PREVALENCES, PENALTIES, AND CHILD POVERTY IN THE U.S.

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ABSTRACT

Using recent LIS data on 28 rich democracies and on the U.S. 1974-2016, we assess the relative importance of the four main risk factors for child poverty: unemployment, low education, young headship, and single motherhood. We decompose these risks into prevalences and penalties (relatively greater poverty for those with versus without the factor). The U.S. has unusually high child poverty despite prevalences near the cross-national average. However, the U.S. has relatively high penalties. Child poverty in the U.S. has been stable at a high level since 1974 despite substantial declines in the prevalences of three of the four risks. This stability partly results from rising penalties for unemployment and low education. The exception is single motherhood, which became slightly more prevalent while the penalty declined. We simulate how much U.S. child poverty would decline with counterfactual prevalences and penalties (e.g. cross-national median, one standard deviation reductions, and 1974 or zero prevalences). In every simulation, the U.S. would still have child poverty rates higher than the cross-national mean. If the U.S had the 1974 prevalence of single motherhood or completely eliminated single motherhood, child poverty would decline only modestly and the U.S. ranking among the 28 rich democracies would be unchanged.

INTRODUCTION

In the most recent Luxembourg Income Study (LIS) data, the U.S. has the third highest rate of child poverty among 28 rich democracies. Although Israel and Spain have recently surpassed the U.S. to claim the highest child poverty among developed countries, the U.S. has had unusually high child poverty for several decades. More than one in five children in the U.S. (21.3%) were poor in 2016. This rate is about 1.65 standard deviations above the cross-national mean of 11.8% and is far above peer countries like the U.K. (8.8%) and Canada (17.8%). As exhibited by the vertical line marking the rate of child poverty in the U.S. in Figure 1, the U.S. has unusually high child poverty. We define poverty using the conventional threshold of 50% of the median equivalized disposable household income. Children are defined as under 18.

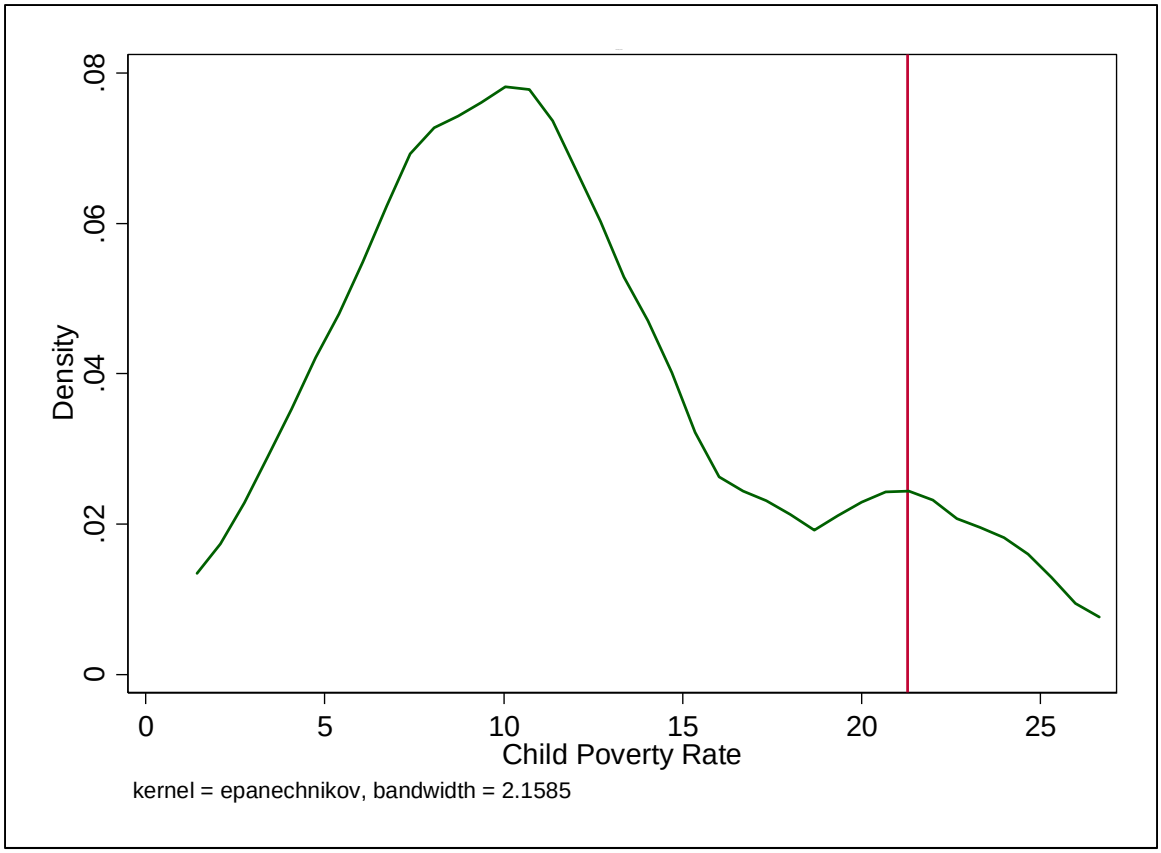

Figure 1. Kernel Density of Child Poverty Rates Across 28 Rich Democracies.

One of the principal explanations for this high child poverty rate focuses on demographic risks. The view has been that the U.S. has high child poverty because a high share of households with children have disadvantageous and poverty-increasing characteristics. Most prominently, considerable research and commentary emphasizes single parenthood as a key cause of child poverty in the U.S. Generally, poverty researchers have converged on four major household risks of poverty: unemployment, low education, young headship, and single motherhood.

The Prevalences and Penalties Framework

Brady and colleagues (2017) developed the prevalences and penalties (PP) framework for assessing how much the risks of poverty can account for macro-level patterns of poverty. The PP framework builds on longstanding demographic decomposition techniques, and measures the prevalences and penalties of the four major risks of poverty. The prevalences are the share of the relevant population with a given risk. The penalties are the relatively higher rate of poverty for those with the given risk compared to those without it, estimated with coefficients for those risks in regression models predicting poverty. They clarify that focusing on reducing prevalences is only one of two ways to weaken the influence of risks on poverty. Rich democracies can also reduce the penalties attached to risks. Indeed, they demonstrate that there is more cross-national variation in penalties than prevalences and that poverty would decline more by reducing penalties than by reducing prevalences. In many rich democracies, several risks do not even carry a significant penalty.

Brady and colleagues use the PP framework to show that high overall U.S. poverty largely results because the U.S. has the highest penalties across rich democracies, despite having below average prevalences. They also show that the U.S. could only attain substantially lower poverty by reducing the penalties attached to risks. By contrast, the U.S. would not have substantially lower overall poverty if it reduced the prevalences of risks to cross-national medians, or the prevalences in 1980 or even 1970 in the U.S. More recently, Laird and colleagues (2018) and Rothwell and McEwen (2018) have used the PP framework to analyze poverty across the U.S. states, and child poverty before and after the Great Recession in liberal welfare states.

The PP framework may yield different insights for child poverty, however. Some have criticized Brady and colleagues (2017) for focusing on overall poverty in working-age households, which may dilute the relevance of risks like single motherhood for children. A sharper focus on child poverty may reveal a more deterministic penalty for single motherhood. In turn, it may be essential, and indeed far more effective, to reduce the prevalences of risks in order to reduce child poverty.

We use the PP framework to analyze child poverty in the U.S. Like Brady and colleagues (2017), we compare the U.S. against 27 other rich democracies in the most recent available LIS data. We also focus on over-time variation in child poverty in the U.S., applying the PP framework to all 12 waves of U.S. LIS data 1974-2016. We first describe the variation in prevalences and penalties of the risks of child poverty across the rich democracies and over time in the U.S. Using the PP framework for child poverty, we show some patterns that are consistent and some that differ with Brady and colleagues' (2017) analysis of overall poverty.

We then simulate how much 2016 U.S. child poverty could be reduced with counterfactual values of prevalences and penalties. Consistent with Brady and colleagues (2017), child poverty would be far lower in the U.S. with reduced penalties than with reduced prevalences. Child poverty would be much worse with cross-national median prevalences or U.S. prevalences from 1974. Despite critiques that reducing single motherhood would more effectively reduce child poverty than overall poverty, we demonstrate that child poverty would not be substantially lower with counterfactual prevalences of single motherhood.

Cross-National Variation in Prevalences and Penalties

We conduct analyses with 28 rich democracies using the most recent wave of data available in the LIS (analyses done September 2018). The analyses are restricted to children under the age of 18. The prevalences are simply the population-weighted means of the binary variables of each risk. The penalties are the coefficients for a model predicting child poverty in each of 28 rich democracies. In addition to the four risks, the models also adjust for the household head being 25-34 or over 54 (reference: head 35-53), the number of children in the household, the number of adults over 65 in the household, whether the head had a tertiary education (reference: head has secondary education), and whether there are multiple earners in the household. The models are linear probability models with robust standard errors clustered at the household level.

Table 1 displays the cross-national means and coefficients of variation (standard deviation/mean) for the prevalences (panel A) and penalties (panel B) of the four major risks of child poverty. For comparison, we also report the U.S. 2016 values for each risk. We have multiplied the prevalences and penalties by 100 for easier interpretation.

Table 1 reveals the U.S. has below average prevalences for two of the four risks (unemployment and low education) and above average prevalences for the other two risks (young headship and single motherhood). However, the U.S. has above average penalties for all four risks. Indeed, the U.S. penalties for the risks for low education and single motherhood are nearly three times as large as the cross-national mean. In addition, Table 1 shows that the cross-national variation in the prevalence is greater than in the penalty for unemployment. However, there is more cross-national variation in penalties than prevalences for low education, young headship and single motherhood.

Table 1. Cross-National Variation in Risks of Child Poverty.

		Prevalences		
	Unemployment	Low Education	Young Headship	Single Motherhood
Mean	6.441	17.174	2.577	11.126
U.S. 2016	5.009	12.020	3.771	16.139
CV	.644	.524	.476	.392
		Penalties		
	Unemployment	Low Education	Young Headship	Single Motherhood
Mean	35.704	6.485	14.522	4.720
U.S. 2016	48.462	18.644	18.501	13.437
CV	.439	1.039	.731	1.603

Within-U.S. Historical Variation in Prevalences and Penalties

It is worthwhile to assess how the U.S. in 2016 compares to the U.S. since 1974. Therefore, we apply the PP framework to over-time historical variation in the U.S. The calculation of prevalences for the U.S. is the same as above. However, we reestimate the penalties because the U.S. has data on more variables than is available for all 28 rich democracies. Hence, our estimation of penalties is based on models including four additional variables: single father household (reference here and above: couple household), and controls for whether the child is Black, Latino, or Other Race (reference: White).

As Figure 2 reveals, the U.S. has consistently had high child poverty. Child poverty peaked at 24.9% in 1986 and 24.7% in 1991, and has moderately declined since. However, since about 2000, U.S. child poverty has been fairly stable. In 2016, about 21% of U.S. children were poor. Despite the over-time fluctuation, the main trend is stability at a high level. The cross-national mean in the recent LIS data is 11.76% and the U.S. has been above 17.8% in every year of LIS data. Even at its lowest point in 1974, the U.S. had comparatively high child poverty.

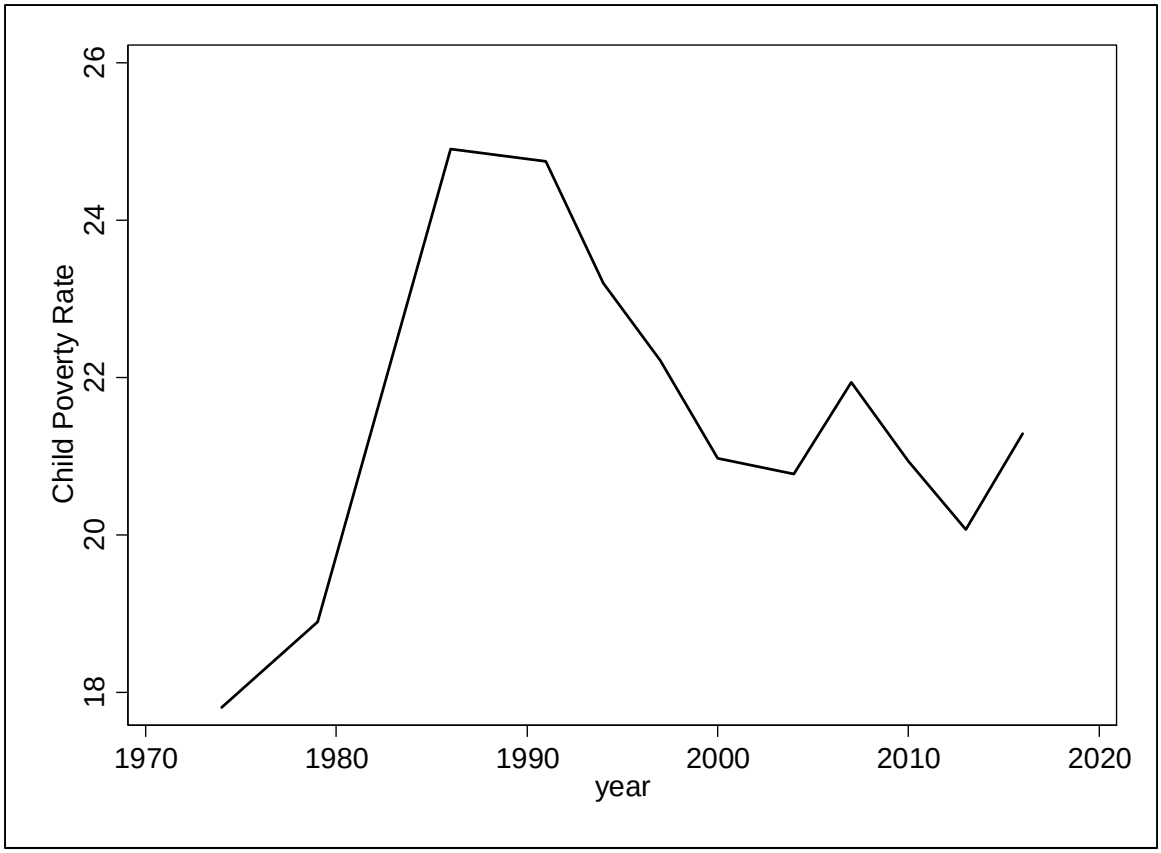

Figure 2. Trends in Child Poverty in the U.S., 1974-2016.

Despite the fact that the U.S. has had stable high child poverty, there has been meaningful variation in the prevalences of the four risks. These trends are displayed in Figure 3. The most noticeable trend is the dramatic decline of children in households headed by those without a high school degree (i.e. "low educated"). In 1974, over 30% of children resided in households headed by a person with less than a secondary degree. By 2016, this prevalence had fallen below 15%. As well, there has been declines in the prevalences of children in young-headed and unemployed households. There was a modest rise and subsequent stabilization in the prevalence of single motherhood. It peaked in 1991 and has declined somewhat since. Since the mid-2000s, the most common risk was single motherhood, followed by a low educated head, unemployment and young head. That said, it should be underlined that single motherhood is the most common prevalence because the others have declined while the prevalence of single motherhood has been fairly stable and not increased. Altogether, the prevalence of the four risks has declined considerably since 1974 and this is largely driven by the decline of low educated heads (and complemented by declines in unemployment and young heads).

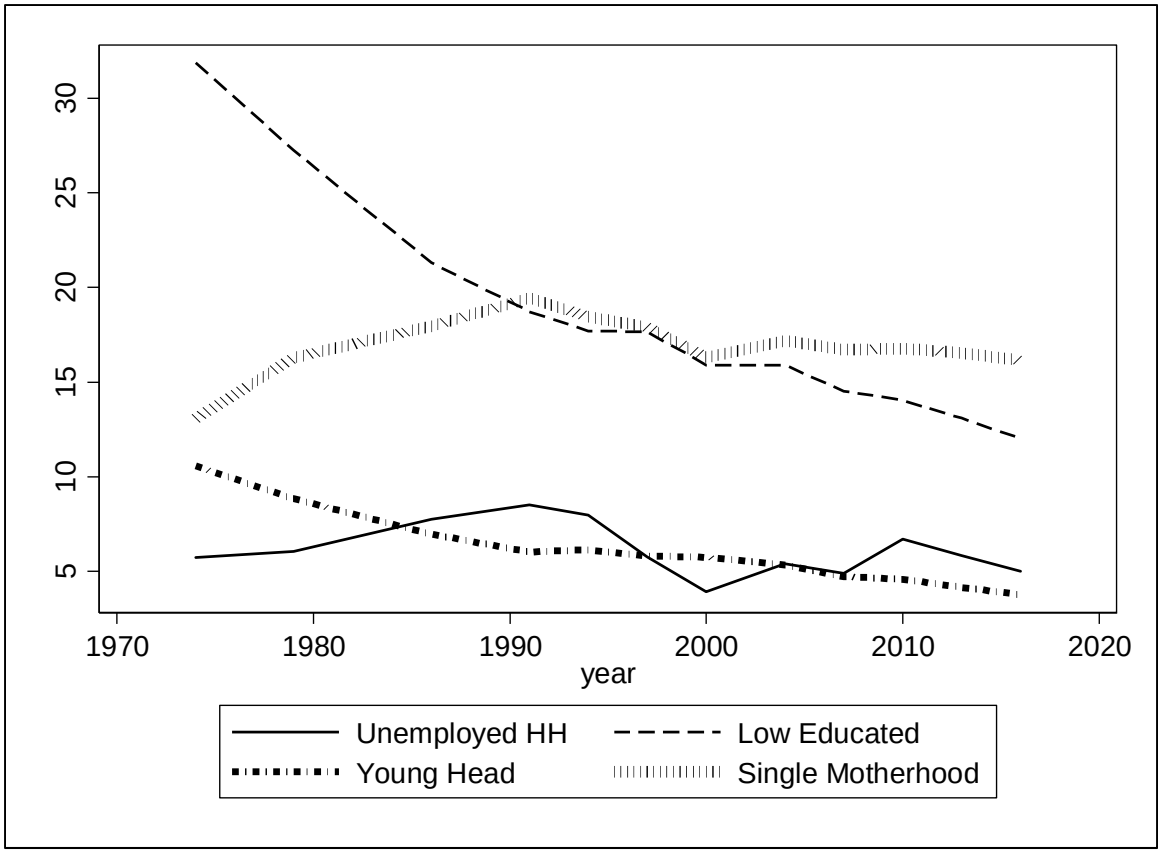

Figure 3. Trends in the Prevalences of the Four Risks Child Poverty in the U.S., 1974-2016.

Figure 4 shows the trends in the penalties for the four risks in the U.S. The largest penalty has always been for unemployment, and this penalty is approximately twice as large as the penalty for any of the other three risks. The penalty for unemployment has modestly increased over time. Hence, even though unemployment is the second-least prevalent of the four risks, its penalty is far more important than the others. The penalty for young headship has fluctuated over time, but been consistently the second largest of the four risks. The penalty for low education has trended upwards over time and is nearly as large as the penalty for young headship in 2016. The penalty for single motherhood peaked in 1986, when it was the third largest penalty. However, the penalty for single motherhood has declined since 1986 and has been the smallest penalty since 1991. In 2016, the penalty for single motherhood is about one-fourth as large as the penalty for unemployment. Thus, despite being the most prevalent risk in 2016, single motherhood has the smallest penalty of the four risks.

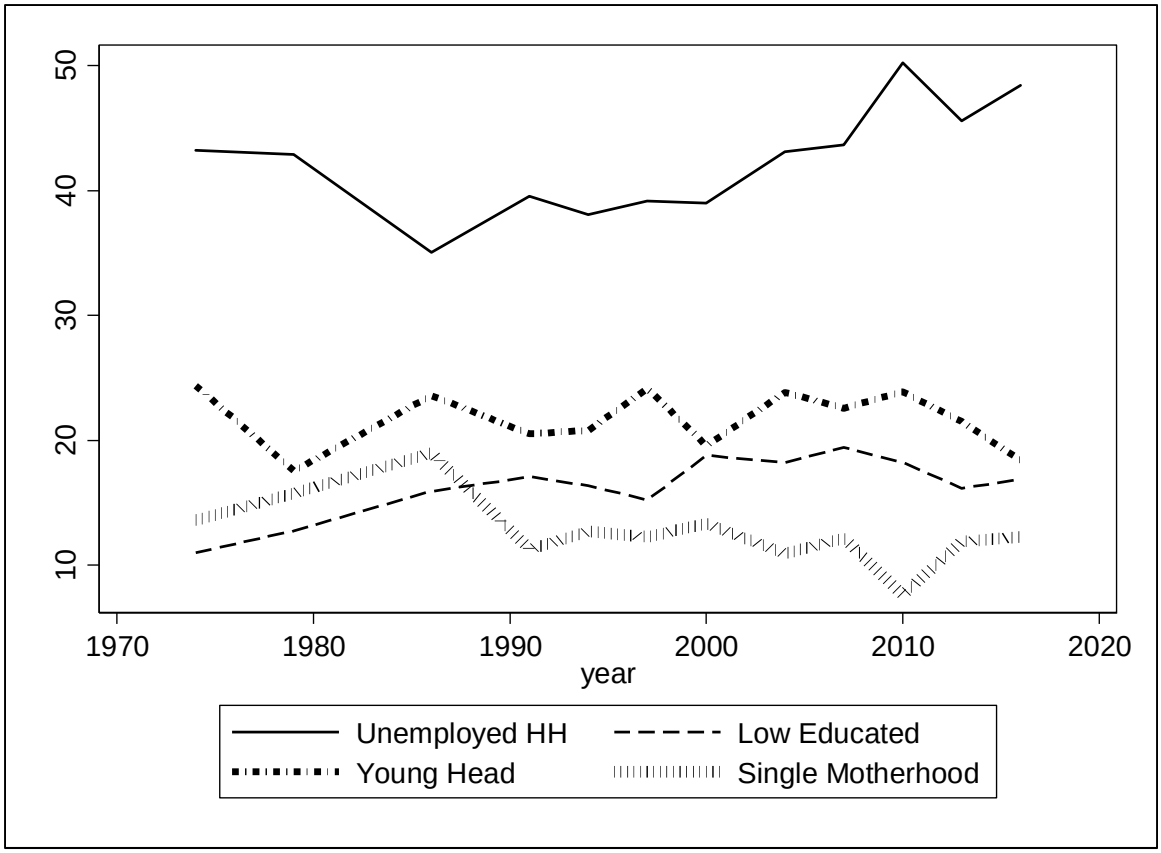

Figure 4. Trends in the Penalties for the Four Risks Child Poverty in the U.S., 1974-2016.

Simulations of 2016 U.S. Child Poverty

To assess how much reductions in prevalences and penalties could reduce child poverty in the U.S. in 2016, we conduct a series of counterfactual simulations. We then estimate t-tests of whether the simulated values are significantly different from the model predicted values. For all t-tests, the simulation produces statistically significant differences, partly because we have a large sample (N=50,060). We also display the cross-national ranking of the U.S. (1=highest poverty of the 28 rich democracies). This displays how much lower U.S. poverty would be – relative to other rich democracies – with counterfactual prevalences and penalties. These predictions are based on the model of child poverty in the U.S. in the 2016 LIS data.

The first row in Table 2 shows the model predicted value of poverty. The model predicted value is slightly below the actual rate of poverty – in part because the U.S. is an outlier. With this predicted value, the U.S. has the fourth highest rate of child poverty (slightly below Italy) instead of its actual third highest value. Regardless, the model predicts an unusually high child poverty rate for the U.S.

The second row shows that if the U.S. had cross-national median prevalences of the four risks, child poverty would be slightly higher (21.0 vs. 20.8). As the U.S. is actually below average in the prevalences of the most salient risks (unemployment and low education), shifting to cross-national median prevalences would worsen U.S. poverty. In this scenario, the U.S. would have the third highest rate of child poverty.

Table 2. T-Tests Comparing Model Predicted vs. Simulated Child Poverty Based on Counterfactual Simulations in U.S. 2016. (All T-Tests Significant at p<.01).

	Child Poverty	***T-Test of Difference from Model Predicted Rate***	***Rank of 28 Rich Democracies (1=highest)***
Model Predicted	.208		4th
Cross-National Median Prevalences	.210	-3.000	3rd
-1 SD Cross-National Prevalences	.166	62.838	6th
Cross-National Median Penalties	.166	123.922	6th
-1 SD Cross-National Penalties	.178	116.217	5th
1974 U.S. Prevalences	.254	-75.119	1st
1974 U.S. Single Motherhood Prevalence	.204	11.786	4th
Zero Single Motherhood	.188	93.776	4th
Zero Prevalences	.137	105.991	8th

The third row shows that the U.S. would have significantly less poverty if it had one cross-national standard deviation lower prevalence of all four risks. Child poverty would be 16.6%. Even with this substantially lower prevalence of risks, the U.S. would still have the sixth highest rate of child poverty. The fourth row shows that a similar rate of child poverty could be accomplished if the U.S. had cross-national median penalties. Hence, the U.S. could reduce poverty by the same amount by having cross-national mean penalties or one standard deviation lower prevalences. The fifth row shows that the U.S. child poverty rate would be 5th highest (17.8%) if it reduce penalties by one cross-national standard deviation.

The four final simulations are based on within-U.S. over-time comparisons. The sixth row simulates what would happen if the U.S. returned to 1974 U.S. prevalences on all four risks. In this simulation, child poverty would be considerably higher and would be the highest of the 28 rich democracies at 25.4%. Hence, turning back the clock on all four risks would substantially worsen poverty. As Figure 5 showed, three of the four risks have declined considerably since 1974 and this has reduced child poverty from what it would have been.

The only risk that increased clearly since 1974 is single motherhood, and as Figure 5 showed, single motherhood is the most prevalent of the four risks. Moreover, many scholars and commentators argue that reducing the prevalence of single motherhood is essential to reducing child poverty. Indeed, single motherhood arguably attracts the most scholarly attention and commentary of the four risks.

The seventh row simulates what would happen to child poverty if the U.S. returned to the 1974 prevalence of single motherhood. The eighth row simulates what would happen if there was zero single motherhood in the U.S. in 2016. These scenarios illustrate the maximum impact of single motherhood on child poverty. Most importantly, neither simulation results in dramatically lower child poverty. If the U.S. returned to the 1974 prevalence of single motherhood, this would result in a trivial reduction in child poverty. With the 1974 prevalence of single motherhood, child poverty in 2016 would decline from 20.8% to only 20.4% and the U.S. would still have the fourth highest rate of 28 rich democracies. Even if there was zero single motherhood, the U.S. would still have 18.8% child poverty and the U.S. would still be fourth highest. Therefore, even if the U.S. completely eliminated single motherhood, its cross-national ranking in child poverty would be unchanged.

Finally, the ninth row simulates what would happen if the U.S. had zero prevalences for all four risks. This implausible scenario shows the maximal impact of reducing all four risks on child poverty. In this simulation, child poverty would decline more substantially to 13.7%. However, we underline that this would still be a fairly high child poverty rate. The U.S. would still be above the cross-national mean of 11.8% and the U.S. would still have the 8th highest child poverty rate of 28 rich democracies. In sum, this last simulation reveals that risks cannot fully explain the unusually high child poverty of the U.S.

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