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The economic value of Google Pay

Evidence from EU and UK consumers and business



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Executive Summary

Introduction

1. The global payments landscape is undergoing a structural shift, driven by technological innovation and evolving consumer expectations. Across the EU and UK, consumers and businesses increasingly value speed, convenience and security, accelerating the transition from cash and traditional cards towards mobile and online payments.

2. Google Pay is part of this broader shift. By enabling faster, more seamless and more secure transactions, it reduces friction at checkout and simplifies payment processes for both consumers and businesses. When these incremental improvements are applied across billions of transactions, they generate a material and measurable contribution to economic activity. At a macroeconomic level, these effects reflect the cumulative impact of reducing "micro-frictions" in everyday payments – small improvements in speed, reliability and security that increase the likelihood that transactions are completed while reducing the resources required to support them.

3. This report estimates that Google Pay contributes €20.2bn to EU and UK GDP in 2025, equivalent to 0.08% of combined GDP. In real terms, this rises to €30.9bn by 2030 (0.13% of combined GDP), as adoption increases and transaction volumes grow. On this basis, every €100 transacted through Google Pay is associated with around €13 of additional value added. The relative contribution is higher in the UK – £4.8bn in 2025 (0.16% of GDP) – reflecting earlier adoption and higher online spending. These results are robust and remain economically meaningful under sensitivity analysis.

4. The economic contribution is not driven by a single mechanism, but by a combination of reinforcing effects. Around half of the impact arises from incremental sales, as reduced friction increases conversion rates, lowers abandonment and raises the likelihood that initiated purchases are completed. The remaining half reflects productivity improvements, including time savings, lower fraud and chargeback costs, and reduced administrative effort. Individually, these effects are small, but when applied across large transaction volumes they become economically meaningful.

5. The analysis is grounded in new survey evidence from consumers and businesses across five EU countries (France, Germany, Ireland, Poland and Spain) and the UK, complemented by stakeholder interviews and published data.

    - Consumers report that payments are faster – nearly 30 seconds faster, both in-store and online. But they also cite benefits from security and convenience, with around 80% of respondents reporting feeling safe when adding a card digitally and a similar share reporting greater confidence when purchasing from unfamiliar merchants. Users also value the broader functionality of Google Pay (and digital wallets more broadly), including storing loyalty cards, travel passes and tickets. Based on stated willingness-to-pay, aggregate consumer welfare – the quantified value of convenience, confidence and multifunctionality – is estimated at €5.4bn.

    - The business survey provides complementary evidence on revenue and cost mechanisms. Around 40% of businesses report higher in-store spending or purchase frequency linked to Google Pay (and digital wallets more broadly), consistent with faster checkout and fewer payment failures. Online, 56% report fewer payment declines and around a quarter report lower cart abandonment after integrating the Google Pay button. Cost benefits are also significant: around 40% of businesses report operating cost reductions, including lower fraud-related compliance costs and fewer chargebacks.

    - Interviews with large businesses reinforce these findings at scale. Stakeholders consistently highlight faster, lower-friction checkout, improved customer experience and reduced fraud and



dispute burdens. Google Pay is also described as strategically valuable – supporting higher transaction volumes, stronger customer engagement and broader digitalisation strategies.

6. This dynamic is particularly relevant in mature payments markets such as the EU and UK, where basic access is already high and economic value increasingly comes from improving performance rather than expanding access. The report shows that even incremental improvements in reliability, speed, security and ease of use can produce measurable macroeconomic impacts.

7. Looking ahead, the scale of future benefits will depend on how adoption evolves and how effectively the payments ecosystem continues to integrate. Outcomes are therefore sensitive to the degree of interoperability and coordination across consumer-facing platforms, financial institutions and underlying payment infrastructure. Where integration continues to reduce friction and support trust, adoption can deepen and economic benefits can continue to grow. Conversely, fragmentation or constraints on integration could lead to earlier maturity and lower aggregate gains.

8. The broader implication of the report is that the economic gains from digital payments are material but not automatic. They depend on maintaining low-friction, secure and interoperable payment journeys as markets evolve. In this context, continued collaboration across the payments ecosystem is likely to be central to realising the full potential of these technologies for consumers, businesses and the wider economy.



CHAPTER 1

Introduction

9. Digital wallets and online payment services have rapidly become one of the main ways citizens pay for goods and services around the world. In markets such as China, mobile wallets now account for the clear majority of consumer transactions; in India, UPI-based mobile payments have expanded at unprecedented pace; while in Australia, digital wallets have overtaken cards at the physical point of sale. This global shift reflects a common set of drivers – greater convenience, speed, and security – as consumers migrate away from cash and traditional cards.

10. Digital wallets and online payment services are now an integral part of Europe's digital economy too. Over the past decade, consumers and businesses have rapidly adopted mobile and online payments as safer, faster, and more convenient alternatives to cash and traditional cards. In 2024, pay buttons accounted for 33% of online transaction value, up from 21% in 2014. Growth in in-store use of digital wallets has been even more pronounced, rising from just 1% to 14% over the same period.

11. Google Pay is part of this transition by supporting secure, tokenised transactions with biometric authentication, and operating within a wider payments ecosystem that includes banks, payment service providers and merchant platforms. Its open model supports transactions across multiple devices and channels.

12. For the purposes of this report, Google Pay refers to Google's payment solution used across both in-store and online environments. It enables contactless payments using a device at the point of sale, as well as seamless online and in-app payments, allowing users to complete transactions quickly using securely stored payment credentials.

13. Understanding the wider economic value of these technologies is increasingly important for policymakers, businesses, and consumers alike. Both the EU and the UK are reshaping their digital and financial frameworks – updating payment rules, expanding access to financial data, and introducing new digital identity systems – and these reforms require clear evidence on what digital wallets contribute. In this context, it is essential to understand how wallets can enhance productivity, support financial inclusion and spur innovation, while continuing to uphold strong standards of security and consumer protection.

14. This report quantifies the economic contribution of Google Pay to the EU and UK economies. It uses new evidence from consumer and business surveys designed for this report, augmented by case studies. The analysis translates behavioural and operational metrics – such as higher sales conversion, lower time to complete transactions and savings from lower fraud and operating costs – into measurable components of economic value. These are then mapped to their macroeconomic counterparts – demand-side output impacts and supply-side productivity improvements – to estimate the technology's contribution to EU and UK GDP. Figure 1.1 summarises the overall results.

15. Across the two regions, the combined effects of higher sales conversion, time savings for consumers and businesses, lower fraud and chargeback rates and greater operational efficiencies translate into:

    - Total annual contribution to EU and UK GDP equivalent to €20.2bn (0.08% of EU plus UK GDP) in 2025.

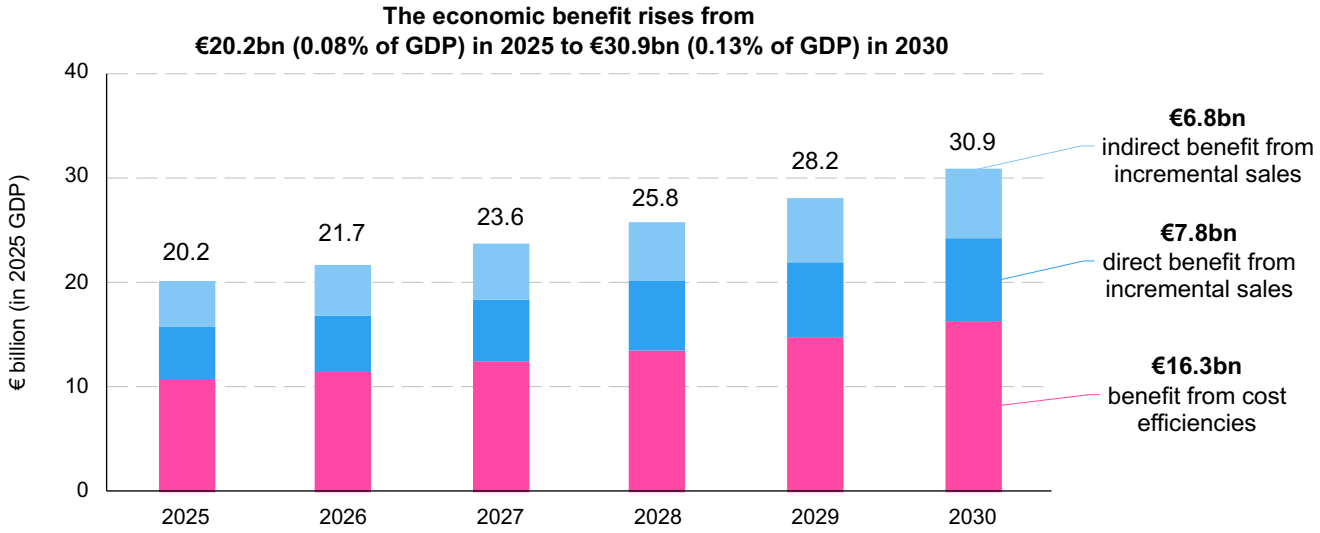
    - This means that every €100 that is transacted through Google Pay represents around €13 of value added for the EU and UK economies.



- The relative benefit is greater for the UK at £4.8bn (0.16% of UK GDP). This is around 30% of the total benefit despite the UK economy being around 17% the size of the EU's. This reflects the UK's position as an economy with high online spending and a relatively early adopter of digital wallets and pay buttons – following on from early adoption of contactless card payments.
- Around half of the benefit arises from incremental sales, with the other half from cost efficiencies.
- Contributions to GDP will continue to rise as digital wallet adoption and associated transaction volumes grow. We estimate that the real terms economic value, measured in terms of 2025 GDP, increases by around half over just five years to €30.9bn (0.13% of EU plus UK GDP) by 2030.

Figure 1.1 shows that the benefits remain material even if we ignore indirect supply-chain effects.

Figure 1.1: The GDP contribution of Google Pay in the EU and UK



Source: Flint Analysis

16. The remainder of this report is organised as follows:

- Chapter 2 presents global trends in the use of digital payments.
- Chapter 3 explains where these sit within the wider payments ecosystem and sets out the framework used to translate observed outcomes into National Accounts-consistent GDP impacts.
- Chapter 4 presents the benefits identified from the consumer survey.
- Chapter 5 outlines the results from the business survey and the benefits for businesses.
- Chapter 6 aggregates the survey results to show the overall contribution to the EU and UK economies and presents sensitivity and scenario analyses around the central estimates.
- Chapter 7 concludes.
- Annex A contains the detailed analytical framework, methodology and technical assumptions; Annex B contains supporting material for Chapter 2 on the global payments context.



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CHAPTER 2

Global trends in the use of digital payments

Chapter at a glance

This chapter sets the wider context for the report. It shows that the shift towards digital payments is a broad international trend, but that adoption varies markedly across countries and between online and in-store payments.

In Europe, digital payments are already well established online and are growing in-store, though from a relatively low base.

International examples, notably from Asia, suggest that adoption can deepen more quickly where payment services are trusted, widely accepted, and integrated effectively through collaboration between consumer-facing providers, financial institutions and underlying payment infrastructure.

17. Digital wallets and pay buttons have become increasingly important across global payments markets over the past decade, both in-store and online. Growth has been especially rapid in some Asia–Pacific markets, where mobile-first payment models have reached high levels of adoption and now account for a large share of everyday transactions.

18. Europe and North America have moved in the same direction, albeit more gradually and from different starting points. In particular, in-store digital payment use has accelerated as wallet functionality, merchant acceptance and consumer familiarity have improved. This matters for the analysis in Chapters 3 to 6, because it suggests that the current position of the UK and Europe should be seen not as a fixed endpoint, but as their current position on a broader adoption trajectory.

2.1 Payment-system maturity and the role of digital wallets

19. The pace and pattern of digital payments adoption vary materially across countries. While the overall direction of travel is similar – towards lower-friction, more digital payment journeys – the maturity of different markets depends on a combination of consumer behaviour, merchant acceptance, banking infrastructure, smartphone penetration and the extent to which payment services are integrated into wider digital ecosystems. These factors can be mutually reinforcing.

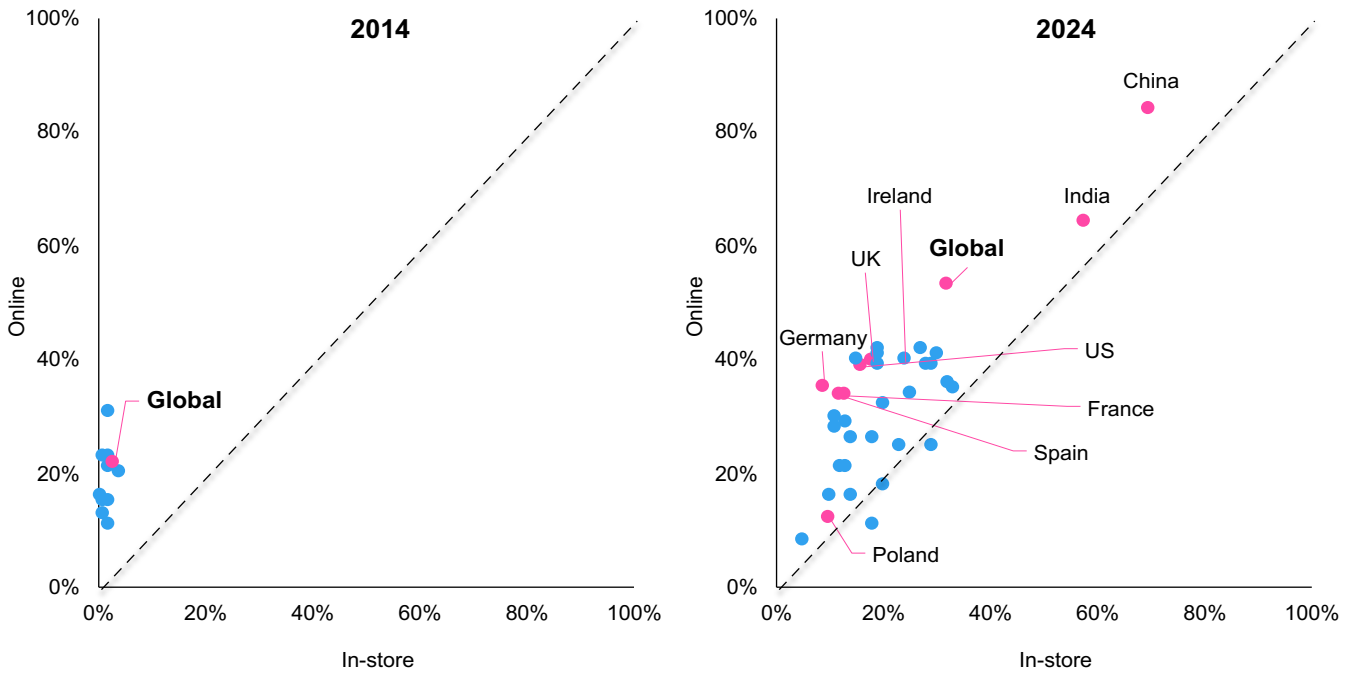
20. Figure 2.1 illustrates this variation using two indicators of payment-system maturity: the share of digital payments made in-store versus the share made online. The relationship is clearly positive. Countries with higher digital-payment usage in-store also tend to have higher digital-payment usage online, suggesting that adoption is not occurring independently across channels, but as part of a broader shift towards more embedded and lower-friction payment experiences.

21. Figure 2.1 also adds an important dynamic dimension by showing how countries move through the adoption cycle over time. In 2014, nearly all markets clustered in the lower-left corner, with very limited in-store usage and online shares rarely exceeding 25%. By 2025, this landscape had become



much more dispersed. Some countries – including the UK, Ireland, France, Spain and Germany – now occupy a middle band where online adoption is substantial and in-store usage is rising quickly. Meanwhile, China and India sit in the upper-right quadrant, illustrating what mature, mobile-first economies can look like when digital payments become the default across channels (see Box 1).

Figure 2.1: In-store vs online digital payment shares of transaction value across countries[1]



Source: Flint analysis of Worldpay Data

22. This pattern is important for two reasons. First, it suggests that in-store and online adoption may reinforce one another over time, as familiarity with digital payment methods in one context supports wider use in another. Second, it indicates that countries with relatively low current usage need not be seen as structurally constrained, but rather as being at an earlier stage of their adoption path.

23. While digital wallets are often associated with card-based payments, in some markets they also support real-time account-to-account (A2A) payments, where funds move directly from the consumer's bank account to the merchant's bank account.[2] Relative to card-based digital wallet payments, wallet-enabled A2A payments can offer advantages for both consumers and merchants. In particular, they can be faster, cheaper and more secure: they bypass card networks and associated fees, can settle in real time, and benefit from banks' security standards and encrypted payment rails.[3]

24. Notable examples include India's Unified Payments Interface (UPI), discussed in Box 1, and Brazil's Pix by Proximity. In early 2025, Brazil's central bank introduced Pix by Proximity, in collaboration with Google, using NFC technology to enable A2A payments without the need to scan a QR code.[4] These examples illustrate how digital payment adoption can deepen when payment services are easy to use, widely accepted and integrated effectively across the wider ecosystem.

[1] Includes only digital wallets and pay buttons.
[2] Payment Systems Regulator (2026), *Account-to-account payments*.
[3] Stripe (2024), *What are A2A payments? A quick guide to account-to-account payments*.
[4] Grant (2024), *Pix Launches Contactless Payments for Google Wallet Users*, Payments Journal.



Box 1: Lessons from China and India

The Asia–Pacific region as a whole has seen uneven adoption of digital payments, with China and India standing out as major success stories, both regionally and globally. Their experience is relevant here not because the UK or Europe are expected to replicate either model precisely, but because both show how adoption can deepen quickly when payment services are trusted, widely accepted and supported by effective infrastructure.

In **China**, digital wallets accounted for 87% of in-store transaction value in 2025, while pay buttons accounted for 84% of online transaction value. Survey evidence also suggests that digital wallets are deeply embedded in everyday consumer behaviour: in 2023, over 80% of people in China reported having a digital wallet, and around two-thirds said they had used one for an in-store purchase in the previous month.[5] China's digital payments expansion is often described as a *"digital payments revolution"*, beginning with Alipay's launch in 2003 to address trust issues in online transactions and accelerating over the following decade as Alipay and WeChat Pay made wallets and QR-code payments mainstream.[6] By 2023, survey data indicated that Alipay and WeChat Pay were used by 92% and 85% of online consumers respectively.[7]

India illustrates a different but equally important route to rapid digital payments growth. Before the launch of UPI in 2016, cash accounted for around 80% of in-store transaction value;[8] by 2025 this had fallen to 14%, while digital payment methods represented more than 60%. A similar shift has occurred online: in 2014, cash and physical cards accounted for 71% of online transaction value;[9] today, digital methods account for approximately 75%.[10] UPI now accounts for nearly half of all real-time payment transactions worldwide, including a growing cross-border component, making it the largest real-time payments system in the world.[11]

India's progress reflects not only smartphone adoption, but also the interaction of payments infrastructure, identity systems and financial inclusion policy. Aadhaar enabled secure digital authentication at scale, while the Jan Dhan Yojana programme brought hundreds of millions into the formal banking system.[12] Within this ecosystem, Google's UPI-based payments app enables users to make instant account-to-account payments via UPI rather than relying on card details.[13] By combining a user-friendly interface with integration through local banks, the app has helped support real-time payments that bypass card infrastructure and interchange fees.[14] Evidence from platform-level analysis also suggests broader inclusion effects: in one Uber-based study, over 50% of users who adopted the app had previously used cash, and 63% of these users were located outside India's top eight metro cities.[15]

The main lesson for this report is that digital payment adoption can accelerate where payment services are easy to use, widely accepted, and integrated effectively across consumer apps, financial institutions and underlying payment infrastructure.

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[5] Global data (2024), *2023 Financial services consumer survey*.
[6] Brookings (2020), *China's digital payments revolution*.
[7] Dauxue Consulting (2025), *Mobile payments in China: How China became a cashless society*.
[8] Boston Consulting Group and National Payments Corporation India (2025), *UPI – The global benchmark for digital payments*, p.13.
[9] The 'cash' category includes cash on delivery, where transactions are initiated online but paid offline upon delivery by the courier.
[10] Worldpay (2025), *2025 Global Payments Report*, p.11.
[11] ACI Worldwide (2024), *Prime time real-time payments report*, p.18.
[12] Boston Consulting Group and National Payments Corporation India (2025), *UPI – The global benchmark for digital payments*, p.11. As of 2025, the programme has scaled to over 560 million accounts. Boston Consulting Group and National Payments Corporation India (2025), *UPI – The global benchmark for digital payments*, p.12.
[13] Introduced as *Tez* in 2017.
[14] Khan (2024), *Why Google Pay succeeded in India but flopped in the US*.
[15] Google (2025), *Google Pay and Uber digitize cab payments*.



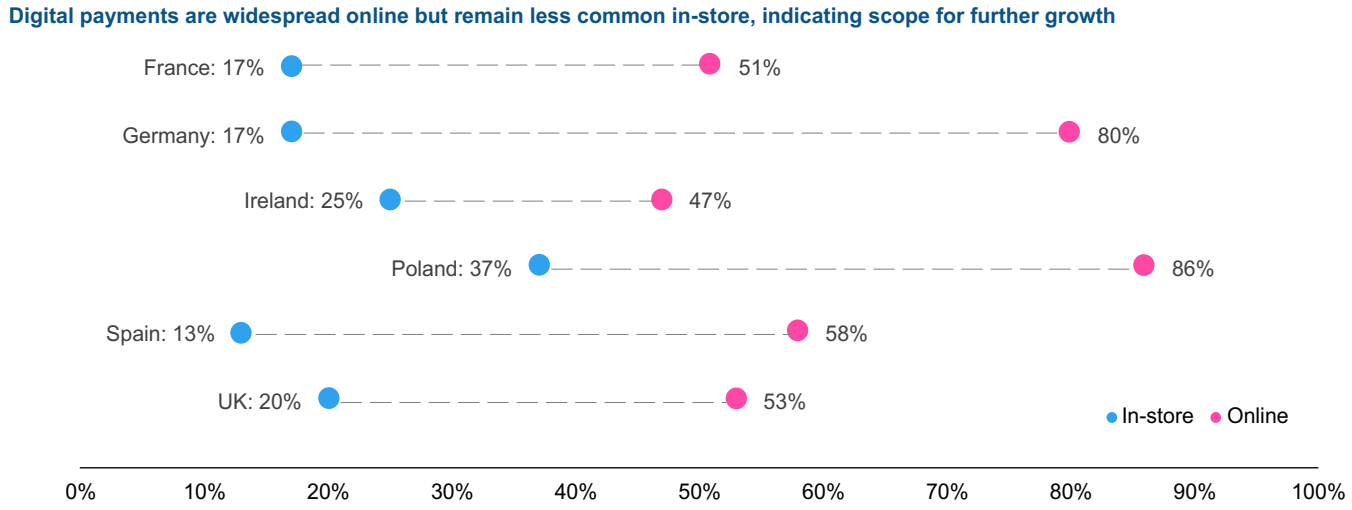
2.2 Digital payments adoption in Europe

25. Europe's digital payments trajectory is shaped by the region's continued reliance on physical payment cards, particularly for in-store transactions. In 2025, physical cards still accounted for around 56% of in-store transaction value in Europe, up from 43% in 2014, with debit and prepaid cards making up the largest share.[16] This distinguishes Europe from some more digitally mature markets and helps explain why there remains substantial headroom for further growth in digital wallet use.

26. Even so, digital wallet adoption has increased markedly in several European markets. In the UK, the share of adults using a digital wallet rose from 14% in 2017 to 57% in 2024, with usage especially high among younger adults.[17] Germany has also seen significant growth, albeit from a lower base, with adult usage rising from 2% in 2017 to 30% in 2023. These figures suggest that digital wallet adoption is already well established in parts of Europe, even if its use is still uneven across countries and payment contexts.

27. Figure 2.2 brings these differences together by comparing the share of transaction value accounted for by digital payments in-store and online across the six focus markets. In all six countries, digital payments account for a larger share of online than in-store transaction value. For example, in Germany, digital payments account for around 21% of in-store transaction value, compared with around 85% online; in the UK, the equivalent figures are around 21% and 54%. This pattern is repeated across the other focus markets, although the size of the gap varies.

Figure 2.2: Digital payment share of transaction value, in-store and online



Source: Flint Analysis of Worldpay data

28. Figure 2.2 therefore highlights two features of the current European landscape. First, online payments are generally further advanced on their digital journey, reflecting the longer history of pay buttons and other digital checkout tools in e-commerce. Second, in-store adoption still has considerable room to grow. In several countries, physical cards remain dominant at the point of sale, while cash continues to account for a significant share of in-store transaction value. Detailed country-level breakdowns for both channels are set out in Annex B.

29. There is also meaningful variation within Europe in how digital payments are made. In some markets, pay buttons account for a large share of online transaction value: in 2025, they represented around 50% in the UK, Ireland and Italy, up from roughly 20% a decade earlier. In others, account-to-account

[16] Card figures include both contactless and chip and PIN transactions.
[17] Payment Systems Regulator (2024), *Bridging the gap: How we are helping consumers make the most of digital payments*.



payment methods are more prominent. In Poland, for example, digital payments account for more than 80% of online transaction value, with much of this driven by BLIK. This underlines how Europe is not converging on a single model of digital payments adoption.

30. Overall, the evidence suggests that Europe is already well along the path towards more digital payment journeys, but that it remains at an intermediate stage relative to the most mature markets discussed earlier in the chapter. Online digital payments are widespread and, in some countries, already dominant. In-store adoption, however, remains lower and more uneven, implying significant scope for further growth if trust, merchant acceptance and interoperability continue to improve. The implications of these trends for the report's modelling assumptions are explored in Chapter 6, while Box 2 places them in the wider European and UK policy context.

Box 2: The European policy context

The spread of digital wallets in Europe is not solely driven by technology and market forces, but also by the policy and regulatory environment in which payments operate. Policy decisions can determine access to payment systems, how data can be used and shared, what level of security is required and how risks are managed. These choices can influence the pace and shape of adoption and the extent to which the benefits of digitalisation, more broadly, are shared. In short, while policy does not create the underlying innovation, it can affect how far that innovation translates into economic and social value.

Though the legal instruments differ, both EU and UK jurisdictions are seeking to support a more open, digital and data-driven financial system, while safeguarding stability and trust. At the EU level, digital wallets sit within a wider policy agenda that includes the evolution of the Payment Services Directive framework into the third Payment Services Directive (PSD3) and the Payment Services Regulation, the Instant Payments Regulation, open finance initiatives, and the European Digital Identity (EUDI) Wallet. In the UK, a parallel set of initiatives is under way: the post-PSD2 payments regime, the work of the Payment Systems Regulator to foster competition and resilience, and the transition from open banking towards a broader open finance framework.

Looking ahead, the policy environment will continue to influence how digital wallets evolve and how their benefits are realised. Decisions on issues such as access to payment systems, the treatment of new account-to-account and instant payment solutions, the role of digital identity, and the governance of data sharing will affect the trajectory of wallet adoption and innovation.



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CHAPTER 3

The payments ecosystem and value creation

Chapter at a glance

This chapter sets out the framework used to estimate the **GDP contribution of Google Pay**.

It begins by locating these products within the wider **payments ecosystem**, including the role of interoperability and coordination across merchants, financial institutions and payment infrastructure,

It then explains how adoption and behavioural outcomes translate into **four monetised value channels**.

These channels are mapped to **demand-side growth** and **productivity improvement**, while wider convenience and trust benefits are treated separately as sitting outside the National Accounts boundary.

31. This chapter explains where Google Pay sits within the wider payments ecosystem and how their use translates into measurable economic value. It sets out the framework used in this report to move from what happens at the point of payment – in-store and online – to what can be measured as economic activity in the National Accounts.

32. Figure 3.1 presents the Theory of Change used in the analysis. It shows how Google Pay, operating within the wider payments ecosystem, affect behaviour and outcomes for consumers and businesses, and how those effects feed into four quantified value channels: incremental sales, time savings, fraud and chargeback savings, and administrative and operational savings. These channels are considered separately for in-store and online payments, reflecting differences in user behaviour, transaction flows and payment processes across the two contexts.

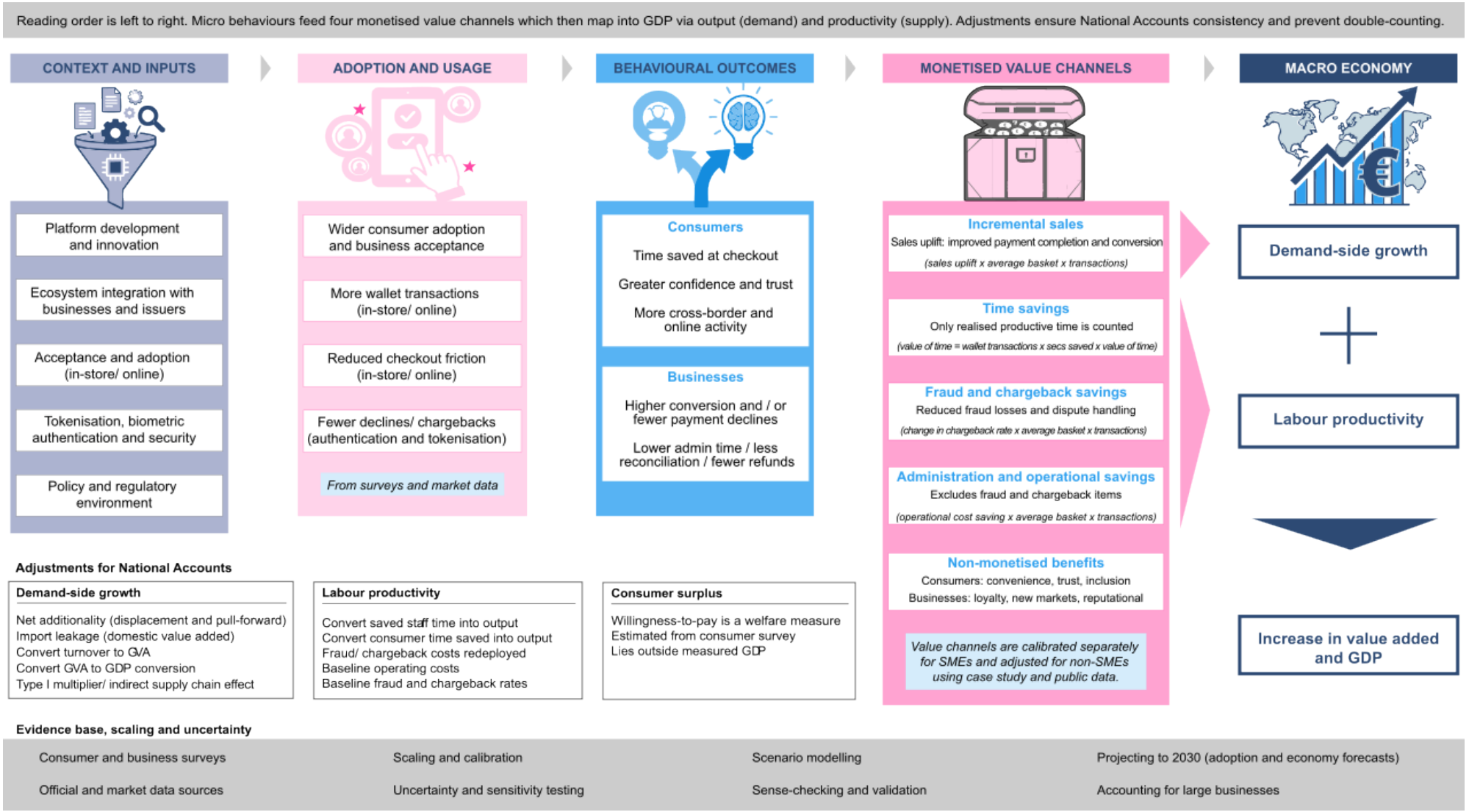
33. The final part of the framework maps these value channels into two macroeconomic mechanisms consistent with GDP measurement: demand-side growth, through higher completed sales and output, and productivity improvement, through time and cost savings that release resources for other productive use. The chapter therefore provides the conceptual bridge between the product-level evidence presented in Chapters 4 and 5 and the aggregate GDP results presented in Chapter 6, while Annex A sets out the detailed methodology and technical assumptions.

34. The chapter begins by describing the payments ecosystem in which these products operate (Figure 3.2). This includes consumer devices and operating systems, merchant interfaces such as apps, websites and point-of-sale terminals, payment service providers and networks, issuing and acquiring banks, and the wider settlement, security and regulatory infrastructure that supports transactions.



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Figure 3.1: Theory of Change for Google Pay



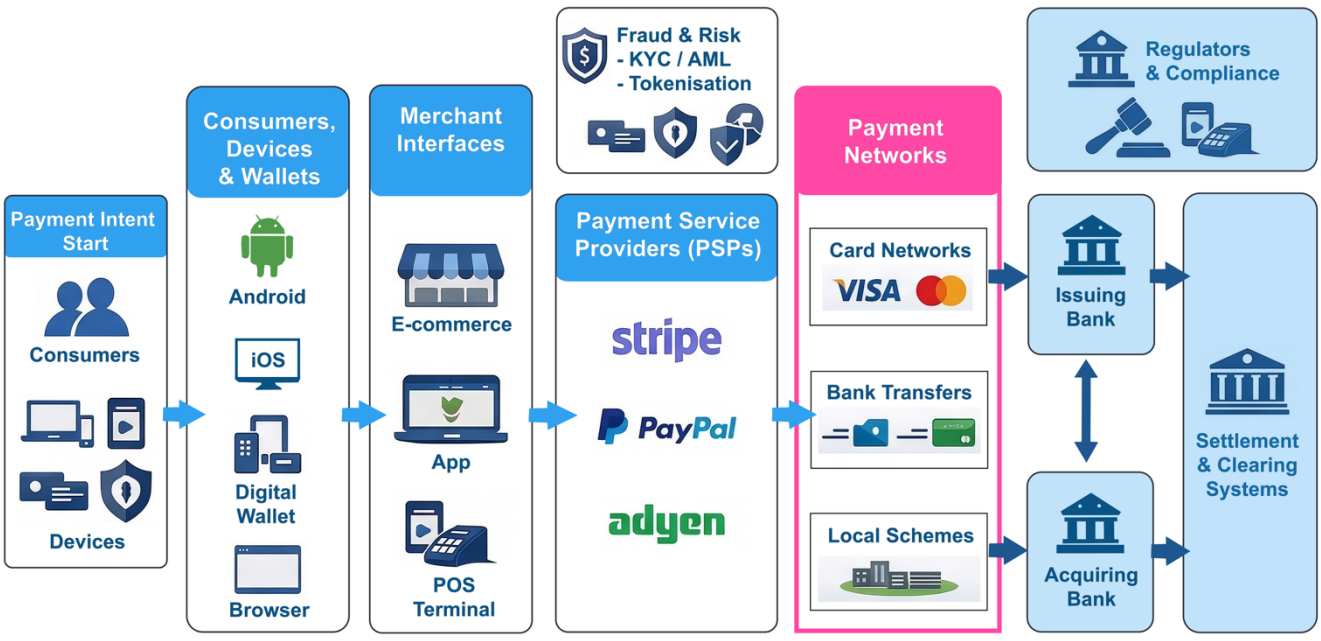
3.1 The payments ecosystem

35. Digital payments take place within a wider payments ecosystem comprising the participants and infrastructure that enable money to move from consumers to businesses when a transaction takes place. Google Pay operates within this broader system – they do not replace the underlying payment rails or banking functions but help consumers and businesses make and receive payments more efficiently, securely and with less friction.

36. The payments ecosystem can be understood as operating across four layers (Figure 3.2):

- **Consumers, devices and wallets.** Mobile operating systems, such as Android and iOS, enable consumers to download digital wallet applications and securely store payment credentials on their devices.
- **Merchant interfaces**. Consumers make payments through merchant-facing interfaces, including e-commerce platforms, merchant websites and apps, and point-of-sale terminals in physical stores.
- **Payment service providers, networks and rails.** Payment service providers help connect merchant interfaces to the wider payments system, while payment networks and rails – including card networks such as Visa and Mastercard, account-to-account payment systems, and local payment schemes – route transaction information between the consumer's bank and the merchant's bank.
- **Issuing and acquiring banks**. Issuing banks provide payment cards to consumers and authorise transactions, while acquiring banks and associated payment-processing functions enable merchants to accept payments, process transactions and receive funds.

Figure 3.2: The payments ecosystem



37. This ecosystem shapes the conditions under which digital payment products are adopted and used. Business acceptance, technical integration, security infrastructure and consumer trust all affect how widely Google Pay is used in-store and online, and therefore the scale at which they can generate value. More broadly, the effectiveness of collaboration across banks, businesses, payment service



providers and underlying payment infrastructure also influences how smoothly these products can be deployed and used, and therefore the extent to which their benefits are realised in practice.

38. The remainder of this chapter focuses not on the ecosystem as a whole, but on the specific pathways through which Google Pay affects consumer and business outcomes, and how those effects are translated into measurable economic value.

3.2 Adoption and usage effects

39. As digital wallets become more widely available and accepted, they are changing how payments are made in both physical and digital retail environments. By enabling consumers to use stored, tokenised credentials through a single tap or click, Google Pay can make payments faster, more seamless and more secure. The effects differ somewhat between in-store and online transactions, reflecting differences in checkout processes and user behaviour.

40. In-store, adoption is linked to the availability of contactless point-of-sale terminals and NFC-enabled devices, which support faster tap-to-pay transactions and reduce friction at checkout. Online, adoption is supported by pay-button functionality, autofilled credentials and digital authentication, which can simplify checkout and reduce failed or abandoned transactions. In both settings, wider usage can improve the efficiency and reliability of payment flows for consumers and businesses.

41. The surveys and interviews used in this report provide evidence on how these effects are experienced in practice. They therefore form the link between the broader payments ecosystem described above and the behavioural outcomes considered below.

3.3 Behavioural outcomes

42. The use of Google Pay can lead to observable changes in how consumers make payments and how businesses process them. In this report, these behavioural effects provide the link between payment usage and economic value.

43. For consumers, digital wallets and pay-button solutions can reduce friction at checkout, save time and increase confidence in completing transactions. For businesses, they can improve the speed, reliability and security of payment processing in both in-store and online settings.

44. These effects are measured separately for consumers and businesses, and for in-store and online payments. The resulting evidence is then mapped onto the four monetised value channels set out below: incremental sales, time savings, fraud and chargeback savings, and administrative and operational savings.

3.4 Monetised value channels

45. The four value channels in Figure 3.1 set out the mechanisms through which changes in payment behaviour are translated into measurable economic value. Together, they capture the main ways in which Google Pay generates benefits for consumers and businesses in both in-store and online settings. More detailed discussion of how each channel is quantified is provided in Annex A.

Incremental sales

46. Digital wallets can increase the volume of completed transactions by reducing friction at checkout and increasing confidence in completing purchases. This includes purchases that might otherwise have been delayed, abandoned or not completed at all. In the framework used here, this channel captures the demand-side contribution to GDP.



Time savings

47. Google Pay can reduce the time required to complete and process transactions. In the macroeconomic framework, only the share of these time savings that is reallocated to productive activity is treated as contributing to GDP; the remainder is treated as a consumer welfare benefit rather than a GDP effect.

Fraud and chargeback savings

48. More secure authentication and tokenised payment credentials can reduce fraud, chargebacks and related dispute costs. This frees resources that would otherwise be used to prevent, manage or absorb these losses, and therefore contributes to productivity.

Administrative and operational efficiencies

49. Digital payment tools can also reduce the administrative effort associated with processing transactions, including reconciliation and related back-office tasks. These efficiencies are treated separately from fraud and chargeback effects to avoid overlap, and are captured as a further productivity gain in the modelling.

3.5 Macro economy: mapping value to GDP

50. The final step in the analytical framework maps the four monetised value channels onto two macroeconomic mechanisms consistent with the National Accounts. This allows the payment-level effects identified in the evidence to be expressed as contributions to GDP. Annex A sets out the technical adjustments used to align these mechanisms with the National Accounts.

Demand-side growth

51. The first mechanism is demand-side growth. This captures the effect of incremental sales: where Google Pay enables transactions that would otherwise not have taken place, they increase expenditure, output and value added in the relevant parts of the economy.

Productivity improvement

52. The second mechanism is productivity improvement. This captures the effect of time savings, administrative and operational efficiencies, and lower fraud and chargeback costs, which allow a given level of output to be supported with fewer inputs and therefore strengthen the economy's productive capacity.

3.6 Non-monetised benefits to consumers and businesses

53. The analysis in this report focuses on four monetised channels through which Google Pay contributes to measurable economic value. However, these channels do not capture the full range of benefits associated with digital wallet adoption. Some benefits improve convenience, trust, user experience and strategic capability, but are not included in the GDP estimates.

54. For consumers, these non-monetised benefits include greater convenience, reduced effort, stronger confidence in digital payments, and the wider usefulness of digital wallets as tools for storing and accessing payment cards, loyalty cards, tickets and travel passes. These effects are important to user experience and adoption, but many fall outside the production boundary used in the National Accounts.



55. For businesses, non-monetised benefits include improved customer experience, stronger customer trust and loyalty, broader access to digital and cross-border markets, and the strategic value of wallet-enabled infrastructure as a platform for future innovation. These effects may support long-term business performance but are not robustly quantified in the modelling used in this report.

3.7 Chapter 3 Summary

56. This chapter sets out the framework used to estimate the economic value of Google Pay in a way that is consistent with the National Accounts. It begins by locating these products within the wider payments ecosystem and then traces the pathway from adoption and usage to observable outcomes for consumers and businesses, separately for in-store and online payments.

57. It then summarises the four monetised value channels through which these outcomes generate measurable economic value: incremental sales, time savings, fraud and chargeback savings, and administrative and operational efficiencies. These channels are mapped to two macroeconomic mechanisms: demand-side growth, through higher completed sales and output, and productivity improvement, through time and cost savings that release resources for other productive use.

58. Finally, the chapter distinguishes these monetised GDP effects from wider non-monetised benefits, including convenience, trust, customer experience and strategic capability, which may support adoption and participation in the digital economy but sit outside the GDP boundary. Annex A sets out the detailed methodology and technical assumptions used to quantify these channels and translate them into GDP-consistent estimates.



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CHAPTER 4

Consumer survey: security, convenience and inclusion

Chapter at a glance

This chapter presents the consumer survey evidence on security, convenience and inclusion.

Around **four in five respondents report feeling safe** adding a card to Google Pay, and roughly **eight in ten feel more confident** purchasing from unfamiliar merchants when using Google Pay. Users also perceive checkout to be around **half a minute faster** in-store and online, on average, which may be particularly relevant for consumers who dislike friction in digital checkout journeys.

Beyond payment cards, Google Wallet is **used to store loyalty cards, travel passes and tickets**, with many respondents open to storing digital ID in future. Respondents' stated willingness-to-pay for these services implies aggregate EU plus UK **consumer surplus of €5.4bn in 2025**.

59. This chapter presents evidence from a bespoke new consumer survey on how Google Pay influence consumer behaviour and experience through key channels such as enhanced security, fraud prevention, time savings and convenience. It then shows how these effects translate into tangible consumer benefits that support consumer welfare and financial inclusion.

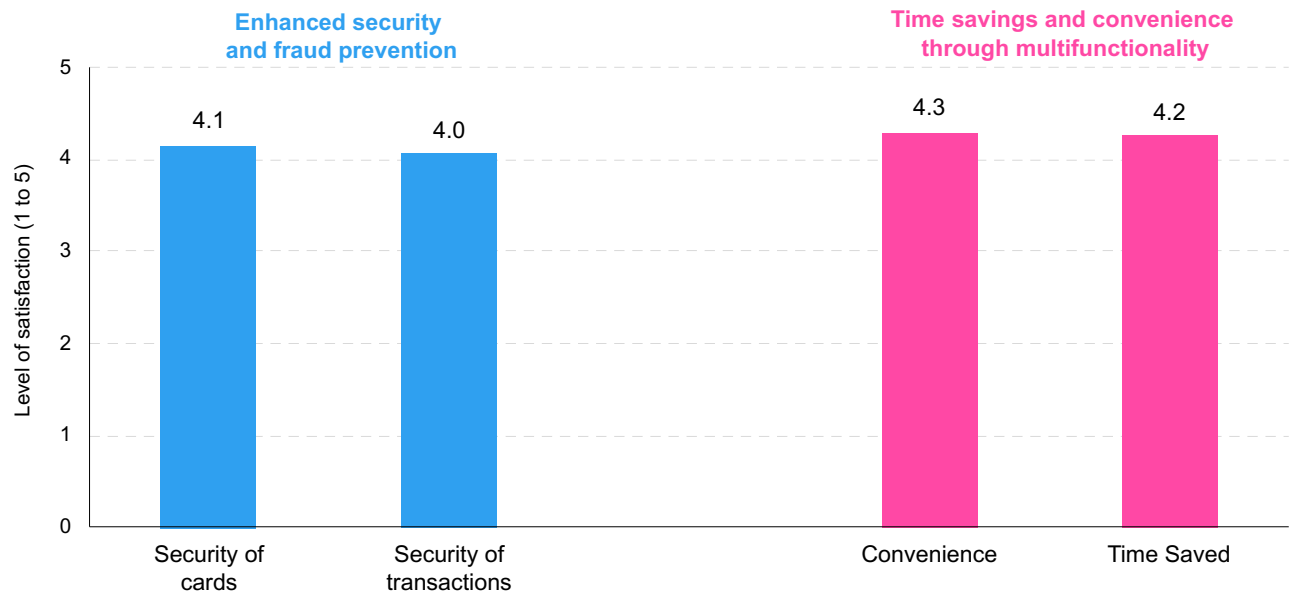
4.1 Consumer benefit channels

60. Google Pay delivers value to consumers through a combination of convenience, security and improved ability to transact quickly and confidently. These channels matter because they directly shape whether consumers are willing and able to complete transactions in digital environments, particularly where perceived risk or friction might otherwise deter participation.

61. Figure 4.1 shows that the average respondent is between 'slightly satisfied' (4) and 'very satisfied' (5) with the two main benefit channels: the enhanced security and fraud prevention and time savings and convenience through multifunctionality. This high level of satisfaction provides a baseline for examining how these benefits influence behaviour and outcomes in practice.



Figure 4.1: Consumer satisfaction with Google Pay benefits

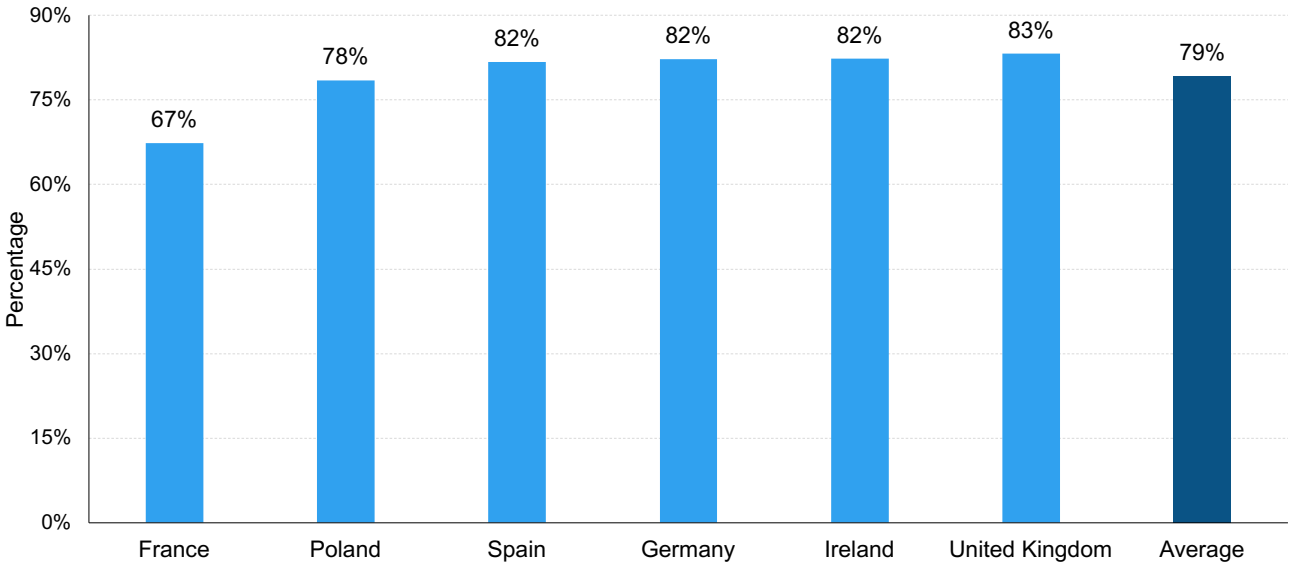


Source: Flint Analysis

Enhanced security and fraud prevention

62. Security is an important driver of digital payment adoption, with around two in five consumers citing higher security standards as a factor that would encourage them to try new payment solutions.[18] Consistent with this, survey respondents report high levels of confidence in the security of Google Pay: a large majority are satisfied with the security of stored cards and transactions, and around one third report being very satisfied. Approximately four in five consumers also report feeling safe when adding a payment card to Google Pay (Figure 4.2).

Figure 4.2: Trust: percentage feeling safe when adding a payment card to Google Pay



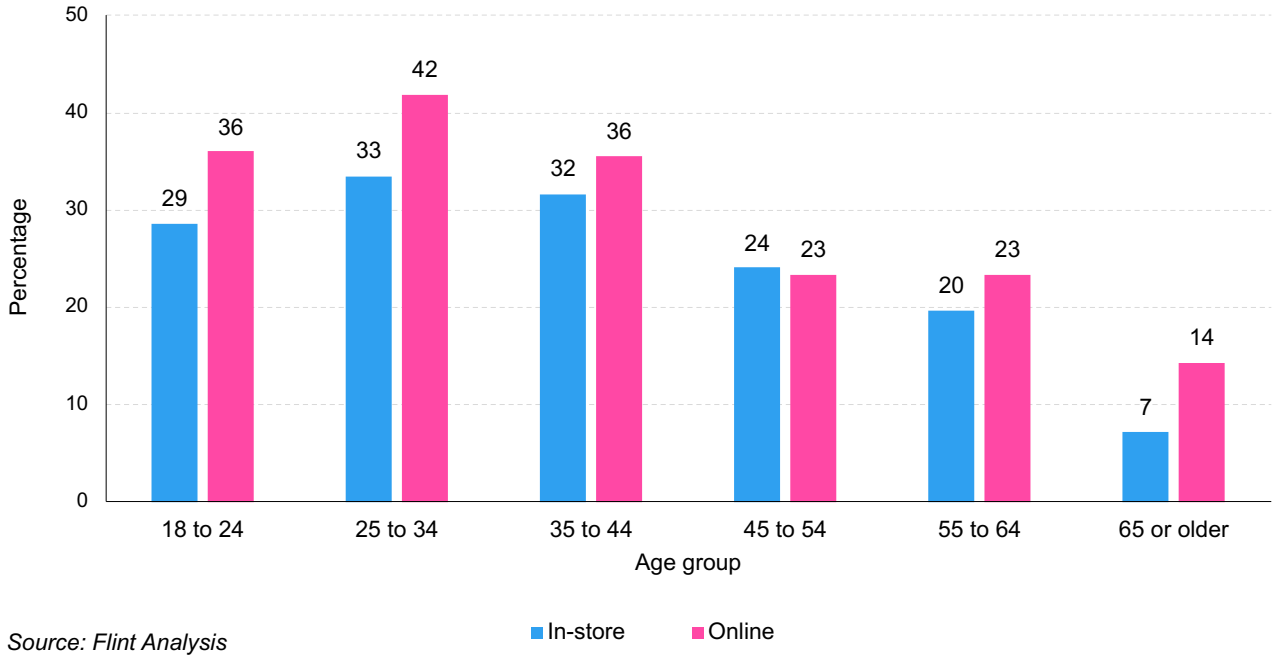
Source: Flint Analysis. This chart has been revised from a previously published version of this report.

[18] European Central Bank (2024), *Study on the payment attitudes of consumers in the euro area 2024*, Chart 29.



63. Respondents are also more likely to use digital payments when concerned about payment fraud – and especially younger users (Figure 4.3). One in four respondents report choosing Google Pay for in-store payments because they view it as a safer payment method than alternatives; one in three say the same when using the Google Pay button online. This behavioural response indicates that security features actively influence payment choices.

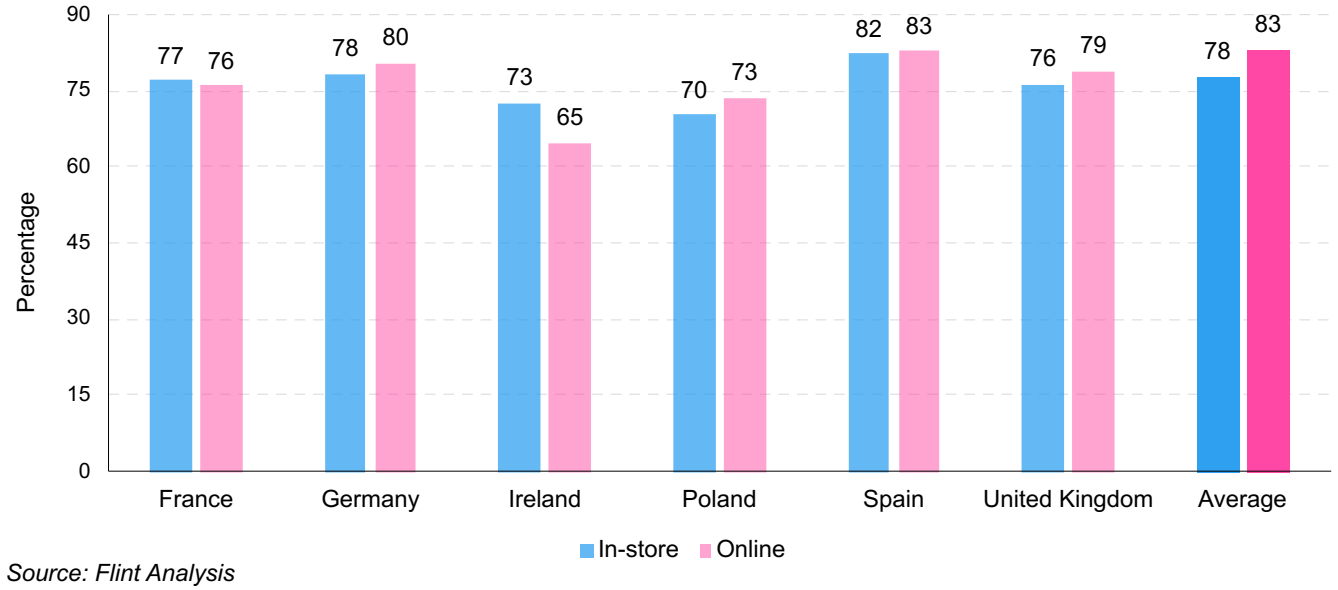
Figure 4.3: Share of respondents who cite fear of fraud as a factor behind their use of Google Pay in-store and online, by age group



Source: Flint Analysis

64. The value of enhanced security is particularly evident when transacting with unfamiliar businesses. Figure 4.4 shows that 78% of respondents report feeling more confident making a first-time in-store purchase from an unfamiliar business when using Google Pay – this goes up to 83% for unfamiliar online business.

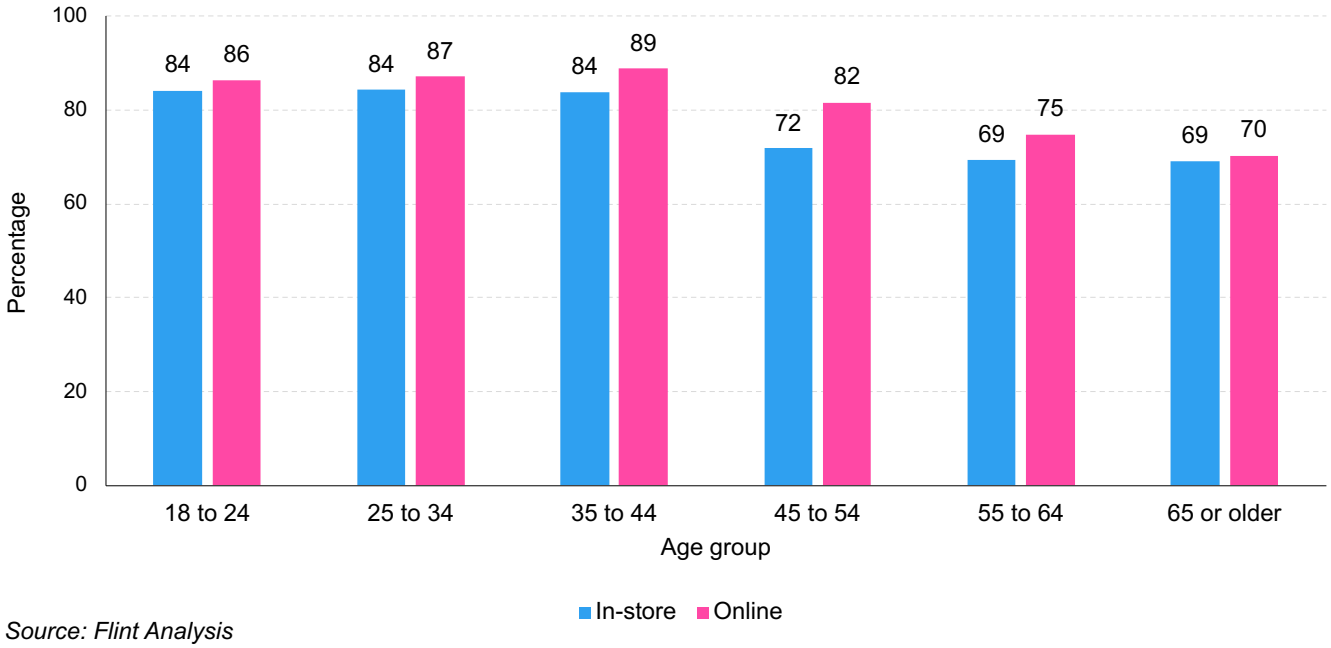
Figure 4.4: Increased confidence when making a first-time purchase from an unfamiliar business when using Google Pay



Source: Flint Analysis

65. Figure 4.5 shows that this increased confidence was more pronounced in the younger three age cohorts than the three older ones, though it was true across all age groups.

Figure 4.5: Increased confidence making a first-time purchase from an unfamiliar business when using Google Pay, by age group



Source: Flint Analysis

66. The utility of Google Pay extends beyond domestic use into cross-border contexts. One in three respondents report using Google Pay to make payments in another country within the past 12 months, or to purchase online in a different currency. When asked whether they feel more confident making payments in a different currency using Google Pay, more than half of respondents answered 'yes'. These patterns are consistent with digital wallets facilitating international transactions and suggest that wallet-based payments can help lower barriers to cross-border commerce, whether genuine or perceived.

Time savings and convenience

67. Amid rapid digitalisation, consumers increasingly value their time, with 77% of U.S. consumers surveyed by Morgan Stanley citing comfort, speed, accessibility and availability as key factors when making purchasing decisions.[19]

68. Our survey results show that Google Pay reduces the time and effort required to complete a transaction (Figure 4.6):

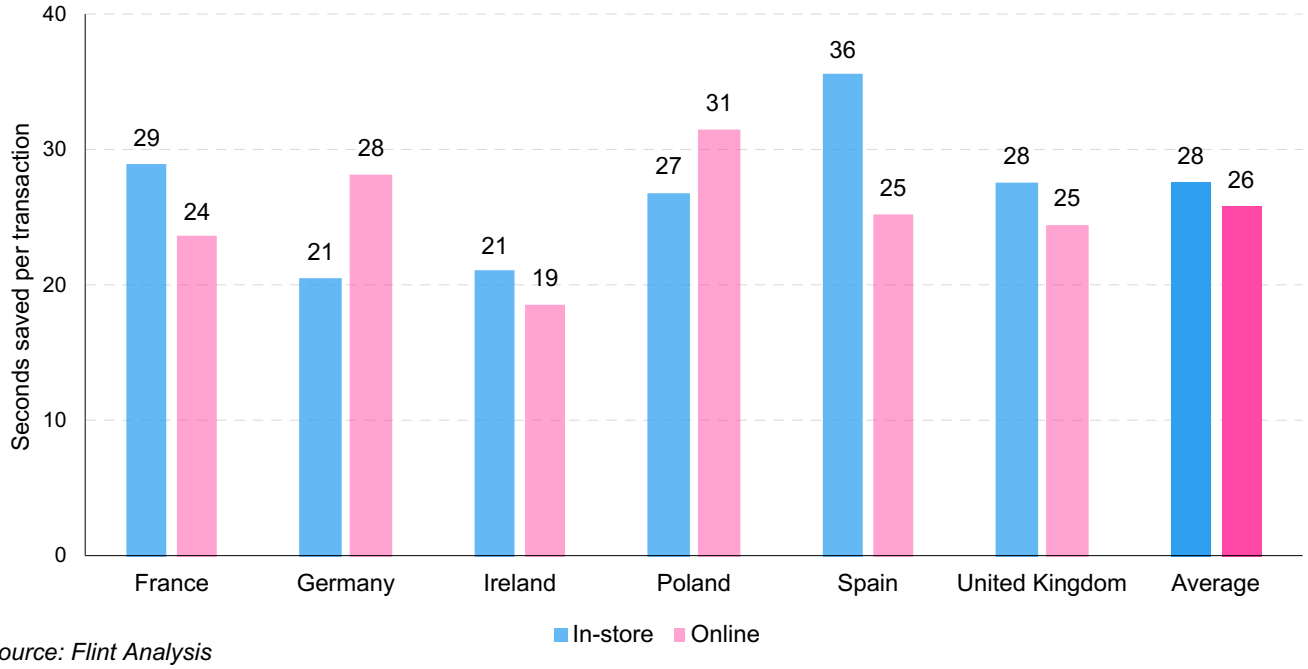
- **In-store,** faster checkout delivers direct time savings for the paying consumer and reduces queues for other consumers. Respondents (across all countries) perceive payments made using Google Pay to be, on average, 28 seconds faster than those made using other payment methods.

- **Online,** the ability to pay with stored credentials reduces friction by eliminating the need to re-enter payment information. Respondents perceive payments made using the Google Pay button to be, on average, 26 seconds faster than using their preferred alternative payment method, with respondents in Poland reporting average time savings of 31 seconds.

[19] Morgan Stanley (2024), *Consumer trends 2024: Investing in the convenience premium*.



Figure 4.6: Average reported time savings, in-store and online



Source: Flint Analysis

69. When consumers are unable to use Google Pay, most report that they would switch to alternative payment methods:

    - For in-store transactions, these include contactless cards (63%), cash (20%) or chip-and-PIN cards (15%).

    - Online, consumers would switch to saved cards on file (30%), manually typing in card details (26%), bank transfers (20%) or *Buy Now, Pay Later* options (14%).

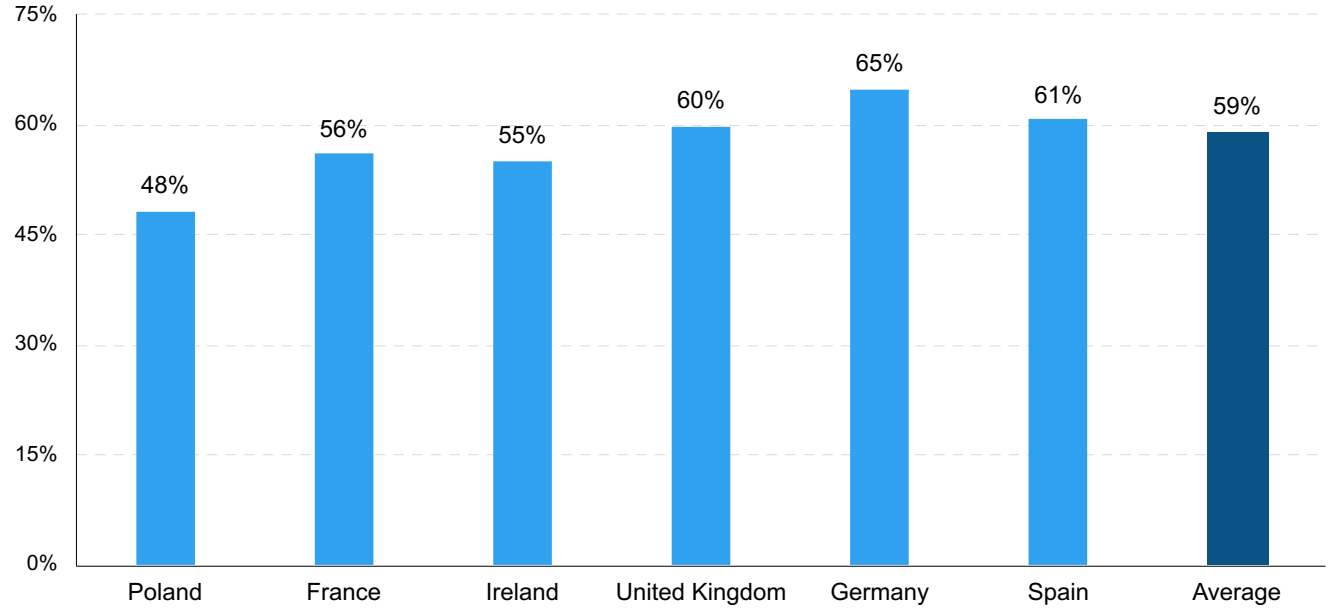
70. Our survey results also indicate **high levels of satisfaction with the convenience offered by Google Pay (and Google Wallet for non-payment functionality)**, with 86% of respondents reporting that they are satisfied and around half indicating they are very satisfied:

    - Google Wallet is used to store loyalty or rewards cards (56%), travel, transit, or boarding passes (37%), and event tickets (29%). This multifunctionality is consistent with reduced friction in everyday tasks, such as commuting, scanning loyalty cards at supermarkets, attending events, among others.

    - Looking ahead, Google Wallet also presents opportunities for future use-cases, with nearly 60% of respondents indicating that they would store a digital ID (e.g. ID card, driving license) in Google Wallet (Figure 4.7). Results vary across Member States and may be influenced by additional factors, such as the availability of well-developed government digital wallet solutions. For example, the relatively lower results observed in Poland may be explained by the widespread adoption of the highly successful *mObywatel* application, which currently includes over 11 million active *mDowód* (digital ID) users. The app provides a range of functionalities, including digital ID and driving licence storage, and already integrates Google Pay as a payment method.



Figure 4.7: Openness to storing a digital ID in Google Wallet



Source: Flint Analysis

4.2 Consumer welfare

71. Consumer welfare refers to the benefits that consumers receive from a good or service over and above what they pay for it, often referred to as 'consumer surplus'. In practice, it can be measured as consumers' willingness-to-pay (WTP) for access to a feature or service (or to avoid losing it), which reflects the value they place on convenience, reliability, and peace of mind.[20]

72. The survey asked consumers for their WTP for Google Pay, and we can use the results to calculate aggregate consumer welfare:[21]

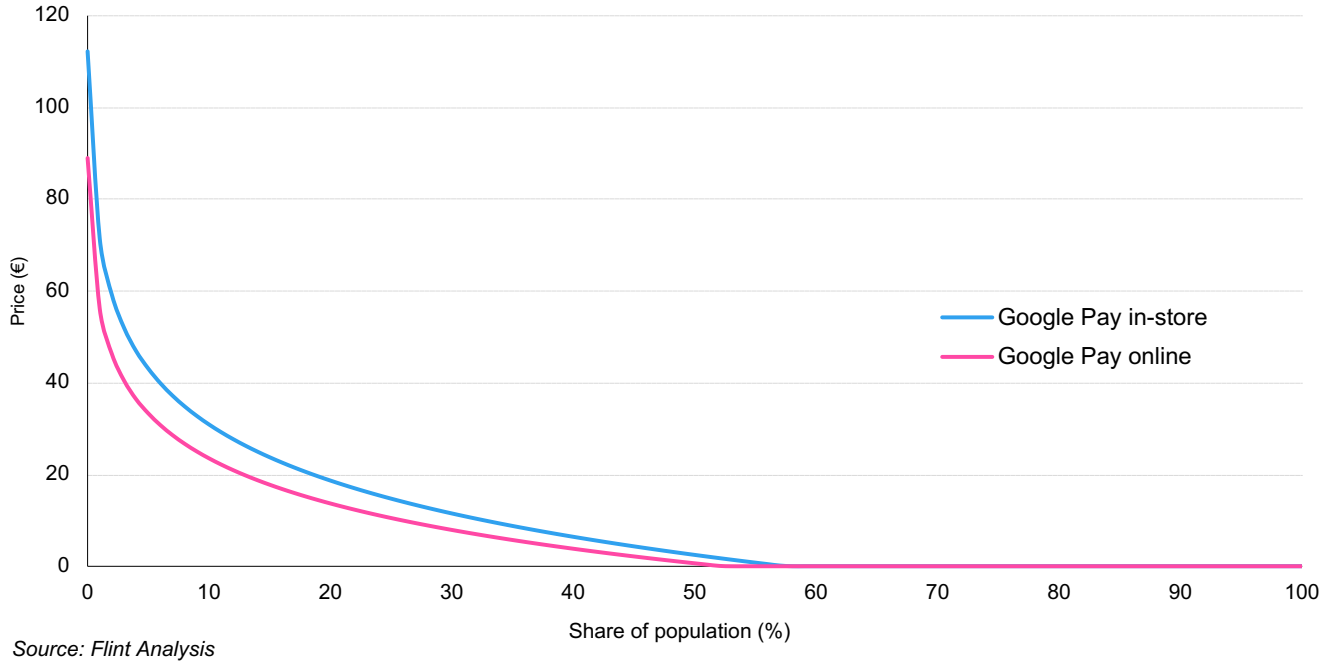
- The average WTP is approximately €9 per month for access to Google Pay in-store, and nearly €7 for access to Google Pay online.
- This pattern – moderately higher WTP for Google Pay in-store than online – is consistent with the former being perceived as a standalone app that users actively choose to use, whereas the online Google Pay button is typically encountered more passively during the checkout process.
- Figure 4.8 plots illustrative (and similar) demand curves (mapping WTP on the vertical axis to proportion of respondents on the horizontal axis) for the surveyed EU countries and the UK.

[20] Willingness-to-pay (WTP) is the maximum amount an individual would pay to obtain a good or service while consumer surplus is the difference between WTP and the price actually paid. For free-to-use services, such as Google Pay, WTP = consumer surplus. Standard treatments are given in Varian and Melitz (2024), *Intermediate Microeconomics: A Modern Approach*, Norton. For an application of stated-preference methods to estimate consumer surplus for digital products and the resulting wedge between GDP and consumer welfare, see Coyle and Nguyen (2023), *Free Digital Products and Aggregate Economic Measurement*, INSEE.

[21] This is a standard approximation in economic analysis and is used, amongst others, by regulators in the UK and EU for valuing services that are provided at zero price. For example, Ofcom, the UK's telecommunications regulator, has used this approach to estimate the detriment from silent and abandoned calls to consumers. Ofcom (2015), *Review of how we use our persistent misuse powers: Focus on silent and abandoned calls*, p.30.



Figure 4.8: Estimated demand curves for Google Pay, aggregated across the EU and UK



Source: Flint Analysis

73. There were, however, notable differences in the WTP of respondents across countries:

- In France and Germany, the median respondent reported being willing to pay between €2 and €4.99 per month for each product. Germany exhibits the highest willingness to pay for these services, with 23% of respondents willing to pay €20 or more per month for Google Pay in-store and 15% willing to pay €20 or more per month for Google Pay online.

- By contrast, in Ireland, Poland, and Spain, median willingness to pay is below €2 per month. In Ireland, only 6% of respondents reported being willing to pay €20 or more per month for Google Pay in-store, and none willing to pay €20 or more per month for Google Pay online. Poland was where respondents were the least willing to pay for Google Pay, with the median Polish respondent willing to pay less than €0.5 (2 Zloty) per month for either product.

- In the UK, the median respondent reported being willing to pay between £2 and £4.99 per month for Google Pay, with 14% of respondents willing to pay £20 or more per month for Google Pay in-store and 9% willing to pay £20 or more per month for Google Pay online.

74. Based on these results, we estimate aggregate annual EU plus UK consumer welfare – the perceived value that consumers derive from each product – to be €5.4bn.

4.3 Financial inclusion

75. The survey evidence also helps to shed light on how Google Pay supports financial inclusion by building consumers' trust in digital payments, reducing practical barriers to use and supporting digital confidence.

76. Financial inclusion usually refers to enabling individuals and businesses to access and use appropriate financial products and services that allow them to participate fully in the economy.[22] In high-access markets such as the UK and most EU countries, where account ownership exceeds

[22] World Bank (2025), *Financial inclusion*.



95%,[23] the inclusion challenge is less about basic access but instead around the notion of *financial capability* – ensuring that consumers can use financial services effectively, in an increasingly digital environment. For example:

- the FCA has noted that the main financial inclusion challenge in the UK does indeed lie in building consumers' financial capability;[24] while
- the latest measures by the European Commission on financial inclusion are similarly focused on strengthening the financial literacy of EU citizens, particularly around digital skills.[25]

Building trust in digital payments

77. Trust is a core enabler of financial inclusion. The World Bank has highlighted that protecting consumers from fraud and financial risks builds their trust in formal financial services and contributes to their sustained participation in the financial system.[26]

78. Google Pay supports this objective through tokenisation, which replaces sensitive card details with encrypted tokens. This reduces exposure to fraud and helps protect consumers – particularly those with limited financial resilience – from financial loss.[27] By strengthening payment security, Google Pay therefore helps build trust in digital transactions and encourages participation.

79. Consistent with this, and as discussed above:

- The majority of respondents report feeling more confident making a first-time purchase from an unfamiliar business when using Google Pay in-store or the Google Pay button online (Figures 4.4 and 4.5).
- Figure 4.3 shows that over a quarter of respondents (higher among younger users) cite fear of fraud as a factor behind their use of Google Pay.

80. By making payments easier, faster and safer, Google Pay also encourages greater participation in digital commerce, with over 60% of respondents reporting that they spend more or make more purchases when using these tools. This pattern is consistent with reduced transaction frictions supporting consumers' continued engagement in digital economic activity.

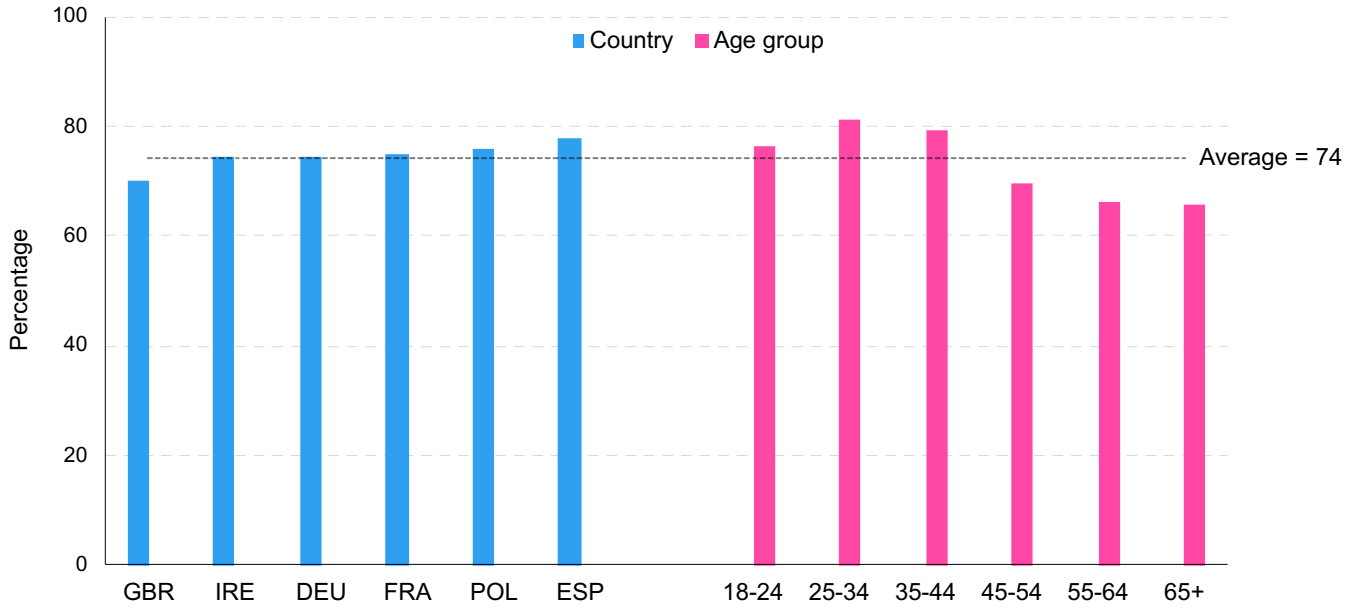
Reducing practical barriers to use

81. Financial inclusion also depends on consumers' ability to participate in the digital economy. Survey evidence suggests that Google Pay helps lower practical barriers to participation. Figure 4.9 shows that most respondents say that Google Pay enables them to make payments or access services that were previously unavailable to them. This can reduce barriers to effective participation by lowering onboarding frictions and simplifying payment use, thereby reducing the level of financial capability required to engage. This may be particularly relevant for groups that face higher capability-related barriers to financial services, such as migrants or individuals with lower levels of financial capability.[28] The right panel of Figure 4.9 shows that this appears more prevalent among younger consumers. This supports the view that digital wallets can expand effective participation even in digitally mature markets.

[23] World Bank (2025), *The global findex database*, p.86.
[24] Financial Conduct Authority (2025), *Resilient futures: strengthening financial capability and inclusion for all*.
[25] European Commission (2025), *New EU strategy on financial literacy launched in September 2025*.
[26] World Bank (2025), *Financial consumer protection*.
[27] Federal Reserve Bank of Kansas City (2025), *How do consumers' fraud experiences vary with their financial vulnerability?*
[28] World Bank (2025), *The Global Findex Database 2025*.



Figure 4.9: Share of respondents who report that Google Pay enables them to make payments or access services that were previously unavailable to them, by country and age group



Source: Flint Analysis

82. With a more streamlined setup process and absent the need for an existing physical card, digital wallets can support earlier, easier and more frictionless engagement with digital financial services. This is especially true with Fintech innovation, where providers drive innovation in account design and pricing. In this context, digital wallets act as enabling infrastructure, allowing customers to use accounts through virtual cards. Some digital banks, such as N26, also allow customers to open accounts fully online and begin making payments using virtual cards stored in Google Pay, without waiting for a physical card once the account is active.[29] This reduces barriers to entry for consumers who require rapid access to a functional payment method or are less familiar with traditional banking processes.

83. Use of digital banks has grown accordingly, particularly among younger consumers. In the UK, the share of adults holding an account with a digital bank increased from less than 1% in 2017 to 14% in 2024,[30] with uptake disproportionately concentrated among those aged 18 to 24.[31]

84. Digital wallets also enables Fintech providers, such as Revolut, to deliver lower-cost and more flexible financial services, including multi-currency and international payments, available instantly through Google Pay.[32] These features are consistent with survey evidence showing that over one-third of respondents have used Google Pay to make payments abroad or Google Pay to transact online in a different currency – benefits that might be particularly relevant for cross-border users, migrant workers or individuals who may not have access to premium banking products.[33]

Financial inclusion summary

85. Our evidence suggests that Google Pay supports financial inclusion in high-access markets by building trust in digital payments, reducing barriers to entry, and enabling effective use of financial

[29] N26, *How to use Google Pay?* and N26, *How to add my card to my digital wallet*.
[30] Financial Conduct Authority (2025), *Financial lives 2024*, p.25.
[31] For example, in 2022, nearly two-thirds of Monzo's customers and around 50% of Starling's were aged 16 to 34, compared with just 25% at traditional banks. Which? (2023), *Are younger consumers getting a better banking experience?*.
[32] Google Cloud, *Revolut: Building the first global financial super app with Google Cloud* and Revolut, *Setting up Google Pay*.
[33] International Monetary Fund (2025), *Estimating the impact of digital money on cross-border flows*, p.1.



services. While these effects do not replace the role of banks or Fintech providers, they act as enablers that support the effective use of financial services, sustained engagement, and improved financial capability as payments digitalise.

4.4 Chapter 4 Summary

86. Overall, the consumer survey evidence shows that Google Pay delivers meaningful benefits to consumers through two primary channels: first, enhanced security and fraud prevention, and second, time savings and convenience. These channels shape how consumers experience and use digital payments, influencing both their willingness and ability to complete transactions in digital environments.

87. The results indicate that consumers recognise and value these benefits. This is reflected in their stated willingness to pay for continued access to both products. While willingness to pay varies across countries, the evidence suggests that Google Pay generates positive welfare outcomes for consumers across the EU and the UK.

88. Beyond direct welfare effects, the survey also highlights financial inclusion as an important indirect outcome. In high-access markets, where account ownership is already widespread, inclusion increasingly depends on financial capability rather than basic access. The evidence suggests that Google Pay contributes to this by supporting trust in digital payments, lowering friction at the point of use, enabling participation in a wider range of digital transactions and supporting digital confidence.



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CHAPTER 5

Business survey and interviews: growth, productivity and resilience

Chapter at a glance

This chapter presents the business survey evidence on growth, productivity and resilience.

Among SMEs, **four in ten report higher in-store spending** or purchase frequency as digital wallet use increases. Online, a quarter report that integrating the Google Pay button has **lowered cart abandonment**, while over half say **payment declines are lower**. Around **four in ten also report operating cost reductions**, including lower fraud-related compliance costs and lower chargeback rates.

Case study interviews with larger businesses support the survey results, finding similar patterns at scale and suggesting that strategic partnerships across the payments ecosystem can help to strengthen trust, improve integration and support wider digitalisation.

The overall evidence suggests that business benefits are not limited to marginal checkout improvements. Better payment performance can support revenue growth at the point of sale, while lower fraud, fewer disputes and reduced administrative effort improve operating efficiency behind the scenes. This combination of demand-side gains and supply-side productivity improvements helps to explain why the business evidence translates into measurable economy-wide benefits in the modelling.

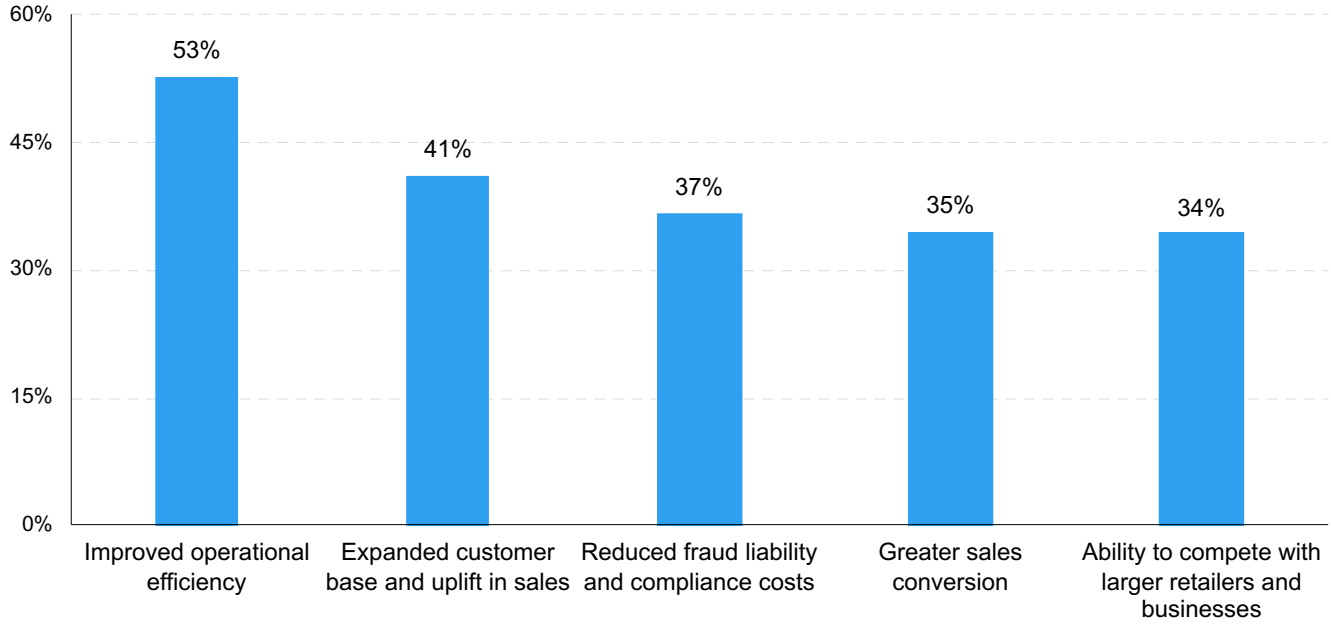
89. This chapter presents evidence – from small and medium-sized enterprises (SMEs) that responded to our business survey and from partner interviews with selected large businesses – on how Google Pay affects business performance and outcomes. It shows how these products reduce costs, increase completed sales, and support competitiveness for SMEs, while enabling efficiency, revenue growth, and strategic positioning for larger businesses. These outcomes align directly with the value channels quantified in the economic modelling: incremental sales, operational efficiencies and savings from lower fraud and chargeback costs.

5.1 Benefits for SMEs: profitability and competitiveness

90. Google Pay primarily benefits SMEs by increasing sales, lowering operating costs and strengthening their competitive position. Figure 5.1 presents the benefits most commonly reported by SMEs when accepting mobile contactless payments in-store. It shows that the benefits spanned both the demand-side (sales uplift, greater sales conversion) and the supply-side (gains in operational efficiency and lower fraud), as well as boosting their ability to compete with larger businesses.



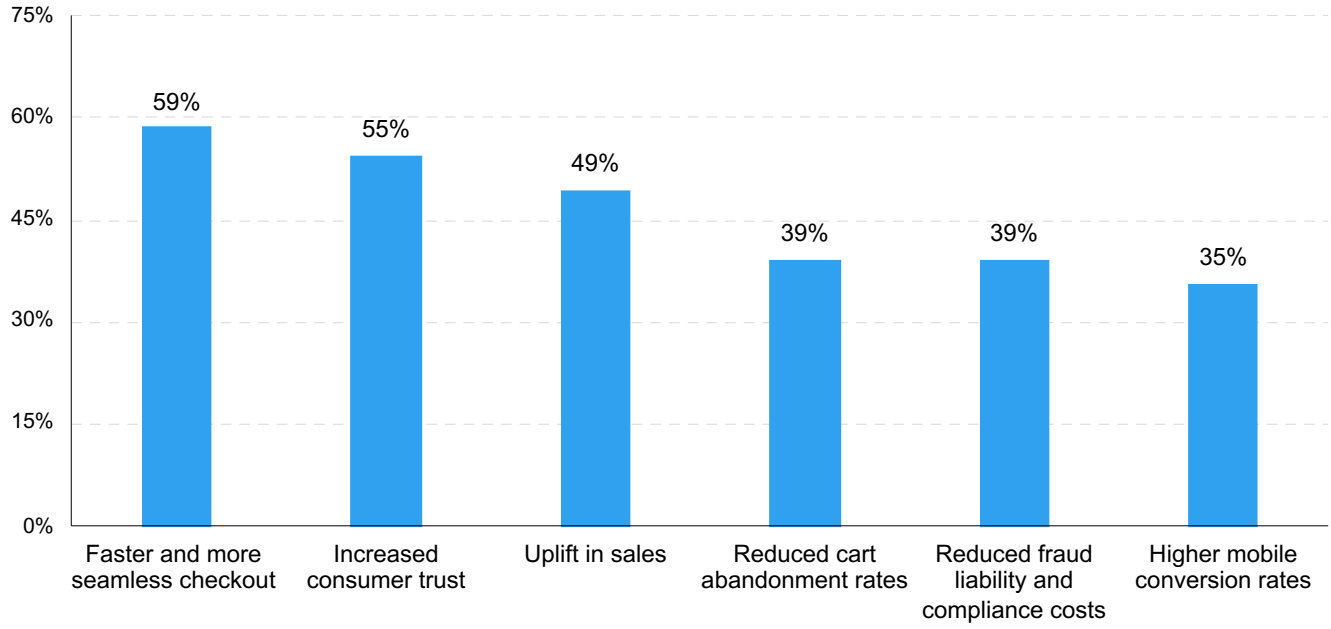
Figure 5.1: Benefits to businesses from accepting contactless mobile payments in-store



Source: Flint Analysis

91. Figure 5.2 shows that these factors also apply to online transactions after integrating the Google Pay button. Online businesses additionally mention the benefits from speedier and frictionless checkouts as well as from increased customer trust.

Figure 5.2: Benefits to businesses from integrating the Google Pay button online



Source: Flint Analysis

Incremental sales

92. The survey results show a significant increase in sales linked to digital wallet adoption:



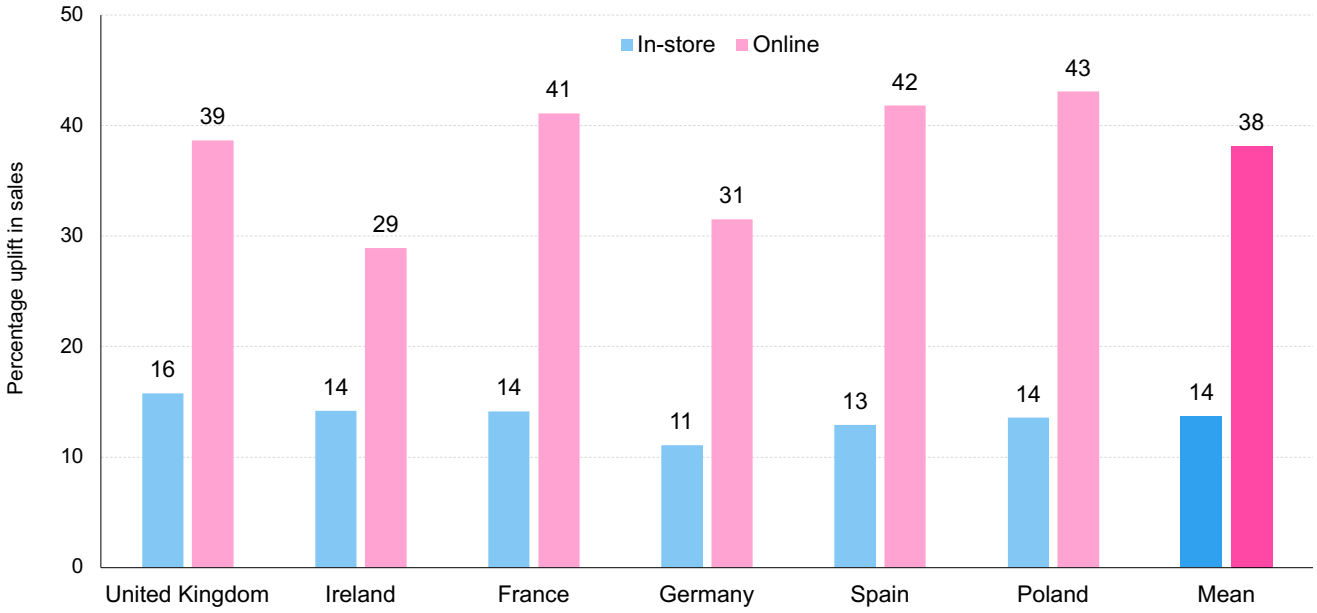
- 44% of businesses say increased digital wallet use has led to higher in-store customer spending or more frequent purchases, as faster checkouts and fewer payment failures reduce friction and support more spontaneous or time-sensitive purchases.

- 24% of online businesses report lower cart abandonment after integrating the Google Pay button, and 56% report fewer payment declines. These improvements increase the share of initiated transactions that are successfully completed.

- These results are corroborated by those from the consumer survey, where 68% of respondents either agreed or strongly agreed with the statement that *"because my digital wallet makes it easier, faster, and safer to pay, I make more in-store transactions and/or spend more on them"* while 62% answered in the same way when asked about online transactions.

93. Figure 5.3 shows that, on average, businesses reported significant increases in sales from in-store and online transactions.

Figure 5.3 Reported sales uplift after adopting digital wallets and / or the Google Pay button



Source: Flint Analysis. This chart has been revised from a previously published version of this report.

94. The reported increase in sales is significant and is likely linked to:

- An increase in market share for those SMEs that have adopted digital wallets and the Google Pay button, at the expense of non-adopters. That is to say that most of this reported increase is likely due to *displacement* of sales rather than being wholly *additional* sales – and this is how it has been modelled in Chapter 6 (and discussed in Annex A).

- Stronger customer loyalty, with over half of SMEs indicating an increase in repeat customers after adopting Google Pay.

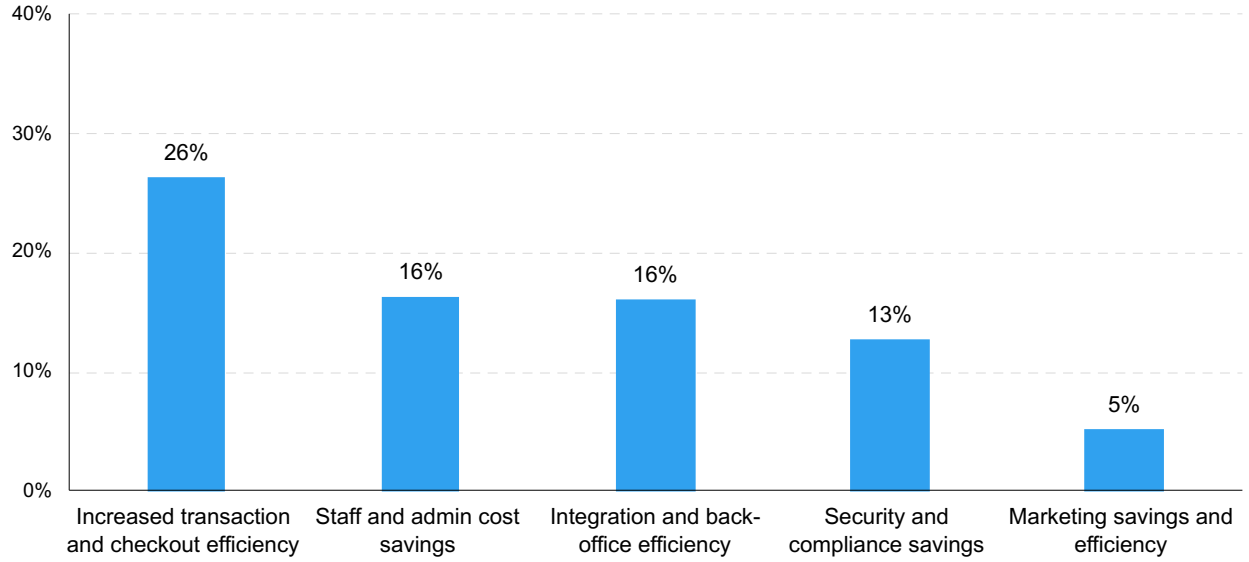
- Non-payment features, with consumers who store loyalty cards in their Google Wallet report making 17% more Google Pay in-store purchases per week.



Cost reductions and operational efficiency

95. Survey results indicate that digital payments made through Google Pay in-store or the Google Pay button online contribute to lower operating costs for SMEs. Around 38% of in-store businesses and 41% of online businesses report cost reductions after accepting Google Pay. For in-store businesses, transaction and checkout efficiency is the main driver, reported by more than a quarter of businesses (Figure 5.4).

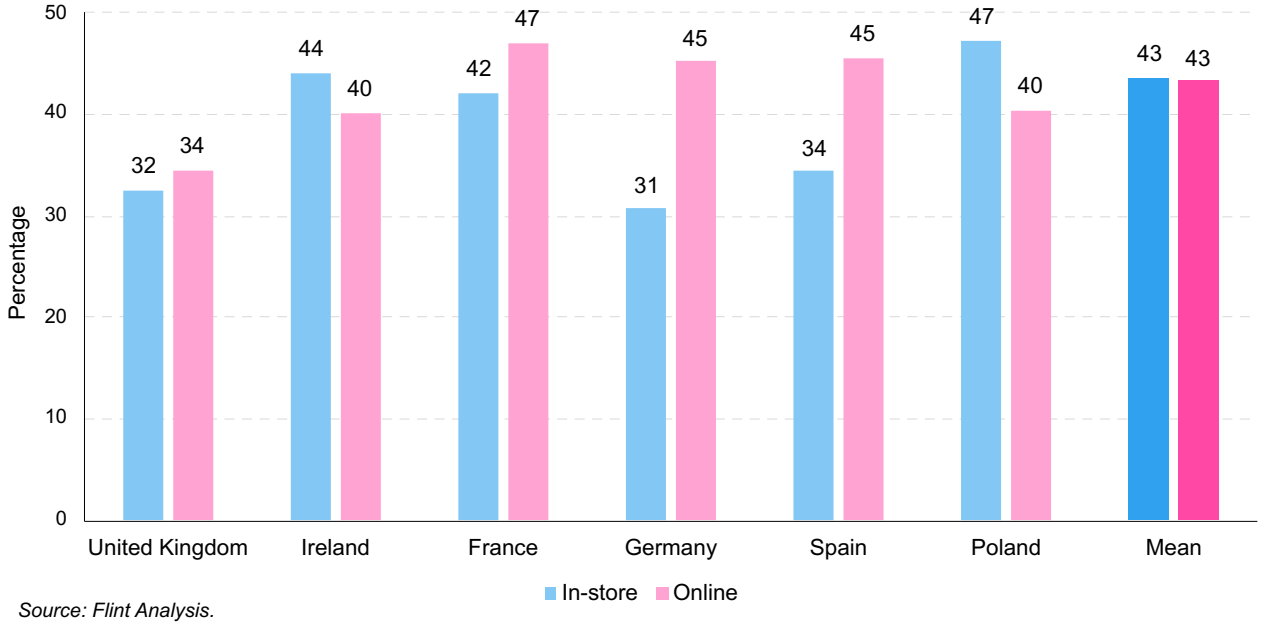
Figure 5.4: Reasons behind businesses reporting lower operating costs



Source: Flint Analysis

96. Google Pay is also associated with lower fraud-related compliance costs. Figure 5.5 shows that 43% of in-store businesses and 43% of online businesses report reductions in these costs, reflecting reduced handling of sensitive card data.

Figure 5.5: Percentage of businesses stating that fraud-related compliance costs have decreased because Google Pay uses tokenised card data



Source: Flint Analysis.

97. In addition, 28% of businesses report lower chargeback rates for digital wallet payments compared with physical card transactions, and 26% report lower chargeback rates for transactions using the Google Pay button compared with other payment methods. Lower chargeback incidence benefits both businesses and card issuers: while the latter typically bear the financial liability for fraudulent chargebacks in card-present and tokenised transactions, businesses benefit from fewer disputes, less administrative work, and lower operational costs linked to resolving chargeback claims.

98. Together, these indicators show that Google Pay in-store and the Google Pay button online contribute to fraud-related cost savings by enabling safer authentication paths, reducing exposure of sensitive card details, and lowering chargeback volumes. Importantly, authentication in Google Pay transactions is largely determined by the device and issuing bank rather than the business. In particular, Consumer Device Cardholder Verification Methods (CDCVM), such as biometric authentication or device unlock, are applied at the device level, while the issuing bank ultimately determines whether authentication is sufficient or whether additional steps are required under PSD2/SCA frameworks. As a result, the savings observed in the survey should be interpreted as reflecting current authentication practices across the ecosystem, rather than the maximum achievable under consistently applied best-practice security standards. Wider adoption and consistent application of tokenised and biometric authentication would therefore be expected to further enhance the fraud-prevention benefits associated with Google Pay.

Competitiveness and market access

99. Digital wallet and payment acceptance also supports SME competitiveness. Businesses surveyed report that nearly half of in-store transactions are made using digital wallets. Consistent with this, one in three in-store businesses report that digital wallets helped them compete more effectively with larger businesses, while over 40% say they provide access to an expanded customer base.

100. Consumer survey evidence also shows higher confidence when paying unfamiliar businesses or transacting across borders using Google Pay, suggesting that trust in the payment method lowers barriers for smaller and less established merchants.

5.2 Benefits for large businesses: operational efficiencies and innovation at scale

101. For larger businesses, including banks, payment service providers, and digital platforms, Google Pay supports efficiency, revenue growth and strategic objectives.

Efficiency and customer experience

102. A common theme across interviews with large businesses was that Google Pay delivers immediate and visible improvements in checkout speed and reduced friction, with some partners describing the Google Pay button as a *"must-have"* to meet customer expectations. For example:

- A travel platform emphasised that Google Pay is particularly valuable to complete purchases in time-sensitive contexts, such as when customers are on the move: "*customers are often booking tickets while travelling, on platforms or just before boarding, and Google Pay avoids them having to type a card number*". One-click checkout and biometric authentication reduce friction and allow customers to complete purchases quickly.

- A European payments service provider (PSP) reported that its merchant clients see higher conversion rates and lower cart abandonment, driven primarily by the removal of manual card entry and smoother mobile checkout.



- Interviewed banks noted that *"Google Pay has strengthened our digitalisation and customer experience strategy, offering a secure and simple solution that complements our banking app for Android customers"*. They also suggested that Google Pay helped them meet customer expectations for modern digital payments.

103. Another key feature of these Google products that contributes to operational efficiency for large businesses is enhanced security and a reduced fraud and dispute burden, driven by tokenisation and device-level authentication. Interview evidence illustrates these effects across different business models:

- A European bank reported *"lower fraud rates [for Google Pay transactions] compared to physical cards, thanks to biometric authentication and tokenisation."* For online transactions it also reported that *"Google Pay reduces disputes compared to other online methods, due to the added security in the checkout process."*

- A European PSP observed directionally lower fraud rates for transactions using the Google Pay button across its merchant base, describing the impact as meaningful.

- A travel platform observed *"lower fraud rates as a result of Google Pay as a transaction"*, and *"reduced operational burden from fraudulent chargebacks"*, noting that consumers *"can just use the one click button to complete the transaction and it's biometrically authenticated, so we have secure, strong customer authentication to prevent fraud."*

Higher transaction volumes and spending intensity

104. Consistent with the survey findings for SMEs, partner interviews indicate that customers who adopt digital wallets such as Google Pay tend to use cards more frequently and account for a greater share of overall spending. For example:

- A UK bank reported that customers using digital wallets spend one-third more than non-wallet users, reflecting both higher transaction frequency and higher average transaction values, and that "*our digital wallet spend now exceeds physical card payments, chip-and-PIN and contactless combined*." They attributed these effects to "*top-of-wallet*" primacy: once a card is added to a digital wallet, it likely becomes the default payment method, capturing a larger share of everyday spending. These insights corroborate the view that most of the increase in observed spending is due to spending that has been displaced from other retailers rather than genuinely additional consumption – and this is how it is modelled in Chapter 6 (see also Annex A for a discussion).

- Similarly, a European bank observed that Google Pay users make *"more transactions and with greater frequency, with fairly consistent growth in operations."*

- A European PSP reported that Google Pay has contributed to "*higher transaction volumes*" across its merchant base, accelerating the shift towards digital payments, noting that the shift would have occurred more slowly without wallet adoption.

Strategy and innovation

105. In addition to the commercial features, interviewees consistently mentioned the strategic value of Google Pay, highlighting the benefits arising from ecosystem interaction. For example:

- A European bank reported that *"the use of Google Pay drives interaction with other digital services, consolidating the omnichannel relationship, mainly among younger segments."* This spillover effect increases engagement across the bank's broader digital ecosystem.



- Banks described the partnership as supporting their broader digitalisation and competitive positioning, avoiding the need to maintain proprietary wallet solutions: "*the alliance with Google Pay has been strategic for us, providing value in security, experience, and competitive positioning*."

- A European PSP highlighted the reputational benefits of association with Google's brand, noting that this strengthens trust among merchants and end users and supports merchant acquisition and retention because "*Google Pay is seen as reliable*."

- Furthermore, both a travel platform and the interviewed banks identified future innovation opportunities and new projects enabled by Google products.

5.3 Chapter 5 Summary

106. The evidence in this chapter shows that Google Pay delivers meaningful benefits across firms of different sizes by reducing friction, risk, and cost at the point of payment. For SMEs, these effects translate into higher completed sales, lower operating and fraud-related costs, and an enhanced ability to compete with larger businesses, supporting both profitability and resilience in increasingly digital markets.

107. For larger businesses operating at scale, Google Pay functions as enabling capability, supporting efficiency, revenue growth and strategic objectives. Partner interviews highlight improvements in checkout performance, lower fraud and dispute burdens and higher transaction volumes that increase spending intensity. Beyond immediate operational gains, large firms also value the role of these products in supporting digitalisation strategies, strengthening brand trust, and enabling future innovation without the need to develop proprietary wallet solutions.

108. Across both SMEs and large businesses, the observed business outcomes align closely with the value channels quantified in the economic modelling – incremental sales, operational efficiencies, and fraud and chargeback savings. Together, these mechanisms explain how improvements at the point of payment scale into demand-side growth and supply-side productivity gains, underpinning the wider economic contribution of Google Pay.



CHAPTER 6

The aggregate economic impacts

Chapter at a glance

This chapter presents the headline results. The total estimated contribution of Google Pay across the EU and UK economies **in 2025 is €20.2bn, equivalent to around 0.08% of combined EU and UK GDP**. Measured in 2025 terms, this rises to **€30.9bn by 2030 (0.13% of GDP)**.

The results reflect both incremental sales and productivity gains, with the UK accounting for a disproportionately large share given earlier digital payments adoption and higher online spending.

Sensitivity testing shows that the results are robust, while scenario analysis demonstrates that the long run magnitude depends on adoption trajectories and the extent of ecosystem integration.

109. The survey results provide the measured benefits of Google Pay for individual consumers and businesses in the six surveyed countries – from the time saved at checkout, to higher conversion rates and reduced administrative effort and fraud costs. To assess the wider contribution to the EU and UK economies overall, we scale up the survey evidence to all users of Google Pay across the UK and every EU country.

110. The micro-level measures from the surveys are first translated into monetary values for each of the four channels and then scaled up to the population of users and transactions in each surveyed country. The resulting monetary benefits are then mapped in a way that is consistent with the construction of GDP in the National Accounts. This chapter describes this process and shows the resulting GDP gain for the EU plus UK between 2025 and 2030. We then conduct sensitivity analysis around the central estimates before presenting some illustrative scenarios to 2040. Annex A provides the technical detail underpinning the methodology described below.

6.1 Translating the survey results into aggregate economic benefits

111. Chapter 3 set out how digital wallets create value through four channels – incremental sales, time savings, lower fraud and chargeback losses, and reduced operating costs – and how these in turn map to sales uplifts and productivity improvements. Building on that framework, the aggregation step takes the monetary value of each channel, in each surveyed country, and adjusts them so that the resulting figures can be interpreted as contributions to domestic GDP. This is then scaled up to include the full EU plus UK area.

112. The first adjustments ensure that **only genuinely additional and domestic activity is counted**. The survey-based uplift in sales is scaled to the full population of Google Pay users and then discounted to reflect the fact that a material proportion of wallet-enabled purchases *displace* spending that would otherwise have occurred with other businesses, other payment methods, or at a different point in time – as evidenced by the significant increases in the share of all payments accounted for by digital payments methods over the past decade. In parallel, incremental sales are split into



domestic and imported content, so that only the portion related to *domestically produced goods and services* is captured in the GDP calculation.

113. The next adjustments **convert sales or turnover into value added**. Higher wallet-enabled sales increase firms' revenues, but they also require additional intermediate inputs – stock, logistics, and other purchased services. To reflect this, the modelling applies sectoral value-added-to-output ratios from the National Accounts, so that the incremental sales channel is expressed as additional gross value added rather than gross turnover.

114. To project the benefits to future years, we use a combination of the growth in adoption and the future path of EU and UK nominal GDP (see below). The latter step introduces price inflation to the results – we control for this by **stating our monetary results in terms of 2025 GDP**.

115. The cost-reduction channels are treated as productivity improvements, reflecting the fact that businesses can deliver the same volume of transactions using fewer resources. The productivity-related benefits captured in the survey translate into GDP through three channels:

    - **Operating-cost reductions.** The survey evidence on lower administrative and back-office costs – such as reduced reconciliation effort, fewer payment exceptions and faster refund handling – is converted into monetary savings using a baseline estimate of operating costs as a share of turnover. In moving from firm-level effects to GDP, the modelling includes only the portion of these savings associated with domestic inputs and likely to translate into measured value added. This ensures that the operational efficiencies observed in the survey are reflected as genuine productivity improvements rather than simple cost reallocations.

    - **Fraud and chargeback reductions.** Reported reductions in fraud losses and chargeback activity are treated in a similar way. Percentage reductions from the survey are applied to a baseline estimate of fraud-related costs, and only the domestic component that represents a real release of resources is carried forward. This captures the fact that more secure transactions reduce the amount of labour and capital tied up in dispute resolution, manual reviews and reimbursement – activities that do not themselves create value.

    - **Time savings.** The seconds saved at checkout are monetised using a value of time, but the modelling distinguishes between time that is likely to be reallocated to productive work and time that reflects convenience or leisure. A further adjustment recognises that not all freed-up staff time will convert into measured output. As a result, only the share of time savings that plausibly supports additional or more efficient work is counted.

    Together, these steps ensure that the cost and time savings identified in the survey are treated as contributing to GDP only where they reflect real improvements in productivity, consistent with the treatment of inputs and value added in the National Accounts. This is a conservative approach that focuses on how much additional GDP is created rather than the much larger broad value of these services. Overall, the adjustments reduce the aggregate economic benefit by around 70%.

116. The measured growth in demand for businesses through the incremental sales value channel also generates benefits for businesses that are within the supply chain. These *indirect* effects are captured through the use of Type I multipliers derived from whole economy measures of how individual sectors of the economy supply and use goods and services from/to other parts of the economy and from abroad. For transparency, we show our central results with and without these indirect supply chain effects. We explicitly exclude *induced* consumption effects – the benefits that accrue from the additional spending of the employment gains associated with the boost in demand. These do appear in some economic impact studies but we have decided against including them since they reflect the output of other sectors and services, so are a measure of 'footprint' rather than additional activity.



117. The results presented in this chapter reflect the direct and supply-chain National Accounts-consistent real terms impacts of Google Pay on the domestic economies of the EU and the UK. Our methodological approach, discussed in more detail in Chapter 3 and Annex A, is to ensure that results are not overstated.

6.2 Results

118. Figure 6.1 shows that in 2025, the **contribution of Google Pay to GDP is estimated to be €20.2bn across the EU and the UK.[34] This represents 0.08% of the combined GDP of the EU and UK economies** in that year. Breaking this down:[35]

- **€10.7bn of the benefit comes from cost reductions and productivity improvements**, including reductions in operating costs, fraud and chargeback losses, and time savings that translate into measurable efficiency gains.

- **€9.5bn of the benefit arises from incremental sales,** reflecting higher conversion rates, fewer payment failures and more completed transactions enabled by lower friction and greater trust at the checkout.

119. The indirect effect is applied conservatively, with domestic supply-chain effects included only for the demand-side benefit from incremental sales. This reflects the fact that the gross value of genuinely additional sales incorporates the value-added of not only the final producers of those goods and services, but also the value-added by domestic and overseas supply chains – the domestic element of which also represents genuinely additional economic activity. That said, the contribution is material even if we focus on direct effects only – in that case the estimated GDP gain is €15.8bn in 2025.

120. These results demonstrate that the economic contribution of digital wallets comes not only from additional consumer spending, but also from businesses being able to operate more efficiently and with fewer resource losses.

121. Looking ahead, our model projects how these benefits evolve to 2030 using two sets of macro assumptions. First, for each country we apply the IMF's latest forecasts for growth in nominal GDP, which capture both expected increases in real activity and the effect of inflation on the value of transactions. This ensures that the contribution of Google Pay remains anchored to the scale of the wider economy rather than being extrapolated mechanically from today's levels.

122. Second, we overlay country- and channel-specific trajectories for digital-wallet usage, informed by market research (including Worldpay's Global Payments Report 2025) and our own analysis of transaction values and wallet penetration in the six study countries. In particular:

- **Faster growth in-store than online.** Because wallet usage starts from a much lower base at the physical point of sale, the in-store share of transactions is assumed to grow more rapidly than the online share – with in-store wallet shares broadly doubling or more in several markets between 2024 and 2030, while online growth is more moderate.

- **Heterogeneous country profiles.** In some countries, such as Poland, projected wallet growth is more modest, reflecting the strength of alternative payment rails such as BLIK and account-to-account (A2A) solutions. In others, wallets expand more quickly as they catch up with card and

[34] For convenience, all results are expressed in Euros, with Sterling and Zloty-denominated values converted at prevailing average market exchange rates.
[35] To protect commercial confidentiality, we do not disclose Google Pay user counts or implied Google-attributable transaction volumes – the scaling approach and published source types are documented, with inputs summarised at a high level in Annex A.



pay-button usage. To the extent that A2A and similar methods are integrated into Google Pay over time, this would represent an upside relative to the central projections (see Box 3).

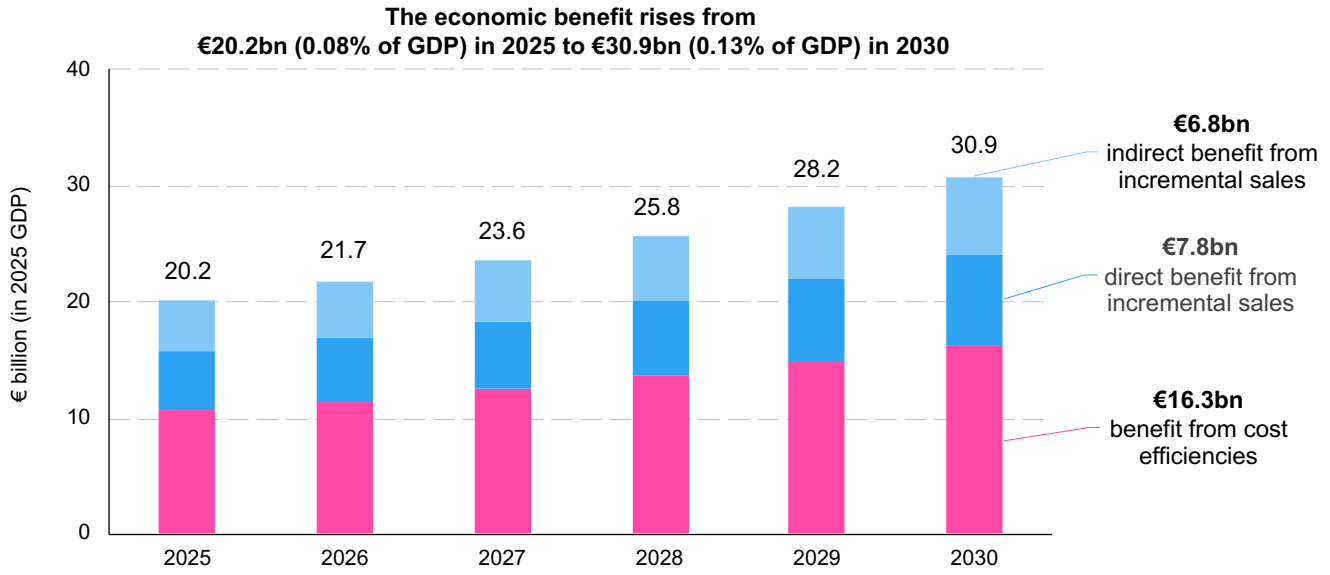
- **Channel maturity.** The projections differentiate primarily between mature online wallet markets, where growth in wallet share is incremental, and less mature in-store usage, where growth is steeper as contactless and mobile wallets spread. This pattern is observed across all six surveyed countries (and more generally) rather than being confined to any single market.

- **Grossing from surveyed EU countries to the wider EU.** The trajectories for the six surveyed countries are combined with data on their shares of the EU economy to construct an aggregate path for wallet-enabled transaction values throughout the EU.

123. Combining these factors, the aggregate GDP contribution of Google Pay is projected to rise to €37.6bn in nominal terms by 2030. To remove the effect of general price and income growth, we instead express this 2030 impact in **2025 GDP-equivalent terms**, which results in an impact of **€30.9bn (0.13% of EU plus UK GDP) in today's terms** – rising by around a half from 2025 to the end of the decade (Figure 6.1). The direct benefit in 2030 is €24.3bn in today's terms.

124. These results indicate that with or without the inclusion of indirect effects, and even after abstracting from inflation and overall GDP growth, the economic contribution of Google Pay is expected to increase materially over time as adoption deepens and wallet-enabled transactions account for a rising share of spending.

Figure 6.1: GDP contribution of Google Pay in the EU and UK



Source: Flint Analysis

125. The €20-€31bn contributions to GDP (0.08%-0.13% of EU plus UK GDP) between 2025 and 2030 correspond to a relatively modest *per euro* additional GDP gain that is applied to a large and increasing base of wallet-enabled spending and payments-related costs across the EU and UK. By way of context, independent studies of broader payment innovation and digital infrastructure suggest that such effects are of the right order of magnitude. Taking three examples:



- A cross-country study by the Bank for International Settlements finds that a 1 percentage point increase in the use of digital payments is associated with about 0.05 percentage points higher annual per-capita GDP growth.[36]

- A Mastercard/EY study estimates that card payments facilitated around 6.5% of UK GDP in 2022 – about £161bn – by enabling transactions that would otherwise be more costly or less likely to occur.[37] This is an estimate of gross impact rather than incremental gain, hence it being larger.

- ACI Worldwide/CEBR estimate that real-time payment systems boosted combined GDP across 40 countries by $164bn in 2023, with a projected $285.8bn by 2028.[38]

126. Relative to these studies, attributing around 0.1% of EU plus UK GDP to the *incremental* impact of a specific set of digital wallet and pay-button services – after adjusting for displacement, import content, intermediate inputs, inflation and excluding induced consumption – should be regarded as a plausible central estimate rather than the maximum possible GDP gain. In the next section we carry out sensitivity analysis around this central estimate.

6.3 Sensitivity analysis

127. We have explained the different adjustments to the survey-based measure of firm-specific economic value made to quantify a central GDP benefit and control for overstatement. But even so, there are still several sources of uncertainty around this estimate – for example, the inherent uncertainties in survey data and when making future projections, as well as variations in the plausible values for different model parameters. In this section we stress-test the main results and assumptions to show a plausible range for this uncertainty, while demonstrating that the economic benefits of Google Pay remain material under plausible lower bound assumptions.

128. The results are most sensitive to the following sets of assumptions (see Annex A for more details):

- **Survey reported parameters:** the results are, unsurprisingly, sensitive to those survey questions connected to overall sales volumes and the change in sales following the adoption of Google Pay. The baseline and post-adoption change in operating costs is another source of potential variation.

- **Mapping from gross impacts to net additional GDP:** the results are most sensitive to the adjustments for net domestic additionality – particularly the proportion of survey-reported sales uplifts that are additional vs capturing market share; the conversions from turnover to value added and then to GDP; and the conversion of staff time savings into domestic output.

- **Transaction volumes and values:** the results are naturally also sensitive to underlying assumptions about the scale of Google Pay use, both in terms of current use and the forecast growth between 2025 and 2030.[39]

- **Indirect effects from domestic supply chains:** as already noted, these provide a noticeable boost to the results with the size of the gain sensitive to the value of the Type I multiplier.

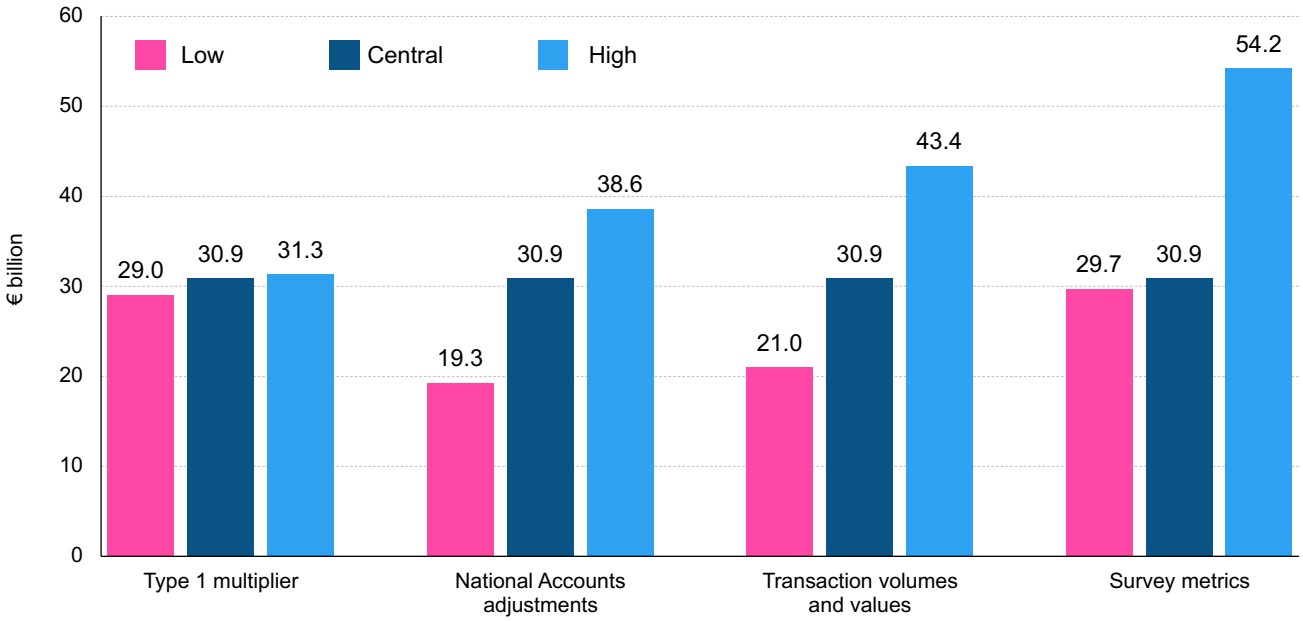
129. Figure 6.2 shows the 2030 central GDP result (dark blue bars) alongside plausible lower (pink bars) and upper (light blue bars) bounds for the four sets of parameter groups discussed above. In each case, we vary one group while holding the others constant, to isolate its contribution to uncertainty.

[36] Bank for International Settlements (2024), *Digital payments, informality and economic growth*.
[37] Ernst and Young (2024), *Economic contribution of card payments to the UK economy*.
[38] ACI Worldwide (2024), *Real-time payments: economic impact and financial inclusion*.
[39] The underlying published sources and the scaling approach are documented, but granular inputs that could disclose commercially sensitive information are withheld.



Within the ranges tested, the overall GDP estimate is least sensitive to the Type I multiplier and becomes progressively more sensitive as we move to the National Accounts adjustments, transaction volumes and values, and finally the survey-derived metrics. For the survey metrics, the GDP estimate varies by around ±30% relative to the central case.

Figure 6.2: Sensitivity analysis: upper- and lower-bound estimates of GDP benefit in 2030



Source: Flint Analysis

Monte Carlo simulations

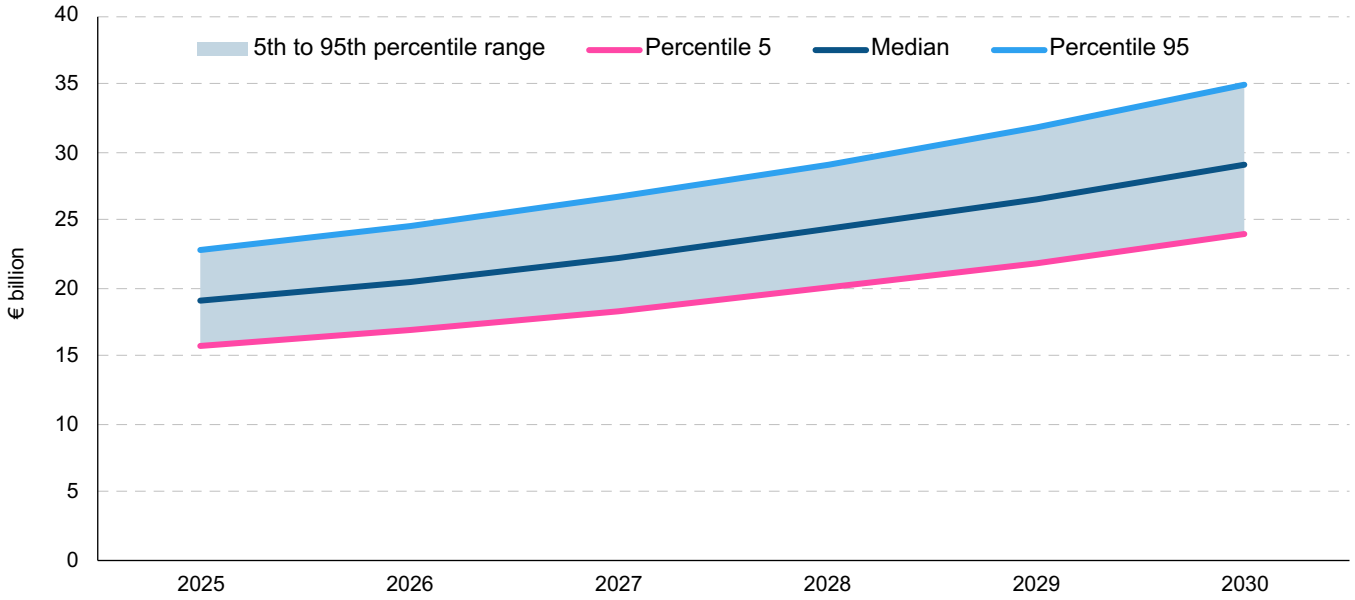
130. In addition to one-at-a-time sensitivity testing, the model was stress-tested using a Monte Carlo simulation (20,000 draws) in which the principal drivers of impact – adoption rates, average transaction values, displacement assumptions and multiplier effects – were varied simultaneously within calibrated parameter ranges. The distributions were centred on the central-case assumptions and bounded by the same ranges used in the scenario analysis, ensuring internal consistency.

131. The simulation produces a distribution of outcomes rather than a single point estimate. For 2030, the central estimate lies close to the median of the simulated distribution, with a 5th percentile to 95th percentile range of €24.0bn to €35.0bn. Figure 6.3 presents this alongside the median result. Note that the median is slightly below the deterministic central estimate, reflecting mild asymmetry in the parameter distributions and the model's non-linear structure. Under the specified parameter uncertainty, 90% of simulated outcomes fall within this interval. The implied probability that the total impact in 2030 is €30.0bn or more is approximately 40%.

132. The results indicate that while there is material dispersion around the central case – reflecting uncertainty over future adoption trajectories and displacement effects in particular – the direction and order of magnitude of the estimated contribution is robust. Even at the 5th percentile, the impact remains positive and economically meaningful.



Figure 6.3: Monte Carlo simulation assessing the uncertainty around the central estimate



Source: Flint Analysis

133. To complement our central estimate, Box 3 sets out illustrative scenarios that vary the post-2030 adoption path – and therefore the scale of wallet-enabled transaction activity – while holding the underlying per-transaction effects and the National Accounts mapping approach constant. The scenarios show how the estimated GDP contribution evolves under alternative, plausible maturity profiles, including upside cases consistent with the 'partnership-enabled' adoption dynamics observed in leading APAC markets (see Chapter 2). While the scenarios present plausible monetary impacts between 2025 and 2040, they are not forecasts.

Box 3: Alternative scenarios

The projections in Chapter 6 combine survey-based micro effects with market-level scaling and adoption trajectories. While the central projection to 2030 is informed by published market evidence and country-specific profiles, longer-run adoption is inherently uncertain – particularly as markets mature and growth rates slow. To reflect this, we set out illustrative scenarios that vary the post-2030 adoption path (and therefore the scale of wallet-enabled transaction activity), while holding the underlying per-transaction effects and the National Accounts mapping approach constant.

These are scenarios, not forecasts. They are designed to show how the estimated GDP contribution would evolve under different, plausible adoption and maturity profiles – consistent with the report's emphasis on avoiding false precision and using scenario framing to communicate uncertainty.

We consider two upside scenarios and two downside ones relative to the central projection:

- **Central trajectory.** This extends the country- and channel-specific adoption paths used in the core projection and analysis of wallet penetration. Growth continues beyond 2030 but slows as markets mature, with in-store adoption continuing to catch up from a lower base and online growth moderating earlier due to higher starting penetration.

- **Partnership-enabled convergence.** In this upside scenario, the post-2030 adoption slowdown is less pronounced as the ecosystem continues to remove frictions over time – for example, through supportive regulatory and standards evolution, improved interoperability across participants, and



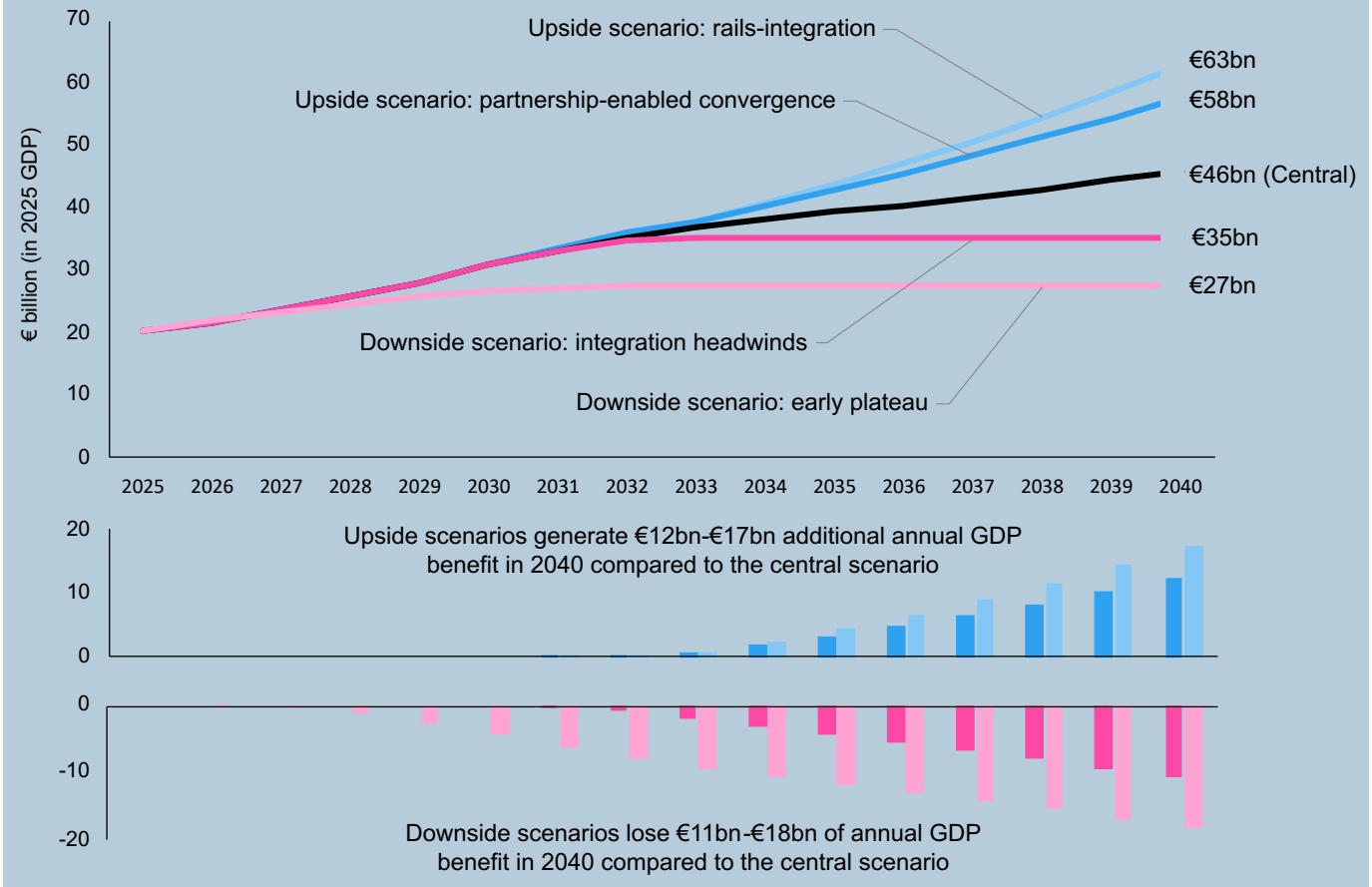
deeper integration of wallet journeys into merchant checkouts and issuer experiences. This mirrors the "partnership-enabled growth" discussed in Chapter 2 (e.g. India's UPI) where coordination between consumer-facing applications, financial institutions and underlying rails can sustain adoption beyond what a simple maturity curve would imply.

- **Rails-integration.** This is a more optimistic variant of 'partnership-enabled convergence'. It assumes not only a shallower post-2030 slowdown in adoption, but also that ecosystem integration deepens materially – with wallet journeys becoming more consistently interoperable with evolving payment rails and related infrastructure over time (including, where relevant, greater integration of account-to-account options within wallet experiences). In this case, both adoption and the breadth of wallet-enabled use-cases continue to expand for longer, supporting a more sustained uplift in transaction volumes and realised efficiency gains than in the other scenarios.

- **Integration headwinds.** In this downside scenario, the post-2030 slowdown is more pronounced because structural frictions persist or intensify – for example, where fragmented implementation, uneven merchant acceptance, or policy and commercial constraints slow the pace of ecosystem integration. In some markets, strong domestic payment preferences and local account-to-account alternatives continue to play a large role, limiting the extent to which wallet-based journeys expand beyond early adopters or beyond specific segments. This scenario reflects the observation that adoption paths differ materially across countries due to market structure, regulation and competitive dynamics – and that these factors can cap penetration even when the technology is available.

- **Early plateau.** This downside scenario is a timing variant of 'integration headwinds' – the same constraints apply, but they bind earlier, so adoption reaches plateaus before rather than after 2030.

Figure 6.4: Scenario analysis: different trajectories to 2040



Source: Flint Analysis



Figure 6.4 compares the scenarios in terms of their GDP impacts over time (upper panel) and the difference in annual impact in 2040 relative to the central trajectory (lower panel). All results are expressed in 2025 GDP terms. The main message is simple – the estimated GDP contribution can differ materially depending on the long-run adoption and maturity path.

The scenario results underline that the size of the economic benefit is sensitive to the trajectory of adoption and to whether future integration across the payments ecosystem continues to reduce frictions over time. When wallet-enabled journeys remain interoperable with the wider system – and where evolving rails (such as account-to-account options) can be integrated into those journeys – usage can deepen for longer and the aggregate gains can continue to build. But weaker integration can lead to earlier maturity and deliver lower benefits. Seen through this lens, the difference between outcomes is probably less about any single product feature and more about how effectively the ecosystem coordinates and collaborates to deliver secure, low-friction payments that people and businesses actually use.

6.4 Chapter 6 summary

134. Chapter 6 brings the analysis together by aggregating the consumer and business survey evidence to estimate the overall contribution of Google Pay to the EU and UK economies. Scaling the survey-measured micro effects to market totals using published data sources, we estimate a direct annual GDP contribution of €20.2bn (0.08% of EU plus UK GDP) in 2025, rising to €30.9bn (0.13%) by 2030 in today's terms (measured in 2025 GDP-equivalent euros). Around half of the gains arise from incremental sales (demand-side growth) with the remaining half from productivity improvements (supply-side efficiencies).

135. These are central estimates constructed using National Accounts-consistent and other conservative assumptions – including accounting for additionality, domestic-content and output 'realisation'. Collectively, they reduce the survey-measured value to businesses by around 70%. The sensitivity analysis stress-tests the economic benefit against plausible variations in the key assumptions and shows that while there is uncertainty, the central finding is robust to reasonable parameter ranges. The Monte Carlo simulations show that the results are material even at lower bound estimates.

136. The illustrative scenarios extend the results to 2040 to show how the size of the economic benefit is sensitive to the path of adoption and to whether future integration across the payments ecosystem continues to reduce frictions over time. This includes upside paths where post-2030 adoption persists as ecosystem integration continues to reduce frictions – as a European analogue of the 'partnership-enabled' adoption dynamics observed in leading APAC markets (discussed in Chapter 2), where effective coordination between consumer-facing applications, financial institutions and underlying rails has been associated with sustained take-up to very high levels.



CHAPTER 7

Conclusions

137. This report shows that Google Pay generates a material, measurable contribution to European economies, driven by improvements in how transactions are completed and managed at scale. In the central case, the model estimates an annual EU plus UK GDP contribution of €20.2bn (0.08% of combined GDP) in 2025, rising to €30.9bn in today's terms (0.13% of combined GDP) by 2030 as adoption increases and volumes grow. The results imply that for every €100 that is transacted using Google Pay, EU plus UK output rises by around €13. These results remain material – €15.8bn or €10 per €100 of transactions in 2025 – even when focusing on direct effects alone, excluding indirect supply-chain impacts.

138. The findings indicate that wallets and pay buttons matter most where they remove 'micro-frictions' that are individually small but systemically large. Small reductions in friction and risk, applied across very large transaction volumes, sum to meaningful aggregate effects. Faster authentication, fewer failed payments, reduced dispute handling and lower perceived risk all raise the effective probability that initiated purchases complete and reduce the resources absorbed by supporting processes. In aggregate, the gains show up as a mix of higher realised output (through incremental sales) and higher productivity (through time and cost savings), rather than a single dominant lever.

139. The report also distinguishes GDP impacts from the conceptually separate measure of welfare value. Consumer surplus estimates, based on stated willingness-to-pay, indicate that users value the convenience, confidence and multifunctionality associated with Google Pay, amounting to an aggregate EU plus UK welfare value of €5.4bn in 2025.

140. The economic benefits are anchored in new survey evidence on observed outcomes for consumers and businesses. The consumer evidence highlights that security and reduced checkout friction shape willingness and ability to transact, including in unfamiliar business and cross-border contexts. The business evidence points to improvements in conversion, fewer declines and operational efficiencies at checkout and in back-office processes. These are not treated as abstract benefits but quantified as measurable mechanisms that are scaled to economy-wide transaction activity.

141. In a mature payments environment such as the EU and UK – where basic access is already high – the economic value of digital payments increasingly comes from reliability, speed, security and reduced operating burden, rather than from expanding the frontier of formal access. The report shows that improvements in the performance of everyday payments can still be large enough, in aggregate, to be visible at a macroeconomic scale, even under conservative National Accounts treatment.

142. International experience suggests that digitisation tends to advance faster where consumer-facing applications, financial institutions and underlying payment infrastructures interoperate effectively. When these parts of the ecosystem work together well, coordination frictions are lower, trust is stronger, and adoption can scale more quickly. This helps explain why the upside scenarios in Chapter 6 are associated not only with higher take-up, but also with more sustained efficiency gains over time.

143. The qualitative evidence in this report points to the same broader lesson. The value of digital payments depends not only on the performance of individual products, but also on the openness and interoperability of the wider ecosystem in which they operate. Where consumer interfaces, merchant checkouts, banks and payment rails connect smoothly across devices and contexts, users experience a more consistent and reliable payment journey. That, in turn, makes digital payment



services easier to adopt, easier to scale, and more likely to realise the economic benefits identified in this report.

144. The stakeholder interviews reinforce this point by showing that strategic partnerships matter for reasons that go beyond immediate conversion or cost metrics. Large businesses, banks and payment providers describe Google Pay as enabling capability that can support broader digitalisation strategies, strengthen brand trust and help institutions mitigate the cost and complexity of maintaining proprietary wallet solutions. In this sense, collaboration across the ecosystem can be valuable not only for improving transaction performance today, but also for supporting future innovation in areas such as digital identity, account-to-account payments and deeper integration with open finance.

145. The report's findings highlight the conditions under which digitisation delivers measurable economic value: reliable execution, trusted security, and low-friction interoperability across participants. Where those conditions are met, innovation and inclusion objectives become easier to realise as the underlying payment journey becomes simpler for users and less costly for firms to operate – such that the technology is used more and more efficiently, generating economic and welfare benefits.

146. Overall, the evidence indicates that improving the performance of everyday payments – making transactions more reliable, faster and more secure – can create macro-visible gains when applied at scale. The central estimates quantify that contribution today and through 2030; the scenarios illustrate how it could evolve beyond 2030 under different adoption paths.

147. The broader conclusion is that the economic gains are material, but they are also conditional: they depend on how effectively low-friction, interoperable payment journeys continue to be realised as markets evolve. In this context, collaboration across the ecosystem can be an efficient route to achieving scale, resilience and user trust, and therefore to realising the full potential of the long-run economic benefits for the European economy.



Annex A. Analytical framework, methodology and technical assumptions

148. This annex sets out the detailed analytical framework, methodology and technical assumptions used to estimate the economic value of Google Pay in this report. It supplements Chapter 3 by providing fuller explanation of the operational mechanisms through which these products create value, the way those effects are mapped into National Accounts concepts, and the evidence and modelling steps used to scale the results to the EU and UK economies.

149. Survey responses provide the micro-level measures of behavioural and operational changes associated with adoption of Google Pay. To interpret these as GDP impacts, a series of adjustments is required so that the results are consistent with the concepts of value added and GDP used in the National Accounts.

150. This annex also summarises the methodology, design and fieldwork for the consumer and business surveys, and the other published and qualitative evidence used in the report.

151. Commercial confidentiality and disclosure: scaling the survey-derived effects to economy-wide impacts requires transaction volumes and average transaction values, applied separately for in-store and online channels. While these inputs are drawn from published sources, disclosing the implied Google Pay user base or Google-attributable transaction volumes could enable reverse engineering of commercially sensitive information. For this reason, results are reported only at aggregate economy-wide level and scaling inputs are summarised at a high level, without publishing granular values that could disclose sensitive metrics.

152. The annex is organised as follows:

- First, it provides fuller explanation of the in-store and online payment mechanisms that underpin the value channels used in the analysis.
- Second, it sets out the four monetised value channels and the way they are mapped into GDP-consistent macroeconomic mechanisms.
- Third, it summarises wider non-monetised benefits that sit outside the GDP boundary.
- Finally, it sets out the evidence base, scaling approach and key technical assumptions used in the modelling.

A.1. Payment mechanisms by channel

153. This section provides a fuller explanation of the operational mechanisms through which Google Pay affects payment experiences in-store and online. It complements the shorter discussion in Chapter 3.

In-store payment mechanisms

154. In-store, wallet adoption is driven by the spread of contactless terminals and NFC-enabled devices that allow instant tap-to-pay transactions. This reduces queuing time, removes the need for cash handling or PIN entry, and minimises physical interaction with payment hardware. For businesses, it speeds up checkout flows and helps manage peak-time demand with fewer staff resources.



155. For consumers, wallet users experience faster checkouts and shorter queues, since authentication through a mobile device replaces manual card entry or cash handling. The ability to pay quickly, often without needing a physical wallet, makes purchases more spontaneous and reduces barriers to smaller or time-sensitive transactions.

156. For businesses, contactless acceptance and faster throughput improve customer experience while lowering staff workload during busy periods. There may also be fewer payment errors or declined transactions, which in turn can support smoother reconciliation at the end of the day.

Online payment mechanisms

157. Online, the presence of pay-button functionality brings comparable benefits. Autofilled credentials and biometric authentication remove friction at checkout, reducing the likelihood of cart abandonment or failed transactions. Strong authentication protocols and trusted branding can also give consumers confidence to complete purchases, particularly with unfamiliar businesses or across borders, while businesses benefit from higher conversion and lower error rates in settlement and reconciliation.

158. For consumers, stored credentials and biometric authentication simplify checkout and reduce friction. Consumers are likely to feel greater confidence when purchasing from new or overseas businesses, knowing that their payment details remain secure and that transactions can be completed in a single click or tap.

159. For businesses, integrating wallet pay buttons improves conversion rates and lowers cart abandonment, while tokenised authentication reduces chargeback frequency and associated administrative costs.

160. These in-store and online mechanisms combine to explain how adoption and usage can lead to observable changes in consumer and business behaviour. They therefore provide the link between product use and the value channels quantified in the model.

A.2. Monetised value channels

161. The four value channels summarised in Chapter 3 represent the specific mechanisms through which changes in payment behaviour generate measurable economic value. Each captures a different way that Google Pay creates benefits for consumers and businesses, split between in-store and online payments. This section sets out the conceptual role these channels play within the analytical framework; the following section explains how they are translated into GDP-consistent impacts.

Incremental sales

162. Google Pay can create additional economic activity by enabling purchases that might otherwise be delayed, abandoned, or not undertaken at all. By making payments faster, easier and more secure, they expand the total volume of completed transactions rather than only reallocating activity between businesses or over time, though some reallocation inevitably occurs.

163. For consumers, this additionality arises from lower friction and higher trust at checkout; for businesses, it comes from higher conversion and fewer payment failures. The resulting uplift in completed purchases represents incremental sales generated by the adoption of wallet technologies. As set out below, this channel links directly to the output side of GDP, capturing the demand-driven contribution to value added.



Time savings

164. Google Pay can reduce the time required to complete a transaction, both for consumers at checkout and for businesses processing payments. In-store, contactless functionality speeds up queues and simplifies cash handling; online, stored credentials reduce time spent entering details or confirming payment.

165. These time efficiencies represent a productivity gain: the same goods and services can be exchanged using less time and effort. Only the portion of time saved that is re-allocated to productive activity within the economy is treated as contributing to GDP, while the remainder constitutes a convenience benefit to consumers and therefore sits outside GDP.

Fraud and chargeback savings

166. This channel improves efficiency and productivity by lowering the costs associated with fraud management across the payments ecosystem, freeing resources that would otherwise be used to correct or absorb these costs for other productive purposes.

167. Tokenisation and strong authentication make digital-wallet transactions more secure than traditional card or cash payments, reducing risks of counterfeit or stolen-card use in-store and limiting exposure to card-not-present fraud online. For businesses, this means fewer fraudulent attempts, chargebacks and disputes; for consumers, it reduces the likelihood of financial loss or administrative burden.

Administrative and operational efficiencies

168. Google Pay also simplifies many of the background processes that support payments, and this channel therefore generates a productivity gain when mapped to the macroeconomy: a reduction in the input resources needed to deliver a given level of output.

169. Automated settlement, easier reconciliation and faster refund handling reduce the administrative effort required to manage each transaction. For businesses, these efficiencies translate into lower staffing and compliance costs, while for consumers they improve the reliability and transparency of transactions. To avoid overlap with the previous channel, these operational efficiencies exclude savings already attributed to reductions in fraud or chargebacks.

A.3. Demand-side growth: incremental sales

170. This section sets out the adjustments applied to translate survey-based incremental sales into GDP-consistent impacts. Survey-reported changes in sales associated with digital payment adoption cannot be interpreted directly as GDP impacts. To ensure consistency with National Accounts concepts, gross sales effects must be adjusted in several ways, so that we: account for displacement and intertemporal substitution; only include the share of spending that accrues to domestic production, including domestic supply chains where truly additional; translate from turnover to the economic concept of value added; convert from value added at basic prices to GDP at market prices.

Displacement and intertemporal substitution

171. Determining a precise value for net additionality is uncertain because it depends on, first, how consumers and businesses respond to reduced payment friction at the transaction level, and second, how much of any measured uplift is ultimately displaced from other spending or pulled forward in time. In our model, net additionality is defined as the share of measured incremental sales uplift that is genuinely additional, after allowing for:



- **Displacement** – sales that would have occurred via a different channel in the absence of Google Pay (e.g. via a different business, channel, or payment method); and

- **Intertemporal substitution (pull-forward)** – planned sales that are brought forward rather than being truly incremental over a longer horizon.

172. **From a microeconomic perspective, there are several reasons why net additionality is plausibly above zero.** Payment frictions operate like a transaction cost (in time, effort, perceived risk, and probability of failure) that raises the effective price of completing a purchase. Consumers with valuations close to the purchase threshold are therefore disproportionately likely to abandon when checkout is slow, error-prone, or requires repeated entry of credentials.

173. Reducing these frictions (e.g. by pre-filling payment credentials, shortening checkout steps, and increasing authentication success rates) increases the probability that an initiated transaction is completed. In behavioural terms, these small 'hassle costs' can have outsized effects on completion behaviour and so reducing such 'sludge' can meaningfully shift outcomes, even when underlying preferences are unchanged.[40]

174. Evidence from large-scale checkout research finds that cart abandonment rates remain high (around 70% on average) and that a material share is linked to checkout frictions and usability issues.[41] Similarly, quasi-experimental evidence from the introduction of one-click checkout shows significant increases in subsequent purchasing behaviour (frequency and spending) among adopters, consistent with reduced checkout 'pain' increasing completed transactions.

175. This is also consistent with our survey evidence – among online businesses in our sample, around 20% report reduced cart abandonment after integrating Google Pay, and around 50% report a reduction in payment declines, both of which point to higher completion rates rather than displaced transactions. In-store, the same mechanism operates through faster checkout and shorter queues, which reduces 'walkaway' risk and lowers barriers to smaller or time-sensitive purchases.[42]

176. Evidence from payments operations also supports the view that payment-stage frictions can prevent legitimate purchases from completing. Network and supervisory evidence indicates that stronger authentication materially reduces card fraud in the EEA, supports improved risk signalling and lower fraud, which can reduce friction and interruptions in payment flows.[43] Mastercard reports that adoption of tokenisation is associated with higher approval rates (around 3-6 percentage points globally) and, in the EU and UK, tokenised and authenticated transactions exhibit three-times lower fraud than transactions using neither.[44]

177. **From a macroeconomic perspective, there are good reasons why net additionality is meaningfully less than 100%.**

- **Budget constraints and substitution.** Even if wallets increase conversion at the point of sale, some of that uplift will be offset by reduced spending elsewhere (from different businesses, categories, or channels) – e.g. budget-constrained consumers cannot spend their income more than once, so some portion of sales gained by an SME adopting digital payment options will be displaced sales from an SME that has not. This is why standard appraisal guidance emphasises displacement and substitution adjustments when translating gross sales effects into net economic

[40] Shahab and Lades (2021), *Sludge and transaction costs*, Behavioural Public Policy.
[41] Baymard Institute (2017), *Checkout Optimization & Reducing Abandonments*.
[42] Unal and Park (2021), *Fewer Clicks, More Purchases*, Marketing Science Institute Working Paper Series.
[43] European Banking Authority and European Central Bank (2024), *2024 Report on Payment Fraud*.
[44] Mastercard (2025), *Mastercard Digital Payment Security Standard*.



impacts. This is likely to be particularly important when considering payment services, as evidenced by the rising market share of digital payment methods over the past decade.

- **Intertemporal substitution and 'table-stakes' dynamics in mature markets.** As digital wallet and pay-button acceptance becomes more widespread, some benefits might be better interpreted as a 'counterfactual loss avoided', i.e. the concern that non-adoption would lead to sales leaking to competitors rather than an ongoing 'gain over baseline'. This makes the net benefit at the whole economy level smaller, and more sensitive to how the counterfactual is defined (e.g. 'no Google Pay option available' versus 'a different payment alternative available').

178. Official appraisal methods in both the EU and UK converge on this same core logic: that economic impacts should be measured relative to a counterfactual and then adjusted for economy-wide effects (including displacement and import leakage) so that measured benefits are not overstated:

- **The European Commission's Better Regulation Guidelines** set out that impact assessments should indicate who is affected and include quantification of costs and benefits where relevant – i.e. the discipline of translating micro evidence into aggregate, decision-relevant impacts. Its Better Regulation Toolbox is designed as operational guidance underpinning the guidelines.[45]

- **The UK Government's Green Book** and accompanying guidance sets out how impact assessments, such as social cost-benefit analysis, should be applied. This guidance explicitly highlights leakage, displacement and substitution as considerations when translating impacts into place-based economic effects.[46]

179. Overall, the evidence supports a material but not dominant net additionality factor: reductions in friction create real additionality, but it is likely that most measured sales uplift will be activity displaced from other businesses and payment methods. We therefore apply a central net additionality of 0.2. For context, this implies a combined displacement and pull-forward deduction of around 80%, which is conservative relative to the displacement ready-reckoners used in UK additionality guidance. Overall, it is consistent with the positive survey evidence on reduced abandonment and declines while recognising that a majority of sales uplift for those adopting the latest digital payment methods will reflect sales captured from non-adopters.

Converting additional sales to GDP

180. We make several further adjustments, which are aligned with official EU and UK appraisal methodologies, to convert the incremental sales reported in the survey to a GDP-consistent measure:

- **The share of household consumption that goes on domestic vs imported goods and services.** The evidence from official statistics, based on overall spending patterns, shows that the import-intensity for goods is higher than it is for services. While these are not perfect analogues for incremental spending associated with digital wallets (which could tilt more goods-heavy or more services-heavy depending on the channel and sector mix), they do support a central assumption of 0.84 for the domestic share of incremental consumption in European economies. This allows for both potential downsides (cross-border e-commerce and tradable goods could raise import leakage) and potential upsides (incremental activity in local services and non-tradables could imply a higher domestic share).[47]

- **Converting incremental turnover to GVA.** The survey-reported turnover reflects gross sales revenues rather than value added, and therefore includes the value of intermediate goods and

[45] European Commission (2021), *Better regulation: guidelines* and European Commission (2023), *Better regulation: toolbox*.
[46] HM Treasury (2022), *The Green Book*.
[47] European Central Bank (2020), *Understanding the impact of the COVID-19 pandemic through an import-adjusted breakdown of euro area aggregate demand*. INSEE (2019), *The "made in France": 81% of final household consumption expenditure, but only 36% of manufactured goods*. Bank of England (2025), *Not such an island after all – speech by Megan Greene*. ONS (2019), *Prices economic commentary: July 2019*.



services purchased from other industries. We compute value-added-to-output ratios, using official Eurostat and ONS supply and use tables, for payments-relevant business activities and aggregate them using output weights to reflect a representative business mix. This yields a central weighted conversion factor of 0.57.

- **Converting GVA to GDP.** We convert our modelled impacts from gross value added (GVA) to gross domestic product (GDP) so that the headline results are expressed on a GDP-consistent basis, which is the standard metric used in measuring economic activity. The conversion adjusts for net taxes on products (i.e. taxes less subsidies) that are not included in GVA. We therefore apply a single central uplift factor, evidenced using official Eurostat and ONS statistics, of 11%.

181. Overall, these four National Accounts adjustments, reduce the estimated gross benefits from incremental sales by around 80%. The sensitivity analysis section of Chapter 6 shows that the results are relatively sensitive to variations in this central assumption.

Capturing the economic value in supply chains

182. Genuinely additional sales will boost the domestic economy in respect of both final goods and services, and output from the domestic supply chain embodied in those goods and services. To capture the wider supply-chain value associated with Google Pay adoption, we extend the modelled direct GVA impacts by applying a Type I multiplier. This captures direct plus indirect effects transmitted through intermediate demand along domestic supply chains, while excluding induced impacts arising from household consumption out of additional wages and salaries.

183. We focus our analysis on sectors most relevant for Google Pay – prominently the retail sector. Using Eurostat and ONS statistics we apply a central weighted (across countries and sectors) Type I multiplier of 1.89. The sensitivity analysis section of Chapter 6 shows that the results are not sensitive to this assumption.

A.4. Productivity improvements: supply-side efficiencies

184. This section sets out how the model treats supply-side efficiency gains arising from Google Pay – specifically, reductions in the real resource costs associated with completing and managing payments. These effects are captured through the time savings, fraud and chargeback savings, and administration and operational savings channels and are mapped to GDP as productivity improvements only to the extent that the associated resources are released and redeployed into productive activity within the National Accounts production boundary. To avoid overstatement, we apply explicit realisation (redeployment) parameters and ensure that operational savings are defined net of any items already captured within the fraud and chargeback channel.

Administration and operational savings: converting saved staff time into output

185. Labour-saving process improvements will not automatically translate into one-for-one increases in measured output. The economic evidence shows that the realisation of productivity improvements following implementation of efficiency enhancing measures works in a nuanced way. For the changes to feed into productivity gains they must often be accompanied by complementary organisational changes, such as work redesign, improving the effectiveness of management practices and the ability to efficiently reallocate labour to output-generating activities. Studies that show this include:



- Brynjolfsson and Hitt, who show that IT-enabled efficiency delivers value primarily through organisational transformation, rather than the mechanical time saving itself.[48]

- The same authors subsequently use firm-level evidence to show that productivity effects materialise more strongly over multi-year horizons than in the short run, consistent with the view that smoothing adjustment frictions is an important factor.[49]

- Bloom and Van Reenen use cross-firm evidence on management practices and find substantial dispersion in productivity outcomes, implying that efficiency potential is only partially realised in typical firms.[50]

186. Determining a precise parameter for the share of staff time savings that should convert into higher output is uncertain, so we triangulate using operational evidence on capacity utilisation and slack in relatively labour-intensive service activities. We use evidence from call-centre and service-operations research because it provides an analytically clean setting in which labour input, demand, slack, and output are directly observable. If full conversion of time savings into output does not occur in this highly measurable, immediately redeployable context, then assuming full conversion elsewhere becomes less defensible.

187. Since service capacity is perishable, firms actively seek to utilise residual surplus capacity rather than allow it to be wasted.[51] As a concrete operational anchor, contact-centre benchmarking commonly treats sustainable agent occupancy at approximately 75-85%, implying that around 15-25% of staff time is structurally absorbed by variability buffers, coordination, and recovery rather than translated into handled workload.[52] Academic service-operations research shows that utilisation can be lower in quality-driven or small-scale operations but can also rise materially in best-practice settings with pooled demand and strong management.[53]

188. We adopt 0.8 as a central estimate for the share of staff time savings that translate into additional productive output in our model. This value broadly represents the midpoint of the observed sustainable utilisation benchmarks in labour-intensive services, while allowing explicitly for organisational frictions and adjustment costs that prevent full conversion. The results are not sensitive to variations in this parameter – a 10% change in the parameter changes the results by around 5%.

Administration and operational savings: operating costs as a proportion of turnover

189. To quantify the administration and operational benefits, we first need an estimate of the baseline level of overhead operating costs. The SMEs survey reports an average Opex-to-turnover ratio of 0.45, meaning that surveyed businesses report overhead operating costs of 45% of turnover. We would expect the whole-economy ratio to be lower than this, since larger companies typically benefit from scale economies in overhead functions (e.g. head office administration, procurement, IT and payments), reducing overhead intensity per unit of sales.

190. To determine the Opex-to-turnover ratio for large businesses, we triangulate using several different sources, including Eurostat and ONS business statistics, the published accounts of large European retailers and analysis from the UK's Competition and Markets Authority.[54] We estimate a weighted

[48] Brynjolfsson and Hitt (2000), *Beyond Computation: Information Technology, Organizational Transformation and Business Performance*, Journal of Economic Perspectives.
[49] Brynjolfsson and Hitt (2003), *Computing Productivity: Firm-Level Evidence*, Review of Economics and Statistics.
[50] Bloom and Van Reenen (2007), *Measuring and Explaining Management Practices Across Firms and Countries*, Quarterly Journal of Economics.
[51] Wirtz (2022), *Services Marketing: People, Technology, Strategy*, World Scientific.
[52] SQM (2023), *What Are the Industry Standards For the Top Call Center KPIs*?.
[53] Koole and Mandelbaum (2002), *Queuing models of call centers: an introduction*, Annals of Operational Research.
[54] CMA (2024), *Competition and profitability in the groceries sector*. Figure 2.6 shows that gross supermarket margins are around 26% while Figure 2.3 shows that operating margins are around 3%.



(by firm size and country) central all-firms Opex-to-turnover ratio of 0.35. The results are not sensitive to variations in this parameter a 10% change in the parameter changes the results by around 5%.

Fraud and chargeback savings: baseline level of fraud

191. The benefits from lower fraud and chargeback rates should only apply to the existing or counterfactual level of fraud-related costs. We therefore need to establish a baseline fraud rate so that we can translate transaction values into an economically meaningful level of avoidable losses, and to ensure that estimated fraud reductions are scaled consistently across the EU and the UK.[55]

192. UK Finance reports an overall unauthorised card fraud-to-turnover ratio of 6.0p per £100 transacted in 2024 (i.e. 0.060%).[56] The ECB/EBA PSD2 fraud data report that fraud accounted for 0.031% of total card payment value in H1 2023, with fraud intensity materially higher for remote transactions (0.101%) than non-remote (0.007%).[57]

193. We set the counterfactual or baseline fraud rate at 0.04% of transaction value. This blended baseline is used to scale the country- and channel-specific fraud-reductions reported in the business survey. The results are not sensitive to variations in this assumption.

A.5. Non-monetised benefits outside GDP

194. The analysis in this report focuses on quantifying the economic value of Google Pay through the four monetised channels described above. However, these channels do not capture the full range of benefits associated with digital adoption. A number of effects improve user experience, trust and participation in the digital economy but are not monetised.

Non-monetised benefits to consumers

195. In addition to the monetised impacts quantified in this report, consumers derive a range of qualitative benefits from Google Pay that are not captured in the GDP estimates but are nonetheless material to user experience and adoption. These include:

- **Convenience and reduced consumer effort.** Google Pay simplifies everyday tasks by reducing the need to carry physical cards, remember card details, or repeatedly enter payment information. The ability to authenticate payments using biometrics or device-level security lowers the effort required to complete a transaction. While some resulting time savings and sales effects are monetised, the broader convenience benefit sits outside GDP.

- **Multi-functionality and integration of daily activities.** Digital wallets increasingly act as multifunctional tools rather than standalone payment instruments. Beyond payment cards, consumers use Google Wallet to store loyalty and reward cards, travel and transit passes, and event tickets. This integration reduces friction across a range of everyday activities but is not readily expressed in monetary terms.

- **Confidence and trust.** Beyond measurable reductions in fraud and chargebacks, Google Pay can provide consumers with greater peace of mind when transacting digitally. Tokenisation, biometric authentication and trusted branding can reduce anxiety around payment security, particularly when making purchases with unfamiliar businesses or in cross-border contexts. While

[55] For modelling purposes, chargebacks are treated as fraud-related costs that scale with fraud; we therefore apply the same baseline fraud rate and reduction factors to both.
[56] UK Finance (2025), *Annual Fraud Report*, 2025.
[57] European Banking Authority and European Central Bank (2024), *2024 Report on Payment Fraud*.



increased confidence supports observable behavioural outcomes, the value of feeling secure is a non-monetised consumer benefit.

- **Support for financial capability and inclusion.** Digital wallets can support financial inclusion in high-access markets by enabling more effective use of financial services rather than simply expanding formal access. By making payments easier, faster and safer, Google Pay reduces confidence-related barriers to participation, particularly for groups with lower baseline digital confidence. The broader social value of improved financial capability and sustained participation in the digital economy is not directly monetised in the GDP estimates.

Non-monetised benefits to businesses

196. Beyond the monetised channels quantified in this report, businesses can also derive qualitative benefits when enabling Google Pay. These include:

- **Improved customer experience and brand perception.** Accepting and enabling Google Pay can improve the checkout experience by reducing friction and perceived risk for customers. Faster, more reliable payments contribute to higher customer satisfaction and may reinforce trust in the business, particularly online. While some of this is captured indirectly through sales uplift, it is difficult to quantify directly.

- **Customer loyalty and long-term engagement.** Digital wallets can strengthen ongoing relationships between businesses and customers. Features such as loyalty cards may encourage habitual use and repeat transactions. While some effects contribute indirectly to higher sales, the longer-term value of customer loyalty and engagement extends beyond what can be robustly quantified in the model.

- **Access to new markets and customer segments.** By lowering friction and increasing trust in digital payments, Google Pay may enable businesses, particularly SMEs, to serve customers who might otherwise abandon transactions, including international customers and first-time buyers. The strategic value of expanded market reach is difficult to isolate, though some of it is reflected in higher sales.

- **Platform for future innovation.** Digital wallet infrastructure provides a foundation for future innovations, including digital identity, account-to-account payments, programmable payments, and deeper integration with open finance. For businesses, this may reduce the need to build proprietary solutions and lower the cost and complexity of adopting new payment-related services over time. The option value associated with this innovation potential is inherently uncertain and is therefore excluded from the quantitative estimates.

- **Interoperability across the Android ecosystem.** Google Pay operates across a range of Android devices produced by multiple manufacturers and supporting different device configurations. For businesses, this may reduce coordination and compatibility frictions when offering wallet-based checkout experiences across customer devices and partner applications, with the potential to simplify rollout and ongoing maintenance across markets.

A.6. Evidence, modelling and uncertainty

197. The analytical framework relies on multiple sources of evidence that together ensure the results are representative of real-world market conditions and statistically robust. Survey evidence provides the core behavioural and operational parameters, while supplementary official and industry datasets are used to scale those effects to economy-wide impacts and to anchor the model in observable market outcomes.



Survey and other data sources

198. We commissioned two bespoke surveys – one for consumers and one for businesses – that are used to estimate the benefits delivered by Google Pay across the four value channels set out in the previous section. The results of these surveys are presented in Chapters 4 and 5, while Chapter 6 shows the aggregate economic benefits to the EU and the UK.

199. The surveys were carried out across six countries – France, Germany, Ireland, Poland, and Spain in the EU, plus the UK. These countries provide a mix of larger and mid-sized European economies, reflecting varying levels of digital payments adoption and diverse consumer and business characteristics, such that they provide a reasonable proxy for conditions across the EU.

200. In addition to survey data, our analysis is complemented by publicly available data and in-depth interviews with several large business and financial stakeholders, which provide further insight into how these Google products deliver benefits at scale.

Scaling and calibration

201. Survey responses are scaled to population level using country-level adoption rates and market-size estimates for both the EU and the UK. Adjustments for in-store and online transactions ensure that the relative weight of each channel reflects its share of overall transaction volume. Further calibration draws on other published data sources, including from central banks, payment regulators and industry specialists, to align totals with official aggregates for retail sales and payment volumes.

202. Scaling to economy-wide impacts requires two additional inputs: transaction volumes and average transaction values. These are applied separately for in-store and online channels in order to translate per-transaction survey results into aggregate monetary impacts. Transaction totals and average values are drawn from published sources rather than from Google's commercial payment transaction data.

Uncertainty and sensitivity testing

203. Sensitivity and scenario analysis test the results against uncertainty in key behavioural and National Accounts parameters and also check the stability of outputs to reasonable variation in scaling assumptions. Central estimates are accompanied by low and high scenarios that vary key parameters such as net additionality, sales uplift and adoption rates within plausible bounds.

204. To capture joint variation across parameters, the framework also employs Monte Carlo simulation, producing confidence ranges for key metrics such as GDP contribution. These techniques provide a transparent view of how sensitive the results are to underlying assumptions.

Projecting to 2030

205. Projections are made from a 2025 baseline through to 2030 using two main drivers: continued growth in wallet adoption and transaction penetration, and forecasts of nominal GDP from the International Monetary Fund. These projections show how the economic contribution of Google Pay evolves over time as uptake and spending volumes increase.

Accounting for large businesses

206. Although the business survey focuses on SMEs, the grossing-up stage of the modelling incorporates the wider business base. Adjustment factors are applied to the four value channels to account for differences in transaction scale, adoption rates and efficiency gains among larger firms. These factors are informed by case studies of large businesses and by public data on payment behaviour by firm



size, ensuring that the aggregate results reflect the full spectrum of businesses operating in the EU and UK.

Consumer survey: design and fieldwork

207. We surveyed 1,429 consumers aged 18 or over whose preferred mobile payment method is Google Pay and who had used it to make an in-store or online purchase in the seven days prior to completing the survey. Of the 1,429 consumers surveyed: 400 were in the UK, 279 in France; 338 in Germany; 51 in Ireland; 158 in Poland; and 203 in Spain. To ensure the surveys were representative, several quota restrictions were applied, including for gender, age, and income bands. Fieldwork was conducted between 27 November and 23 December, 2025.

208. The survey was structured into eight sections covering consumer benefits delivered through the aforementioned channels of interest, across both in-store and online sales, as well as cross-border activity and future use-cases related to the broader Google Wallet:

    1) Demographic information from respondents to support sample representativeness.

    2) Information on digital wallet adoption and perceptions, including respondents' preferred digital wallet.

    3) Information on digital payments made in the previous seven days, both in-store and online.

    4) In-store payments.

    5) Online payments.

    6) Information on payment fraud.

    7) Information on cross-border payments, including those made using non-domestic currencies.

    8) Views on a potential future use-case: using digital wallets to store digital IDs.

Business survey: design and fieldwork

209. We surveyed 1,428 small- and medium-sized businesses (fewer than 250 employees) that make sales either in-store or online (or both). Selection was conditional on businesses accepting contactless payments (in-store) or enabling the Google Pay button in their (online) checkout process. Of the 1,428 businesses surveyed: 416 were in the UK; 280 in France; 336 in Germany; 50 in Ireland; 148 in Poland; and 198 in Spain. Almost half (47%) of businesses that were surveyed sold through both in-store and online channels; 36% only sold in-store; and 17% only sold online. Quotas were applied for business size to ensure representativeness. Fieldwork was conducted between 8 and 18 December, 2025.

210. The business survey was structured into three sections:

    1) Demographic information from respondents to support sample representativeness.

    2) Information on in-store transactions using digital wallet payment methods in terms of sales volume, time savings, compliance and operating costs, chargeback rates, sales uplift, and consumer loyalty, and compared these outcomes with other payment methods where relevant.

    3) Information on online and mobile app transactions made using the Google Pay button, focusing on sales volume, conversion rates, cart abandonment, chargeback rates, compliance and operating costs, time savings, sales uplift, payment declines, and levels of trust and consumer



loyalty. Where relevant, these outcomes were compared with those of other payment methods, including alternative pay buttons.

Other sources of data and information

211. To complement our survey analysis, we draw on a wide range of publicly available data sources. These have been referenced throughout the report, with the more prominent sources including:

- Economic statistics and demographic data from official sources – primarily the EU's Eurostat and the UK's Office for National Statistics. These include data on gross domestic product, gross value added, sectoral output, retail sales and population. Forecasts for GDP are taken from the International Monetary Fund's World Economic Outlook.

- Banking and finance data has also primarily been sourced from official providers – the European Central Bank, the Bank of England and the UK's Financial Conduct Authority.

- For information on global trends in the use of digital payment methods, we have drawn extensively on data from Worldpay's 2025 Global Payments Report.

212. Given that the benefits of these two Google products extend beyond consumers and SMEs, we also conducted in-depth interviews with several large businesses (see Chapter 5). The purpose of these interviews was to gather qualitative insights into how these benefits are realised, including improvements in checkout efficiency, sales uplift, enhanced security and reduced payment fraud, ecosystem interactions, and the strategic value of Google Pay.



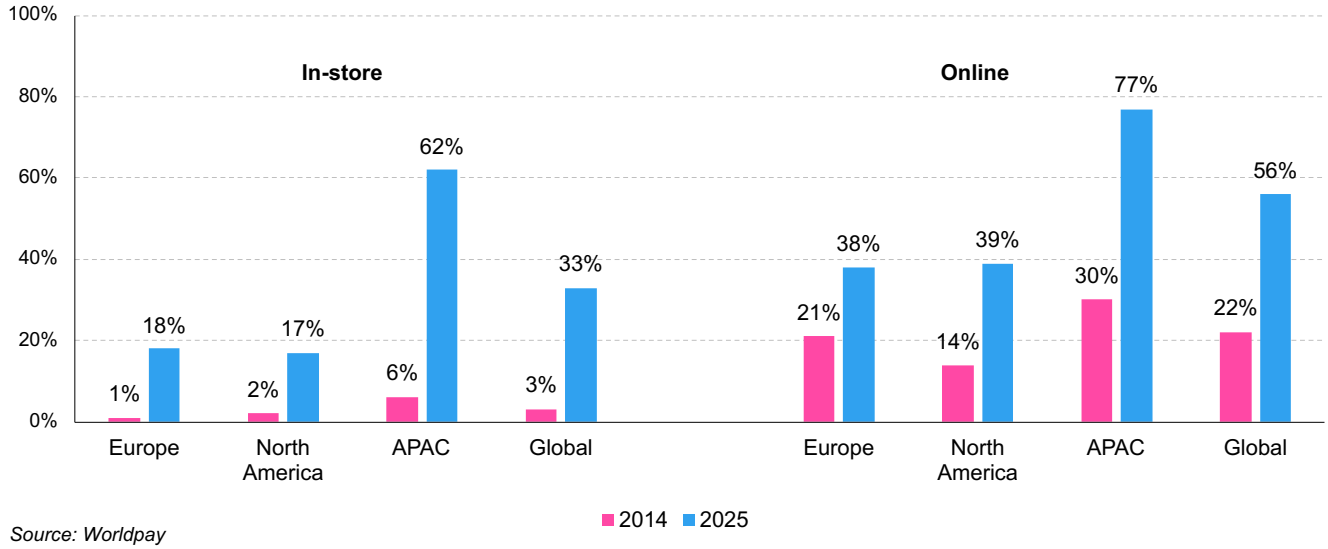
Annex B. Supporting global payments context

213. This annex contains charts supporting the material in Chapter 2. It provides fuller descriptive context on global, APAC and European payments trends.

B.1. Global and regional context

214. Figure B.1 provides the broad regional backdrop to Chapter 2. It shows that the shift towards digital payments has been widespread over the past decade, with APAC remaining the most advanced region and Europe and North America following similar, though more gradual, paths.

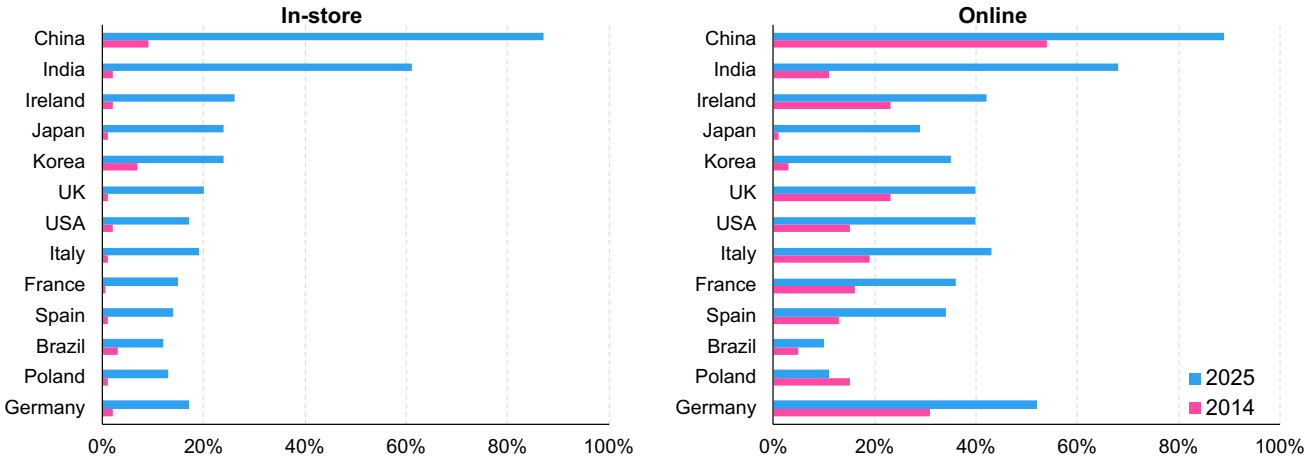
Figure B.1: Digital wallet share of in-store and online transaction value by region, 2014 and 2025



Source: Worldpay

215. Figure B.2 provides a wider cross-country comparison of adoption in 2014 and 2025. It shows that markets now exhibiting relatively high wallet and pay-button usage often started from much lower bases a decade earlier, underscoring how quickly adoption can deepen once usage begins to scale.

Figure B.2: Cross-country comparison of digital wallet adoption, 2014 and 2025



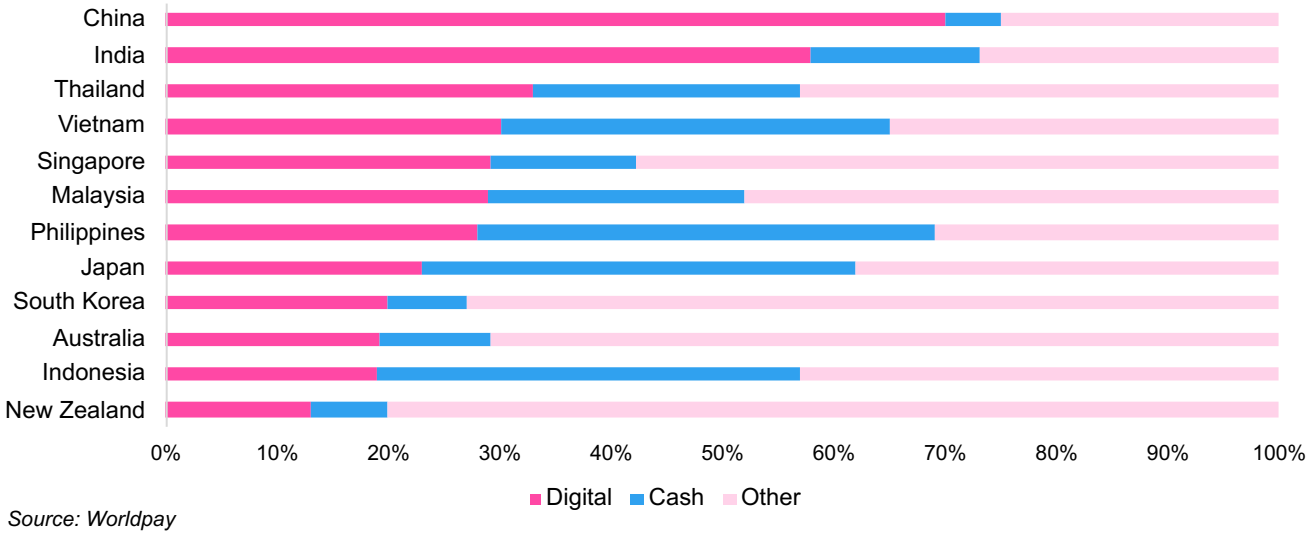
Source: Worldpay

B.2. China and India

216. Figures B.3 and B.4 provide additional context for Box 1. They illustrate the scale of digital payments adoption in China and India, and the different routes through which that adoption has developed.

217. Figure B.3 highlights the uneven but rapid shift towards digital payments across APAC in in-store transactions. China and India stand out, with digital wallets accounting for around 70% and 58% of in-store transaction value respectively in 2024.

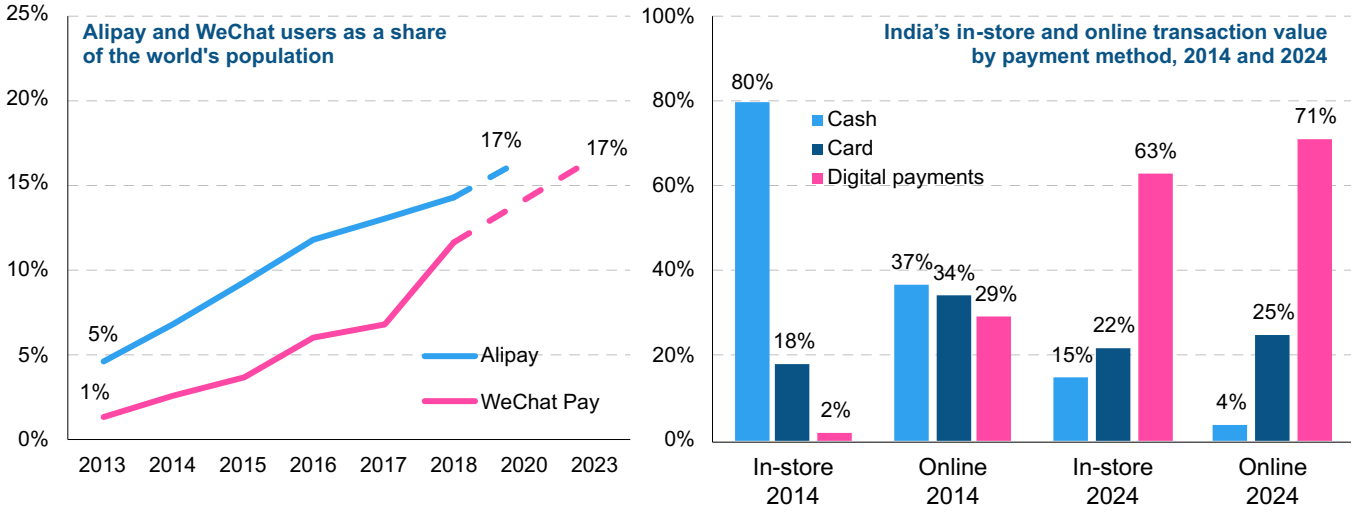
Figure B.3: In-store transactions in APAC: digital wallet vs cash payments, 2024



Source: Worldpay

218. Figure B.4 (left panel) illustrates the global scale reached by China's leading wallet platforms. By 2023, the active user bases of Alipay and WeChat Pay were together equivalent to around 17% of the world's population.

Figure B.4: Digital payments adoption in China and India



Source: Brookings; Ant Group; Tencent; World Bank

Source: Worldpay

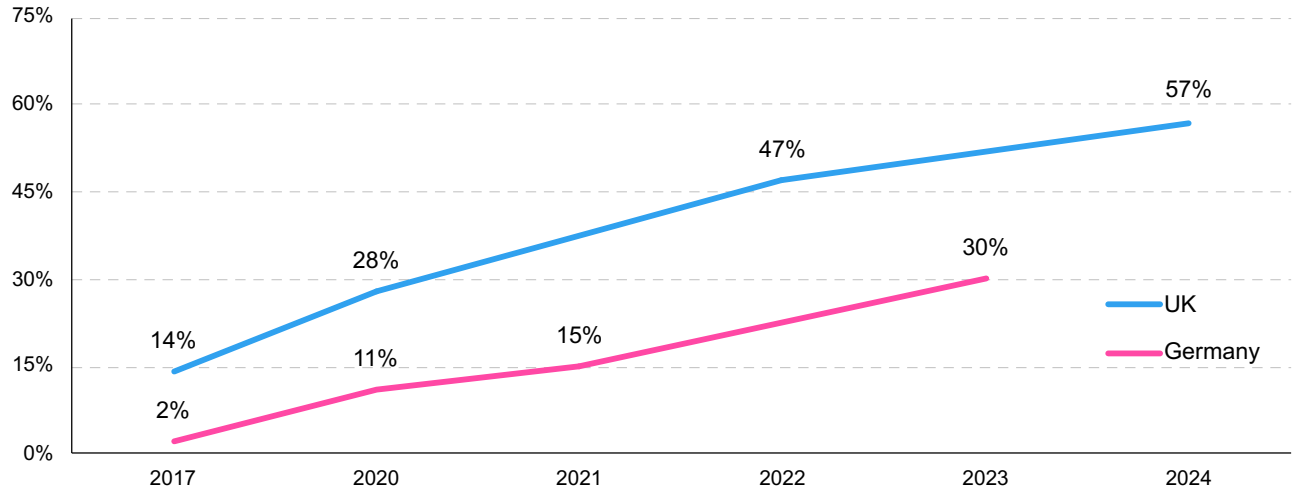


219. Figure B.4 (right panel) shows how sharply India's payments mix has changed over a decade. Prior to the launch of UPI, cash accounted for 80% of in-store transaction value; by 2024 this had fallen to 15%, while digital methods accounted for more than 60%. A similar shift is seen online.

B.3. Europe

220. Figure B.5 shows the increase in digital wallet adoption among adults in the UK and Germany. In the UK, it rose from 14% in 2017 to 57% in 2024; in Germany, it rose from 2% in 2017 to 30% in 2023.

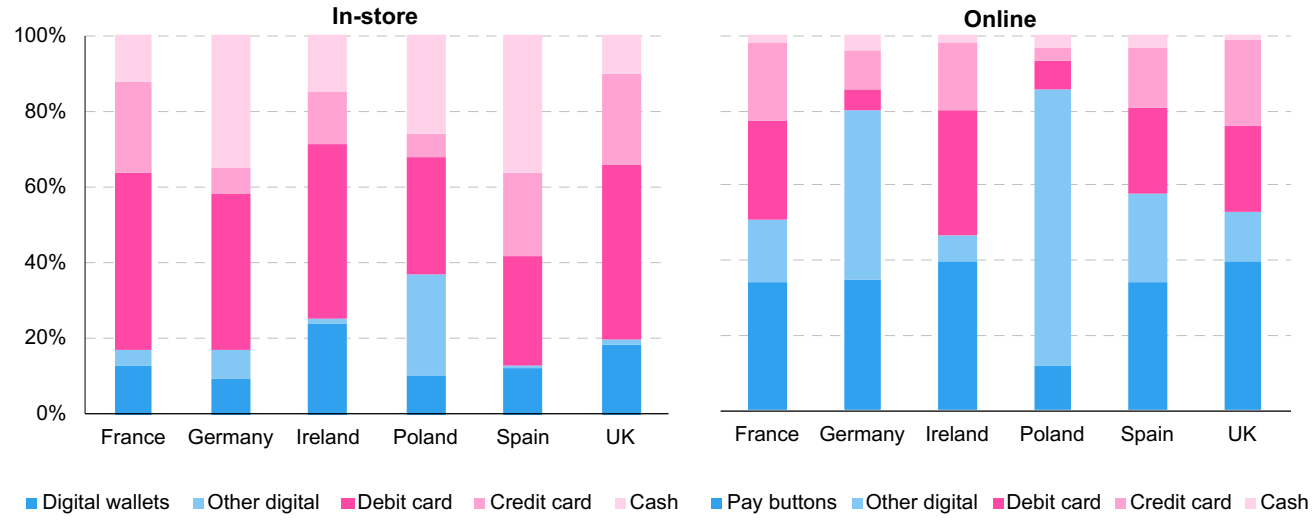
Figure B.5: Digital wallet adoption in the UK and Germany, 2017–2024



Source: FCA; UK Finance; Deutsche Bundesbank; ACI worldwide

221. Figure B.6 (left panel) shows that physical cards remain dominant across Europe, while cash still accounts for a sizeable share of in-store transaction value in several markets, including Germany, Spain, Italy and Poland. Figure B.6 (right panel) provides the corresponding online breakdown. Across Europe, pay buttons and other digital payment methods account for 59% of online transaction value, compared with 39% for debit and credit cards combined. Poland stands out, with digital methods accounting for more than 80% of online transaction value, supported in part by BLIK.

Figure B.6: Share of in-store and online transaction value by payment method in Europe, 2024



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