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PATENT PROSECUTION REGIME IN MAINLAND TANZANIA: A 'PROSECUTOR–GRANTOR PERSPECTIVE'

Boaz John Mabula[*]

Abstract

In the context of patent law, the term prosecution refers to the interaction process between a patent applicant and a national patent office concerning an application for a patent and other subsequent proceedings related to such grant. It serves the overarching purpose of verifying whether or not the claimed invention meets the mandatory formality and substantive legal requirements. This article employs a 'prosecutor–grantor perspective' to critically examine the efficacy of the patent prosecution regime of Mainland Tanzania. It identifies legal and institutional challenges limiting patent prosecution. These challenges include: (i) neither the Patents (Registration) Act, 1987 nor its Patents Regulations, 1994 provide for the procedural guidance on how to process appeals from the Registrar's Office to the High Court thereby creating a legal limbo; (ii) legal issues and dilemmas surrounding the prosecution of AI-generated inventions, and public order and morality exceptions during the examination process; (iii) undeveloped jurisprudence due to the underutilisation of the High Court; and (iv) infrastructural limitations, understaffing, and underqualified staff in the Patent Office. While drawing some lessons from other jurisdictions, such as Kenya and India, the article

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proceeds to recommend that Mainland Tanzania amend and restructure its existing patent prosecution regime to address identified legal and institutional challenges, benefiting all parties involved.

Keywords: *Intellectual property protection, patent application, patent prosecution in Tanzania.*

1. INTRODUCTION

It cannot be disputed that the patent system creates exclusionary rights for inventors and innovators to guarantee the recoupment of their invested capital.[1] These rights should be granted only to inventions and innovations that meet the underlying normative criteria. It is through patent prosecution this goal is achieved. Patent prosecution is the gatekeeper and a vital filtering mechanism against undeserved inventions and innovations.[2] This is a holistic process—involving prior art searching, assessing the patentability of a prospective patented invention, drafting, preparing, and filing a patent application—as well as opposing and/or invalidating the grant of such patent and other subsequent processes undertaken about the patented invention.[3] Its genesis and development are traced to the history of the patent system itself, which is based on the Venetian Patent Statute of 1474.[4] This

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1 See also Vries, D., *Leveraging Patents Financially: A Company Perspective*. Wiesbaden: Springer, 2012, p. 16.

2 Marsoof, A., Kariyawasam, K., and Talagala, C., *Reframing Intellectual Property Law in Sri Lanka: Lessons from the Developing World and Beyond*. Singapore: Springer, 2022, p. 39.

3 Amernick, B.A., *Patent Law for the Nonlawyer: A Guide for the Engineer Technologist, and Manager*. New York: Springer, 2012, pp. 71 et seq.

4 See Anderfelt, U., *International Patent-Legislation and Developing Countries*. Dordrecht: Springer, 2013, p. 3.

law granted patents by issuing a normative decree for inventive and novel inventions and innovations.[5] In principle, the Venetian Government granted *ad hoc* legal protections like *privilegi* (i.e., patents).[6] These *privilegi* promoted technological development and innovation while boosting the country's local production of services and goods.[7] This fact called for a rigorous filtering mechanism or thorough examination process to ensure what is protected is genuinely new and inventive. The patent law system calls this process patent prosecution.[8]

In Mainland Tanzania, patent prosecution is divided into two stages: pre-grant prosecution and post-grant prosecution. These stages involve highly regulated interaction between applicants (prosecutors) and the national patent office (grantor). It is worth noting that the Patents (Registration) Act of 1987[9] (the Act) and the Patents Regulations of 1994[10] (the Regulations) entirely regulate this process. In principle, patent prosecution is a decisive business strategy across all fields of technology and a powerful normative tool for national socio-economic development. Its effectiveness depends on certain preconditions, including a robust national patent prosecution regime. Therefore, this article employs a 'prosecutor–grantor perspective' to examine the effectuality of Mainland Tanzania's patent prosecution. It proposes this structure:

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5 In fact, the law obliged the grantees to publicly disclose such inventions and innovations to the Venetian State in order to obtain full-fledged legal protection.

6 These were loyal privileges grated by the Venetian State.

7 Fusso, S., "Lessons from the Past: The Venetian Republic's Tailoring of Patent Protection to the Characteristics of the Invention", 2019 at p. 113 (available at <https://ssrn.com/abstract=3331687> accessed 28 January 2024).

8 See also Kim, J., Jeong, B., and Kim, D., *Patent Analytics: Transforming Intellectual Property Strategy into Intelligence*. Singapore: Springer, 2022, p. 11.

9 Act No. 1 of 1987 (Cap. 217).

10 Patents Regulations, 1994 (G.N. No. 490 of 1995).

Part (2) discusses some informed thoughts on the relevant concepts and processes, followed by the legal and institutional framework regulating patent prosecution under part (3). Part (4) systematically analyses the legal and institutional challenges limiting the regime's effectiveness, and part (5) concludes the treatise by offering relevant proposals for improvement.

2. REFLECTION ON KEY CONCEPTS AND PROCESSES

2.1 Patent

The patent law of Mainland Tanzania does not define the term patent. Doctrinally, however, a patent means an exclusive statutory right granted by the national patent office (grantor) for inventions or innovations. These can be products or processes providing a novel way of doing something or offering a new technical solution to the existing problem(s) in various fields of human endeavours.[11] A patent is an intellectual property right (IPR) awarded for technical inventions, innovations, or discoveries. The legal owner can prevent others from using the patented subject matter for commercial gain.[12] In the marketplace, the patent provides a defensive mechanism to protect inventors and innovators from having their new inventions, innovations, and discoveries copied

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11 See the normative definition by the World Intellectual Property Organisation (WIPO) (available at <https://www.wipo.int/patents/en/> accessed 13 January 2024). See also Albert, D., et al., "Introduction to Patent Searching", in Lupu, M., et al., (eds.), *Current Challenges in Patent Information Retrieval*. Berlin: Springer, 2017, pp. 3–45, p. 4.

12 Omar, A.M., et. al., "Promotion and Knowledge of Online Patent Literature Search to Enhance Scientific Outputs in Tanzania: Case of Two Universities in Zanzibar", 52(1) *International Information and Library Review*, 2020, p. 2.

or imitated by their rival competitors.[13] Thus, the patent is a crucial normative tool in the business industry, acting as a shield, sword, or both.[14]

2.2 Invention

From a legal point of view, an invention is a technical solution in any field of human endeavours.[15] It relates to creating a new product, process, or method or may involve an incremental improvement of an existing product or process. An invention is protected through a patent, which, as noted, is a powerful commercial tool for gaining exclusivity and competitive advantage in the marketplace.[16] It is worth noting that inventions are products of human intellect obtainable through research and development (R&D) initiatives, adaptations from marketing and sales, increments through patent databases, outsourcing, and other sources. It is commercially necessary and encouraged for inventors to protect their inventions through patents to gain a competitive edge, create new sources of revenues through commercialiation, access niche markets and expand freedom to operate (FTO), enhance market bargaining power, especially in mergers and acquisitions, as well as patents do attract credible investors, among other things.[17]

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13 See Dornelles, J.P., "Why Are They Hiding? Patent Secrecy and Patenting Strategies", 22(3) *Innovation, Organisation and Management*, 2020, p. 316.

14 See also Tehranchi, B., "Intellectual Property Considerations and Patent Protection: A Surgical Roadmap", in Gharagozloo, F., et al., (eds.), *Robotic Surgery*. Cham: Springer, 2021, pp. 197–205, p. 197.

15 See Section 7(1) of the Act. See also WIPO., *Inventing the Future: An Introduction to Patents for Small and Medium-sized Enterprises*. Geneva: WIPO, 2018, p. 10.

16 Ibid, WIPO, 2018, p. 8.

17 WIPO., *WIPO Intellectual Property Handbook: Policy, Law and Use* (2nd Edn.). Geneva: WIPO, 2004, pp. 17–18.

2.3 Patent Prosecution

Patent prosecution refers to the entire process, from drafting and filing the patent application through search and examination procedures to maintaining the granted patent in the register of patents.[18] It is an interactive undertaking in which the applicant works with the national patent office to obtain a patent and accompanies legal protections for a certain period.[19] Patent prosecution serves the overarching purpose of verifying whether or not the claimed invention meets the mandatory formality and substantive legal requirements, thereby preventing "the grant of patents for inventions with low social value that increase the social cost of the patent system."[20] The economic theory of patents reaffirms that a successful patent prosecution incentivizes inventors to recoup the capital invested in the process, fostering continuous innovation and creativity.[21] Moreover, the revenues generated from a granted patent make it possible to (re)finance further technology research and development (R&D), thereby spurring better technologies for current and future generations. Mainland Tanzania's patent prosecution process is divided into two stages: pre- and post-grant.

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18 Donavanik, J., "The Use of Prosecution History of Foreign Counterpart Patents to Make In-Depth Analysis of Thai Patents", 16(1) *Naresuan University Law Journal*, 2023, pp. 69–92, p. 69. See also Brunner, J., "Patent Prosecution as Dispute Resolution: A Negotiation Between Applicant and Examiner", 2014(1) *Journal of Dispute Resolution,* 2014, pp. 7 et seq.

19 See also Lu, D.L., Kowalski, T.J., and Jarecki-Black, J., "Patent Prosecution of Biotechnology and Pharmaceutical Patents in a Changing Legal Landscape", 2(1) *Future Medicinal Chemistry*, 2009, pp. 7–9.

20 Encaoua, D., Guellec, D., and Martinez, C., "Patent Systems for Encouraging Innovation: Lessons from Economic Analysis", 35 *Research Policy*, 2006, pp. 1423–1440, p. 1424.

21 See also Moser, P., "Patents and Innovation: Evidence from Economic History", 27(1) *Journal of Economic Perspectives*, 2013, pp. 23–44, p. 25.

2.4 Pre-Grant Prosecution

2.4.1 Preparation, Drafting and Filing

Preparing a patent application requires the involvement of different types of expertise in the relevant field(s) of technology. The patent agent first needs to interview the inventor to appreciate the nature of the invention, the subject of patent protection, and its legal patentability criteria. It is equally important to thoroughly ascertain the prior art and inventorship issues before embarking on the drafting process, as the same might invalidate the patent later, as observed in some jurisdictions.[22] Preparing, especially appreciating the nature of the subject invention, is imperative before undertaking the actual drafting process.

The drafting process takes place after ascertaining the essential components of the invention and the subject of patent protection during the preparation stage. Drafting a patent application requires practical experience gained after a considerable period.[23] WIPO comments that a good drafting process produces a high-quality application with clear terms and a successful registration.[24]

An application is made to the Registrar of Patents within the Business Registrations and Licensing Agency (BRELA) through a

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22 See Mann, R.J., and Underweiser, M., "A New Look at Patent Quality: Relating Patent Prosecution to Validity", 9(1) *Journal of Empirical Legal Studies*, 2012, pp. 1–32, pp. 24–25.

23 Quinn, G., "Patent Drafting Basics: Instruction Manual Detail is What You Seek", 2018 (available at <https://ipwatchdog.com/2018/10/20/patent-drafting-basics-instruction-manual-detail/id=102519/> accessed 28 January 2024).

24 WIPO., WIPO Drafting Manual, IP Assets Management Series. Geneva: WIPO, 2007, p. 29. See also Wininger, A., "Tips for Accelerating Patent Prosecution in China", 2010 (available at <https://www.natlawreview.com/article/tips-accelerating-patent-prosecution-china> accessed 23 January 2024).

request on a prescribed Form (i.e., Form No. 2) and accompanied by payment of necessary prescribed fees.[25] Form No. 2 reflects a Consolidated Form in the Online Registration System (ORS). The application must contain a request, a description, claim(s), drawing(s), and an abstract. The description must fully and completely disclose the invention sufficiently for a thorough evaluation.[26] The claim defines the invention for which protection is sought and has to be fully supported by description.[27] In law, the claim determines the scope of protection and is always the bone of contention in patent litigations.[28] The Technical Board of Appeal of the European Patent Office in *Re Universidad de Sevilla* aptly underscores that claims must be clear to define patent protection, enabling potential infringers to determine if they are working within the claim's scope.[29]

2.4.2 Formal and Substantive Examination

The grant of a patent involves several rigorous statutory activities, including examination. The Registrar of Patents must subject the filed application to a formal procedural examination. This is a process of verifying whether all administrative and procedural requirements have been met, including whether the application concerned carries a clear description of the claims and particulars of the applicant.[30] The substantive examination follows and goes

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25 Section 18 of the Act and Regulation 8 of the Regulations.

26 See Regulation 8 of the Regulations.

27 See comprehensively Sections 35 and 37 of the Act and Regulations 8, 9, 10, 11, 12, and 13 of the Regulations.

28 Brumbaugh, N.J., "History and Purpose of Claims in United States Patent Law", 14(4) *Journal of the Patent Office Society*, 1932, pp. 273–287, p. 273.

29 T 0754/13 3.2.07 of 13 May 2014, para. 2.1 (p. 9).

30 See Section 25 of the Act. See also Ladas, S.P., *Patents, Trademarks, and Related Rights*. Harvard: Harvard University Press, 1975, p. 344.

beyond administrative and procedural requirements. It goes to the root of the patent application, assessing the normative patentability criteria of novelty, inventive step, and utility.[31] Regrettably, the patent prosecution regime of Mainland Tanzania does not allow an automatic examination of the substance unless the Minister responsible for matters relating to patents authorises it and only for certain specified technologies.[32]

2.4.3 Withdrawal, Rejection and Refusal of Patent Applications

The withdrawal is a voluntary action of the prosecutor to take back a filed application intending not to pursue any patent protection concerning the invention. Section 24 of the Act allows the applicant to withdraw his patent application at any time before the grant of a patent or rejection or refusal. The withdrawal action can be active or passive. An active withdrawal is a formal process of filing a formal request to withdraw the application. Passive withdrawal occurs when the applicant fails to respond to the official notification of the Registrar of Patents within the prescribed time, which consequently lets the application be deemed withdrawn. The reasons for withdrawal of patent applications include application documents with serious defects, lack of patentability criteria, anticipation of lack of market for the prospective patent, and opting for other intellectual property assets such as trade secrets.[33] In Mainland Tanzania, an application for active withdrawal requires a formal request to the Registrar of

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31 See also Bucknell, D.G., (ed.), *Pharmaceutical, Biotechnology and Chemical Invention*. Oxford: Oxford University Press, 2011, p. 321.

32 See Section 27 of the Act and Regulation 27 of the Regulations.

33 See Schettino, F., and Sterlacchini, A., "Determinants of Patent Withdrawals: Evidence from a Sample of Italian Application with the EPO", 31 *World Patent Information*, 2009, pp. 308–314, pp. 309 et seq.

Patents, accompanied by payment of a non-refundable fee.[34] The rejection and refusal of patent applications have similar connotations to withdrawals. The Registrar of Patents indicates his intention of not accepting such applications from the first instance due to the failure to comply with formal and substantive legal requirements.

2.4.4 Correction and Amendment of Patent Applications

Following a rejection or refusal of a patent application, the prosecutor can make corrections and amendments and re-file the application.[35] Failure to correct such defects presumes the application has not been filed. The patent prosecution regime of Mainland Tanzania provides a chance for the applicant to *suo moto* corrects or complies with any requirements before granting a patent. However, this should be done within three months through Form No. 5, accompanied by payment of a prescribed fee.[36] The procedure is part of the administration of patent justice and offers many benefits to the patent system. For example, the dynamic nature of technological innovation allows the prosecutor to fine-tune the application to ensure robust legal protection of the subject invention.[37] Moreover, it brings quality, clarity, and consistency to the patent application in compliance with the mandatory requirements of the patent law, best practices, and comments raised by the national patent office.[38] This procedure involves an

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34 Regulation 21 of the Regulations.

35 See Section 25(2) of the Act.

36 See Regulations 22 and 25 of the Regulations.

37 See Xiaolan, R., *Patent Administrative Litigation: Rules and Review*. Singapore: Springer, 2016, p. 100.

38 See also Reilly, G., "Amending Patent Claims", 32(1) *Harvard Journal of Law & Technology*, 2018, pp. 4 et seq.

amendment or correction of curable errors, mistakes, or omissions, such as typographical or clerical errors. Indubitably, the absence of this procedure would result in technological and scientific stagnation.[39]

2.4.5 Grant and Registration of Patent

After formally examining the patent application, the Registrar will grant and issue a patent to the prosecutor through Form No. 11. This grant has to be registered in the Register of Patents.[40] The grant of patent follows the Registrar's notification bearing his decision to grant such a patent and requesting the applicant to pay the necessary grant and publication fees within three months of the notification.[41] The grant and registration of a patent confers the patentee with an (absolute) patent right, namely, an exclusive right that prevents third parties, especially business competitors, from using the patented invention without his prior permission.[42]

2.5.6 Publication of Granted Patents and Issuance of Certificate of Grant

The grant and registration of the patent are followed by the publication in the Government Gazette and issuance of the certificate of grant to the patentee.[43] Section 28(3) of the Act provides that upon the payment of the grant and publication fees,

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39 See also the reasoning of the Court in *Nestle SA v. The Controller of Patents and Designs*, 2023/DHC/00074, High Court of Delhi (unreported) and *Allergan Inc. v. The Controller of Patents and Designs*, 2023/DHC/000515, High Court of Delhi (unreported).

40 See Section 28(1) and (2) of the Act and Regulations 28 and 29 of the Regulations.

41 Ibid.

42 See also Eisenberg, R.S., "Patents and the Progress of Science: Exclusive Right and Experimental Use", 56(3) *The University of Chicago Law Review*, 1989, pp. 1017–1086, p. 1017. See further *K. Ramu v. Adyar Ananda Bhavan & others* C.S No. 495 of 2006, Madras High Court of India.

43 Section 28(3) of the Act.

the Registrar of Patents has to publish a reference to the grant to the Government Gazette (GG) and proceed to issue the respective patent to the applicant within four months from publication of such grant, followed by a certificate of grant through Form No. 12. The certificate of grant is a *prima facie* evidence of patent ownership by the patentee.

2.4.7 Post-Grant Prosecution

Post-grant prosecution consists of two procedures: extension of the term of the patent and maintenance of the patent. The two procedures reinforce the patent exclusive rights (or patent monopoly) granted under the patent law, allowing the patent holder to recoup the capital invested in the process for a maximum period.[44] In this way, post-grant prosecution prevents the premature loss of exclusive rights (or patent monopoly).

2.4.8 Extension of the Term of Patent

The minimum life span of any patent protection is twenty years, counting from the filing date.[45] Upon the expiration of this period, the patent falls into the public domain.[46] In Mainland Tanzania, a patent expires at the end of the tenth year after the filing date. This means there is no automatic protection for twenty years. The patentee or licensee who wishes to extend the term of any patent for another ten years must request the Registrar within twelve

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44 See also the discussion of Lester and Zhu at Lester, S., and Zhu, H., "Rethinking the Length of Patent Terms", 34(4) *American University International Law Review*, 2019, pp. 787–806, pp. 787 et seq.

45 See Article 3 of the 1994 Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement).

46 For a detailed discussion as regards the concept of public domain and its normative supportive arguments, see Horowitz, S.J., "Designing the Public Domain", 122(5) *Harvard Law Review*, 2009, pp. 1489–1510, pp. 1489 et seq.

months before the said patent expires and upon payment of prescribed fees.

The Registrar will then extend such term for five years, and upon further request, for the remaining five years respectively.[47] This is known as the 'extension of the term of patent.' It is not the same thing as a 'patent of addition.'[48] An extension of the patent term for the second period is strictly conditional. The patentee has to prove that the invention is being worked on in the United Republic of Tanzania or that there is reasonable cause for failing to work on it.[49] These conditional requirements embedded in the patent prosecution regime of Mainland Tanzania dilute the monopolistic nature of patents as fully-fledged personal property rights and contravene the relevant international standards on patent protection.

2.4.9 Maintenance of Patent

The protection of patent's lifecycle requires payment of prescribed annual fees paid in advance to the Registrar of Patents starting with the second year after the filing date. Therefore, patents require annual maintenance. Regulation 30 of the Regulations clarifies that a patent maintenance fee is a statutory fee payable annually over a granted patent's lifecycle to give it the force of law in Tanzania.

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47 Section 39 of the Act. The said request has to be presented through Form No. 15.

48 In fact, patent of addition "is an application made for a patent undergoing improvement or modification of the invention described or disclosed in the main invention for which the patentee has already applied for or has obtained a patent", see Dewan, M., "Patent of Addition", 2022 (available at <https://www.lexology.com/library/detail.aspx?g=0307bcf3-8ade-406e-b43a-83a88ec17c09#:~:text=Patent%20of%20Addition%20is%20an,or%20has%20obtained%20a%20patent> accessed 2 February 2024).

49 See Section 39(2) of the Act.

Androde and Viswanath describe the payment of statutory fees for patent maintenance as an "integral part of the patenting process and may also be referred to as the payment of patent annuities, patent annual fees, patent renewal fees, or patent annual fees."[50]

3. LEGAL AND INSTITUTIONAL FRAMEWORK REGULATING PATENT PROSECUTION

3.1 Legal Framework

The discussion concerning the legal and institutional framework is based on the premise that an effective patent prosecution regime constitutes a positive incentive for inventors and innovators.[51] This part discusses the legal and institutional framework regulating patent prosecution in Mainland Tanzania. The overarching gist portrays a layout of the existing legal and institutional structures within which matters relating to patent prosecution are handled in the territory.

3.1.1 Domestic Legislation

The Act and its Regulations govern patent prosecution in Mainland Tanzania. The Act establishes the National Patent Office (the grantor)[52] to administer the territory's substantive and procedural aspects of patent prosecution.[53] The statutory functions and powers of the grantor are performed through the Registrar of Patents, who is the appointee of the President—assisted by the

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50 Androde, A., and Viswanath, V., "A Global Look at Post Grant Patent Maintenance Fees", 2020 (available at <https://ipwatchdog.com/2020/01/14/global-look-post-grant-patent-maintenance-fees/id=117768/> accessed 25 January 2024).

51 See also Devlin, A., "The Misunderstanding Function of Disclosure in Patent Law", 23(2) *Harvard Journal of Law and Technology*, 2010, pp. 401–402.

52 The same is an integral part of the Business Registrations and Licensing Agency (BRELA).

53 See Sections 3 and 5 of the Act.

Deputy Registrar and other Officers appointed by the Minister responsible for matters of patents.[54] Regrettably, neither the Act nor Regulations prescribe the professional qualifications or legal requirements to consider when appointing these officers.[55]

The Act excludes against patent prosecution these matters, namely: "discoveries, and scientific and mathematical theories; plant or animal varieties or essentially biological processes for the production of plants or animals, other than microbiological and the products of such processes; schemes, rules or methods for doing business, performing purely mental acts or playing games; methods for the treatment of the human or animal body by surgery or therapy, as well as diagnostic methods, except their products for use in any of those methods; and more presentation of information."[56] These subject matters are not patentable because of public interest and/or public policy justifications.[57]

Procedurally, the Act obligates prosecutors to lodge their formal requests for the grant of patents through Form No. 2 (in triplicate), which are accompanied by payment of prescribed fees as per the First Schedule to the Act.[58] The Act also provides for a mandatory inclusion of patent specifications in the patent application

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54 Ibid, Section 4.

55 It can be argued that this loophole is the source of unqualified and/or underqualified personnel in the national patent office, see the next part (4) for further discussion.

56 See Section 7 of the Act.

57 See comprehensively Bently, L., "Exclusions from Patentability and Exceptions to Patentees' Rights: Taking Exceptions Seriously", 64 *Current Legal Problems*, 2011, pp. 315–347, pp. 317 et seq.

58 It is worth noting here that the First Schedule to the Act provides a list of fees payable in the whole process of undertaking patent prosecution in Mainland Tanzania. See also Regulation 8.

documents.[59] The patent specification comprises the title of the invention, the background of the invention, a summary of the invention and its objectives, drawings or sketches, description and claims, and an abstract. The grantor can reject or refuse any prosecution documents not substantially compliant with the patent specification. In *Kirin-Amgen Inc v. Hoechst Marion Roussel Ltd,* the Court reaffirmed that a patent application is bound to fail if the specification "does not disclose the invention in a manner which is clear enough and complete enough for the invention to be performed by the person skilled in the art."[60]

The correction and amendment of patent application documents are integral to patent prosecution. The Act allows prosecutors to correct or amend any formal defects concerning their prosecution documents. However, this has to be done before the grant.[61] Similarly, the Act incorporates the right of priority as provided under international intellectual property regimes to facilitate patent prosecution in multiple jurisdictions.[62] The National Patent Office must formally examine whether or not all formal (administrative) requirements have been complied with before the grant. Examining the substance is generally not an integral part of the patent prosecution regime in Mainland Tanzania.[63] The patent law

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59 See Regulations 8, 9, 10, 11, 12, 13 and 14.

60 [2005] RPC 169. See also Bainbridge, D.I., *Intellectual Property (8th Edn.)*. Edinburgh: Person Education Limited, 2010, p. 413.

61 See Sections 19 and 20. See also the right to withdrawal before the grant under Section 24.

62 See Section 21.

63 See Sections 25 and 27 as well as Regulation 27.

obligates the Registrar of Patents to conduct a formal examination before admitting any application for the patent grant.[64]

After successfully conducting such a formal examination, the Registrar must grant, publish, and issue the respective patent.[65] Patent law obligates prosecutors to pay maintenance (annual) fees to keep their patents alive.[66] Overall, it is fair to clarify that substantive and procedural aspects of the patent law and the patent prosecution discussed above are yet to be tested in the High Court and Court of Appeal. As such, the country lacks any (developed) judicial jurisprudence concerning the theoretical and practical applicability of procedural and substantive provisions of the patent law beneficial to both prosecutors and the grantor.

3.1.2 Regional and International Instruments

Tanzania is a signatory to several regional and international intellectual property law frameworks, which holistically enshrine relevant normative standards regarding patent prosecution. The first instrument worthy of consideration is the Protocol on Patents and Industrial Designs within the Framework of the African Regional Intellectual Property Organisation, 1982 (as revised) (hereinafter referred to as the Harare Protocol or Protocol). It was adopted by the African Regional Intellectual Property Organization (ARIPO) on 10 December 1982 to strengthen cooperation between State Parties to protect and exploit patents

64 See Regulation 25.
65 See Regulation 28.
66 See Regulation 30.

by establishing a centralized procedure to grant patents.[67] Tanzania ratified this Protocol on 1 September 1999.

The provisions of the Harare Protocol and its Regulations[68] (ARIPO Regulations) are applicable in Mainland Tanzania when, on the one hand, qualified Tanzanian prosecutors seek protection in multiple jurisdictions using this regional centralised route; and, on the other hand, when Mainland Tanzania acts as a Designated State, Elected Office or simply a Receiving State as per Section 29 of the Act.[69]

Unlike the Act of Mainland Tanzania, the Harare Protocol provides for a pre-grant publication of patent applications to be effected after an expiration of eighteen months from the filing date.[70] The Harare Protocol obligates the ARIPO office to formally examine patent applications before granting such patents. Of particular interest is that, like in Mainland Tanzania under the said Act, substantive examination is not an automatic procedure under the Harare Protocol: The Protocol demands a formal request for the ARIPO office to undertake substantive examination and the payment of special fees.[71] The ARIPO office is a quasi-judicial

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67 See the Preamble of the Harare Protocol.

68 Regulations for Implementing the Protocol on Patents and Industrial Designs Within the Framework of the African Regional Industrial Property Organization, 2002 (as revised).

69 Section 29 of the Act states that "*A patent granted by virtue of the Protocol* in respect of which the United Republic of Tanzania is a designated state, *shall have the same effect in the United Republic of Tanzania as a Patent granted under this Act*, unless the Registrar has communicated to the ARIPO office in respect of the application thereof, a decision in accordance with the provisions of the Protocol, *that if the patent is granted by the ARIPO office*, that patent shall have no effect in the United Republic of Tanzania", (emphasis mine).

70 See Section 2*ter* of the Protocol.

71 See Sections 3(2)(b) and 3(3)(10) of the Protocol.

body, and her decisions are appealable to the Board of Appeal established within the framework of the ARIPO institutional and regulatory structure.[72]

It is noteworthy to underscore here that patent prosecution through the ARIPO framework has a novel feature lacking in Mainland Tanzania's framework. That is to say, the Harare Protocol regulates the grant of patents for transgenic plants and animals and biotechnological subject matters. For example, Regulations 7*bis*.2 and 7*bis*.3 of the ARIPO Regulations provide that "biotechnological inventions shall be patentable if they concern – biological material which is isolated from its natural environment or produced by means of a technical process even if it previously occurred in nature; plants or animals provided that the technical feasibility of the invention is not confined to a particular plant or animal variety; a microbiological or other technical process, or a product obtained by means of such a process other than a plant or animal variety."

It has to be noted that certain biotechnological inventions are not patentable. These are: "processes for cloning human beings; processes for modifying the germ line genetic identity of human beings; uses of human embryos for industrial or commercial purposes; processes for modifying the genetic identity of animals which are likely to cause them suffering without any substantial medical benefit to man or animal, and also animals resulting from such processes; an embryonic stem cell of an animal, an animal at the various stages of its formation and development such as a germ cell, a zoosperm, an embryo, [and others], belong[ing] to the

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72 See Section 4*bis* of the Protocol.

category of animal variety" among other things.[73] This exclusion or exception is founded on morality and bioethics' justifications, which guide the patentability of subject matters in the biotech industry.[74]

Last is the Patent Cooperation Treaty (PCT) of 1970. It is a multilateral patent law treaty adopted by the World Intellectual Property Organisation (WIPO) on 19 June 1970 and entered into force on 24 January 1978. Essentially, the PCT provides a centralized procedure for lodging patent applications in multiple jurisdictions of member states to PCT by a single application.[75]

Tanzania became a state party to PCT on 14 September 1999. Several foreign patent applications enter Africa and Mainland Tanzania, in particular, through this framework.[76] Mainland Tanzania's PCT system is integral to the domestic patent prosecution regime. Section 32 of the Act directs the Patents Office to act as a designated, receiving, or elective office. The PCT constitutes the foundational global framework providing a worldwide mechanism for simplified filing and processing of patent applications, which "postpones the major costs associated

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73 See Regulation 7*bis*.2 and 7*bis*.3 of the ARIPO Regulations.

74 See comprehensively Caplan, A., and Arp, R., *Contemporary Debates in Bioethics*. Hoboken: Willey, 2014, pp. 137 et seq. See further Guilloux, B., *Marine Genetic Resources, R&D and the Law 1: Complex Objects of Use*. Hoboken: Willey, 2018, pp. 96 et seq.

75 See Rajec, S.R.W., "Advances in Patent Rights Acquisition in International Patent Law", 41(2) *Cardozo Arts & Entertainment Law*, 2023, pp. 447–456, p. 451.

76 See relevant statistics at WIPO, *PCT Yearly Review 2024: The International Patent System*. Geneva: WIPO, 2024, pp. 36–54. See also WIPO, *WIPO Indicators 2024*: Geneva: WIPO, 2024, pp. 26–31.

with internationalising a patent application; and provides a strong basis for patenting decisions."[77]

3.2 Institutional Framework

3.2.1 Office of the Registrar of Patents

The Office of the Registrar of Patents grants patents in Mainland Tanzania. It is established under Section 3 of the Act. It serves as a government office within the institutional framework of the BRELA. It is essential to point out that the BRELA is an executive agency under the Ministry of Industry and Trade responsible for business administration and implementation and/or enforcement of relevant laws, including patent law. It was established within the purview of the Executive Agencies Act[78] and started its official business on 3 December 1999.[79]

Regarding patent prosecution through the regional (ARIPO) and international (PCT) frameworks, the Office of the Registrar of Patents is mandated to act as a Receiving Office, Designated Office, or Elected Office.[80] In this way, it is obliged to execute many related statutory functions, including receiving patent applications, conducting formal examinations, and presiding over quasi-judicial proceedings concerning disputes arising from patent prosecution.[81] The BRELA is an omnibus national intellectual

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77 See Bonvallet, C., "The Powerful Benefits of the Patent Cooperation Treaty (PCT)", PCT Webinar Organised by Patsnap WIPO, Geneva, October 18, 2017 at p. 17.

78 Act No. 30 of 1993.

79 See the relevant official webpage of the BRELA (available at <https://www.brela.go.tz/index.php/about/introduction> accessed 28 January 2024).

80 See Sections 29, 31 and 32 of the Act.

81 See Section 5 of the Act. See generally Mwenhwandege, D.K., "Compliances to Laws, Regulations and Policies Governing Corporate Business in Tanzania: General and

property office faced with serious institutional challenges that limit the country's patent prosecution effectiveness.[82]

3.2.2 The High Court of Tanzania

The High Court of Tanzania (the High Court or Court) is a key institution in the administration of patent justice, especially in circumstances where the decisions of the grantor aggrieve prosecutors.[83] It plays a significant role in both pre-and post-grant prosecution stages. The High Court is obligated to hear appeals against decisions by which the Registrar of Patents accords a filing date, rejects applications, treats applications as if the same had not been filed, and determines whether or not any of the claims are withdrawn[84] to re-determine the decisions of the Registrar of Patents as regards the refusal or rejection of requests for extension of the term of patents;[85] to hear appeals from prosecutors who are aggrieved by decisions of the grantor concerning the grant of patents or refusal to grant a request for restoration of patent applications or in cases where patents are deemed to be withdrawn due to failure to pay maintenance or annual fees;[86] to mentioned just a few. Despite these clear statutory mandates about patent prosecution in the country, the High Court is yet to be called upon to exercise its very mandates. Thus, this Court has yet to establish a thorough judicial assessment concerning the scope and applicability of substantive and procedural legal aspects of patent

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Crosscutting Regulatory Issues", LL.M. Dissertation, Open University of Tanzania, 2020, pp. 39 et seq.

82 See the next Part (4) of for further discussion.

83 See Section 2.

84 Ssection 30.

85 See Section 39(6).

86 See Section 40.

prosecution. The reasons for the underutilisation of the High Court are discussed under subpart 4.2.5 below.

3.2.3 Ministerial Role on Issues of Patents

The Minister responsible for matters relating to patents (under the current institutional set-up, is the Minister of Industry and Trade). The Minister plays a key normative role—in appointing the Deputy Registrar of Patents, Examiners, and other Officers within the Office of the Registrar of Patents—to carry out relevant statutory functions concerning patent prosecution in Mainland Tanzania.[87] The Minister is also responsible for facilitating substantive examination. Section 27(1) of the Act reaffirms that "the Minister may by Regulations direct that applications for patents relating to a specified technical field shall be the subject of an examination as to substance." Since the inception of this statutory provision, there is no evidence indicating that the Minister has invoked his mandate under the said provision.

3.2.4 ARIPO Secretariat

ARIPO Secretariat (the ARIPO office) becomes relevant when patent prosecution is sought in multiple (regional) jurisdictions under the Protocol on Patents and Industrial Designs within the Framework of the African Regional Intellectual Property Organisation, 1982 (as revised) and, primarily when Mainland Tanzania acts as a Receiving State, Elected State or Designated State. The ARIPO office is empowered to, among other things, grant patents and administer such patents on behalf of the Contracting States. This power constitutes a conspicuous exception or departure to the territoriality principle of patent rights

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87 See Section 4. However, the law does not provide for the professional qualifications or legal requirements to be considered in appointing these important personnel.

protection: it substantively negates the normative idea that there is no such thing as regional or international patents.

Section 29 of the Act recognises the ARIPO office as a relevant actor when patent prosecution is effected across the Member States of ARIPO. As a regional and international quasi-judicial body, the ARIPO office must comply with and adhere to the Harare Protocol and its Regulations when effecting patent prosecution. In this way, the ARIPO Board of Appeal regarding *Patent Grant No. AP773 Entitled Foot Operated Sanitary/Litter Bin* accentuates that "we would like to urge the ARIPO office to strictly observe the Protocol and in particular adherence to time limits, information delivery, procedure and processing of applications, procedure on appeals and rules of natural justice."[88] The next part examines the legal and institutional challenges limiting the effectiveness of patent prosecution in Mainland Tanzania.

4. LEGAL AND INSTITUTIONAL CHALLENGES

4.1 Legal Challenges

4.1.1 Remedy Against Registrar of Patents' Decisions: A Procedural Dilemma

The Registrar's Office is a quasi-judicial body that receives and processes patent applications based on the provisions of the patent law. As noted earlier, patent prosecution involves an interaction between prosecutors, the grantor (i.e., the national patent office), and the High Court. The Court is an important player in the administration of patent justice, especially when the decisions of the Registrar aggrieve applicants.

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88 See para. 15 (Decision of 30 August 2007).

Regrettably, neither the Act nor Regulations provide for the procedural guidance on how to process appeals from the Registrar's Office to the High Court, but also as regards the powers of the Court, its composition, and the nature of appeals proceedings considering these appeals originate from a quasi-judicial body. The patent law does not indicate the nature of pleadings used in the appeals process, the appeal timeframe, and where to lodge them.[89] This legislative gap could lead to conflicting decisions, which may undermine the whole system of judicial precedent in patent law. Furthermore, it could lead to unnecessary preliminary objections and increased patent prosecution and litigation costs. At a macro-level, this could entirely prevent prosecutors from accessing patent justice through the High Court (and Court of Appeal).[90] It is worth mentioning that the law is instructive and certain in similar proceedings from quasi-judicial bodies to the High Court, such as in labour, tax, land, and mining matters. The Assistant Registrar and Senior Examiner at the Patent Office (BRELA) noted that the Civil Procedure Code[91] can be invoked to fill this legislative gap.[92]

Patent law does not reference the Civil Procedure Code, the general law for civil proceedings, nor does it mandate applying High Court practices from normal civil cases. In Kenya, for example, the Industrial Tribunal rightly held that the practice under

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89 This is collaborated by the information obtained from four patent attorneys, interview by author (8 October 2023, Ilala District, Dar es Salaam).

90 See generally Michael, O.C., "Appraisal of What Constitutes Legal Gaps and How They Are Filled in Different Jurisdictions", 41(1) *JMCL*, 2014, pp. 141–174, pp. 149 et seq.

91 [Cap. 33 R.E 2019].

92 Interview by the author (12 October 2023, BRELA office, Dar es Salaam).

the Civil Procedure Act and Rules cannot be invoked without explicit provisions referencing that effect.[93] There is thus an urgent need to rectify this legislative omission and/or procedural dilemma to create legal certainty in the administration of patent prosecution justice in Mainland Tanzania.

4.1.2 Public Order and Morality During Examination Process

Any law enacted by legislative bodies in a particular political community reflects its public order and morality.[94] Inventions and innovations that offend societal moral values and public order cannot be accorded any legal character.[95] The terms' public order' and 'morality' are ambiguous, and their genuine construction varies depending on the social orientation, practices, and experience of the state concerned. They reflect the country's prevailing socio-cultural and religious values.[96] It is thus highly improbable that an objective definition is provided.[97] In Mainland Tanzania, patent prosecution is not immune from limitations and exclusions. Accordingly, certain subject matters are not patentable at all. The Patents Act regime also prohibits the exploitation of certain

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93 See *John Kamonjo Mwaura v. KIPI and others*, IPT Appeal No. 21 of 2018, among other things, the humble Tribunal at p. 11 aptly makes it clear that "there is no incorporation of the Civil Procedure Act or Rules by reference in either Industrial Property Act or Industrial Property Rules. In view of this, it is improper and inappropriate to invoke the Civil Procedure Act and Rules in appeal proceedings […]."

94 For a general discussion, see Moore, M.S., "Four Reflections on Law and Morality", 48(5) *William and Mary Law Review*, 2007, pp. 1523–1570, pp. 1526 et seq.

95 Kankanala, K.C., *Genetic Patent Law and Strategy*. New Delhi: Manupatra, 2007, pp. 128 et seq.

96 See generally Curci, J., *The Protection of Biodiversity and Traditional Knowledge in International Law of Intellectual Property*. Cambridge: Cambridge University Press, 2020, pp. 268 et seq.

97 Prifti, V., "The Limits of "Ordre Public" and "Morality" for the Patentability of Human Embryonic Stem Cell Inventions", 22(1–2) *The Journal of WIPO*, 2018, pp. 2–15.

inventions and innovations considered '*immoral*' or against '*public order*.'[98]

The patent law neither defines nor sets normative benchmarks on 'public order' or 'morality" exceptions.[99] These guiding benchmarks could help Examiners execute their patent prosecution mandates according to the lawmakers' intent and without prejudice.[100] The Office of the Registrar of Patents has not formulated any relevant guidelines, manuals, or practice notes. The High Court has not developed any jurisprudence that clearly defines 'public order' or 'morality' for patent prosecution or examination purposes.[101]

In other jurisdictions, relevant normative benchmarks have been adopted to guide Examiners as regards public order and morality exceptions during the examination process. For example, the Kenyan Guideline for the Examination of Patents, Utility Models, and Industrial Designs of 2007[102] instructs that it is within the province of Government policy-makers to decide matters that can be excluded from the patent prosecution process on the grounds of public order and morality.[103] These matters include inventions of which commercial exploitation would be contrary to morality

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98 Section 12 of the Act; Regulation 16(i) of the Regulations.

99 Cf. Casabona, C.M., and Beriain, I.M., (eds.), *Synbio and Human Health: A Challenge to the Current Intellectual Property Framework?*. Cham: Springer, 2014, pp. 117 et seq.

100 Senior Examiner and Assistant Registrar at the Patent Office, interview by author (12 October 2023, BRELA office, Dar es Salaam).

101 Ibid.

102 Adopted by the Kenya Industrial Property Institute (KIPI).

103 See Para. 6.36 of the Guideline.

and public order, such as methods of cloning human beings and mantraps.[104]

In Singapore, the Intellectual Property Office of Singapore (IPOS), through the Examination Guidelines for Patent Applications at IPOS of 2022, reaffirms that public order and morality exceptions aim at preventing "the grant of patent rights for inventions which the general public would regard as abhorrent or from which the public need protection."[105] The Guidelines instruct Examiners to consider that "the test relates to public perceptions – *moral beliefs differ between individuals and care should be taken by Examiners to avoid applying their personal beliefs during examination*."[106] The Guidelines equally instruct that morality and public order exceptions may not prevent the prosecution of inventions considered immoral or against public order in Singapore if the purpose is to export them to a country where such prohibitions do not apply.[107] In other words, a patent law provision may prohibit the *use* of an invention in Singapore on the grounds of public order and morality, but this does not necessarily exclude it from patentability.

Furthermore, inventions that offend morality and public order may still be prosecuted and commercially exploited under stringent government legal regulations and directives.[108] Overall, particular

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104 Ibid.

105 Para. 8.196 of the Guidelines. See also Demir, E., and Stamhuis, E., "Patenting Human Biological Materials and Data: Balancing the Reward of Innovation with the *Ordre Public* and Morality Exception", 18(7) *JILP*, 2023, pp. 546–553 at p. 549 where the authors argue that the aim of this exception "is to refuse patent protection to inventions that may provoke public disorder or cause offensive use, criminally or generally."

106 Ibid, (emphasis mine).

107 Ibid, Para. 8.197.

108 Ibid, Paras. 8.195–8.218.

inventions are considered immoral or against public order, such as inventions that can cause death, pandemics, and substantial damage to properties, as well as inventions related to toxins, biological agents, and genetic manipulations.[109] Examiners are encouraged to consult Senior Examiners when examining applications that offend morality and public order.[110]

Similarly, in India and the Republic of Korea, the national patent offices have adopted guidelines and manuals to govern morality and public order exceptions during examination. In these jurisdictions, the following inventions are considered immoral and against public order for purposes of patent prosecution: any invention whose primary purpose or commercial use involves, for example, committing theft or burglary; counterfeiting of currency notes; gambling; adulteration of food; and inventions relating to sexual aides.[111] Choudhary argues that in developed and least developed countries, the patent regime is designed not only to increase the rate of innovations but also the same is attuned to enhance access to life-saving technologies, particularly in the field of public health, while paying attention to public policies such as moral values and public order.[112] Therefore, the "patent law's

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109 Ibid.

110 Ibid.

111 See the Office of Controller General of Patents, Designs and Trademarks (India), Manual of Patent Office Practice and Procedure, November 2019, p. 88; and Korean Intellectual Property Office (KIPO), Patent Examination Guidelines, January 2021, pp. 371–372.

112 Choudhary, K., "Ordre Public and Morality Exclusions from Patentability" 2024 (available at <https://www.lexology.com/library/detail.aspx?g=e1eff8bb-aeqd-4b20-bc95-68dd27f5aa07> accessed 22 January 2024). See also Thambisetty, S., "Understanding Morality as a Ground for Exclusion from Patentability under European Law", 12(2) *Eubios Journal of Asian and International Bioethics*, 2002, pp. 48–53.

existing public policy and morality exclusion should be clearly (re)interpreted and a new method introduced for assessing the moral and public policy implications of commercialising emerging technologies."[113] National legislators must establish the general framework for morality and public order exceptions within which the patent office will operate.

4.1.3 Artificial Intelligence's Inventions and the Prosecution Process

Artificial intelligence (AI) is an ability demonstrated by a computer or robot controlled by a computer to perform activities usually performed by humans. In the technology industry, AI is already a game-changer. AI-generated inventions and innovations are becoming increasingly popular worldwide.[114] The traditional patent regime is squarely founded on 'human-centered innovation.' It presupposes that an inventor or innovator is always a natural person who should be acknowledged and attributed in patent prosecution processes. Section 14 of the Act reaffirms this position. It states that "the right to a patent shall belong to the inventor. If two or more persons have jointly made an invention, the right to the patent shall belong to them jointly. If and to the extent to which two or more persons have made the same invention independently of each other, the person whose application has the earliest filing date or, if priority is claimed, the

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113 Pila, J., "Adapting the Ordre Public and Morality Exclusion of European Patent Law to Accommodate Emerging Technologies", 38(1) *Nature Biotechnologies*, 2020, pp. 546–558, p. 546.

114 Shrivastava, V., Bansal, J.C., and Panigrahi, B.K., *Power Engineering and Intelligence Systems*. Singapore: Springer, 2024, p. 300. See also Sun, H., "Artificial Intelligence Inventions", 50(1) *Florida State University Law Review*, 2022, pp. 61–122, at p. 61 "In the new technological era, artificial intelligence (AI) reigns supreme. With the assistance of AI systems, society is undergoing a radical transformation. AI may not only soon replace human labour in many industrial sectors, but as AI gains the power to generate greater inventions, it may also outsmart human inventors."

earliest validly claimed priority date and leads to the grant of a patent, shall have the right to the patent."[115]

The description, part of the patent specification, must be presented to enable a person skilled in the art to learn and do the invention disclosed. Besides, the patent examiner, who is a qualified human expert in the area of technology concerned, is expected to be able to study the invention and judge it against the patentability criteria before the grant. However, AI poses several regulatory challenges in the patent prosecution processes. Considering the current structure of the patent law in Tanzania, several normative questions on patent prosecution arise. They include the following questions: Should AI inventions go unexamined or unprotected because the law does not recognise non-human inventors? Who should be a person skilled in the art of an examiner for AI patent applications? And what should be the term of patent protection for AI inventions, considering the short-cycle or lifespan of AI inventions in the marketplace? All these normative questions lack normative answers under Mainland Tanzania's existing patent prosecution regime.

When asked, the Assistant Registrar and Senior Examiner at the Patent Office (BRELA) responded that the patent law in Mainland Tanzania is silent on AI. However, the examiner opined that AI inventions cannot be protected in the territory.[116] It should be noted that the nature of the aforementioned Tanzanian provisions is similar and/or identical to that of the U.S. regime in which the

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115 See Sections 17 and 25(6) of the Act and Regulations 8(2) and 28(2)(c) of the Regulations.

116 Interview by author (12 October 2023, BRELA office, Dar es Salaam).

United States Patents and Trademark Office (USPTO) has categorically ruled that in certain circumstances, AI inventions can be subjected to prosecution and hence protected.[117] Therefore, there is an urgent need to repackage the patent prosecution regime to reflect the current technological developments in the patenting industry.

4.2 Institutional Challenges

4.2.1 BRELA: An Omnibus National Office

Organisationally, the Patents Section (which forms part of the Industrial Property Division) of the BRELA serves as the Office of the Registrar of Patents responsible for the grant of patents within the meaning of Sections 3, 4, and 5 of the Act.[118] The BRELA is designed to perform a wide range of generic legal mandates, including company registration, business name registration, issuance of industrial licences, and intellectual property rights (IPRs), such as patents.[119] BRELA is, therefore, designed in this way: an office lumped with multiple statutory responsibilities—some of these responsibilities should have been allocated to independent, autonomous, and separate national organs, each performing specific legal mandates.

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[117] It is worth highlighting that the USPTO's argument is premised on the fact that the U.S patent law (which is similar to that of Mainland Tanzania as noted above) repeatedly refers to innovators and inventors using humanlike words such as 'whoever' and pronouns like 'himself' and 'herself,' nevertheless, it reaffirms that the protection of patents concerning AI may be offered in some circumstances.

[118] See also the Approved Organisation Structure of the Business Registrations and Licencing Agency (BRELA), Approved by the President in March, 2024 (available at <https://www.brela.go.tz/pages/organization-structure> accessed 2 February 2025).

[119] See para. 2 of the Executive Agencies (The Business Registrations and Licensing Agency) (Establishment) Order, 1999 (G.N No. 294A of 1999), which came into operation on 28 October 1999.

A well-designed and adequately equipped national office is a prerequisite for an effective and efficient patent prosecution.[120] Cruz and Olivos rightly reaffirm that "a country without a good patent office and good patent laws is just a crab, and cannot travel any way but sideways and backways."[121] As such, for the attainment of institutional development goals and better carrying out of its statutory mandates, including mandates relating to patent prosecution, this IPRs Division of BRELA ought to have been created as an autonomous and independent national organ dealing with specific and pure mandates on IPRs, including patent prosecution.

Establishing an autonomous and independent national organ with specific and pure IPRs mandates contributes to institutional effectiveness, efficiency, accountability, and transparency that enhance, among other things, the patent prosecution process. It should be noted here that the Office of the Registrar of Patents is obliged to perform not only the most known statutory duty, i.e., granting patents but also is equally obliged to promote inventiveness among nationals of Tanzania.[122] This cannot be achieved under the current institutional set-up. This is because the national office will:

> …likely crash in attempts to do everything. The key is to have fewer, clear, and not self-defeating objectives. Having "lofty objectives" […] is one of the deadly sins in public

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120 Picard, P.M., and Potterie, B.P., "Patent Office Governance and Patent Examination Quality", 104 *Journal of Public Economics*, 2013, pp. 14–25, pp. 16–17.

121 See Cruz, M.S., and Olivos, C., "The Twenty-First Century Intellectual Property Office", in Correa, C., and Seuba, X., (eds.), *Intellectual Property Development: Understanding the Interfaces*. Singapore: Springer, 2019, pp. 181–198, p. 181.

122 See Section 5(b) of the Act.

> administration. A direct guarantee for non-performance […] is to try to do several things at once […], the truth is, if you try to do everything, you'll accomplish nothing. When authorities have too many objectives, they face what is known as *priority goal ambiguity*, where some goals are sacrificed at the expense of others.[123]

It is worth stressing that a solid national patent office is a precondition for effective patent prosecution and the development of matured innovation in any country. The important thing is the stability of the office, regardless of its size, and that it has a clearly defined purpose. The experience shows that most developed countries started with small yet solid IP offices whose mandates were specific on IPRs and not lumped. This resulted in institutional efficiency, effectiveness, transparency, and accountability, which later transformed the respective States into world-class hubs of patents and innovations: Korean Intellectual Property Office (KIPO), Japan Patent Office (JPO), China National Intellectual Property Administration (CNIPA), United States Patents and Trademark Office (USPTO), to mention just a few, are among the living examples.[124]

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123 Temu, G., "Regulation and Enforcement of Competition Law in Tanzania's Telecommunications Sector: Law, Institutional Design and Practice", PhD Thesis, University of Bayreuth, 2021, p. 258.

124 See among others, Liu, K., *IP Laws and Regimes in Major Asian Economies: Combing Through Thousand Threads of IP to Peace in Asia*. Abingdon: Taylor & Francis, 2022, pp. 7 et seq; Longo, J., "A Brief Analysis of the Chinese Intellectual Property Regime", 2019 (available at <https://a-capp.msu.edu/article/a-brief-analysis-of-the-chinese-intellectual-property-regime/> accessed 28 January 2024); WIPO, *Intellectual Property Offices and Sustainable Innovation: Implementing the SDGs in National Intellectual Property Systems*. Geneva: WIPO, 2023, pp. 15 et seq.

As such, the omnibus nature of the BRELA has been perceived as a structural obstacle to achieving its statutory goals regarding patents. For example, Section 5(c) of the Act mandates the Office of the Registrar of Patents to establish and operate a "patent documentation centre" to disseminate information on patents to the people of Tanzania. However, this normative objective is yet to be achieved due to the omnibus nature of the BRELA.[125] In Kenya, for example, the Kenya Industrial Property Institute (KIPI) is an autonomous parastatal with a specific mandate as regards industrial property rights, such as patents[126] – and it does not operate as an omnibus IPRs office with generic legal mandates like the BRELA's companies registration, business names registration, issuance of business licences and other general (or ambiguous) mandates.

4.2.2 Understaffing and Underqualified Staff in the Patent Office

The Office of the Registrar of Patents (the grantor) is headed by the Registrar of Patents, an appointee of the President of Tanzania. Equally, the Minister responsible for matters relating to patents is empowered to appoint a Deputy Registrar of Patents, Examiners, and other Officers whose legal mandate is to implement and administer the substantive and procedural aspects of the patent law. However, neither the Act nor its Regulations specify the required professional qualifications or the process for appointing patent officers.[127]

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125 Information obtained from the Assistant Registrar and Senior Examiner at the Patent Office, (12 October 2023, BRELA office, Dar es Salaam).

126 See Section 3 of the Industrial Property Act, Act No. 3 of 2001.

127 See Sections 3, 4 and 5 of the Act.

In Kenya, for example, the relevant law is very expressive and certain on this aspect: Sections 6 and 11 of the Industrial Property Act (Kenya Act)[128] direct that the Chairman of the Kenya Industrial Property Institute (KIPI) must be a holder of a law degree or science and with at least seven years of experience in matters relating to industrial property.[129] Equally, the Managing Director and other technical staff of the KIPI who manage the day-to-day activities are obligated to possess at least seven years' working experience in matters relating to industrial property and have a university degree in law, science, business administration, or information technology.[130]

The situation in Mainland Tanzania often results in the appointment of unqualified or underqualified patent officers. Empirical evidence indicates that the national IPRs office suffers not only from a shortage of staff, inadequate staff, and insufficient workforce but also from staff's limited knowledge and expertise, which lead to operational bottlenecks.[131] For example, in the financial year 2022/2023, there were only 140 permanent employees and 52 temporary employees (31 temporary contract staff and 21 volunteers) at the national IPRs office expected to provide effective and efficient public services, including patent prosecution services, to the country.[132] As Nditi notes, until 2020,

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128 Act No. 3 of 2001.

129 Ibid, Section 6.

130 Ibid, Section 11.

131 BRELA, "Strategic Plan 2021/22 – 2025/26", July 2021, pp. 5–13. See also BRELA, "Strategic Plan 2016/17 – 2020/21", April 2016, pp. 10–20. Among other things, this is due to lack of formal training and development policy.

132 See the National Audit Office, "BRELA: Report of the Controller and Auditor General on the Financial and Compliance Audit for the Financial Year Ended 30 June 2023", March 2024, pp. 27–28. It should be noted that for the financial year 2021/2022, there were only 145 permanent employees and 61 temporary employees.

Tanzania's Patent Office had only one staff member conducting formal patent examinations. The office could not perform substantive examinations because it lacked capacity and substantive examiners, severely compromising patent quality.[133]

In the financial year 2022/2023, the National Patent Office received 75 patent applications. As such, only 26 (35%) applications were accepted and patents granted, and the rest of the applications (i.e., 49 (65%) were rejected.[134] This *status quo* could justify the higher rejection rate of patent applications at the National Patent Office due to understaffing and underqualified staff. Be that as it may, I submit that, under the circumstances, it is highly improbable for the Office of the Registrar of Patents to fulfill the letter and spirit of both substantive and procedural aspects of the patent law in a way that enhances an effective patent prosecution in Mainland Tanzania.[135]

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133 Nditi, D.N.N., "Regulation of Patents in Mainland Tanzania: Policy, Legal and Institutional Challenges", 48(2) *EALR*, 2021, pp. 83–115, p. 113. See also Diyamett, B., et al., "The National Innovation System in Tanzania and Its Relevance for Development", in Goransson, B., Brundenius, C., and Aguirre-Bastos, C., (eds.), *Innovation Systems for Development: Making Research and Innovation in Developing Countries Matter*. Cheltenham: Edward Elgar Publishing, 2017, pp. 184–229 at p. 197 where the authors stress that in order to promote the development of innovation through patents in Tanzania, the national patent office needs to be strengthened; however, "until now, this process has been very weak."

134 See the National Audit Office, op. cit., p. 18.

135 Indeed, an effective and efficient delivery of services, including patent prosecution services, requires the BRELA "to have the necessary internal capabilities, systems and processes. These involve having simplified but secured business processes, modern technologies, knowledgeable and skilled human resources and proper alignment of the organisation structure", see BRELA, "Strategic Plan 2021/22 – 2025/26", July 2021, p. 24.

4.2.3 Infrastructural Limitations

The availability of a well-equipped patent office in terms of institutional infrastructure is not only a prerequisite for efficient patent prosecution but also an incentive for effective implementation of the patent prosecution regime, which promotes technological development.[136] It is evident that, in Mainland Tanzania, the Office of the Registrar of Patents suffers from inadequate and insufficient institutional infrastructure to implement the provisions of the patent law efficiently and effectively.[137] For example, there is no infrastructure to deal with patent applications relating to the deposit of micro-organisms as per Regulation 10 of the Regulations. In this way, prosecuting patents involving micro-organisms and biotechnological-related inventions is thus impossible unless and until the patent office outsources the services of other developed IP offices, such as the ARIPO.[138]

Therefore, "the patent office does not conduct substantive examination of the patent applications. It only examines the applications to satisfy that the same conform to the formality required under the law."[139] In other words, the lack of necessary institutional infrastructure impedes substantive examination. The substantive examination is decisive in the country's technological development processes as it "potentially serves the important

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136 Picard, P.M., and Potterie, B.P., "Patent Office Governance and Patent Examination Quality", 104 *Journal of Public Economics*, 2013, pp. 14–25, pp. 16–17.

137 BRELA, "Strategic Plan 2016/2017 – 2020/2021", April 2016, pp. 14–15.

138 Information obtained from Senior Patent Examiner and Assistant Registrar at the Patent Office, Interview by author (12 October 2023, BRELA office, Dar es Salaam).

139 See Mwakaje, S.J., "A National Study on Intellectual Property and Small and Medium Sized Enterprises in Tanzania", WIPO Development Agenda Project, 2011, p. 21. See also Regulation 27 of the Regulations.

function of gatekeeping against granting applications that fail to meet substantive statutory requirements."[140]

It is a vital filtering mechanism against undeserved inventions and innovations in the contemporary knowledge-based global economy. In Kenya, for example, the patent office is equipped with the necessary infrastructure for substantive examination: in this context, therefore, after conducting a formal examination, the Managing Director of KIPI has to inform the prosecutor to submit a request for examination as to substance. This has to be done within five years from the filing date. If there is no such request for substantive examination within five years, the application will be deemed abandoned.[141] As Kihwelo rightly puts it, the patent law needs modern infrastructure to complement an effective patent prosecution process.[142]

4.2.4 Lack of Competencies in Patent Drafting

Any patent prosecution system involves a technical exchange of documents between prosecutors and the national patent office (i.e., grantor). From these prosecutors' application documents, the grantor must properly assess the request for the grant of patents and, thereafter, grant the same. Therefore, mastering patent drafting skills is pivotal to the patent prosecution cycle. Acquiring these skills is not an overnight process—it needs not only a mature

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140 Rutenberg, I., and Makanga, L., "Utility Model Protection in Kenya: The Case for Substantive Examination", 19 *The African Journal of Information and Communication*, 2018, pp. 19–37, p. 22.

141 See Section 44 of Kenya Act.

142 Kihwelo, P.F., "Intellectual Property Rights (IPR) Protection in Tanzania: The Nightmare and the Noble Dream", 5 *Journal of the Open University of Tanzania*, 2003, pp. 111–119, p. 115.

theoretical background but also intensive practical experience—the latter can only be acquired through many years.[143]

In Mainland Tanzania, an application for the grant of patents must be made to the Registrar of Patents containing prescribed patent specifications, which include a request, description, claims, drawings, and an abstract.[144] The available evidence from the key informant with more than 10 years in the Patent Office indicates that most applicants and self-proclaimed patent attorneys from all sections of the legal-cum-business community are not yet competent in drafting proper patent applications that conform to the normative requirements of the patent prosecution regime.[145] Along the same lines, Mwakaje rightly observes that the patent system in Tanzania is comparatively underutilised when compared to, for example, the use of other IPRs systems such as trademarks and copyrights; this is because of, among other things, "lack of necessary technical expertise to draft patent applications and the cost of patent prosecution from the patent attorneys."[146]

Notably, poor patent drafting skills have resulted in adverse impacts, particularly to prosecutors, such as rejection of patent applications, extra prosecution costs and expenses, abandonment of patent applications, difficulties in claims interpretation, and may

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143 Zhang, T., et al., "Call for Standardization in Patent Claim Drafting", 34(3) *Santa Clara High Technology Law Journal*, 2018, pp. 290–314, pp. 290 et seq.

144 See Section 18 of the Act.

145 Information obtained from Senior Examiner and Assistant Registrar at the Patent Office, (12 October 2023, BRELA office, Dar es Salaam). See generally Diyamett, B.D., and Mabala, R., "From Inventors to Innovators: An Investigation into Individual Inventors in Tanzania", ATPS Special Paper Series No. 36, 2007, pp. 14 et seq.

146 Mwakaje, op. cit., p. 63.

equally lead to unnecessary litigations.[147] For example, in the financial year 2022/2023, the patent office received 75 applications. As a result, only 26 (35%) of the applications were accepted and patents granted. The remaining applications (i.e., 49 (65%) were entirely rejected due to poor drafting that offended formal and substantive requirements.[148] Overall, it cannot be disputed that poorly drafted patent applications lead to poor patent prosecution and protection. [149]

4.2.5 Undeveloped Jurisprudence

In Mainland Tanzania, as mentioned before, the jurisdiction on appeals from the Registrar of Patents lies with the High Court of Tanzania. The Court was established to play a significant role in both pre-and post-grant prosecution stages. Specifically, it is obliged to hear appeals against the decisions of the Registrar of Patents concerning requests for the grant of patents, rejection and refusal of such requests, and invalidation proceedings, among other things.[150] The Court has not yet handled patent dispute cases, thus limiting its jurisprudential contribution to patents.[151]

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147 Interview with the Senior Examiner and Assistant Registrar at the Patent Office (12 October 2023, BRELA office, Dar es Salaam).

148 See the National Audit Office, op. cit., p. 18. See also BRELA, "Strategic Plan 2021/22 – 2025/26", July 2021, p. 14.

149 Hyden, M.D., and McAnulty, T.P., "Drafting the "Global" Patent Application", 2017 (available at <https://www.finnegan.com/en/insights/events/webinar-drafting-the-global-patent-application.html> accessed 22 January 2024).

150 See comprehensively Sections 30, 39(6) and 40 of the Act.

151 On a related note, it remains to be seen whether the Court is properly designed and well-equipped to handle patent dispute cases; see generally the official website of the Judiciary as regards educational and professional profiles of the members of the bench in this regard (available at <https://www.judiciary.go.tz/web/> accessed 30 January 2024).

The conspicuous underutilisation of the High Court can be attributed to many factors, including the aforementioned legislative gaps as regards the appeals process from the Registrar's Office to the High Court. Furthermore, there is a low level of invention and innovation in the country, which leads to the low number of patent applications and patents to be 'litigated' at the High Court;[152] indeed, "patents (and other IPR forms) are a traditional source of measurement of the national capacity for technology development and innovation."[153] For instance, whilst Mainland Tanzania had only 26 registered patents in the financial year 2022/2023, as noted above, Kenya had 410 registered patents in the financial year 2021/2022.[154] This shows that Tanzania is lagging in terms of technological development when compared to, for example, other neighbouring developing countries like Kenya. It is worth mentioning:

> …there has not been a comprehensive management system to effectively plan, monitor and evaluate science, technology and innovation (STI) education, training and R&D activities in the country. Often, R&D activities are conducted in isolation and/or independently of a prioritised order of national and societal needs, with the result that research results – and any anticipated innovations – *are known only to a few individual researchers* [….] There have been a number of potentially useful grassroots-level innovations reported by

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152 See also BRELA "Strategic Plan 2016/17 – 2020/21", April 2016, pp. 17–20, that reaffirms that there is "low growth pace of innovations and inventions in the country."

153 See Diyamett, B., et al., op cit., p. 197.

154 KIPI, "Annual Report and Financial Statements for the Financial Year Ended 30 June 2022", March 2023, p. xix.

> R&D institutions that have not been supported towards translation into tangible products, processes, and services.[155]

Under these circumstances, I submit that the full utilisation of the High Court and its potential jurisprudential contribution in the realm of patents will remain a mere future hope if not a fictitious ideal.

5. CONCLUSION AND THE WAY FORWARD

5.1 Conclusion

This article has established that patent prosecution is a decisive business strategy across all fields of technology and a powerful normative tool for socio-economic development. On the one hand, it serves the overarching purpose of verifying whether or not the claimed invention meets the mandatory formality and substantive legal requirements. On the other hand, it incentivizes investors to recoup their capital invested in the process, fostering continuous innovation and creativity. It has further been established that the effectiveness of patent prosecution depends on certain preconditions, including a robust national patent prosecution regime. Through a 'prosecutor-grantor perspective', the article identified legal and institutional challenges limiting patent prosecution in Mainland Tanzania. These include the lack of procedural guidance on how to process appeals from the Registrar's Office to the High Court, legal issues and dilemmas surrounding the prosecution of AI-generated inventions, and public order and morality exceptions during the examination process, undeveloped jurisprudence due to the underutilisation of

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[155] Diyamett, B., et al., op. cit., p. 197.

the High Court, and infrastructural limitations, understaffing, and underqualified staff in the Patent Office. To sum up, the next subpart below proposes some recommendations for improvement.

5.2 The Way Forward

5.2.1 Amendment of the Patent Law

(a) It is recommended that the patent law (i.e., Patents (Registration) Act, No. 1 of 1987 (Cap. 217) and its Patents Regulations, 1994 (G.N No. 490 of 1995) be amended to include express and lucid procedural provisions relating to not only appeal processes from the Office of the Registrar of Patents to the High Court, but also concerning the nature of appeal pleadings, the timeframe within which to appeal, place (registry) of lodging the appeal pleadings, and composition and mandate of the High Court should also be well articulated. Among other things, this can be achieved through inserting an express legal provision in the patent law, which refers to the application of the Civil Procedure Code, No. 49 of 1966 (Cap. 33) and the practices of the High Court.

(b) The patent law should be revised to provide the normative meaning and parameters of morality and public order in the context of patent prosecution in Mainland Tanzania. This can also be achieved by enacting relevant guidelines, practice notes, and manuals by the Office of the Registrar of Patents. This is intended to create apparent legal certainty, especially when patent prosecution is sought and effected over biotechnological inventions.

(c) The patent law should be amended to expressly address dilemmas surrounding the prosecution of inventions generated by AI. Among other things, the amendment should expressly state that an AI can be an inventor of inventions under the patent law; hence, patent prosecution can be effected within the parameters of the amended provisions.

(d) Regarding patent prosecution through self-proclaimed patent agents, the patent law should be amended to expressly include statutory requirements regarding professional qualifications for those who wish to practice as patent agents. These qualifications should include possessing sufficient knowledge in industrial property matters and being an advocate of the High Court of Tanzania admitted and registered to practice before the Office of the Registrar of Patents.

5.2.2 Institutional Reforms

(a) The Office of the Registrar of Patents (BRELA) should be restructured into an autonomous and independent national IP office like the KIPI in Kenya, however small it might be, and be well-staffed with a dedicated team of qualified personnel and infrastructure to administer its patent prosecution fairly mandates while fulfilling the letter and spirit of the IP law in general. It should be noted that the role of the patent office is not only pegged on granting patents but is equally mandated to promote inventiveness among nationals of Tanzania and develop a documentation centre aiming at disseminating patent information. This will create institutional effectiveness, efficiency, accountability,

and transparency that simplify prosecuting patents in the country. This can partly be achieved if the Government and all stakeholders pay special attention to the decisive role of patents in the current knowledge- and industrial-based economy.

(b) In the same vein, the patent regime should be revised to expressly provide the professional qualifications of staff within the patent office. These qualifications should include relevant experience in specified areas of technology, a fair knowledge of industrial property matters, and appropriate university decrees. This is expected to positively lead to the attainment and fulfillment of the objective of the patent prosecution regime. In this regard, it is essential to borrow a leave from Kenya.