

Unlocking innovation: Utility Model Adoption in MSMEs - Prospects and Challenges

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ABSTRACT

Micro, Small & Medium Enterprises (MSMEs) are considered to be as vital contributors to economic growth, innovation, and employment generation worldwide. In their pursuit of competitiveness in a dynamic business environment, the protection of intellectual property (IP) becomes imperative. While patents offer robust protection, their intricate procedures and stringent requirements may pose barriers for MSMEs. In this context, utility models emerge as a pragmatic alternative, bridging the gap between patents and design rights. This research endeavours to assess the benefits and challenges associated with the adoption of utility models specifically within the MSME sector in the Pondicherry region. Utilizing a questionnaire distributed through Google Forms, data were collected from MSMEs operating in and around Pondicherry. Out of 250 questionnaires circulated, 46 respondents participated in the study. Through descriptive analysis, the research identified key benefits, including promoting innovation, technological advancement, knowledge enhancement, revenue generation, and market expansion. Conversely, challenges such as complex procedures, higher fees, lengthy application processing times, and a lack of technical expertise were also highlighted. The adoption of utility model protection in India holds significant potential for bolstering the competitiveness of MSMEs. Policymakers are urged to streamline procedures, bolster awareness campaigns, and promote utility models as a viable option for IP protection. By addressing challenges and leveraging prospects, an enabling environment can be cultivated, fostering innovation, competitiveness, and sustainable growth within the MSME sector. This study contributes to the understanding of IP protection mechanisms and provides valuable insights for policymakers, industry stakeholders, and MSMEs seeking to navigate the complexities of IP rights in the modern business landscape.

KEYWORDS: Intellectual Property Rights, MSME, Utility Model, Benefits, Challenges

1. INTRODUCTION

Micro, Small & Medium Enterprises (MSMEs) constitute a vital segment of global economies, making significant contributions to economic growth, job creation, and innovation. In India, MSMEs play an especially crucial role, accounting for a substantial portion of industrial production and exports, while also driving socio-economic development. Despite their immense potential, MSMEs encounter formidable challenges that hinder their growth and sustainability. One such challenge revolves around the protection of intellectual property (IP), which is essential for fostering innovation, enhancing competitiveness, and securing market position in today's knowledge-driven economy.

Intellectual property rights (IPRs) encompass various legal mechanisms designed to safeguard intangible assets such as inventions, designs, trademarks, and copyrights. For MSMEs, IP protection holds profound significance as it enables them to safeguard their innovations, inventions, and proprietary technologies from unauthorized use or exploitation by competitors. By securing IP rights, MSMEs can erect barriers to prevent others from unauthorized commercial exploitation of Intellectual Property in addition MSMEs can attract investment, negotiate licensing agreements, and leverage their innovations to gain a competitive edge in the marketplace. However, the conventional route of securing patents, while effective, poses significant challenges for MSMEs due to its complexity, costliness, and lengthy processing times.

In response to these challenges, utility models have emerged as a viable alternative for MSMEs seeking IP protection. Unlike patents, utility models offer a more streamlined and cost-effective approach, providing protection for incremental innovations and improvements to existing products or processes. This research aims to explore the realm of utility models and their relevance within the context of MSMEs operating in the Pondicherry region of India.

Despite the potential benefits offered by utility models, their adoption and implementation among MSMEs remain relatively understudied, particularly within specific regions or industries. Therefore, this research seeks to address this gap by conducting a comprehensive assessment of the benefits and challenges associated with utility model implementation in MSMEs operating in the Pondicherry region of India. By exploring the experiences, perceptions, and practices of MSMEs in relation to utility models, this study aims to assess the benefits and challenges for MSMEs in adoption of utility models, with a specific focus in and around on the Pondicherry region. The remainder of this paper is structured as follows: Section 2 provides a review of relevant literature on utility models and their implications for MSMEs. Section 3 outlines the research methodology, including data collection procedures and analytical techniques. Section 4 presents the findings of the study, including an analysis of the benefits and challenges associated with utility model implementation. Section 5 discusses the implications of the findings and offers recommendations for policymakers, industry stakeholders, and MSMEs. Finally, Section 6 concludes the paper by summarizing the key findings and highlighting avenues for future research.

2. THEORETICAL FRAMEWORK

2.1 The Emergence of Utility Models as a Pragmatic Alternative

In pursuit of safeguarding their innovations and securing competitive advantages, Micro, Small & Medium Enterprises (MSMEs) often encounter formidable barriers when navigating the complexities of traditional patent protection. The intricate procedures, substantial costs, and prolonged processing times associated with patents can pose significant challenges, particularly for MSMEs with limited resources and expertise. However, amidst these challenges, a pragmatic alternative has emerged in the form of utility models. Utility models offer MSMEs a streamlined and cost-effective approach to intellectual property (IP) protection, providing a viable solution to address the shortcomings of traditional patents. With a simplified registration process, reduced financial burdens, and greater flexibility, utility models present MSMEs with a practical means of safeguarding their incremental innovations and improvements to existing products or processes. This emergence of utility models as a pragmatic alternative holds significant implications for MSMEs operating in dynamic and competitive business environments.

2.2 Benefits of Utility Models

The potential positive impact of utility models on Micro, Small & Medium Enterprises (MSMEs), are increased innovation, technological advancement, knowledge enhancement, heightened financial revenue, and improved market share.

2.2.1. Innovation and Technological Advancement

Innovation is a key driver of economic growth, with entrepreneurial activity leading to the introduction of new products, processes, or technologies that disrupt existing markets and create new opportunities. Within the context of MSMEs, utility models can incentivize innovation by providing protection for incremental improvements or adaptations to existing products or processes. Empirical studies by *Mazzoleni and Nelson (1998)* and *Teece (1986)* highlight how IP protection mechanisms, including utility models, stimulate innovation among firms, leading to technological advancement and competitive advantage.

2.2.2. Knowledge Enhancement

The Knowledge-Based View (KBV) of the Firm emphasizes the importance of knowledge creation, acquisition, and utilization in sustaining competitive advantage. Within this framework, utility models act as mechanisms for capturing and protecting incremental innovations, thereby strengthening the knowledge assets of Micro, Small, and Medium Enterprises (MSMEs). Research shows that utility models enable firms—particularly SMEs and technologically lagging companies—to learn, adapt, and gradually develop capabilities for more advanced, patentable inventions (Kim et al., 2010; Suthersanen, 2019). Similarly, Boztosun (2010) highlights that utility models help identify shortcomings of traditional patent systems and foster sustainable innovation processes. By securing utility model protection, MSMEs can enhance organizational learning, facilitate collaboration with external partners, and establish a foundation for long-term technological upgrading, thereby improving their overall knowledge base and innovation capacity.

2.2.3. Heightened Financial Revenue

Transaction Cost Economics (TCE) suggests that firms aim to minimize costs associated with market exchanges, such as information asymmetry, opportunism, and contractual hazards. Utility models reduce these costs by providing clear property rights and lowering risks of imitation or infringement. Due to their lower inventive-step requirement and faster registration process, utility models allow firms to commercialize innovations more rapidly and secure additional revenues through licensing or technology transfer (Prud'homme, 2016; Torres-Barreto et al., 2014). Kılıç et al. (2017) further demonstrate that acquiring utility models positively correlates with financial

and strategic benefits, especially for R&D-driven firms. Collectively, these findings suggest that utility models facilitate licensing deals, strategic collaborations, and technology commercialization, thereby enhancing financial performance for MSMEs.

2.2.4. Improved Market Share

The Resource-Based View (RBV) posits that sustainable competitive advantage stems from valuable, rare, inimitable, and non-substitutable resources. Utility models represent intangible strategic assets that enable firms to differentiate products, deter imitators, and strengthen market positioning. Empirical evidence indicates that incremental innovations protected by utility models enhance competitiveness, particularly in developing countries where firms face technological gaps (Kim et al., 2010; Suthersanen, 2019). Prud'homme (2016) shows that calibrated utility model regimes in East Asia promoted technological learning and market expansion during early industrial development. Thus, effective utilization of utility models helps MSMEs protect market niches, deter competitors, and achieve larger market shares, driving long-term growth and sustainability.

3. CHALLENGES OF UTILITY MODELS

The challenges of Utility Models for MSMEs could be, complex procedures, higher fees, extended processing time, and a lack of technical support faced by Micro, Small & Medium Enterprises (MSMEs) in utility model implementation.

3.1. Complex Procedures

Institutional Theory suggests that organizations conform to institutional norms, rules, and structures to gain legitimacy and ensure survival in their environments. In practice, UM systems in countries such as Germany and Ethiopia often mirror patent-like complexities, requiring detailed technical documentation and legal expertise that small firms find difficult to navigate (Königer, 2005; Bedada, 2017). This administrative complexity, often involving detailed technical documentation and legal expertise, reduces accessibility and discourages smaller firms from seeking protection. Complex procedures for utility model registration may deter MSMEs from seeking protection, leading to underutilization of this IP mechanism.

3.2. Higher Fees

Transaction Cost Economics posits that firms seek to minimize transaction costs associated with market exchanges, including those related to information asymmetry, opportunism, and contractual hazards. In the context of utility model implementation, higher fees may act as a barrier for MSMEs, increasing the costs associated with obtaining and maintaining utility model rights. Studies by Kılıç et al. (2017) identifies application and maintenance fees as key barriers to utility model adoption. When costs are perceived as high relative to the incremental nature of innovations, MSMEs are less likely to pursue utility model filings, undermining its role as a low-cost alternative to patents.

3.3. Extended Processing Time

Resource Dependency Theory suggests that organizations rely on external resources and dependencies to achieve their goals and objectives. Extended processing time for utility model registration may stem from resource constraints within administrative agencies, limited capacity, or bureaucratic inefficiencies. Evidence from Prud'homme (2016) and Torres-Barreto et al. (2014) suggests that delays in registration and examination—caused by administrative inefficiencies or resource limitations—diminish the speed advantage that utility models are meant to provide. This delay can impede commercialization opportunities and weaken competitive benefits for MSMEs. Extended processing time may exacerbate uncertainty and delay MSMEs' access to IP protection, hindering their ability to capitalize on innovative opportunities.

3.4. Lack of Technical Support

The Knowledge-Based View of the Firm emphasizes the role of knowledge creation, acquisition, and utilization in generating sustainable competitive advantage. A lack of technical support for MSMEs in navigating the utility model registration process may stem from knowledge gaps, limited expertise, or insufficient resources. According to Boztosun (2010) and Suthersanen (2019), many firms—particularly in developing economies—lack adequate technical assistance or advisory services for drafting and filing utility model applications. This knowledge gap results in weak protection, enforceability issues, and underutilization of utility model regimes as a strategic IP tool. Without adequate technical support, MSMEs may struggle to understand the intricacies of utility model requirements, leading to suboptimal decision-making and underutilization of this IP protection mechanism.

4. RESEARCH METHODOLOGY

The research paper aims to bridge existing gaps by undertaking a thorough examination of the advantages and hurdles linked with the implementation of utility models in Micro, Small & Medium Enterprises (MSMEs) situated in the Pondicherry region of India. This region, renowned for its vibrant entrepreneurial ecosystem and burgeoning MSME sector, provides an opportune context for this study. Employing a mixed-methods approach, data for the research were sourced from both primary and secondary outlets. Secondary data were extracted from various published sources, contributing to the contextual foundation of the study. The primary data collection involved the distribution of a comprehensive questionnaire through Google Forms to MSMEs in and around Pondicherry. The questionnaire, meticulously designed to capture nuanced insights, was circulated to a targeted sample of MSMEs. The study garnered responses from 46 participants out of the 250 questionnaires disseminated, ensuring a representative sample for analysis. To derive meaningful insights, the collected data underwent meticulous analysis using statistical software (SPSS). The researcher conducted a descriptive analysis, unravelling the perceived benefits and challenges associated with the implementation of utility models. This multifaceted methodology enhances the depth and reliability of the research findings, offering a nuanced understanding of the utility model landscape within the specific context of Pondicherry's MSME sector.

5. ANALYSIS AND FINDINGS

5.1 Demographic Profile

	<i>Frequency</i>	<i>Percentage %</i>
<i>Location of Company</i>		
<i>Urban</i>	35	76
<i>Rural</i>	11	24
<i>Classification of Industry</i>		
<i>Fabricated metal products</i>	08	17
<i>Iron and steel products</i>	12	26
<i>Food processing and Beverages</i>	06	13
<i>Manufacturing of wood, pulp and Paper products</i>	04	09
<i>Pharmaceuticals</i>	10	22
<i>Others</i>	06	13
<i>Education</i>		
<i>Diploma</i>	16	35
<i>UG</i>	16	35
<i>PG</i>	14	30
<i>Designation</i>		
<i>Manager</i>	16	35
<i>Accountant</i>	06	13

<i>Owner</i>	<i>14</i>	<i>30</i>
<i>Sales & Marketing</i>	<i>06</i>	<i>13</i>
<i>Supervisor</i>	<i>04</i>	<i>09</i>

Table: 5.1

Table 5.1 provides a comprehensive overview of the demographic profile of participants from diverse firms. The data reveals that a significant portion of respondents, comprising 76%, originate from urban areas, highlighting the predominantly urban representation in the study. In contrast, 24% of participants hail from rural areas, indicating a varied geographical distribution among the surveyed individuals. When delving into the classification of industries, a heterogeneous distribution is observed. Specifically, 17% of participants are associated with fabricated metal products, 26% with iron and steel products, 13% with food processing and beverages, 9% engaged in the manufacturing of wood, pulp, and paper products, while 22% are affiliated with pharmaceuticals. The remaining 13% represent a mix of participants from various other industries, showcasing the diverse industrial landscape captured in the study. The educational background of respondents is multifaceted, with 35% holding diplomas, 35% possessing undergraduate degrees, and 30% attaining postgraduate qualifications. This diversity in educational attainment enriches the study by encompassing participants with varying levels of academic expertise. Examining job designations among participants offers insights into the organizational hierarchy. Managers constitute the largest group at 35%, emphasizing the managerial representation in the study. Accountants contribute to 13%, reflecting the financial expertise within the sample. Company owners, comprising 30%, underscore the significance of entrepreneurial perspectives, while 13% in sales and marketing roles and 9% in supervisory positions contribute to the overall occupational diversity of the study participants. This intricate demographic profile enhances the richness and applicability of the research findings within the broader context of the MSME sector.

5.2 Benefits of Utility Model

Table: 5.2

Variables	Mean	Rank	Std. Deviation	Minimum	Maximum
Promoting innovation	4.4565	2	.68982	3.00	5.00
Revenue generation	4.3261	4	.70093	3.00	5.00
Market expansion	4.3696	3	.74113	1.00	5.00
Knowledge enhancement	4.4565	2	.68982	2.00	5.00
Technological advancement	4.5000	1	.72265	2.00	5.00

Table 5.2 The descriptive statistics provided summarize responses from a survey on utility model protection. Respondents, on average, perceive positive contributions in Promoting innovation (Mean: 4.4565) and Revenue generation (Mean: 4.3261). The relatively high mean for Market expansion (Mean: 4.3696) indicates a positive average perception, although opinions vary moderately. Similarly, utility model protection is viewed positively in Knowledge enhancement (Mean: 4.4565), with a relatively low standard deviation suggesting high agreement. The mean for the Technological advancement (Mean: 4.5000) indicates a positive average perception, but opinions vary moderately. Respondents generally view utility model protection favourably across various aspects. Overall, on both parameters, Mean and Standard Deviation, Promoting innovation and Knowledge Enhancement emerges as the significant benefits of Utility Model.

5.3 Challenges of Utility Model

Table: 5.3

Variables	Mean	Rank	Std. Deviation	Minimum	Maximum
Lengthy Application Processing times	4.1739	4	.87697	2.00	5.00
Higher Fees	4.2609	2	.80097	2.00	5.00

Complex Procedure	4.1957	3	.88492	2.00	5.00
Lack of technical expert	4.4130	1	.93276	2.00	5.00

Table 5.3 The descriptive statistics reveal perceived challenges associated with utility model protection, based on respondents' feedback across four variables. On average, respondents note a substantial lengthy application processing times (Mean: 4.1739), indicating a common perception of time-intensive processes. The mean for higher fees (Mean: 4.2609) suggests that respondents, on average, find the fees relatively high. The complexity of the procedure for utility model protection is reflected in the mean of 4.1957, indicating an average perception of complexity. Additionally, respondents, on average, believe that utility model protection requires technical expertise (Mean: 4.4130). Standard deviations for each variable imply a moderate level of variability in responses, highlighting diverse opinions on these challenges. In the overall analysis on both parameters, Mean and Standard Deviation, Higher Fees emerges as a significant barrier for Utility Model.

6. CONCLUSION

In conclusion, this research highlights the critical role of Micro, Small & Medium Enterprises (MSMEs) in driving economic growth, innovation, and employment globally. Recognizing the imperative need for intellectual property (IP) protection in their quest for competitiveness, this study explores utility models as a practical alternative, effectively bridging the gap between the complexities of patents and design rights. The findings indicate a positive perception among respondents regarding utility model protection, particularly in Promoting innovation, revenue generation, market expansion, knowledge enhancement, and technological advancement. Despite these positive views, challenges such as lengthy application processing times, higher fees, complex procedures, and lack of technical expert. Most significantly Knowledge Enhancement appears to be the predominant benefit and Higher Fees poses to be the significant barrier. Policymakers are encouraged to streamline procedures, elevate awareness initiatives, and position utility models as a viable IP protection avenue for MSMEs. Addressing these challenges will be pivotal in enhancing the accessibility and effectiveness of utility model protection, unlocking its significant potential for fortifying the competitiveness of Indian MSMEs. This study contributes valuable insights for policymakers, industry stakeholders, and MSMEs navigating the intricate landscape of IP rights, paving the way for an environment conducive to innovation, competitiveness, and sustainable growth within the MSME sector.

REFERENCES

1. Bedada, T. (2017). *Economic significance of the utility model protection and the legal challenges in Ethiopia*. Haramaya University.
2. Boztosun, N. A. (2010). *Exploring the utility of utility models for fostering innovation*.
3. DiMaggio, P. J., & Powell, W. W. (1983). *The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields*. *American Sociological Review*, 48(2), 147–160.
4. Grant, R. M. (1996). *Toward a knowledge-based theory of the firm*. *Strategic Management Journal*, 17(S2), 109–122.
5. Jee, Y., & Hötte, K. (2024). *Knowledge accumulation and the transition from utility models to patents in South Korea*.
6. Kim, Y. K., Lee, K., Park, W. G., & Choo, K. (2012). *Appropriate intellectual property protection and economic growth in countries at different levels of development*. *Research Policy*, 41(2), 358–375.
7. Kılıç, A., Eren, H., & Uysal, F. (2017). *Factors affecting patent and utility model acquisition tendency*. *Procedia Computer Science*, 120, 406–412.
8. Königer, K. (2005). *Registration without examination: The utility model – A useful model?*
9. Lee, K., Park, W. G., & Choo, K. (2006). *Innovation and intellectual property rights in East Asia*.
10. Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company*. Oxford University Press.
11. Pfeffer, J., & Salancik, G. R. (1978). *The external control of organizations: A resource dependence perspective*. Harper & Row.
12. Prud'homme, D. (2016). *Utility model patent regime “strength” and technological development: Experiences of China and other East Asian latecomers*. *Technovation*, 54, 26–40.
13. Suthersanen, U. (2019). *Utility models: Do they really serve national innovation strategies?* *Queen Mary Journal of Intellectual Property*, 9(3), 271–289.
14. Torres-Barreto, M. L., Mendez-Duron, R., & Hernandez-Perlines, F. (2014). *Technological impact of R&D grants on utility models*. *Journal of Engineering and Technology Management*, 33, 1–16.
15. WIPO. (2008). *Utility models and innovation*. World Intellectual Property Organization.
16. Sajid Sheikh (2022), *Exploring the Possibility of Utility Model Protection in India*, Scholars Middle East Publishers, Dubai, ISSN 2617-3484 (Online).