Proceedings of the 2nd International Conference on Financial Technology and Business Analysis
DOI: 10.54254/2754-1169/92/20231195

The Impact of Different Elements on Whether People Make Deposits

Gong Cheng[1,a,*], Zihan Wang[2,b], Linyue Zhang[3,c]

[1]Liberal Arts, The University of Manchester, Manchester, Oxford Rd Manchester M13 9PL, UK
[2]Zhenhai High School Cambridge A-level Center, Ningbo, 315299, China
[3]School of Economics and Finance, Xi'an Jiaotong University, Xi'an, 710061, China
a. 2403774246@qq.com, b. 1797159427@qq.com, c. zly2391382223@163.com
**corresponding author*

Abstract: The main thrust of this paper is to establish the correlations between a couple of elements and the inclination of people to deposit in banks, the study also finds out the target masses served by the bank deposit business. For this purpose, this research paper uses the binary logistic model to analyses how the following eight factors respectively influence people's intention to deposit in banks. The eight factors include age, balance, job, marital, education, housing mortgage, loan and default. The results of the research indicate that groups which own the characteristics of being highly educated, being single, being senior, having a fatter salary will be prone to save money in banks. Besides, students and retired people also tend to own a deposit in banks. In conclusion, it is useful and wise for bank to take measures to attract these groups to enlarge the size of deposit, which will definitely bring more profits to banks.

Keywords: Bank Deposit, Binary Logistic Model, Customers Attracting Strategy

1. Introduction

The definition of deposit shows that it is a transaction involving a transfer of money another party, keeping money with the ability to access it at any time conveniently. It is not only secure the money of customers but also have a significant effect on bank's liquidity, being the primary funding source of most of the banks. The demand for deposit has changed with the times, and different factors can influence a person whether they make deposits. This also means that banks need to look for different target customers to offer deposit services based on different factors. So, judging the impact of a factor on deposits is important for banks.

For this, this article focuses on eight different factors, including housing mortgage, age, marital, education, balance, job, default and loan. To examine these factors, this research uses Binary logistic model. It is based on the logistic function (also known as the sigmoid function) to describe the relationship between the probability of an event occurring and the independent variables. This article is about how 8 different factors have impacted deposits, and the strategies that banks are using to address these impacts.

DOI: 10.54254/2754-1169/92/20231195

2. Variables

In order to ensure that the variables selected are significant for the whole model, the research do a check the significance of every variables before establishing the model. Based on the results of p-value in the following table 1, it is clear that most of the variables are significant and can be used in the logistic model.

Table 1: Significance of variables

variables		p-value
age	intercept	3.97e^(-7)***
	age	0.000229***
balance	intercept	2e^(-16)***
	balance	2e^(-16)***
job	Blue-collar	5.25e^(-10)***
	entrepreneur	0.001459**
	housemaid	0.023229*
	management	0.043985*
	retired	2e^(-16)***
	Self-employed	0.690256
	services	0.000583***
	student	2e^(-16)***
	technician	0.496067
	unemployed	0.001894**
	unknown	0.835675
marital	married	0.001829**
	divorced	0.173083
	single	0.000122***
education	primary	3.71e^(-16)***
	secondary	0.000223***
	tertiary	2e^(-16)***
	unknown	1.06e^(-5)***
Housing mortgage	yes	2e^(-16)***
	no	2e^(-16)***
loan	yes	2e^(-16)***
	no	0.35
default	yes	2.52e^(-5)***
	no	7.14e^(-7)**8

(*: p<5% **: p<1% ***: p<0.1%)

2.1. Age

As age changes, so does the wealth a person has, the way they use it, and their spending habits. This also means that people's attitudes towards whether deposit also change. So, the relationship between age and deposit is shown as below.

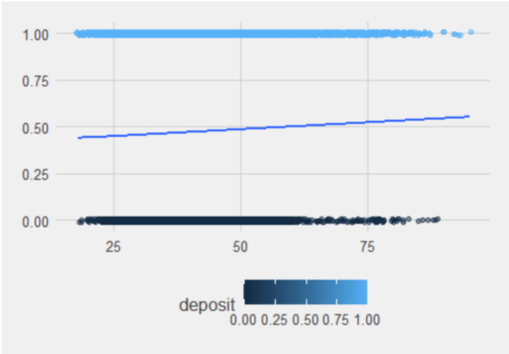

Figure 1: age-deposit

Figure 1 shows that people's willingness to save increases with age. When the age increases for one year, the probability of depositing increases 0.59%. It can be seen here that older people are more willing to make deposits than younger people. Through Hal E. Hershfield with the teammate [1] research, it shows that many people don't have the money they need for retirement, and young people are more likely to spend their money now than in the future, without a unified plan for future. Young people do not realize the importance of planning for their future lives and are more inclined to spend money in the present rather than saving for the future. This is why young people are reluctant to deposit. And then older people are more likely to save money, probably because they have more spare cash. Taking the retired people as an example, most of them receive pension every month while they do not have the housing loan as younger people and their children have already lived by themselves, so it is possible for them to have savings. To keep their money safely and earn some interests, it is a good choice to deposit in the bank. Through Asli Demirgüç-Kunt [2] research, it shows that as the world ages, more and more people start to think about their lifelong livings, and the deposit of older people starts to rise, while at the same time an increase in measures of trust in the financial system, such as a moral hazard index based on deposit insurance, would lead to more old people to deposit. It can be seen here that banks should improve the credit and security of their deposits so that more elderly people will be willing to trust them and make deposits in banks. In summary, older people are more likely to save money than younger people, and more and more of them will be willing to do so as time goes on.

2.2. Balance

Balance means the personal balance of customer. Personal balance may determine people whether want to deposit, so this will also have an impact on deposits. Here is the relationship graph.

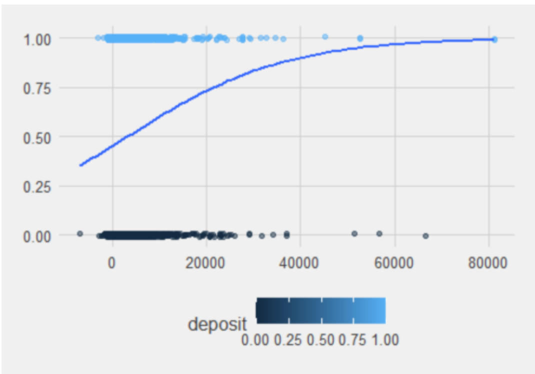

Figure 2: balance-deposit

DOI: 10.54254/2754-1169/92/20231195

From the Figure 2, it shows that every time the balance increases by 1,000, the likelihood of a deposit increases by 6%. And that means more balance lead to more deposit. Firstly, when people have spare money which is their personal balance they will prefer to deposit in the bank to earn the interest also the bank will provide some investing product for them to manage their finance. In addition, people with spare money who are willing to go for savings may also be planning for their future by saving their extra possessions for the future just in case. Finally, it is also likely that people with surplus wealth choose to deposit money because it is safer, protects them from property loss, and allows them to take advantage of additional bank services, such as discounts on merchandise and shopping with points, while they are at it. In summary, the higher balance people more prefer to make deposits. Providing better service and deposit product benefits to such customers is the key to attracting them.

2.3. Job

Job determines one's salary, which is an important part of the composition of one's wealth. So, it stands to reason that occupation should be an important factor affecting deposit. Their relationship is shown below.

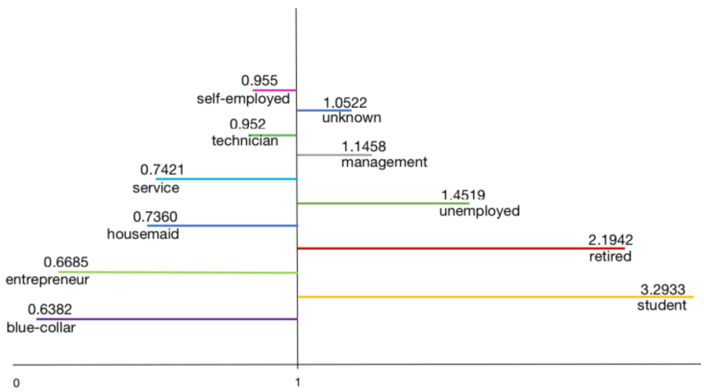

Figure 3: job-deposit

In Figure 3, the data reflects the fact that the student population, as well as retired people, who are among the highest paid, are very happy to make deposits. That also means the people cannot with stand high risk of investment or willing to acquire the interest as fixed income have higher probability of owning savings. From the results we get, it is hard to identify which specific occupation has the strongest preference of deposit. However, for the ones with higher probability of depositing have several characteristics in common. Usually, the people cannot with stand high risk of investment or willing to acquire the interest as fixed income have higher probability of owning savings. Take the unemployed people as an example, it is hard for them to predict the time they can be hired but during the time they seek for new job they still need to have income to support their necessary demands of living while the way of earning money should not be too risky because they cannot take over the harms of loosing money. In this way, taking deposit is a good solution. Not surprisingly, students or retired prospects are most likely to subscribe to time deposits. Retirees tend not to spend their cash lavishly, so they are more inclined to lend it to financial institutions for their use. Students are another group that habitually subscribe to time deposits. In summary, students and high-income earners are more willing to make deposits and they can be the main target of banks.

DOI: 10.54254/2754-1169/92/20231195

2.4. Marital

Marital reflects people whether to form a family. Whether a person has a family will affect their spending habits, financial expenses, and future plans for their property. So, this is also a factor that affects savings. Their relationship is shown in the figure.

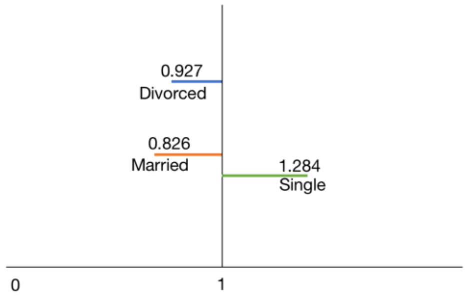

Figure 4: marital-deposit

The Figure 4 shows 3 different scenarios in marital. Divorced which is data of people who prefer depositing is lower than the ones who do not (about 8%). Married people who want to deposit or not are similar, people in this category who have deposit is about 18% lower than that do not have. In the single, more people tend to deposit with nearly 28% higher than the data of the group of people who do not have deposit. This shows that single people are more inclined to save money. Through Neil Bhutta and Lisa Dettling report [3], there is growing evidence that many families have little or no financial cushion. For example, a recent survey found that many Americans would borrow or sell something to pay for a $400 unexpected expense, suggesting that a large portion of the population has very low levels of liquid savings. It is clear from this that many families do not actually make deposit for future risks. At the same time, Ariane [4] research shows that within the family, most women are assigned responsibility for the day-to-day management of the budget, which exacerbates their concerns about short-term financial security and has a negative impact on deposit. Women's fear of daily expenses in the family makes them decide that they do not have enough money, which leads to a pessimistic attitude towards making deposit in the family. It's like the cost of schooling for the kids, rent, utilities. Instead of making deposit, they spend it on daily expenses. This leads to the fact that people with families won't want to make deposits. However, for those who are single, their daily expenses are all up to them and they have plenty of freedom. This also means that they can have plenty of surplus wealth and plan their own deposit plan. So for banks, singles should all be potential customers worth focusing on. In summary, Singles are more likely to go for savings compared to those with families.

2.5. Education

Educational attainment is likely to affect awareness of the importance of making deposit, which will influence whether to deposit. The relationship is shown in the figure 5 below.

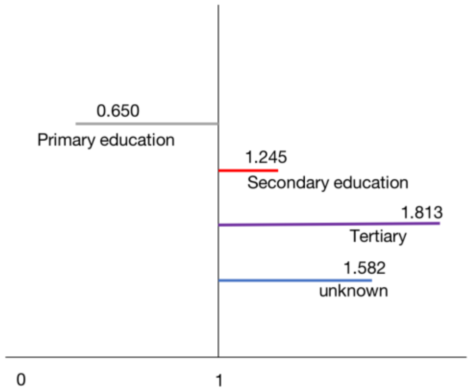

Figure 5: education-deposit

Figure 5 shows that among those with only primary education, those who are willing to save are lower than those who are not about 35%. There are 24.5% more people with secondary education who are willing to save money than those who are not. Those with tertiary education were 81 % more likely to deposit money than those who did not. This also means that the more educated people are, the more they tend to save money. Through B. Douglas Bernheim [5] research, it shows that mandatory regulations improve students' exposure to financial courses and their asset accumulation as adults. This demonstrates that students with financial education realise the importance of making deposit. This knowledge will make students more inclined to save for future wealth accumulation. At the same time, Margaret [6] shows that students perform significantly better at saving when they are financially educated than when they are uneducated, and this is independent of the family's education and wealth. This also means that those who have received an education are more aware of the importance of making deposit and planning for wealth, knowledge that cannot be learned from home. This makes it all the more important for banks to corporately promote the importance of deposits to a wider audience and to focus on serving the highly educated. In summary, the more educated you are, the more you will to deposit.

2.6. Housing Mortgage, Loan, Default

Among these three factors, the first one is housing mortgage. Many people in the modern world would choose to use housing mortgage, this can make it quicker for a person to own their own home. At the same time, it starts to put a strain on one's liquidity. In this way, this will have an impact on making deposits. Loan, it may increase people's existing assets, but this also squeezes the remaining assets available to them in the future. This can leave people unable to afford to make deposits. Default, people in this situation still need to go and pay off their debts, which means it's hard for them to have money to deposit. The relationship between them and deposit as the Table 2 shown below.

Table 2: housing mortgage, loan, default-deposit

coefficients	yes	no
Loan	0.5054	0.9812
Housing	0.4357	1.3273
Default	0.4928	0.9097

Table 2 shows the customers with housing mortgage do not prefer depositing. Probably,the main reason of it is having limited financial ability because the loan of housing costs a large proportion of their income therefore there is not enough part for them to deposit into the bank. At the same time,

DOI: 10.54254/2754-1169/92/20231195

the data shows that customers with default record less inclined to deposit. For example, this situation may indicate that the customers still have bank loans at this time, therefore it is so tough for them to save money and turn it into deposit. At last, people with loans are less likely to deposit. This may be because the current situation of debt leads to their poor financial situation. Some people may not be able to deposit because they have no remaining money, and some people may not choose to deposit because they think that the way of earning interest rate is too slow to help them change their current situation. In summary, people who have loan, deposit, and housing mortgage not prefer to deposit.

3. Discussion

3.1. Gamification in FinTech

Today's consumers expect apps and digital experiences, which creates opportunities for bank marketing ideas. Gamification is a simple and creative way to engage consumers, and banks can apply game principles and mechanics to engage and motivate consumers. For example, banks use their apps as part of banking to promote money-saving options. Once users take part in a challenge, they accumulate deposits that are then transferred directly into a savings account.

3.2. Location-based Advertising Campaigns

Regardless of the size of the bank, physical location is an important element of bank marketing campaigns and advertising. Banks can offer on-site counselling to reduce the amount of time customers spend on-site, and it's also important to take simple steps to shift the focus away from tellers and towards smarter ATMs and digital self-service, which reduces the cost of physical locations, thus providing more outlets and greater value.

3.3. Creating a Social Media Personality

Social media will continue to exist as part of a bank's marketing campaign. However, most banks use social media in a relatively traditional, even 'boring' way. Meanwhile, other types of large corporations are using strong social media personalities to drive consumer engagement and build customer loyalty. Creating a personality, having fun with social and providing consistent customer service and interaction through the platform is a great digital marketing idea. Customers will be more likely to follow a bank's page or channel if they know that its main purpose is to entertain, not simply to sell products.

3.4. Reward Engaged Users

Engagement is a key part of keeping consumers interested and informed about the bank. Taking the time to build a rewards programme for ongoing engagement is a lucrative marketing idea that will help banks continue to drive engagement. For example, banks can reward users for checking in on Facebook; banks can create rewards programmes for users who deal with digital banking and budgeting on a daily or weekly basis; and banks can create rewards programmes to drive adoption of new programmes. For example, if a bank launches a new mobile app, it can reward customers who adopt and continue to use the app.

4. Conclusion

In conclusion, the older people get the more they want to save. So, in response to age, banks should focus more on the older age group. And having a salary does not determine whether people have savings. When banks can introduce better policies to encourage people with salaries to save money,

DOI: 10.54254/2754-1169/92/20231195

more people with salaries can save money. What's more, the data reflects the fact that the student population, as well as managers and entrepreneurs, who are among the highest paid, are very happy to make deposits. This also suggests that high earners and young students are the target of the banks' attention. In addition, the singles are the category of people who are more willing to deposit. So, banks should be able to target their services and strategies to singles to encourage savings. Moreover, the more highly educated the group is, the more they have the intention to save money. So, banks can focus more on the highly educated group. And then, people without mortgages are significantly more likely to make deposits, and banks should be paying more attention to them. Also, people who don't default will still be willing to save money, which means that banks can put a small amount of effort into pulling in this group of customers. Lastly, the group without loans is still more likely to go to the bank to save money than the group with loans. So, whether a customer has loans or not becomes a point of concern for the bank.

Acknowledgement

Gong Cheng, Zihan Wang and Linyue Zhang contributed equally to this work and should be considered co-first authors.

References

[1] Hal E. Hershfield, Daniel G. Goldstein, William F. Sharpe, Jesse Fox, Leo Yeykelis, Laura L. Carstensen, Jeremy N. Bailenson (2019) Increasing Saving Behavior Through Age-Progressed Renderings of the Future Self. Available at: https://journals.sagepub.com/doi/abs/10.1509/jmkr.48.SPL.S23

[2] Asli Demirgüç-Kunt, Leora F. Klapper, Georgios A. Panos (2016) Saving for Old Age. Available at: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2811340

[3] Neil Bhutta, Lisa Dettling (2018) Money in the Bank? Assessing Families' Liquid Savings using the Survey of Consumer Finances. Available at: https://www.federalreserve.gov/econres/notes/feds-notes/assessing-families-liquid-savings-using-the-survey-of-consumer-finances-20181119.html

[4] Ariane Agunsoye, Jerome Monne, Janette Rutterford, Dimitris P. Sotiropoulos (2022) How gender, marital status, and gender norms affect savings goals. Available at: https://onlinelibrary.wiley.com/doi/abs/10.1111/kykl.12294

[5] B. Douglas Bernheim a, Daniel M. Garrett b, Dean M. Maki c (2001) Education and saving:: The long-term effects of high school financial curriculum mandates. Available at: https://www.sciencedirect.com/science/article/abs/pii/S0047272700001201

[6] Margaret Sherrard Sherraden, Lissa Johnson, Baorong Guo (2010) Financial Capability in Children: Effects of Participation in a School-Based Financial Education and Savings Program. Available at: https://link.springer.com/article/10.1007/s10834-010-9220-5