

Peran Bias Implisit terhadap Komponen ERP N2 pada Pengguna Layanan Pinjaman Online

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Abstrak. Layanan pinjaman *online* semakin populer di Indonesia dan banyak digunakan oleh generasi muda. Fenomena ini menarik perhatian karena keputusan terkait layanan keuangan digital kerap dapat dipengaruhi oleh proses evaluatif otomatis yang terjadi di luar kesadaran sadar. Dalam psikologi sosial dan kognitif, bias implisit menggambarkan kecenderungan evaluatif spontan terhadap suatu objek yang dapat diukur melalui *Implicit Association Test* (IAT) dan variannya, *Single Target IAT* (ST-IAT). Namun, studi mengenai bias implisit terhadap pinjaman *online* masih terbatas, terutama yang menelusuri aspek neural yang terlibat dalam pengolahan konflik evaluatif. Penelitian ini bertujuan untuk menguji pengaruh kondisi kompatibilitas ST-IAT dan frekuensi penggunaan layanan pinjaman *online* terhadap aktivitas neural pada komponen ERP N2 yang merefleksikan kontrol penghambatan dan deteksi konflik. Desain penelitian menggunakan *mixed experimental design*, dengan kondisi ST-IAT (*compatible* vs *incompatible*) sebagai faktor *within-subject* dan frekuensi penggunaan (*frequent* vs *infrequent*) sebagai faktor *between-subject*. Sebanyak 30 partisipan Gen Z berpartisipasi dalam tugas ST-IAT sambil direkam aktivitas EEG *64-channel*. Hasil penelitian menunjukkan tidak terdapat perbedaan signifikan amplitudo N2 antar kondisi, namun kelompok *frequent* menampilkan amplitudo N2 yang lebih tinggi dibandingkan kelompok *infrequent*, menandakan peningkatan kontrol penghambatan terhadap konflik evaluatif. Temuan ini menunjukkan bahwa bias implisit terhadap layanan keuangan digital beroperasi terutama secara afektif, namun tetap melibatkan mekanisme kognitif ketika muncul ketidaksesuaian evaluatif.

Kata kunci: *bias implisit, ERP N2, pinjaman online, kontrol penghambatan, waktu reaksi, ST-IAT*

Abstract. Online loan services are increasingly popular in Indonesia and widely used among young adults. This phenomenon has drawn attention because financial decisions in digital contexts are often influenced by automatic evaluative processes that occur outside conscious awareness. In social and cognitive psychology, implicit bias refers to spontaneous evaluative tendencies toward an object, which can be measured using the *Implicit Association Test* (IAT) and its variant, the *Single Target IAT* (ST-IAT). However, research on implicit bias toward online lending remains limited, particularly studies that examine the neural mechanisms underlying evaluative conflict processing. This study aimed to examine the effects of ST-IAT compatibility conditions and frequency of online lending use on neural activity in the ERP N2 component, which reflects inhibitory control and conflict detection. The study employed a mixed experimental design, with ST-IAT condition (*compatible* vs. *incompatible*) as a within-subject factor and usage frequency (*frequent* vs. *infrequent* users) as a between-subject factor. Thirty Gen Z



participants who had experience with online lending performed the ST-IAT task while their brain activity was recorded using a 64-channel EEG system. Results showed no significant differences in N2 amplitude between compatibility conditions; however, the frequent user group exhibited greater N2 amplitudes than the infrequent group, indicating stronger inhibitory control in resolving evaluative conflict. These findings suggest that implicit bias toward digital financial services operates primarily through affective mechanisms but still engages cognitive control when evaluative inconsistency arises.

Keywords: *implicit bias, ERP N2, online loans, inhibitory control, reaction time, ST-IAT*