

YOUNG ADULTS' ATTITUDE TOWARDS DIGITAL PAYMENT METHODS AND FINANCIAL RESPONSIBILITY

EMMA ROSENLIND,¹ ULRIK SÖDERSTRÖM,¹
OLE NORBERG,¹ HELEN CRIPPS,² THOMAS MEJTOFT¹

¹ Umeå University, Digital Media Lab, Umeå, Sweden
emma.rosenlind@umu.se, ulrik.soderstrom@umu.se, ole.norberg@umu.se,
thomas.mejtoft@umu.se

² Edith Cowan University, School of Business and Law, Perth, Australia
h.cripps@ecu.edu.au

There are numerous online payment methods when shopping online. This paper presents the evolution of payment methods through the years and investigates which payment methods young adults prefer and investigates if and how modern payment methods affect financial responsibility among young adults. The study was conducted through a survey and follow-up interviews with Swedish young adults. 75% claimed they make online purchases 1-3 times a week or more, of which 35% always check their bank account before paying. The study suggests that direct payment using their smart device (Swish) is the most preferred payment method. The research suggests that it is the combination of the different payment methods available that is impacting financial responsibility among young adults rather than the payment method itself.

Keywords:
payment
methods,
financial
responsibility,
finance,
purchase
behaviour,
Bled
eConference

1 Introduction

Traditionally money (cash) was handled banks. When you wanted to use the money, you had to walk to the bank so the teller could hand it over to you. Then you had to take the money to the store if you wanted to buy something (Eriksson, & Sandhill, 2019). In the early 60s, debit cards were launched as the first step toward digitalizing payments (Leblebici, 2012; Lauer, 2020). The debit card was similar to the check, but its infrastructure and payment guarantee to the seller eventually outcompeted checks and cash (Wisehn, 2019). About 10 years later, Michael Aldrich invented a system that came to be the foundation of e-commerce (Aldrich, 2011). The breakthrough for online payments and e-commerce happened in the early 90s and big tech companies such as PayPal and Amazon worked hard to lead the market forward (Ferrera & Kessedjian, 2019). In 2005, The National Federation coined the term “Cyber Monday”, due to the high number of online transactions carried out during Thanksgiving that year (McFerrin, 2021). For 30 years, online payments and e-commerce have constantly developed. Since almost all payments and transactions are something that can be done by yourself without interaction with another human party, the teller in the bank, is now no longer needed. The list of different ways of paying on the internet is long, but all of them have one thing in common, they strive toward making the experience for the customers as easy as possible (van der Cruijssen, & Plooij, 2018; Page, 2021).

2 Research Objectives

With the rise of the cashless society and the ephemeral nature of digitalization payments means that young people have grown up in an environment where payments are more straightforward, accessible, and frictionless (Senali et al., 2022; Tatum, 2022). The digitalization of payment methods and the rise of “buy now pay later” schemes have seen increasing numbers of young people experiencing debt and financial distress (Coffey et al., 2023). This paper aims to understand young adult’s approach to finance in the context of how different payment methods can affect financial responsibility among young adults. To answer this, the following research questions have been formulated:

1. Which online payment methods do young adults use and prefer today?
2. How do online payment methods affect young adult's level of financial responsibility?

3 Literature Review

The following section will introduce some key concepts of this study.

3.1 Financial responsibility

Financial responsibility is a term that is used when talking about the process of handling money and assets in a way that is considered productive and in the best interest of the individual. Financial responsibility is about having a mindset where you can look beyond the wants of today to be able to provide the needs of tomorrow (Senali et al., 2022; Tatum, 2022).

3.2 BankID

BankID is a Swedish digital ID launched in 2002. It is an electronic ID document that can be compared with a national ID card and is based on the Swedish personal number that is unique for each citizen. BankID makes it possible for companies, banks, authorities, and other organizations to identify and enter into agreements with private persons via the internet. BankID has become an effective addition to the individual security device that many banks provide (BankId, n.d.-a). Today, 12 of Sweden's biggest banks use BankID as an identification service which means that when paying online with third-party payment methods, such as Klarna and Swish, the identification will be handled through BankID. The identifying process, when paying online, only consists of reading through the information about the purchase (amount of money and receiver) and confirming with either a code consisting of digits or any other smartphone unique verification procedure, such as fingerprint or facial recognition (BankID, n.d.-b).

3.3 Digital Payment Methods

The following section describes five different payment methods that will be covered in this study. The payment methods are commonly used in Sweden, and some only operate in Sweden (Arvidsson, 2019; Insight Intelligence, 2020).

1) *Klarna*: Klarna is a global leading payment and shopping service that currently provides 150 million active customers with a flexible and smart purchase experience. In Sweden, Klarna offers three different ways of paying – (1) Direct payment, which means that the money is drawn from the account straight away, (2) Pay after delivery with “Klarna – Pay in 30 days” (“Klarna – Få först. Betala sen” in Swedish), which means that the customer do not have to pay until receiving the goods, and (3) Instalment plans where the customer can spread the cost of their purchase over up to 36 months. All the payments and purchases can be handled in Klarna’s mobile app or website (Klarna, 2022).

2) *Swish*: Swish is a Swedish mobile-based payment method where the user can send money through an app that is directly connected to their bank account (Arvidsson, 2019). It was launched in 2012 as a service for payments between private users. In 2014, Swish expanded to companies and organizations (Swish, n.d.). As of 2022, Swish has over 8.3 million private users and over 300,000 connected companies, and during June 2022 around 40 billion SEK was sent via Swish (Arvidsson, 2019; Swish, 2022).

3) *Apple Pay*: Apple Pay is a way of handling payments, both in physical stores and online. The bank card is connected to Apple Pay through a unique device number and a unique transaction code. This means that the personal card number is never stored directly on the device and runs less chance of getting hijacked. When paying online with Apple Pay no confirmation with an external verification service is needed. Depending on the device the confirmation can be done with either Face ID, Touch ID, or passcode (Apple, n.d.).

- 4) *Invoice*: An invoice is a physical or electronic document that contains a payment claim. It can be sent from one company to another company or to a private person. All online banks work differently, but paying an invoice is often carried out similarly (Hansson, 2022).
- 5) *Card payment*: Card payment is when the payment is done directly by using a bank card. To complete the purchase, the card number, the card's validity period, and the CVC code need to be entered. Often the purchase will have to be confirmed via a third-party security service, such as BankId (Swedbank, n.d.).

4 Method

The study was carried out by using a survey with follow-up interviews. The survey was created with the tool Typeform and was sent out via Facebook and Slack. The target group of the study is young adults, which are defined as men and women between 18-25 years old. The respondents were selected from Umeå University and We Know It, a consultant firm for students. The reason behind the choice was for the respondents to preferably be young adults and somehow be experienced with digital payment methods.

4.1 Survey questions

The first part of the study aimed to collect demographic data about the user. Questions such as age, gender, and daily occupation were asked. The second part of the survey consisted of questions regarding which payment method the respondent prefers and most frequently uses. Questions such as "Which payment method do you prefer?" and "Rank the following payment methods according to which you are most likely to use" were asked. The last part of the survey consisted of questions regarding how the respondents view their own financial responsibility. Questions such as "Do you know how much money you have in your bank account right now?" and "Do you check your bank account before you make a purchase?" were asked. At the end of the survey, the respondents were asked to enter their e-mail addresses to participate in follow-up interviews. After the answers were analyzed, four people were contacted for interviews. Based on their answers in the survey, questions regarding their payment habits and financial responsibility were asked. The study only investigates payment methods that are used in Sweden. All questions were

written in Swedish but were translated into English in the result section of this paper. Another limitation is that most of the participants were Swedish young adults studying at the university and may therefore not give a correct representation of the whole target group.

5 Results

5.1 Demographic data

A total of 57 respondents within the target group (18-25 years old) answered the survey (63% male and 37% female). Due to the target group and the choice for distributing the survey, 95% of the population were students and only 5% were employed.

5.2 Payment methods

The data collected through the survey showed that most of the participants prefer Swish as a payment method when shopping online (Figure 1). When asked about the factors that influenced their choice of payment method, most part of the participants cited simplicity and flexibility as the main reasons for preferring Swish. The second most popular payment method was card payment. Respondents supported their choice of card payment due to the ability to save your card details in your browser, which makes it simple and easy or feeling of familiar and not knowing any other payment option. The third most popular payment method, with 21%, was “Klarna – Pay in 30 days. One factor that made them choose this payment was that they want to receive the item before they pay of it. Another factor was that they do not want to pay for something they may want to return. Invoice and Klarna instalment plan were also included as alternatives in the question, but these options were by any of the respondents as their preferred payment method.

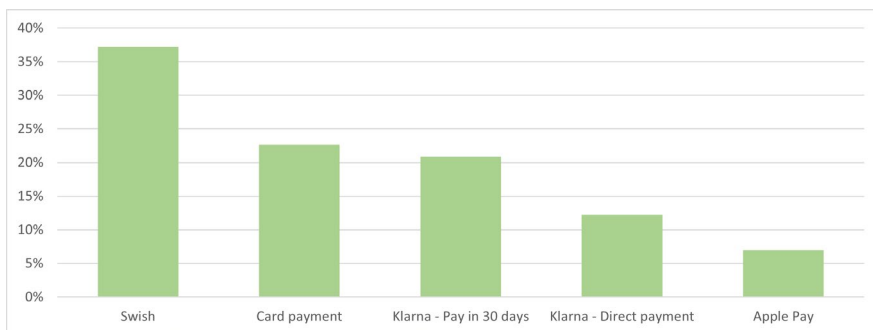


Figure 1: Which payment method do you prefer when shopping online?

The respondents were also asked to rank the payment methods according to which they are most likely to use. The answers agreed with the previous results, with Swish ranked in first place. Of the respondents 54% have tried the “Klarna – Pay in 30 days” function as part of the ranking. When asked why they tried it, 14% of respondents were motivated by not having enough money for the purchase. However, the most common reason for using it was the ability to see the item before paying. For 30% of the respondents the most common reason for using invoices was that there was no other payment method available and for 17% they used invoices when they wanted to buy something but did not have the money for it. 11% stated they use invoices when the purchase was made on behalf of someone else or for their employer, and three said they only use them when buying expensive items. Finally, 51% of the respondents claimed that there has been at least one occasion that they have not fulfilled a purchase due to limited payment methods (Figure 2).

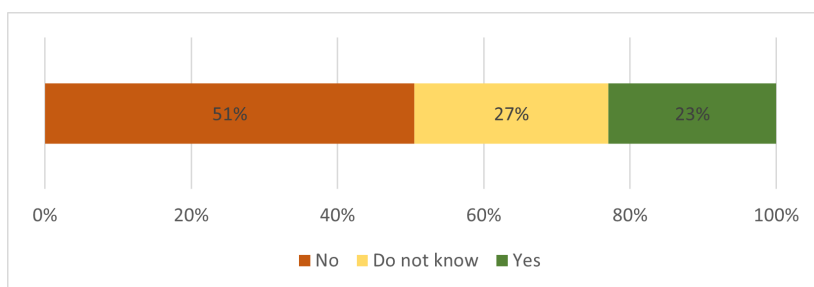


Figure 2: Has it happened that you have not fulfilled a purchase due to limited payment methods?

5.3 Financial responsibility

The part of the survey regarding financial responsibility consisted of seven questions. The first three questions asked about the respondent's online purchase behaviour. 61% of the respondents make online purchases 1-3 times a month, and 23% make online purchases a couple of times per year. Only one person never makes online purchases and only one person makes online purchases a couple of times per week. 37% of the respondents always checked their bank account balance before they make the purchase (Figure 3).

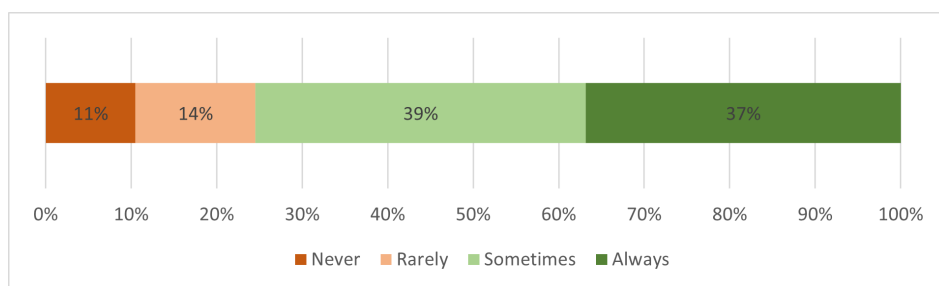


Figure 3: Do you check your balance before making an online purchase?

Respondents were asked if they borrow money from friends and family. Only one person answered that they do it often, approximately 16% answered that it can happen, but rarely, and the remaining 82% claimed that it never happens. The 18% of the people who say they borrow money from friends and family still claim to have a buffer with easily accessible money, of more than 500 USD (5,000 SEK). In total, 79% of the respondents have a buffer of over 500 USD with 18% have a buffer of under 500 USD and only 3% answered that they do not have a buffer at all.

In the final question the respondents ranked their financial responsibility from 1-10. The mean answer was 7.2 (Figure 4). Comparing to the previous answers of the respondents who considered themselves less financially responsible (3 or lower), none of them uses “Klarna – Pay in 30 days” or Invoice due to not having enough money at the time of purchase. Only one person that answered that they never or rarely check their bank account before purchase (Figure 3) also answered that they are less financially responsible (3 or lower).

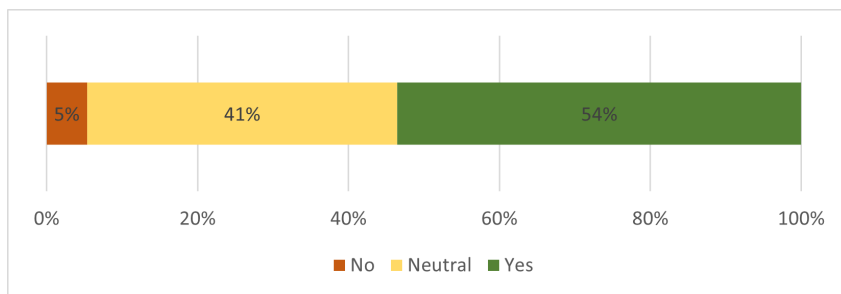


Figure 4: Do you consider yourself as financial responsible?

5.5 Follow up interviews

Of the respondents 14 participants chose to enter their email addresses and therefore volunteered to be a part of the follow up interviews. After analysing their results, four people who were representative of the range of survey respondents were contacted and asked to attend an interview. A semi-structured interview was conducted where the questions were adapted to the participants' previous answers. Some of the questions that were asked were:

- How often do you make impulse purchases?
- Develop further what makes you prefer Klarna/Swish/Card Payment.
- “Klarna – Pay in 30 days” and invoice work basically the same way. What makes you prefer “Klarna – Pay in 30 days”?
- How do you keep track of when it is time to pay for your purchase?
- How do you keep track of your purchases?
- Tell more about the situation where you did not proceed with your purchase due to limited payment methods.

The common findings from the interviews, which corroborates the results of the survey, was that people prefer to use Swish since it is easy, feels safe and the money is drawn from the account straight away. The major reason for preferring “Klarna – Pay in 30 days” was the shortage of money at the time for the purchase and the possibility of receiving the item before payment was required. One respondent stated that it is easier to decide whether you want the item since you can see and feel it before paying. But the same person also highlighted that they often forget to return

items or, decide to keep them, even though they might not need or want them, due to the effort required to return the item.

One respondent expressed that he easily loses track of how much he spends as it is so easy to purchase with Klarna. He said that he often buys takeaway food with Klarna since it is the fastest way of paying when you are on the go, and sometimes they only offer “Klarna – Pay in 30 days”, not direct payment. Another person preferred “Klarna – Pay in 30 days” over invoice since Klarna does not charge any extra cost and you pay for your purchase through the app or website directly, without filling in any invoice details. The same person also mentioned the difficulties of keeping track of when the pay date expires on an invoice as a reason for using “Klarna – Pay in 30 days” and appreciated the notices from Klarna as he considered them crucial to remember to complete the payment. All four participants expressed strain of keeping track of purchases and getting an accurate overview of their finances since purchases can be spread out over different platforms and payment services.

6 Discussion

When analysing the results, Swish is currently the most popular payment method among young adults in Sweden. Swish was chosen due to its simplicity, flexibility, and the fact that the money is drawn from the account immediately. Card Payment is the second most popular payment method because of reliance and simplicity, with the addition that it is mainly preferred if the user already has the card details saved in the browser. The third most popular payment method is “Klarna – Pay in 30 days” and it was chosen due to the flexibility when making returns and not needing the money at the time of the purchase (Senali, et al., 2022; Kumar et al., 2023). However, it needs to be taken into consideration that almost all the respondents were students. Students may be less likely to make as many online purchases as someone who works, but at the same time, students may be more versed in using digital payment methods with is consistent with previous research (Yuk et al., 2021; An et al., 2023). Students also may be more aware of their private economy since they are on a strict budget. To answer these questions and make a more accurate study, the number of respondents would need to increase, but also expanded with a greater variation in occupation. This could be done by not only spreading the survey to university students but also reaching out to young adults working. Common to

the three preferred payment methods mentioned is that they all use the third-party BankID to complete the payment this is consistent with previous research that has identified security as a key deterrent of the use of digital payments (Patil et al., 2017; van der Cruijssen and Plooi, 2018; Senali, et al., 2022). BankID is an important part of the payment process since it handles security in a much more efficient and fast way than using e.g., a specific security device. One could therefore argue that it is not the paying method itself that needs to be considered in the paper, but the whole purchase and payment process.

Regarding the second research question, there is not enough evidence to conclude whether these payment methods can affect financial responsibility among young adults. To investigate this matter further, additional questions regarding purchase behaviour and financial responsibility need to be included in further research. Another obstacle when gathering information for the second research question is that the respondent's idea of how financially responsible, they are, does not always align with the reality of how they act as found by Garbinsky et al., (2021).

Regardless, one interesting finding was that the motivation to complete a purchase decreased if the choice of payment methods was limited (van der Cruijssen and Plooi, 2018; Senali, et al., 2022). If the respondent never completed the purchase, this could suggest that the payment methods that are not as fast and flexible may make the customer more thoughtful when making a purchase (Coffey et al., 2023). However there is a point where the purchase is so important that this over rides any difficulties with the payment method. If this is some sense of financial responsibility by deferring discretionary purchases, or just laziness, it is hard to tell. Since no follow-up questions were asked about the situation, this is a subject for further research.

Another interesting finding was the struggle of getting an overview of purchases when they are spread out over different types of platforms and payment methods. Further research is required to determine if it is not the payment method itself that affects the financial responsibility among young adults, it is the situation and combination of different payment methods available at the time of purchased (Senali, et al., 2022). As this insight is drawn from the four people during the follow-up interviews it would be necessary to interview more people and add questions about the matter to any future survey. One conclusion that can be made is that "Klarna – Pay in 30 days", which was the third most popular payment method,

creates a way to temporarily avoid financial responsibility. By being able to buy things for money that you do not have, you avoid the fundamental idea of financial responsibility, which is about giving up today's desires to be able to provide for the needs of tomorrow.

7 Conclusion

This paper aims to investigate which payment method young adults prefer and use today and if the payment method has any impact on their financial responsibility. This study shows that Swish is currently the most preferred payment method among young adults in Sweden. Whether the payment method affects financial responsibility among young adults cannot be entirely determined by the result of the study. Still, the results show that an individual's choice of payment method can play a role in their financial responsibility. Some respondents highlighted that "Klarna – Pay in 30 days" has a (negative) impact on their financial responsibility since it is easy to use money that they do not have. The findings of the study also implicate that it can be the combination of different payment methods that affect young adults' financial responsibility.

References

- Aldrich, M. (2011). Online Shopping in the 1980s. *Annals of the History of Computing*, 33(4), 57–61.
- An, Q., Hong, W. C. H., Xu, X., et al. (2023). How education level influences internet security knowledge, behaviour, and attitude: a comparison among undergraduates, postgraduates and working graduates. *International Journal of Information Security*, 22, 305–317. <https://doi.org/10.1007/s10207-022-00637-z>
- Apple. (n.d.). Apple Pay. Available: <https://www.apple.com/apple-pay/>
- Arvidsson, N. (2019). *Building a Cashless Society: The Swedish Route to the Future of Cash Payments*. Springer.
- BankID. (n.d.-a). Mobilt BankID, Available: <https://support.bankid.com/sv/bankid/mobilt-bankid>
- BankID. (n.d.-b). Vad är BankID?. Available: <https://support.bankid.com/sv/bankid/vad-aer-bankid>
- Coffey, J., Senior, K., Haro, A., et al. (2023). Embodying debt: youth, consumer credit and its impacts for wellbeing. *Journal of Youth Studies*. <https://doi.org/10.1080/13676261.2022.2162376>
- Eriksson, B., & Sandhill, U. (2019). Cashless: A dead end for Sweden?. In A. Larsson & R. Teigland (Eds.), *Digital Transformation and Public Services* (pp. 235–242). Routledge.
- Ferrera, C., & Kessedjian, E. (2019). Evolution of E-commerce and Global Marketing. *International Journal of Technology for Business*, 1(1), 33–38.
- Garbinsky, E. N., Mead, N. L., & Gregg, D. (2021). Popping the positive illusion of financial responsibility can increase personal savings: Applications in emerging and western markets. *Journal of Marketing*, 85(3), 97–112.
- Hansson, A., (2022). Betala räkning – Hur betalar man en faktura? Available: <https://buffert.se/betalara-ningar-fakturor/>
- Insight Intelligence. (2020). *Sverige betalar 2020*. Available:

- <https://www.svenskhandel.se/globalassets/dokument/aktuellt-och-opinion/rapporter-och-foldrar/betalfragor/sverige-betalar-2020.pdf>
- Klarna. (2022). About Klarna. Available: <https://www.klarna.com/international/about-us/>
- Kumar, S., Prashar, S., & Shah, A. (2023). Creating brand love for payment apps through emotions. *Marketing Intelligence & Planning*, 41(3), 279–292. <https://doi.org/10.1108/MIP-07-2022-0314>
- Lauer, J. (2020). Plastic surveillance: Payment cards and the history of transactional data, 1888 to present. *Big Data & Society*, 7(1), 1–14. <https://doi.org/10.1177/2053951720907632>
- Leblebici, H. (2012). The evolution of alternative business models and the legitimization of universal credit card industry: Exploring the contested terrain where history and strategy meet. In S. J. Kahl, B. S. Silverman, & M. A. Cusumano (Eds.) *History and Strategy (Advances in Strategic Management, Vol. 29)* (pp. 117–151). Emerald Group Publishing Limited. [https://doi.org/10.1108/S0742-3322\(2012\)0000029009](https://doi.org/10.1108/S0742-3322(2012)0000029009)
- McFerrin, J. (2021). The history of ecommerce: from its origins to modern day. Available: <https://www.iwdagency.com/blogs/news/the-history-of-ecommerce-how-did-it-all-begin>
- Page, G., (2021). Focus: Evolution of payment methods. Available: <https://cigp.com/insights/evolution-of-payment-methods>
- Patil, P.P., Dwivedi, Y.K., Rana, N.P. (2017). Digital Payments Adoption: An Analysis of Literature. In: *Digital Nations – Smart Cities, Innovation, and Sustainability, I3E 2017. Lecture Notes in Computer Science*, vol 10595. Springer. https://doi.org/10.1007/978-3-319-68557-1_7.
- Senali, M. G., Cripps, H., Meek, S., & Ryan, M. M. (2022). A comparison of Australians, Chinese and Sri Lankans' payment preference at point-of-sale. *Marketing Intelligence & Planning*, 40(1), 18–32.
- Swedbank, (n.d.). Handla på nätet med kort. Available: <https://www.swedbank.se/privat/kort/sa-anvander-du-ditt-kort/handla-med-kort-pa-natet.html>
- Swish (n.d.). About Swish. Available: <https://www.swish.nu/about-swish>
- Swish. (2022, June). Swish statistics – June 2022. Available: https://assets.ctfassets.net/zrqoyh8r449h/4oohpQ2xPiUFJFWZLwifZ/fd1be4bfd8d10dd65c20c64157f38b6f/Swish_statistics__downtime_june_2022.pdf
- Tatum, M., (2022). What is financial responsibility? Available: <https://www.smartcapitalmind.com/what-is-financial-responsibility.htm>
- van der Cruijssen, C., & Plooi, M. (2018). Drivers of payment patterns at the point of sale: stable or not?”, *Contemporary Economic Policy*, 36(2), 363–380. <https://doi.org/10.1111/coep.12245>
- Wischn, I., (2019). Sveriges första kreditkort, Available: <https://www.foretagskallan.se/foretagskallan-nyheter/lektionsmaterial/sveriges-forsta-kreditkort/>
- Yuk, M. T., Ka, Y. C., Luchen, H., Yun, K. I., & Wan, Y. (2021). Financial innovation in digital payment with wechat towards electronic business success. *Journal of Theoretical and Applied Electronic Commerce Research*, 16(5), 1844–1861. <https://doi.org/10.3390/jtaer16050103>

