

ABSTRAK

Putri Dwi Farassi. Perancangan *Prototype Web Dynamic Pricing* Berbasis *Deep Learning* pada *Seller UMKM Fashion* untuk Keberlanjutan Bisnis. Skripsi, Jakarta. Program Studi Bisnis Digital, Fakultas Ekonomi dan Bisnis, Universitas Negeri Jakarta, 2026.

Penelitian ini dilatarbelakangi oleh fenomena tingginya tingkat kompetisi dan fluktuasi harga di *marketplace* serta kompleksitas perhitungan potongan biaya administrasi yang kerap mengancam stabilitas profitabilitas pelaku usaha mikro. Fokus utama penelitian adalah merancang *prototype website* BeePrice dengan mengintegrasikan algoritma *Deep Learning* untuk otomatisasi strategi penentuan harga dinamis (*dynamic pricing*). Tujuan penelitian ini adalah untuk menciptakan solusi teknologi yang mampu memberikan rekomendasi harga jual optimal secara otomatis, transparan, dan presisi guna mendukung keberlanjutan bisnis pelaku usaha. Metode penelitian yang digunakan adalah metode perancangan sistem berbasis kebutuhan pengguna yang dievaluasi melalui tahapan pengujian kegunaan (*usability testing*). Unit analisis dalam penelitian ini adalah *seller UMKM fashion* aktif yang mengoperasikan toko daring di platform Shopee, Tokopedia, dan TikTok Shop. Teknik analisis data dilakukan untuk mengukur tingkat kegunaan (*usability*) dan kenyamanan pengalaman pengguna (*user experience*) terhadap *prototype* yang dikembangkan. Hasil penelitian menunjukkan bahwa perancangan *prototype website* BeePrice telah berhasil memenuhi standar kegunaan yang tinggi, di mana integrasi fitur otomatisasi harga dinamis dan transparansi simulasi keuntungan mampu mereduksi friksi operasional secara signifikan. Rekomendasi yang diberikan bagi pengembang sistem adalah perlunya perluasan integrasi platform *social commerce* eksternal dan penguatan variabel masukan algoritma secara *real-time*. Melalui implementasi desain *prototype* ini, *website* BeePrice diharapkan dapat membantu *UMKM fashion* menjaga daya saing dan mencapai keberlanjutan bisnis di ekosistem digital.

Kata Kunci: *Prototype Web, Dynamic Pricing, Deep Learning, UMKM Fashion, Keberlanjutan Bisnis.*

ABSTRACT

Putri Dwi Farassi. Design of a Deep Learning-Based Dynamic Pricing Web Prototype for Fashion MSME Sellers for Business Sustainability. Thesis, Jakarta. Digital Business Study Program, Faculty of Economics and Business, Universitas Negeri Jakarta, 2026.

This research is driven by the phenomenon of intense competition and price fluctuations in online marketplaces, as well as the complexity of calculating administrative commission fees that frequently threaten the profitability stability of micro-businesses. The primary focus of this study is to design the BeePrice web prototype by integrating Deep Learning algorithms to automate dynamic pricing strategies. The objective of this study is to create a technological solution capable of providing automated, transparent, and precise optimal selling price recommendations to support business sustainability. The research method applied is user-needs-based system design evaluated through usability testing stages. The unit of analysis in this study consists of active fashion MSME sellers operating online stores on Shopee, Tokopedia, and TikTok Shop platforms. The data analysis technique was conducted to measure the usability and user experience of the developed prototype. The results indicated that the BeePrice web prototype successfully met high usability standards, where the integration of automated dynamic pricing features and profit simulation transparency significantly reduced operational friction. Recommendations provided for system developers include expanding external social commerce platform integrations and strengthening real-time algorithm input variables. Through the implementation of this prototype design, the BeePrice website is expected to assist fashion MSMEs in maintaining competitiveness and achieving business sustainability within the digital ecosystem.

Keywords: Web Prototype, Dynamic Pricing, Deep Learning, Fashion MSMEs, Business Sustainability.