

# Economic Freedom As a Constraint-Relaxing Mechanism: Evidence From U.S. Migration

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July 2026

Interstate migration reshapes the distribution of population, labor, and tax capacity across the United States, and scholars have long sought to understand what leads households to move from one state to another. One major line of research highlights economic fundamentals — especially wages, employment opportunities, and housing costs — as key drivers of migration decisions (Molloy, Smith, and Wozniak 2011; Kennan and Walker 2011). Another, drawing on Tiebout’s (1956) idea of “voting with one’s feet,” emphasizes the role of the state policy environment, suggesting that households sort across states in response to differences in taxes, regulation, and public goods. A third line of research takes a life-course perspective and shows that migration is also shaped by household circumstances, with factors such as marital status, mortgage, and adverse life events often making relocation either easier or more difficult (Cooke 2013; Coulson and Grieco 2013; Leibbrand and Crowder 2018; Spring, Gillespie, and Mulder 2024).

These types of research have largely developed apart from one another. Research on state-level economic freedom and migration consistently finds that states with greater economic freedom attract net migrants (Ashby 2007; Mulholland and Hernández-Julián 2013; Shumway and Davis 2016; Arif et al 2020). Yet nearly all of this work relies on aggregate state-to-state migration data from the Internal Revenue Service or the Census Bureau. While such data can show that more economically free states gain migrants overall, they cannot reveal which households are moving or whether responsiveness to economic freedom differs across the life course.

By contrast, the household-level migration literature has used the Panel Study of Income Dynamics (PSID) to examine who moves and why. These studies show that mobility is shaped by factors such as homeownership and mortgage equity (Coulson and Grieco 2013), disruptive life events (Cooke 2013; Spring, Gillespie, and Mulder 2024), and neighborhood attainment (Leibbrand and Crowder 2018). What this literature has not

done is to connect PSID households to the policy and economic environment of their state of residence. As a result, the questions of whether economic freedom matters for migration and which households respond most strongly to it have not been examined with household-level panel data.

This paper connects these two literatures by linking thirteen biennial waves of the PSID, spanning 1999 to 2023, to the Fraser Institute's EFNA subnational index. We estimate the probability of interstate migration as a function of the change in economic freedom between a household's current state and its prior state, controlling for a standard set of individual and household covariates.

The analysis produces two main findings. First, larger economic freedom differentials are strongly associated with a higher likelihood of interstate migration. Second, the effect of economic freedom varies substantially across households. The strongest responses come from groups that are usually seen as less mobile—older individuals, homeowners, and households with young or school-age children. Taken together, these results suggest that economic freedom is not simply a pull factor for the already mobile. Rather, it appears to ease the constraints that keep less mobile households from relocating.

These findings contribute to three areas of research. First, for research on economic freedom and migration, they provide the first household-level panel evidence to complement current studies. They also refine the existing view by showing that the aggregate relationship is driven disproportionately by groups that aggregate data cannot directly observe. Second, for the PSID-based migration literature, this paper introduces the state policy environment as an additional determinant of mobility alongside the life-course factors. Third, for the broader policy debate on interstate competition, the results suggest that institutional reform may help states attract not only young and unattached movers, but also older households, homeowners, and families whose location decisions can have important long-run effects on local labor markets, housing demand, and fiscal capacity.

The remainder of the paper is organized as follows. The Literature Review section examines the literature on migration. The Method and Data section introduces the data and outlines the empirical approach. The Results section presents the estimation results and discusses their economic magnitude. The Conclusion discusses the broader implications of the findings.

## Literature Review

The main idea behind linking state institutions to migration comes from Tiebout's (1956) model of local public goods, which suggests that mobile households choose among jurisdictions based on the mix of taxes, regulation, and public services they offer. The studies that followed have generally found the same result: states with higher economic freedom tend to attract more migrants. Ashby (2007) was among the first to document this pattern and showed that it holds even after controlling for income, unemployment, and climate. Shumway and Davis (2016) showed that this relationship also has implications for the redistribution of income across states.

A smaller part of this literature has moved beyond average effects to ask which groups respond most strongly to economic freedom. Mulholland and Hernández-Julián (2013) find that the educational composition of migrants is not uniform: states with greater economic freedom attract relatively more migrants with secondary and some-college education.

Even so, these studies share similar limitations: they rely on aggregate flow data, in which migrants appear only as counts defined by origin, destination, and broad demographic categories. Such data can show that more economically free states attract migrants, but they cannot capture the household context behind the decision to move. They do not show, for example, whether a household owns a home, has young children, recently experienced a job change, or faces other constraints that shape mobility. As a result, the literature can identify broad migration patterns, but it cannot explain how economic freedom interacts with the household-level factors.

A separate literature has used the PSID to study migration from exactly this household-level perspective. The PSID is especially valuable for this kind of research because it has followed the same individuals and their descendants since 1968, including a rich set of demographic, economic, and life-course information. Cooke (2013) uses propensity-score matching with the 1997–2007 PSID to identify “tied migrants” and “tied stayers,” which are married individuals whose migration behavior would likely have been different if they had been single. He finds that family structure is a major source of immobility: most married individuals are tied stayers rather than tied migrants. Spring, Gillespie, and Mulder (2024) extend this line of work by studying adverse life events. They find that divorce and involuntary job loss increase the likelihood of long-distance moves. Together, these studies

show that marriage, children, and kin ties can shape when and where households move. Our baseline results broadly reflect these patterns: marriage and the presence of young children are strongly related to migration behavior.

Coulson and Grieco (2013) use the 1999–2009 PSID to estimate how homeownership and mortgage equity affect the likelihood of moving. Their finding shows that homeowners are much less likely to move than renters. They further show that this lock-in effect comes mainly from homeownership itself rather than from negative equity. What Coulson and Grieco do not consider is whether the lock-in effect of homeownership changes with the institutional environment of the state. That is one of the main questions we examine in our extended specification.

Taken together, these two literatures raise a question that neither can answer directly. The aggregate literature on economic freedom and migration shows that states with greater economic freedom attract migrants, but it cannot show which households are driving that result. In particular, it cannot tell us whether the response comes mainly from younger and less constrained households, who are already more mobile, or from more rooted households, for whom moving in response to institutional differences would involve a larger economic and personal adjustment. The PSID migration literature, by contrast, documents in detail the factors that constrain mobility—homeownership, family structure, age, and kin ties—but does not examine whether those constraints are strengthened or weakened by differences in the state policy environment.

This paper fills this gap by linking PSID data with the EFNA subnational index. By estimating how changes in economic freedom across states affect households' migration probabilities, and by allowing that effect to vary across the household characteristics, we provide the first direct test of whether economic freedom acts mainly as a pull factor for the already mobile or as a force that relaxes the constraints keeping less mobile households in place.

## **Method and Data**

This study combines two primary data sources to examine the relationship between state-level economic freedom and interstate migration decisions in the United States. Individual-

and household-level data are drawn from the Panel Study of Income Dynamics (PSID), while state-level measures of economic freedom come from the Fraser Institute's Economic Freedom of North America (EFNA) subnational index. The analysis covers the period 1999 through 2023, which corresponds to thirteen biennial waves of the PSID following its shift to a biennial survey design. The 1997 wave is used only to construct prior-state-of-residence information and is therefore not retained in the estimation sample, since migration is defined relative to the preceding wave.

The PSID is the longest-running household panel survey in the world, initiated in 1968 with an original sample of approximately 4,800 U.S. households. The survey follows all descendants of original sample members as they form new households, providing a multigenerational panel uniquely suited to studying migration behavior over extended time horizons. For this analysis, household heads are identified in each wave using PSID sequence numbers, and individuals are linked across waves using permanent person identifiers constructed from the 1968 family identifier (ER30001) and within-family person number (ER30002) from the PSID Cross-Year Individual File. This construction preserves each individual's identity even as they form new households, divorce, or otherwise change household composition, allowing consistent tracking of household heads across the full panel.

The Fraser Institute's EFNA subnational index provides annual measures of economic freedom for all fifty U.S. states. The subnational index synthesizes multiple dimensions of state-level economic policy—including government spending, taxation, and labor market regulation—into a single summary score ranging approximately from 0 to 10, with higher values indicating greater economic freedom. The EFNA index is well-suited to this analysis because it captures policy-induced variation in the institutional environment across states and over time.

The two data sources are merged on state of residence (FIPS code) and survey wave. Observations are restricted to household heads with non-missing values on all covariates and for whom a valid prior-wave observation exists. Washington, D.C., is excluded because it is not covered by the EFNA index, as are observations with missing or non-standard state codes. The final analysis sample comprises 92,474 household-head-year observations drawn from 13 waves spanning 1999 to 2023.

The dependent variable of interest, *move*, is a binary indicator equal to one if the household head's state of residence in wave  $t$  differs from their state of residence in wave  $t - 1$ , and zero otherwise. This wave-to-wave formulation captures the probability of interstate migration between consecutive observations.

The key explanatory variable, *ef\_gap*, is defined as the difference between the economic freedom score of the household head's state of residence in wave  $t$  and the economic freedom score of the state in which the household was observed in wave  $t - 1$ . For households that do not move, this variable captures within-state changes in economic freedom over the two-year interval and is typically small in magnitude. For households that move between states, *ef\_gap* captures the difference in institutional environment between the destination and origin states experienced as a consequence of migration.

A standard set of individual- and household-level covariates is included to control for observable determinants of migration. *Age* is the head's age in years. Two indicators capture the presence of children at potentially disruptive ages: *toddler* equals one if the youngest child in the household is between one and four years old, and *schoolkid* equals one if the youngest child is between five and seventeen. The omitted category corresponds to households with no resident children or with only adult children. Additional binary controls include *married* (equal to one if the head is legally married), *homeowner* (equal to one if the household owns its dwelling), *employed* (equal to one if the head reports being employed for wages), (equal to one if the head reports self-employment as primary work activity), and (equal to one if the head reports being retired). Survey wave fixed effects are included to absorb common shocks and secular trends in interstate mobility.

Because interstate migration is a relatively rare event in the PSID—occurring in approximately 4.3 percent of household-year observations—standard logistic regression is subject to small-sample bias that can distort coefficient estimates (King and Zeng, 2001). To address this, the analysis employs Firth's (1993) penalized maximum likelihood estimator, which reduces finite-sample bias. The estimator has been shown to perform well in settings with rare binary outcomes.

The baseline specification estimates the probability that household head  $i$  migrates between waves  $t - 1$  and  $t$  as a function of the economic freedom differential and a

vector of individual characteristics:

$$Pr(move_{it} = 1) = \Lambda(\alpha + \beta \cdot ef\_gap_{it} + X_{it}'\gamma + \delta_t + \varepsilon_{it})$$

where  $\Lambda(\cdot)$  denotes the logistic cumulative distribution function,  $X$  is the vector of individual and household controls, and  $\delta_t$  represents survey-wave fixed effects. The coefficient on  $ef\_gap$  is the parameter of primary interest, capturing the average association between exposure to an economic freedom differential and the probability of interstate migration.

A central motivation for this study is that the responsiveness of migration decisions to economic freedom differentials is unlikely to be homogeneous across the population. Mobility is constrained by life-cycle factors—the presence of young children, homeownership, labor market attachment—and these constraints may systematically moderate how individuals respond to economic freedom incentives. To investigate heterogeneous responses, an extended specification interacts  $ef\_gap$  with each individual-level covariate:

$$Pr(move_{it} = 1) = \Lambda(\alpha + \beta \cdot ef\_gap_{it} + X_{it}'\gamma + (ef\_gap_{it} \times X_{it})'\theta + \delta_t + \varepsilon_{it})$$

The vector  $\theta$  captures the differential sensitivity of migration probability to economic freedom gaps across subgroups defined by age, family composition, homeownership, marital status, and labor market status. Positive interaction coefficients indicate that a given subgroup is more responsive to economic freedom differentials, whereas negative coefficients indicate that the subgroup is less responsive to economic freedom differentials. Taken together, the vectors  $\gamma$  and  $\theta$  permit a decomposition of migration responses into a baseline constraint effect (through  $\gamma$ ) and a moderated freedom-responsiveness effect (through  $\theta$ ), allowing the analysis to address not only whether economic freedom matters for migration, but for whom it matters most. All specifications include biennial wave fixed effects to absorb unobserved time-specific shocks common to all states, such as national business-cycle conditions or federal policy changes.

## Results

Table 1 reports estimates from the baseline Firth penalized logit model, which relates the

probability of interstate migration to the economic freedom differential and a standard set of individual- and household-level covariates. The coefficient on *ef\_gap* is positive, and highly significant ( $\beta = 0.864, p < 0.001$ ), indicating that exposure to a more economically free state environment between consecutive waves is strongly associated with a higher probability of interstate migration. The magnitude of the coefficient is consistent with the view that institutional quality, as captured by subnational economic freedom, is a meaningful determinant of household migration decisions in the United States.

The EFNA subnational index is measured on a 0-10 scale, where higher values indicate greater economic freedom. To illustrate the economic magnitude of this effect, consider a married, employed, 45-year-old renter with no resident children. The baseline specification implies a predicted migration probability of approximately 7.9 percent when the economic freedom differential is zero. A one-unit increase in *ef\_gap* roughly doubles this probability, to approximately 17.0 percent, and a two-unit increase raises it to approximately 32.6 percent. These magnitudes demonstrate that modest differences in state-level institutional environment can generate substantial differences in migration propensity, even after controlling for demographic, family, and labor-market characteristics.

The estimated effects of individual and household characteristics are consistent with prior findings in the migration literature. Age is negatively associated with the probability of moving ( $\beta = -0.039, p < 0.001$ ), reflecting the widely observed decline in mobility over the life cycle. Holding other covariates constant and evaluating at a one-unit economic freedom gap, predicted migration probability declines from approximately 30.8 percent at age 25 to approximately 17.0 percent at age 45 and 8.5 percent at age 65. The presence of young children reduces migration probability, with strong negative coefficients on both the *toddler* indicator ( $\beta = -0.369, p < 0.001$ ) and the *schoolkid* indicator ( $\beta = -0.588, p < 0.001$ ). The larger magnitude for school-age children is consistent with the greater disruption costs associated with changing schools and peer networks during middle childhood.

Marital status and homeownership exhibit opposing effects. Married household heads are more likely to migrate ( $\beta = 0.402, p < 0.001$ ), while homeowners are substantially less

mobile ( $\beta = -0.974, p < 0.001$ ). The homeownership effect is the largest in magnitude among the control variables and reflects the well-known lock-in effect of housing tenure on geographic mobility. To illustrate, a married, employed, 45-year-old homeowner facing a one-unit economic freedom gap has a predicted migration probability of only 7.2 percent, compared to 17.0 percent for an otherwise identical renter. Retired heads exhibit the highest migration propensity conditional on other covariates ( $\beta = 0.792, p < 0.001$ ), consistent with retirement representing a major life-cycle transition that frequently coincides with relocation. Self-employment is associated with modestly lower migration probability ( $\beta = -0.189, p = 0.002$ ), while the coefficient on standard employment is small and statistically insignificant.

Table 2 reports estimates from the extended specification that interacts *ef\_gap* with each individual-level covariate. This specification permits a direct test of whether the sensitivity of migration decisions to economic freedom differentials varies systematically across demographic, family, and labor-market subgroups. Five of the eight interaction terms are statistically significant, indicating that households differ substantially in how they respond to economic freedom, even though the average response is strongly positive.

The interaction between *ef\_gap* and age is positive and highly significant ( $\beta = 0.013, p < 0.001$ ), meaning that older individuals respond more strongly, not less, to economic freedom differentials. While overall mobility falls with age, the sensitivity to economic freedom rises. This pattern suggests that economic freedom differentials help relax the age-related barriers to mobility. It exerts stronger pull on groups for whom mobility costs are otherwise higher.

Households with school-age children also display heightened responsiveness to economic freedom gaps ( $\beta = 0.479, p < 0.001$ ), as do households with toddlers ( $\beta = 0.160, p = 0.040$ ). Although the main effects on *toddler* and *schoolkid* confirm that these households are considerably less mobile on average, the positive interaction terms indicate that when such families do migrate, the decision is more tightly linked to the extent of economic freedom at the destination. A plausible interpretation is that families with dependent children weigh destination characteristics more carefully before undertaking a disruptive move, so that moves that do occur are disproportionately directed toward states offering

a meaningfully better institutional environment.

The most striking moderating effect is associated with homeownership. The interaction  $ef\_gap \times homeowner$  is positive, and highly significant ( $\beta = 0.823, p < 0.001$ ). Despite homeowners' substantially lower baseline migration probability, those who do move respond more strongly to economic freedom differentials than renters. This pattern suggests that a sufficiently large improvement in the institutional environment can overcome homeownership lock-in, and that when homeowners do relocate, they appear to do so with substantially greater sensitivity to the economic environment of the destination state. The finding echoes a theme that economic freedom differentials exert their strongest pull on groups for whom the baseline costs of moving are highest.

The interaction between  $ef\_gap$  and marital status is negative and statistically significant ( $\beta = -0.149, p = 0.018$ ). Married household heads, despite a higher baseline propensity to migrate, exhibit a somewhat weaker response to economic freedom differentials relative to unmarried heads. This is consistent with the constraint imposed by dual-career considerations or spousal preferences, which may lower migration responses that would otherwise be driven by economic incentives facing the household head in isolation.

The interactions between  $ef\_gap$  and labor-market status present a more nuanced picture. In the baseline specification, self-employment is negatively associated with migration, retirement is strongly positively associated, and standard employment has a small and insignificant effect. In the fully interacted specification, however, none of these labor-market interactions with  $ef\_gap$  reach statistical significance. This suggests that although labor-market status exerts meaningful direct effects on migration propensity — particularly for retirees, who are the most mobile group in the sample — it does not systematically alter the responsiveness of households to variation in state-level economic freedom. Taken together, the interaction results are consistent with a model in which economic freedom incentives are most powerful for households facing the greatest baseline mobility frictions—homeowners, older individuals, and families with young or school-age children—rather than for the groups traditionally viewed as most mobile.

The overall pattern of results offers two complementary findings. First, the baseline specification shows that interstate migration is strongly and positively linked to

differences in state-level economic freedom, with effect sizes large enough to produce meaningful differences in migration probability across a plausible range of  $ef\_gap$ . Second, the interaction analysis reveals that this average effect masks important heterogeneity: the responsiveness to economic freedom is not uniform across the population but is concentrated among groups for whom baseline mobility costs are highest. The implication is that economic freedom functions not merely as an attractor of the already-mobile but as a constraint-relaxing force capable of inducing migration among households that would otherwise be geographically anchored.

## Conclusion

This paper examines whether differences in state-level economic freedom help explain interstate migration in the United States, using Panel Study of Income Dynamics data matched with the Fraser Institute's Economic Freedom of North America subnational index across thirteen biennial waves from 1999 to 2023. Two main findings emerge. First, larger differences in economic freedom between states are associated with significantly higher migration probabilities, and the estimated effects are economically substantial. Second, this relationship conceals important heterogeneity: the strongest responses appear among groups traditionally considered less geographically mobile, including older individuals, homeowners, and families with young children. Taken together, these findings suggest that economic freedom operates less as a simple pull factor for the already mobile and more as a force that relaxes constraints on migration.

These findings have implications for state policymakers. The results suggest that improvements in institutional quality — through lower taxes, lighter regulation, or more efficient spending — can meaningfully improve a state's ability to attract migrants, including groups that are typically less likely to relocate. This point matters because migration is not only about increasing population counts; it also affects the composition of a state's labor force, tax base, housing demand, and long-run economic dynamism. If economic freedom disproportionately affects older individuals, homeowners, and families with children, then institutional reform may help attract households with deeper community attachment, greater accumulated assets, and longer planning horizons. In that sense, a state's policy environment may shape not only whether people move, but which kinds of residents it is most likely to gain or lose.

The results also suggest that states do not compete only through climate, geography, or short-term job growth, but also through the policy environment they create for households making long-horizon decisions. For people facing high moving costs — financial, professional, or family-related — a better economic environment may reduce uncertainty and improve the expected return to relocation. This helps explain why economic freedom appears especially influential for groups that are otherwise geographically anchored. Policies that improve the predictability, affordability, and flexibility of economic life may therefore matter most precisely where mobility barriers are strongest.

Moreover, a state with rising taxes, heavier regulatory burdens, or less effective public spending may also lose households that once seemed relatively fixed in place. Over time, such losses can have cumulative consequences for local labor markets, housing markets, and fiscal capacity. By contrast, states that maintain or improve economic freedom may gain an advantage in attracting and retaining residents who contribute not only labor, but also capital, stability, and community investment.

Rather than simply rewarding states that appeal to highly mobile individuals, economic freedom appears to loosen the constraints that keep many households from moving at all. This perspective helps connect migration behavior to the broader policy environment and suggests that state governments can influence population flows in more meaningful ways than is often recognized. Future research could build on this finding by examining which dimensions of economic freedom matter most for different households and whether these migration responses translate into longer-run differences in growth, housing adjustment, and state fiscal performance.

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## Appendix

Table 1. Determinants of Interstate Migration: Baseline Specification  
***Firth penalized logit, PSID 1999-2023 (N=92,474)***

	Move
	<b>Coefficient</b>
Economic freedom gap	0.864*** (0.031)
Age	-0.039*** (0.002)
Toddler in household	-0.369*** (0.046)
School-age child	-0.588*** (0.045)
Married	0.402***

**Appendix (continued)**

Table 1. (continued)

***Firth penalized logit, PSID 1999-2023 (N=92,474)***

	Move
	<b><i>Coefficient</i></b>
	(0.038)
Homeowner	-0.974***
	(0.040)
Employed	-0.009
	(0.047)
Self-employed	-0.189***
	(0.060)
Retired	0.792***
	(0.078)
Constant	-1.338***
	(0.106)

**Appendix (continued)**

Table 1. (continued)

***Firth penalized logit, PSID 1999-2023 (N=92,474)***

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Wave fixed effects	Yes
Observations	92,474
Wald $\chi^2(21)$	2,668.20
Penalized log-likelihood	-14,959.11

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**Notes:** The dependent variable is an indicator equal to one if the household head’s state of residence differs between consecutive biennial PSID waves. Standard errors appear in parentheses beneath each coefficient. All specifications include biennial wave fixed effects.

**Significance:** \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01.

**Appendix (continued)**

Table 2. Determinants of Interstate Migration: Heterogeneous Responses  
*Firth penalized logit with interactions, PSID 1999-2023 (N=92,474)*

	Move
	<b>Coefficient</b>
<b>Panel A. Main effects</b>	
Economic freedom gap	-0.039 (0.127)
Age	-0.041*** (0.002)
Toddler in household	-0.400*** (0.048)
School-age child	-0.695*** (0.049)
Married	0.441*** (0.041)

**Appendix (continued)**

Table 2. (continued)

***Firth penalized logit with interactions, PSID 1999-2023 (N=92,474)***

	Move
	<b><i>Coefficient</i></b>
Homeowner	-1.165***
	(0.043)
Employed	0.000
	(0.049)
Self-employed	-0.175***
	(0.063)
Retired	0.778***
	(0.085)
 <b><i>Panel B. Interactions with economic freedom gap</i></b>	
Economic freedom gap X Age	0.013***
	(0.003)

**Appendix (continued)**

Table 2. (continued)

***Firth penalized logit with interactions, PSID 1999-2023 (N=92,474)***

	Move
	<b><i>Coefficient</i></b>
Economic freedom gap X Toddler	0.160***
	(0.078)
Economic freedom gap X School-age	0.479***
	(0.078)
Economic freedom gap X Married	-0.149***
	(0.063)
Economic freedom gap X Homeowner	0.823***
	(0.066)
Economic freedom gap X Employed	0.029
	(0.080)
Economic freedom gap X Self-employed	-0.068

**Appendix (continued)**

Table 2. (continued)

***Firth penalized logit with interactions, PSID 1999-2023 (N=92,474)***

	Move
	<b>Coefficient</b>
	(0.100)
Economic freedom gap X Retired	-0.068
	(0.133)
Constant	-1.193***
	(0.109)
Wave fixed effects	Yes
Observations	92,474
Wald (29)	2,724.06
Penalized log-likelihood	-14,774.64

**Notes:** The dependent variable is an indicator equal to one if the household head’s state of residence differs between consecutive biennial PSID waves. Standard errors appear in parentheses beneath each coefficient. All specifications include biennial wave fixed effects.

**Significance:** \* p < 0.10, \*\* p < 0.05, \*\*\* p < 0.01.

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