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Impact of cashless bank payments on economic growth: Evidence from G7 countries

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Abstract

Purpose: This paper examines the impact of cashless bank payments on the economic growth of G7 countries, namely Canada, Germany, Japan, France, Italy, the United Kingdom and the United States.

Design/methodology/approach: The paper employed annual data from 2012 to 2020 and the latest Panel ARDL model to examine the relationship described above.

Findings: The study's findings suggest that in the long run the cashless mode of payments considered in this study, which includes card & e-money, credit transfer and cheque, have a strong positive relationship with the real GDP of G7 countries. In the short run, card & e-money and cheque payments positively and significantly affect the real GDP. Credit transfer is found to have an insignificant relationship in the short run.

Originality/value: As the world is moving towards digitization and a cashless economy, the impact of cashless payments and digital finance is becoming an important topic for researchers. Further, existing literature focused only on European Countries that used traditional methodologies and provided mixed results. Therefore, this study aims to extend the existing literature in context of G7 countries by employing latest Panel ARDL model.

Practical implications: This study is beneficial for policymakers, in particular, of G7 countries, as it indicates the role of digitization and cashless payments in the growth and development of the economy.

1. Introduction

The 21ˢᵗ century is the age of information and communication technology. Every discipline observes innovations, whether it is the discipline of science, medicine, agriculture, or others. The Finance discipline has also witnessed technological advancements in recent decades and creating benefits for governments, institutions, and people, especially those from the middle or lower middle class, as access to digital financial products becomes easy. Six advantages of digital finance have been mentioned by Ozili (2018), Ali et al. (2022) and Uche et al. (2022a). First, it helps penetrate financial services to other non-finance sectors more significantly while more individuals get access to essential services. Second, due to the introduction of digital finance, access to secure and fast banking is possible for middle or lower-middle-class people in developing countries. Hence, they will likely conveniently move to and perform digital transactions instead of cash transactions. Third, digital finance offers a vast range of services/products to each stakeholder of an economy: the corporate sector, small & medium enterprises, and individuals. It ultimately leads to an increase in overall consumption in the economy and hence the gross domestic product, which indicates the financial health of the economy gets a boost. Fourth, Uche et al. (2022b) and Syed et al. (2019) mentioned that digital finance has the potential to positively affect the long-term profitability and performance of banks, especially small-sized banks. Fifth, digital finance is beneficial for governments as governments play a facilitation role in providing digital finance platforms and earn increased revenue in the form of taxes which comes from a higher number of financial transactions occurring in a specific fiscal year. Sixth, there is a greater possibility that digital finance innovation can significantly decrease the illegal circulation of money. However, Chang et al., (2019a; 2019b), Hashmi and Chang (2021) and Ozili (2018) also mentioned that a large population still needs to be tapped into digital finance, and there is a massive gap between access to digital finance and its availability.

Today, the trade is being executed so that there is less use of hard cash while making payments (Sreenu, 2020). According to World Payment Report (2021), the size of cashless transactions increased by 8% in 2020. The same report stated that the share of electronic money and instant payments were 14.5% of worldwide cashless transactions in 2020. The two forms mentioned above of cashless transactions are expected to capture 25% of worldwide cashless transactions by 2025. It implies that the world is moving towards a cashless society. The business novice website defines a cashless society as *"an economic concept where financial transactions are executed in an electronic format rather using banknote."* The evolution of a cashless economy is associated with many economic benefits (Wong et al., 2020). More importantly, cashless payments can impact an economy's growth (Hashmi et al., 2021a, 2021b, 2022; Aminata & Sjarif, 2020). In recent times, some quantitative studies have been conducted on the impact of cashless payment on the

economic growth of a country or group whose primary focus was the European countries and Nigeria (Chang, 2020; Chang and Rajput, 2018; Chang et al., 2018; Wong et al., 2020).

Further, one of the limitations of the existing literature is that it provided mixed results on the significant causal relationship between cashless payment and economic growth. Another limitation is that traditional methodologies have been used in existing to study this relationship. However, the traditional methods have limitations and hence cannot be relied on the results of past studies. Therefore, this study aims to extend the existing literature by conducting a quantitative study and ascertaining the short-run and long-run relationship between cashless payment and the economic growth of G7 countries. The study in contributing in existing in two ways. First, the group of G7 countries is targeted due to their economic and technological importance. Earlier studies lacked on this. Second, the study employed the latest research methodology of the panel ARDL for short & long run dynamics.

The variables which are considered for this study include Real GDP as a proxy for economic growth, and Credit Transfer (CT), Cheque (CH), and Card & E-Money (C_EM), indicating the different modes of cashless payments as per the Bank for International Settlements (BIS) website. Further, considering the limitations mentioned earlier, the study's objectives are below.
- ➢ To examine the relationship between cashless payments and the economic growth of G7 countries.
- ➢ To ascertain the short-run and long-run relation of cashless payment with the economic growth of G7 countries.
- ➢ To evaluate whether the existing literature results are in line and can be generalized in the context of G7 countries.

As mentioned in the above objectives, the study considered G7 countries. The rationale behind selecting G7 countries is their economic and technological importance. According to the World Economics website, the gross domestic product (GDP) of G7 countries accounts for approximately 27% of the world GDP. The life expectancy, on average, is 82 years there. On the other hand, the G7 economies are spending billions of dollars in research & development to bring financial innovations. According to G7 Digital & Technology Ministerial Declaration of 2021, it is affirmed by G7 digital ministers that electronic transfers will bring efficiency in time and security and support trade recovery in G7 countries. So, the world is moving towards digitization and a cashless economy. Therefore, it is essential to know how these cashless payment systems are linked with the growth of an economy. This study is beneficial for policymakers, in particular, of G7 countries, in that it will indicate the role of digitization and cashless payments in the

growth and development of the economy. The study entertains the following research questions based on the objective and significance of the study.

1. What is the impact of credit transfer transactions in the long and short run on the economic growth of G7 countries?
2. What is the impact of cheque payment transactions in the long and short run on the economic growth of G7 countries?
3. What is the impact of card & e-money transactions in the long and short run on the economic growth of G7 countries?

The paper is further divided as follows. Section 2 reviews the literature on digital financial inclusion, acceptance, benefits, and challenges to a cashless society and cashless payments & economic growth, along with hypothesis development. Section 3 presents the research methodology, including econometric model specification, data, and sources. Section 4 discusses the results obtained, while Section 5 gives a conclusion, directions, and recommendations for future research.

2. Literature Review

2.1 Digital Financial Inclusion

Financial inclusion refers to convenient access to quality financial products and services at economical prices (Arun & Kamath, 2015; Chang et al., 2020c; Derindag et al., 2022) and is considered a means for alleviating poverty (World Bank, 2022). Financial inclusion leads to improved mental and physical health and positively impacts the income and consumption of individuals and firms of small size (Patwardhan, 2018). Further, it is one of the United Nations' Sustainable Development Goals to increase financial inclusion significantly as it provides better economic opportunities to poor individuals (Chang et al., 2020a, 2020b; Patwardhan, 2018). With the passage of time and thanks to technological advancement, that financial inclusion is now being offered digitally. Lyman& Lauer (2015) describe digital financial inclusion as having access to financial products and services at an economical cost to people, especially those not part of financial inclusion earlier, according to their needs. They further identified that digital financial inclusion is based upon three pillars: digital transactional platform, retail agents and equipment to perform digital transactions. Tennant (2021) and Gohar et al., 2022a, 2022b) mentions in the Financier Worldwide Magazine that from 2021 to 2026, payments, which are made digitally, will grow at a rate of 13.7% per annum and expects that world will become a cashless society in the future.

2.2 Acceptance of cashless payment mechanisms

Today, a considerable percentage of the population use digital payment mechanism to make their daily payments, which shows people's response to adopting cashless payment methods. According to Fortune Business Insights, by 2026, the global market size of digital payments will grow by 24.4% per annum. Many industries and countries at the strategic level have adopted the cashless payment mechanism. In recent literature, scholars have identified different factors and determinants leading to accepting the cashless payment mechanism. Chang et al., (2022); Xena & Rahadi (2019) studied six factors affecting SMEs' acceptance and adoption of cashless payment mechanisms. They reported that the adoption and electronic acceptance payments in SMEs are positively affected by all six factors: effort expectancy, social influence, perceived security, performance expectancy, technological acceptance and culture. Another study on the same topic was conducted by Chang et al. (2022a, 2022b); Ozturk (2016) in the hospitality industry. The author found that ease of use and perceived usefulness are the factors in deciding whether to adopt a cashless payment mechanism based on RFID technology. The same conclusion was drawn by Maydybura et al. (2022); Gohar et al. (2022c, 2022d) and Bwigenge et al. (2020) in their study in the context of the public transportation industry.

Recent literature has also focused on accepting and adopting cashless payment mechanisms at the country level. Wang et al. (2022), Peng et al. (2022), and Rahman et al. (2020) conducted a study under the VB-SEM methodology. They concluded that performance expectancy, facilitating conditions, grievance redressal, and behavioral intention significantly affect the adoption of cashless payment mechanisms in Pakistan. However, in the context of Malaysia, along with performance expectancy and facilitating conditions, other factors that are technological security, social influence, motivation (hedonic), and innovation also proved to be significant in the adoption of a cashless payment mechanism.

2.3 Benefits of and challenges to a cashless society

Kumari & Khanna (2017) conducted a comprehensive study on the objectives and benefits of going cashless along with the challenges. The authors highlighted that individuals and governments both get benefits from cashless payments. Individuals benefit by conveniently performing financial transactions in seconds at their fingertips while less fearing cash theft. On the other hand, government benefits as digital payments allow easy record tracking, and the economy gets documented, reducing tax avoidance. They concluded that a cashless society has a multiplier effect on the economy and can bring

stability and prosperity to a country's economy. Further, the cashless society can play a vital role in reducing money laundering, i.e., illegally generating a massive amount of money and corruption like the circulation of fake currency. Other benefits of a cashless society include transparency and efficiency.

Although the cashless payment mechanism is widely accepted and the world is moving towards a cashless society considering the potential benefits the cashless society has, there are also some challenges associated with making the world cashless. Fabris (2019) pointed out six reasons why making the world a cashless society seems complicated. First, older people need more knowledge regarding digital finance and its use. Moreover, many of the population need bank accounts and internet access. Second, financial education literacy is remarkably low, and many studies have shown the link between poverty and financial education. The third is the increasing trend of cybercrime rapidly spreading in the United States. According to Fabris & Luburic (2014), 86% of phishing websites represent themselves as financial institutions. Fourth is the concern regarding personal data privacy. Many individuals are concerned about theft and unfair use of their financial data, which will be stored electronically when making transactions. The data can be used without consent to make customer profiles and commercial purposes. Fifth, digital payment means moving from traditional payment mode, i.e., cash. This move demands change which always faces resistance, especially when individuals must be aware of how this change would affect their current status. Sixth is the risk of failure of information technology systems and that a cashless society would depend entirely on IT. There is empirical evidence of data hacking, virus attacks and failure of IT systems due to worst weather conditions.

Further, a big chunk of the world's population is not part of a formal financial system with no bank account (Kumari & Khanna, 2017). Due to privacy concerns, growing cybercrime and less education and awareness related to financial products and services (Fabris, 2019). According to facts & figures given by Patwardhan (2018), a total of 02 billion people represent a big chunk of the world's population, i.e., 38% of adults are deprived of essential financial services as they do not own a single bank account. Out of this 38%, around twenty percent of these unbanked adults live in indigence and reside in countries with low income. On the other hand, around fifty-five percent of these unbanked adults are women. It is further mentioned that globally, fifty-seven percent of adults are categorized as under-banked. It indicates that they may own a bank account but are still deprived of financial products/services like investment opportunities, access to insurance products, and others. However, it is projected by Bill Gates that by the end of 2030, these 02 billion unbanked adults will perform transactions and store money using their phones (Koh et al., 2018).

2.4 Cashless payments and Economic growth

The focus of recent research has been on different forms of cashless payments. Hasan et al. (2012) targeted the retail electronic payment sector to ascertain its impact on economic growth (measured in terms of real GDP per capita.) of 27 European markets. The study used cash, cheques, credit transfer, direct debits, and payment cards as the independent variable. The established conclusion under the Generalized Method of Moments (GMM) Arellano Bond-based panel method was that card payment strongly correlates with economic growth. They were seconded by direct debits and credit transfers, while payments via cheques were found to have weak relation to economic growth. In a similar 56 cross-country research, Zandi et al. (2013), utilizing pooled cross-section time series method, found the same results that card payments and usage correlate positively to economic growth.

Further, the study found varying results for emerging and developed markets. Due to increased e-payments via cards during 2008-2012, emerging markets showed an increase of 0.8% in GDP, while developed markets showed an increase of 0.3% in GDP. However, in the context of OECD countries, card payments, cheques and e-money did not reflect any effect on economic growth but only the debit cards (Wong et al., 2020). This study employed a REM to test the association between cashless payments and the growth of GDP.

In 2011, the central bank of Nigeria announced a cashless policy to promote digital payments and reduce hard cash circulation in the country. Several studies have been conducted to ascertain this cashless policy's impact on Nigeria's economy. Yusuf (2016) studied the impact of a cashless policy on economic growth using pooled OLS method. The study focused on payments via POS, website, mobile and cheques and found that all these significantly impact the growth of the Nigerian economy, with mobile payment being the most effective while cheque payment being the least effective. The study also revealed that the acceptance of the cashless payment mechanism by the Nigerian people is not due to the introduction of the cashless policy by the central bank of Nigeria. Instead, this adoption is based on the Unified Theory of Acceptance and Technology use (UTAUT) theory. Ropheka & Miapkwap (2020) conducted a study on a similar topic and utilized a similar OLS method in Nigeria while focusing on different independent variables, including ATM transactions, mobile banking and internet banking. Their study also established the same conclusion that cashless payments have a positive impact on the growth of the Nigerian economy.

Similarly, by focusing on a single country, Givelyn et al. (2022) conducted the study in the context of Indonesia by considering the pre and during-COVID-19 situations. The study concluded that in the short run, e-money and debit cards have an insignificant relationship with the country's economy pre-COVID-19 and during the COVID-19 period. However, the speed of adjustment towards equilibrium is more significant during the COVID-19 period. While in the long run, the pre-COVID and during-COVID results were different. In pre-COVID phenomena, the effect of e-money is significant. However, there is no evidence of the significant effect of credit and debit cards on the Indonesian economy. However, during the COVID phenomena, credit cards and e-money became significant in a positive direction, and the effect of debit cards remained unchanged. Another study in the context of Indonesia was conducted by Aminata & Sjarif (2020) to study the relationship between cashless payments and economic growth. Their study in the context of Indonesia found, using multiple linear regression analysis, that electronic money transactions and debit card have a significant and positive association with Indonesia's economic growth. At the same time, credit card payments in Indonesia also did not show any impact on economic growth.

Furthermore, Sreenu (2020) conducted a study in the context of India to test the relationship between economic growth and cashless payments in the short term and long term. The study employed a panel data technique to examine causality using data from 2010 to 2018. The study found strong evidence of positive causality between the economic growth of India and e-money along with card payments. The study further concluded that adopting one cashless payment system would negatively affect the other in the short run. Therefore, the immediate effect of cashless payments cannot be observed on economic growth.

Debit cards use declining in European countries (Grzelczak & Pastusiak, 2020). In their study of cashless payment effect on economic growth in selected European countries, Grzelczak & Pastusiak (2020) found that payment cards and transfer orders significantly affect the economic growth of Central, Western European and Easter European countries. However, regarding Western European countries, no evidence was found for the significant impact of cheques and direct debits on economic growth. Digitization of financial products positively contributes to the economic growth in Sub-Saharan African countries, while in OECD countries, this relationship is not significant (Myovella et al., 2019). Gupta & Hakhu (2021) suggested that controlling digital corruption and illegal activities is essential to foster economic growth through cashless transactions.

Based on the above varying literature, this study has developed the following hypothesis to test in the context of G7 countries.

H₁: There is a significant impact of credit transfer transactions in the long and short run on the economic growth of G7 countries.

H₂: There is a significant impact of cheque payment transactions in the long and short run on the economic growth of G7 countries.

H₃: There is a significant impact of card & e-money transactions in the long and short run on the economic growth of G7 countries.

3. Research Methodology

3.1 Data & sources

The current study utilizes secondary panel data as panel data analysis portrays precise and better results (Hsiao et al., 2006). The data ranges from 2012 to 2020 of seven cross-sectional entities, namely Canada, Germany, France, United Kingdom, Italy, Japan and the United States (G7 Countries), while the frequency of data is annual. In this way, the study is based on sixty-three observations. Further, the Real GDP is a dependent variable indicating economic growth, as RGDP is mainly used in literature. The data for Real GDP (at constant price) is taken from World Bank economic database for each country under study and converted into US$ based on the period average exchange rate taken from International Financial Statistics, which is the database of IMF. On the other hand, the study's independent variables, which are considered different modes of cashless payments (as per the Bank for International Settlements website) are part of retail payment system. According to BIS website, retail payment system refers to system of funds transfer handling low-value large volume payments. The system is mainly comprised of Credit transfer transactions, Direct Debit transactions, Cheque payment transactions and Card & E-Money transactions. It is essential to mention here that the Direct Debit is excluded from the study due to the non-availability of its data for Japan. The data for each independent variable is collected from the Bank for International Settlements (BIS) website. The BIS regularly provides statistics on payment systems and financial market infrastructure.

3.2 Methodology

A quantitative causal study, based on secondary data, is conducted to ascertain the impact of cashless payments on the economic growth of G7 countries by employing the panel autoregressive distributed lag model (Panel ARDL) technique. The Autoregressive Distributed Model is an ordinary least square-based regression model. It is a type of model where the independent variable is also the dependent variable in a way that the

value of the dependent variable depends on its own lagged (past) value along with the present and past of other independent variables (IGI Global, n.d.). The rationale behind this model selection is that the ARDL model has addressed the limitations of traditional methodologies. First, it is suitable in studies where the time frame is larger than the number (N) and also that this technique is suitable for ascertaining short-run and long-run relationships (Garidzirai & Muzindutsi, 2020: Asteriou et al., 2021). Second, the ARDL model allows data stationarity at the level or first difference (Chang et al., 2019). Third, the ARDL technique provides meaningful results even when the sample size is small (Latif et al., 2015). Lastly, the ARDL models can incorporate enough lags to get effective results (Chang et al., 2019).

Many scholars have employed the ARDL model, like Maghyereh and Abdoh (2022); TajMazinani et al., (2022) and Latif et al. (2015), to study the relationship between saving & investment and Attard (2019) to study the causal relationship between Public debt and the economy's growth. Others include Garidzirai & Muzindutsi (2020) to analyze the productivity of primary economic sectors and their contribution to economic growth, and Nasrullah et al. (2021) to study the causal relationship between climate change and production. However, evidence still needs to be found for applying the panel ARDL model to study the association between cashless payments and economic growth across the countries.

As stated above, the ARDL model allows for a mixture of data; therefore, panel unit root tests are performed before running the panel ARDL model to check the model's reliability and applicability. According to Garidzirai & Muzindutsi (2020), the literature recommends Levin, Lin and Chu (2002), Hadri (2000), Maddala & Wu (1999), Bretiung (2000), Perasan & Shin (2003) unit root tests for panel data. The following section presents

$$RGDP_{it} = \beta_o + \sum_{i=1}^{n} \beta_1 RGDP_{t-1} + \sum_{i=1}^{n} \beta_2 CT_{t-1} + \sum_{i=1}^{n} \beta_3 CH_{t-1} + \sum_{i=1}^{n} \beta_4 C\_EM_{t-1} + \alpha_1 RGDP_{t-1} + \alpha_2 CT_{t-1} + \alpha_3 CH_{t-1} + \alpha_4 C\_EM_{t-1} + e_t$$

the results based on the tests mentioned above. However, the basic Panel ARDL model for this study is as follows:
where;

      RGDP = Real GDP value
      CT = Credit transfer transactions
      CH = Cheque transactions
      C_EM = Card & E-Money transactions
      e = Error term
      t-1 = lagged values
      β = Beta sign is for short-run relationship
      α = Variables with α is for a long-run relationship

4. Discussions

4.1 Descriptive Statistics

Descriptive statistics of the variables under study are presented in Table I. The values presented in the table are in USD (in millions). Further, the null hypothesis of the JB normality test, which says that data is in normal distribution form, is rejected at a 1% significance level, as depicted in the table.

Table I - Descriptive Statistics							
	Mean	**Median**	**Maximum**	**Minimum**	**Std. Dev.**	**Prob (Jarque-Bera)**	**N**
RGDP	5193004	2860291	19925436	1516559	5592160	0.000	63
CT	43007477	29785658	126000000	2009405	37371889	0.015	63
CH	5075922	1257746	29183880	57750	9237070	0.000	63
C_EM	1290542	556662	7838372	174577	1905123	0.000	63

4.2 Panel unit root test

The results of panel unit root tests to check the stationarity of data are presented in Table II. The table shows the p-values at the level & first difference obtained by applying Levin, Lin & Chu (LLC), Im, Pesaran, Shin (IPS) and Fisher ADF unit root tests without trend & intercept and with intercept/trend & intercept. The null hypothesis for each test mentioned above is that there is a unit root. In other words, the data would be considered non-stationary if the null hypothesis was not rejected. However, as depicted in the table, the null hypothesis is rejected in all cases. According to LLC, IPS and ADF tests, the real GDP and credit transfer variables are stationary at the level. On the other hand, cheque payment and card & e-money variables are found stationary at a level according to LLC & ADF tests but at first difference according to IPS. Therefore, based on the results presented in table II, data used in this study is stationary at either level or first difference. Hence, the panel ARDL model is suitable for further short and long-run analysis.

Table II - Panel Unit Root Test (P-values)						
Unit Root Test	Level & 1st difference	Trend & Intercept	RGDP	CT	CH	C_EM
Levin, Lin & Chu **(Null H: Unit Root)**	Level	Intercept	0.000*	0.000*	0.001*	1.0000
		Trend & Intercept	0.000*	0.000*	0.000*	0.000*
		Without trend & Intercept	0.542	0.506	0.000*	0.999
	1st difference	Intercept	0.000*	0.000*	0.000*	0.000*
		Trend & Intercept	0.005*	0.000*	0.000*	0.000*
		Without trend & Intercept	0.000*	0.000*	0.003*	0.427
Im, Pesaran, Shin **(Null H: Unit Root)**	Level	Intercept	0.086***	0.033**	0.755	0.999
		Trend & Intercept	0.006*	0.581	0.531	0.239
	1st difference	Intercept	0.000*	0.143	0.007*	0.052***
		Trend & Intercept	0.701	0.359	0.361	0.551
Fisher - ADF **(Null H: Unit Root)**	Level	Intercept	0.049**	0.009*	0.864	0.894
		Trend & Intercept	0.001*	0.404	0.563	0.051***
		Without trend & Intercept	0.329	0.584	0.000*	0.999
	1st difference	Intercept	0.000*	0.106	0.003*	0.032**
		Trend & Intercept	0.839	0.160	0.153	0.525
		Without trend & Intercept	0.000*	0.000*	0.039**	0.006*
*,**,*** *indicates significance at 1%, 5% & 10% level respectively.*						

4.3 Long run analysis

Table III presents the results of the panel ARDL (1, 1, 1, 1) model for long-run analysis, which is estimated based on the Akaike Info Criterion (AIC). The study's findings are significant at a 1% level in the long run. The significance of the results suggests that cashless payments significantly and positively affect the economic growth of G7 countries in the long run, where card & e-money has a strong positive effect on real GDP, seconded by cheque payment and credit transfer. As depicted in the table, the coefficients of card & e-money, cheque payment and credit transfer indicate that an increase of one million USD in the variables will increase the real GDP of G7 countries by 1.50 million, 0.36 million and 0.039 million USD, respectively. This study's findings align with the findings of Darsono et al., (2022); Kim (2021); Hasan et al. (2012) & Zandi et al. (2013), where card payments and usage have been found to have a strong positive relation with European countries' economic growth. The reason for this positive relationship could be that the convenience and security offered by cashless payment mechanisms have made people habitual in making cashless transactions at an increased level while sitting anywhere in the world.

Table III - Long run equation values

	Credit Transfer	Cheque payment	Card & E-Money
Co-efficient	0.0390	0.3652	1.5032
P-value	0.0000*	0.0000*	0.0000*

*indicates significance at 1% level

4.4 Short run analysis

Table IV presents the results of short-run dynamics of panel ARDL (1, 1, 1, 1) for long-run equilibrium. As depicted in the table, the coefficient of error correction term (COINTEQ01) is negative and significant at a 5% level, indicating that data will return to its long-run equilibrium at a speed of 18.79 percent in each of the periods. Further, the findings of this study suggest that card & e-money, and cheque payments positively and significantly affect the real GDP in the short run. That is an increase of one million USD in card & e-money, and cheque payments will increase real GDP by 2.5 million and 0.79 million USD, respectively. However, credit transfer is found to have an insignificant relationship in the short run.

	Credit Transfer	Cheque payment	Card & E-Money	COINTEQ01 (ECT)	C
Co-efficient	0.066	0.791	2.596	-0.187	398814
P-value	0.288	0.011**	0.055***	0.039**	0.027**

Table IV - Short run equation values

*,**,*** indicates significance at 1%, 5% and 10% level

5. Conclusion

As the world is moving towards digitization and a cashless economy, the impact of cashless payments and digital finance is becoming an important topic for researchers. However, there is less number of studies currently in this area. Most of the studies already conducted focused only on European Countries that used traditional methodologies and provided mixed results. Based on the current literature's limitations, this study's primary purpose is to ascertain the long-run and short-run relationship of cashless payments on the economic growth of G7 countries.

The study's contribution to the literature is twofold. Firstly, it focused on the group of G7 countries due to their economic and technological importance, which earlier studies lacked to focus. Secondly, it applied the latest research methodology of the ARDL (Panel) for precise short-run and long-run results.

The study found evidence of a positive and significant relationship between real GDP and cashless payment in the context of G7 countries. In the long run, all three variables, card & e-money, cheque payment and credit transfer, were found to be significant. However, in the short-run, credit transfer has an insignificant relationship with real GDP.

The study's results highlight the importance of digitized services in the financial sector. The findings are of great importance for policymakers, institutions and governments of G7 countries to bring more technological innovation to the financial sector. The purpose of the study was achieved. However, there were some limitations confronted during the research process. First, the data availability is limited, and the available data only includes some modes of cashless payments. However, many modes of cashless payments are currently being practiced in the markets, including direct debits, mobile wallet banking and others. Thirdly, few quantitative studies have been conducted in this area of research. Therefore, more comprehensive research is recommended in the future,

including developing nations. Further, the impact of cashless payment and digital finance on reducing poverty and money laundering also needs attention to explore more benefits of the cashless society. Meanwhile, the institutions and governments should contribute by ensuring the availability of relevant facts and figures.

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