



Reserve Bank
of New Zealand
Te Pūtea Matua

Keeping cash local - technical paper (considering the benefits of cash)

Money and Cash Directorate

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Technical paper considering the benefits of cash

Executive summary

After considering the issue from multiple perspectives, our analysis suggests that the existence of cash ('cash *per se*') generates significant positive benefits for New Zealand.

The availability of cash impacts the people and businesses of New Zealand in multiple ways. Not all these impacts can be discussed other than in conceptual terms. In this paper our primary focus is on those impacts that can be quantified. We consider both positive impacts ('benefits') and negative impacts ('disbenefits'), aiming to arrive at a measure of the overall net benefit of cash *per se* for New Zealand.¹

Quantifying the net benefits generated by cash *per se* is not straightforward. On the one hand, the things we can easily measure aren't necessarily a good representative of the positive impacts of cash. And on the other hand, the concepts we think best capture the positive impacts of cash aren't easy to measure.

We begin by identifying all possible impacts, whether quantifiable or not. We then move onto focusing on those that can be quantified. Starting with what we can easily measure, cash contributes to government revenue ('seigniorage'). In 2025 this was included in our Annual Report and given as \$397 million per annum.² Moving onto the productivity benefits of cash for small businesses, we estimate these to be \$600 million per annum. We looked at research that measured the impact on New Zealand's businesses of significant changes in the business environment and adapted the findings to come up with an estimated output (measured as Gross Domestic Product or 'GDP') impact in the event New Zealand became cashless.

Finally, while we think the wellbeing impact on the 80 percent plus of people that use cash sometimes is arguably the most important element of the benefits of cash, it is also the most difficult to quantify. We approached this in two ways. Firstly, within the context of a wider research exercise, we asked people what they would be prepared to pay to have cash (this was not a formal willingness to pay study). The result was an estimated benefit of \$437 million per annum. Secondly, an alternative exercise involved carefully considering the aspects of people's lives most impacted by cash, referring to New Zealand's results in the international self-reported wellbeing ('Happiness') surveys produced annually since 2012, and quantifying the potential impacts using the Treasury's cost benefit tools designed for this purpose. This analysis indicates cash *per se* generates benefits of \$2.9 billion per annum.

After considering our findings, and the qualitative information available to us, our view is that wellbeing and output are enhanced significantly in New Zealand by the presence of cash.

¹ We do not include in disbenefits the direct costs of providing the infrastructure and regulatory context needed to make cash available: i.e. the Reserve Bank's own cash centre, the public-facing infrastructure used to provide cash services to bank customers, or the costs involved in public administration in relation to cash.

² Reserve Bank of New Zealand (2025) Source: Note 19 to the Financial Statements. [RBNZ Annual Report 2024/25](#),

Introduction

The Reserve Bank's role

The Reserve Bank is responsible for ensuring the needs of the public for banknotes and coins are met, as outlined in the Reserve Bank of New Zealand Act 2021 ('the Act').³ We interpret these responsibilities as meaning the Reserve Bank must ensure cash remains a meaningful payment option for communities across New Zealand. To meet these responsibilities, the Reserve Bank acts as the steward of the cash system. This involves closely monitoring the cash system and, where objectives are not being met, designing and implementing policy interventions.

Cornerstones of the cash system

The Reserve Bank's own cash operations, the cash distribution activities performed by private firms, and the Reserve Bank's stewardship are the cornerstones of the cash system (refer to Box 1 for more information). Due to complex interdependencies, if one or more of these cornerstones is performing unreliably, or inadequate in other ways, the whole system is at risk.

Box 1. Cornerstones of the cash system

The Reserve Bank's cash operations facility performs unique functions in the cash system. These functions are the destruction of unfit banknotes, taking receipt of bulk shipments of new banknotes and coins from offshore suppliers, and providing secure storage for the Reserve Bank's cash assets. All these functions involve substantial cash assets and associated risks and as such necessitate public sector provision.¹

Public-facing cash services are provided by banks and other private firms. These services allow businesses and individuals to deposit, withdraw and swap cash and may be provided in person or utilise self-service automatic teller machines ('ATMs'). To provide these services, banks and other cash service providers purchase inputs from specialist suppliers. These specialist suppliers, among other things, store and process commercial banks' cash assets (these are of much lower value than Reserve Bank cash assets), transport cash, and service ATMs.

The Reserve Bank's stewardship of the cash system is an example of public administration. It involves monitoring the cash system, reviewing its performance, and implementing cash-related policy interventions.

Market failures in the cash system

Maintaining a healthy cash system is challenging as multiple market failures are present in the cash system. If unaddressed, these market failures have the potential to permanently remove cash as a payments option in New Zealand.

³ Refer to s116 (c) Reserve Bank of New Zealand Act 2021. [Reserve Bank of New Zealand Act 2021 No 31 \(as at 27 November 2025\), Public Act Contents – New Zealand Legislation](#)

One of the key failures is the presence of network externalities operating across markets (and in particular, externalities characteristic of 'two-sided markets'). These externalities operate like mutually reinforcing feedback loops and have the potential to make the cash system non-viable in the long term. Whilst there is a clear public benefit in consumers retaining the option of cash as a means of payment, the collective preference is not factored into individual decision-making.

Take the scenario of individual consumers - responding to private incentives - deciding not to use cash for their everyday payments. (This could be because they prefer to pay by a card, or it could be because it has become too hard to access cash). This leads to fewer merchants accepting cash. When a consumer is deciding whether to carry cash, the likelihood a merchant will accept cash is a factor. Hence, the decision not to pay with cash in the first instance, through the impact on merchant behaviour, has a self-reinforcing effect on the consumer.

The Reserve Bank has an active policy programme aimed at addressing the impacts of the market failures evident in the cash system. The key challenge with this work programme is identifying effective levers when network externalities are present alongside other market failures. Other countries are facing similar challenges. Those – such as the UK, Ireland, and the Netherlands, among others – have recently introduced new regulations and granted significant new powers for the purpose of ensuring continued wide access for communities and businesses to cash services.

The counterfactual for our net benefits assessment

If any one of the cornerstones of the cash system fails, the whole system fails and New Zealanders lose the option of cash. Hence the relevant counterfactual for our analysis is the absence of cash completely (i.e. New Zealand becomes cashless). Such a stark counterfactual is unusual in cost benefit analysis. Unlike the cash system, in many areas of public interest it is possible to array outcomes on a spectrum ranging from less to more. Due to the complex interdependencies and other market failures, such a characterisation is not realistic for cash. Unless the necessary conditions are present, the various inputs required to supply public-facing cash services will not be available and the whole system will disappear.

Given the counterfactual is relevant for the failure of any of the three cornerstones, our net benefits assessment can be used to support cost benefit calculations for investment or interventions in any of the three cornerstone areas. However, care needs to be taken to avoid duplication and thus over-stating benefits.

We avoid duplication by establishing the net benefits of cash *per se*. We then make appropriate deductions where a single cornerstone is being considered. For example, if we are calculating the benefits of introducing a minimum standard for public-facing cash services we first estimate the benefits of cash *per se* and then deduct the benefits attributable to the Reserve Bank's cash operations and cash-related public administration. We proxy these deductible benefits by their costs.⁴ The main purpose of this paper is to outline how we have estimated the first step in this process – i.e. the net benefits of cash *per se*.

⁴ An alternative approach, which leads to an equivalent result when all three cornerstones are considered together, is to contrast the benefits of cash *per se* with the combined costs associated with the three cornerstones.

The counterfactual raises questions about the resources currently employed in the cash system. Would they still be employed in the counterfactual and, if not, how do we treat this loss of resources? We make the conventional assumption that once the transition from the status quo to the counterfactual was completed, all resources would be fully employed – growing demand for non-cash payment products would absorb resources released from the status quo. However, the resources released from the cash system in the status quo may not be easily absorbed by the growing non-cash payments sector in the counterfactual, meaning there would be some, albeit temporary, loss of resources to the economy. Such transition frictions constitute a ‘transition cost’. We don’t take account of transition costs in our analysis and, instead, when discussing costs (not in this paper, but elsewhere) we focus on comparing two (fully transitioned) end states.

The potential impacts of cash

We identified multiple potential impacts of cash. Appendix 1 provides further context for impacts relating to efficiency in payments, social capital and wellbeing impacts.

Our qualitative assessment is that the potential disbenefits are ambiguous whereas the potential benefits are clear (refer Tables 1 and 2).

Table 1. The potential positive impacts of cash on New Zealand (‘benefits’)

Potential benefits	Affected party	Description
Efficiency and productivity	Consumers, merchants, recipients of donations	Different payment methods will be suitable in different circumstances. The parties are best placed to decide what suits them when cash is available when there is optionality in payments (i.e. cash exists alongside digital payments). Otherwise-idle resources may be mobilised by the opportunities provided by the availability of cash (for example, farmgate sales).
Social cohesion	All New Zealanders, specific communities	Cash enables exchanges to be made that build social cohesion and social capital. Social capital acts as a social safety net.
Resilience to shocks	All New Zealanders, communities affected by natural disasters or digital outages, households and individuals facing personal setbacks	Personal holdings of cash mean individuals living in communities that have lost power or internet can keep transacting and allow individuals lacking digital payment options for other reasons to buy what they need. Cash is used as a budgeting tool, enabling people to stay out of debt.
Cultural identity	All New Zealanders, specific communities	Banknotes and coins are physical artefacts which people identify with. Cash is used in cultural ceremonies. Cash is used in ritualised ways within families, neighbourhoods and friendship groups.

Potential benefits	Affected party	Description
Wellbeing benefits attributable to the exercise of agency	<p>People who face barriers (physical, cognitive) when presented with digital-only payment options</p> <p>Children below the age when they can legally have their own bank account</p> <p>All New Zealanders</p>	<p>Not being able to use a payment method means those affected become dependent on others. Not only does this erode their self-worth, it puts them at risk of financial abuse (e.g. sharing of bank card PINs).</p> <p>The capability approach literature points to the wellbeing effects <i>per se</i> (self-esteem, mental health) of being able to exercise agency (i.e. the exercise of choice).</p> <p>Flow-on benefits in terms of the efficacy of government income support.</p>
Tourism receipts	Merchants	Tourists may forego purchases if they cannot be made with cash.
Financial literacy	Children	Parents report that being tangible, cash is valuable to educate children about money.
The probability of a financial crisis	All New Zealanders	Being able to convert the digital money issued by banks into cash gives people confidence to hold the digital money. In the absence of cash people may be more nervous, leading to more frequent withdrawals (switching money from one bank to another), thus adding costs to the financial system and increasing the probability of bank runs.
Seigniorage	Crown revenue	Cash provides an alternative to government bonds to fund expenditure.

Table 2. The potential negative impacts of cash ('disbenefits')

Potential disbenefits	Affected party	Description
Carbon emissions	All New Zealanders	The carbon emissions of the cash system may be slightly higher than the emissions of digital payment systems (the latter have high energy needs, while the former has a reliance on physical transport).
Threats to personal safety and property of merchants	<p>Merchants</p> <p>The general public</p>	<p>The threat to personal safety of merchants may be higher if there is a cash system but items other than cash are more likely to have prompted the theft.</p> <p>The overall threat to personal property is likely to be the same whether there is cash or not. The amount stolen in one cash event is likely to be small (limited to the amount held in a wallet or a shop till) but it may happen often. In contrast,</p>

Potential disbenefits	Affected party	Description
		<p>the amounts at risk from theft in one digital money event can be high (limited only by the size of the bank account balance) but may occur less often.</p> <p>Threats to the personal safety of the general public can exist in either end state as the theft may involve threatening a person (to hand over a wallet, or to hand over banking passwords respectively).</p>
Efficacy of tax policy	All New Zealanders	Our assessment is that the overall efficacy of tax policy is likely to be the same in both end states. We assume the same amount of resources and expertise will be devoted to tax evasion under either end state, with the same effectiveness.
Incidence of crime	All New Zealanders	Our assessment is that the incidence of crime is likely to be the same in both end states. Resources and expertise will be devoted to crime under either end state, with the same effectiveness. The nature of the crimes committed may differ.

Quantifying the potential impacts

When considering quantification, our focus was on benefits as those impacts are not ambiguous. An initial scan of the available evidence suggested only a subset were likely to be quantifiable (and among those, the results would be of varying quality).

The most straightforward impact to quantify was seigniorage, the measurement of which is subject to accounting conventions. Estimating the economic productivity impacts of cash was more problematic in that we could not locate any empirical evidence directly connecting cash to business profitability or other measures indicative of output effects. We did, however, have access to small business assessments of the impact of cash on their businesses and estimated economy-wide output impacts from that basis.

We identified multiple potential impacts on people. One option was to try and quantify each of these impacts in turn and then aggregate the results. For example, the Treasury's cost benefit tool (CBAX) provides monetised estimates for changes that affect people's ability to express their culture.⁵ This approach in our case was limited as there were relatively few categories for which monetised values were available.⁶

The alternative approach, which we adopted, was to acknowledge that the various impacts on people might reasonably be combined conceptually into a single measure for which monetised values might be available. This provided two avenues for monetisation. On the one hand, we had some indicative data on New Zealanders' willingness to pay to keep cash. The data emerged from workshops held in 2021, but this research does not qualify as a formal willingness to pay study.

⁵ Refer New Zealand Treasury (2025). rows 187 and 188 in the CBAX spreadsheet. [The Treasury's CBAX Tool | The Treasury New Zealand](#).

⁶ Research conducted on behalf of the UK's Financial Conduct Authority used this approach. Refer Suter et al (2023). [Costs to consumers and SMEs of a loss of access to in-person cash and banking services: Technical report](#)

On the other hand, we could combine theory and New Zealand's results in the international self-reported wellbeing data ('World Happiness Reports') to form a view on how the absence of cash might impact on self-reported wellbeing. We could then apply the Treasury's CBAX tool's monetised value for changes in self-reported wellbeing to quantify the impact.

In the remainder of this paper, we go through this analysis in detail.

Cash generates income for the Crown ('seigniorage')

Beginning with the beneficial impact that is most easily measured, the presence of cash generates income for the government. There are many explanations of seigniorage in the economics literature. One way the concept is explained focuses on the fact that central banks manufacture then sell cash and can, with the proceeds, invest in interest-bearing securities thus earning interest income.^{7 8}

Possibly an easier way to understand seigniorage is to consider what would happen in the event New Zealand became cashless. Given the cash already in existence would no longer be usable by anyone, it would have to be presented to the Reserve Bank for re-purchase (the amount of cash currently in circulation is valued at around \$9 billion). The Reserve Bank would need to borrow to pay for the cash being returned so new interest-paying government debt would have to be issued. In other words, in a cashless world, the government's interest costs would be higher. Seigniorage is similar conceptually to the interest savings generated for the government by the presence of cash.

Revenue generated for the Reserve Bank from cash in 2025 was \$397 million per annum.⁹

Benefits in the form of GDP impacts

Moving on to a broader measure, but one that needs to be estimated rather than retrieved from an accounting report, we considered possible impacts on GDP. Based on the evidence we've assembled, we believe it is, on balance, reasonable to conclude that GDP would likely be permanently smaller (i.e. there is a permanent, annual forfeit) in the event New Zealand was cashless. GDP can be conceptualised and measured as the sum of production across sectors, as a sum of final expenditures, or as the sum of different types of income (wages, profits, interest). We have applied a GDP-as-production lens for our analysis.

Recent New Zealand research findings indicate that many businesses currently accept cash, are satisfied with that option and would, in the absence of cash, expect to face increased costs (due to increases in digital payments-related costs such as fees) and increased friction (reduced ease of use and reduced reliability in the payments methods used). Given this evidence, on balance, the removal of cash would seem to be similar conceptually to a supply shock for businesses who currently accept cash, with adverse impacts for GDP.

Having established that many businesses do accept cash and would face increased costs and friction in the absence of cash, the question arises 'What would be the scale of the impact?'

⁷ Many central banks, including the Reserve Bank, outsource the manufacture of cash.

⁸ See, for example, Buiters (2007).

⁹ Refer Reserve Bank of New Zealand (2005) [RBNZ Annual Report 2024/25](#). Source: Note 19 to the Financial Statements

Research findings show that 72 percent of small businesses would be adversely affected if cash were not available.¹⁰ If we assume *only* those businesses are affected, the latest data we have suggests New Zealand would have more than 420,000 affected businesses accounting for almost 30 percent (or \$120 billion) of New Zealand's annual GDP.¹¹ If the loss of cash reduces output from this sector by 0.1 percent, for example, the impact equates to \$120 million a year. It seems unlikely that business owners would report an impact if the anticipated scale of the impact was merely 0.1 percent. Something closer to an anticipated 1 percent impact might arguably be more likely to generate the recorded response. At 1 percent, the impact would be \$1.2 billion a year.

The reported support of small businesses for cash may be a surprise to those who observe the pace at which point-of-sale transactions can be concluded when digital payment methods are used. However, the predominant digital payments methods are not free of transaction frictions. Examples of such frictions include the time-consuming administration required of a business when a payments card is fraudulently used at the point-of-sale, delays when a customer has insufficient funds, and disruptions when the digital networks are unexpectedly offline.

Evidence of business support for cash as a means of payment is also provided in a 2022 survey of New Zealand businesses conducted on behalf of the Commerce Commission. The study found that "among those [businesses] who offer each payment method, satisfaction is highest for cash....."¹²

In some cases, the friction created for businesses by not having the option of accepting cash may be so great as to see some resources exit from market production altogether (for example, the domestic fruit trees and labour involved in farm gate sales, the labour involved in spontaneous car wash services).

There is evidence we can draw on to develop an upper bound to what we can assume about the impact of removing cash on businesses that use it. In 2023 NZIER estimated that increased business digitalisation has the potential to boost multifactor productivity by 1.5 percent to 3.5 percent.¹³ Digitalisation refers to the transformation of business through greater use of digital business tools and infrastructure including but not limited to digital payment methods.

A change in multifactor productivity is similar but not equivalent to a straightforward cost shock, as it refers to a change in the ability of a business to generate revenues given unchanging labour and capital inputs. Hence, the absence of cash would seem to have the potential to reduce productivity due to the friction it introduces for businesses as well as increased payments-related costs.

If something as all-encompassing as increased digitalisation is only capable of enhancing productivity by 1.5 to 3.5 percent, it seems likely that 'shocking' businesses in a relatively narrower way – by restricting the types of payments they can accept – will have a smaller impact than this.

Thus, for the purposes of quantifying the output impacts of cash assume only small businesses are impacted, and the impact sits within a range of 0.1 percent to 0.9 percent, with a mid-point of 0.5 percent. This generates a mid-point estimate of \$600 million per annum.

¹⁰ Xero (2024) [Cards and convenience reign supreme in Aotearoa | Xero NZ](#)

¹¹ We sourced our small business data from the Ministry of Business, Immigration and Employment website. In January 2026 the website reported that the total number of small businesses was 594,000 contributing 40 percent of GDP. 72 percent of 594,000 businesses equals 427,680 and 72 percent of 40 is 28.8 percent of GDP. We sourced GDP data from StatsNZ and used the production measure. GDP in 2025 was reported as \$432 billion. [Small business and manufacturing | Ministry of Business, Innovation & Employment](#)

¹² Commerce Commission (2022). [Kantar-Public-KantarE28099s-Merchant-Research-Report-November-2022.pdf](#)

¹³ Refer New Zealand Institute of Economic Research (2023) [nzier-what-works-for-digitalisation-may-2023.pdf](#)

Benefits in the form of wellbeing impacts

'Willingness to pay' to have cash

In March 2021 the Reserve Bank commissioned Kantar Research to hold in-depth, 4-hour, 'deliberative' workshops with 60 members of the public drawn from four centres across New Zealand.¹⁴ The purpose was to explore whether participants valued the cash system after they had been given detailed information about the system, and the issues facing the system.

At the end of the workshops participants were presented with the prospect of losing the cash system and were asked how much they were prepared to pay to keep it.

"So lower income individuals gravitated more towards the \$20-\$40 per individual contribution, while those more able to pay expressed a readiness to contribute over \$100. Perhaps the more important finding than the sum itself was that this strong linkage between a willingness to pay and the ability to pay indicates that most workshop participants value the continuation of the cash system to the limit of their ability to contribute meaning that this is a valued & important feature of our society & culture."¹⁵

Studies show that had the question been asked 'How much compensation would you require if New Zealand was to lose the cash system', participants would likely have reported far higher values. Willingness to pay studies are reported to consistently show that people who already have something they value report higher compensation needs than what they report being prepared to pay for something new (i.e. that they have no current experience of).¹⁶ Our reported estimates may therefore be on the low side as we did not frame the question as 'what compensation would you require'.

We used the Kantar results in the following way (refer Table 3):

- We retrieved data from StatsNZ that gave adult population headcounts in various income categories based on the 2018 Census.¹⁷ From this we created four stylised income categories (very low, low, moderate, high).
- We assumed this income distribution was appropriate for the entire population of New Zealand, not just adults.
- While nominal incomes can reasonably be assumed to have increased since 2018, in the absence of more recent comparable Census data, we assumed the *distribution* of income remained the same in 2025 as it was in 2018 (i.e. that there has been no change in inequality when measured as annual individual earnings).¹⁸

¹⁴ Kantar (2021). The value of cash – insights report 29th April 2021. [The value of cash - insights report](#)

¹⁵ Kantar (2021). The value of cash – insights report 29th April 2021. [The value of cash - insights report](#)

¹⁶ HM Treasury, Social Impacts Taskforce. Supplementary Green Book Guidance: Wellbeing guidance for appraisal. [Wellbeing guidance for appraisal - supplementary Green Book guidance.pdf](#)

¹⁷ Statistics New Zealand. (2020) [Aotearoa Data Explorer • Total personal income by age group and sex, for the census usually resident population count aged 15 years and over, 2013 and 2018 Censuses \(RC, TA, SA2, DHB\)](#)

¹⁸ Treasury has undertaken analysis of inequality more recently but their basis of measurement is the household, not individual earnings. Treasury's household analysis suggested inequality has increased in New Zealand since 2018. Treasury (2024). [Analytical Note AN 24/10 - Exploring trends in income inequality in New Zealand \(2007–2023\)](#)

- Based on the Kantar research findings, we assigned four 'willingness to pay' values to the four income categories (\$20, \$40, \$100 and \$150 per annum).
- We calculated the total willingness to pay across all income categories then updated the aggregate estimate to consumer price inflation (note, population data by income category was not available for 2023 at the time this analysis was done).

Table 3. Willingness to pay findings

Annual earnings (% allocated based on 2018 Census) ¹⁹	2025 population	Willingness to pay (2021 prices)
Very low (35% of people)	1,600,260	\$20 per annum
Low (24% of people)	1,386,892	\$40
Moderate (24% of people)	1,386,892	\$100
High (17% of people)	960,156	\$150
Total population	5,334,200	
Total willingness to pay (2025 adult population, and 2021 prices)		\$354 million
Total willingness to pay (2025 adult population, and 2025 prices)		\$437 million

Formal willingness to pay studies about access to cash services have been done elsewhere. Research done in 2023 on behalf of the UK's Financial Conduct Authority included both consumers and small and medium sized enterprises ('SMEs'). Respondents were asked about their willingness to pay for different aspects of a banking service.

"Consumers and SMEs both indicate a willingness to pay to preserve access to cash and banking services at their usual location. The service consumers and SMEs would on average be willing to pay the most to preserve access to at their usual location is regular banking services (£18.10 per annum for consumers, £247.34 for SMEs) and the service they would be willing to pay the least to preserve access to is balance enquiry (£6.94 per annum for consumers, £102.64 for SMEs). The cost estimation results suggest that consumers and SMEs might incur a wide range of costs if they lose access to cash and banking services at the place they usually do so."²⁰

¹⁹ We have used 'Very low' to refer to income ranging from a loss to \$20,000 in 2018; 'Low' to income of \$20,001 to \$40,000 in 2018, 'Moderate' to income of \$40,001 to \$70,000 in 2018, and 'High' to income above \$70,000 in 2018. The median income in 2018 was \$41,280. While nominal incomes can reasonably be assumed to have increased since 2018, in the absence of more recent comparable Census data, we have assumed the *distribution* of individual's annual earnings into four bands remains as it was in 2018 (i.e. there has been no change in inequality in annual individual earnings.)

²⁰ Suter et al (2023a)

In attempting to explain differences in the willingness to pay, the researchers estimated potential costs due to losing access to cash (such as increased travel costs, bank switching costs, and an increased risk of online fraud).

“The cost estimation results suggest that consumers and SMEs might incur a wide range of costs if they lose access to cash and banking services at the place they usually do so. Travel-related costs are typically the largest component of these, which is driven to a significant extent by the fact that consumers and SMEs would have to travel further and for longer to alternative locations.

There is also evidence that other kinds of costs may be incurred. In particular, there is evidence that consumers and SMEs may experience bank switching costs and potential fraud from using online and telephone banking when losing access to cash and banking services at their usual place. Additionally, some SMEs may experience inconvenience from meeting with business managers away from bank branches when losing access to banking services at their usual branch. This research provides quantitative estimates for many kinds of costs, however there may also be other costs that are not measured in this research. For example, there may be costs associated with mitigation strategies taken in response to a loss of access to cash and banking services, for example reducing the frequency of use of these services.”²¹

Impacts on self-reported wellbeing

Our second approach to considering impacts on people using a comprehensive measure began with evidence about the number of people who use cash sometimes.

Every two years the Reserve Bank undertakes a survey of people aged 18 and over that asks about cash use and attitudes (the ‘Cash Use Survey’). The most recent Cash Use Survey results come from 2023. The findings show that 88 percent of adults report using cash sometimes and among those people around 1 in 10 (or 8.3 percent of all adults rely on cash (i.e. use cash to pay for everyday things 7 times or more per week).²²

For ease of explanation, we use 80 percent (not 88 percent) in our calculations. Given cash is used by children as well as adults, we applied the 80 percent finding to the total number of New Zealanders aged 5 years and over (4 million people).²³ We thus arrived at 4 million people impacted in some way in the event New Zealand became cashless.²⁴

The wellbeing benefits we identified arise for individuals acting in a personal or civic capacity only, not as owners or representatives of a business.

We took the approach that losing access to cash would have an adverse impact on self-reported wellbeing – in particular, leading to some reduction on the 11-point scale conventionally used to measure self-reported wellbeing.²⁵ On the scale 0 reflects a low level of self-reported well-being

²¹ Suter et al (2023a) [Costs to consumers and SMEs of a loss of access to in-person cash and banking services: Narrative report](#)

²² Reserve Bank (2024), Figure 12. [2023 cash use survey summary report](#)

²³ Statistics New Zealand (2025) [Select variables - Infoshare - Statistics New Zealand](#) Estimated Resident Population by Age and Sex (1991+), September quarter 2025.

²⁴ If, instead, we assume only those aged 18 and older are impacted by the absence of cash, 80% of this group equates to 3.3 million people impacted. This 18 percent reduction in the estimated impacted population flows through directly to the estimated wellbeing impact, reducing it from an estimated \$2.9 billion per annum to \$2.4 billion per annum.

²⁵ Refer Statistics New Zealand (2024b) [Wellbeing statistics: 2023 \(updated\) | Stats NZ](#)

and 10 reflects a high level. Self-reported wellbeing results are reported for the New Zealand population by Statistics New Zealand.²⁶

We were unable to find any empirical evidence and/or literature which directly showed the impact of access to cash on self-reported wellbeing. However, we have qualitative information about the impact of access to cash on various domains of wellbeing in New Zealand.^{27 28} From those domains we were able to make a connection to self-reported wellbeing, thus creating a connection from cash to self-reported wellbeing. We were then able, using Treasury's CBAX tool, to quantify changes in self-reported wellbeing (refer Figure 1). The CBAX gives a dollar value for changes in life satisfaction (reported as 'subjective wellbeing').²⁹

Figure 1. Identifying and quantifying wellbeing impacts from cash



Information about the importance of various domains of wellbeing for self-reported wellbeing is available in the international literature.³⁰ The next section provides more details. Appendix 1 provides further information about our research and analysis undertaken to better understand the relationship between cash and the domains of wellbeing.

The literature on the drivers of self-reported wellbeing

A large body of literature on the drivers of self-reported wellbeing (SWB) has built up over the past 50 years.³¹ The issue of what drives SWB has been looked at from i) a cross-country perspective where the aim is to explain differences in national average levels of SWB and ii) at the level of the individual (aiming to explain differences between individuals).

A consistent finding is that i) freedom to make key life decisions (perceptions of control and agency), ii) income, and iii) social connections all matter for SWB. These are also the domains we have identified as being impacted by the presence of cash (noting that, whilst not direct substitutes for each other, a generalised increase in transaction costs – due to the absence of cash as a payments option - is similar in effect to a reduction in disposable income). Undertaking generous

²⁶ Refer Statistics New Zealand (2024b) [Wellbeing statistics: 2023 \(updated\) | Stats NZ](#)

²⁷ Refer Reserve Bank of New Zealand (2021) [Future of Money - Cash system redesign - Issues paper](#)

²⁸ Refer Reserve Bank of New Zealand (2021) [Future of Money - Cash system redesign - Issues paper](#)

²⁹ Refer New Zealand Treasury (2025), lines 241 to 243 in the CBAX spreadsheet. [The Treasury's CBAX Tool | The Treasury New Zealand](#)

³⁰ An accessible introduction to this material is provided in HM Treasury, Social Impacts Taskforce (2021). [Wellbeing guidance for appraisal - supplementary Green Book guidance.pdf](#)

³¹ Hirschauer et. al. (2015) [Happiness and Utility in Economic Thought—Or: What Can We Learn from Happiness Research for Public Policy Analysis and Public Policy Making? | Social Indicators Research | Springer Nature Link](#)

acts – including donating money – is another area that can arguably be associated with cash. However, for our analysis we have not included it ('generosity' also includes volunteering time and helping a stranger).

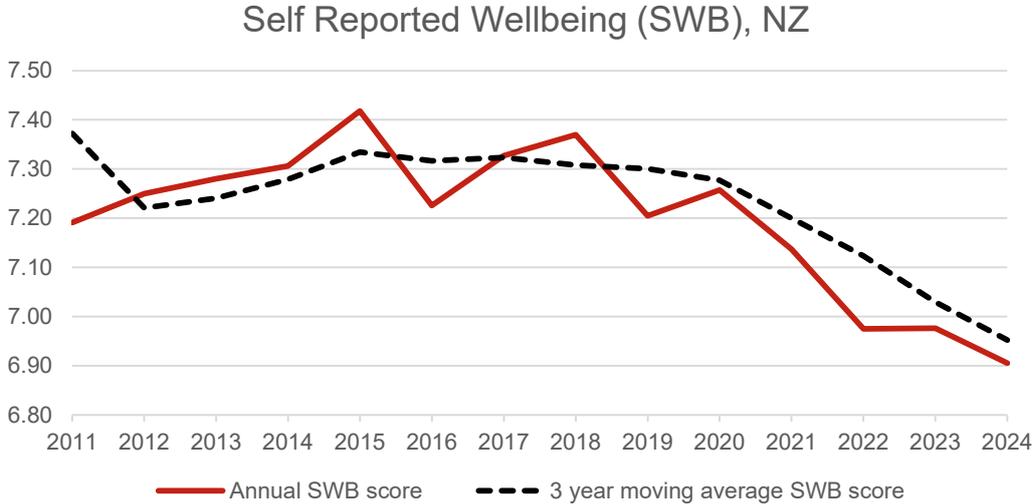
Trust in government (which we view as being similar to perceptions of corruption) is also potentially relevant for cash and a possible driver of SWB. The most recent data from the Reserve Bank Cash Use Survey (2023) reported, for example, that 8.5 percent of those who hold cash included as one of the reasons they hold cash "I don't trust the government".

We need to establish how much each domain contributes to a SWB score to understand how much impact changing cash access might have on SWB. Insights can be obtained from the annual World Happiness Reports. These reports table SWB scores for each country, calculated on a comparable basis, and attribute the final score to different domains. There are country differences in the relative contribution different domains make to SWB. The SWB score is based on a single life evaluation question known as the Cantril Ladder.

"Please imagine a ladder with steps numbered from 0 at the bottom to 10 at the top. The top of the ladder represents the best possible life for you and the bottom of the ladder represents the worst possible life for you. On which step of the ladder would you say you personally feel you stand at this time?"³²

When attributing SWB scores to different wellbeing domains, the reports use three-year moving average results. In the most recent report, for 2024, New Zealand ranks 12th globally with a three-year moving average SWB score of 6.952 points on a 11-point scale. Figure 2 presents New Zealand's results since the first data collection in 2011.

Figure 2. New Zealand's results as reported in the World Happiness Reports



Source: World Happiness Report 2025, [Home | The World Happiness Report](https://www.worldhappinessreport.com/)

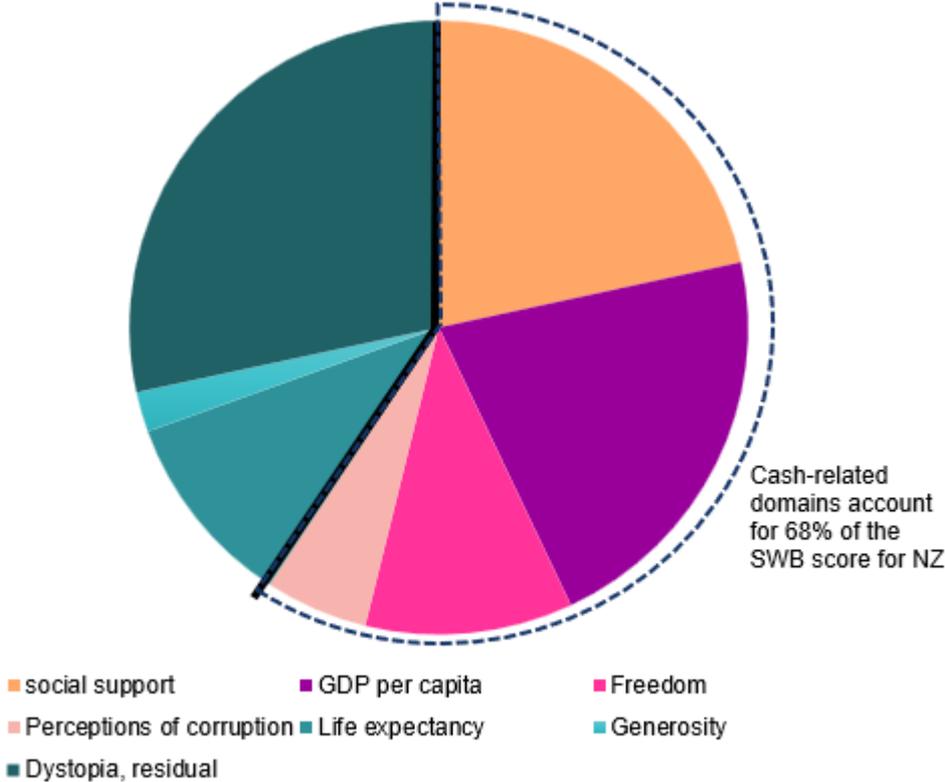
³² World Happiness Report 2025. <https://www.worldhappinessreport.com/>

The World Happiness Reports recognise six domains of wellbeing:

- Social support
- GDP per capita
- Life expectancy
- Freedom
- Generosity
- Perceptions of corruption

Based on the analysis we present in Appendix 1 our view is that, of the six domains of wellbeing four - social support, GDP per capita, freedom and perceptions of corruption - are most likely to be impacted by the presence of cash as a payment option. The 2024 results show that these four domains contributed 4.7 points towards New Zealand’s 6.952 score (i.e. 68 percent of the overall score), indicating they are important for the overall result. The largest contribution was made by social support (1.71 points, contributing 24.6 percent of the overall score, followed by GDP per capita (1.70 points, 24.4 percent), freedom (0.86 points, 12.4 percent), and perceptions of corruption (0.43 points, 6.2 percent). Figure 3 refers.

Figure 3. Contributions to New Zealand’s 3-year average SWB score reported for 2024



Source: World Happiness Report (2025a).³³

³³ Refer World Happiness Report 2025a. [Home | The World Happiness Report](#)

Arriving at an estimate of the SWB impact if cash was no longer available

Using these results, we can explore the impact of changes in these domains caused by reduced cash access. Currently we have no quantitative estimates of the sensitivity of domain scores to having cash as a payment option, so we have no alternative but to make assumptions, and to be as transparent as possible about the basis for those.

If we assume the loss of cash access would have the effect of reducing contributions to the overall SWB score by 1 percent for each of the relevant domains (income, social support, perceptions of freedom and perceptions of corruption), with no impact on the other domains, the average SWB for New Zealand would decline by 0.05 points.

If we assume the effect is larger for some drivers – say a decline of 10 percent for perceptions of freedom and the presence of social support – but again a 1 percent reduction for income, and no impact on other domains – the average SWB score falls by 0.3 points.

Our \$2.9 billion per annum estimate of the benefits of cash is based on a drop in the SWB score of 0.1 points in the event New Zealand became cashless. This is equivalent to assuming going cashless reduces the contribution to the overall SWB score from social support by 2.5 percent, from perceptions of freedom by 5 percent, from income by 0.5 percent and from perceptions of corruption by 0.5 percent and has no impact on other domains.

To put these assumptions in context, compared to the results reported for 2019, the contributions made by social support and freedom to choose have increased by 15 percent and 33 percent respectively. Given the scale of changes possible in these domains, our assumptions in the event New Zealand loses all access to cash seem very conservative. Table 4 refers.

Table 4. Actual and assumed contributions to New Zealand’s SWB score

Domains of wellbeing	Points contributed in 2024	Points contributed in 2019	% change between 2019 and 2024	Cashless scenario (c.f. 2024 results)
Social support	1.712	1.487	15%	1.669 (-2.5% c.f. 2024)
Income (log of GDP per capita)	1.698	1.242	37%	1.690 (-0.5% c.f. 2004)
Freedom to choose	0.861	0.647	33%	0.818 (-5.0% c.f. 2004)
Healthy life expectancy	0.815	1.008	-19%	0.815 (no change)
Perceptions of corruption	0.429	0.461	-7%	0.427 (-0.5% c.f. 2004)
Generosity	0.167	0.326	-49%	0.167 (no change)
Other	1.270	2.128	-40%	1.270 (no change)
Total SWB score for NZ	6.952	7.300	-5%	6.856 (-1.4% c.f. 2004)

We're hopeful that in time research will be available, from New Zealand and elsewhere, that provides quantified estimates of the sensitivity of SWB scores to cash access. Such research would provide a useful complement to the analysis we report in Appendix 1.

New Zealand Treasury's CBAX values.

Treasury has quantified changes on the self-reported wellbeing scale. Treasury publishes three values for the annual per person dollar impacts of a 1-point change on the 11-point wellbeing scale. The lowest value is \$7,343 per person per annum, the medium value is \$16,784, and the high value is \$26,225.³⁴

We assumed a 0.1 reduction in self-reported wellbeing in the event New Zealand becomes cashless and, wanting to be conservative in our estimates, used the lowest of the three values provided by Treasury. We thus had 4 million people impacted to a value of \$734 per person per year, which means an aggregate wellbeing impact of \$2.9 billion per annum.

We think this is a conservative estimate for a further reason. The self-reported wellbeing impacts for those people who *rely* on cash (1 in 10 among the 4 million, or around 400,000 people) would likely be higher than the \$734 per annum value we assigned for everyone.

Conclusion

Seigniorage, output and wellbeing impacts are each a distinct type of benefit and so should be added together to arrive at an overall estimate of the benefits of cash. In other words, the benefits attributable to cash are much greater than any single estimate we present here. However, in the interests of being conservative, we present our estimates of each benefit individually, as if each is the only benefit cash creates.

After considering the issue from multiple perspectives, our view is that cash generates significant positive net benefits for New Zealand. Table 5 refers.

³⁴ New Zealand Treasury (2025). Refer to lines 241 to 243 in the CBAX spreadsheet. [The Treasury's CBAX Tool | The Treasury New Zealand](#)

Table 5. Monetised estimates of the net benefits of cash per se

Benefit	How it was monetised	Estimated value
Seigniorage	Accounting conventions	\$397 million per annum
Productivity benefits for small business	% of small businesses who self-report an impact, assume 0.5% reduction in multifactor productivity	\$600 million per annum
Impact on wellbeing – ‘willingness to pay’ (not a formal willingness to pay study)	Kantar deliberative workshops (March 2021), using 2018 Census income distribution, updated using CPI	\$437 million per annum
OR monetising potential self-reported wellbeing impacts on the 80 percent of people aged 5 and over. ³⁵	OR Connecting cash to domains of wellbeing, NZ results in World Happiness Surveys, Treasury’s CBAX tool.	OR \$2.9 billion per annum

³⁵ If, instead, we assume only those aged 18 and older are impacted by the absence of cash, 80% of this group equates to 3.3 million people impacted. This reduction in the estimated impacted population flows through directly to the estimated wellbeing impact, reducing it from an estimated \$2.9 billion per annum to \$2.4 billion per annum.

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Appendix 1. Understanding the relationship between cash and the domains of wellbeing

Our use of user narratives

The Reserve Bank's work on the future of cash began in 2018.³⁶ Since 2018 we have met with many community service providers and other groups and discussed how their clients and members are impacted by reduced cash access. Our engagement has been broad and included agencies such as the Ministry for Social Development, the Citizens Advice Bureau and FinCap who provide or fund budget advisers and financial mentors, service groups who assist ex-prisoners upon release, Women's Refuge, collectives representing sex workers, disabled persons representatives, iwi representatives, and Age Concern.

These conversations provided insights about the complexity of peoples' lives and how access to cash helps with managing and surviving that complexity. Some of these insights were reported in Appendices 2 and 3 to the 2021 Reserve Bank public consultation document Future of Money – Cash System Redesign.³⁷

Exploring user narratives in detail is an approach Money and Cash Directorate ('M&C') relies on and continues to develop. More recently we expanded our engagement to include merchants, and we have also embedded service design specialists into our policy work to build out our narrative-based analysis.

We believe user narratives are a helpful tool for understanding the potential costs and benefits of policy interventions and other environmental changes that impact on the decisions households make when they enter into an exchange in markets and non-market (social, cultural) contexts.

These narratives should be considered alongside other analytical tools such as modelling economic agents acting in markets.

In our view, based on our research and analysis to date, the narratives are particularly important in the case of interventions (or scenarios) that alter the type-of-money options faced by households. This is because conventional economic models only lead to relevant insights if certain conditions are met (for example, if there are market failures present, the models need to take account of this explicitly if they are to produce valuable insights).

The first complication is that money enables exchanges in non-market settings. These exchanges are analogous to making purchases in markets and investing (in the non-market case, one is building social capital, rather than financial capital). Figures A1.1 and A1.2 refer. However, this non-market activity is omitted from official measures of output (gross domestic product or 'GDP'). Hence the impact of changes in money options in these non-market settings will be overlooked if one is limited to considering the impacts through the narrower lens of conventional measures of output which are based on market-based exchange.

³⁶ Reserve Bank of New Zealand (2018) [The future of cash in New Zealand - An internal project research report \(rbnz.govt.nz\)](#)

³⁷ Reserve Bank of New Zealand (2024) [Future of Money - Cash system redesign - Issues paper \(rbnz.govt.nz\)](#)

Figures A1.1 and A1.2 illustrate how cash contributes to valuable output that is not captured in GDP estimates.³⁸

Figure A1.1 Cash enables non-market 'production' as well as measured market production

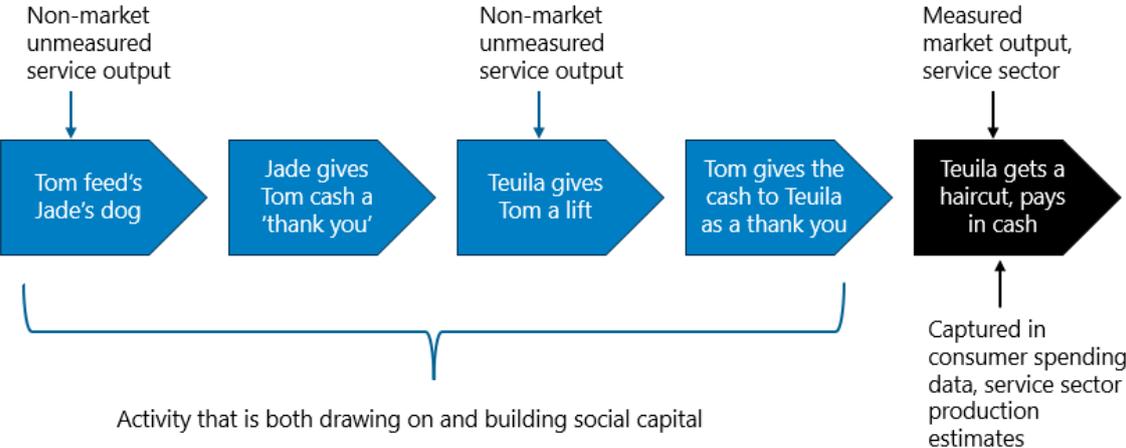
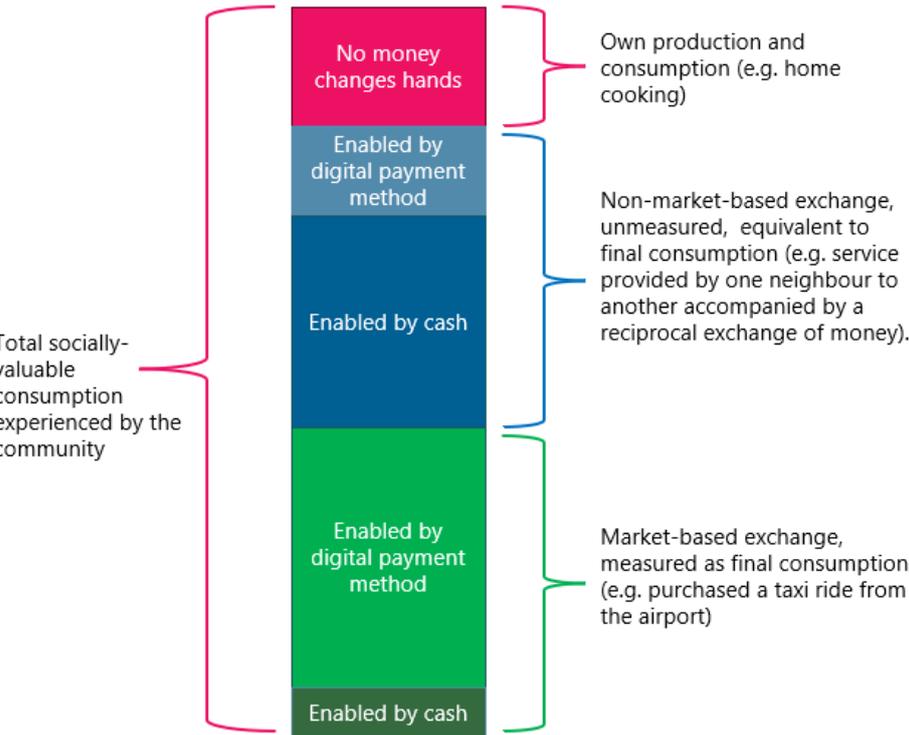


Figure A1.2



The second complication is that, unlike market purchases of goods and services, where conventional economic models are applied, the societal impact of one household's decision to use a given type of money for a market-transaction is not fully captured by that decision. Network externalities arise. For example, the more one household uses one type of money the more likely it

³⁸ An accessible introduction to this topic is provided by Stiglitz, J.E., Sen, A. and Fitoussi, J. (2009 and 2009a). Report of the commission on the measurement of economic performance et social progress and The measurement of economic performance and social progress revisited.

is other households will be able to use it. Unlike conventional markets, the systems that provide money have the characteristics of 2-sided markets and would need to be modelled as such.

The third complication is that the use of money is constrained by the availability of infrastructure that distributes it. If the infrastructure is inadequate preferences cannot be realised. Historically (and still predominantly today) cash infrastructure is not provided on a for-profit basis (i.e. accompanied by direct user charges) but is integral to the 'private money' proposition made to customers by banks (the proposition being that private money balances can be converted to cash on demand without any loss of value for the customer). In other words, the systems that underpin the distribution of cash have the characteristics of a public good. Such goods, if left to the market, are typically under-supplied relative to what is societally optimal.

- Given demand for cash for use in payment is supply-constrained, the rates of usage we observe and/or record are not synonymous with demand (the household's money choice has been constrained).
- Public research confirms the public value cash an option, not using the option on a day-to-day basis does not negate its perceived value.

The following constructed narrative provides an illustration of the approach, and the insights it generates.

Illustration: Mary.

Currently:

Mary is 85. Her eyesight, while always sound, has recently deteriorated to such a degree she is legally blind. She is otherwise physically well. Mary has short term memory issues, and experiences short-lived confusion especially when stressed. While otherwise cognitively able, Mary finds planning more than a day ahead somewhat of a challenge. Mary lives alone in her own and her daughter lives 30 kms away. Mary has a contract with Spark but excludes broadband (being vision impaired reduces the value of it).

Mary's large utility bills and rates are paid automatically by direct debit. Mary currently goes to the bank once a fortnight to withdraw the remaining balance of her government-provided income in the form of cash. Mary cooks for herself and shops for groceries daily. Mary's daily shopping trip has social and cultural elements (meeting friends, visiting library, making charitable donations).

The scenario - All dispensing of cash ceases in town.

The only way Mary can now access her govt-provided income is using a payment-card. Mary cannot read the information on a point-of-sale terminal – she must rely on the shop assistant telling her the amount she has to pay. She has no option but to use a PayWave card to pay. This has a maximum value cap on each transaction and incurs a user charge.

The only way Mary can establish the balance of money available to her at the start of each day is to ring the 0800 number at the bank, which can take a long time to connect. Once out shopping she must mentally record how much she has spent so she isn't embarrassed at the till with declined funds. Mary becomes increasingly anxious about shopping and begins to dread what used to be an enjoyable daily event.

The response

Mary's daughter Jen begins to do Mary's shopping for her, taking Mary's PayWave card to pay. Jen can't go shopping every day so must buy enough groceries for Mary for the week. The mix of things bought starts to only partially meet Mary's needs because of Mary's inability to plan more than a day ahead (the weekly list she gives Jen is imperfect).

The impact

The quality of Mary's meals begins to decline, due to her inability to accurately instruct her daughter as to the weekly shopping. There is both under and over-ordering of food. More must be spent on food, but the quality of Mary's meals declines (there is more wastage).

Preparing meals becomes a new source of stress.

Mary must hand over her PayWave card to Jen. Even if Jen is completely honest any discrepancies in the amount of money available may become a source of tension between Mary and Jen.

Mary may be subjected to financial abuse by Jen.

With no reason to go shopping, more spent on everyday groceries, and with less confidence, Mary goes out less. She ceases buying the treats that used to be part of her daily outing. She can afford less electricity as her food bills have increased.

Mary no longer eats as well, has less social stimulation, and is anxious in situations that were once enjoyable. Her physical and mental health declines.

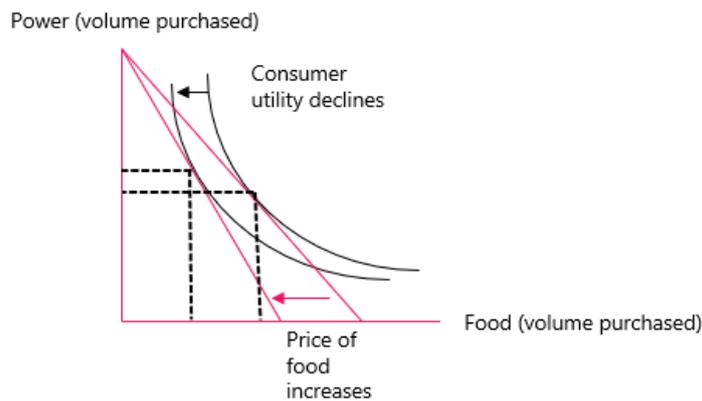
Mary's quality of life has declined considerably.

Conventional economic analysis

Conventional economic analysis can be used to assess some of the impacts on Mary in the event cash is no longer available.

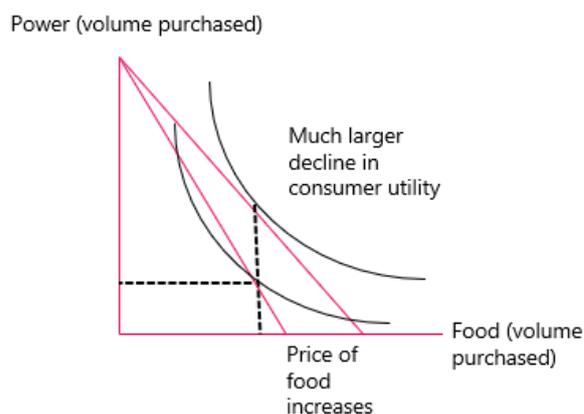
- Mary's need for groceries continues to be met in the absence of cash.
- There is some food wastage now, which means Mary gets less meaningful food for the amount spent (equivalent to an increase in price).
- Given Mary's budget is fixed, she enjoys less utility from her income (her wellbeing declines) (refer Figure A1.3).

Figure A1.3



If Mary's demand for food is inelastic (and this is likely - she cannot eat less despite the price increase) her utility decline is far greater from the price increase than would otherwise be the case (refer Figure A1.4).

Figure A1.4



Conventional economic models show that the move to cash both reduced Mary's overall consumption of goods and services (as seen by the volume adjustments) and reduced her level of utility from market goods. The driver behind these outcomes was friction/inefficiencies in ordering/increased food wastage generated by Mary's inability to order accurately when faced with a 1-week shop, which in turn followed on from her loss of access to cash. The market impacts experienced by Mary are compatible with a subsequent decline in Mary's mental and physical health.

The conventional economic models provide an incomplete picture

However, the models outlined above underestimate the impact on Mary from the loss of cash. In addition to reducing what she consumes, and suffering a consequent loss of utility, Mary:

- Is at greater risk of experiencing family conflict
- Is at greater risk of feeling ashamed in public (having an insufficient balance)
- Is less able to build social relationships and thus social capital

- Is at greater risk of being subject to financial abuse, and
- Loses her sense of agency as she has become dependent on others for what she could otherwise do herself.

Mary's narrative indicates the impacts from loss of access to cash should be considered across multiple domains, namely:

- Physical and mental health, which, in turn, reflect impacts on:
 - Access to food, electricity, shelter
 - Family relationships and social capital
 - Cultural values, and
 - Sense of agency, dependency.
- Disposable income, which in turn reflects impacts on:
 - Labour market status and stability, and
 - The costs involved in getting essential goods.