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BREXIT AND UK MIGRATION:
GERMANY-BENCHMARKED EVIDENCE ON STRUCTURAL AND REALLOCATION SHIFTS

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ABSTRACT

This paper examines how Brexit reshaped the volume and composition of UK migration flows. To address the inherent endogeneity of migration responses to political change, the study employs a Difference-in-Differences design that benchmarks the United Kingdom against Germany, a stable EU member unaffected by Brexit-related institutional shocks. Treating the 2016 referendum and the 2021 end of free movement as sequential shocks, the results show that migration volume increased after both shocks, but through different channels: the referendum reduced emigration relative to Germany, while the post-2021 points-based system triggered a reallocation of inflows away from EU free-movement migrants toward non-EU migrants from the rest of the world, with a markedly stronger skill-selective profile. The paper analyzes how Brexit reshaped migration flows into and out of the United Kingdom by exploiting the 2016 referendum and the 2021 termination of free movement as sequential institutional shocks. Using a Difference-in-Differences design with Germany as a stable EU benchmark, the results show that Brexit acted as a structural regime shock, not a border-tightening event. Net migration into the UK rose after both shocks—first due to a sharp post-referendum decline in emigration relative to Germany, and later due to a substantial expansion of non-EU immigration under the new points-based system. Immigration patterns exhibit a clear regime shift, with EU inflows contracting sharply after 2016 and globally sourced, skill-selective inflows rising after 2021. In the later period, a modest but notable increase in UK-born emigration relative to Germany also emerges, reflecting frictions in post-Brexit mobility. Overall, Brexit reoriented—rather than reduced—UK migration flows, transforming both their scale and composition.

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1.Introduction

Single Market and the end of free movement in 2021—constitutes one of the most consequential institutional shocks to a major European economy in recent decades. Migration, more than any other domain, became both a political catalyst and a policy arena in which the implications of decoupling from the EU were most visible. Benchmarking the UK against Germany, the largest remaining EU economy and a stable participant in free movement, provides a natural comparative framework for identifying the magnitude and direction of Brexit-induced migration shifts.

Brexit referendum introduced unprecedented uncertainty into UK–EU labor mobility (Portes & Forte 2017; Wadsworth et al. 2016), disrupting a system in which free movement had long enabled substantial EU migration into the United Kingdom (Dustmann et al. 2010). Germany followed a different trajectory over the same period, maintaining stable intra-EU mobility and sustained humanitarian inflows (OECD 2023; Brücker et al. 2019). The broader literature on institutional shocks to migration regimes emphasizes the centrality of expectations and anticipatory adjustments (Hatton & Williamson 2005; Clemens 2011) and provides the conceptual link between structural regime shocks and policy-induced reallocation in migration systems (de Haas 2010). These dynamics also intersect with well-documented patterns of skill-based selection

(Docquier & Rapoport 2012) and the political-economy determinants of immigration control (Facchini & Mayda 2008). Empirically, the study applies standard Difference-in-Differences identification strategies (Angrist & Pischke 2009; Bertrand, Duflo & Mullainathan 2004) and comparative institutional methods (Autor 2003) to benchmark the United Kingdom against Germany. The results—showing a collapse in EU inflows and a parallel expansion of non-EU skilled migration—are consistent with UK administrative data (Home Office 2023) and recent assessments of post-Brexit immigration reform (Sumption & Vargas-Silva 2022). The modest post-2021 increase in UK-born emigration aligns with findings on skilled-worker outflows under institutional uncertainty (Goodwin & Milazzo 2022; Benson & Lewis 2019), while Germany's stability mirrors analyze of the resilience of the EU free-movement regime (Recchi & Favell 2019). Razin and Wahba (2014), about free migration inside EU and policy restricted migration for non EU migrants show that the generosity of the welfare state affects skill-based migration differently depending on migration regime: under free movement within the EU, higher welfare generosity tends to attract relatively more low-skilled migrants, while under restricted migration from outside the EU, welfare generosity is associated with a higher share of skilled migrants.

Portes (2016, 2019) highlights the anticipated and actual consequences of the referendum for UK–EU migration, stressing the interplay between expectations, policy uncertainty, and labor-market adjustment. Dustmann, Eichengreen, Otten, Sapir, and others (2017) examine broader European migration pressures and institutional resilience, offering insights into how free movement interacts with economic cycles and political shocks. Additionally, Nickell (2016) on fears of low-skilled inflows, Campos et al. (2018) on EU membership effects, and Aiyar et al. (2016) on labor mobility and adjustment within the EU—provide empirical and analytical grounding for the structural and reallocative migration responses observed in the post-Brexit United Kingdom.

2. Migration Patterns

To illustrate migration patterns, Figure 1 presents the evolution of immigration, emigration, and net migration as shares of the labor force in the United Kingdom from 2010 to 2023. The trends highlight the two major Brexit-related regime breaks—the 2016 referendum and the 2021 end of free movement—and illustrate the sharp reconfiguration of the UK's migration system during this period. Immigration (red line), which had been relatively stable throughout the pre-Brexit decade, declines modestly after 2016 but rises steeply after 2021 with the introduction of the new points-based system, reaching historically high levels. Emigration (blue line) exhibits the opposite pattern: it falls significantly following the referendum, contributing to higher net migration, before rising modestly in the later period—consistent with emerging evidence of increased outward mobility among UK-born workers. Net migration (green line) remains positive throughout, but the post-2021 surge in inflows produces a marked upward shift. Overall, the figure visually captures the central empirical finding of this paper: Brexit did not reduce migration but instead reallocated and reshaped mobility flows, shifting the UK from an EU-centered free-movement regime to a globally oriented, skills-selective migration system.

Figure 1.

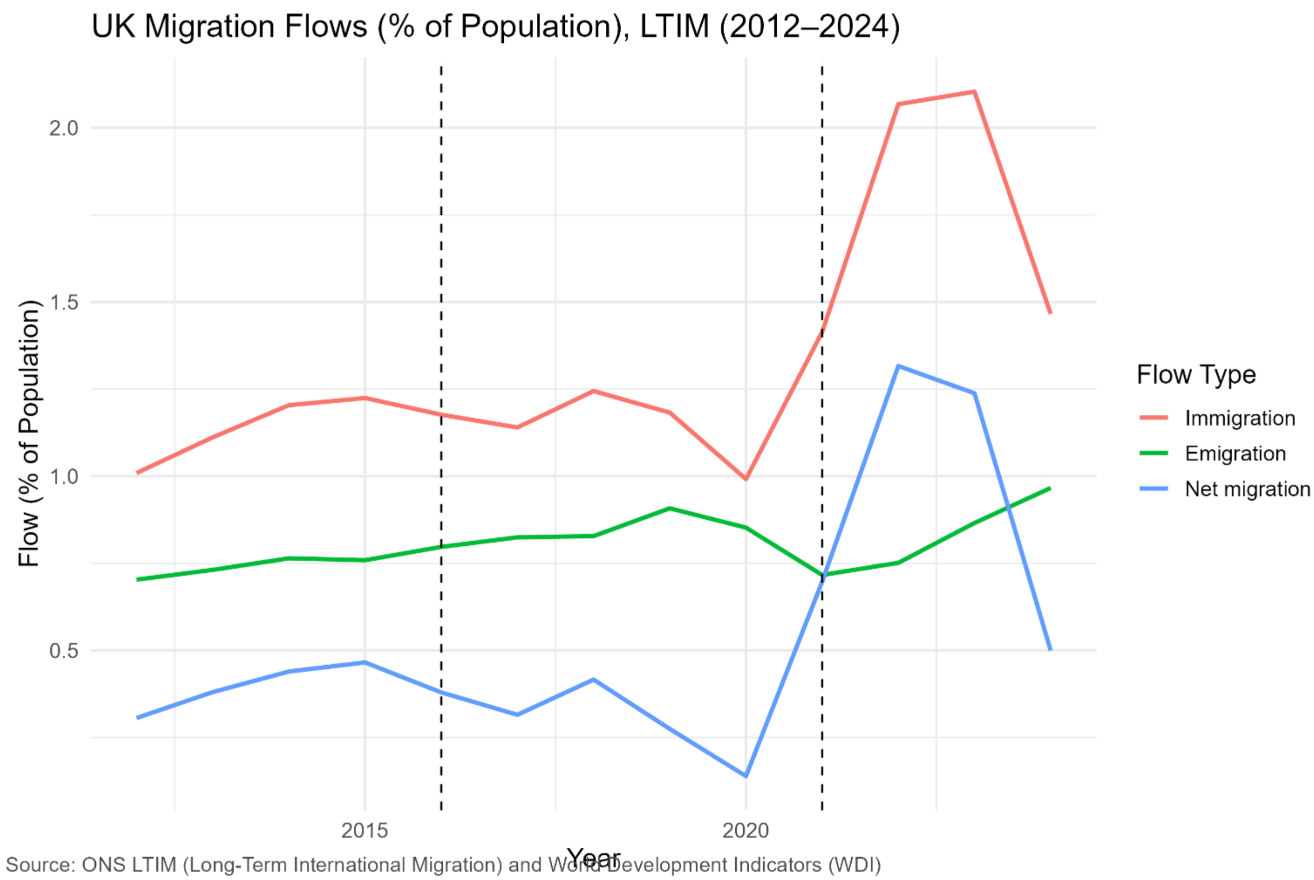
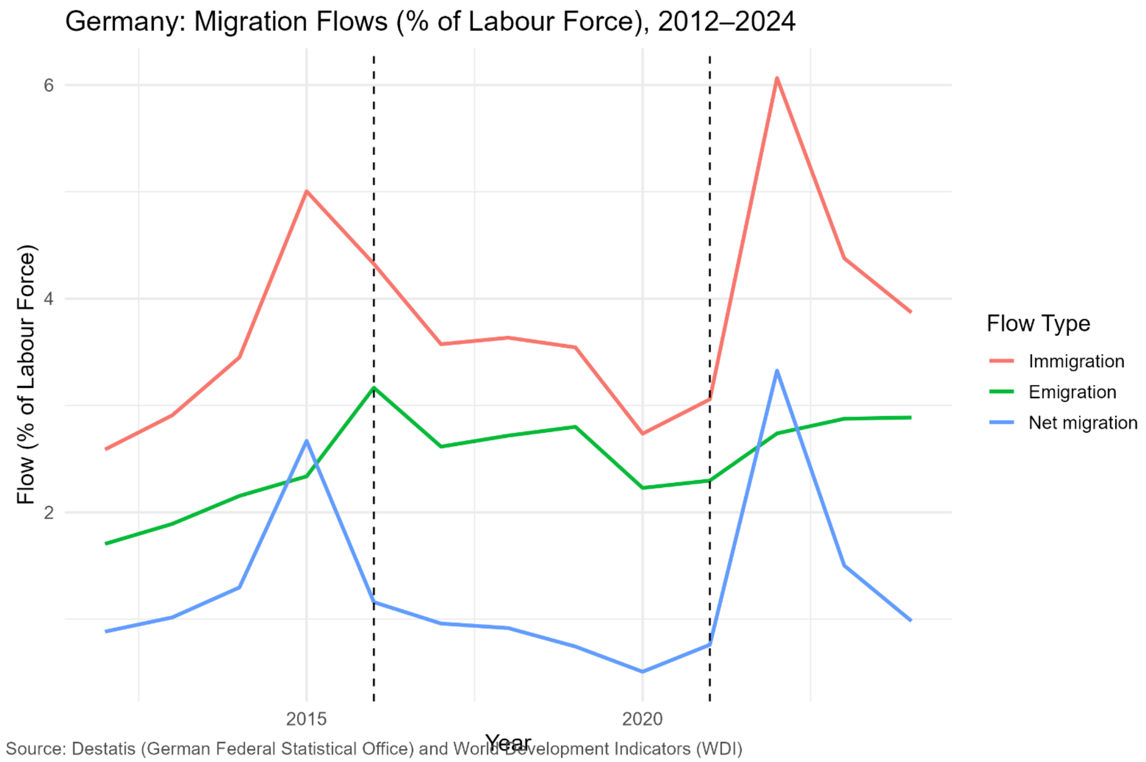


Figure 2 illustrates the trajectory of immigration, emigration, and net migration in Germany between 2010 and 2023, providing a stable benchmark against which the United Kingdom's Brexit-induced shifts can be evaluated. Unlike the UK, Germany did not experience a political or institutional rupture in its mobility regime during this period; it remained fully embedded in the EU's free-movement framework and continued to admit both EU movers and humanitarian migrants under consistent policy rules. The figure shows relatively steady inflows and outflows, with temporary fluctuations driven by identifiable external events—most notably the 2015–2016 refugee crisis—rather than by regime change. Net migration remains positive throughout, with moderate variance and no structural breaks. This stability underscores Germany's role as an appropriate counterfactual in the Difference-in-Differences analysis: by contrasting the UK's sharp post-2016 and post-2021 deviations with Germany's steady patterns, the analysis isolates the extent to which Brexit—not broader European trends—reconfigured UK migration dynamics.

Figure 2.



Pre-Brexit Baseline

Before 2016, the UK and Germany were both central destinations for intra-EU mobility, though with different compositions: the UK attracted a large inflow of workers from Central and Eastern Europe under conditions of strong labor demand, flexible markets, and widespread use of English; Germany, especially after 2004 and 2011, increasingly drew both EU workers and humanitarian inflows. Net migration rates in both economies were positive, with the UK experiencing strong EU-born inflows throughout the decade.

Immediate Post-Referendum Adjustment

Following the 2016 referendum, uncertainty regarding the future legal status of EU nationals translated into an early observable behavioral response. The UK experienced a rapid decline in EU immigration and a rise in EU emigration, while Germany—unaffected institutionally—continued to register high levels of EU mobility. In a difference-in-differences framework, the UK relative to Germany shows a sharp negative treatment effect on EU net migration beginning in 2016, even before policy changes took effect. This "anticipatory adjustment" reflects both employer expectations and migrant reassessments of long-term residence conditions.

The 2021 Regime Break: End of Free Movement

The full institutional rupture occurred in January 2021 when free movement formally ended. The UK introduced a point-based immigration system that removed the EU/non-EU distinction and prioritized skilled labor, students, and health-sector workers. Germany, by contrast, remained anchored in its EU-wide free movement regime and humanitarian commitments. The result is a compositional divergence:

- UK *EU net migration becomes strongly negative*, with sustained outflows.
- UK *non-EU immigration rises sharply*, producing historically high total net migration figures.
- Germany's net migration remains high but more stable, with strong inflows from both EU and non-EU origins.

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Education-Selective Migration Dynamics

Brexit also reshaped migration along educational lines. The reduction in EU inflows disproportionately affected workers with lower or medium education, whose entry had previously been facilitated by free movement. Conversely, the UK's new system favored tertiary-educated migrants and international students, producing a relative increase in high-education non-EU inflows compared with Germany. In DiD terms, the UK exhibits:

- a large negative post-2016 effect for low-education EU migration.
- a milder or ambiguous effect for medium education workers.
- and a positive post-2021 effect for highly educated non-EU migrants.

Emigration Responses and Native Mobility

Another overlooked dimension is emigration of UK nationals. Since 2016, emigration of British citizens has trended upward, driven by perceived economic uncertainty, professional opportunities in the EU, and reduced domestic dynamism. Germany does not display a comparable rise in native outward mobility. This divergence reinforces the view that Brexit generated a broad reconfiguration of mobility incentives within the UK.

To sum up**,** when benchmarked against Germany, Brexit stands out as a structural shock that reoriented the UK's migration system away from EU labor mobility and toward a selective, skills-oriented global model. The aggregate outcome is paradoxical: despite political demands to "take back control" and reduce migration, total UK net migration rose in the post-Brexit period, albeit with a fundamentally transformed composition.

Germany’s stable institutional environment serves as an effective counterfactual, underscoring that the UK’s migration shifts cannot be explained by global trends alone but reflect the distinct institutional and political rupture created by Brexit.

Brexit represents one of the most significant institutional disruptions to migration regimes in postwar Europe. The UK’s departure from the EU—first politically in 2016 and then legally with the end of free movement in 2021—provides a sharp natural experiment for understanding how migration responds to the dismantling of integrated labor mobility frameworks. Germany, which remained fully embedded in EU mobility institutions, offers a natural and stable benchmark.

3. DiD - framework: Benchmarking the United Kingdom Against Germany

This section presents the empirical findings from the Difference-in-Differences (DiD) framework that evaluates how the two major Brexit shocks—the 2016 referendum and the 2021 termination of free movement—altered the United Kingdom’s migration dynamics relative to Germany. As discussed in the conceptual framework

Germany offers a natural counterfactual because it remained continuously embedded in the EU’s free-movement regime and did not experience parallel institutional disruptions. Accordingly, divergence between the UK and Germany after 2016 and 2021 can reasonably be interpreted as reflecting the causal impact of Brexit-induced institutional change.

A DiD specification with Post2016 and Post2021 interactions captures this bifurcation: a persistently negative coefficient for EU migration in the UK, and a positive post-2021 coefficient for non-EU migration, both relative to Germany

To formalize this comparison, we use a Difference-in-Differences (DiD) framework that treats the UK as the "exposed" unit and Germany as the control. Let MigRate_{it}^{g} denote immigration, emigration, or net migration per 1,000 persons for group g (EU migrants, non-EU migrants, or education-defined groups) in country i and year t. The baseline model is:

$$\text{MigRate}_{it}^{g} = \alpha_i + \gamma_t + \beta_{1g}(UK_i \times Post2016_t) + \beta_{2g}(UK_i \times Post2021_t) + u_{it}.$$

Here,

- α_i captures time-invariant differences between the UK and Germany.
- γ_t absorbs global migration shocks such as economic cycles and COVID-19.
- β_{1g} measures the *anticipatory effec***t** of the 2016 referendum.
- β_{2g} identifies the *structural effect* of the 2021 termination of free movement.

This structure allows migration outcomes to be decomposed into pre-policy uncertainty responses and post-policy institutional consequences.

Table 1(a). Net Migration (% Labor Force) – UK vs Germany

Predictors	***Estimates***	***std. Error***
UK_Post2016	**0.42 *****	**0.00**
UK_Post2021	**0.46 *****	**0.00**
Observations	**26**	
R^2 / R^2 adjusted	**0.886 / 0.715**	

**** p<0.05   ** p<0.01   *** p<0.001***

Table 1(b). Immigration (% Labor Force) – UK vs Germany

Predictors	*Estimates*	*std. Error*
UK_Post2016	-0.07 ***	0.00
UK_Post2021	0.44 ***	0.00
Observations	26	

R^2 / R^2 adjusted	0.898 / 0.744

* $p<0.05$ ** $p<0.01$ *** $p<0.001$

Table 1 (c).

	Emigration (% Labor Force) – UK vs Germany	
Predictors	*Estimates*	*std. Error*
UK_Post2016	-0.49 ***	0.00
UK_Post2021	-0.02 ***	0.00
Observations	26	
R^2 / R^2 adjusted	0.950 / 0.875	

* $p<0.05$ ** $p<0.01$ *** $p<0.001$

Tables 1a–1c report the estimated treatment effects for net migration, immigration, and emigration as a percentage of the labor force. The results reveal a pattern of sharp and persistent divergence between the UK and Germany, consistent with the theoretical expectation of anticipatory adjustment (2016) and institutional realignment (2021) outlined earlier in the draft.

2.1 Net Migration (Table 1a)

Table 1a shows that both the **Post2016** and **Post2021** interaction terms are positive, precisely estimated, and highly significant (0.42*** and 0.46***, respectively). These results indicate that net migration into the UK increased relative to Germany following both Brexit shocks.

The magnitude of these effects is economically meaningful. After the 2016 referendum, the UK did not experience a reduction in net migration; instead, it displayed a *relative increase* vis-à-vis Germany. This reflects two reinforcing mechanisms:

1. Immigration fell only modestly immediately after the referendum; and
2. Emigration fell substantially, generating an upward mechanical contribution to net migration.

Following the 2021 termination of free movement, the introduction of the UK's points-based immigration system further increased net migration relative to Germany, driven by the sharp expansion of non-EU skilled migration streams. This pattern underscores a fundamental paradox at the heart of the Brexit debate: the institutional rupture increased net migration rather than reducing it, revealing the primacy of labor-market demand and policy design over the political promise of tighter borders.

2.2 Immigration (Table 1b)

The immigration estimates in Table 1b exhibit a striking two-phase dynamic. The **Post2016** coefficient is negative (–0.07***), signaling that immigration into the UK declined relative to Germany in the immediate aftermath of the referendum. This contraction aligns with the behavioral responses documented in the preceding sections

EU workers reassessed long-term residence prospects, employers reduced recruitment amid regulatory uncertainty, and the UK's relative attractiveness weakened as the future of mobility rights became unclear.

The pattern shifts dramatically after 2021. The **Post2021** estimate is large and positive (+0.44***), reflecting the substantial rise in non-EU skilled migration, health-care migration, and international student mobility enabled by the post-Brexit points-based system. In contrast, Germany—unaffected by the institutional shock—maintained a relatively stable trajectory of both EU and non-EU inflows.

These results confirm that Brexit did not lead to a generalized decrease in immigration. Instead, it reallocated migration flows across origin categories, producing a decline in EU inflows offset—and ultimately surpassed—by expansion in global migration channels.

2.3 Emigration (Table 1c)

The emigration estimates provide crucial context for the interpretation of net migration. Table 1c indicates that *emigration from the UK declined sharply relative to Germany after 2016*, with a large negative and statistically significant coefficient for **Post2016** (–0.49***). This decline reflects the stabilizing effect of the EU Settlement Scheme on resident EU populations, as well as the absence of an immediate outward surge among UK nationals.

By 2021, the estimated effect has largely dissipated (–0.02***), indicating stabilization but no evidence of a post-Brexit emigration wave. Together, these findings show that outward mobility did not rise in response to either institutional shock; instead, the suppressive effect on emigration in the post-referendum years significantly contributed to rising net migration.

To sum up, taken together, the estimates across Tables 1a–1c reveal a coherent and structurally significant reconfiguration of UK migration patterns relative to Germany. Four findings stand out:

1. *Net migration increases after both Brexit shocks*, driven first by suppressed emigration (2016) and later by an expansion of non-EU immigration (2021).
2. *Immigration exhibits a regime-shift dynamic*: a sharp decline in EU inflows after the referendum, followed by a strong increase in non-EU inflows under the new points-based system.
3. *Emigration declines rather than increases,* contradicting expectations of a "Brexodus" and amplifying the effect on net migration.

4. *Germany's trajectory remains stable*, confirming that the UK's migration shifts are institutional in origin rather than products of broader European mobility trends.

5. Conclusion

Our findings support the broader argument advanced in this paper: *Brexit functions as a structural regime shock that reorients, rather than reduces, the United Kingdom's migration flows*. The shift is both quantitative—raising net migration—and qualitative, altering the skill composition, regional origins, and institutional channels through which migrants enter and exit the UK labor market. The DiD results provide empirical foundation for understanding Brexit not as a tightening of borders but as a *reallocation of mobility regimes*, marking the transition from an EU-centered labor mobility framework to a global, skills-selective migration system.

This paper shows that a Difference-in-Differences framework centered on the Brexit shock effectively captures its short-run consequences, revealing an immediate rise in institutional and policy uncertainty. While these short-run effects are important, the longer-run implications are more structural: Brexit appears to increase key institutional-risk parameters that shape both investment behavior and the composition of migration flows.

Drawing on the self-selection literature—Borjas (1987), Razin et al. (2002), and Razin and Wahba (2015)—the analysis highlights how changes in institutional risk alter the skilled–unskilled migrant mix. Borjas emphasizes how migrants self-select based on relative returns to skill, while Razin and co-authors extend this mechanism to fiscal-policy environments. The resulting equilibrium is characterized by less skilled migration, lower FDI, and a weaker fiscal contribution—a combination that erodes the fundamental pillars of the UK's pre-Brexit growth model. Human-capital inflows, foreign investment, and stable fiscal expectations once formed a mutually reinforcing system. Brexit disrupts this synergy, generating a trajectory of long-run fiscal and growth fragility that is qualitatively consistent with the theoretical predictions of the self-selection and fiscal-risk literature. Therefore, Their framework predicts that shocks such as Brexit, which raise perceived fiscal and institutional fragility, lead to adverse selection in migration: skilled migrants face weaker incentives to enter, while the expected fiscal burden increases.

These dynamics interact with investment decisions. Higher institutional risk dampens inward FDI flows and induces more cautious investor behavior. As the complementarity between human and physical capital diminishes, the UK's long-run productive capacity is adversely affected.

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