Buy Now, Pay Later (BNPL) on Your Credit Card

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1 Introduction

Buy Now, Pay Later (BNPL) is a FinTech credit product that allows consumers to delay full payments into interest-free installments. Countries such as Australia began to add regulations, which influenced others such as Great Britain and the United States to further investigate the implications of BNPL. This paper is one of the first attempts at economic research on BNPL, focusing on how consumers use BNPL products and the implications of charging BNPL transactions to credit cards. Through an analysis of UK credit card transaction data, the authors document the prevalence of BNPL usage on credit cards, particularly among younger consumers and those in deprived areas.

2 Data

2.1 Source and Sample

The data consists of anonymized UK credit card transactions from multiple banks and credit card issuers. The sample includes approximately 1 million credit cards held by UK consumers between December 2018 and September 2022.

2.2 Data Details

- Each credit card transaction record includes the amount of spending, the type of spending, demographics, and an anonymized card-account identifier.

- Demographics: Age range and geography of cardholders.

- BNPL transactions are identified via payment processor tags (e.g., Afterpay, Klarna).

- PayPal transactions were excluded from data due to the inability to distinguish BNPL from non-BNPL payments.

- Doesn't include repayments, borrowing costs, debit card use, or unpaid BNPL balances.

- Uses a sample of data on BNPL transactions from lenders like Clearpay, as a useful estimate of overall BNPL usage.

  Key metrics:

  - In 2021, 19.5% of credit cards in 2021 had at least one BNPL payment.
  - The median value of the BNPL transaction: £19.65.
  - 96% of the transactions are £100 or less.
  - The median total BNPL spending per card in 2021: £157.
  - 17.6% of cards spent £500 or more on BNPL.
  - In the US, 22% of Buy Now, Pay Later (BNPL) transactions are charged to credit cards, while in the UK, surveys suggest 26% of BNPL users rely on credit cards, and 42% use some form of borrowing.

3 Empirical Framework

3.1 Objective

The study analyzes the prevalence and patterns of BNPL transactions charged to credit cards, with a focus on demographic and geography.

3.2 Essential Variables

- **BNPL Usage**: Percent of credit cards with BNPL transactions and share of total credit card spending on BNPL.

- **Demographics**: Age and geography of cardholders.

- **Deprivation Index**: Aligned with the 2019 English Indices of Multiple Deprivation (IMD) to evaluate levels of vulnerability to socioeconomic challenges such as poverty.

3.3 Regression Model

The following regression model is used to analyze the relationship between deprivation levels (IMD ranking) and BNPL usage across 315 districts in England.:

$$Y_d = \alpha + \beta \text{IMD}_d + \epsilon_d$$

- Y_d: Measures BNPL usage (percentage of cards or share of credit card spending).

- Alpha: Intercept- Represents the baseline value of BNPL usage when the Index of Multiple Deprivation (IMD) is zero

- Beta: measures the change in BNPL usage for a one-unit change in the IMD ranking

- IMD_d: Ranking by Index of Multiple Deprivation (IMD) of deprivation (1 = most deprived, 315 = least deprived).

- Epsilon: represents the error term (unexplained variation).

- The model is weighted by district population size from UK's Office for National Statistics) to ensure larger districts influence results more.

- Standard errors are clustered by region to account for similarities between nearby districts / spatial correlation.
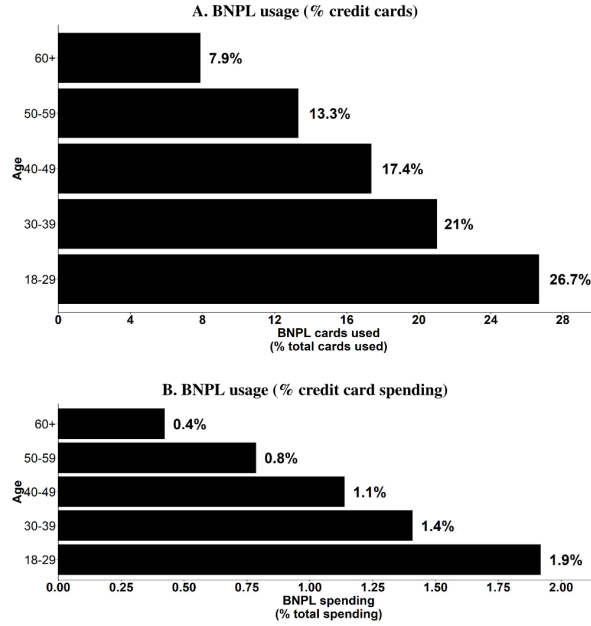
4 Results

4.1 BNPL Usage on Credit Cards

- Rapid growth in BNPL spending on credit cards: 21.4x increase between January 2019-December 2021.

- BNPL spending as a percentage of total credit card spending: 1.2% in 2021, peaking at 1.6% in December 2021.

- BNPL lending grew to £2.7bn, 3.4x increase than in 2019

- December 2021: BNPL was nearly 6x higher than in December 2019.

- Seasonal peaks align with Black Friday and Christmas spending and in 2022 BNPL on credit cards declined due to worsening economic conditions

4.2 Age Heterogeneity

- 84% of BNPL transactions on credit cards are by consumers aged 18–49.

- Younger consumers are less likely to repay credit card balances in full, increasing the risk of interest costs.

A. BNPL usage (% credit cards)

Age	BNPL cards used (% total cards used)
60+	7.9%
50-59	13.3%
40-49	17.4%
30-39	21%
18-29	26.7%

B. BNPL usage (% credit card spending)

Age	BNPL spending (% total spending)
60+	0.4%
50-59	0.8%
40-49	1.1%
30-39	1.4%
18-29	1.9%

4.3 Geographic Deprivation

- BNPL usage is higher in more deprived areas which is serious as credit cards in deprived areas are less likely to be repaid in full and more likely to incur higher interest rates.

- Moving from the least to most deprived local authority is associated with a 28–30% increase in BNPL usage (measured by fraction of cards) and a 58–66% increase (measured by share of spending).

5 Conclusion

5.1 Positive effects

- **Positive effects**: BNPL could help consumers in poorer areas who struggle with liquidity to smooth their consumption if they are constrained by immediate cash flow issues. Additionally, BNPL might be cheaper than other forms of borrowing like payday loans, which have high APR. This could improve welfare by enabling consumers to avoid high-cost debt.

5.2 Negative effects

- **Negative effects**: BNPL could harm consumers if it leads them to borrow more on higher-cost credit or encourages financially inexperienced individuals to make naive mistakes. These mistakes could include being over-optimistic about their ability to repay on time.

5.3 Final Thoughts

- A significant minority of UK consumers charge BNPL transactions to their credit cards, particularly younger consumers and those in deprived areas.

- This behavior raises doubts about consumers' ability to repay BNPL debt and prompts regulatory questions about refinancing unsecured debt.

- Further research is needed to assess the welfare effects of BNPL, its substitution for other payment mechanisms, and the potential impact of regulatory interventions.

6 References

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