied, this included their right to property and being able to own property.³⁹⁵ Additionally, women were even given the same status as a minor.³⁹⁶

Today, courts are considering how the historical treatment of women has impacted women. *Harksen v Lane NO and Others*, acknowledged, how laws historically discriminated against women based on stereotypes of capacity and social role.³⁹⁷ In *President of the Republic of South Africa and Another v Hugo*, the Court acknowledged the context of women's lives and reasons why the law should take into account unequal roles men and women fulfil.³⁹⁸

³⁸⁷ The Constitution of the Republic of South Africa, 1996.

³⁸⁸ ACHPR 'African Charter on Human and Peoples' Rights- Chapter 2', available at <https://www.justice.gov.za/policy/african%20charter/afr-charter02.html>, accessed on 7 August 2021.

³⁸⁹ South African History Online 'Women's Rights and representation', available at <https://www.sahistory.org.za/article/womens-rights-and-representation>, accessed on 3 May 2021.

³⁹⁰ The Constitution of the Republic of South Africa, 1996.

³⁹¹ ACHPR 'African Charter on Human and Peoples' Rights- Chapter 2', available at <https://www.justice.gov.za/policy/african%20charter/afr-charter02.html>, accessed on 7 August 2021.

³⁹² South African History Online 'Women's Rights and representation', available at <https://www.sahistory.org.za/article/womens-rights-and-representation>, accessed on 3 May 2021.

³⁹³ 'A citizen, especially a member of a minority group, who is denied the social, political, and economic benefits of citizenship.' (See: Dictionary.com 'Second-class citizen', available at <https://www.dictionary.com/browse/second-class-citizen>, accessed on 30 December 2021.)

³⁹⁴ Marked by Teachers 'Women were second-class citizens in the year 1900', available at <https://www.markedbyteachers.com/as-and-a-level/sociology/women-were-second-class-citizens-in-the-year-1900-how-far-is-this-a-true-assessment-of-women-at-the-beginning-of-the-twentieth-century.html>, accessed on 30 December 2021.

³⁹⁵ Women's Legal Centre 'Women's Property Rights under customary Law' 2010, available at <http://wlce.co.za/wp-content/uploads/2017/02/Womens-Property-Rights-Under-Customary-Law.pdf>, accessed on 30 December 2021.

³⁹⁶ South African History Online 'Women's Rights and representation', available at <https://www.sahistory.org.za/article/womens-rights-and-representation>, accessed on 3 May 2021.

³⁹⁷ *Harksen v Lane NO and Others* (CCT9/97) [1997] ZACC 12, para 93.

³⁹⁸ *President of the Republic of South Africa and Another v Hugo* (CCT11/96) [1997] ZACC 4, para 33.

Additionally, international agendas protect the equality of women and their right to own property. The United Nations General Assembly and its 193-member states adopted the 2030 Agenda for Sustainable Development.³⁹⁹ The agenda underlines that ‘gender equality, and the empowerment of women and girls will contribute to progress across all the Sustainable Development Goals and targets.’⁴⁰⁰ Additionally, WIPO is committed to promoting gender equality in the IP industry and has taken steps to raise the profile of gender equality.

Whilst one can be optimistic about the future, many suggest that the reason that there is an eminent gender discrepancy in the IP industry is because women were seen to be inferior and are now trying to catch up, something that men never had to do. Women have always been up against an enormous current, finding it hard to swim to the end, always having to kick a little harder and faster, and if they do, they are still less seen than their male counterparts. Hypothetically, had women been given the same opportunities by law as men in the past, it would be highly unlikely that there would be an evident gender discrepancy not only in the IP industry but in other areas of life too.

4.4.2 The history of women inventors and innovators

Innovative ideas and concepts envisioned and created by women have indeed had importance throughout our world. Women have created noteworthy inventions and the history of women inventors should be applauded. From the life raft to the feeding tube to the dishwasher to the car heater, inventions created by women have been historic. However, despite their efforts to invent and create representation for themselves, men have tried to take the credit numerous times.

Sybilla Masters invented a way to process mielies, the rights to the patent were allocated to her husband.⁴⁰¹ This is because married women in 1715, could not legally own property in England. This was until the expansion of the Married Women’s Property Act in 1882.⁴⁰²

³⁹⁹ WIPO Magazine ‘Women and the international patent system: encouraging trends’ April 2018, available at https://www.wipo.int/wipo_ma399gazine/en/2018/02/article_0008.html, accessed on 17 May 2021.

⁴⁰⁰ Ibid.

⁴⁰¹ J Brant et al ‘Policy Approaches to Close the Intellectual Property Gender Gap - Practices to Support Access to the Intellectual Property System for Female Innovators, Creators and Entrepreneurs’ 2019, available at https://www.wipo.int/export/sites/www/intellectual_property-development/en/agenda/pdf/policy_approaches_close_the_intellectual_property_gender_gap.pdf, accessed on 27 March 2021.

⁴⁰² Ibid.

Additionally, Trotula of Salerno, also known as the world's first gynaecologist, is an early victim of prejudice.⁴⁰³ Her written work has been important in providing knowledge about women's health, however medical professionals had been sceptical that a woman could have produced such work. Absurd assumptions and doubts regarding her work, ultimately allowed male doctors to copy their names over her work.⁴⁰⁴

Furthermore, a gender perspective of intellectual property law may be best approached with the discussion of the 1881 USA supreme court case *Egbert v. Lippmann*. This case challenged and exposed the gendered assumptions of the law.⁴⁰⁵ Mr. Samuel Barnes was the person responsible for the design of the corset. In 1866, Barnes had applied for a patent, however, died a month after the patent was issued. Egbert, as his wife, executor and owner of the patent, sued Lippmann for patent infringement.⁴⁰⁶ In this case, Ms. Egbert was described as an 'intimate friend' of Barnes and only later as his 'wife'. Additionally, the judge who authored the majority opinion, ruling against Ms. Egbert, declared that Barnes had 'slept on his rights' too long. This sly innuendo is an indication that the Court was mindful of the gendered nature of corsets, the emotional and sexual aspects of the relationship between the plaintiff and the original male inventor.⁴⁰⁷ The position of the case with regards to patent law at that time is an example, in which the female body was the object of invention, suggests that the doctrines of patent law themselves were gendered.⁴⁰⁸ Many argue that the Court's ruling was tainted by the view that Barnes had surrendered his right to patent ownership by 'sleeping on his rights' whilst others commercialized the invention.⁴⁰⁹

The historical treatment of these women regarding their property ownership has indeed been largely due to women not being able to have inadequate protection from the law. Thus, having affected the progression of women today in the IP industry. The way the above women were

⁴⁰³ B Yuill 'The historical reputation of Trota through the years shows how the mores of a current society can restrict contemporary understanding of a figure from the past' 4 April 2021, available at <https://explorethearchive.com/trota-of-salerno>, accessed on 30 December 2021.

⁴⁰⁴ Ibid.

⁴⁰⁵ C O D Kamp & D Hunter 'A history of intellectual property in 50 objects', available at <https://poseidon01.ssrn.com/delivery.php?ID=664098073095004029070102023016101113016075014035075091072123010121094095009066127102060117127102005032118123105077005121026078017006037007087028093077116115098071002044028127015069079104021117094118127029012008121093080124127100120019100023017089121&EXT=pdf&INDEX=TRUE>, accessed on 20 July 2021.

⁴⁰⁶ *Egbert v. Lippmann* 104 U.S. 333 (1881)

⁴⁰⁷ K W Swanson 'Intellectual Property and Gender: Reflections on Accomplishments and Methodology' (2015) 24(1) *Journal of Gender, Social Policy & the Law* 175-200.

⁴⁰⁸ Ibid.

⁴⁰⁹ D Halbert (note 20 above).

treated regarding their property and inventions is just a handful of the history of women inventors that have been victim to not being able to benefit from their ideas. While one can see that in years since then, that there has been an improvement in women being able to hold onto their rights, represent and own IP.

Historically, prohibitions in the law discouraged women from being accredited for their inventions. This was done so that no IP was sought by women or if they were, they were done in the names of the fathers, brothers, or husbands of the actual inventor.⁴¹⁰ Today, it is very difficult to identify anything that is unequal or discriminatory in the IP legal system, both nationally and internationally. No statutes or legislation prohibit women completely, from owning and creating IP.⁴¹¹

Additionally, the lack of legislation prohibiting women within the IP industry might persuade individuals to believe that there is no reason to worry.⁴¹² However, there is greater progress seen in other areas of policy reform. For example, employment. The removal of historic inequality does not always mean it is the end of inequality. Even though women are no longer excluded from professions, there is a continuation of women being affected even after new laws have removed direct challenges towards the participation of women in the IP industry.

4.4.3 The historical impact on IP ownership and development for women, nationally.

The gender bias women faced in the past in SA has affected the history of inventions and opportunities for a woman. The historical treatment of women regarding ownership and development had inevitably, created a precedent that followed after. It established and entrenched a gender bias against women as inventors and owners of property.

The impact of Roman-Dutch law and English common law reflects SA's past of colonial control by the Dutch and English.⁴¹³ Today, SA has a mixed legal system, meaning that the

⁴¹⁰ DL Burk (note 14 above).

⁴¹¹ Ibid.

⁴¹² Ibid.

⁴¹³ A Barratt and P Snyman (note 368 above).

countries legal system is a mix of Roman-Dutch civilian law, English common law, customary law, and religious personal law.⁴¹⁴

In over 25 years into democracy, SA has indeed made improvements in reforming the legal system, that previously had not allowed women's participation in certain economic, social, and political industries.

In SA, customary law had been enforced and existed in the country years before the earliest colonization in SA. Customary law is derived from time immemorial and establishes itself in the cultural traditions of society today.⁴¹⁵ During the colonial period, the Natal Code of 1878 introduced fundamental concepts through subsequent revisions and amendments.⁴¹⁶ The Code stated that customary law was based on a few leading principles, from which all other aspects of the law were derived.⁴¹⁷ These key aspects of customary law contained the subjugation of women to men. Throughout SA's historical development, customary law has had an underlying aspect of discrimination. In *Bhe and Others v Khayelitsha Magistrate and Others*, the Courts 'considered the history of customary law and the effects of changing circumstances on present practices and the position of women.'⁴¹⁸

As mentioned, in the past a woman party to a customary marriage was referred to as a minor. This was in terms of section 11(3)(b) of the Black Administration Act.⁴¹⁹ With regards to the Bill of Rights and the equality clause, women today have the same rights as men.⁴²⁰ Additionally, section 6 of the recognition of the Customary Marriages Act⁴²¹ allows women now to have the same status as their husbands. Thus, the women of today have the right to ownership of assets, this includes the right to IP.⁴²² However, the inferior position of African women, especially in rural areas, with reference to colonialism is controversial. Indeed, all women in SA have the legal right to equality and to own IP. However, there is still *de facto*

⁴¹⁴ Ibid.

⁴¹⁵ D Wall 'Customary Law in South Africa: Historical Development as a Legal System and its Relation to Women's Rights', available at <https://www.sahistory.org.za/article/customary-law-south-africa-historical-development-legal-system-and-its-relation-womens>, accessed on 7 August 2021.

⁴¹⁶ Ibid.

⁴¹⁷ Ibid.

⁴¹⁸ *Bhe and Others v Khayelitsha Magistrate and Others* (CCT 49/03) [2004] ZACC 17, para 89 and 91.

⁴¹⁹ The Black Administration Act 38 of 1927.

⁴²⁰ G Mutangadura 'Women and Land Tenure Rights in Southern Africa: A human rights-based approach' 8-9 November 2004, available at <https://pubs.iied.org/sites/default/files/pdfs/migrate/G00173.pdf>, accessed on 30 December 2021.

⁴²¹ Recognition of Customary Marriages Act 120 of 1998.

⁴²² D Wall (note 415 above).

discrimination and *de facto* subordination of women to consider. Thus, a change in the attitudes in society as well as towards the implementation of progressive law is needed. This issue ultimately affects the rate at which women progress in our country.

The *de facto* discrimination and *de facto* subordination of women can be argued to be because of the historical treatment of women and laws that were implemented against women. Thus, the historical treatment of women has undoubtedly impacted the rate at which women develop within high intensive fields, such as the IP industry, as well as the impact it has had on the ownership rights and esteem of women today.

In the case of *Prinsloo v Van de Linde and Another*, the Court stated that:

‘The impact of structured and vast inequality is still with us despite the arrival of the new constitutional order...

...While our country, unfortunately, has great experience in constitutionalising inequality, it is a newcomer when it comes to ensuring constitutional respect for equality.’⁴²³

Similarly, *Brink v Kitshoff NO*, held that gender discrimination, though not visible, resulted in deep patterns of disadvantage.⁴²⁴

It is evident that Courts in SA do consider and can understand the broader perspectives with regards to the historical treatment of women and patriarchy. However, most case precedent concerns women with regards to marriage or motherhood. This conveys the message that the historical treatment of women has impacted women of today, and it is of importance to consider such in law. More case precedent is needed to consider the historical disadvantage of a women’s private life, such as the IP industry.

Throughout history, women have been given fewer rights than men. The underlying historical and ‘legal bias against women is a result of the structural gender inequalities in a largely patriarchal society.’ This ultimately meant that women were not able to study STEM. Men have always had enough male mentors and representation in the IP industry as legislation did not prohibit men from ownership and being able to study STEM subjects. Thus, there was always

⁴²³ *Prinsloo v Van der Linde and Another* (CCT4/96) [1997] ZACC 5, para 20.

⁴²⁴ *Brink v Kitshoff NO* (CCT15/95) [1996] ZACC 9, para 44.

an influence towards young boys to continue in such professions, whilst girls never had the support, opportunities, representation, and mentorship within the field to succeed.

4.4.4 The historical effect on IP ownership and development for women, internationally.

Even internationally, woman and women inventors of the past suffered much injustice due to the social and legal system at the time specifically off the late 19th century.⁴²⁵ Similarly in SA, laws in the United States granted all property rights to men, such as a woman's husband or father. This prohibited women from controlling and owning property in their names.⁴²⁶ Additionally, negative stereotypes limited women to become inventors. Historically, women were treated as a stranger or outsider. Laws implemented at the time reinforced this belief.⁴²⁷

The struggle that countries face in ensuring gender parity in the IP industry, and the struggle that governments face when implementing laws, it's largely based on the historical viewpoint of women and the historical laws oppressing women's property rights. In 1929, women were not considered 'persons' in terms of section 24 of the British North America Act of 1867. This was based on a British ruling that said that women are 'eligible for pains and penalties, but not rights and privileges.'⁴²⁸ In 1765, in terms of the law, married women did not exist independently from their husbands.⁴²⁹ This meant that all of her property was under the control of the man she married. It was only in 1882, the European Act of Parliament allowed married women the right to own property.⁴³⁰ Internationally, during much of recent history and at the start of the granting of legal rights in IP, women were closed off to the formal procedures of the IP legal system.⁴³¹

⁴²⁵ A Porter (note 329 above).

⁴²⁶ E S Hintz 'Counting Women Inventors', available at <https://invention.si.edu/counting-women-inventors>, accessed on 7 August 2021.

⁴²⁷ A Porter (note 329 above).

⁴²⁸ Margo 'One for the people: The 1929 Persons Case' 18 October 2011, available at <https://www.cplea.ca/one-for-the-people-the-1929-persons-case/>, accessed on 30 December 2021.

⁴²⁹ G Lehrman 'The legal status of Women, 1776- 1830', available at <https://ap.gilderlehrman.org/essay/legal-status-women-1776%C3%A2%E2%82%AC%E2%80%9C1830>, accessed on 30 December 2021.

⁴³⁰ Human Rights Careers '10 Reasons Why Gender Equality is Important', available at <https://www.humanrightscareers.com/issues/10-reasons-why-gender-equality-is-important/>, accessed on 30 December 2021.

⁴³¹ C Lopez-Curzi 'Seven reasons we still need to fight for women's human rights', available at <https://www.amnesty.org.uk/blogs/yes-minister-it-human-rights-issue/seven-reasons-we-still-need-fight-womens-human-rights>, accessed on 7 August 2021.

In 1883, Matilda Joslyn Gage, a radical feminist,⁴³² mentioned how such property laws hindered women inventors and owners:

‘Should such a woman be successful in obtaining a patent, what then? Would she be free to do as she pleased with it? Not at all. She would hold no right, title, or power over this work of her own brain. She would possess no legal right to contract, or to license any one to use her invention. Neither should her right be infringed, could she sue the offender. Her husband could take out the patent in his own name, sell her invention for his own sole benefit, give it away if he so chose, or refrain from using it, and for all this she would have no remedy.’⁴³³

The oppressive property laws placed on women influenced an urgent need for gender-neutral laws in modern society, internationally. A current worry regarding women in the IP industry is that laws in place today, that are seemingly gender-neutral, may actually put women at a disadvantage within the IP industry. For example, evidence shows that IP laws protecting ‘traditional crafts and knowledge of traditional weavers in Ghana have unexpectedly reinforced gender disparity within the community.’⁴³⁴ The study⁴³⁵ found that the national weavers implemented laws protecting their traditional crafts and knowledge. Even though these laws functioned in the community, the broader perspectives of these laws, such as gender, were not taken into consideration. The study⁴³⁶ further found that in that particular community in Ghana, weaving is traditionally male work. Additionally, infringement allegations were brought against workers who were mostly women.⁴³⁷ This is an example of a supposedly neutral law that, instead, reinforced the gender discrepancy in the IP industry.

The 21st century is a time of new advanced technology, great innovations, increased ways of communication, and the equal right to education. The influence these current laws has had on women means that they can pursue STEM careers. However, women pursuing STEM careers

⁴³² Radical feminism is a political and theoretical perspective that is centred around the domination of women by men. (See: A J Mills, G Durepos & E Wiebe ‘Radical feminism’, available at <https://methods.sagepub.com/reference/encyc-of-case-study-research/n285.xml#:~:text=Radical%20feminism%20is%20a%20theoretical,class%2C%20race%2C%20or%20ethnicity.>, accessed on 20 July 2021.)

⁴³³ E S Hintz (note 426 above).

⁴³⁴ D L Burk (note 3 above).

⁴³⁵ Ibid.

⁴³⁶ Ibid.

⁴³⁷ Ibid.

come down to a matter of choice and an increase in cultural acceptance by the society in which they live.⁴³⁸

With regards to the woman's right to property ownership, international progress has been made for legal protection. Many countries all over the world have reformed their Constitutions and legislation to ensure that women have equal property rights.⁴³⁹

4.5 Conclusion

When a person would think of a new invention, it is natural that we think of machines and technology, instead of beadwork patterns.⁴⁴⁰ This understanding is due to the historical treatment of women. Women in the past have not had the opportunity to use their minds and skills to the best of their ability, which may suggest why there were so few women inventors from the past. Historically, women were not rewarded for their efforts, and the benefits of IP rights accumulated to men.

In summarising the research conducted in this chapter, the historical treatment of women and past property laws have affected the development of women in the IP industry today, both nationally and internationally. The factors that have impacted the development of women in the IP industry because of history essentially relate to and identify factors that hinder women in the IP industry today and are socio-economic factors.

- Historically, women experienced stagnated growth regarding development in the IP industry because of the legal system. There was a prolonged period where there was little to no socio-economic growth for women both generally and with regards to property ownership. This meant that there was a long period where there was a lack of representation of women in the IP industry, a lack of creating awareness and a lack of enforcing property rights for women whereas. This was something men never had an issue with. Whilst men were able to grow themselves socio-economically, women were often left at home to fulfill their roles as caregivers and housekeepers. This naturally

⁴³⁸ M Butcher ... et al 'Women in STEM and the Laws That Enabled Diverse Innovation' (2020) 23(3) *Chapman Law Review* 333-360.

⁴³⁹ UN (note 31 above).

⁴⁴⁰ Beadwork patterns is an example of what women would usually create.

would have caused a delay in the number of women in the IP industry compared to the number of men.

- Additionally, the effects of inadequate property laws for women had its effects on society. In SA, oppressive laws and the introduction of colonialism promoted patricidal conservative views of women, male supremacy and enforced stereotypes. Such stereotypes and views are still embedded in patriarchal societies. The fact that this is an issue shows negative effects of the conservative government. It essentially developed deep roots of *de facto* discrimination that deter women of today from participating in the IP industry. Even in the 21st century, women in certain areas of the world, still face *de facto* discrimination and because of this, own less property.⁴⁴¹ This is despite laws implementing equality. This discrimination is the reason authors of today such as J.K. Rowling, otherwise known as Robert Galbraith, choose to write under gender-ambiguous or male names.⁴⁴²
- Furthermore, oppressive laws and colonialism in SA affected women's self-esteem and female identity. This potentially demotivated women and prevented them from empowering other women, which delayed the development of women in the IP industry. This was also caused by women being seen as second-class citizens and minors.
- In addition, women were not empowered to study STEM or enter the IP industry, by neither society nor the legal system. STEM subjects were usually associated with what men would study. This prevented young girls of that time from having representation and women to look up to thus, creating a ripple effect till today.
- Owning property gives individual a sense of independence and security, which is something women of the past never had. In women not being able to solely own property in the past prevented economic empowerment and the possibility to own her own financial assets. Limited finances and being caught in a poverty cycle meant that women don't have enough money protect their IP or educate themselves. This meant that until a woman was able to be financially secure on her own, she was always dependent on men. Therefore, women did not have the liberty to just go out and do what they wanted, for example if they wanted to pay for a STEM degree. They were placed in a box by the patriarchal society that they lived in and by the stereotypes enforced by

⁴⁴¹ J Brant... et al (note 121 above).

⁴⁴² N Finn 'Pseudonymous Disguises: Are Pen Names An Escape From the Gender Bias in Publishing?' 2016, available at <https://scholarship.depauw.edu/cgi/viewcontent.cgi?article=1044&context=studentresearch>, accessed on 30 December 2021.

laws implemented at that time. Till today this has created *de facto* subordination within society.

- Moreover, the way historical laws were constructed made it easier for society to enforce gender stereotypes, which have ultimately enforced gender inequality in communities.⁴⁴³ This suggests that the IP system is gendered largely due to the historical treatment of women. This is not to promote oppression or exclude women. Instead, the IP system might reinforce the thought that disadvantage women within the IP industry. Thus, the IP system may represent a part of a social system that is prejudiced against women and their gender roles in society.

However, despite the negative effects of the historical treatment of women and past property laws, for many women the historical treatment of women serves as encouragement to do justice to the women before them who did not get the same opportunities and helps women understand why the world is the way it is. However, it is not as easy for women living in a patriarchal country. It is now time for policy makers and governments to learn from past mistakes and aim to rectify them by enforcing direct legal mechanisms to reach gender parity in the IP industry. If this is done, then surely in the future we will be able to see the effects of fair, gender-responsive⁴⁴⁴ and gender-sensitive⁴⁴⁵ laws just as we were able to see the effects of oppressive, conservative laws of the past.

‘It has become seemingly clear that the very fabric of law is gendered, in that it endorses male norms as being superior and female norms as being subordinate. These are common characteristics within a patriarchal society, and the only way in which we can change the narrative is to change the law itself, and that is what governments have been engaged in.’⁴⁴⁶

Even if laws do ‘seem’ to be gender neutral, maybe it is just a disguise as no substantial progress is seen for women in the IP industry. Therefore, the international intellectual property legal system, seems to be contrary to the constraints of gender equality, as it promotes masculine notions of ownership. The irony is that the Constitution⁴⁴⁷, and the several statutes in our law, are meant to remedy the injustices of the past. However, we should consider, that maybe the

⁴⁴³ A Porter (note 329 above).

⁴⁴⁴ (See: Chapter 6)

⁴⁴⁵ (See: Chapter 6)

⁴⁴⁶ J Brant... et al (note 121 above).

⁴⁴⁷ The Constitution of the Republic of South Africa, 1996.

Constitution⁴⁴⁸ itself is just a disguise as SA's current situation in the IP industry at least, is far from gender equal.

This chapter concludes that if in a hypothetical world or alternative reality, women had been given the same rights to property ownership then men in the past, women today would be more equated in many areas of society, including IP law and the IP industry. This ultimately, also affected women progressing and development within the IP industry. For successful policy development to occur, drafters of policies need to consider women as an historically disadvantaged group and prioritize them as that.

⁴⁴⁸ The Constitution of the Republic of South Africa, 1996.

CHAPTER 5: TRENDS OF THE GENDER DISCREPANCY IN THE INTELLECTUAL PROPERTY INDUSTRY, WITH REFERENCE TO PATENT APPLICATIONS

5.1 Introduction

In 2018, a WIPO study⁴⁴⁹ showed that SA had one of the greatest gender gaps in the world regarding patent applications. 2020 statistics showed that a mere 16.5% of inventors named in patent applications were women.⁴⁵⁰ While the number of women in the IP industry is increasing, progress is slow. WIPO estimated that at the present pace, equality will only occur in 2058.⁴⁵¹ This is an incredibly long wait whilst women continue to be underrepresented, in numerous areas of the IP industry, around the world, and severely in Africa.⁴⁵²

Successful policy reform relies on an evidence base and support of international standards. This chapter will focus on statistics regarding the gender discrepancy in the IP industry as an evidence base needed for successful policy reform. Additionally, in comparing legal aspects relevant to the topic in SA to the United States of America (USA) will allow for the consideration of international policies as well as international standards overall.

In previous chapters, much discussion has been focussed on the legal and historical treatment of women, thus aiding in ensuring there has been a consideration of all aspects relating to the issue to ensure successful policy development. This included a focus on SA, who suffers from this problem on a larger scale. Although this is the case, one cannot rule out the fact that internationally women have also been historically oppressed by law. SA is not the only country that has experienced this. Evidence shows that certain countries' legal systems, that have also historically oppressed women are progressing at a faster rate compared to SA, in the IP industry.⁴⁵³ Therefore, it is important to go one step further in comparing SA to a more

⁴⁴⁹ J Beger 'Innovation and Intellectual Property in South Africa: The Case for Reform' April 2018, available at <https://www.tralac.org/documents/news/1917-innovation-and-intellectual-property-in-south-africa-the-case-for-reform-accessibsa-april-2018/file.html>, accessed on 1 March 2021.

⁴⁵⁰ WIPO 'Gender Equality, Diversity and Intellectual Property' available at <https://www.wipo.int/women-and-intellectualproperty/en/#:~:text=WIPO%20is%20working%20to%20bridge,only%20be%20reached%20in%202058.>, accessed on 1 March 2021.

⁴⁵¹ WIPO (note 34 above).

⁴⁵² WIPO (note 450 above).

⁴⁵³ WIPO Pub 'Special section Measuring women's participation in international patenting Chapter 1' 2016, available at https://www.wipo.int/edocs/pubdocs/en/wipo_pub_941_2016-chapter1.pdf, accessed on 21 August 2021.

progressive country, regarding the IP industry. Critically analysing SA's delay beyond reasons of the historical treatment of women and their laws and evaluating necessary considerations when suggesting an appropriate recommendation towards policy reform would contribute to identifying the best possible solutions for the country.

Additionally, this chapter will provide a brief comparative study using the jurisdictions of SA and the USA. The comparison will be provided by using the most recent statistics available as well as laws and policy each country has implemented to increase the rate of women in the IP industry. Observing how different these two countries are in achieving gender parity in the IP industry provides the essence of how far behind SA is.

Furthermore, in evaluating the characteristics of the gender discrepancy, it is evident that this is an issue specifically evident in patent applications. The reason to make an emphasis on patent applications in this chapter, instead of another area of IP law is because there is an application system implemented, which allows one to gather data and which does not occur in the copyright system.⁴⁵⁴ This too emphasises the need for an evidence base for future policy implementation.

Moreover, although owners are mentioned in patent applications and the inventor's gender is not usually included in patent applications, statistics worldwide have been gathered in this way. For purposes of research and successful policy-making, a recommendation is that details pertaining to gender need to be incorporated in all administrative processes within the IP industry. Worldwide data is based on statistics being inferred gender based on inventors' first names, using data from the United States Patent and Trademark Office and the European Patent Office Worldwide Patent Statistical Database. Inventors' names were matched to a gender using birth data and cross-referencing other datasets.⁴⁵⁵

Additionally, the reason a comparison between SA and the USA has been chosen is because there is an evident amount of legislation that the USA has implemented in ensuring a decrease in the gender discrepancy in the IP industry compared to legislation and policies SA has implemented. Although the USA is not the country that has decreased the gender discrepancy in the IP industry at the fastest rate in the world, it is the country that is reforming its legal

⁴⁵⁴ E Bourtchouladze 'WIPO Seminar Discusses Intellectual Property and Gender' 5 December 2014, available at <https://www.ip-watch.org/2014/12/05/wipo-seminar-discusses-intellectual-property-and-gender/>, accessed on 21 August 2021.

⁴⁵⁵ C Guibourg and N Stylianou (note 22 above).

system faster than SA in considering women in the IP industry. Furthermore, in comparison to the world, SA is the country that is the slowest in progressing woman in the IP industry.⁴⁵⁶

The chapter will begin by providing a brief overview of IP patent statistics worldwide, followed by statistics from SA, statistics from the USA, and legislation each country has implemented in the hope of bettering these statistics in the IP industry. Statistics are offered by the WIPO of the United Nations, as well as available empirical studies. In order to be able to provide efficient and reliable possible legal solutions and policy approaches, and to identify whether laws in place are currently sufficient, statistics would need to be evaluated by policymakers, which this chapter will provide insight on.

5.2 The gender discrepancy worldwide

5.2.1 Statistics and demographics

As discussed in the previous chapter, the number of women compared to men within the IP industry is not enough to be able to reach gender parity within this field. This includes, as discussed, women in the legal IP sector and women in other areas of the IP industry, such as innovation and participation in patent applications.⁴⁵⁷

The evaluation of the statistics regarding the number of women holding patents and applying for patents is imperative for the drafters of new policies to understand the nature and extent of the gender discrepancy. According to investigations conducted by WIPO, it is evident that the number of women applying for patents has increased and continues to increase.⁴⁵⁸ However, even though the rate at which women are participating in the IP industry is increasing, it is too slow.⁴⁵⁹ This is evident in the graph below:

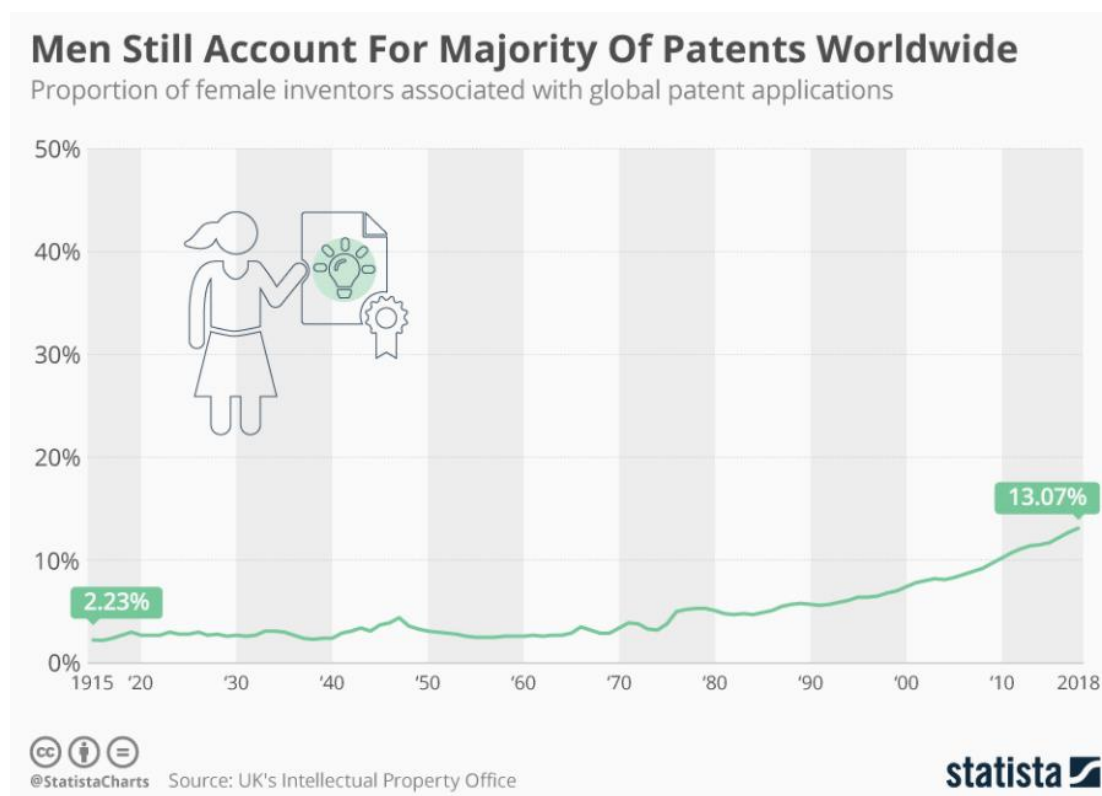
⁴⁵⁶ WIPO Pub (note 453 above).

⁴⁵⁷ WIPO (note 34 above).

⁴⁵⁸ Ibid.

⁴⁵⁹ Ibid.

Figure 1: Graph showing the increase of women's participation in global patent applications from 1925 to 2018.⁴⁶⁰



In evaluating the graph above, the rise in more women associated with the patent application process slowly began in the mid '1980s. This was a time amid the second wave of feminism and at a time where the feminist movements contributed to laws becoming gender equal. Identifying the above confirms the long struggle that women of the past had faced within the industry. Additionally, it confirms that women waited a long time to break barriers and to see results from the fight for gender equality.

In 2020, women inventors made up only 16.5% of the patent applications worldwide and two-thirds of patent applications are granted to men.⁴⁶¹ In the 20th century, for several decades, women had represented less than 2% of inventors associated with patent applications.⁴⁶² Although the amount is slowly increasing, the percentage remains low.

⁴⁶⁰ UK's Intellectual Property Office 'Men still account for the majority of patents worldwide', available at <https://cdn.statcdn.com/Infographic/images/normal/19539.jpeg>, accessed on 28 June 2021.

⁴⁶¹ WIPO (note 34 above).

⁴⁶² Ibid.

Additionally, a study⁴⁶³ revealed that ‘in STEM women use the patent system far less and they are less than 50% likely to obtain a patent for their own inventions’ compared to men.

Furthermore, patents can be filed individually or by a team of inventors. The data provided by WIPO shows a positive trend, indicating that women are participating more within patent applications. However, the gender discrepancy becomes even more disappointing when considering that most of the statistics offered come from a sole female inventor on a male-dominated team of inventors.⁴⁶⁴ Francis Gurry, the previous WIPO director-general described the lack of women participating in the IP industry and innovation as ‘shameful’.⁴⁶⁵

Figure 2: The following diagram indicates the worldwide gender gap by comparing the male to female participation rate on patent applications between 1998- 2002 and 2013- 2017.⁴⁶⁶

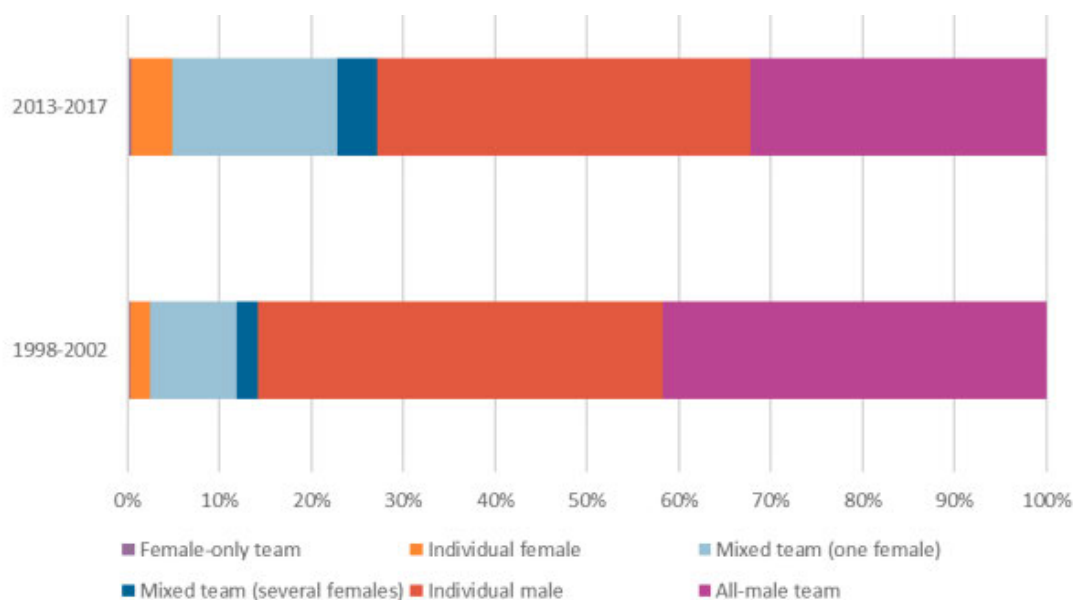


Figure 2 statistics indicates that the gender gap has been a constant issue. In 2017, males and all male teams together still had participation rate of over 70%. This is not including the statistics of the mixed team with only one female member, which form the 3rd largest participation portion in both time periods.

⁴⁶³ DO Oriakhogba (note 52 above).

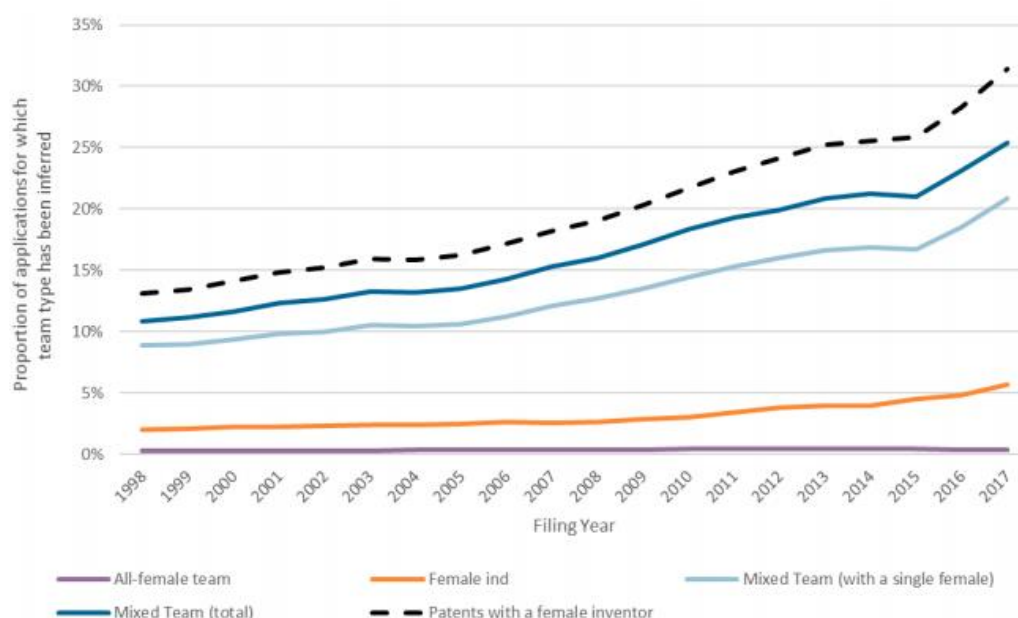
⁴⁶⁴ WIPO (note 34 above).

⁴⁶⁵ Ibid.

⁴⁶⁶ Intellectual Property Office ‘Gender profiles in worldwide patenting An analysis of female inventorship’ (2019 edition), available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/846363/Gender-profiles-in-worldwide-patenting-2019.pdf, accessed on 11 July 2021.

In more recent years, 25% of all patents, worldwide, have had at least one female inventor. Statistics show that in 2017, 6% of new patents submitted were from an individual female. All-female teams are non-existent, and in 2017 made up only 0.3% of patent applications, considering the statistics from the last 10 years.⁴⁶⁷ In comparing these statistics to what men have submitted, the number of women participating in patent applications, only 5 years ago, is indeed, shameful. Especially because women of today do have more opportunities to empower themselves and create opportunities for themselves than in the past.⁴⁶⁸

Figure 3: Table showing the gender breakdown of patent applications, submitted worldwide, from 1998 to 2017.⁴⁶⁹



As per the above graph, in the past 20 years, an increasing number of ‘patents have at least one woman as an inventor.’⁴⁷⁰ This amount increased from 13% in 1998 to 31% in 2017.⁴⁷¹ In the majority of patents listed, women are either working alone or as a part of a team. The number of women inventors which have many ‘female inventors has increased from 2% in 1998 to 4.5% in 2017.⁴⁷² Additionally, the number of applications with an equal amount of male to

⁴⁶⁷ WIPO (note 34 above).

⁴⁶⁸ Intellectual Property Office (note 466 above).

⁴⁶⁹ Ibid.

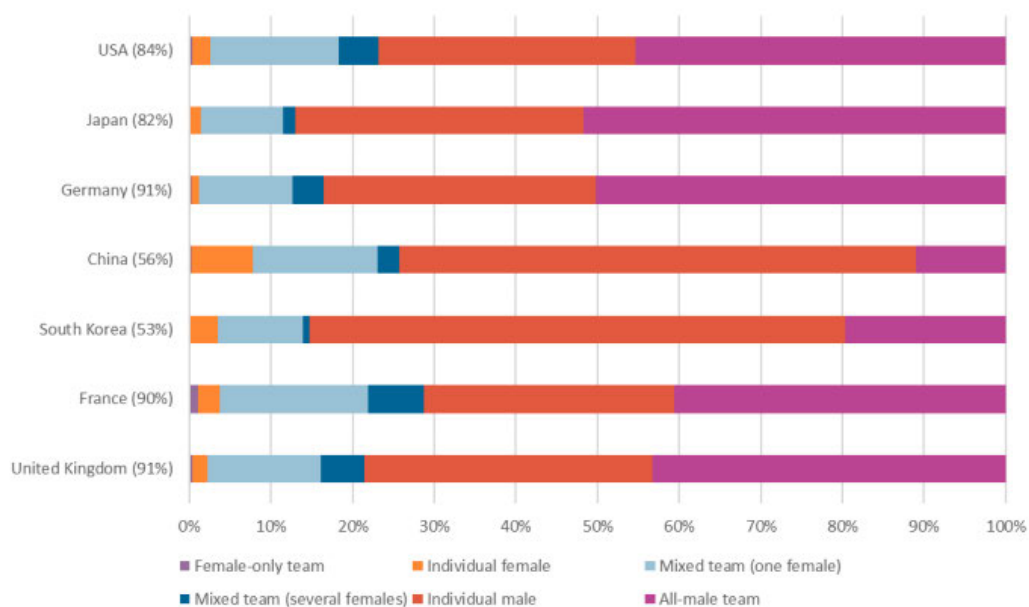
⁴⁷⁰ Ibid.

⁴⁷¹ Ibid.

⁴⁷² Ibid.

female inventors increased from 3% in 1998 to 8% in 2017.’⁴⁷³ Although it is a small progression, the time it takes for such a small progression is unsatisfactory.

Figure 4: Graph showing the variety of inventor teams for the seven countries with the greatest number of resident inventors.⁴⁷⁴



Statistics reveal that France is the only country that includes a statistic for female-only teams and has the most patent applications with numerous female inventors. France is followed by the USA, China and the UK.⁴⁷⁵

Although at a global level the gender discrepancy seen in the IP industry, and specifically patent applications is severely evident, statistics gathered from different countries reveal that it may be a bigger issue for certain countries, who have progressed at a slower rate, compared to others.

There are obvious variations in the proportion of female inventors among countries. The data examined from now in this sub-chapter is obtained from a 2019 study.⁴⁷⁶ The study evaluated demonstrates that the gender discrepancy in international patenting is considerable, but it is decreasing. The study showed that certain countries, like France, are more ahead of other

⁴⁷³ Ibid.

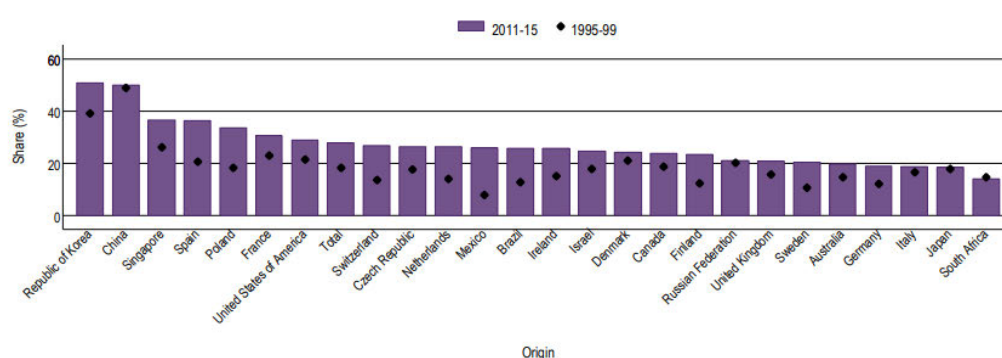
⁴⁷⁴ B Diakun 'Data reveals strong growth in the number of female inventors, but there is still a long way to go' 11 October 2019, available at <https://www.iam-media.com/patents/data-reveals-strong-growth-number-female-inventors-there-still-long-way-go>, accessed on 21 August 2021.

⁴⁷⁵ Ibid.

⁴⁷⁶ Ibid.

countries, with regards to having more female inventors from their country. Overall, the number of patent applications involving female inventors, working on their own or as a part of a team, has increased by 500% between 1975 and 2020.⁴⁷⁷ When certain countries which show a greater progression towards gender equality in international patenting, are indeed signs of gender parity in IP in such countries. However, this is not the case for all countries.⁴⁷⁸ SA had the highest patent gender gap from the countries that were considered for the study.⁴⁷⁹

Figure 4: Graph showing the percentage of international patent applications with women inventors by origin.⁴⁸⁰



Source: WIPO Statistics Database, October 2016.

In evaluating the above graph, one would be able to compare the statistics of countries from the past decade to determine the rate of progress towards gender parity in patent applications. The Republic of Korea and China filed the most patent applications.⁴⁸¹ European countries, also amount within the top countries in the years between 1995 and 2015. In this decade gap, most countries had improved their rate of progression.⁴⁸² However, SA is the country that had the least number of patents by women filled in 1995 and an insignificant rate of progression is seen 20 years later.⁴⁸³ Higher-income countries have shown to have more women inventors.⁴⁸⁴

⁴⁷⁷ Ibid.

⁴⁷⁸ WIPO Pub (note 453 above).

⁴⁷⁹ Ibid.

⁴⁸⁰ Ibid.

⁴⁸¹ Ibid.

⁴⁸² Ibid.

⁴⁸³ WIPO Pub (note 453 above).

⁴⁸⁴ Ibid.

For all countries included in the above study, except for SA, gender parity is seen in patent applications improved when comparing the five-year period of 1995-99 to that of 2011-15. SA had shown to have a decline in patent applications with women inventors.⁴⁸⁵

As identified, the gender discrepancy in the IP industry is a global issue. However, in terms of Figure 4 SA has seen the least progression of the participation of women in the IP industry. Therefore, it may be necessary for policy reform to occur in a way that SA can take from what other countries have done in aiding towards a decrease of the gender discrepancy in the industry, but also adapt it to suit SA's needs.

The 2030 Agenda for sustainable development was adopted by the United Nations and its 193-member states in recognizing this gender discrepancy. The agenda underlines that gender equality and empowering women would improve all Sustainable Development targets.⁴⁸⁶

Additionally, WIPO has shown to be dedicated to empowering women and promoting gender equality within the IP industry.⁴⁸⁷ WIPO has instituted small steps for a better future to try and compact this issue. They have done so by including the disaggregation of IP data by gender as a vital implementation indicator for strategies targeted at fostering innovation and encouraging economic, social, and cultural advancement.⁴⁸⁸

5.3 A comparison of the gender discrepancy in selected countries

5.3.1 Africa

a. The gender discrepancy

An additional issue, different to the one mentioned in the previous chapter, with regards to why there are so few women in the IP industry stems from the fact that invention requires money, supplies and, the opportunity to contribute ideas that of which many women, particularly in

⁴⁸⁵ Ibid.

⁴⁸⁶ B Lefevre...et al 'Women and the international patent system: encouraging trends' April 2018, available at https://www.wipo.int/wipo_magazine/en/2018/02/article_0008.html, accessed on 28 June 2021.

⁴⁸⁷ Ibid.

⁴⁸⁸ Ibid.

developing countries have limited access to.⁴⁸⁹ 95% of the world's research occurs in developed countries and 2019 statistics showed that gender gaps are vast in developing countries as the female-to-male percentage of unpaid work varies from three times more in America to almost seven times more in Africa.⁴⁹⁰ The law has also had an impact on this as discussed in the previous chapter.

The majority of countries in Africa are developing countries.⁴⁹¹ A developing country are countries that have lower living standards, lack infrastructure investments, has an undeveloped industrial base, and low Human Development Index compared to other more advanced countries.

Statistics show that there is a large degree of gender inequality that is seen in developing countries.⁴⁹² Gender gaps favouring men are larger in poor countries than seen in richer countries. This occurs in various aspects, both within the workplace and society. This shows that developing countries are at a disadvantage when trying to reach gender parity.⁴⁹³

This in no way implies that poorer countries have a monopoly on gender inequality. Statistics have shown that men are at more of an advantage fundamentally in all societies. However, disparities tend to be greater in countries with a lower GDP per capita, such as developing countries.⁴⁹⁴

Additionally, developed countries have more resources to be able to research and they are better equipped to overcome the challenges seen by women in applying for patent applications. Developed countries have the capacity to gain data needed as 95% of the world's research occurs in developed countries. They can offer opportunities and education to women as they have the resources.⁴⁹⁵

⁴⁸⁹ World Economic Forum 'Global Gender Gap Report 2020' 2020, available at http://www3.weforum.org/docs/WEF_GGGR_2020.pdf, accessed on 29 March 2021.

⁴⁹⁰ Ibid.

⁴⁹¹ S Jayachandran 'The Roots of Gender Inequality in Developing Countries' 20 February 2015, available at <https://www.annualreviews.org/doi/full/10.1146/annurev-economics-080614-115404>, accessed on 21 August 2021.

⁴⁹² Ibid.

⁴⁹³ Ibid.

⁴⁹⁴ Ibid.

⁴⁹⁵ J Berger and A Rens (note 5 above).

However, the more developing countries are not only different from the richer developing countries just because they have less money and resources to overcome challenges. Poorer societies hold traditional views that lead to gender inequality by exacerbating favouritism toward males.⁴⁹⁶ Women in poorer and more developing countries have been seen to be worse off compared to women in developed countries on a variety of gender inequality aspects. Cultural differences between the rich and the poor also ultimately affect why gender progression in patent applications is too slow. Traditional practices seen in various poorer and developing countries influence gender inequality in poor countries even in the face of economic growth. Such as patrilocality and male-focused rites. Lack of development is indeed relevant even with cultural influences are evident. Poverty is often something that worsens the cultural influences that impact the preference of males.⁴⁹⁷

In Africa, 90% of employed women are in informal employment, which adds to the list of reasons why women in Africa are underrepresented in applying for patent ownership today.⁴⁹⁸ If women are living in poverty there is less of a chance that they would have sufficient education to become aware of STEM opportunities, obtain STEM scholarships and be aware of the importance of achieving gender parity, let alone gender parity in patent applications.⁴⁹⁹

b. Statistics regarding the gender disparity progress in patent applications in South Africa.

One must note, that although statistics reveal that developing countries are more disadvantaged in achieving gender parity that not all developing countries struggle or are unable to.⁵⁰⁰ Statistics reveal that certain developing countries have been able to break barriers and see a faster progression towards gender parity in patent applications.⁵⁰¹ For example, China, Brazil and Mexico as seen in figure 4 of this Chapter.⁵⁰² Thus, studying such on a case-by-case basis is worthy of a discussion. However, ultimately the majority of developing countries are

⁴⁹⁶S Jayachandran (note 491 above).

⁴⁹⁷J Berger and A Rens (note 5 above).

⁴⁹⁸Ibid.

⁴⁹⁹Ibid.

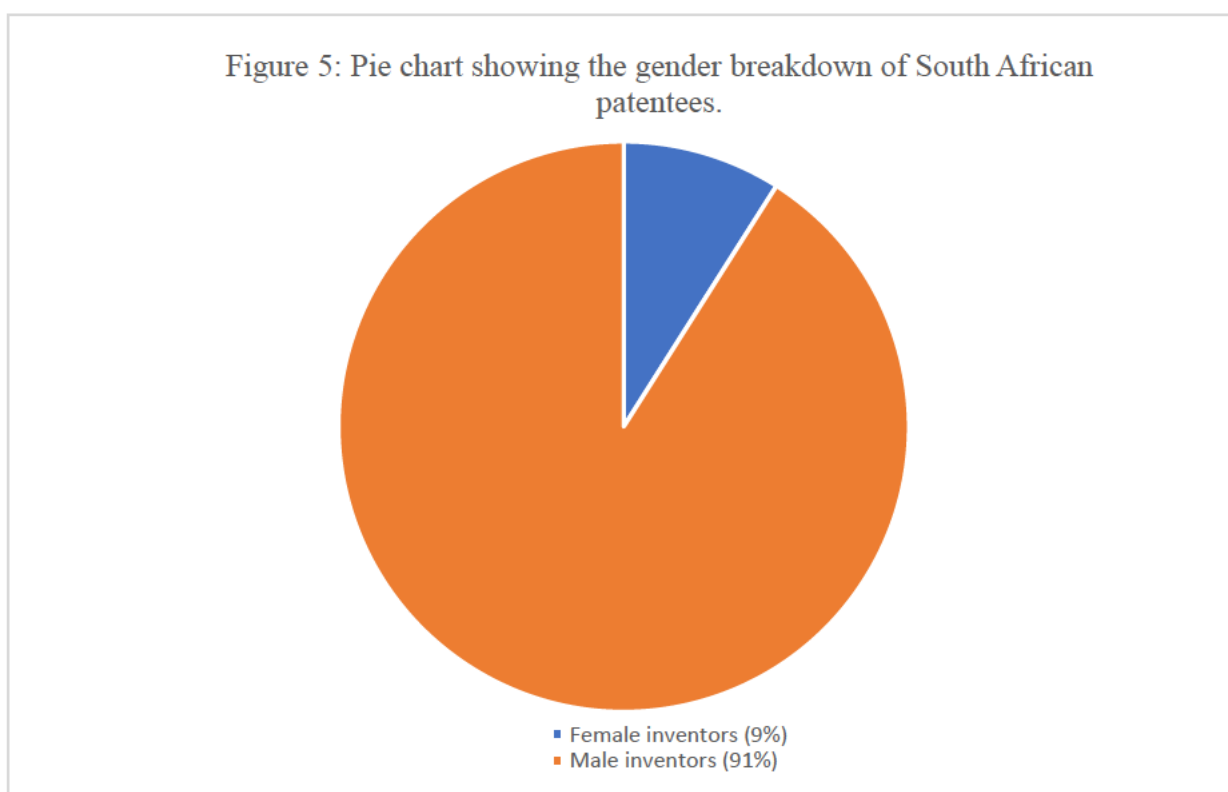
⁵⁰⁰Ibid.

⁵⁰¹Ibid.

⁵⁰²WIPO Pub (note 453 above).

disadvantaged, and SA is seen as one of the developing countries that are yet to show progression and are far behind other countries.⁵⁰³

Additionally, when evaluating the following statistics, one must keep in mind that as a social group, women do not have similar experiences. For example, due to a woman living in a developing versus a developed country or due to a woman's geographical location, such as living in rural or urban areas, their opportunities differ.⁵⁰⁴



In evaluating the above pie chart, statistics reveal that in 2018 just 9% of South African patents had a female inventor compared to the 91% of male inventors.⁵⁰⁵ These statistics indicate the extent of the gender gap in SA.

In evaluating statistics, the maximum number of female inventors was among the academia at 41%. The second highest amount was among research bodies at 25%. Very few came from women in STEM compared to men.⁵⁰⁶

⁵⁰³ J Berger and A Rens (note 5 above).

⁵⁰⁴ The Commission on Gender Equality (note 197 above).

⁵⁰⁵ J Berger and A Rens (note 5 above).

⁵⁰⁶ Ibid.

c. Current initiatives in place⁵⁰⁷

Most countries have adequate legislation pertaining to gender equality, including SA and the USA. However, policies relating directly to gender and IP is lacking worldwide. Therefore, there is a need for policy reform and development.

One would think that individuals who have been prejudiced in the past should be able to develop within an equal democracy today, and at least have the opportunity to reach parity. For example, there are varied Broad-based Black Economic Empowerment policies in place for people of colour that have been oppressed due to Apartheid.⁵⁰⁸ However, few have been implemented for women being considered a historically disadvantaged group in the IP industry.

According to statistics, internationally, SA is one of the more unequal countries. SA's democracy promises a country that is free from gender inequality.⁵⁰⁹ This has been enshrined in South African law. However, there are immense discrepancies between what women of today experience and what the law promises to offer.⁵¹⁰

The Women Empowerment and Gender Equality Bill (WEGE Bill)⁵¹¹ is aimed at giving effect to section 9 of the Constitution.⁵¹² With regards to the empowerment of women and gender equality, the Bill aimed to produce a legislative framework to support implementation of laws, the appointment of women, the representation of women, and to provide for matters connected therewith.⁵¹³

Former UN Secretary General Ban Ki-moon stated that:

⁵⁰⁷ One would think that individuals who have been prejudiced in the past (historically disadvantaged groups) should be able to develop within an equal democracy today, and at least reach gender parity within communities. For example, in South Africa there are varied Broad-based Black Economic Empowerment policies in place for people of colour that have been oppressed due to Apartheid.

⁵⁰⁸ J Berger and A Rens (note 5 above).

⁵⁰⁹ Global Citizen (note 21 above).

⁵¹⁰ Ibid.

⁵¹¹ Women, Youth and Persons with Disabilities 'Women Empowerment and Gender Equality Bill [B50-2013]: public hearings with Minister' (29 January 2014), available at <https://pmg.org.za/committee-meeting/16819/>, accessed on 22 November 2021.

⁵¹² The Constitution of the Republic of South Africa, 1996.

⁵¹³ Global Citizen (note 21 above).

‘Women’s economic empowerment is essential for the full, effective and accelerated implementation of the Beijing Platform for Action and the 2030 Agenda for Sustainable Development. Without it, the global economy will not yield inclusive growth that generates decent work for all, eliminates poverty, promotes equality — foremost, gender equality — and improves wellbeing and livelihoods. Achieving women’s economic empowerment and realising women’s human and labour rights constitute a sustainable development solution for people, planet and prosperity that equally benefits paid and unpaid, formal and informal workers.’⁵¹⁴

The WEGE Bill was enacted in 2013.⁵¹⁵ It contained several controversial provisions. One of these was the requirement for parties to give 50% of their seats to women.⁵¹⁶ It was argued that the provision took away the right to choose, thus being unconstitutional.⁵¹⁷ Additionally, many proposals suggested that the Bill was a ‘duplicate of existing legislation’,⁵¹⁸ for example, the Employment Equity Act⁵¹⁹, PEPUDA⁵²⁰ and the BBBEE Act⁵²¹. These were said to be already struggling to be implemented.⁵²² The recommendations were made to review the existing legislation and identify the gaps, instead of the implementation of a new Bill.

CEDAW demanded that the issues of patriarchal oppression be addressed in the Bill.⁵²³ However, Clause 13 (2) of the draft Bill was removed from the tabled Bill. Patriarchy was identified as the main cause of gender inequality in SA.⁵²⁴ This Bill⁵²⁵ was needed to enact measures that would prevent this institution from continuing its harmful activities. However, provisions needed to be stronger.⁵²⁶ The Bill needed to enact measures that would prevent the harmful effects of cultural norms and practices on society. This would enable SA’s society to move towards a level playing field.⁵²⁷

⁵¹⁴ C Levendale ‘TOWARDS WOMEN’S ECONOMIC EMPOWERMENT: An overview of challenges, achievements, legislative mechanisms and programmes’ (August 2017), available at <https://www.parliament.gov.za/storage/app/media/uploaded-files/International%20Womens%20Conference%202017%20-%20Womens%20Economic%20Empowerment%20-%20August%202017.pdf>, accessed on 21 November 2021.

⁵¹⁵ Women, Youth and Persons with Disabilities (note 511 above).

⁵¹⁶ Ibid.

⁵¹⁷ Ibid.

⁵¹⁸ Ibid.

⁵¹⁹ The Employment Equity Act 55 of 1998.

⁵²⁰ The Promotion of Equality and Prevention of Unfair Discrimination Act 4 of 2000.

⁵²¹ The Broad-based Black Economic Empowerment Act 53 of 2003.

⁵²² Women, Youth and Persons with Disabilities (note 511 above).

⁵²³ Ibid.

⁵²⁴ Ibid.

⁵²⁵ Ibid.

⁵²⁶ Ibid.

⁵²⁷ Ibid.

The WEGE Bill⁵²⁸ could be a way to address women's underrepresented representation in STEM sectors, but it is not on the Parliamentary agenda. This Bill was promoted by our former Women's Minister, Lulu Xingwana, but it has since lapsed. It no longer enjoys political favour and has not been re-tabled.⁵²⁹

Additionally, the Commission for Gender Equality (CGE) has been introduced to make a difference to this reality, as it aims to protect, enforce, monitor, and analyse how much SA has achieved in reaching gender parity. 'The mission of the CGE is to promote, protect, monitor and evaluate gender equality through research, public education, policy development, legislative initiatives, effective monitoring and litigation.'⁵³⁰ However, currently, the CGE is not doing enough, and this is seen in the number of people that raise complaints with them regularly.⁵³¹ A recommendation would be to ensure that when they monitor and evaluate policies that are relevant to growing gender discrepancies, that they be more gender conscious in the process, especially when a policy is not fulfilling its aim or when a policy can do more for gender inequalities in a specific field by being more gender inclusive. Additionally, considering every aspect that affects a gender discrepancy should be considered more seriously. For example, a more enforcement of the gender mainstreaming approach. According to the WEGE Bill gender mainstreaming is 'the process of identifying gender gaps and making women's, men's, girls' and boys' concerns and experiences integral to the design, implementation, monitoring and evaluation of policies and programmes in all sectors of life to ensure that they benefit equally.'⁵³² This approach is seen to be successful when the feminist movements⁵³³ resulted in change within legislation that mandates gender-based aspects to be integrated into all policies, programs, and projects. Other recommendations will be discussed further in chapter 6.

⁵²⁸ Ibid.

⁵²⁹ Ibid.

⁵³⁰ Global Citizen (note 21 above).

⁵³¹ Ibid.

⁵³² OCED 'OCED Toolkit for Mainstreaming and Implementing Gender Equality' 2015, available at <https://www.oecd.org/gov/toolkit-for-mainstreaming-and-implementing-gender-equality.pdf>, accessed on 3 January 2022.

⁵³³ 'Such as the first wave of feminism which occurred at the turn of the 19th century. During this stage, the feminist movement was primarily about obtaining the right to vote and equal political rights for women. The first wave was based on formal equality and culminated in achieving political and legal inequalities. Hence, all women continually protested against this oppression. In 1918, in Britain, women over the age of 30 were granted the right to vote. 10 years later, women were given the full right to vote which was equal to the right of the man. Thereafter, more women around the world were also given voting rights. Thus, the first wave was successful.' (See: T Anand 'A Brief Summary Of The First Wave Of Feminism' 25 April 2018, available at <https://feminisminindia.com/2018/04/25/summary-second-wave-of-feminism/>, accessed on 19 April 2021.)

Ultimately, gender parity in the IP industry will only begin to see a positive trend when gender equality within the law and society has been embraced, as well as when gender is considered in future IP policies, or at least considered with STEM fields.

Regarding the IP industry, although there may be various empowerment strategies and organisations empowering women in STEM fields for inventorship and to apply for IP ownership, there is no South African policy or legislation that supports this directly. As discussed in the previous chapter, historically laws implemented were a barrier to IP inventorship and ownership for women, as well as women's socio-economic status and attendant problems of gaining access to rights in the law.

SA still needs an inclusive policy to encourage socio-economic development for women.⁵³⁴ However, there is nothing that is directly linked to gender even during a time where SA is focusing on IP policy development. This is something that other countries have considered, and other countries are empowering women to be involved in by means of legislation, such as the USA.⁵³⁵ Although a proper conclusion needs to be done on a case-by-case basis, it seems as if SA is lagging behind with regard empowering women in the IP industry. Emphasizing again, the need for policy development and reform

5.3.2 The USA

c. Statistics regarding the gender disparity progress in patent applications in the USA.

In 2020, the USPTO published a study⁵³⁶ on the evaluation of female inventorship and ownership related to patent applications. The study evaluated the trends seen in female

⁵³⁴ J Galvad and R Pereira (note 297 above).

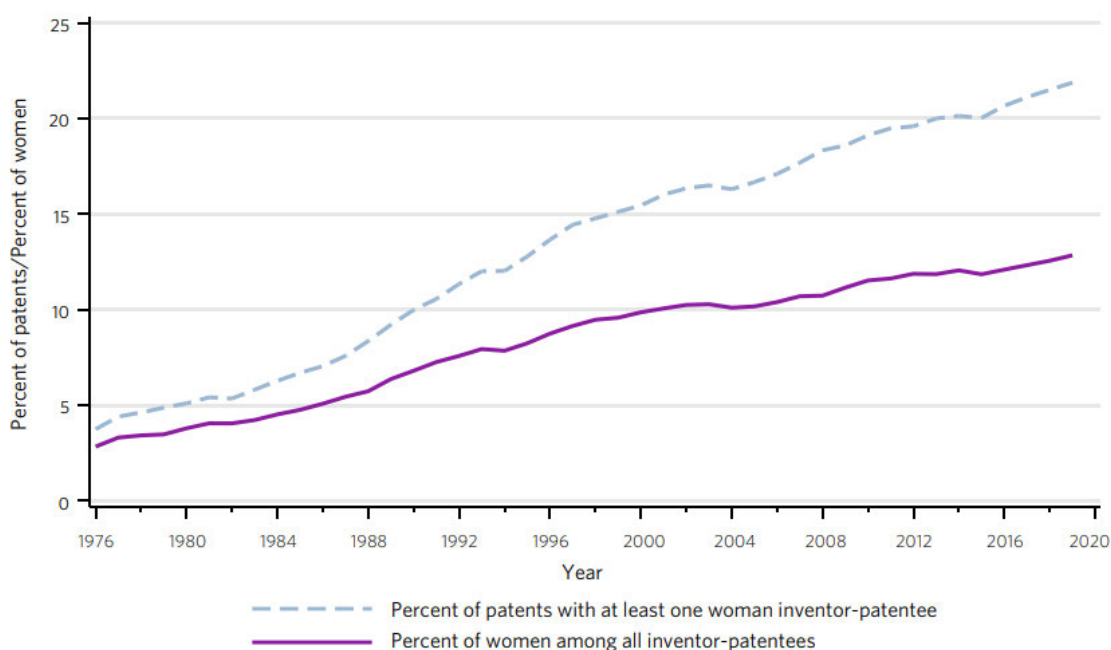
⁵³⁵ USPTO 'Progress and Potential: 2020 update on U.S. women inventor-patentees' 2020, available at <https://www.uspto.gov/sites/default/files/documents/OCE-DH-Progress-Potential-2020.pdf>, accessed on 21 August 2021.

⁵³⁶ 'The USA patent system improves the lives of Americans by encouraging and strengthening innovation. In a 2019 report, "Progress and Potential: A profile of women inventors on U.S. patents," the USPTO investigated the participation of U.S.-based women inventor-patentees in the U.S. patent system. It examined the trends and characteristics of women's participation.' (See: USPTO 'Progress and Potential: 2020 update on U.S. women inventor-patentees' 2020, available at <https://www.uspto.gov/sites/default/files/documents/OCE-DH-Progress-Potential-2020.pdf>, accessed on 21 August 2021.)

inventorship and ownership, by evaluating the number of women working in STEM fields that ultimately contribute to women in the IP industry.⁵³⁷

The main finding of the study is that in the USA more and ‘more women are entering, pursuing and staying active’ in the current IP industry.⁵³⁸ This is different from what SA is currently seeing with regard to their progression towards gender parity in the IP industry.⁵³⁹ The USA has seen rapid growth specifically between 2016 and 2020. The number of women inventing and applying for patent ownership increased from 12.1% in 2016 to 12.8% in 2019.⁵⁴⁰ It can be argued that because of South African drafters and policymakers’ failure to consider necessary reform and factors, is the reason the USA is in a better position. The following graph shows the positive trend seen in the USA.

Figure 6: Graph showing the number of women involved in the patent system in the USA from 1976 to 2020.⁵⁴¹



⁵³⁷ USPTO (note 535 above).

⁵³⁸ Ibid.

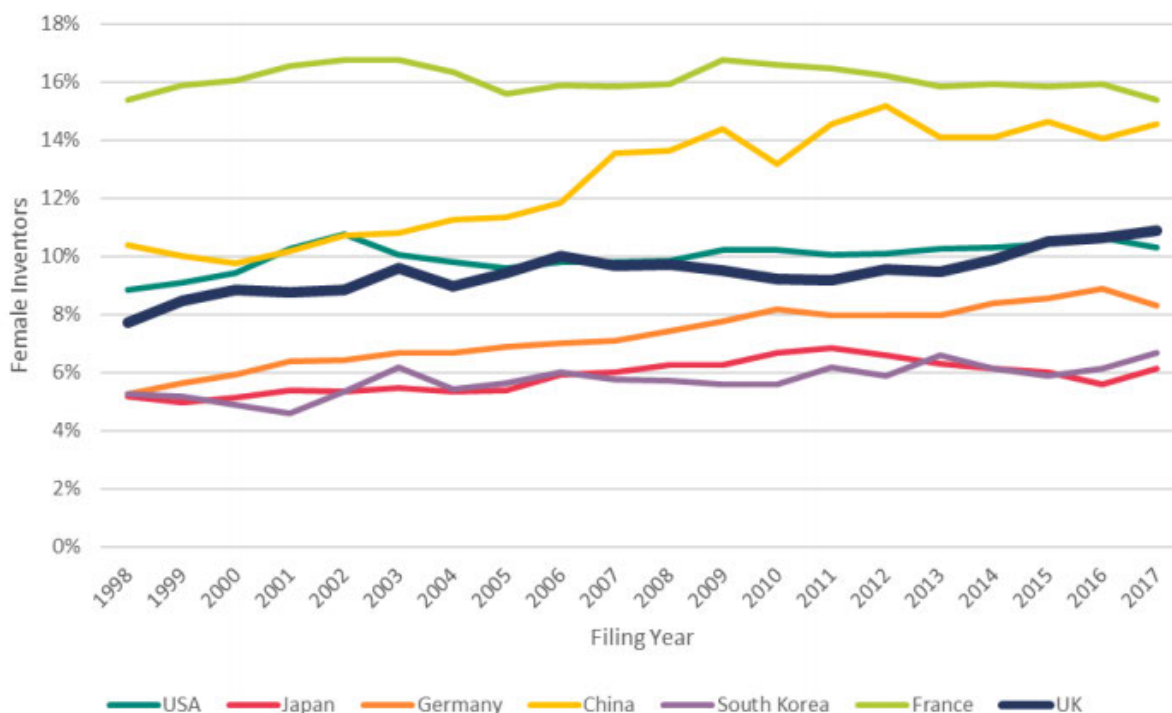
⁵³⁹ Ibid.

⁵⁴⁰ Ibid.

⁵⁴¹ Ibid.

Additionally, the following graph shows the study of the yearly percentage of female inventors, with regards to specifically, patent applications over the past 20 years by six selected countries.⁵⁴²

Figure 7: Graph showing the growth of the proportion of female inventors owning patent applications from 1998 to 2017.⁵⁴³



Although the USA is not progressing at the fastest rate compared China and France, it is compared to SA. Additionally, out of all countries the USA seems to be implementing and considering development within their legal system at a more progressive rate, despite them not being the fastest country to progress in the IP industry.

It is important to not assume and conclude too greatly from statistics that reveal the gender patent roles from the top patent jurisdictions because anyone in the world may file a patent in any jurisdiction. However, identifying the statistics of the gender patent roles from the top resident inventor jurisdictions, rather than the patent jurisdictions, would provide a more efficient way to identify aspects regarding the gender discrepancy.

⁵⁴² Ibid.

⁵⁴³ Intellectual Property Office (note 466 above).

d. Current initiatives in place⁵⁴⁴.

Comparing SA to the USA in no way implies that the USA has reached gender parity. However, the USA has indeed identified that the gender discrepancy seen in the IP industry as an issue. Within the last decade, the USA has implemented legislation that has indeed impacted the rate at which progress is seen for women in the IP industry.⁵⁴⁵ They have identified that STEM education is the key to ensure the quickest progression within the IP industry. In order to empower more STEM subjects being pursued by women in the USA, legislation has been focused on empowering the participation of underrepresented populations, this includes women.⁵⁴⁶ The USA had aimed to enhance the quality of educators teaching STEM degree fields and have promoted STEM related activities to educate young minorities.⁵⁴⁷ By targeting the underrepresented minorities, the USA aims to provide benefits and more opportunities for such populations to work in STEM fields. This will be a great step towards achieving gender parity in the IP industry and in achieving greater social equality.⁵⁴⁸

The USA has a range of policies that aim to empower women, such as the Gender Equality and Women's Empowerment 2020 Policy and the Women's Entrepreneurship and Economic Empowerment Act of 2018.⁵⁴⁹ However, the USA does not have a current IP policy that promotes gender consideration and gender sensitive measures in the IP industry. Despite this, the country has accomplished attracting and retaining women towards STEM fields, which aid

⁵⁴⁴ 'In 1995, Hillary Clinton gave a remarkable speech at the United Nations Fourth World Conference on Women in Beijing. The speech was made just after the 75th anniversary of the 19th Amendment to the United States Constitution. She acknowledged that "human rights are women's rights, and women's rights are human rights", intertwining the fight for gender equality in America to the fight for gender equality worldwide.' (See: C Kwauk 'The US role in advancing gender equality globally through girls' education' October 2020, available at <https://www.brookings.edu/essay/the-uss-role-in-advancing-gender-equality-globally-through-girls-education/>, accessed on 21 August 2021.)

⁵⁴⁵ USPTO (note 535 above).

⁵⁴⁶ J Best and C Cohen 'Increasing Participation, Student Engagement, Quality, and Capacity: STEM Legislative Action by the 113th Congress' available at <https://files.eric.ed.gov/fulltext/ED557603.pdf>, accessed on 21 August 2021.

⁵⁴⁷ Ibid.

⁵⁴⁸ USPTO (note 535 above).

⁵⁴⁹ Gender Equality and Women's Empowerment 2020 Policy, available at https://www.usaid.gov/sites/default/files/documents/USAID_GenderEquality_Policy_MT_WEB_single_508.pdf, accessed on 22 December 2021.

towards decreasing the gender discrepancy in the IP industry.⁵⁵⁰ Additionally, although advantageous, such a policy is not as urgently needed for the country, unlike SA who is currently in the process of IP policy development. This is because various legislation has been proposed and empowered in the USA in acknowledgment of the issue of the gender discrepancy in the IP industry. Therefore, such policy development is not as needed for the USA.

The following legislation has been proposed since June 2013 they have been allocated to a Senate committee for deliberation:⁵⁵¹

The Women and Minorities in STEM Booster Act of 2013 promotes a workforce that is diverse and aims to decrease the discrepancy of women and minorities in STEM fields and IP fields. Its intention was to ensure that the participation of historically underrepresented populations had access to STEM fields. Even though it was proposed, it was not enacted. However, its provisions are likely to become law by being included in another US Bill. Such as in the Promoting Women in Entrepreneurship Act, signed in 2017 by former president Donald Trump.⁵⁵² The efforts to consider such legislation already is a step in the correct direction.⁵⁵³ Nevertheless, in 2021 congresswoman Carolyn B. Maloney and Senator Hirono reintroduced the Act as the Women and Minorities in STEM Booster Act of 2021.⁵⁵⁴ Moreover, the STEM Opportunities Act of 2013 establishes an effort with the National Science Foundation and the Office of Science and Technology Policy to ensure STEM professionals are increasing the talent pool by eradicating biases based on gender, race and ethnicity.⁵⁵⁵

Additionally, as mentioned in the introduction of this chapter, an evidence base is necessary for successful policy reform. Unlike many other countries of the world and including SA, the USA has already worked towards ensuring the need for an evidence base. This shows that the

⁵⁵⁰ The White House Office of Press Secretary 'FACT SHEET: Promoting Gender Equality and Women's empowerment' 27 September 2015, available at <https://obamawhitehouse.archives.gov/the-press-office/2015/09/27/fact-sheet-promoting-gender-equality-and-womens-empowerment>, accessed on 22 December 2021.

⁵⁵¹ J Best and C Cohen (note 546 above).

⁵⁵² W Thomas 'Trump signs legislation promoting women in STEM fields' 3 March 2017, available at <https://physicstoday.scitation.org/doi/10.1063/PT.5.1108/full/>, accessed on 21 August 2021.

⁵⁵³ M Landrieu 'Women and Minorities in STEM Booster Act of 2013' 2013, available at <https://www.govtrack.us/congress/bills/113/s288>, accessed on 21 August 2021.

⁵⁵⁴ HONOLULU 'Hirono Proposes New Investments to Improve Opportunities for Women and Minorities to Pursue STEM Careers, Reintroduces Legislation to Promote and Support Diversity in STEM Pipeline' 2 July 2021, available at <https://www.hirono.senate.gov/news/press-releases/hirono-proposes-new-investments-to-improve-opportunities-for-women-and-minorities-to-pursue-stem-careers-reintroduces-legislation-to-promote-and-support-diversity-in-stem-pipeline>, accessed on 21 August 2021.

⁵⁵⁵ J Best and C Cohen (note 546 above).

drafters of legislation in the USA have thought seriously about factors needed for successful reform. The Inventor Diversity for Economic Advancement Act of 2021⁵⁵⁶, also referred to as the IDEA Act, has been introduced as a result of the ‘lack of diversity among inventors named on patents, and the inability of the USPTO to provide data to reliably assess the situation.’⁵⁵⁷ The IDEA Act states that:

“The Director shall provide for the collection of demographic information, including gender, race, military or veteran status, and any other demographic category that the Director determines appropriate, related to each inventor listed with an application for patent, that may be submitted voluntarily by that inventor.”⁵⁵⁸

Although the above legislation is yet to be official law as it has just been introduced, it shows that the US is tackling this issue. No such Acts have been proposed in SA as yet.

Other recent legislation in the USA encourages obtaining more information with regards to women and patent applications. A Bill passed in 2018, named the SUCCESS Act, extends the ability of the USPTO to require reports of women and minorities within the patent system.⁵⁵⁹ It additionally recommends strategies to increase these statistics. However, this legislation has just been passed and it is too early to be able to study the results and to see whether there has been a faster progression of women in the patent system. The good thing is that this shows that countries are becoming aware of the issue and are also of the view that more data would provide a better understanding to implement future solutions.⁵⁶⁰

Moreover, the USPTO launched two strategies that aid individuals regarding their IP rights, through the America Invents Act of 2011. Accordingly, the Pro Se Assistance Program aims to assist patent candidates are applying and filing their patent without the service of a listed attorney. The Patent Pro Bono Program delivers free legal aid, including training and filing of

⁵⁵⁶ T Fraizer ‘What a great IDEA! Collecting Data on the Diversity of Patent Inventors’ 11 March 2021, available at <https://www.iptechblog.com/2021/03/what-a-great-idea-collecting-data-on-the-diversity-of-patent-inventors/>, accessed on 22 December 2021.

⁵⁵⁷ Ibid.

⁵⁵⁸ Ibid.

⁵⁵⁹ LAW360 ‘3 Things You Need to Know About the SUCCESS Act’ 13 November 2018, available at <https://www.law360.com/articles/1100437/3-things-you-need-to-know-about-the-success-act>, accessed on 26 June 2021.

⁵⁶⁰ Ibid.

patent applications for candidates who earn less than a certain income.⁵⁶¹ It is estimated that around 60% of patent applicants who make use of the strategy were women.⁵⁶²

5.4 Conclusion

In evaluating the trends and characteristics of the number of women inventors and IP owners globally, one can identify the progression of women's participation in the IP industry, including in patenting. However, despite this progress there is still a gender discrepancy in the IP industry. This is another aspect that the drafters of future policies need to consider ensuring successful policy development.

Women's participation in the IP industry is indeed not equally distributed around the world. Countries such as France and the USA have improved substantially over the past few years. Ultimately the involvement that these countries have had on the gender discrepancy in the IP industry, would determine the rate of progression at a global level. Similarly, countries that are underperforming such as SA, will delay the progression.

Although the global statistics of the gender discrepancy in the IP industry is not the same everywhere. SA's rate of decreasing the gender discrepancy in the IP industry is dire compared to the trends of other countries, this is clearly seen in Figure 4. In comparing SA's statistics with another country's statistics, one is truly able to identify the delay in SA's progression towards gender parity in the IP industry. In the previous chapter, it was argued that the historical treatment of women with regard to property ownership indeed affected women today, especially with regards to property ownership today. However, the reason it was so important to compare South African statistics to another country's statistics is because property ownership and inventorship for women, and the oppressed South African past has been an international issue. Thus, we have to identify what truly SA was lacking and identify reasons for more than just the historical treatment of women. It is recommended that SA is lacking adopting and implementing policies and laws aimed at decreasing the gender discrepancy in the IP industry. Policy development is therefore necessary.

⁵⁶¹ USPTO 'Patent Pro Bono Program for independent inventors and small businesses.', available at <https://www.uspto.gov/patents-getting-started/using-legal-services/pro-bono/patent-pro-bono-program>, accessed on 5 June 2021.

⁵⁶² Ibid.

It is concluded that the limited success women have had in the IP industry in SA is evidence enough that the law fails to achieve gender parity in the IP industry. The USA on the other hand has been engaging with progressive laws to date. Although the USA is not the fastest country in the world progressing woman within the IP industry, legislation that they have implemented indeed adds to them progressing at a faster rate compared to SA.

Moreover, it is not unnoticed that France and the USA are developed first-world countries and that SA is a developing third-world country. Thus, it is safe to say that a future discussion must consider all factors on a case-by-case basis.

Based on the above research, countries should be involved and take guidance from what other countries have implemented in developing new policies and growing their efforts to empower female entrepreneurs, inventors, and creators over time.

CHAPTER 6: POLICY REFORM RECOMMENDATIONS TO SUPPORT ACCESS TO THE INTELLECTUAL PROPERTY SYSTEM FOR FEMALE INNOVATORS, CREATORS, AND ENTREPRENEURS.

6.1 Introduction

The protection of women's right to IP and women's ability to participate in the IP industry can be best protected when policies are properly implemented and reviewed. Laws and policies related to these rights should be reviewed to ensure they are in line with national and international guidelines.⁵⁶³ This is an important step to ensure that all legal frameworks and policies are properly implemented to protect women.⁵⁶⁴

Strategies used to empower women⁵⁶⁵ within the IP industry is a sensitive topic for society given the prejudicial past women have experienced with regards to property laws. For recommendations to be effective, it is of important that solutions go beyond the surface and are able to tackle the causes within the legal system that prevent or deter women from pursuing STEM fields, from their intellectual property rights, from their potential for innovation and participation at the same rate as their male counterparts in the IP industry.

Therefore, to bring about change in the participation of women in the IP industry requires direction for the government on how laws and rules are to be implemented and reformed. In understanding the concepts provided in chapter 2, this chapter will consider all the factors needed for successful reform specifically for the gender discrepancy in the IP industry. This will allow for reform recommendations to be solid, and prove to be beneficial for governments and policymakers to use to ensure policy development to decrease the gender discrepancy in the IP industry. The recommendations made in this chapter are for policymakers to implement during the policy-making processes as well as what they can include in the actual policy that

⁵⁶³ The Commission on Gender Equality (note 197 above).

⁵⁶⁴ Ibid.

⁵⁶⁵ Different women have had different experiences. There are various factors that differentiate women including race, disability, economic circumstances and social circumstances, to name a few. In suggesting recommendations to decrease the gender discrepancy in the IP industry, woman will be discussed as a group. However, consideration will be given to women from developing countries.

will aim to decrease the gender discrepancy in the IP industry. This would assist either the creation of a new gender IP policy or the reform of the current IP policy.

In 2005, all the African governments addressed⁵⁶⁶ the gender discrepancy in the IP industry by identifying key gender issues⁵⁶⁷ in STEM fields.⁵⁶⁸ Despite their efforts, the situation today is still unacceptable. The factors that have contributed to this are:

‘lack of clear policy guidelines on how to improve women’s involvement in STEM, lack of gender analysis expertise, women’s reproductive roles, unequal workload sharing between women and men, educational imbalances and unequal representation in decision-making positions, lack of role models, masculine stereotypes in STEM, lack of data on gender, socio-cultural barriers, lack of equity on access to basic technologies, gender-insensitive curriculums and gender discrimination.’⁵⁶⁹

This chapter in providing recommendations for policy development and reform will take on a gender-sensitive⁵⁷⁰ perspective, with a focus on gender mainstreaming. This chapter aims to provide recommendations that can serve as the foundation of the implementation of a gender-responsive policy.⁵⁷¹

⁵⁶⁶ In adapting other countries’ IP policies in certain countries, it may not always show a progression or better productivity. This is because most countries create IP laws based on socio-economic circumstances. For example; African countries would need to protect their traditional cultural expressions from unauthorised use, therefore the enactment of *sui generis* laws are relevant. This, however, may not be the case for the USA because traditional knowledge is not as exposed, or it does not contribute as much to the national economy. However, with regards to the gender discrepancy seen in the IP industry, it is known to be a global issue. Since South Africa is so far behind other countries, with regards to a faster progression for women seen in the industry, it may be necessary for policy reform to occur in a way that South Africa can take from what other countries have done in aiding towards a decrease of the gender discrepancy in the industry, but also adapt it to suit South Africa’s needs.

⁵⁶⁷ This includes a lack of ‘sex-disaggregated data, limited participation of gender-oriented stakeholders, inadequate considerations of the gender mainstreaming approach, Africa’s education system in Africa being pyramidal with a decrease in girls’ enrolment at higher levels of learning, especially in STEM subjects.’ (See: The African Academy of Sciences ‘Factors which Contribute to or Inhibit Women in Science, Technology, Engineering and Mathematics in Africa’ April 2020, available at https://www.aasciences.africa/sites/default/files/Publications/Women%20in%20STEM%20Report_Final.pdf, accessed on 28 December 2021.)

⁵⁶⁸ The African Academy of Sciences ‘Factors which Contribute to or Inhibit Women in Science, Technology, Engineering and Mathematics in Africa’ April 2020, available at https://www.aasciences.africa/sites/default/files/Publications/Women%20in%20STEM%20Report_Final.pdf, accessed on 28 December 2021.

⁵⁶⁹ Ibid.

⁵⁷⁰ ‘The process of identifying gender gaps and making women’s, men’s, girls’ and boys’ concerns and experiences integral to the design, implementation, monitoring and evaluation of policies and programmes in all sectors of life to ensure that they benefit equally.’ (See: EIGE ‘gender-sensitive, available at <https://eige.europa.eu/thesaurus/terms/1211>, accessed on 28 December 2021.)

⁵⁷¹ ‘A gender-responsive policy takes into account both women’s and men’s interests and needs. It is an inclusive policy that also considers the unique needs of subgroups within the dominant framework of gender. Policies can be either gender specific (for example, a policy to promote gender equality in the IP industry) or a gender-

6.2 Recommendations for policy development to decrease the gender discrepancy in the IP industry

The IP policy should make recommendations ensuring the implementation of a gender mainstreaming⁵⁷² system based on intellectual property development. Recommendations made in this chapter will enforce the essence of gender mainstreaming. This is needed as the South African government has failed to make use of the flexibilities available within international trade rules through the implementation of a plan of action tackling the gender discrepancy in the IP industry. This is despite the constitutional guarantee of gender equality.

Establishing a gender mainstreaming redistributive policy⁵⁷³ specifically towards the IP industry is necessary.⁵⁷⁴ It is necessary to ensure that women are given equal opportunities.⁵⁷⁵ A redistributive policy ‘are an essential component of strategies for reducing inequality and promoting sustainable development.’⁵⁷⁶ Policy development is needed to align the various laws and regulations related to women empowerment with the implementation of IP laws. This would facilitate the establishment and implementation of strategies and plans for the promotion of gender equality and women empowerment within the IP industry, provide for the establishment of gender mainstreaming regarding IP, and promote equality and social cohesion among women within the IP industry, which is needed.⁵⁷⁷

integrated policy (for example, a policy on the gender discrepancy in IP that includes elements specific to women’s and men’s needs).’ (See: Women’s Democracy Network ‘Gender-Responsive Policymaking HANDBOOK’ 2020, available at https://www.iri.org/sites/default/files/gender-responsive_policymaking_handbook.032720.pdf, accessed on 28 December 2021.)

⁵⁷² According to the WEGE Bill gender mainstreaming is ‘the process of identifying gender gaps and making women’s, men’s, girls’ and boys’ concerns and experiences integral to the design, implementation, monitoring and evaluation of policies and programmes in all sectors of life to ensure that they benefit equally.’ This approach is seen to be successful when the feminist movements resulted in change within legislation that mandates gender-based aspects to be integrated into all policies, programs, and projects. (See: Women, Youth and Persons with Disabilities ‘Women Empowerment and Gender Equality Bill [B50-2013]: public hearings with Minister’ 29 January 2014, available at <https://pmg.org.za/committee-meeting/16819/>, accessed on 22 November 2021)

⁵⁷³ American political scientist Theodore J. Lowi ‘distinguishes between (1) distributive policies (i.e. measures concerning the distribution of new resources), (2) redistributive policies (that is, measures that modify the distribution of existing resources), and (3) regulatory policies (i.e. measures that specify conditions and constraints for individual or collective behaviour’ (See: C Knill and J Tosun ‘Policy Making’ 2008, available at https://www.researchgate.net/publication/30014974_Policy_making, accessed on 10 November 2021.)

⁵⁷⁴ The Commission on Gender Equality (note 197 above).

⁵⁷⁵ Ibid.

⁵⁷⁶ UN Economic and Social Commission for Western Asia ‘Distributive Policies’, available at <https://archive.unescwa.org/redistributive-policies>, accessed on 28 December 2021.

⁵⁷⁷ Department of Environmental Affairs ‘National Gender Policy Framework’, available at https://www.dffe.gov.za/projectsprogrammes/environment_sector_genderstrategy/policy_framework, accessed on 16 November 2021.

The Beijing Platform for Action by the UN officially introduced gender mainstreaming in 1995.⁵⁷⁸ Therefore, gender mainstreaming has been acknowledged since over 25 years ago and because of this people may question the effectiveness of the integration of gender mainstreaming in policies as a solution. One could argue that because of the time since the formal introduction of gender mainstreaming internationally, results of gender equality should be evident by now. However, the UN Entity for Gender Equality and the Empowerment of Women support that

‘a strong, continued commitment to gender mainstreaming is one of the most effective means for the United Nations to support promotion of gender equality at all levels - in research, legislation, policy development and in activities on the ground, and to ensure that women as well as men can influence, participate in and benefit from development efforts.’⁵⁷⁹

Although gender discrepancies exist in many spheres, gender mainstreaming has proven to be a positive solution⁵⁸⁰ and a continued commitment will assist current gender issues in the long run.⁵⁸¹

Moreover, there are additional ways to improve gender mainstreaming and eradicate any concerns that may be. This includes the use of gender-sensitive language, gender-specific analysis⁵⁸², gender-specific data collection, stronger monitoring mechanisms, equal access for

⁵⁷⁸ E Prihatiningtyastuti *The effects of Gender Mainstreaming Policy on women, focusing on drinking water provision in Indonesia* (Unpublished Master of Philosophy thesis, The University of Western Australia, 2018).

⁵⁷⁹ UN Women ‘Gender Mainstreaming’, available at <https://www.un.org/womenwatch/osagi/gendermainstreaming.htm>, accessed on 28 December 2021.

⁵⁸⁰ Ibid.

⁵⁸¹ As mentioned previously, an example of gender mainstreaming being a successful tool is the accomplishments of the feminist movements. (See: chapter 5)

⁵⁸² For example, a study showed that Khomani San women in Africa had expressed worries over the patenting of biological materials obtained from their indigenous traditional knowledge. Retaining control over their information and resources is vital for feeding their families and protecting their intellectual histories and legacy as woman plant gatherers. The concern that these women had in wanting to maintain resources important for feeding their families, shows the nurturing and caring qualities of a woman and a mother. Identifying aspects specific to women is an example of a gender-specific analysis. ‘Throughout Africa, many women are seen carrying babies, wrapped in blankets on their backs. This is normal in such a country. Although men fathered these children, women are the ones who care for, nurture, and raise these children. These are qualities that cultural feminists argue are the very essence of being a woman. However, from childhood through to adulthood in certain traditional homes and countries, women are taught to respect and serve men. Women were expected to be submissive towards their husbands, brothers, uncles, and fathers. This is seen as the norm in many traditional cultures including the traditional African culture.’ (See: J Bingham...et al ‘Cultural Feminism’, available at https://www.jsu.edu/lifelearning/files/2012/09/W_Cultural-Feminism-in-South-Africa.pdf?x61825, accessed on 5 January 2022.)

men and women to resources and services,⁵⁸³ and both genders being equally involved in decision-making processes. This should also be taken into consideration when reforming the IP policy for decreasing the gender discrepancy in the intellectual property industry

Gender mainstreaming will allow for policies and plans to consider the various factors that affect women. It also addresses the root causes of the inequality between men and women.⁵⁸⁴

The root causes are:

‘The lack of understanding and commitment to gender mainstreaming; lack of sharing information and knowledge; failure to comment on existing legislation and bills that negatively impact the socio-economic empowerment of women and the advancement of gender equality; inadequate oversight capacity and expertise on policies and programs for the empowerment of women and the advancement of gender equality; predominance of gender imbalances in the country and the insufficient gender expertise.’⁵⁸⁵

An example of where gender mainstreaming has been of utilised is in the South African Policy for Women’s Empowerment and Gender Equity which is implemented in a province-wide manner. It aims to improve the status of women by encouraging women to participate and develop their skills.⁵⁸⁶ The draft framework aims at promoting women’s economic empowerment and addressing the various barriers that prevent women from participating in the economy. It also focuses on addressing the indirect barriers that prevent women from accessing and controlling economic activities.⁵⁸⁷

6.2.1 The need for an accurate evidence base

As mentioned in Chapter 2, an evidence base is needed for successful reform to occur. One of the greatest challenges towards policy formulation for the decrease of the gender discrepancy within the IP industry is that there is not enough data indicating the nature, impact, and more

⁵⁸³ City of Vienna office for Gender Mainstreaming ‘The five principles of gender mainstreaming’, available at <https://www.wien.gv.at/english/administration/gendermainstreaming/principles/five-principles.html>, accessed on 28 December 2021.

⁵⁸⁴ Ibid.

⁵⁸⁵ A Bangani and A Vyas-Doorgapersad ‘The implementation of gender equality within the South African Public Service (1994–2019)’ (2020) 8(1) *Africa’s Public Service Delivery and Performance Review* 353.

⁵⁸⁶ Department of Environmental Affairs (note 577 above).

⁵⁸⁷ UNDP ‘10 principles of gender-responsive communications for development’ 14 September 2018, available at <https://www.eurasia.undp.org/content/rbec/en/home/library/gender-equality/10-principles-of-genderresponsive-communications.html>, accessed on 28 December 2021.

importantly, the extent of the gender discrepancy in the IP industry.⁵⁸⁸ The WIPO, in the hope to achieve its goals, has now compiled a dictionary filled with worldwide gender names.⁵⁸⁹ Their hope with this is to be able to identify the gender of the individuals within IP applications.⁵⁹⁰ Additionally, research and statistics on gender are now reported yearly.⁵⁹¹

However, despite WIPO's efforts, the world is still in the initial stages of tackling the IP gender discrepancy.⁵⁹² IP offices, and many applicants worry that if such demographic data is required then an even greater gender bias will immerge. Looking at historic change, this is seen to be a legitimate fear. It is uncertain if an individual's gender is seen to impact an applicant's success within patent applications. However, there is some evidence showing that assessors manage to show bias against woman applicants.⁵⁹³

According to the Human Rights normative framework, OHCHR encourages the use of gender-specific statistics to make women more visible in statistical data and to monitor gender equality. OHCHR recommends that 'in addition to disaggregating commonly compiled statistics by sex ..., making women more visible in statistics and monitoring gender equality require women-specific statistics ...' and "expanding statistics in critical areas, such as ... access to assets (e.g. IP, etc)"⁵⁹⁴

More information required has been continuously known as a gap in producing long-term policies worldwide.⁵⁹⁵ By obtaining more needed data on the demographics of women protecting their IP, it is the initial step to understanding the kind of strategies that will provide the greatest impact on the issue.⁵⁹⁶ This will allow for policymakers to make well thought out decisions. Obtaining more accurate demographics about women's use of patent protection would aid in developing greater strategic solutions. The world would be able to compare data

⁵⁸⁸ The African Academy of Sciences (note 568 above).

⁵⁸⁹ G Lax Martinez, J Raffo, K Saito (note 122 above).

⁵⁹⁰ Ibid.

⁵⁹¹ Ibid.

⁵⁹² J Brant...et al *Policy Approaches to Close the Intellectual Property Gender Gap - Practices to Support Access to the Intellectual Property System for Female Innovators, Creators and Entrepreneurs* (unpublished document, Development Agenda Project, 2019) 11.

⁵⁹³ A Kahler 'Examining Exclusion in Woman-Inventor Patenting: A Comparison of Educational Trends and Patent Data in the Era of Computer Engineer Barbie' (2011) 19(3) *American University Journal of Gender Social Policy and Law* 773-798.

⁵⁹⁴ J Brant...et al (note 592 above).

⁵⁹⁵ Health Policy Project 'Evidence-based strategies to engage men and boys in gender-integrated health interventions' October 2014, available at https://www.healthpolicyproject.com/pubs/382_MenandBoysBrief.pdf, accessed on 28 December 2014.

⁵⁹⁶ The Commission on Gender Equality (note 197 above).

across different countries more extensively and conclusions about whether challenges occur from cultural and historic social norms would be more evident.

However, for developing countries like SA, the data collection processes are not easy, and they usually do not live up to international standards.⁵⁹⁷ Therefore, to assist in decreasing the gender discrepancy in IP in SA there is a need for investments in obtaining sex-disaggregated⁵⁹⁸ data.⁵⁹⁹

A recommendation for SA as well as other countries facing this issue would be to state such a requirement in policies undergoing policy reform and development processes. A comparative analysis of women entering the industry should be recorded to create awareness of the statistic. Statistics and research should be reported so that when one drafts laws and policies, adequate and accurate statistics of reality are taken into consideration. For example, laws and policies should require countries to keep a record of gender with regards to incoming patent examiners, this is similarly seen in other countries too. The USA's SUCCESS Act⁶⁰⁰ requires reports of women and minorities within the IP industry.⁶⁰¹ This recent legislation in the USA encourages obtaining more information with regards to women and patent applications. If adequate and accurate data is provided policymakers would have an even better perspective of the issue.⁶⁰²

Recommendations for South Africa on possible key reforms to contain in the IP policy include:

- Implementation of a database that aids in the collection of sex-disaggregated data in the IP industry. This dissertation suggests that the continued efforts to obtain data will prove to be beneficial, even if it is difficult in developing countries. Additionally, various developing countries have been able to keep an estimated record of COVID-19 statistics. Therefore, countries have had a recent form of data collection experience.

⁵⁹⁷ J Cleland 'Demographic Data Collection in Less Developed Countries 1946-1996' (November 1996) 50(3) *Population Studies* 433-450.

⁵⁹⁸ 'Sex-Disaggregated Data is data that is collected and presented separately on men and women, boys and girls. Sex- disaggregated data reflect roles, real situations, general conditions of women and men in every aspect of the society. For instance, the literacy rate, education levels, business ownership, employment, wage differences, dependants, house and land ownership, loans and credit, and debts are included.' (See: UNHR 'Gender Equality Policy' September 2011, available at https://www2.ohchr.org/english/issues/women/docs/genderequalitypolicy_september2011.pdf, accessed on 28 December 2021.)

⁵⁹⁹ The African Academy of Sciences (note 568 above).

⁶⁰⁰ The Study of Underrepresented Classes Chasing Engineering and Science Success Act of 2018 (The SUCCESS Act).

⁶⁰¹ LAW360 (note 559 above).

⁶⁰² If adequate and accurate data is provided, policymakers would have an even better perspective of the issue than compared to chapter 5 of this dissertation.

Therefore, if governments and policies promote the use of easily accessible databases to collect sex-disintegrated data in the IP industry, it would indeed be a way forward.

- A commitment to educating civil servants about the importance of the collection of sex-disaggregated data to provide them with the skills of the data revolution in developing countries.
- Easy access to sex-disaggregated data for the public, for governments and to create awareness on the issue of the gender discrepancy in the IP industry.

6.2.2 Knowledge Base

Individuals who are non-specialists of IP normally find IP to be a difficult concept to understand.⁶⁰³ This absence of understanding the importance of protecting one's IP rights is a challenge to the participation of individuals in IP.

With regards to an understanding of policy reform within society, current research barely examines if the understanding of IP would differ because of one's gender.⁶⁰⁴ However, one could argue because of the injustice's women have faced in the past, it would be more likely that they are more uneducated not just in IP but within other areas too. This is especially true for lower-class women from developing countries that have not the same access to education than men. The percentage of women who have an education compared to men could validate this point.⁶⁰⁵

Moreover, a study⁶⁰⁶ in the USA asked women entrepreneurs about their involvement with the patent system. Comments from these women included that "To me, the reason I did not apply for a patent or trademark is that I don't understand how the process works. I [do not] know how to go about it", "[I had] fear of the process, not knowing and understanding it. I delayed eight years from the time I knew I needed to do it (file for a patent)" and "I looked into patents but after looking into it, it was so convoluted with nothing for me".⁶⁰⁷

⁶⁰³ J Cutura (note 317 above).

⁶⁰⁴ J Brant... et al (note 121 above).

⁶⁰⁵ The Commission on Gender Equality (note 197 above).

⁶⁰⁶ National Women's Business Council 'Intellectual Property and Women Entrepreneurs' 10 September 2012, available at <https://s3.amazonaws.com/nwbc-prod.sba.fun/wp-content/uploads/2018/02/27192554/Qualitative-Analysis-Intellectual-Property-Women-Entrepreneurs-Part-2.pdf>, accessed on 2 March 2021.

⁶⁰⁷ J Brant... et al (note 121 above).

The above views that women have had on IP and patent applications confirms the absence of knowledge and understanding of IP fields and the gender discrepancy in the IP industry. Although the challenge to grasp concepts of IP is not unique to women, it does however still challenge the participation of women within IP.

Moreover, a study⁶⁰⁸ found that women do not see the commercialization of their inventions as a part of their career path. The latter part of this chapter will include how the Department of Women, Youth and Persons with Disabilities (DoW) and the CGE can get involved with resolving factors that hinder this, which include inadequate access to finances, socio-cultural norms, stereotypes, fear of commercialising, lack of understanding,⁶⁰⁹ etc.⁶¹⁰ This is especially true for women in developing countries, such as SA. Many women are unaware that they can use IP law to their advantage. This could mean that they are not aware of how to differentiate themselves from their competitors.⁶¹¹

Furthermore, without IP law enforcement, women in creative industries such as music and arts can feel the negative impact of their work not being protected. This is especially so for developing countries.⁶¹² For instance, in Tanzania, women make up about 75% of the people working in the music industry. However, due to the lack of copyright enforcement in the country, many aspiring female musicians are denied their rights and royalties.⁶¹³ Therefore, policies should develop better IP rights enforcement, enforce training and skills development of judicial officers, clerks and create public awareness.

⁶⁰⁸ National Women's Business Council (note 606 above).

⁶⁰⁹ K Kariyawasam 'Women and IP commercialisation in the Asian Region: Case Study of Sri Lanka', available at https://www.wipo.int/export/sites/www/women-and-ip/en/docs/women_and_ip_commercialisation_asian_region_sri_lanka.pdf, accessed on 28 December 2021.

⁶¹⁰ Additional factors include: 'Inadequate incentives to research commercialisation, lack of investor-friendly organisations or innovations hubs to boost women-led innovations, lack of support and incentives from government to commercialise research, legal barriers and complicated business start-up processes, insufficient infrastructure at both academic and industry sectors for commercialisation of research, lack of understanding of technology transfer and licensing, lack of common understanding of the value of research commercialisation, lack of technical and business knowledge/experience.' (See: K Kariyawasam 'Women and IP commercialisation in the Asian Region: Case Study of Sri Lanka', available at https://www.wipo.int/export/sites/www/women-and-ip/en/docs/women_and_ip_commercialisation_asian_region_sri_lanka.pdf, accessed on 28 December 2021.)

⁶¹¹ J Cutura (note 317 above).

⁶¹² Ibid.

⁶¹³ UN (note 31 above).

Even when laws and regulations protect women's rights, women still need to know and understand their rights for it to be effective in practice.⁶¹⁴ This is not just about knowing what one's rights are, but also about knowing how to exercise and enforce them.

Initiatives like the Girl Scouts IP Patch in the United States aims to educate and empower girls about IP rights and STEM professions.⁶¹⁵ The WIPO Academy hosts effective mentoring to everyone, both young and old in corporate or public sectors.⁶¹⁶ The Canadian IP office implements awareness and educational programmes to ensure that individuals understand and implement their patent rights. Initiatives such as this need to be introduced more on a global level and in SA by the DoW and CGE.

One initiative that has seen much success is the Korea International Women Inventors Exposition. This initiative is an IP awareness-raising strategy.⁶¹⁷ In 2022, Korea had discovered that out of all the patent applications filed only 4% belonged to women.⁶¹⁸ The republic recognised that the loss of potential offered from women would be disastrous. The Korean IP Office began educating women and mentoring them on how to invent and how to protect their inventions. They now host the Korea International Women Inventors Exposition every year. The Exposition allows for women innovators to display their creations, enables network building, and offers training prospects in patent protection.⁶¹⁹ Although such an initiative is fairly new and results will prove difficult to conclude, initiatives such as this would undoubtedly create awareness to both women and men on the importance of including women within IP.

Recommendations for South Africa on possible key reforms to contain in the IP policy include:

- A commitment to appropriate training to improve knowledge and skills in gender analysis to all policymakers and other persons involved in the policymaking process.

⁶¹⁴ NGLS 'Policy Brief #7 Recommendations on Women's Human Rights and Gender Equality', available at https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwjJtba7kof1AhVhoFwKHV4_BWUQFnoECAsQAQ&url=https%3A%2F%2Fsustainabledevelopment.un.org%2FgetWSDoc.php%3Fid%3D2965&usg=AOvVaw1VCkZ-nUuH0XReUhtc0yK4, accessed on 28 December 2021.

⁶¹⁵ USPTO 'Girl Scouts IP Patch' 27 October 2014, available at <https://www.uspto.gov/kids/patchFAQ.html> accessed on 28 June 2021.

⁶¹⁶ WIPO 'WIPO Academy' available at <https://www.wipo.int/academy/en/>, accessed on 28 June 2021.

⁶¹⁷ J Brant... et al (note 121 above).

⁶¹⁸ WIPO 'Leading the Way for Inventive Women in Korea and Beyond' 29 July 2016, available at https://www.wipo.int/women-and-ip/en/news/2016/news_0005.html, accessed on 28 June 2021.

⁶¹⁹ Ibid.

- A coordinated approach to creating awareness of knowledge base, for example, mentoring in corporate or public sectors.
- Implementation of educational programmes to ensure that individuals understand and implement their intellectual property rights.
- A commitment to ensuring universities understand the importance of diversity and accepting women into STEM degree courses.
- Promotion of the linkage between universities and the IP industry.
- A commitment to constant education and empowerment for high school girls about IP rights and taking up STEM professions.
- The implementation of career days or career counselling schemes in schools and universities enforcing STEM as well as educating girls on they should consider the prospects of it.
- The implementation of organisations dedicated to assisting women inventors recognize and facilitate the commercial possibilities of their research and development.
- A commitment to educating traditional societies about women pursuing STEM fields.
- A commitment to educating law firms on the gender discrepancy in the IP industry, promote that they equally employ IP female attorneys, and promote that they inspire young female candidate attorneys to look into IP law as a career.

6.2.3 Building capacity and trade reform

Developing a framework for the development of ‘trade-related capacity building and aid for trade programmes’ can help countries overcome their gender trade barriers.⁶²⁰ Moreover, trade negotiation mandates should include a gender-sensitive approach when it comes to negotiating the terms of trade.⁶²¹ Understanding this will aid the making of a successful policy, it will also allow policymakers to understand the restriction in the policy-making process because of factors that hinder women’s participation in the IP industry.⁶²² As trade policies interact with other domestic and international factors, they need to be coordinated and gender-sensitive to reach development goals.⁶²³

⁶²⁰ The Commission on Gender Equality (note 197 above).

⁶²¹ Ibid.

⁶²² Women Watch (note 270 above).

⁶²³ Ibid.

Establishing gender-sensitive trade agreements and policies requires fleshing out the framework and exploring the various commitments in trade agreements.⁶²⁴ A gender-sensitive flanking measure should be introduced to address the negative impacts of trade reforms on women. Doing so will help minimize the negative impacts on women and girls, and ultimately aid in decreasing the gender discrepancy in the IP industry.⁶²⁵

Gender-sensitive⁶²⁶ policies need to be implemented in both national and international law. This will allow for progression to be seen within industries that produce gender discrepancies, this includes the gender discrepancy and the IP industry.

Recommendations for South Africa on possible key reforms to contain in the IP policy include:

- Developing a framework for the development of trade-related capacity building and assistance for trade programmes.
- The implementation of trade diagnostic studies carried out to promote trade readiness and market entry for female IP owners.
- The incorporation of research on gender needed in all administrative processes within the IP industry.
- The incorporation of gender-sensitive measures in gender IP policy development.

6.2.4 Broad stakeholder participation

Laws and policies in place should ensure that through their participation in the formulation of policies and programmes, women are able to shape the policies and initiatives that affect their lives.⁶²⁷ Thus, it is important that policies and programs related to the IP industry must be implemented with the inclusion of women as part of the stakeholder group.⁶²⁸ This will allow them to participate in the evaluation and monitoring processes, which would help improve the gender discrepancy in the industry.⁶²⁹ This ensures that women have full and accurate

⁶²⁴ Ibid.

⁶²⁵ M Williams (note 269 above).

⁶²⁶ Gender-sensitive measures include addressing gender inequalities, consideration of gender differences, implementation of education and training, and promotion of participation of women. (See: Canadian Cataloguing in Publication 'Gender-bases analysis: a guide for policy-making' 996, available at http://www.pacificwater.org/userfiles/file/IWRM/Toolboxes/gender/gender_based_analysis.pdf, accessed on 2 January 2022.)

⁶²⁷ The Commission on Gender Equality (note 197 above).

⁶²⁸ MM Katopola (note 18 above).

⁶²⁹ Ibid.

information regarding the decisions related to IP law and ensures that women be given equal representation in all decision-making bodies that deal with IP.⁶³⁰

Additionally, this will ultimately aid in successful gender-specific analysis. If women are a part of such processes, they will be able to provide their specific experiences and gender perspectives. Additionally, ensuring that there is a broad stakeholder approach implemented would ensure that there is diversity and with diversity in decision-making bodies comes diverse interpretations, more solutions and different perspectives.

Recommendations for South Africa on possible key reforms to contain in the IP policy include:

- The promotion of the use of Williams 2018 SMART checklist, as mentioned in chapter 3.
- The promotion of multi-stakeholder approach.
- A commitment to consultations, decision-making, and policy-making processes being comprehensive and participatory. For example, the inclusion of different perspectives from different men and women in decision-making or the inclusion of diverse perspectives from all genders who challenge gender roles in the IP industry.
- The implementation of measures to achieve at least 50% representation and participation of women in the IP industry and decision-making bodies.

6.2.5 Empowerment⁶³¹ embedded in our legislation

One must realise that even if the law does reflect ‘how women’s creative output is produced and disseminated, they could still be denied the benefits of legal protection because of their

⁶³⁰ The Commission on Gender Equality (note 197 above).

⁶³¹ ‘Empowerment is the process of acquiring the ability to make strategic life choices in a context where this ability has previously been denied. Women’s empowerment has five components, including both civil and political as well as cultural, economic and social dimensions: (i) women’s sense of self-worth; (ii) their right to have and to determine choices; (iii) their right to have access to opportunities and resources; (iv) their right to have the power to control their own lives, both within and outside the home; (v) and their ability to influence the direction of social change to create a more just social and economic order, nationally and internationally’ (See: UNHR ‘Gender Equality Policy’ September 2011, available at https://www2.ohchr.org/english/issues/women/docs/genderequalitypolicy_september2011.pdf, accessed on 28 December 2021.)

lower status in society⁶³², lack of knowledge about IP, and limited legal resources.’⁶³³ Specific to SA, it has proven difficult to reconcile IP rights with women’s traditional knowledge and cultural expressions.⁶³⁴

Traditional knowledge and cultural expressions should be recognised, and protected through international legal instruments. Even nationally, the IPLAA⁶³⁵ has been made to provide for the protection of various forms of indigenous knowledge, but it insufficiently captures and recognizes women’s contributions, nor does it refer to laws that will aid in decreasing the gender discrepancy in the IP industry.

Furthermore, unconscious biases and stereotypes, are a challenge that is still evident. Negative stereotyping is argued to go back into childhood, regarding a non-conscious emphasis on gender prejudice toys, the media, and social norms.⁶³⁶ For example, engineering and coding toys are known to be for boys whilst make-up toys and cooking sets are known to be for girls.

With regards to tackling social norms and stereotypes, a study⁶³⁷ asked women why they did not pursue patent applications. They made comments such as “The discouragement from society, from parents or friends is what accounts for a patent or trademark application abandonment”, “I don’t think my [former] husband would have supported me in what I am doing ... for a man it is different. If a man is trying something, the woman would support him. If there are more patents and trademarks for men, that might be a reason”.⁶³⁸ Such comments are evidence in itself to show that women are less likely to gain opportunities in the high-tech field because of social stereotypes, and more importantly, it shows how the law has failed. However, the problem is not just the law itself, but also because of the lower socioeconomic

⁶³² In 2018, during a WIPO meeting, the delegation of Switzerland detected that the gender discrepancy in patent applications is possibly due to social and cultural difficulties that avoid women from contributing their full potential, including the exploitation of IP rights. (See: J Cutura ‘Challenges for Women Inventors and Innovators in Using the Intellectual Property System - A Literature Review’ July 2019, available at https://www.wipo.int/export/sites/www/ip-development/en/agenda/pdf/literature_review.pdf, accessed on 14 October 2021.)

⁶³³ J Cutura (note 317 above).

⁶³⁴ UNHR ‘Gender Equality Policy’ September 2011, available at https://www2.ohchr.org/english/issues/women/docs/genderequalitypolicy_september2011.pdf, accessed on 28 December 2021.

⁶³⁵ The Intellectual Property Laws Amendment Act 28 of 2013.

⁶³⁶ The Commission on Gender Equality (note 197 above).

⁶³⁷ National Women’s Business Council ‘Intellectual Property and Women Entrepreneurs’ 10 September 2012, available at <https://s3.amazonaws.com/nwbc-prod.sba.fun/wp-content/uploads/2018/02/27192554/Qualitative-Analysis-Intellectual-Property-Women-Entrepreneurs-Part-2.pdf>, accessed on 28 June 2021.

⁶³⁸ Ibid.

status of women. This issue also prevents women from gaining equal access to legal protection and knowledge about the law.⁶³⁹

Moreover, India has conducted a successful program that other countries could implement similarly. The Department of Science and Technology in India started the Women's Science Scheme in 2002. This initiative involved training women, to pursue careers in STEM.⁶⁴⁰ They aimed to fight against the fact that women are less likely to be empowered within STEM fields and receive equivalent resources than compared to men. The initiative addresses the gender discrepancy that is created because of pregnancy and family responsibility. These are examples of attributes specific to women, and that they mostly impact women. The initiative involved empowering women to re-join areas of STEM. The initiative even offers fellowships with research grants and scholarships to women. They are trained in the prosecution of patents, patent examinations, patent landscapes, and other skills relevant to IP rights. After the training, the women are sent to work in IP rights firms. The women who have participated in this program have had empowering careers in STEM and IP.⁶⁴¹ Women have qualified to become patent agents, worked with patent rights, become entrepreneurs, and become advocates for rights within IP. As of 2018, 600 women participated in this program with more than 150 women involved in the patent system.⁶⁴² This is an initiative that has proven to work for India.

Therefore, for countries, especially poorer, patriarchal countries like SA, it would be effective to implement similar empowerment strategies to break barriers for women to enter the high-end workforce. Grant programmes such as this one are also appropriate for companies and non-governmental organisations to help bridge the gender discrepancy in patent applications and empower more women.⁶⁴³ Legislation should empower the same.

Recommendations for South Africa on possible key reforms to contain in the IP policy include:

- A commitment to clarity on the distinction between the difference between traditional cultural expressions and traditional knowledge
- The promotion of the value for rural African women's crafts.

⁶³⁹ J Cutura (note 317 above).

⁶⁴⁰ Ibid.

⁶⁴¹ Ibid.

⁶⁴² Ibid.

⁶⁴³ Ibid.

- Support for the development of IP rights through *sui generis* legislation as the preferred form of protection
- The consideration of gender as a social difference with regards to indigenous knowledge
- A commitment to use gender-responsive wording in educating and empowering girls about IP rights and STEM professions
- Promote women already in the IP industry to empower young girls to enter the field as means of headhunting, improving their self-esteem, and proving representation within the industry.
- Affirmative action programs targeting development for women in intellectual property
- Redress the damaging effects of gender inequality and stereotypical gender roles and norms, but with specific reference to women in the IP fields.

6.2.6 The need for IP financial assistance to be backed up in legislation

IP protection costs money. Women have had and continue to have fewer economic resources than men. The IP system and patent application process are known to be expensive. Many inventors abandon protecting their IP because of the expense of the patent.⁶⁴⁴ Many people fear that there is too little of a guarantee of financial benefit, so they question going through with the patent application process. However, the reality becomes even more devastating when an evident gender financial gap is evident. This is caused by a variety of reasons that prejudice women from earning fairly compared to men. This includes not being paid equivalently to men, not being given the same financial opportunities, women being given less capital and resources as their male counterparts.⁶⁴⁵ This is why it is important to offer financial assistance to women, and to dismiss worries about the trouble and price of IP protection.

The United States Patent and Trademark Office launched two strategies that aid individuals regarding their IP rights, through the America Invents Act of 2011.⁶⁴⁶ Accordingly, the Pro Se Assistance Program aims to assist patent candidates are applying and filing their patent without the service of a listed attorney.⁶⁴⁷ The Patent Pro Bono Program delivers free legal aid,

⁶⁴⁴ J C Mannell *Practising Gender: Gender and Development Policy in South African Organisations* (Unpublished Doctor of Philosophy, London School of Economics, July 2012).

⁶⁴⁵ A Lioumbis 'Are patents expensive?' 7 March 2016, available at <https://www.linkedin.com/pulse/patents-expensive-alexandros-lioumbis>, accessed on 3 June 2021.

⁶⁴⁶ USPTO (note 561 above).

⁶⁴⁷ Ibid.

including training and filing of patent applications for candidates who earn less than a certain income.⁶⁴⁸ It is estimated that around 60% of patent applicants who make use of the strategy were women.⁶⁴⁹ Despite legal aid, SA has no such legal mechanisms in place.

Recommendations for South Africa on possible key reforms to contain in the IP policy include:

- Attention is to be placed on changing policies and practices that have hindered women's access to intellectual property. For example, affordability.
- A commitment to providing training and IP registrations for women below a certain income bracket.
- The promotion of bursaries and scholarships so women can study a STEM degree.
- A commitment to offering financial aid to women below a certain income bracket enabling them to enter the IP field
- A commitment to offering startup capital to women designing, inventing, and creating.
- The implementation of a fund or donation scheme to promote women in the industry.
- Promotion of a global funding campaign to assist women in SA, since it is a developing country and the country with the slowest rate of progression in the IP industry. Money from such schemes can go towards the development of a database, providing women with resources to create and invent, bursaries for women or even a pay for mentoring and expos specifically designed to empower women in the IP industry.

6.3 Other initiatives

As mentioned previously⁶⁵⁰, the CGE's mission 'is to promote, protect, monitor and evaluate gender equality through research, public education, policy development, legislative initiatives, effective monitoring and litigation.'⁶⁵¹ Moreover, DoW's mission 'is to accelerate socio-economic transformation and implementation of the empowerment and participation of women, youth and persons with disabilities through oversight, monitoring, evaluation and influencing policy.'⁶⁵² The CGE and the DoW should fulfill their responsibility to SA. Ultimately, they

⁶⁴⁸ Ibid.

⁶⁴⁹ Ibid.

⁶⁵⁰ The Commission for Gender Equality aims to protect, enforce, monitor, and analyse how much South Africa has achieved in reaching gender parity. However, currently, the commission is not doing enough, and this is seen in the number of people that raise complaints with them regularly (see Chapter 5).

⁶⁵¹ Commission for Gender Equality, available at <https://cge.org.za/>, accessed on 28 December 2021.

⁶⁵² National Government of SA 'DWYPD', available at <https://nationalgovernment.co.za/units/view/31/departments-of-women-youth-and-persons-with-disabilities-dwypd>, accessed on 28 December 2021.

have a lot to offer and could intervene in ways that support decreasing the gender discrepancy in the IP industry. Essentially, they could intervene⁶⁵³ by supporting the commitments outlined in national policies. Routing for the policy reform and development for the gender discrepancy in the IP industry is the first step.

Additionally, they can be involved more proactively by ensuring that when they monitor and evaluate policies that are relevant to decreasing gender discrepancies, that they are more gender-conscious in the process, especially when a policy is not fulfilling its aim or when a policy can do more for gender inequalities in a specific field by being more gender-inclusive. In addition, considering every aspect that affects a gender discrepancy should be considered more seriously. For example, more enforcement of the gender mainstreaming approach or assisting in recognising gender-specific factors that hinder advancement in the IP industry.

They could ensure that there is an enabling policy environment in place to translate their commitment to gender equality into a reality. They should ensure the development of policies and programs to empower women, transform gender relations and guarantee that gender considerations are being considered for the advanced status of women, and to advocate for ‘the promotion of new attitudes, values and behavior.’⁶⁵⁴ This is needed in a patriarchal society like SA. Furthermore, they could develop performance indicators measuring the process made in decreasing the gender discrepancy in the intellectual property industry or the process made in the integration of gender in a potential gender IP policy. This will improve their monitoring framework.

Both the CGE and DoW could intervene by ensuring that there is ‘strategic leadership, good governance, effective, efficient, and economic use of public resources for the socio-economic empowerment’ of women in the IP industry. They should support gender mainstreaming, monitor, evaluate and report systems, such as a mechanism to ensure timely interventions aimed at socio-economic empowerment of women in the IP industry. Moreover, they could implement outreach and advocacy initiatives. Such interventions have been included in the Department of Women’s Strategic Plan for 2015 to 2020.⁶⁵⁵ This demonstrates that the DoW indeed attempts to create solutions and commitments to gender equality and socio-economic empowerment for women, however, more emphasis is needed for women in the IP industry. For example, the

⁶⁵³ With assistance from the DTI, DSI and the DST.

⁶⁵⁴ UN Women ‘UN Women Strategic Plan 2022-2025’, available at <https://www.unwomen.org/en/digital-library/publications/2021/09/un-women-strategic-plan-2022-2025>, accessed on 28 December 2021.

⁶⁵⁵ Ibid.

implementation of an awareness campaign that attracts women into STEM fields or educating society on IP protection. Furthermore, women's mentoring programs could help scientists and innovators develop the necessary technical skills and training to enter the IP industry. As a form of capacity building, the mentors would help women scientists develop their expertise and network with other women scientists.

Due to the historical treatment of women, many women experience financial constraints. Promotion of the offering bursaries and scholarships and funding opportunities for women wanting to enter the IP industry is also helpful. Alternatively, the creation of international funding and donation schemes or campaigns could prove to assist the gender discrepancy. A funding scheme would help women obtain loans for their research and commercialization. To further encourage women inventors, policies the CGE and DoW could support a national reward system that rewards women for their achievements. For example, a compensation reward or small bursary for further studying or discounts. This system would encourage women into the IP industry and aid in decreasing the gender discrepancy in the IP industry. The CGE and DoW can invest in this or use the donation money from a donation scheme.

Additionally, women may not want to enroll in an educational institution because of their family commitments, and pregnancy. Considering such factors that are specific to women would ensure that a gender-specific analysis is being considered. Identifying that women may not enroll in educational institutions because of factors specific to women or because of the patriarchal nature of a society, are necessary factors to consider in the policy-making process. There is a need to ensure that there is gender equality in STEM fields and degrees. Awareness campaigns and volunteers going out into such societies to expose families and headhunt women to participate in the IP industry can be something the CGE and DoW invest in.

Additionally, creating initiatives that ensure universities are aware of the gender discrepancy in the IP industry could be beneficial. Creating awareness on this issue especially at tertiary educations may provide universities to ensure that the acceptance rate is fair and equal.⁶⁵⁶

⁶⁵⁶ Department of Women 'Strategic Plan 2015-2020', available at <http://www.women.gov.za/images/Department-of-Women---Strategic-Plan.pdf>, accessed on 28 December 2021.

Moreover, a government hub should be established to assist women in developing IP and commercializing their ideas. This hub could be operated by specialists to assist women in transforming ideas into viable products.

In addition, The CGE and DoW can implement IP boot camps and trade expos for women. Women inventors can promote themselves through various events and workshops. These events help them get their products or services in the market. This also enforces networking of women in the IP industry. Perhaps the CGE and DoW could also publicize case studies of women in the IP industry who have turned their ideas into marketable products at these boot camps or trade expos or even just to the general public. These individuals could serve as role models and ambassadors for other women entrepreneurs. Additionally, people need to know that the gender discrepancy in the IP industry is an issue that SA faces on a large scale.

Moreover, the DoW could implement a certification policy towards companies that support women's IP, such as their designs, inventions, and creations. This would imply that companies involved would get recognition for supporting women's socio-economic development in the IP industry as well as assist them with potential customers and clients that would want to be involved with companies that aim to uplift society.

6.4 Conclusion

Since SA is in the process of policy development it would be appropriate to reform its IP policy or create a separate IP gender policy. Policymakers could reform the current phases of the IP policy and integrate gender more directly. However, trying to reform the policy by integrating gender into it in this way, may not be enough and may just seem like an afterthought. This is numerous gender considerations need to be considered, numerous factors policymakers need to understand, and a much-needed emphasis needs to be placed on the gender discrepancy in the IP industry.

Alternatively, a separate gender IP policy would support women socio-economic development within the IP industry, however, since the IP policy already supports socio-economic development, it makes sense to include recommendations for the gender discrepancy in the IP industry in it.

Therefore, this chapter supports that a new phase of the current IP policy would be the best and most effective way to decrease the gender discrepancy in the IP industry. Women and gender discrepancies should rightfully be included in the IP policy as a means of promoting socio-economic development. It should be introduced and account for the development of women in SA's IP industry. This new phase would inevitably be a gender-responsive section of the IP policy. Therefore, the best solution would be to create a separate phase for gender and IP within SA's current IP policy. This is because the gender discrepancy in the intellectual property industry should have effective and sustainable solutions.

Furthermore, the policymakers must be able to make well-informed decisions based on gender considerations. Much emphasis needs to be put on gender considerations and the factors relative to the gender discrepancy in the IP industry, such as historical property laws placed on women, the history of women inventors, statistics, gender perspectives, and trends over the years with regards to women's participation in the IP industry. Policymakers would need to focus on and engage with the different factors to be able to provide a policy aimed at the gender discrepancy in the IP industry. This is an enormous responsibility for policymakers because of the dire situation of the gender discrepancy in the intellectual property industry. A separate phase will create awareness around the issue, it would not be an afterthought and gender considerations would have sufficiently been considered.

Furthermore, this chapter, in providing recommendations referred to factors needed for successful reform considered gender statistics, the historical treatment of women, past laws, and the gender perspectives. Moreover, this chapter had referred to various legal instruments that other countries have implemented that SA has not. These other countries in implementing such legal instruments have seen a decrease in the gender discrepancy in the IP industry. This suggests that reform is needed within SA's legal system, especially in the IP law area.

It is sad to know that even if the law were to reflect how women's creative output is produced and disseminated, they could still be denied the benefits of legal protection because of their lower status in society, lack of knowledge about IP, and limited legal resources.⁶⁵⁷ 'Many patriarchal societies still believe that the subordination of women is deeply rooted in their

⁶⁵⁷ J Cutura (note 317 above).

culture.’⁶⁵⁸ However, one needs to consider that several African countries were colonised and the thought of gender equality introduced into society only recently. Therefore, instantaneous change is not realistic for the such patriarchal societies and African countries.

The problems women face with the justice system are often linked to the content of the laws, the implementation, and administration of the laws, and the culture surrounding their administration. The content of laws that discriminate against women are some of the main obstacles to women’s development. As previously mentioned, there are still laws that prevent women from progressing in the IP industry. The culture surrounding the law can be challenging for women. One of the biggest factors that women have to consider is their attitude towards the law. SA has some of the most progressive laws in the world but using them successfully requires a positive attitude towards societal and legal change, which is the essence of the agenda-setting stage in the policy-making process.

Moreover, the ‘policy reform method tends to fail because the latent biases and stereotypes cannot be easily overcome through written directives only.’⁶⁵⁹ Drafters must consider the needs of women and their families when formulating the policies.⁶⁶⁰ Doing so can help improve the policies and make them more effective. Although biological differences may contribute to perpetuating stereotypes, recognizing these differences can help minimize the burden on women.⁶⁶¹ Well-written policies aim to provide equal opportunities and is the best solution to decreasing the gender discrepancy in the IP industry.⁶⁶²

Moreover, legislation and policies in place should ensure that women are involved in the policy-making process of monitoring and evaluation, specifically regarding the gender discrepancy in the IP industry. Additionally, policies and programmes related to the gender discrepancy in the IP industry should also consider women’s rights throughout their design and implementation. This process involves conducting gender-sensitive assessments and monitoring programmes that promote equality for women and men. This will aid in obtaining more data and allow for awareness to occur that would ultimately bring funding opportunities and resources for women to pursue a career in the IP industry.

⁶⁵⁸ DO Oriakhogba (note 52 above).

⁶⁵⁹ The Commission on Gender Equality (note 197 above).

⁶⁶⁰ Ibid.

⁶⁶¹ Ibid.

⁶⁶² Ibid.

Governments should be thinking about the issue and ensure policy development occurs specifically for the progression of women within the IP industry.

CHAPTER 7: CONCLUSION

7.1 Introduction

This chapter, being the final chapter, comprises conclusions, a summation of the issues discussed as well as considerations for policy reform and development recommendations, future research, and limitations. This chapter aims to re-evaluate the research questions mentioned in chapter 1 and provide adequate conclusions.

7.2 Deductions and Recommendations

The research questions that were evaluated and discussed in this dissertation were:

7.2.1 How does one facilitate successful policy reform with a focus on gender-related issues?

Chapter 2 discussed the policy-making process and considered factors that should be considered by the government and policymakers to ensure successful policy implementation. This included the need for an accurate evidence base, achieving political commitment, persistent advocacy and lobbying, supporting international standards, embracing multi-stakeholder approaches, capacity-building, peer understanding, and an understanding of policy reform within society.⁶⁶³ However, for the sake of this research, it is important that policymakers not just support such factors but also take into consideration factors that would facilitate a gender-responsive policy.

The Department of Justice's Gender Policy Statement of March 1999 stated that:

‘[T]he current systemic inequalities, resulting from centuries of legalised injustice against women, cannot simply be eliminated by the identical treatment of men and women ... [T]he legal system has, until now, failed to accommodate some of the fundamental differences in the social experiences

⁶⁶³ Lawgovpol (note 152 above).

of women and men, and has instead imposed rules on women that are based on men's experiences.'⁶⁶⁴

Thus, to facilitate successful policy reform with a focus on gender-related issues, a gender-responsive policy is fundamental. This requires a transformation of mindset and attitude by producing and encouraging solutions in which women are appreciated, recognized, and treated equally within the policy-making process. Gender mainstreaming involves gender-sensitive analysis and gender-sensitive monitoring. Such a framework is crucial to ensure the development of a successful policy and are generous into considerations that need to be acknowledged to implement a successful gender policy. This is apart from the general factors needed for successful policy implementation. Additionally, a gender-responsive policy would take into consideration a gender-specific analysis. This includes the consideration of factors that are related to both men and women specifically. Looking at gender-specific factors related to women demonstrates that women have been historically disadvantaged, it demonstrates the gender roles in society that are specific to them and considers diverse gender perspectives. This would allow policymakers to come up with solutions that are well thought out and comprehensive. Additionally, a gender-responsive policy would consider the concept of gender-mainstreaming. Such mechanisms would aid in decreasing the gender discrepancy in the IP industry.

Therefore, providing solutions that facilitate successful policy reform for the sake of this research, a gender-responsive policy is the ideal solution to decrease the gender discrepancy in the IP industry. This is because the various gender considerations would need to be acknowledged such as the historical treatment of women with regards to property ownership, past property laws placed on women, and an evidence base that provided accurate sex-disaggregated data, to name a few. The implementation of gender-responsive policies, instead of gender-neutral will mean that the needs and interests of both women and men in our current IP structures, operations, methods, and work, will be taken into consideration and not ignored. This will eventually lead to the removal of barriers to women fulfilling their potential.

⁶⁶⁴ The Department of Justice's Gender Policy Statement, March 1999.

7.2.2 Do current policies provide sufficient legal mechanisms that aid in decreasing the gender discrepancy in the IP industry?

As chapter 3 concluded, current policies and legislation do not provide sufficient legal mechanisms that aid in decreasing the gender discrepancy in the IP industry. SA has gender equality policies as well as a new IP policy, however, neither consider the gender discrepancy in the IP industry specifically, whilst countries like the USA are in the process of implementing actual laws related to women in STEM fields, thus potentially decreasing the gender discrepancy in the IP industry for that country.⁶⁶⁵

SA is among the countries that are failing to address the gender discrepancy in the IP industry fast enough. The drafters of legislation seem to have neglected the gender discrepancy when it comes to addressing the needs of women in the IP industry. Additionally, there have been no steps taken by relevant stakeholders to specifically address the needs of women in the IP industry. This shows that they are not taking the issue seriously enough.

Moreover, SA should protect traditional knowledge directly for women.⁶⁶⁶ This obligation can be adequately achieved through national policy reform processes. As chapter 3 concluded, the IPLAA, the IP policy, and other legal mechanisms need to provide this issue of the gender discrepancy in the IP industry with more of a priority, and introduce gender-responsive mechanisms in the process. Even international agreements leave concerns of having negative effects on women. This indicated that drafters of such legislation have not adequately addressed nor understood factors relating specifically to women.

The National Gender Policy Framework on Women's Empowerment and Gender Equality⁶⁶⁷ 'establishes a clear vision and framework for gender mainstreaming across laws, policies, procedures and practices which serves to ensure equal rights and opportunities for women and men in all spheres and structures of government, as well as in the workplace, the community and the family.'⁶⁶⁸ There is a need to develop policies and procedures that will promote inclusive growth and share the economic and social benefits of innovation for women in the IP industry. This can be done through the establishment of policy reform and development

⁶⁶⁵ J Best and C Cohen (note 546 above).

⁶⁶⁶ WIPO (note 208 above).

⁶⁶⁷ The National Gender Policy Framework on Women's Empowerment and Gender, 2000

⁶⁶⁸ Department of Women (note 656 above).

procedures, both nationally and internationally. The IP industry in SA needs policy development to implement the enabling framework. This will help improve the capacity of the development patterns for women within the industry.⁶⁶⁹

7.2.3 How does the historical treatment of women, with regard to property ownership laws, impact women's development and ownership in the IP industry today?

The historical injustices that women have experienced may have prevented them from participating in the IP industry. This includes their property rights.⁶⁷⁰ Historically, women were not given equal treatment to IPR's. Despite the implementation of equality laws today, women still face *de facto* discrimination in certain countries, because of this.⁶⁷¹ The historical barriers that women have faced, in terms of ownership and inventorship have shaped the factors that hinder women from the IP industry today. Such as lack of representation, lack of understanding because of lack of education, unconscious or conscious gender bias in the IP industry, gender stereotypes of STEM fields, and the cost of protecting IP. If women were given the same rights as men to property ownership in the past, they would be more equal in society.⁶⁷² This would have historical importance and would have affected women's progress within the industry.

However, indeed other countries have had similar pasts as gender inequality is an international issue.⁶⁷³ However certain countries have shown to have a faster rate in decreasing the gender discrepancy in the IP industry than compared to SA. Firstly, this is because such countries are implementing progressive laws that have a direct relation to the gender discrepancy in the IP industry. Currently, SA has no laws or policies that link gender and IP in a direct way that would aid in decreasing the gender discrepancy. Additionally, other countries are implementing initiatives that support women development in the IP industry at a greater rate. Although SA may have initiatives in place to support the studying of STEM degrees, it needs to be more

⁶⁶⁹ UN (note 31 above).

⁶⁷⁰ J Brant...et al (note 592 above).

⁶⁷¹ Ibid.

⁶⁷² A Lafrance (note 342 above).

⁶⁷³ The reason it was so important to compare South African statistics to another country's statistics is because property ownership and inventorship for women, and the oppressed South African past has been an international issue. Thus, we have to identify what truly SA was lacking and identify reasons for more than just the historical treatment of women. It is recommended that SA is lacking adopting and implementing policies and laws aimed at decreasing the gender discrepancy in the IP industry. Policy development is therefore necessary. (See chapter 5)

enforced with an emphasis on women. Secondly, SA has deep patriarchal roots that are hard to overcome in a developing country that in the past has had a strong conservative government. The views of this government have entrenched concepts and views in society from a prejudicial legal system that has proven difficult to just disappear. Thirdly, the lack of resources, infrastructure, and finances of developing countries affects economic development as a whole.

Chapter 5 concluded that stagnated growth is one of the main reasons for the gender discrepancy in the IP industry today. Stagnated growth meant that there was a period where there was little to no socio-economic growth for women within the IP industry. This period had created a ripple effect demonstrating that women will always be a little further behind than men. Inadequate protection and oppressive property laws for women implemented by conservative governments enforced male supremacy and gender stereotypes in patriarchal societies, much of which is seen in society as *de facto* discrimination and *de facto* subordination. Moreover, even though IP is linked to scientific and technical studies, the cultural influences that prevent women from entering the workforce may still be present in the legal system. This is because the traditional beliefs about science are still held.⁶⁷⁴

In SA, the history of colonialism was said to have affected women's self-esteem, sense of purpose, and female identity. This was because prior to colonialism women were devoted to and responsible for cultivating and harvesting land which was suddenly taken from them when the Dutch arrived in SA.⁶⁷⁵ Having property and looking after property of your own gives a person a sense of independence and financial stability. However, the oppressive property laws of the past prevented this, which enforced financial constraints placed on women. Financial constraints on placed on women meant that they would be dependent on men, who thus had control of what women would do and the roles they play. The gender-pay gap and the wealth disparity have demonstrated that 68% of women are unable to save enough money because they are not being paid enough.⁶⁷⁶ It is argued that a factor that contributes to this is the *de facto* discrimination in society from past oppressive laws. Additionally, many women in developing countries are informal traders, domestic workers and have low-paying jobs where they simply

⁶⁷⁴ J Brant... et al (note 121 above).

⁶⁷⁵ H Bradford (note373 above).

⁶⁷⁶ H Bondy 'Are women more financially stressed than men? Here's how to overcome it' 18 September 2019, available at <https://www.nbcnews.com/know-your-value/feature/women-are-more-financially-stressed-men-here-s-how-overcome-ncna1055901>, accessed on 31 December 2021.

cannot afford the protection of IP if they decide to event, create or design something.⁶⁷⁷ Therefore, the lack of women in the IP industry today produces a lack of representation for little girls. The number of women in the IP industry in the past did not enforce representation for little girls nor empowered other women to enter into the field. It was only until recently that initiatives for women in STEM are enforced.

However, even though more progress is needed within society and the legal system for more women to participate in the IP industry to bridge the gender gap, there is a glimpse of light as more women are at the frontline of invention today. Headlines in 2020 read ‘Meet the husband-and-wife team behind the leading vaccine for COVID-19.’⁶⁷⁸ That is representation right there. A woman was a part of an invention that potentially saved humanity and the world knows about it.

7.2.4 What are the trends of the gender discrepancy in the IP industry, with reference to patent applications?

In analysing, SA’s statistics and trends with those of other countries, one can identify the delay in the country’s progress towards gender parity in the IP industry is significantly due to the number of women applying for patents.

This chapter has recognized the reality that SA has progressed at a slower rate, with regards to the gender discrepancy in the IP industry, than compared to the rest of the world.⁶⁷⁹ It is clear that the South African government, and other governments that find themselves in a similar position as SA, must identify more with the needs and rights of women in the IP industry and provide an empowering atmosphere for the realisation of these rights as a diverse contribution to the industry will only improve it.

⁶⁷⁷ C Guibourg and N Stylianou (note 22 above).

⁶⁷⁸ D Gelles ‘The Husband-and-Wife Team Behind the Leading Vaccine to Solve Covid-19’ 10 November 2020, available at <https://www.nytimes.com/2020/11/10/business/biotech-covid-vaccine.html>, accessed on 31 December 2021.

⁶⁷⁹ J Beger ‘Innovation and Intellectual Property in South Africa: The Case for Reform’ April 2018, available at <https://www.tralac.org/documents/news/1917-innovation-and-intellectual-property-in-south-africa-the-case-for-reform-accessibsa-april-2018/file.html>, accessed on 1 March 2021.

SA has achieved some appreciable progress in its legal and policy framework to protect the rights of women.⁶⁸⁰ However, compared to the legislative improvements other countries have made, to see a faster progression in the IP industry, SA is behind. In comparing SA to the USA, the USA has introduced Acts that directly address factors that hinder women's advancement in the IP industry.⁶⁸¹ They are more progressive and have led to the establishment of various initiatives designed to improve the status of women in the IP industry.⁶⁸² The USA has been implementing progressive laws in the areas of IP.⁶⁸³

On comparison. The South African IP industry has a long way to go to achieve gender parity, but this research suggests that since SA is in the process of policy development in the IP industry that it is an ideal time to introduce the gender discrepancy in the IP industry as a case for policy reform.

7.2.5 What recommendations for policy reform would support access to the IP industry for female innovators, creators, and entrepreneurs?

As chapter 6 concluded, the need for an accurate evidence base, empowerment embedded in legislation, investing in understanding the policy reform process, investing in understanding IP law, the need for IP financial assistance to be backed up in legislation, and developing capacity building and trade reform, are recommendations for policymakers when considering potential policy development in SA regarding the gender discrepancy in the IP industry. Even other countries may be able to benefit from such recommendations.

Moreover, the policy reform process tends to fail when it comes to addressing the biases and stereotypes that still exist in society.⁶⁸⁴ This method only works if the drafters take into consideration the needs of women when formulating their policies.⁶⁸⁵ The content of laws that restrict women's progress are some of the main obstacles that women face in the IP industry. As mentioned previously, it is therefore, important to ensure the implementation of a gender-responsive IP policy that takes into consideration the gender mainstreaming approach, which

⁶⁸⁰ World Economic Forum 'Global Gender Gap Report 2020' 2020, available at http://www3.weforum.org/docs/WEF_GGGR_2020.pdf, accessed on 29 March 2021.

⁶⁸¹ J Best and C Cohen (note 546 above).

⁶⁸² Ibid.

⁶⁸³ Ibid.

⁶⁸⁴ C Knill and J Tosun (note 62 above).

⁶⁸⁵ MM Katopola (note 18 above).

includes a gender-specific analysis and the implementation of gender-sensitive measures. These steps include the sex-disaggregation of IP data as a key performance indicator for policies aimed at promoting innovation and creativity and encouraging economic, social, and cultural development in the IP industry.⁶⁸⁶

Chapter 6 argued that an additional phase should be added to SA's current IP policy. This is because the current IP policy deals with socio-economic empowerment and the gender discrepancy in the IP industry is a socio-economic issue. Additionally, a separate phase will ensure enough emphasis and consideration is placed by the government and policymakers to ensure solutions are direct to the gender discrepancy in the IP industry. This would demonstrate awareness and consideration for the issue then rather than implementing gender into the current phases of the IP policy, which may just seem like an afterthought where solutions may prove to be not as robust and thorough. However, the recommendations made for policy development and policy reform in this chapter would prove to be of assistance in the creation of a new gender IP policy, the integration of gender in the current phases of the IP policy, or a separate phase 3 of the current IP policy.

A summary of potential recommendations for SA on possible key reforms to contain in the IP policy include:

- A commitment to implement a database that will aid in the collection of sex-disaggregated data in the IP industry.
- A commitment to creating awareness of the knowledge base and the various opportunities that are available to women in the IP industry and educating young girls about the various opportunities available to them in the IP industry is also a part of this project. For example, the promotion of career days that promote women in science and technology should be considered as part of the comprehensiveness of this project.
- To promote the equality of opportunity in the IP industry, law firms should promote the recruitment of female attorneys in IP law.
- The development of a framework for trade-related capacity building.
- The implementation of the establishment of a multi-stakeholder approach and a commitment to comprehensive and participatory processes. This should include the inclusion of diverse views from all genders in making decisions in the industry.

⁶⁸⁶ WIPO Magazine (note 399 above).

- A goal of 50% representation of women in the various decision-making bodies of the IP industry.
- A commitment to ensuring that the distinction between traditional knowledge and traditional culture is clear. Support for the development of IPR's through *sui generis* laws is also proposed.
- Affordability is also a key component of this project. It is also proposed to provide financial aid for women who are below a certain income bracket for IP studies and registration.

Potential key reforms that should be included in such a policy can be successful with the support of the CGE and DoW. As mentioned, the CGE and the DoW could intervene in ways that support decreasing the gender discrepancy in the IP industry. Such as developing performance indicators that measure the steps taken to decrease the gender discrepancy in the IP industry supporting gender mainstreaming and monitoring various systems aimed at supporting women's economic empowerment in the IP industry.

Through women's mentoring programs could be implemented where women in the IP industry could develop the necessary technical expertise and provide training for women to enter the IP industry. A government centre should also be established to help women develop and commercialize their ideas. The CGE and the DoW could also organize events and workshops for women in the IP industry.

Additionally, the implementation of an awareness campaign about IP protection could also help women enter the workforce. Additionally, women may not want to enrol in educational institutions due to various factors such as their family commitments and pregnancy. Creating awareness about the gender gap in the IP industry could also help improve the acceptance rate of women in these fields. The CGE and DoW could publicize the achievements of women in the IP industry. These individuals could then serve as role models for other women entrepreneurs. Role models and ambassadors for women entrepreneurs are needed in the IP industry.

Due to the historical injustices against women in the IP industry, many women have financial constraints. International funding and donation campaigns could also help address the gender discrepancy in the industry. A funding scheme could go towards women inventors to obtaining

loans, scholarships, and bursaries for their research and development. Moreover, a compensation reward could also be established to encourage women to enter the IP industry. The DoW could also promote companies that support women's IP. Companies that support women in the IP industry could be recognized for their contributions via certification policies.

7.3 Future Studies

The focus of this dissertation was on gender and IP, but similar forms of underrepresentation and discrimination happen in the IP industry. For example, as a result of race, with women of colour facing a double jeopardy. Further discussion on the above topic in future research, could include a discussion of the broader aspects of diversity and inequality seen in the IP industry. This dissertation considered women as a group and did not differentiate too far on aspects of class and race therefore future studies could consider such aspects. Such as the concepts of intersectionality and race with gender, with reference to apartheid's effect on women in the IP industry.

Further research could also possibly evaluate the topic based on feminist perspectives. The principles of feminist theory may guide policy reform on the topic further. Feminism has challenged western legal tradition that has alleged that the law is neutral and objective even though the law, has not been gender-neutral nor objective in the past.⁶⁸⁷ Feminist theory can show the masculine assumptions that exist in the construction of IP law, as well as provide a view of the political economy of the IP system, that has historically promoted more men than women.⁶⁸⁸ This is may prove to be beneficial for the drafters of policies to consider as a different viewpoint during gender-specific analysis to ensure even more comprehensive solutions for the gender discrepancy in the IP industry.

Additionally, future studies can compare the statistics gathered in this dissertation to future statistics, especially statistics after the Covid-19 pandemic and how Covid-19 has affected women in the IP industry.

⁶⁸⁷ M Hamalengwa 'Feminism and Intellectual property Law', available at <https://www.iposgoode.ca/2009/12/feminism-and-intellectual-property-law/comment-page-1/>, accessed on 18 July 2021.

⁶⁸⁸ D Halbert (note 20 above).

Moreover, since international policy and law have only been in place for a short time, future research can include whether they have been successful in the long run. Alternatively, examine how long it took the legislature to prioritize women in the IP industry and whether policy development and reform recommendations beyond what has been implemented and what is suggested in this dissertation could be further reformed.

7.4 Final conclusion

During the discussion in this dissertation, it was found to be evident that the current legislative framework provides little if any chance of success in the decrease of the gender discrepancy in the IP industry.

The fact that no substantive change is occurring, with regards to women in the IP industry, means the state of the legislative framework remains inadequate and insufficient in its service to women. The low number of women applying for IP ownership and inventing remain a reality.⁶⁸⁹ SA, in making policies specific to its needs, could benefit immensely from adopting gender-responsive methods that jurisdictions with more knowledge and experience have used in their combat of the gender discrepancy in the IP industry.

It is clear from this dissertation that the law as it relates to gender and IP falls short. Therefore, it is visible that the rights of women in the IP industry are not yet in line with the international standards laid down for the realisation of the large gender discrepancy in the IP industry. This places an urgent need for countries to bring policies as per international norms and standards, so that these rights guarantee development, as well as ensure policies are specific to certain country's needs. There is, therefore, no opposing the fact that there is a need to ensure that there is an enabling atmosphere to ensure the protection, promotion, and realisation of rights of women in the IP industry. The right atmosphere and all efforts should also facilitate the realisation of the rights without shame, prejudice, or fear of condemnation. Africa must rise to ensure that this is a reality, but not only on paper. Despite the steps taken by many different countries to decrease this worldwide issue, there is a need for attendant legal and policy reforms to be implemented.

⁶⁸⁹ DO Oriakhogba (note 52 above).

This dissertation has shown that there remains a lot to be done in the development of legal and policy frameworks to adequately protect and enforce the rights of women in the IP industry not only around the world but specifically in SA.

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Miss Kirshia Pillay (217029533)
School Of Law
Howard College

Dear Miss Kirshia Pillay,

Original application number: 00014750

Project title: A legal based evaluation and discussion of the gender discrepancy in the intellectual property industry.

Exemption from Ethics Review

In response to your application received on 11 October 2021, your school has indicated that the protocol has been granted **EXEMPTION FROM ETHICS REVIEW**.

Any alteration/s to the exempted research protocol, e.g., Title of the Project, Location of the Study, Research Approach and Methods must be reviewed and approved through an amendment/modification prior to its implementation. The original exemption number must be cited.

For any changes that could result in potential risk, an ethics application including the proposed amendments must be submitted to the relevant UKZN Research Ethics Committee. The original exemption number must be cited.

In case you have further queries, please quote the above reference number.

PLEASE NOTE:

Research data should be securely stored in the discipline/department for a period of 5 years.

I take this opportunity of wishing you everything of the best with your study.

Yours sincerely,



Mr Simphiwe Peaceful Phungula
obo Academic Leader Research
School Of Law

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