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Determinants of Illegal Lending Engagement in Indonesian Rural Areas

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Abstract

This research aims to identify the factors that influence individuals to engage in illegal lending in rural Indonesian areas. Specifically, the study examines the roles of financial knowledge and economic pressure in this decision-making process. Data were collected from 246 participants through both online and paper-based questionnaires. The hypotheses were tested using probit analysis. The findings reveal that financial literacy levels do not significantly affect illegal lending behavior, whereas economic pressure has a significant impact on the decision to engage in illegal lending. These results suggest that efforts to reduce illegal lending should focus on alleviating economic pressures faced by people in rural areas. By addressing the underlying economic conditions that drive individuals toward illegal lending, it is possible to mitigate this behavior and promote more sustainable financial practices. This research contributes to the understanding of illegal lending dynamics and offers valuable insights for policymakers and financial educators aiming to improve financial stability and reduce reliance on illegal lending in rural communities.

Keywords: financial technology; peer-to-peer lending; rural debt behaviour; financial literacy; illegal lending

INTRODUCTION

The development of financial technology is entrusted to bring more benefit than harm. Society, business, and government belief that financial technology helps them a lot in their daily life. Financial technology today that disrupts business and economic sectors has several business models. Some of the business models that commonly develop in financial technology are 1) funding, 2) payment, 3) capital market, 4) insurance, and 5) wealth management (Lee, I. Shin, 2018). The development of financial technology has become the catalyst for changes in society's economic behaviour.

Financial technology offers benefits to a wide society as it provides access to financial services, enhancing efficiency, fostering innovation, and promoting financial inclusion (Morgan, 2022). For instance, through peer-to-peer lending platforms, financial technology empowers individuals to manage their finances more conveniently and affordably (Septiani, et al., 2020).

However, alongside these benefits, there are risks and challenges, including unlicenced lenders that potentially exploit consumers' vulnerability, such as low-income individuals and rural people with limited limited financial literacy.

Indonesia is a country with high development in financial technology (after china); this trend is happening because financial technology aims to help people who live in archipelago areas (Davis, Maddock, & Foo, M., 2017). The total population of Indonesia is 273.500.000 which 56,4% live in the city and 43.6% live in the rural area (Worldometer, 2020). Thus, Indonesia considers a big market, with internet users reaching 143.26 million. Half of the internet users 19-34 years of age, 50.08 per cent have smartphones/tablets, 44.16 per cent use smartphones/tablets to access the internet, and 26.47 per cent use the internet more than 7 hours per day (Asosiasi Penyelenggara Jasa Internet Indonesia, 2017).

Online peer-to-peer lending is the development of financial technology that shows significant progress in Indonesia. It promotes the easiest way to lend money by online platform instead of the bank for productive and consumptive reasons. The presence of peer-to-peer lending may help small-medium enterprises to gain more capital lending for their production. However, the problem of many borrowers that easily lend money may become a victim of weak regulation (Hidajat, 2019).

While there's growing research on peer-to-peer (P2P) lending, several gaps exist in understanding its impact on rural communities specifically: Heterogeneity of Rural Communities: Most studies generalize findings, but rural areas are diverse. Research needs to differentiate impacts based on factors like population density, economic activities, infrastructure, and social capital (Maskara et al, 2021). For example (Maskara et al, 2021) highlights how P2P loan demand correlates with bank branch presence in rural areas, suggesting a substitution effect where traditional finance is weak. This might not hold true for all rural settings. Social Impact Measurement: Rigorous methodologies are needed to measure the social impact of P2P lending on rural communities, going beyond economic indicators to assess well-being, empowerment, and social cohesion (Jose & Chacko, 2017).

One of the first peer-to-peer lending movers was Zopa, which started its business in 2005 (Cai, Lin, Xu, & Fu, 2016). Using technological advances and fast-changing customer behaviour, peer-to-peer lending has gained popularity worldwide as a convenient way of financing and is expected to be better than the traditional banking system (Bachmann et al., 2011; Feng, Fan, & Yoon, 2015). Peer-to-peer Lending that directly meets the investor (people who have idle money) and debtor (people who need cash) have a similar business process to microfinance. The difference is that online peer-to-peer lending has no required collateral and could borrow in a short-term period (less than six months).

The fast-reliable-easy lending money platform leads to lousy debt behaviour in low-income societies, especially in rural areas in Indonesia, which typically lack financial literacy and inclusion. Based on National Financial Literacy and Inclusion Survey from the Indonesia Financial Service Authority (2018), public literacy about banking still dominates compared to other financial services. Moreover, the faster development of financial technology is not followed by government regulation on this issue. That condition puts the end-user at a high risk of the harmful effect of the development of financial technology.

Furthermore, the rapid development of financial technology has outpaced government regulation in Indonesia, creating significant regulatory gaps that fail to adequately protect consumers from harmful effects of predatory lending. The absence of robust regulatory oversight allows unscrupulous lenders to operate with impunity, taking advantage of vulnerable populations with limited access to traditional banking services and minimal financial literacy. As a result, rural communities in Indonesia are potentially disproportionately affected by the negative consequences of illegal peer-to-peer lending, including high-interest rates, hidden fees, and aggressive debt collection tactics.

These practical implications highlight the need for research to understand rural people's engagement in illegal peer-to-peer lending. By investigating the causes of lousy debt behavior in low-income societies, this study can inform policy intervention to mitigate the risks associated with illicit lending practices.

Based on the survey of the Indonesia Financial Service Authority, the primary community that lacks financial literacy and inclusion is located the rural community, where less information availability. Even though the percentage is 43,6%, people who live in rural areas are less financially literate than those who live in urban areas. The financial literacy index in the rural area found only 34,53%, while the urban area found 39,94% (Otoritas Jasa Keuangan, 2019). The gap between financial literacy level and financial inclusion also creates another potential problem. The latest data found that Indonesia's financial literacy index is 38,05%, while the financial inclusion is 76,19%. The difference in literacy index and financial inclusion could make people access financial institutions, financial services, financial products, and financial technology. Still, they do not have enough knowledge to make an excellent financial decision. The easy access that is not followed by good knowledge has the potential to make a wrong financial decision.

Meanwhile, the economic condition of people living in Indonesian rural areas commonly categorizes middle – low-income families. Primarily people work in the informal sector and get paid daily based on their work. In rural areas, typically, they have Cooperation. They form Cooperation and crowd some funds as principal, saving each member and its to help each other in their business and daily lives. If the member needs money for several reasons, they can borrow some money in Cooperation for the solution. The Cooperation has a strict and lengthy list of requirements before they help financially. The criteria that should be considered include the Character, Capacity, Capital, Collateral, and Condition of the lender to measure the credit's granting process and prevent lousy debt (Parinata, 2019).

The existing financial practices in rural Indonesia, such as Cooperatives, contrast starkly with the ease of peer-to-peer lending facilitated by financial technology. Unlike peer-to-peer lending platforms, cooperatives operate on principles of cooperation and collective responsibility, where members pool their resources to support each other's economic activities and meet their financial needs (Guttman, 2021).

Cooperatives typically have stringent requirements and procedures for accessing financial assistance, ensuring that loans are provided responsibly and sustainably. Members must meet certain eligibility criteria, contribute to the cooperative's funds, and adhere to repayment schedules to maintain the cooperative's financial health and integrity. In contrast, peer-to-peer lending platforms offer quick and convenient access to credit without the rigorous screening and oversight common in traditional financial institutions and cooperatives (Lenz, 2016).

However, since the demand for loans for consumption in rural areas still exists, the availability and accessibility of online peer-to-peer lending create a new opportunity for peer-to-peer lending platforms to capture the borrower, especially in rural areas. When the poor are converted into customers, dignity and access to choose from the service are required (Prahalad, 2005). Online peer-to-peer lending provides access and availability by requiring fewer requirements and assessing borrowing money in the fastest time.

Therefore, by exploring how rural individuals engage with online peer-to-peer lending, this research not only addresses the persistent demand for loans in rural areas but also to foster a deeper understanding of the dynamics of financial behavior in rural context.

Based on the interview result by Kompas.com in Karang Mukti Village, Subang District, West Java, people borrow money in conclusion because of urgency and daily needs. Still, some also borrow money for unnecessary necessities such as a motorcycle or jewellery. They trigger to borrow some money due to the availability and accessibility; however, it is a new challenge to pay the debt itself. Thus, this research will explore how people in rural areas behave financially due to the development of online peer-to-peer lending and explain the problem and potentially harmful effects of online peer-to-peer lending in rural areas.

By investigating how rural people engage with peer-to-peer

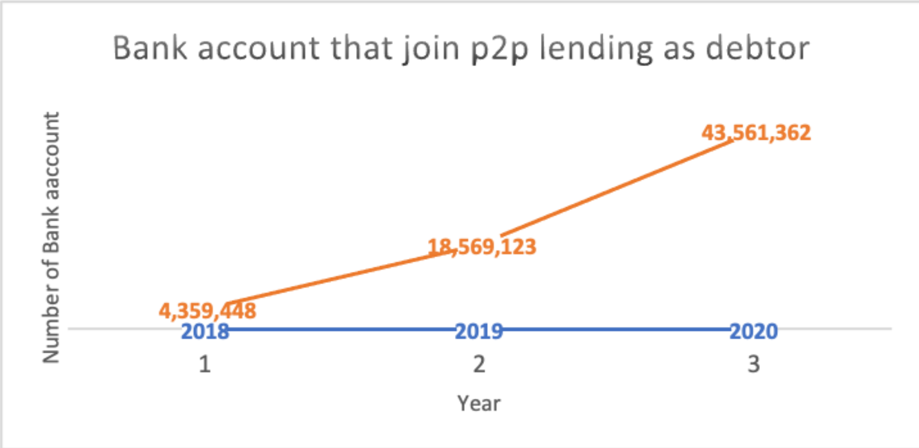

Figure 1. Bank Account Joined P2P Lending as Debtor (2018-2019)

Figure 2. Outstanding Loan of Peer-to-Peer Lending in Indonesia (2018-2020)

lending, this research not only contribute to the deeper understanding of the role of financial technology in rural context but also underscores the necessity of addressing the potential risks and challenges associated with its implementation.

LITERATURE REVIEW AND HYPOTHESES DEVELOPMENT

Development of Peer-to-Peer Lending in Indonesia

In the last three years (2018, 2019, 2020), peer-to-peer lending has increased significantly in Indonesia. The outstanding loans in 2018 are 15,67 trillion IDR, increasing to 81,49

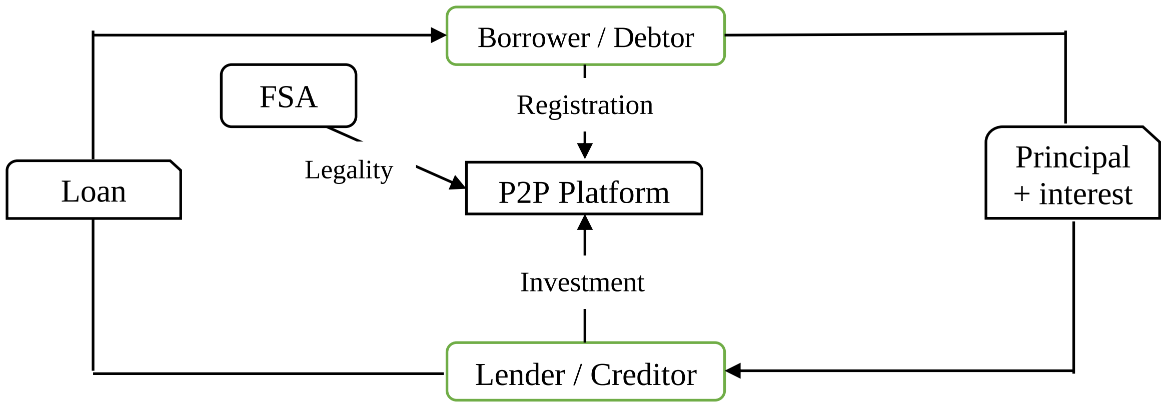

Figure 3. Business Model Online P2P Lending in Indonesia

trillion IDR in 2019. The latest data shows a total of 155,9 trillion IDR in 2020 as an outstanding loan (OJK, 2020). The increase in outstanding loans was also linear with the increasing number of debtor bank accounts registered in the application.

In 2018, only 4.359.448 people registered their bank accounts in peer-to-peer lending, which increased ten times by the end of 2020. Now, 43.561.362 people register their bank accounts for peer-to-peer Lending (OJK, 2020).

The increased outstanding loans in the last three years and the increasing number of debtor bank accounts registering in the peer-to-peer lending signal that this business model has a high demand in Indonesia. Peer-to-peer lending practice in Indonesia arises as a solution for micro-business that gets difficulties in passing bank credit requirements. However, the accessibility of peer-to-peer lending is not only for micro-business but also for any party, including the household sector, with an identity card to borrow money.

In general, three parties include in the peer-to-peer landing system. The first role is the investor or lender. Commonly, they come from middle or high economy persons or another business entity with idle cash in hand. The lender puts their idle cash into the second party, the online peer-to-peer lending operator. When the lender deposits their money, the money is still on the peer-to-peer lending operator. The third party is the borrower or the debtor. The debtor is people or businesses that need loans. They could apply for a loan with several documents to verify their identity and make the credit rating score. Another stakeholder in this business is the Indonesian Financial Service Authority (FSA). FSA takes part as a party that verifies the legality of the peer-to-peer lending business. Here is the figure 3 that could describe the relationship between parties in the Online peer-to-peer lending business in Indonesia.

Problem Online Peer-to-Peer Lending in Rural Area

The potential problem that might arise is about credit scoring system (Mezei, J'ozsef, Byanjankar, & Heikkil, 2018; Z. Zhang, 2014). The traditional banking system has matured and well-established a credit scoring system, using one integrated bank database to assess customer credit scores. Online peer-to-peer lending does not have this infrastructure, and they do not involve any settled database to evaluate the borrower's credit score. One of the alternatives to solve this problem is using big data. Financial technology associations should create an integrated database that shares their credit transaction history with customers.

The lack of a credit scoring system in peer-to-peer lending is a potential moral hazard to the customer because of bad debt (Lu, T., Jia, Z. Xu, Y. Huang, L. Zhang, 2016; C. Zhang, Lu, & Xu, 2017). One solution to reduce the risk of moral hazard in this business is to create a well-establish credit scoring system. A well-established credit scoring system could help online peer-to-peer lending operators to score their customer risk, reducing the possibility that the customer failed to pay the debt.

Previous research also identifies five main problems in Indonesia today's online peer-to-peer lending. The study uses qualitative analyses and does focus group discussions with the Head of the Investment Alert Task Force, the Director of Fintech Licensing and Supervision Arrangements (Financial Services Authority), the Head of the Sub-Directorate for Electronic Certification Organizers Control (Ministry of ICT), the Deputy Chairperson of the AFPI and several academics. They found that the problem was: 1) public awareness about peer-to-peer lending, 2) data leakage and personal data protection, 3) personal data fraud, 4) illegal fintech lending, and 5) marketing ethics (Suryono, Budi, & Purwandari, 2021).

Public awareness on how to use online peer-to-peer lending leads to one customer borrowing money from multiple financial applications. Some of them did not understand the risk of having debt. Another does it intentionally, as we classify it as a moral hazard. This shared understanding of financial technology creates new poverty. An inadequate account of peer-to-peer lending related to low-level financial knowledge. As the financial service authority found, the rural area in Indonesia has a lower financial literacy index. Based on the Cermati.com report, people in the rural area typically borrow relatively small amounts, between 200.000 IDR – 1.000.000 IDR. The borrower will realize that the debt bill has exceeded their monthly salary and ultimately have difficulties paying the debt, the interest and the administration fee. Based on the Kompas.com interview with the five debtors of peer-to-peer Lending in Karang Mukti Village, Subang District, West Java, people have debt in more than five peer-to-peer lending applications but small amounts. However, it may lead them to debt dependency and debt payment trouble without conservative calculation.

The cases above show that individuals lacking financial knowledge are often more susceptible to engaging in illegal peer-to-peer lending due to a limited understanding of the requirements associated with borrowing. Without sufficient literacy, they may struggle to comprehend the complexities of peer-to-peer lending agreements, including interest rates involved, repayment terms and potential penalities for defaulting on loans.

Moreover, financially illiterate individuals may find it challenging to assess risk associated with borrowing money (Bannier & Neubert, 2016). They can underestimate the potential consequences of taking on loans which can lead them to make impulsive borrowing decisions without fully considering the long-term financial implications. Based on that argument, this research proposes the first hypothesis:

H_1: People lacking financial knowledge are more likely to engage in illegal P2P lending

Economic pressure can increase the probability of individuals engaging in illegal peer-to-peer lending due to several factors (Marinaro, 2017). First, when indivdiuals face financial pressure, they may feel compelled to seek alternative source of funding, particularly if they have limited access to traditional banking. This sense of urgency can lead individuals to overlook or downplay the risk associated with illegal lending, as they prioritize immediate financial relief.

For example, based on the Kompas.com interview in Karang Mukti Village, Subang District, West Java trigger to loan some money, especially if they received the promotion when they are in an urgent condition such as to pay their children's tuition fees, health spending, and even to pay another loan.

Second, economic pressure can also exaxerbate individuals' vulnerability to exploitative unresponsible lenders who may take advantage of their desperate financial situation. In their desperation to relief financial difficulties, individuals may be more susceptible to predatory lending practices, including very high interest rates, hidden fees and repayment terms which can trap them in cycles of debt.

Additionally, economic pressure may diminish individuals to critically evaluate lending offers and assess the legitimacy of the lending. When facing economic pressure, individuals may be more inclined to overlook warning sigms of fraudulent or illegal lending practices because they prioritize securing funds to meet their immediate needs. Based on such arguments, this research proposes the second hypothesis:

H_2: Economic pressure increases the probability of engagement with illegal P2P lending

The raising of online peer-to-peer lending exposes rural society to easy microfinancing without social control as a credit rating. Easy loans without social control from the neighbourhood and low-level financial literacy expose risky economic behaviour. Even worse, as low-income families, many people in rural areas make financial decisions as 'compensatory' for low self-esteem. In rural areas, many irrational financial decisions have been made to buy goods and fulfil their secondary and tertiary needs (Hindun & Reza, 2016).

METHOD

This research collected data using online and paper questionnaires to answer the hypothesis. People in the rural area will be the targeted population in this research. A total of 10 questions has been spread using convenience sampling in several provinces in Indonesia. A total 246 people participate in this research.

This research has two independent variables and one dependent variable. The first variable is financial knowledge. Financial knowledge in this research was measured using five essential financial literacy measurements developed by van Rooij et al. (2011). People have been asked about their basic knowledge of personal finances. There are measured: 1) Numeracy skill, 2) Interest compounding, 3)

Inflation, 4) Time value of money, and 5) Money illusion.

The second variable is economic pressure. This research asked each participant whether the economic pressure made their interest in the offering of P2P lending on the mobile phone. To measure this variable, two objectives' questions have been asked that have been used by previous research (Sheehan & Tilden, 1983; Vinokur, Price, & Caplan, 1996) (Sheehan & Tilden, 1983) (Sheehan & Tilden, 1983) (Sheehan & Tilden, 1983) (Sheehan & Tilden, 1983). Two questions used to measure economic pressure are: 1) the average monthly expense to income ratio and 2) the perceived price level in your city.

This research's engagement with illegal P2P lending is measured using a direct question. This question measures people's perception of engaging or not with illegal P2P lending. Using a 5 Likert scale from 1 to 5 (I do not want to use the service, I am doubtful about the service, I have no idea about the service, I am thinking of using the service, I will use the service). The higher the score, the higher the probability people will engage with illegal P2P lending.

Probit analysis was used to identify the probability of each participant engaging in illegal lending.

$$\mathbf{Pr\ (IL) = a0 + b1FL + b2EP2 + b3JK + b4MS + b5ELE + b6MID + b7UNI + e}$$

Information:
IL = Engage to Ilegal Lending (categorical 0 = not engage, 1 = engage)
FL = Financial Literacy (interval 0 – 100 points)
EP2 = Economic Pressure (interval conversion from Likert scale)
JK = Gender (categorical: 1 = male, 0 = female)
MS = Marital Status (categorical: 1 = married, 0 = single)
ELE = Elementary school level (1 = for elementary school, 0 = not elementary school)
MID = Junior and Senior High School (1 = for junior and senior high school, 0 = not both of them)
UNI = University (1 = for university, 0 = for not university)

RESULTS AND DISCUSSION

Probit analysis has been used to examine the binary outcome of this research. As this research examine whether participant engage / not engage with Illegal Lending, this statistical analysis is the most suitable. Figure 2 shows us that two out of five variables show significant results. Financial literacy (FL), Gender (JK), and Marital Status (MS) show do not affect the engagement in illegal lending. On the other hand, economic pressure (EP2) and Education Level (ELE, MID and UNI) significantly impact the intention to engage in illegal lending.

The result of estimation maximum likelihood Probit is depicted in figure 4. Based on figure 4, the higher people have economic pressure

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Dependent Variable: IL
Method: ML - Binary Probit (Newton-Raphson / Marquardt steps)
Date: 05/27/22 Time: 10:52
Sample: 1 246
Included observations: 246
Convergence achieved after 5 iterations
Coefficient covariance computed using observed Hessian

Variable	Coefficient	Std. Error	z-Statistic	Prob.
FL	0.122945	0.106820	1.150956	0.2498
EP2	0.490971	0.140664	3.490387	0.0005
JK	-0.254422	0.207525	-1.225980	0.2202
MS	-0.135492	0.263792	-0.513633	0.6075
ELE	-2.567937	0.982357	-2.614056	0.0089
MID	-2.622064	0.583551	-4.493290	0.0000
UNI	-2.947623	0.614577	-4.796180	0.0000

Mean dependent var	0.178862	S.D. dependent var	0.384018
S.E. of regression	0.376719	Akaike info criterion	0.927878
Sum squared resid	33.91818	Schwarz criterion	1.027623
Log likelihood	-107.1290	Hannan-Quinn criter.	0.968041
Deviance	214.2579	Restr. deviance	231.0743
Avg. log likelihood	-0.435484		

Obs with Dep=0	202	Total obs	246
Obs with Dep=1	44		

Figure 4. Result of Probit Analysis

the higher their probability of engaging in illegal lending. This finding similar with Karlan, 2019 that highlight how individual facing financial constraint are more vulnerable to predatory lending practice which is associacet with illegal lending. The figure also shows that the higher the education, the lower the chance of engaging in illegal lending. That finding supported with previous research (Kara et al., 2021) shows that higher education levels are generally associated with better financial literacy and decision-making, leading to a lower likelihood of engaging in risky financial behaviors like borrowing from illegal lenders.

On the other hand, the higher their financial literacy level found has no relation to their intention to engage in illegal lending. This finding similar with previous research (Hoeve, et al. 2014) found that while higher financial knowledge doesn't always prevent debt, specific financial management skills, often developed through financial literacy programs, can reduce risky borrowing. This difference could be due to various factors like the specific financial literacy measures used, the context of the study, or the sample characteristics.

Similar findings with gender and marital status, both have no relation to illegal lending engagement. This research found no association between whether people are male or female and people with marital status or single. The probability of engaging in illegal lending is unidentified. This finding has similarities with previous study that found mixed result regarding gender with lending platforms. Similarly with marital status impact on financial decision could be a complex and influenced by cultural and socioeconomic factors (Chen et al, 2017).

CONCLUSION, IMPLICATION AND LIMITATION

This research aims to identify factors that could influence engagement with illegal lending. The results show that people with high economic pressure and low formal education have the highest probability of dealing with illegal borrowing. In contrast, people with low financial stress and high formal education found the lowest possibility of having a transaction with illegal lending. This finding supports the second hypothesis of this research. Conversely, this research found that financial literacy did not influence illicit engagement lending decisions. This finding shows that the first hypothesis of this research is not supported.

This research finding that financial literacy is not related to people's decisions on illegal lending was quite surprising, as many previous studies found the opposite. Previous research found that people with high financial literacy or knowledge have lower debt and are less likely to engage with debt decisions such as credit cards and mortgages (Brown & Graf, 2013; Huston, 2012; Lusardi & Tufano, 2015).

One of these research contributions is finding the critical role of economic pressure concerning illegal lending engagement. Previous research in illegal lending focuses only on the practice of illegal Lending (Hidajat, Suryono, Budi, & Purwandari, 2019; Hidayat, Alam, & Helmi, 2020; Suryono et al., 2021). Very few studies examine the role of economic pressure on engagement in illegal lending. Previous research examines financial pressure with negative behaviour such as suicide

(Yoder & Hoyt, 2005) and alcohol overuse (Conger, R. D., Lorenz, F. O., Elder Jr, G. H., Melby, J. N., Simons, R. L., & Conger, 1991). This research contributes to the literature by showing how economic pressure is essential in debt decisions, especially in illegal debt.

The strong link between economic pressure and illegal lending reinforces the need for social safety nets and economic empowerment programs. Policymakers should consider initiatives that alleviate financial strain on vulnerable households, reducing their susceptibility to predatory lending. This could include job training, micro-loan programs with fair terms, or direct cash assistance during crises.

The protective effect of education highlights its long-term importance. Investing in quality education, particularly financial literacy integrated into school curricula, can empower individuals to make informed financial decisions and avoid risky borrowing.

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