BANKS AND THE ECONOMY:
EVIDENCE FROM THE IRISH BANK STRIKE OF 1966

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Banks and the Economy:

Evidence from the Irish Bank Strike of 1966*

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Abstract

This paper studies a natural experiment in macroeconomic history: the Irish bank strike of 1966, which led to the closure of the major commercial banks for three months. We use synthetic control to estimate how the economy would have evolved had the strike not happened. We find that economic activity slowed, deviating by 6% from the counterfactual path. Narrative evidence not only supports this finding, but also depicts the struggles of households and firms managing a credit crunch, a liquidity shock, and rising transaction costs. This case study highlights the importance of banks for economic performance.

Keywords: Banks, Ireland, macroeconomy, post-war.

JEL Classification: E32, E44, G21, N14, N24.

1   Introduction

At 3 p.m. on 5 May 1966, the doors of the major commercial banks in Ireland closed (*Evening Herald*, 5 May 1966). As a result of a strike over pay, the banks did not open again until 5 August 1966. This was neither the beginning nor the end of the breakdown in industrial relations. In December 1964, there were reports of an imminent strike, which "threatened complete stoppage" of the banking system, triggering a run (*Irish Times*, 21 April 1966). Strikes returned to the banks in 1970 and 1976.

Figure 1 shows the totality of the strike in 1966, as more than 99% of commercial bank branches closed. No banks remained open beyond a handful of small institutions in Cork, Dublin, and Limerick and savings banks, which accepted deposits but did not lend to households or firms. Was the bank strike a macroeconomic blip or disaster?

Although this natural experiment quasi-randomly assigns the treatment, we still need a control. To estimate a counterfactual island that does not experience the strike but otherwise resembles the Irish economy, we use synthetic control, which constructs a doppelgänger that is a weighted average of peer economies. The treatment effect is the difference between the actual and counterfactual path of economic activity after the strike.

We find that the bank strike was a significant macroeconomic shock. Although the actual and counterfactual economies closely tracked each other at first, the two diverged after the panic over a potential strike in the last quarter of 1964: the Irish economy stagnated, while the counterfactual continued on an upward trend. The gap peaked at 6.1% during the strike and was not closed until 1969. In the interval between run and strike, banks and the public became more risk averse, so that credit growth flatlined. When the banks closed, there was an acute shortage of cash and credit, which raised transaction costs and impaired the functioning of markets. In the absence of formal credit intermediation through banks, there was substitution to micro credit via cheques, which possibly prevented a larger macroeconomic disaster.

Figure 1: *The Geography of the Bank Strike*
Panel A. Open Commercial Bank Branches: Before the Strike
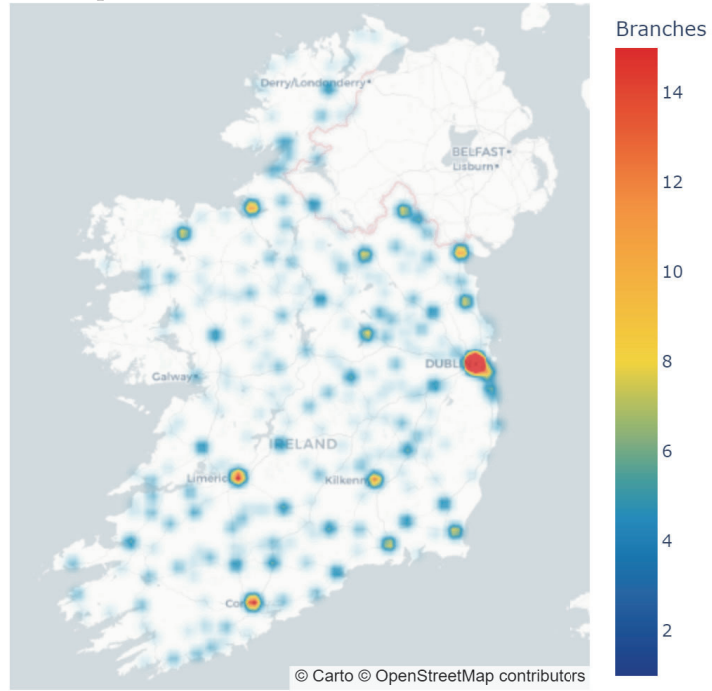
Panel B. Open Commercial Bank Branches: During the Strike
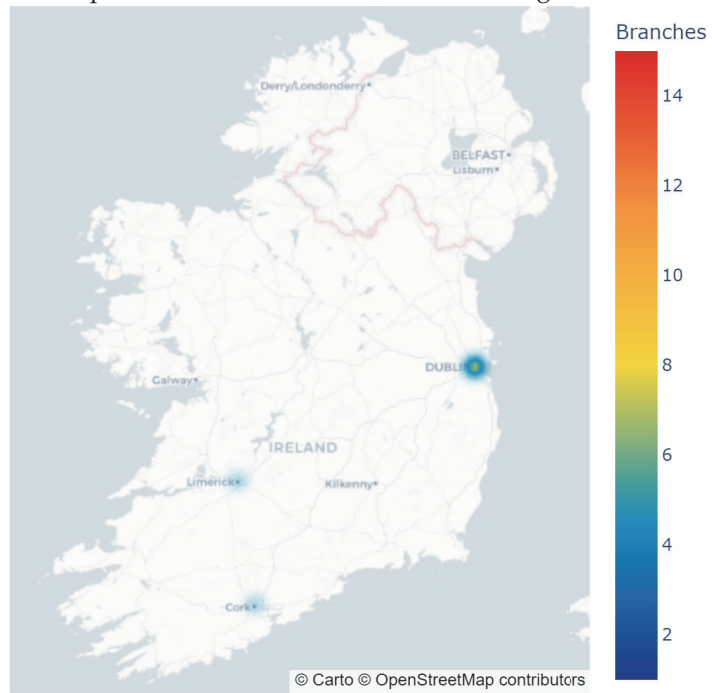
Notes and sources: Calculated from the *Bankers' Almanac and Year Book* (1966).

Our results challenge the standard narrative that the Irish economy survived without banks (*Economist*, 13 August 1966; *Financial Times*, 3 July 2015; *Independent*, 12 July 2015). Although losses were limited and the level of economic activity was preserved, in the context of consistent high growth, the correct reference point is the higher level that would have prevailed if the strike was avoided. Judged against this counterfactual, this is a dismal episode of lost growth as labour and capital were used unproductively to obtain, transport, and secure cash and credit that otherwise might have been more efficiently employed.

As natural experiments are rare, this episode can help to shed light on the fundamental relationship between banks and the economy. Although bank strikes are unusual shocks, they precipitated runs and closures, which are of more general interest. Runs are a common feature and amplification mechanism of banking crises (Reinhart and Rogoff, 2009; Baron et al., 2021), from the Panic of 1907 to the Global Financial Crisis. Closures are also standard features of banking crises that result in lost expertise, information, and relationships, increasing the cost of credit intermediation (Bernanke, 1983b; Reinhart and Rogoff, 2009). Closures may be temporary, such as bank holidays or suspensions, or permanent, such as failures, of which there was masses of both during the Great Depression (Friedman and Schwartz, 1963).

Outside of an experimental setting, estimating the causal effects of runs and closures is complicated. The first challenge is that these events are often caused by bad fundamentals, so that exogenous variation is relatively rare. Failing to account for this endogeneity is likely to bias the estimated costs up. The second challenge is that policy often responds to these events with bailouts, lending of last resort, and monetary and fiscal policy. These policies, designed to limit the damage, are likely to bias the estimated costs down.

The existing literature has confronted these challenges to greater and lesser extents. One strand has studied correlations, regressing economic outcomes on measures of financial instability (Jordà et al., 2013; Romer and Romer, 2017). Another strand has documented causal effects using the narrative approach, which uses contemporary newspaper reports to distinguish between plausibly exogenous and endogenous episodes (Jalil, 2015; Kenny et al., 2021). However, there is a high bar for rigorous narrative analysis, such as a source

that is real-time and accurate and classification that is consistent and dispassionate (Romer and Romer, 2023).

This paper also connects to several other strands of existing research. One is the growing literature studying natural experiments in macroeconomic history, such as the diminutions in eighteenth-century France (Velde, 2009), the discovery of precious metals in the Americas during the early modern period (Palma, 2021), or the maritime disasters in the Spanish Empire (Brzezinski et al., forthcoming). These papers not only improve our historical understanding, but also provide causal evidence on fundamental questions in macroeconomics.

The other relates to the Irish bank strikes. There is a puzzling disconnect between general interest – with coverage in broadsheets (*Financial Times*, 3 July 2015; *Independent*, 12 July 2015), radio programmes (*BBC Radio 4*, 11 November 2022), and leading textbooks (CORE, 2017) – and the limited scholarship on the strikes. The classic study is by Murphy (1978), who noted that the strikes of 1966, 1970, and 1976 were associated with temporary shortfalls in retail sales. A recent study is by Krueger (2018), who focuses on the strike of 1970, concluding that the effects were limited but that the absence "of a proper settlement mechanism implied that risks were rising for almost all transactors." However, as neither study uses modern cliometric methods, there is value in revisiting the economic consequences.

The paper is structured as follows. Section 2 sets out the historical context. Section 3 explores the economic costs of the bank strike. Section 4 provides narrative evidence. Section 5 concludes.

2   Historical Context

A   The Economy

The economic outlook was more promising in the early 1960s than at any time since political independence (Ó Gráda and O'Rourke, 1996; Honohan and Walsh, 2002). Between 1961 and 1966, net emigration was lower than any inter-census period since 1922 (Ó Gráda and

O'Rourke, 2022). Consumer price inflation was moderate at 4.2% per year between 1960 and 1965 (Central Statistical Office, 2023). Average unemployment reached a post-war low of 5.6% in 1965 (Department of Industry and Commerce, various).[1] Overall, the economy grew at 3.6% per year between 1960 and 1965, which surpassed any other five-year interval since independence (Central Statistical Office, 1979).

Turning to the financial system, the Irish banking sector had been a "byword for stability" (Ó Gráda, 2012), having experienced no major crisis since the Munster Bank failure in 1885, and it would not be hit by another until 2008. Monetary stability was also a consistent feature of the Irish economy. Since political independence in 1922, the Irish pound had remained within the sterling zone, fixed at parity to the British pound under a de facto currency board that lasted until 1979. As well as contributing seigniorage, the currency board provided financial and macroeconomic stability (Honohan, 1994).

Despite these positive trends, the 1960s saw a marked deterioration in industrial relations. 1966 suffered the highest amount of work days lost to strikes since 1937 (Brannick et al., 2000). In terms of lost work days, the bank strike in 1966 was, by some margin, the most substantial strike that year. It involved 7,800 workers and accounted for between 67-75% of the days lost to strike action in commerce and between 37-45% of strike days in all sectors, despite lasting only 12 weeks.[2]

B   The Bank Strike

The origins of the strike extend back to December 1964, when the Irish Bank Official Association (IBOA), which represented bank employees, rejected the pay award recommendations of an external arbitration board (Fogarty, 1971, pp. 147-8). This raised the likelihood of a strike and the suspension of banking services, resulting in a panic and a run on deposits that lasted for several days around the country (*Irish Examiner*, 5 December 1964). However, the subsequent "announcement that settlement talks had been arranged in the

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[1]Proxied by mid-month percentages of insured persons on the live register.
[2]The upper bound of these estimates assumes that the bank strike accounted for all lost work days in the commercial sector. The lower bound assumes that the bank strike accounted for 90% of all lost work days in the commercial sector.

bank officials' pay dispute brought an easement of the general situation" (*Irish Press*, 5 December 1964). The agreement created "new dispute machinery in the form of a Joint Industrial Council (JIC) to replace the negotiations, conciliation and arbitration procedure," between the IBOA and the Irish Banks Staff Relations Committee (IBSRC), the negotiating body of the Associated Banks. No alterations to salaries were made (Fogarty, 1971, pp. 147-8) and "feelings simmered in the Association [IBOA]" (*Irish Times*, 22 April 1966) when another claim for a pay increase was referred to, and ultimately rejected by, arbitrators in 1965 (Fogarty, 1971, pp. 147-8).

During the first months of 1966, the IBOA continuously lobbied for a 22% salary increase at entry level (*Irish Examiner*, 30 April 1966) and an all-round status increase of 7% in the Republic and 11% in Northern Ireland (*Irish Times*, 22 April 1966). The IBOA stated that the objective of the demand was "to restore their [bank officials] position in the community" (*Irish Independent*, 23 April 1966), emphasising that the current starting salary was inadequate for bank officials who may have to live away from home. When talks broke down, strike action was endorsed on 21 April by the IBOA and two weeks' notice was served to the Associated Banks. On 29 April 1966, the Irish Banks' Standing Committee (IBSC) and the Northern Ireland Bankers' Association (NIBA) published notice to all customers on both sides of the Irish border that strike action would likely "come into effect on and from Friday, 6th May 1966." It continued that "if the threatened strike takes place, the Banks will be unable to provide banking services and will be compelled to close." While neither the strike notice served by the IBOA nor the customer warning issued from the Associated Banks guaranteed a strike, it was apparent in the first week of May that "the difference between the IBOA and the IBSRC remains so wide that it would be virtually impossible to bridge it today or tomorrow" (*Irish Times*, 4 May 1966).

The Associated banks affected by the strike were Bank of Ireland, Belfast Banking Company, Hibernian Bank, Munster and Leinster Bank, National Bank of Ireland, National City Bank, Northern Bank, Provincial Bank of Ireland, Royal Bank of Ireland, and Ulster Bank (*Irish Examiner*, 29 April 1966; *Belfast Newsletter*, 29 April 1966). Accounting for 829 of 836 commercial bank branches in Ireland in 1966, the Associated Banks were the major inter-

mediators of credit to households and firms (*Bankers' Almanac and Year Book*, 1966). The Non-Associated banks, "an amalgam of merchant and North American banks" (Murphy, 1978), had 7 branches (*Bankers' Almanac and Year Book*, 1966), were not organized by the IBOA (Fogarty, 1971, p. 106), and remained open during the strike.

The dispute of 1966 was initially referred to as a "selective strike" (*Irish Times*, 21 April 1966) as it primarily concerned employees who had entered service after 1 January 1959 (those with less than seven years of service). However, as the IBSC acknowledged, "as 3,400 officials out of a total of 7,800 are in this category, a complete disruption of business must inevitably and immediately follow" (*Irish Examiner*, 29 April 1966). Contemporary observers recognised that while bank salaries were "high for the senior officials, for the first eight years of service salaries are not high" (*Irish Times*, 21 April 1966). Nonetheless, these salaries compared well to other clerical starting salaries at the time and recent pay increases "at the lower end had been proportionately much higher than the cost-of-living increase and the proportion increase at the higher end" (*Irish Times*, 21 April 1966). While the remaining 4,400 workers were instructed by the IBOA to attend to their duties as usual, the banks fully closed as they had warned and attempted to lay off the remaining workers not on strike (*Irish Examiner*, 4 May 1966). This caused a further dispute, as the IBOA questioned the legality of this move, claiming that willing workers had been "locked out" and dismissed with insufficient notice according to their employee agreements (*Irish Examiner*, 4 May 1966).

C   Resolution

Northern Ireland's strike was resolved relatively quickly – within a month – as the Belfast parliament (Stormont) intervened in the dispute. In the Republic, however, responsibility for resolving the dispute between the IBOA and the IBSRC remained with the JIC (as established by the Agreement of December 1964). The contrast in outcomes resulted in persistent political pressure from opposition in the Dublin parliament (Dáil) to override the official procedure, which the government consistently resisted (Dáil Éireann Debates,

17 May 1966; 7 June 1966; 14 June 1966). The Minister for Industry and Commerce, Dr Patrick Hillery, referred to the fact that "negotiations are in progress: these should be let run their course" (Dáil Éireann Debates, 14 June 1966).

By late July, there was hope that the bank strike was coming to an end. On 20 July, the IBOA met and decided to put the proposals that emanated from Labour Court negotiations between the two parties to a membership ballot (*Irish Times*, 20 July 1966). Two days later, the IBOA and IBSRC met at the Labour Court to discuss "a number of relatively small points [...] that would arise normally following a resumption of work" and it was "generally felt that the strike is now nearly over" (*Irish Times*, 22 July 1966). Though the IBOA voted in favour of the proposals, it was by a narrow majority, with particular opposition coming from junior members (*Irish Press*, 30 July 1966). The settlement was announced by the IBSC Secretary, Richard Brennan, on 29 July 1966 (*Irish Press*, 30 July 1966). The IBOA instructed its members "who serve in the Republic of Ireland to resume duty on Wednesday August 3rd at the usual starting time" (*Irish Times*, 30 July 1966). The banks reopened to the public with limited opening hours on 5 August and normal service returned from 10 August (*Evening Echo*, 29 July 1966).

The agreement resulted in the introduction of new salary structures and a percentage increase that exceeded the raise of "the £1 of the 10th round" [national wage agreement] (Fogarty, 1971, p. 148). Bank officials received an immediate salary increase of at least 7.5% in all cases with a further 3.5% from 1 April 1967, as well as "improved promotional prospects for women and junior officials" (*Irish Press*, 30 July 1966). The major structural change flowing from the settlement was that salary scales were revised into six separate and transparent stages, classified by seniority and occupation. Ironically, those who "fared worst were the most junior officials, who were the most deeply involved" (*Irish Times*, 30 July 1966). However, the promotional prospects for junior officials were "dramatically improved" (*Irish Times*, 30 July 1966). The senior officials who had been locked out in May received between 67% and 80% of their salary, depending on entitlement to overtime (*Irish Times*, 30 July 1966). The terms achieved in the Republic were also offered to Northern Ireland's bank officials, whose status had been established by parliamentary intervention

in June (*Irish Times*, 30 July 1966).

3 Statistical Evidence

We now turn to an assessment of the economic fallout associated with the bank strike of 1966. As Figure 1 showed, the strike was not far from a total blackout, so there is little cross-sectional variation to exploit. Therefore, we use synthetic control, which is ideally suited to the setting, given the intervention affects a single unit at a single point in time.

A Synthetic Control

To begin our discussion of the methodology, we introduce the potential outcomes framework (Rubin, 1974). The treatment effect, $\tau_{1t} = Y_{1t}^I - Y_{1t}^N$, is the difference between two objects. The first is is the potential response with intervention, Y_{1t}^I, which is observable. Returning from the general to the specific case of the bank strike, this is an actual economic outcome in Ireland. The second is the potential response with no intervention, Y_{1t}^N, which is unobservable. Relating back to the bank strike, this is a counterfactual economic outcome in Ireland. The subscripts 1 and t index Ireland and time respectively.

As Y_{1t}^I is observable, the goal is to estimate Y_{1t}^N. To do so, we use synthetic control, which constructs a counterfactual as a weighted average of units in a donor pool:

$$\hat{Y}_{1t}^N = \sum_{j=2}^{J+1} \omega_j Y_{jt} \tag{1}$$

where ω_j are weights that are non-negative, $\omega_j \geq 0$, and sum to 1, $\sum_{j=2}^{J+1} \omega_j = 1$, and j indexes units in the door pool, $j = 2, \ldots, J+1$.

An important question is how to estimate the weights, ω_j. The standard approach is to use constrained optimization to minimize:[3]

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[3]See, for example, Abadie and Gardeazabal (2003), Abadie et al. (2010), and Abadie (2021).

$$\left[\sum_{h=1}^{k} v_h \left(X_{h1} - \sum_{j=2}^{J+1} \omega_j X_{hj} \right)^2 \right]^{1/2} \tag{2}$$

X_{h1} is a "characteristic" of the Irish economy before treatment. $\sum_{j=2}^{J+1} \omega_j X_{hj}$ is the synthetic control estimate of the characteristic, which is a weighted average of units in the donor pool. Therefore, equation 2 selects weights that minimize the squared difference between Ireland and the synthetic control, summed over each characteristic, $h = 1, \ldots, k$. The characteristics are selected and weighted based on their "predictive power" of the outcome (Kaul et al., 2022).[4]

There are three key assumptions of synthetic control. The first is that no other units receive the treatment. The Bretton Woods era is well-known for the absence of bank instability – no major chronology records a banking crisis in our sample of economies in the 1960s (Reinhart and Rogoff, 2009; Schularick and Taylor, 2012; Bordo et al., 2014; Baron et al., 2021).

The second is no interference, which requires that treatment in one unit does not affect outcomes in other units (Abadie, 2021). As a small economy, it is unlikely that events in Ireland have significant international spillovers.

The third is no anticipation, which could lead to bias if forward-looking agents react in advance of the treatment (Abadie, 2021). As a strike is often the last resort once all else has failed, it was not a complete surprise in May 1966. In contexts of anticipation, Abadie (2021) recommends to "backdate the intervention in the data set to a period before any anticipation effect can be expected, so the full extent of the effect of the intervention can be estimated." Therefore, we assign the treatment date to 1964:IV, when rumours of a strike surfaced, sparking a run.

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[4]The `synth` command in Stata "uses a data-driven regression based method to obtain the variable weights contained in the v-matrix. This method relies on a constrained quadratic programming routine, that finds the best fitting ω-weights conditional on the regression based v-matrix" (Abadie et al., 2011).

B Data

As inputs, data is needed for an outcome and for matching covariates. The outcome is GDP at constant prices, which is available from the OECD (2023) since 1960:I for a panel of advanced economies. The data is quarterly and is seasonally-adjusted at source.

The covariates are investment/GDP, hours, human capital, total factor productivity, exports/GDP, and imports/GDP, which have a clear relationship with economic performance and have been included in other papers in macroeconomics using synthetic control (Abadie et al., 2015; Born et al., 2019). The data is available on an annual basis from the Penn World Table for many economies since 1950 (Feenstra et al., 2015).[5] We also include lags of the outcome, GDP at constant prices, as covariates. The covariates are observed one year before the intervention, which is 1963 for annual data and 1963:IV-1964:III for quarterly data.[6] Table 1 summarizes the data.

Linking the two data sets results in a sample of 20 OECD economies that form the donor pool: Australia, Austria, Belgium, Denmark, Finland, France, Germany, Greece, Italy, Japan, Korea, Mexico, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland, United Kingdom, and United States. The sample is 1960:I to 1969:IV.

C Striking Effects

We now turn to the economic costs of the bank strikes. The first step is to compare the economies of Ireland and the doppelgänger. Table 2 reveals a close resemblance for most characteristics: hours, human capital, total factor productivity, exports/GDP, and imports/GDP. The match is looser for investment/GDP as Ireland had a low investment rate compared to peer economies. However, the algorithm assigns investment/GDP very little weight (0.01%), placing more weight on variables with greater predictive power.

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[5]The Penn World Table carefully combines series from a variety of sources and is widely used in macroeconomics (see, for example, Jones and Klenow (2016), Fajgelbaum et al. (2017), and Dvorkin et al. (2021)).

[6]We include some but not all pre-intervention observations of the outcome, as recommended by Kaul et al. (2022).

Table 1: *Data Sources*

Variable	Source	Frequency	Description
Outcome			
GDP	OECD (2023)	Quarterly	Constant prices and seasonally adjusted at source (1960:I=1)
Covariates			
Investment/GDP	Feenstra et al. (2015)	Annual	Share of gross capital formation at current PPPs
Hours	Feenstra et al. (2015)	Annual	Average hours worked per worker per year
Human capital	Feenstra et al. (2015)	Annual	Human capital index, based on years of schooling and returns to education
Total factor productivity	Feenstra et al. (2015)	Annual	Total factor productivity level at current PPPs (USA=1)
Exports/GDP	Feenstra et al. (2015)	Annual	Share of merchandise exports at current PPPs
Imports/GDP	Feenstra et al. (2015)	Annual	Share of merchandise imports at current PPPs

Table 2: *Matching Covariates*

	Ireland	Doppelgänger
Investment/GDP	0.18	0.29
Hours	2,313	2,008
Human capital	2.30	2.52
Total factor productivity	0.70	0.69
Exports/GDP	0.17	0.18
Imports/GDP	0.32	0.29

The next step is to explore the composition of the doppelgänger. Table 3 shows that the

doppelgänger is made up of five European economies: Norway (57.9%), United Kingdom (18.1%), Italy (12.3%), Austria (10.7%), and Portugal (0.9%). These economies are similar to the Irish economy along the dimensions reported in Table 2 by design.

The table highlights some key properties of synthetic control over other methods (Abadie, 2021): (1) Transparency. This is an advantage over regression, where the weights are often implicit. (2) Sparsity. Relative to regression, fewer units receive non-zero weight. (3) Objectivity. This compares to traditional case studies, where the selection of comparators can be subjective.

Table 3: *The Composition of the Doppelgänger*

Economy	Weight	Economy	Weight
Australia	0	Korea	0
Austria	0.107	Mexico	0
Belgium	0	Netherlands	0
Denmark	0	Norway	0.579
Finland	0	Portugal	0.009
France	0	Spain	0
Germany	0	Sweden	0
Greece	0	Switzerland	0
Italy	0.123	United Kingdom	0.181
Japan	0	United States	0

The last step is to plot the results. Figure 2 compares the actual and counterfactual path of economic activity. Before news of the strike, the Irish economy – the green line – was steadily advancing at an average annual growth rate of 4.1% between 1960:I and 1964:III. The doppelgänger – the blue line – maintained pace. After the news, however, the economy stagnated, slumping to an average annual growth rate of 0.9% between 1964:IV and 1966:III, while the doppelgänger continued on its earlier trajectory. When the strike was over, the Irish economy rebounded, returning to the doppelgänger at the beginning of 1969.

Figure 3 reports the treatment effect of the bank strike: the deviation of the Irish eco-

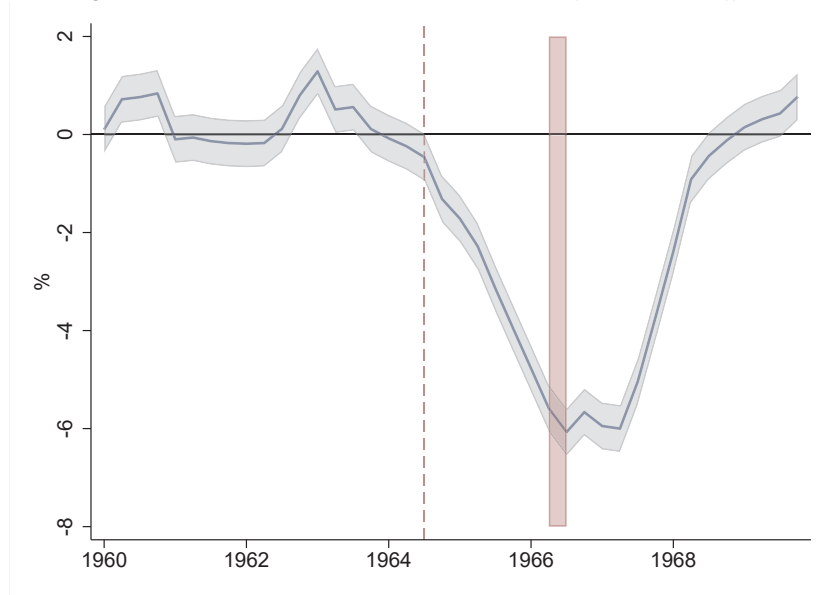Figure 2: *The Bank Strike and Economic Activity: Actual and Counterfactual*
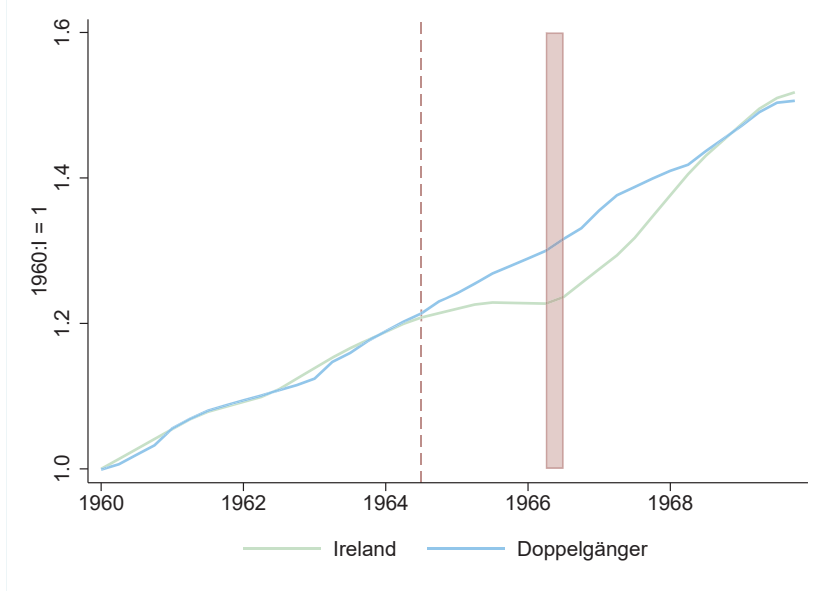
Notes: The line marks the last pre-intervention period: 1964:III, which is the quarter before news of a bank strike triggered a run. The shaded bar denotes the bank strike between 1966:II and 1966:III.

nomy from the doppelgänger (as a percentage of the doppelgänger).[7] The shaded band represents one standard deviation of the pre-intervention difference (Born et al., 2019). The gap fluctuates around zero prior to treatment. However, a shortfall develops in the aftermath, amounting to 6.1% of lost economic activity by the end of the strike. There is a small deficit from the first quarter of 1964, but this is within the normal pre-intervention range. The gap is larger in every quarter post-intervention (from 1964:IV to 1968:I) than any quarter pre-intervention (from 1960:I to 1964:III). Overall, the rumoured and realized closure of the major commercial banks in Ireland caused a significant reduction in economic activity.

These results contribute to several areas of existing literature. The first relates to the economic costs of banking instability. These studies report peak drops in the level or growth

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[7]This is calculated as: $\frac{Y^I_{1t} - Y^N_{1t}}{Y^N_{1t}} \times 100$.

Figure 3: *The Bank Strike and Economic Activity: Treatment Effect*

Notes: The line marks the last pre-intervention period: 1964:III, which is the quarter before news of a bank strike triggered a run. The shaded bar denotes the bank strike between 1966:II and 1966:III. The shaded band represents one standard of the pre-intervention gap between Ireland and the doppelgänger.

rate of a measure of economic activity of approximately 3-10% following an innovation to a binary or continuous measure of banking distress in advanced economies (Jordà et al., 2013; Reinhart and Rogoff, 2014; Jalil, 2015; da Rocha and Solomou, 2015; Romer and Romer, 2017; Baron et al., 2021; Kenny et al., 2021). Although the fundamentals were sound and crisis was avoided, the magnitude of the effect is similar.

The second is economic scarring. Our results suggest that the costs were temporary, which stands out against studies reporting long-run losses (Cerra and Saxena, 2008; Jordà et al., 2013; Kenny et al., 2021). However, the closures were not permanent, which may explain these differences in persistence.

The third relates to the macroeconomic consequences of banking panics. Baron et al. (2021) find that the costs of banking panics without crises are small, the costs of banking crises without panics are moderate, and the costs of banking crises with panics are large. Therefore, panics have little effect in isolation, but are an amplification mechanism of crises.

The quasi-random run of December 1964 suggests, however, that banking panics without crises do weaken economies, as the losses mounted well before the strike in May 1966, although it is not possible to separate the impact of the run from anticipation of the strike.

An important issue with synthetic control is inference. One exercise in this direction is the shaded bands that represent one standard deviation of the pre-intervention gap. Another is a permutation procedure that iteratively reassigns the treatment unit to others in the donor pool, holding the treatment date constant, which generates a distribution of placebo effects (Abadie, 2021). If the bank strike is a significant economic shock, outcomes in Ireland should be extreme relative to other economies that did not experience the strike.

After running the model for each of the economies in the donor pool, we calculate the root mean squared prediction error (RMSPE) for the pre- and post-intervention periods.[8] A high ratio of the post- to pre-intervention RMSPE, r_j, means that there is a poor fit after intervention – indicating a large effect – and a good fit before intervention – suggesting a close match. Figure 4 plots this ratio for 21 economies (Ireland plus 20 donor units). The Irish economy stands out at the top of the table with a ratio of 10.6, implying that the gap is more than 10 times larger after the intervention than before, which contrasts to the other economies in the donor pool, whose ratios range from 0.8 to 6.4. This information can be used to calculate an exact p-value. Cunningham (2021, pp. 520-4) suggests to: first, sort the ratios from highest to lowest, as in Figure 4. Second, divide the rank by the number of units. As Ireland is first of 21 units, the p-value is $1/21 = 0.048$. Abadie (2021) proposes: $p = \frac{1}{J+1} \sum_{j=1}^{J+1} I_+ (r_j - r_1)$, where $I_+ (\cdot)$ is an indicator function that returns one if non-negative and zero otherwise, which results in $p = 0$.[9] These two statistics suggest that the output losses are statistically significant at standard levels.

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[8]The pre-intervention period is 1960:I-1964:III. The post-intervention period is 1964:IV-1967:II. After this point, the Irish economy reconverges to the doppelgänger and closes the gap.

[9]This is because the indicator is zero for all units except Ireland ($j = 1$) and $r_1 - r_1 = 0$.

Figure 4: *Placebo Distribution*
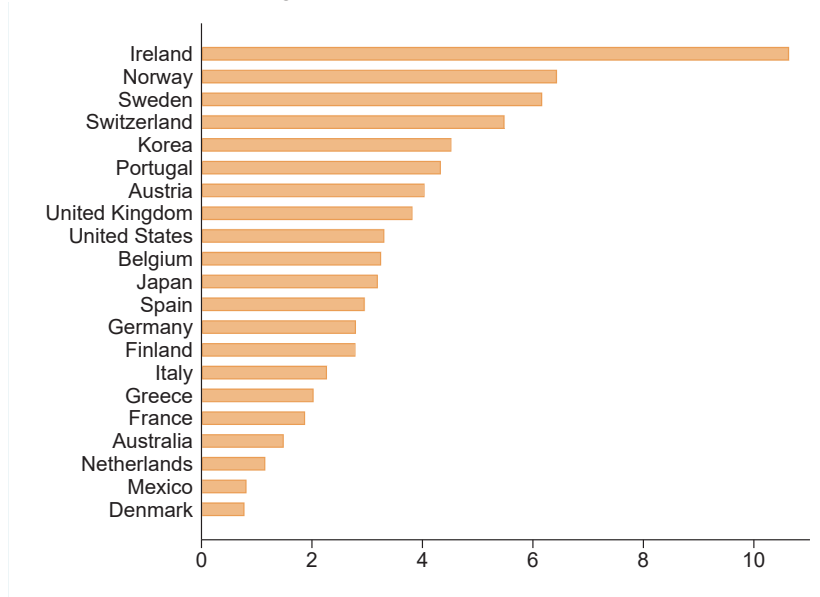
D   Robustness

We now explore the robustness of the results. To do so, we re-estimate the model, varying one element at a time and holding all else constant.

First, we include additional covariates (Figure A1). Although our selection was informed by previous research, Abadie et al. (2015) also include the industry share and inflation rate, while Born et al. (2019) also include consumption/GDP and the employment share. The industry share was collected from the International Labour Office (1986), while the rest can be calculated from the Penn World Table (Feenstra et al., 2015).[10]

Second, we alter the timing of the covariates (Figure A2). In the baseline model, the covariates are observed one year before the intervention. In this specification, we average the covariates over the whole pre-intervention period.

Third, returning to the key assumptions of synthetic control, one is that no other units receive treatment. While there was no banking crisis in any of the 21 economies in the 1960s (Reinhart and Rogoff, 2009; Schularick and Taylor, 2012; Bordo et al., 2014; Baron

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[10]The frequency of the industry share is decadal. Therefore, we include the observation for 1960.

et al., 2021), there may have been more minor episodes of bank distress. Analyzing the behaviour of bank equity prices, Baron et al. (2021) observe cumulative declines of 30% or more on three occasions in the pre-intervention period – Germany in 1962, Italy in 1962, and Switzerland in 1964 – and three times in the post-intervention period – Norway in 1964, Netherlands in 1965, and Austria in 1966. Although Baron et al. (2021) regard this type of event as "due to equity market sentiment unrelated to banking distress" and not a banking crisis because of the absence of narrative evidence, widespread failures, or panics, we explore the sensitivity of our results to the exclusion of these economies from the donor pool (Figures A3 and A4).

In our research, we uncovered reports of bank strikes in Italy and the United Kingdom in late 1967. On the situation in Italy, the *Irish Times* (5 July 1967) observed that "a series of two-day regional strikes began on Monday morning and were to end last night. Bank employees in the rest of Italy are scheduled to walk out tomorrow and on Friday to demand the renewal of their national contraction and the inclusion in it of an automatic cost-of-living increase." On events in the United Kingdom, the *Irish Times* (25 November 1967; 9 December 1967) reported that there were some local strikes in Blackpool, Bolton, Doncaster, Nottingham, and South Wales that affected banks for a few days at the end of 1967. As a result, we drop Italy and the United Kingdom from the donor pool (Figure A5).

Fourth, another key assumption is no interference. The United Kingdom was Ireland's closest neighbour, not only geographically but also economically, accounting for 46.1% of imports and 56.4% of exports in 1963 (Mitchell, 2013). As Ireland only accounted for 2.3% and 3.5% of the United Kingdom's imports and exports respectively (Mitchell, 2013), it is unlikely that the smaller economy can significantly affect the larger, although they could be connected through financial networks (Elliott et al., 2014; Acemoglu et al., 2015). To be sure that spillovers are not affecting our results, we exclude the United Kingdom from the donor pool (Figure A6).

Fifth, a potential concern is that the doppelgänger is affected by idiosyncratic shocks in the post-intervention period. Therefore, we re-run the model, leaving one of the donor economies with positive weight out at a time (Figure A7).

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The results of these exercises are collected in Appendix A. In each case, the doppel-gänger economy advances at a similar rate before and after the intervention, while there is a sharp slowdown of the Irish economy. This results in a robust treatment effect irrespective of the model. However, while the post-intervention outcomes are similar, the pre-intervention fit is worse in most alternative specifications.
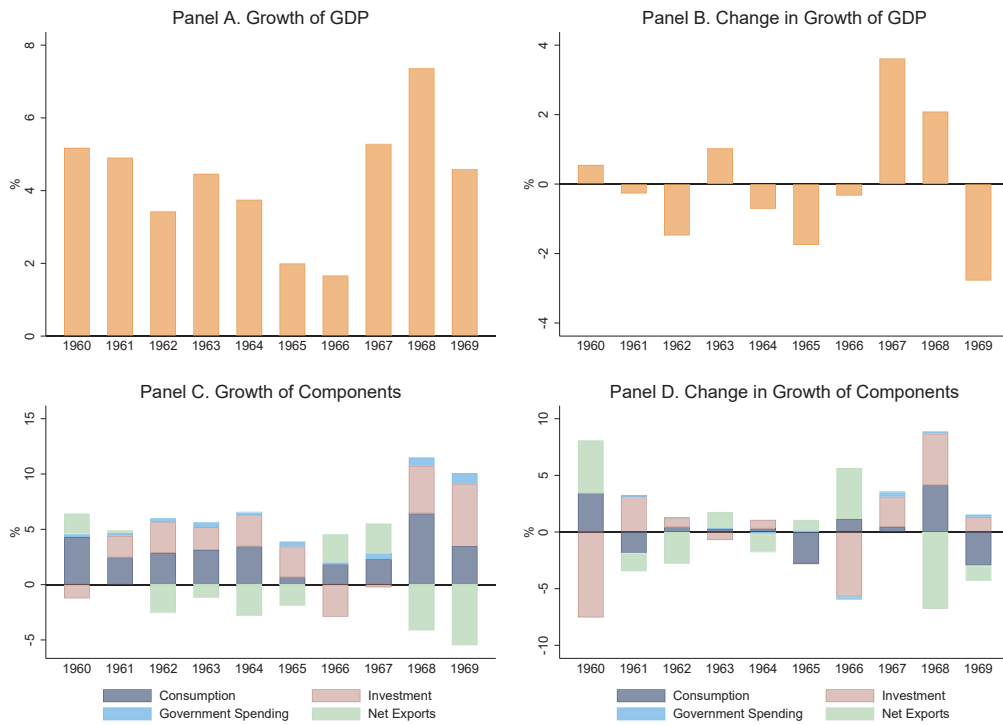
E Mechanisms

The synthetic control delivers an estimate of the total economic cost. In this section, we break down the bill to understand how it was generated. To do so, we move from synthetic control, which requires data for many economies, to a more flexible approach, presenting evidence that we have collected and constructed for Ireland.

An interesting starting point is a demand decomposition, which calculates the contribution of the expenditure components – consumption, investment, government spending, net exports – to GDP growth. The components, reported annually in constant prices, are available from the Central Statistical Office (1971). The contribution of component x in year t is: $\frac{\Delta x_t}{y_{t-1}}$, where Δ is the difference operator and y is GDP.

Figure 5 shows the results. Panel A plots the growth of GDP, which reiterates the impressive progress in the early 1960s, advancing by about 4% per year. However, in 1965 and 1966 there is a sharp slowdown to less than 2% per year. From 1967, there is a strong rebound to the high growth regime. As the impact is a reduction in the growth rate, and therefore more about the second derivative than the first, we also present the change in the growth of GDP in Panel B, which suggests that the slowing begins in 1964. Panels C and D report the same information for the components of GDP. One striking result is the cooling of consumption in 1965. Had the consumption growth of 1964 continued in 1965, GDP growth would have been 2.8 percentage points higher. Another is the slump in investment. Gross fixed capital formation fell by 11.8% in 1966, having grown by more than 10% in each of the past five years. A final interesting result is the boost from net exports in 1966, without

Figure 5: *A Decomposition of Economic Growth*

Panel A. Growth of GDP

Panel B. Change in Growth of GDP

Panel C. Growth of Components

Panel D. Change in Growth of Components

Consumption   Investment
Government Spending   Net Exports

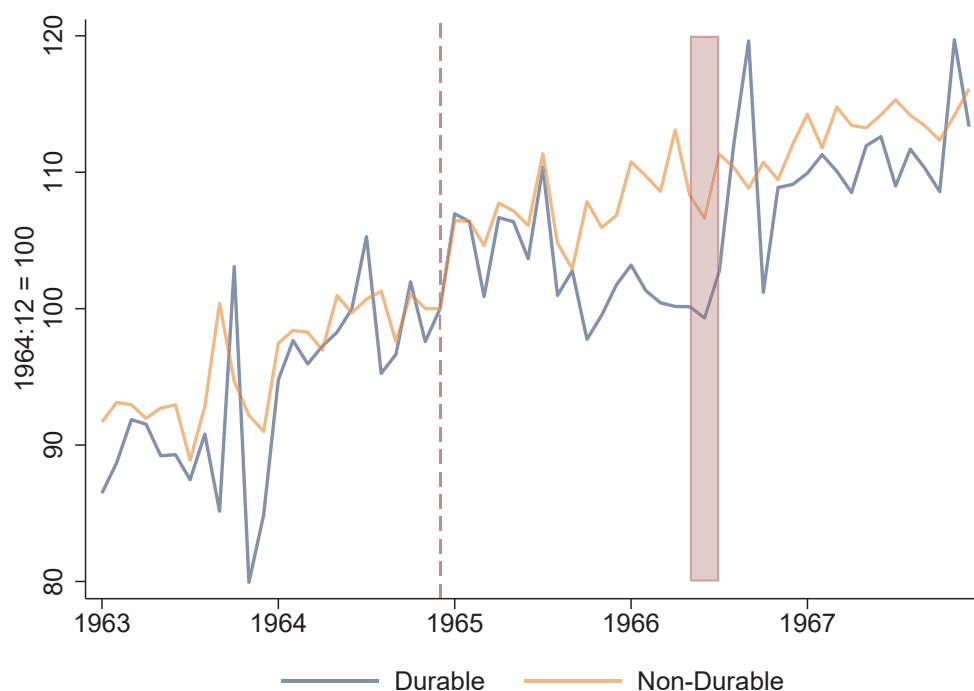*Notes and sources:* Calculated from the Central Statistical Office (1971).

which the economy would have contracted by 0.9%, according to the decomposition.

To zoom in on the consumption crunch, we construct durable and non-durable consumption indices based on the retail sales micro data from the Department of Industry and Commerce (various). The durable categories are: boots and shoes; drapery and apparel; motor vehicles, cycles, garages and filling stations; hardware; department stores; and other non-food, including variety chain stores. The non-durable categories are: grocery; grocery with public house; public house and wines and spirits; fresh meat; tobacco, sweets, and newspapers; country general shop; other food, drink, and tobacco; and drugs (chemist). The indices are weighted by their respective shares in the 1968 retail sales index (Department of Industry and Commerce, 1969).[11] Figure 6 shows that durable and non-

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[11]The series have been seasonally adjusted by regressing them on monthly dummies and adding their mean to

durable consumption fluctuated in parallel until the summer of 1965, but diverged after as durables decreased while non-durables continued to increase. When the banks reopened, there was a strong recovery in durable consumption.

Figure 6: *Durable and Non-Durable Consumption*

A remaining question to be answered is why fear of the strike, which surfaced in the run of December 1964, began the process of weaker durable consumption and investment, that was then exacerbated by the strike in May 1966. We explore two lines of inquiry. The

the residuals.

first is a tightening of bank balance sheets. The second is uncertainty. Both are consistent with the facts of reduced durable consumption and investment.

To begin the investigation of the banks, we collect balance sheet information, which is available at a quarterly frequency from the Department of Industry and Commerce (various). The balance sheets are aggregated to cover the Associated Banks, but disaggregated into various assets and liabilities.

Figure 7 displays the dynamics of three ratios. The gap in each is due to the stoppage in reporting during the strike. Panel A plots the capital-asset ratio, which is calculated as the sum of paid-up capital to total assets. After the run, there was an increase in the capital buffer, which implies lower risk as there is more capital to absorb losses. This does not reflect a fall in assets but a rise in capital, which increased by 8.1% in the quarter after the run and again by 14.9% in the quarter after.

Panel B shows the liquidity ratio, which is measured as the ratio of cash and balances with London agents and other banks and money at call and short notice to total assets. The ratio first declined, implying more risk, and then increased, representing less risk, which has two possible interpretations. One is that it was driven by the public, who withdrew cash during the run and later redeposited. The other is that banks had agency, holding a higher fraction of assets in cash. Both represent a flight to safety.

Panel C presents the key figure – the loan-asset ratio – which is the ratio of loans and advances to total assets. Lending declined from 55% of assets at the beginning of 1965 to 50.3% by the first quarter of 1966. After the strike, the loan-asset ratio had fallen to 47.8% of assets. The falling share of loans in the asset portfolio implies less risk as it is more skewed to safe assets, such as cash and government bonds, and less to lending, which is a riskier asset (Kenny et al., 2023). The decline in the loan-asset ratio is not merely due to developments in the denominator. Figure 8 shows the value of loans, which stagnated between the run and the strike, almost perfectly mirroring the slowing of economic activity.

Figure 7: *Dynamics of Bank Balance Sheets*
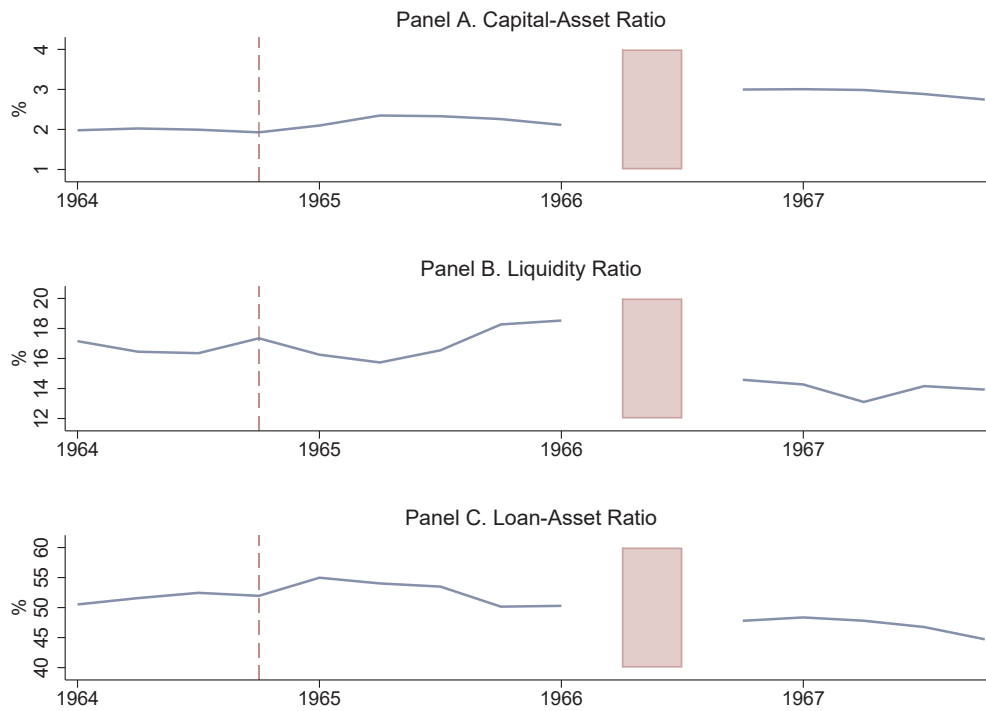
Panel A. Capital-Asset Ratio

Panel B. Liquidity Ratio

Panel C. Loan-Asset Ratio

Notes and sources: The line marks the last pre-intervention period: 1964:III, which is the quarter before news of a bank strike triggered a run. The shaded bar denotes the bank strike between 1966:II and 1966:III. Calculated from the Department of Industry and Commerce (various).

Therefore, in the interval between run and strike, bank balance sheets became more conservative with higher capital buffers, more cash, and less lending. This could reflect a rise in risk aversion from the banks, the public, or both.

Turning to uncertainty, we construct a new monthly index of economic uncertainty based on the frequency of key words reported in the *Irish Times* (various), which is a national newspaper of record that is published daily.[12] As in the historical indices of Baker et al. (2016), the economic terms are "business", "commerce", "commercial", "economic",

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[12] For a summary of historical research using news-based measures of uncertainty, see Lennard (2020).
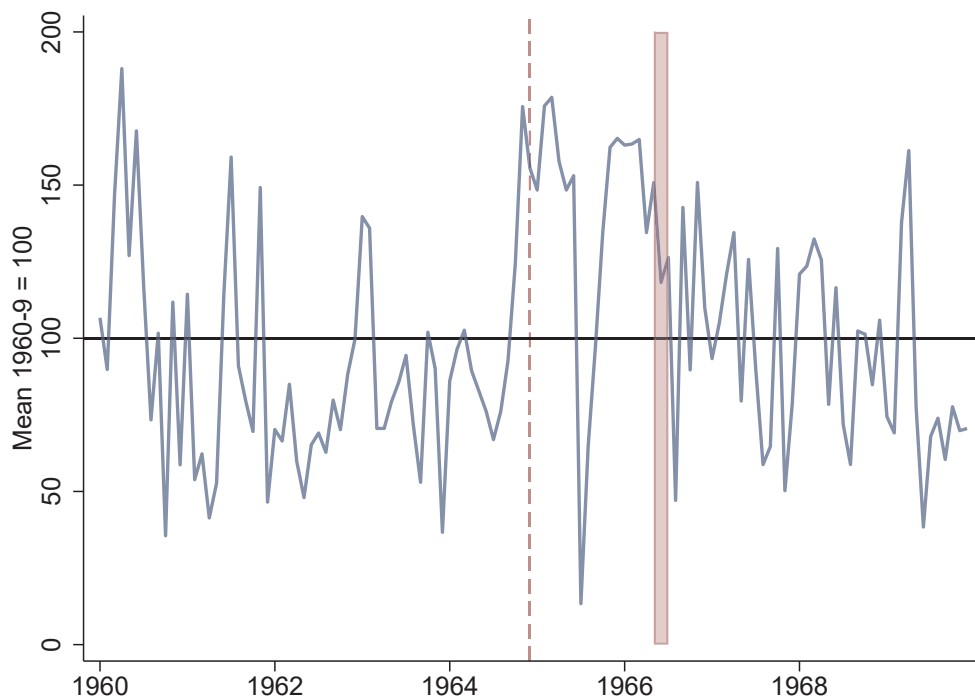
Figure 8: *Loans and Advances*
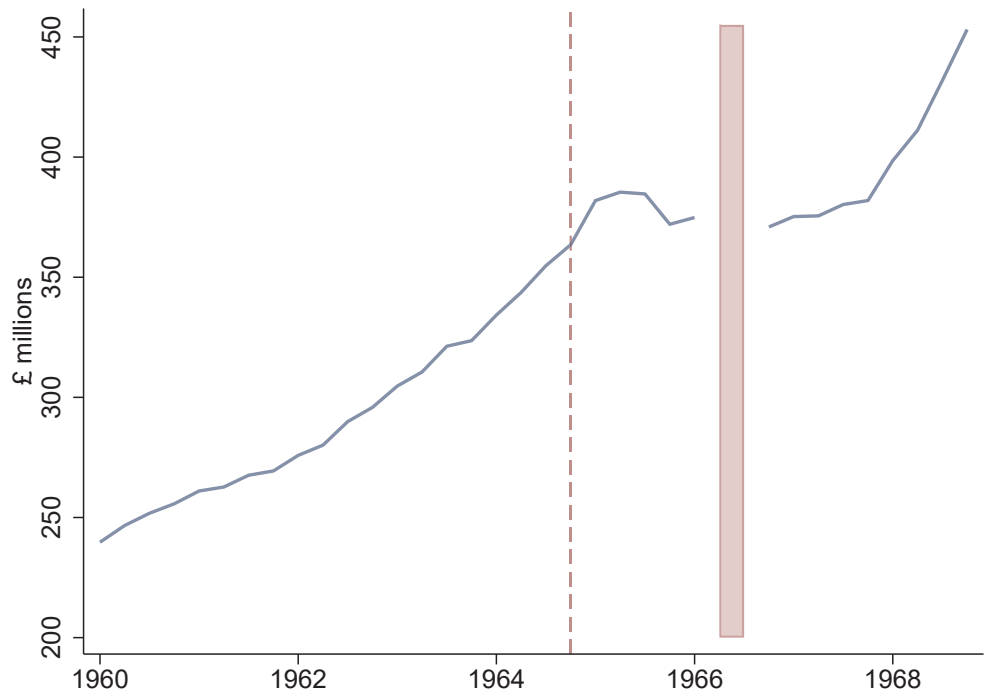
Notes and sources: The line marks the last pre-intervention period: 1964:III, which is the quarter before news of a bank strike triggered a run. The shaded bar denotes the bank strike between 1966:II and 1966:III. Calculated from the Department of Industry and Commerce (various).

"economy", or industry"; the uncertainty terms are: "uncertain" or "uncertainty." Figure 9 shows the fraction of total articles containing an economic and uncertainty term, normalized so the mean is 100. The figure clearly shows a sharp increase in uncertainty around the run of December 1964. Uncertainty then subsides, before ramping up again in the lead up to the strike in May 1966. Therefore, the threatened and realized shutdown of commercial banks was associated with heightened uncertainty about the economic outlook.

In summary, bank balance sheets tightened and uncertainty spiked, which was associ-

Figure 9: *Economic Uncertainty*

Notes and sources: The line marks the last pre-intervention period: 1964:III, which is the quarter before news of a bank strike triggered a run. The shaded bar denotes the bank strike between 1966:II and 1966:III. Calculated from the *Irish Times* (various).

ated with a softening of durable consumption and investment, as more risk averse agents postponed decisions that are costly to reverse (Bernanke, 1983a). However, we recognise that the evidence documented here is descriptive and not necessarily causal.

4   Narrative Evidence

We now turn to narrative evidence to cross-reference our macro findings and to understand how households and firms navigated the strike at the micro level.

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A   Credit Intermediation

A central function of banks is to intermediate credit between potential borrowers and lenders. In the absence of the Associated Banks, most formal credit intermediation was frozen as customers were unable to "modify their credit position with their banks, either by extending or reducing their accommodation or their deposit" (*Financial Times*, 26 May 1966). As a result, there were several reports – in prospect and retrospect – of a "credit squeeze" (*Irish Independent*, 4 May 1966; *Irish Examiner*, 13 July 1966).

However, credit did not grind to a complete halt as agents substituted away from formal to more informal sources, using "the improvised systems of cheques, barter and cash deals" (*Irish Independent*, 10 May 1966). The cheque was an important instrument that bridged households and firms through the strike. As queues developed outside the Associated Banks on the eve of the shutdown, it was not only a scramble for cash but also "a rush by customers to secure fresh cheque books which they can use for the duration of the strike" (*Evening Herald*, 5 May 1966).

How much credit was intermediated through cheques? A rough measure is that the cheque books that had been stockpiled in the run up to the strike were exhausted by late June: "people were beginning to run out of cheques and resorting to the 'do-it-yourself' variety" (*Irish Times*, 24 June 1966). Households produced "home-made cheques such as billheads and notepaper with 3d stamps", while many small businesses "had their own cheques printed" (*Irish Times*, 11 August 1966). Another gauge is the backlog to be cleared once the banks reopened. The *Economist* (13 August 1966) reported that "it may take bank employees up to four weeks of exhausting [...] overtime to sort through the sea of paper credit on which the economy floated."

How did cheques circulate if they could not be cleared? Murphy (1978) notes that cheques "were drawn, not against known credit accounts or allowed overdraft limits, but against the value of other uncleared cheques and/or the transactors view as to his creditworthiness." The *Financial Times* (26 May 1966) argued that this "reflects the strong personal relationships within a small community where no one is really anonymous and two

people who are strangers to each other rarely fail to find that they have a mutual friend. In such a society credit is a much less formal matter than in larger countries with great cities. Few Irish people have any difficulty about changing a cheque [. . .] Consequently, during a bank strike cheques become a kind of legal tender, passing happily from hand to hand, pending the reopening of the banks, when they can finally be laid reverently to rest after a useful and active life." Therefore, the use of cheques was facilitated by local information and close personal relationships, which are usually thought to be impaired by bank closures (Bernanke, 1983b).

Although cheques circulated widely, they were not universally accepted. From the start, there were many notices that cheques from "regular customers" and "known clients" only would be accepted (*Evening Herald*, 26 May 1966; *Irish Independent*, 7 May 1966). As the strike developed, cheques were increasingly rejected, as shopkeepers were unable and manufacturers "unwilling" to accept them due to a shortage of cash (*Irish Times*, 4 June 1966; *Tuam Herald*, 25 June 1966). The *Irish Independent* (16 June 1966) summarized: "Traders have cut down drastically on cheque dealings and many say they are losing business as a result. The general manager of a Dublin department store said: 'We now have as many cheques in our safes as we can afford to have on hand and are now restricting credit dealings to gilt-edged customers. Normally, we would sell furniture, carpets and such items to strangers by cheque, delaying delivery until clearance of the cheque. All this business is now lost.'"

B   Liquidity

The bank strike disrupted the regular flow of cash in the economy, where surpluses and deficits are intermediated by banks through deposits and loans. In the early stages, cash was not in short supply as "£10m extra was withdrawn on the last day of banking", which provided "an additional float" (*Financial Times*, 26 May 1966).

However, shortages developed within a month: "Ready cash is becoming scarce and many companies found it difficult to fill yesterday's pay packets. The large withdrawals during the last few days before the strike left a surplus of cash in circulation and most com-

panies were more afraid of being robbed than being short. But during the last two weeks this surplus has disappeared" (*Irish Times*, 4 June 1966). The *Evening Herald* (26 May 1966) reported that a "shortage of cash is worrying Government Departments, also. There was, at least, one case of a Local Government request for more than £100,000 turned down because the money was not available." As a result of the scarcity, "companies have tended to hoard [. . .] stocking up with notes in case the strike continues for another month" (*Irish Times*, 4 June 1966). The shortage made obtaining cash costly: "Yesterday the managing director of a large supermarket chain which exchanges £60,000 a week with large employers on a barter basis, in return for cheques, confirmed that he had been offered six per cent interest by firms seeking large amounts of cash immediately. Firms who had made this offer were seeking amounts up to £15,000 [. . .] However, there is no evidence that it has been done to date" (*Irish Independent*, 16 June 1966).

Not only was there a challenge of finding large sums for wages, there was also a big problem of small change (Sargent and Velde, 2003). From the outset, the *Irish Independent* (4 May 1966) forecasted that "all traders will be seeking small change", continuing, for example, that "drapers, charging typical prices of 2/11 and 7/11, will have a special demand for pennies." By the middle of June, it confirmed that "small change is rapidly growing scarcer" (*Irish Independent*, 16 June 1966). As with large sums, small denominations were trading at a premium: "1s. pieces, needed for the gas, were soon at a premium of 1s. 3d." (*Economist*, 13 August 1966).

As a consequence of the disruption, there were surpluses and deficits along the supply chain and between producers and consumers that had to be coordinated so that the cash was in the right place at the right time. Prices did some of the work, as the examples of high interest rates on cash and premiums on small change demonstrate. Concerns about losing cash through accidents and theft did some of the rest. For example, the *Financial Times* (26 May 1966) described that money circulates "by virtue of the anxiety of businesses which accumulate cash to dispose of it again, in return for cheques, rather than hold large quantities of cash on their premises. Cinemas, dance halls, shops and accountants' offices, among other businesses, all become miniature banks, cashing cheques in order to dispose

of mounting quantities of cash."

The *Irish Independent* (4 May 1966) noted that "most firms will be able to solve their pay-roll and security problems on a 'give-and-take' basis with suppliers and distributors. Factories with big staffs will pay their employees from cash paid over the counters of supermarkets, department stores, bakeries, dairies and cinemas. Retailers will give priority to their suppliers. In return the factories will write cheques which the distributive trades can cash after the strike. The money in this way will be safely disposed of." Another key intermediator was "publicans [. . . who] have been acting as bankers to their customers" (*Irish Times*, 24 June 1966).

Cash was also channelled between those in surplus and deficit due to civic concerns: "large firms who take in big amounts of cash daily are helping out by cashing cheques for business houses" (*Tuam Herald*, 25 June 1966).

In the absence of banks, therefore, firms that were dealing with consumers at the end of the supply chain, such as bakeries, pubs, and department stores, accumulated cash that was transferred back down the supply chain through cheques. The cash would then be paid out as wages, returning back to the coffers of the firms further up the chain serving consumers.

C   Transaction Costs

Significant resources were devoted to managing cash and credit. A striking example is that "some firms [. . .] reportedly opened accounts with English banks with the intention of *flying* in wage money" (*Irish Independent*, 4 May 1966). Workers were diverted from their usual tasks: "Batchelors [producers of baked beans . . .] had five members of its staff full-time [. . .] cashing cheques in bits and pieces round the country" (*Irish Times*, 4 June 1966). The unofficial cheques that circulated after cheque books had run out had to be examined on a case-by-case basis (*Irish Times*, 24 June 1966). From the beginning of the strike, "security firms did a nonstop business escorting cash boxes and money bags to business firms. Gardai on patrol in cars and on foot had instructions regarding possible robberies" (*Irish Examiner*, 6 May 1966).

Thus, cash went from a medium of exchange that quietly greased the wheels of industry to an industry in itself with producers, police, and planes diverted from productive purposes to roles that were previously fulfilled by banks. On top of this, there was the foregone interest from hoarding cash and holding cheques, which was "expensive [given the] level of interest rates" (*Irish Times*, 4 June 1966).

The Fogarty Report (1971) noted similar transaction costs in the Strike of 1970: "Considerable inconvenience and expense arose from the dispute even at what might be called the level of petty cash. Organisations had to divert staff to running around shops and churches to find cash for wages; to spend money on employing security agents to transport their cash; and through inability to pay cheques into banks, to find ways of holding in safe custody unprecedented masses of vulnerable paper [...] the grand total of irritation, wasted effort, and expense which the dispute imposed on users is formidable."

D   The Functioning of Markets

The interaction of a shortage of cash and credit impeded the functioning of markets. At the micro level, there was "no sale due to bank strike" at the Tipperary Cattle Market (*Irish Press*, 21 May 1966) and "upset" trading at the Cahirmee Horse Fair as a result of the "credit squeezes" and "shortage of ready cash" that was "due to the bank strike" (*Irish Examiner*, 13 July 1966; *Irish Independent*, 13 July 1966).

At the more macro level, the strike limited activity on the stock exchange. The *Irish Independent* (6 June 1966) explained that "trading on the Dublin Stock Exchange last week was severely restricted by the lack of banking facilities and as long as the bank strike continues local business will remain at a low level. The majority of operators deposit their share certificates with their bankers for safe keeping and not having access to them at present puts quite a severe curb on market activity. Also, quite a large proportion of business in the local Gilt-edged and Industrial issues is channelled through the banks. Trading conditions last week probably touched their lowest level for a considerable time."

E   Trade and Tourism

As an open economy, Ireland was interconnected with the rest of the world through goods, services, capital, and people. While cheques were used domestically, this was more problematic internationally. The *Evening Herald* (6 May 1966) suggests that "English and Scottish banks are refusing to accept cheques drawn on Irish banks until the strike by Irish bank clerks is over", while the *Financial Times* (6 July 1966) reported that "businesses settling by cheque with overseas firms think they may have problems when discount periods run out." The challenge of intermediating credit across borders saw "costs jump – a Federation of Irish Industries spokesman said that the change-over of the administrative system of many concerns to deal with payments had increased costs. Many firms with long standing associations with foreign firms had come to an arrangement by which payments were made satisfactorily but this could not be expected to last over a long period" (*Irish Independent*, 25 May 1966). Tourism was also affected as "English people are under the impression that it would be difficult to cash cheques here and have decided to stay at home or shorten their visits" (*Kerryman*, 25 June 1966).

F   Other Forms of Substitution

Beyond substitution from formal to informal sources of credit, there was little substitution between Associated and non-Associated banks. The *Evening Herald* (26 May 1966) reported that "banks unaffected by the strike are not enrolling thousands of new clients, but are limiting services to clients already established with them." A potential explanation is that this temporary opportunity was not worth the irreversible investment in staff, offices, etc. (Bernanke, 1983a).

G   Aggregate Impact

The narrative evidence not only sheds light on the mechanisms but also confirms our estimates of the aggregate costs. The more optimistic reports portrayed an economy that had "survived" and managed "to keep going" (*Financial Times*, 26 May 1966; *Economist*, 13

August 1966), but there is no indication that the strong pre-treatment growth was maintained. The gloomier assessments, including a rethink from the *Financial Times*, noted that "the prolonged close-down of the banks is having a very serious effect on business" (*Tuam Herald*, 25 June 1966), that the "strike [...] has seriously upset business" (*Financial Times*, 6 July 1966), and that as a result of the strike "profits in many sectors of industry are under distinct pressure, indicating a falling off in business prosperity generally" (*Irish Independent*, 4 July 1966). The *Irish Examiner* (19 May 1966) summarized: "The strike was hitting commerce, the tourist trade and the working man."

5   Conclusions

In popular accounts, the Irish bank strikes are evidence that an economy can survive without banks (*Economist*, 13 August 1966; *Financial Times*, 3 July 2015; *Independent*, 12 July 2015). However, the Irish economy was booming in the early 1960s, so the stagnation that set in between the run in 1964 and the aftermath of the strike in 1966 was not a success but a failure of lost growth. The episode instead is a case study of the importance of banks in intermediating credit, providing liquidity, and reducing transaction costs. Banks have been more or less a constant for centuries, performing these vital functions without much fuss, until, that is, they are gone.

A standard concern of natural experiments is external validity. The Irish bank strike is interesting in its own right but there are idiosyncrasies of this episode that do not generalize. The strike resulted in closures that were temporary – more like suspensions or bank holidays – not permanent failures. The strike was also nearly total, topping the Great Depression and possibly any other crisis in history, for the fraction of bank branches that were closed. Therefore, the strike does not perfectly replicate the characteristics of an ordinary banking crisis.

Yet the strike provides important insights into the relationship between banks and the economy. As Milton Friedman (1952) argued: "The major defect of the data on which

economists must rely – data generated by experience rather than deliberately contrived experiment – is the small range of variation they encompass. Experience in general proceeds smoothly and continuously. In consequence, it is difficult to disentangle systematic effects from random variation since both are of much the same order of magnitude." The Irish bank strike is a valuable natural experiment in an advanced economy in the recent past that goes above and beyond the minor fluctuations of normal times. We learn from it that banks are fundamental to economic performance.

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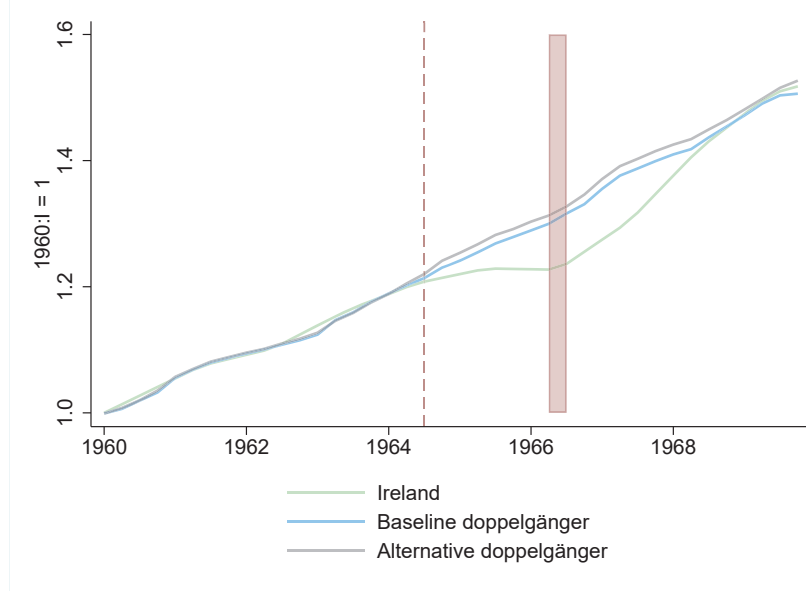
A   Robustness

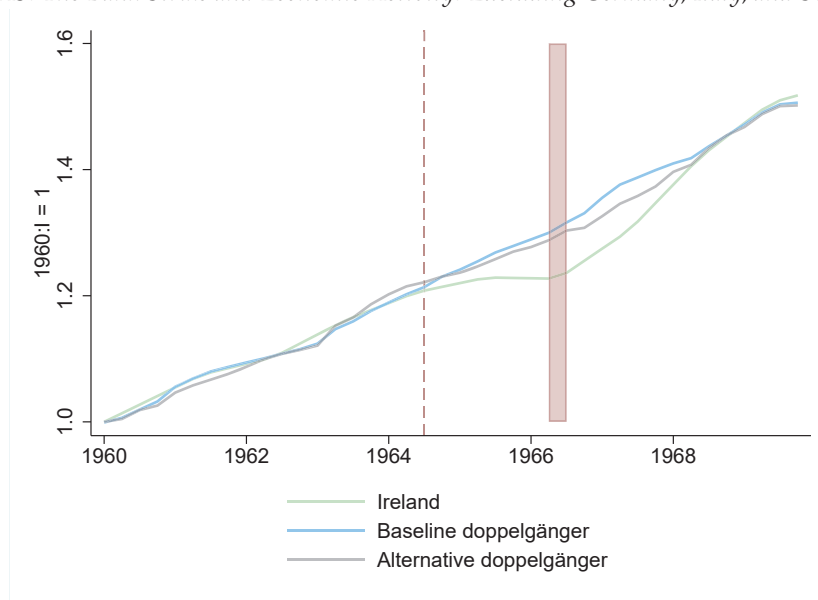Figure A1: *The Bank Strike and Economic Activity: Additional Covariates*
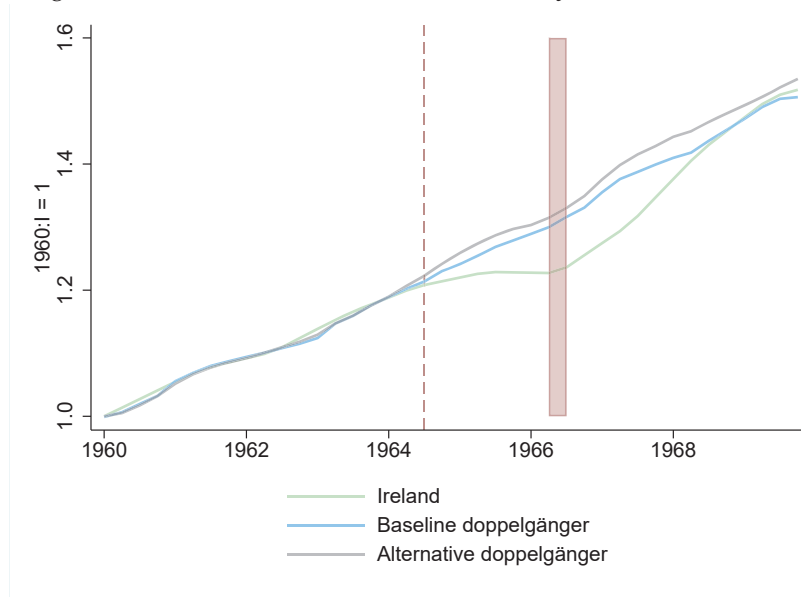
Notes: The line marks the last pre-intervention period: 1964:III, which is the quarter before news of a bank strike triggered a run. The shaded bar denotes the bank strike between 1966:II and 1966:III.

Figure A2: *The Bank Strike and Economic Activity: Alternative Timing of Covariates*
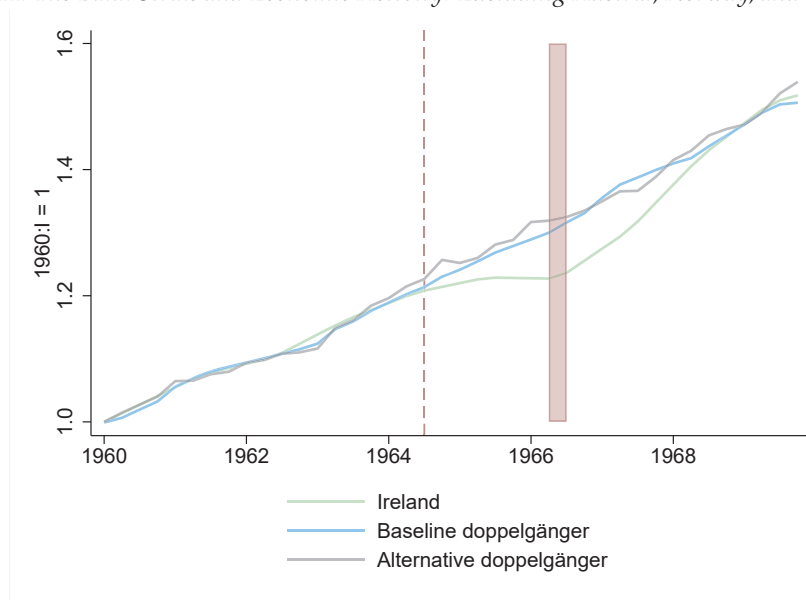

Notes: The line marks the last pre-intervention period: 1964:III, which is the quarter before news of a bank strike triggered a run. The shaded bar denotes the bank strike between 1966:II and 1966:III.

Figure A3: *The Bank Strike and Economic Activity: Excluding Germany, Italy, and Switzerland*
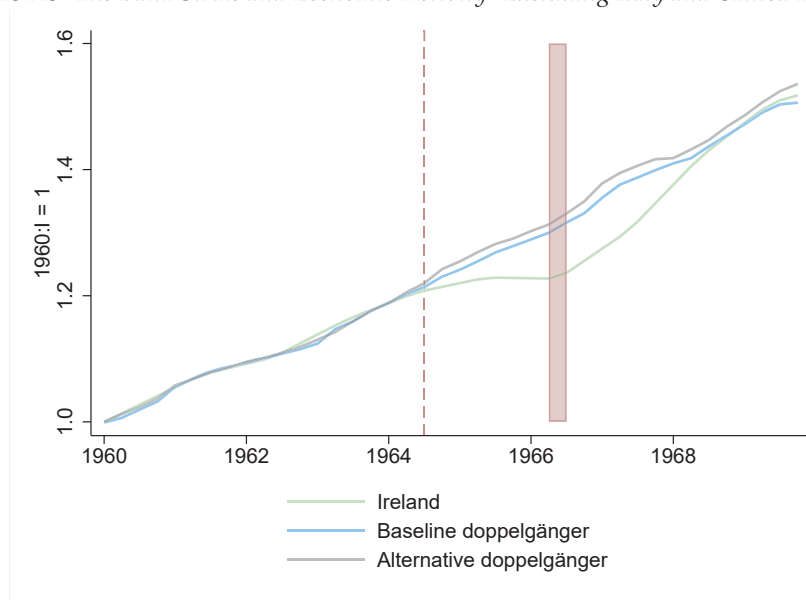

Notes: The line marks the last pre-intervention period: 1964:III, which is the quarter before news of a bank strike triggered a run. The shaded bar denotes the bank strike between 1966:II and 1966:III.

Figure A4: *The Bank Strike and Economic Activity: Excluding Austria, Norway, and Netherlands*
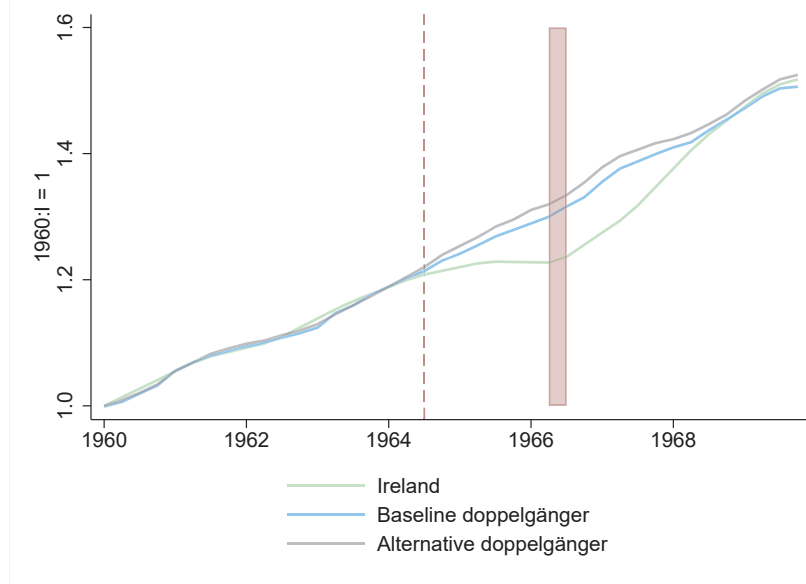

Notes: The line marks the last pre-intervention period: 1964:III, which is the quarter before news of a bank strike triggered a run. The shaded bar denotes the bank strike between 1966:II and 1966:III.

Figure A5: *The Bank Strike and Economic Activity: Excluding Italy and United Kingdom*
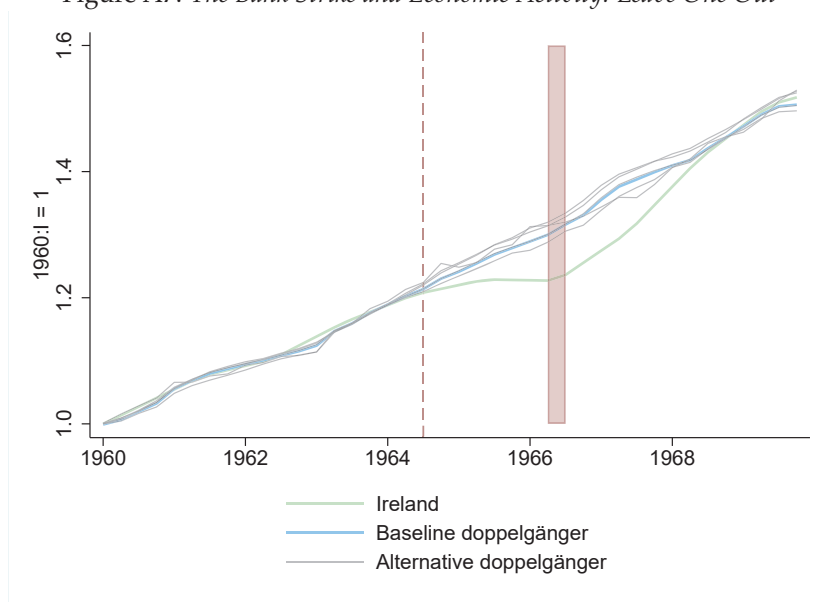

Notes: The line marks the last pre-intervention period: 1964:III, which is the quarter before news of a bank strike triggered a run. The shaded bar denotes the bank strike between 1966:II and 1966:III.

Figure A6: *The Bank Strike and Economic Activity: Excluding United Kingdom*

Notes: The line marks the last pre-intervention period: 1964:III, which is the quarter before news of a bank strike triggered a run. The shaded bar denotes the bank strike between 1966:II and 1966:III.

Figure A7: *The Bank Strike and Economic Activity: Leave One Out*

Notes: The line marks the last pre-intervention period: 1964:III, which is the quarter before news of a bank strike triggered a run. The shaded bar denotes the bank strike between 1966:II and 1966:III.