

## Purchasing a Myth: The Financial Consequences of the Model Minority Stereotype for Asian American Youth

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**Abstract:** In the United States, Asians are stereotyped as a “model minority” because of their high educational attainment and labor market outcomes relative to other racial groups. At the postsecondary level, Asian students are more likely to attend prestigious colleges and to complete college or graduate school, which are often expensive and may require Asian students to rely on educational loans or borrow more debt. This paper investigates Asian youths’ experiences with debt and considers economic consequences, showing that low-SES Asians are less likely to borrow, but borrow more than similar whites. This is associated with Asian youths’ higher likelihood of enrolling in selective colleges and graduate schools relative to low-SES whites. However, these institutions do not appear to provide the same income advantage to Asian youth as they do for whites, which has implications for social mobility and the accumulation of wealth across race and ethnic groups.

In the United States there is a persistent stereotype depicting Asian Americans as the “model minority” because of their high educational attainment and superior labor market outcomes relative to other racial and ethnic groups. Although there is vast heterogeneity in educational and economic outcomes among Asians from different socioeconomic and ethnic backgrounds (Fong 2008; Kao and Thompson 2003; Sakamoto, Goyette, and Kim 2009), on average, Asian students are more likely to attend prestigious colleges and to complete Bachelors and graduate degrees than white youth (Sakamoto et al. 2009; Xie and Goyette 2003). Yet, more selective colleges often have higher tuition and fees than less selective ones and graduate school tuition represents an additional cost for students who attend (College Board 2018; National Center for Education Statistics 2017). To date, there has been little empirical attention to how Asian American students finance their higher levels of postsecondary education, which may have implications for their economic outcomes relative to whites (Dettling et al. 2017; Sakamoto et al. 2009).

To finance the growing cost of a college degree, students are increasingly turning to educational loans to pay their tuition and associated fees (Houle 2014a). Financing college has become harder for families regardless of their racial and ethnic background, but the degree of debt and its consequences vary by students’ race and ethnicity (Addo, Houle, and Simon 2016; Houle and Addo 2018; Houle and Warner 2017; Jackson and Reynolds 2013). As such, it is important to consider whether Asian American students are more likely to rely on educational loans and assume higher levels of debt than whites. We ask if there are deleterious economic consequences to the model minority stereotype if Asian Americans feel compelled to attend prestigious institutions. If Asian American students are more likely to rely on educational loans

and to have higher amounts of debt compared to native-born white students, it may lead Asian Americans to be disadvantaged in their wealth accumulation.

Scholars have advocated for dismantling the model minority stereotype by showing the diversity of Asian educational and economic experiences. Because low SES Asians may still be viewed as model minorities, the ways in which they are disadvantaged are particularly at risk of being overlooked and may even be compounded because of the stereotype (Kao and Thompson 2003; Sakamoto and Kim 2014). Moreover, borrowing patterns for undergraduate debt varies by socioeconomic status (Houle 2014b), further indicating the importance of considering Asian students' experiences with debt across the income gradient. Furthermore, postsecondary institutions vary in the socioeconomic composition of their student bodies and low-SES youth may be less likely to attend selective colleges or graduate school so institutional explanations for borrowing patterns may be less applicable to disadvantaged groups.

Extending previous work challenging the model minority stereotype, this study investigates whether Asians' high educational achievement and attainment has financial consequences and whether these consequences vary by socioeconomic status among Asian Americans. Using educational loans as a way to investigate Asian-white differences in college costs among families with similar resources, this study shows that disadvantaged Asian students are less likely to rely on loans during college, but when they do, they borrow much more than low-income whites. However, the Asian-white differences in educational debt are related to college selectivity and graduate school enrollment and completion. We find that there are financial consequences to these postsecondary experiences. Neither white nor Asian students experience an earnings benefit by age 26 to attending the most selective colleges, and earning a

graduate school degree is associated with lower incomes for both Asian and white students, which may reduce asset accumulation across their life course.

Altogether, the results suggest that the model minority stereotype obscures the financial consequences of Asian students' educational attainment. Previous research explored black-white differences in educational debt (Addo et al. 2016; Houle and Addo 2018; Houle and Warner 2017; Jackson and Reynolds 2013), but had not considered the ways in which the racialized educational experiences of Asian Americans may impact their reliance on student loans. In addition, these findings extend previous work on the economic differences between Asians and whites by highlighting the role of debt. Moreover, this study raises the question of the value of selective colleges and a graduate degree, at least in terms of income in the young adult years. Additional education after college may not be a dependable way to ensure social mobility, especially given the amount of debt required to attain a graduate degree. This may be especially true of Asian students who are more likely than whites to use graduate school to advance their economic prospects.

## COSTS OF THE MODEL MINORITY MYTH

Asian Americans have been characterized as a “model minority” due to their high educational attainment and strong economic performance in the United States, but this may have harmful implications for Asians. Namely, it overlooks the considerable heterogeneity in the academic outcomes and socioeconomic status of Asian students and obscures the ways in which Asians are disadvantaged (Kao and Thompson 2003; Ngo 2006). Typically, those from East Asian countries, Japan, China, Korea, are more advantaged than Southeast Asians, such as Laotian, Cambodian, Hmong, and Vietnamese, though there are variations that exist within each

ethnic group as well (Ngo 2006). Many Asian Americans who migrated from South Asian countries are also relatively disadvantaged, except for Indian Americans who have some of the highest incomes and educational attainment of any Asian ethnic group in the United States. These differences stem from the timing and mode of migration of these groups, but also are related to the communities they enter upon arrival to the United States and the resources and discrimination these communities face (Icel, 1999; Portes and Rumbaut, 2006). The wide variation in Asian American socioeconomic outcomes indicates that the model minority stereotype oversimplifies the considerable heterogeneity of the group and also overlooks the advantaged educational levels that some immigrants bring with them to the US (Lee and Zhou 2017; Wang, Takei, and Sakamoto 2017).

Even college-educated Asians may not benefit from similar economic payoffs to higher education as white graduates. Indeed, another critique of the model minority characterization argues that Asian Americans have not yet reached economic parity with native-born whites. Early analyses relying on data from the 1970s and 80s showed that Asian American men's earnings parity with whites was due to their overeducation, suggesting that Asian Americans pursued higher levels of educational attainment to circumvent racial discrimination in the labor market (Hirschman and Wong 1984; Sue and Okazaki 1990). When comparing the income of whites and Asians with the same level of education, Asians earned less. However, critics of this study found that the income disparity between college-educated Asian and white men primarily exists because of human capital differences of Asian Americans who earned their postsecondary degrees abroad (Zeng and Xie 2004). These findings have been corroborated in more recent studies after considering field of study and after treating region of residence as an endogenous variable (Wang et al. 2017). Similarly, a study of native-born South Asian Americans shows that

they have higher incomes than native-born, non-Hispanic whites (Woo, Sakamoto, and Takei 2012), though South Asians are among the most advantaged Asian ethnic groups within the United States and their economic performance may not be comparable to less advantaged Asian populations. Indeed, U.S.-born Southeast Asians, who are less advantaged relative to Indians or East Asians, earn less than comparable whites (Takei, Sakamoto, and Kim 2013), and Cambodians, Laotians, and Hmong are particularly disadvantaged (Sakamoto and Woo 2007). In addition, work focusing on US-born Asians found that those with less than a high school degree earn less than whites with similar educations after taking into account geography as well as demographic and job characteristics (Kim and Sakamoto 2014). The authors argue that employers may discriminate against hiring less-educated Asians who do not conform to the stereotype of high-achieving Asians, further highlighting the importance of comparing Asians to whites with similar socioeconomic backgrounds to fully understand the economic consequences of the model minority stereotype.

More recent work extended this line of research by comparing Asian and whites' labor market outcomes beyond income. Relative to college-educated white women, similarly-educated Asian women, regardless of where they completed their education, have similar earnings to native-born whites, but are less likely to be in the labor market or to hold supervisory roles (Kim and Zhao 2014). Kim and Zhao (2014) hint that discriminatory processes may explain Asian women's disadvantage in terms of labor market participation and supervisory roles, but acknowledge the possibility that other human capital differences exist. However, to explain the poor representation of Asians in managerial roles and the executive level of businesses, qualitative work argues that the model minority stereotype reinforces skills that make Asians top performers in the classroom while failing to incentivize skills that will allow them to climb the

corporate ladder (Chin 2016). Moreover, recent work shows that Asian Americans have fewer assets than whites (Dettling et al. 2017), suggesting that Asian families' income does not compound to the same degree as whites. It remains an open question as to whether Asians have reached economic parity with whites, but evidence indicates domains and certain groups of Asians for whom this is not the case. Altogether, investigations of Asians' economic outcomes relative to whites suggest the importance in considering financial indicators beyond income to understand Asians' financial reality relative to whites. Given the high average levels of educational attainment among Asian Americans, Asian Americans may be more susceptible to the downside of carrying educational debt.

Finally, individuals from groups who are the subject of persistent stereotypes may internalize these stereotypes (Correll et al. 2014; Trieu and Lee 2018). In this way, Asian youth may feel compelled to conform to the high levels of academic performance as prescribed by the model minority stereotype. Although high academic expectations are often lauded in the popular press and the American culture, qualitative research shows that attempting to live up to the model minority stereotype can be anxiety-provoking for both low- and high-achieving Asian high school students (Lee 1994). At the postsecondary level, Asian students may also try to adhere to the model minority stereotype by attending more selective colleges or pursuing advanced degrees. Indeed, Asian students make up a significant minority of the student body at elite colleges and are more likely to attend graduate school than whites. Although attending more selective colleges or accruing graduate degrees may lead to higher earnings post-graduation (Posselt and Grodsky 2017), these institutions often require significant economic investment that may financially strain Asian students, who are expected to live up to the model minority stereotype.

## EDUCATIONAL LOANS FOR ASIAN AND WHITE STUDENTS

Previous work suggests that Asian youth are more likely to enroll in a selective undergraduate institution, attend graduate school, and complete a postsecondary degree, but these postsecondary institutions require considerable financial investment that may leave Asian students reliant on educational debt to fund their educations (Posselt and Grodsky 2017). In some ways, relying on debt to attend college may be advantageous if it provides access to postsecondary institutions, or to higher quality institutions, for students who lack the resources to attend otherwise, but previous work shows that children from families with fewer resources are more likely to use educational loans and rely on higher amounts of debt to fund their undergraduate educations than children from advantaged households (Addo et al. 2016; Houle 2014b). The possibility that disadvantaged students are borrowing more to enroll in selective colleges is concerning because it complicates notions that education provides a pathway to upward mobility for young adults. Although more prestigious colleges and graduate degrees may improve labor market outcomes post-graduation (Brand and Halaby 2006; Dale and Krueger 2002; Posselt and Grodsky 2017; Rivera 2011), to understand these institutions' role in social mobility, it is critical to determine whether those from disadvantaged households are borrowing more to enroll.

To date, there has been little empirical research on the educational debt of Asian American students given their high postsecondary attainment. Previous work examining racial disparities in undergraduate debt have focused on black-white differences, finding that black students are more likely to use educational loans, have higher amounts of debt, and are more likely to rely on debt in excess of \$30,000 (Addo et al. 2016; Houle 2014a; Jackson and

Reynolds 2013). There are very few studies of educational loans that include Asian Americans despite their higher levels of college enrollment. One study that focuses on students at elite colleges finds that Asian students borrow \$3,717 in the first two years of college while white students borrow \$3,313 (Charles et al. 2009). However, this study did not examine the differential effects of college selectivity, the influence of demographic characteristics, or whether these patterns are observed after the initial two years of college (Charles et al. 2009). Relying on administrative tax data from 2013, another study showed that Asian students rely on less debt than white students to finance their postsecondary educations, but this does not consider college selectivity or how Asian and white families rely on debt across the income distribution (Grinstein-Weiss et al. 2016). The few studies that consider Asian Americans offer contradictory findings for Asian students' postsecondary debt. To better understand how educational debt differs for Asian and white students, we advocate for disaggregating students by their family background characteristics. Moreover, because Asian students' are not only more likely to attend college, but their postsecondary experience disproportionately includes both graduate school and selective undergraduate institutions, considering both is critical for understanding educational debt burden of Asian Americans relative to whites.

## DATA & METHODS

### Data

This study relies on data from the National Center for Education Statistics' Educational Longitudinal Survey, 2002 (ELS: 2002), which is a multi-stage survey that randomly sampled high school sophomores within their high schools. This data set is ideal for this study's research questions because it oversamples Asian students and because it attempted to link all survey

respondents who attended college to both the Integrated Postsecondary Education Data System (IPEDS) and the National Student Loan Data Study's (NSLDS) administrative records of student and parent's federal loan usage. However, there are several limitations to the data. First, we do not have data for students for whom names or social security numbers were missing or incomplete since it made the matching to federal loan information impossible. Second, we have no information on the private loans that students and/or their parents obtained – this means that our information on college debt is an underestimate of the total debt held by students and their parents. However, the majority of students who rely on loans from college use federal loans and the majority of loans students use in college come from the federal government so the amount of bias is potentially limited.

The base year survey collected data from a nationally-representative sample of 16,197 10<sup>th</sup>-grade students and their parents in 2002. To understand the financing of college, students in the sample had to matriculate to college. Thirty-two percent of the full sample had not attended college by the third survey wave in 2012 (when respondents were approximately 26 years old) and they are not included in our study. An additional thirty percent of this reduced sample did not match with NSLDS records because their identifying information was incomplete. Because we are interested in investigating the model minority stereotype of Asian Americans and how they fare relative to whites, we focus our discussions on Asians and whites but include black and Latinx youth in our models. After using multiple-imputation for missing data on age of migration, college selectivity, and type of graduate school and dropping those who have missing data for race and ethnicity, the final analytic sample consists of approximately 8,670 unique

students, 7,270 of whom relied on loans and are included in the analysis for amount of debt borrowed<sup>1</sup>.

### **Variables.**

*Race.* This study relies on youths' self-reports at age 15 of their race and focuses on Asian and white youth.

*Parents' Income.* Family resources, such as parents' income, likely influence students' college institutional types and their reliance on educational debt (Houle 2014b). Parents' income was collected during the base year of ELS in 2002 from a parent survey administered to guardians of the children participating in ELS. Parents' income was collected as a categorical variable of fourteen categories. We have recoded parents' income grouping into high-, middle-, and low-income families. The low-income category contains households who earn between \$0 and \$50,000, which roughly corresponds to households that fall below the median family income in 2002, making them eligible for Pell grants that would offset the need for educational loans. Young adults from middle-income households have parents who earn between \$50,001 and \$100,000, and high-income youth grew up in households where parents made \$100,001 or more.<sup>2</sup>

*Educational Debt.* NSLDS collects data on a variety of different federally-provided educational loans. These analyses will focus on an aggregated debt variable that is the sum of three different types of loans: Stafford loans that are subsidized by the federal government, unsubsidized Stafford loans, and Perkins loans. These NSLDS determines whether or not

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<sup>1</sup> Sample sizes are rounded to the nearest tens, per NCES disclosure rules.

<sup>2</sup> Other categorizations of parents' income were used with similar results. We chose the most parsimonious model to ease interpretation and preserve adequate sample sizes of Asian youth within each income category.

families use these loans and creates a dichotomous variable. Among those who used the specific loan, it collects data on how much debt students relied on. Because of the skewness in the amount of debt students and parents use, we log-transform each of the three debt variables. There are many other sources of debt that students may use, such as PLUS loans, but NSLDS did not disaggregate whether PLUS loans were used by students or the parent. Because these analyses focus on students' experiences with debt, we did not include PLUS loans in the analyses. In addition, students may use debt from private lenders rather than federal sources, but NSLDS does not have information on any of these types of loans. However, using private loans is less common compared to federally-backed loans, but we acknowledge that our analyses underestimate loan usage and debt. Because private loans are most often used at the graduate level, it is likely that our findings underestimate the disparity in debt between Asian and white youth.

*Background Characteristics.* There are a number of possible confounders that may affect our analyses. For example, previous research has documented that women are more likely to use higher amounts of debt than men (Addo 2014; Dwyer, Hodson, and McCloud 2013). In addition, families may draw on additional resources that may shape the likelihood of students' use of debt. For example, parents' college attendance may alter students' reliance on debt. Qualitative work shows that families across the income distribution enact strategies to help their children afford college (Hamilton 2016; Tevington, Napolitano, and Furstenberg 2017), but parents with a college degree report seeking out scholarships and sources of funding explicitly to help their child avoid debt (Hamilton 2016). In addition to the cultural capital that college-educated parents bring to the planning of student expenses, native-born families may also be better equipped to navigate the American higher education system. We compare students who are third generation

or more to those who are first or second generation. In addition, students who are still working towards their undergraduate degree at age 26 may have entered college later and thus have less debt than students who are no longer enrolled or they may have borrowed more debt if they have been “swirling” between multiple institutions (Goldrick-Rab 2006).

*Institutional Characteristics.* The amount of family resources available to students limits parents’ ability to fund their children’s education; however, the type of college students attend is an important determinant of the cost of their schooling. First, more selective institutions may be more expensive than those that have a more open enrollment policy. ELS created a five-part indicator for the selectivity of each institution a student attended that corresponds to the Carnegie college classification system categorizations from 2010, which is when many of these young adults were in their sophomore year of college. The colleges are categorized so that the least selective are less than two-year or unclassified two-year colleges, then unclassified four-year colleges. Next are “inclusive” four-year colleges which are schools whose freshman students’ fall in the lowest two quintiles of test scores on average, then “moderately-selective” colleges which comprises the middle two quintiles, and finally the most selective institutions are what ELS classifies as “highly-selective four-year institutions” enrolls students in the top quintile of test scores at baccalaureate-granting institutions. Note that this is still a large category of schools and are not the Ivy League institutions that can offer their most disadvantaged schools a debt-free education. Hence, in our study, students attending the highest prestige colleges (top quintile of test scores), were more likely to borrow money. We categorize students by the most selective institution they attended.

Finally, students who attend graduate school likely rely on higher levels of debt. We consider students’ graduate school experiences in two ways: First, we control for those who have

already completed a graduate degree, but we suspect that students who are currently enrolled in graduate school may also have greater debt, as well as the potential for greater debt in the future, than students who are not currently pursuing a graduate degree. Because the amount of debt likely varies by program, we disaggregate graduate school enrollment into students studying in a post-baccalaureate program from those who are studying for a terminal Master's degree, students enrolled in academic doctoral programs such as PhDs or EdDs, and students in professional doctoral degree such as law, medicine, or dentistry.

### **Analytic Strategy.**

Consistent with previous research examining the amount of debt students use (Houle 2014b; Walsemann and Ailshire 2016), we rely on a Craggit model to estimate the likelihood of using educational loans and then the amount of debt given that loans were used. The Craggit model is used when estimating a continuous dependent variable where the modal response is zero. Moreover, unlike other methods like the Tobit model, the Craggit model allows for different processes to influence the likelihood of debt and the amount of debt borrowed (Burke 2009). To understand how Asians' experience with debt differs across the income distribution, we interact race with parents' income. Since we are testing the hypothesis that Asian American students are exposed to greater financial risk in terms of educational debt, we test how college selectivity and graduate school are related to the Asian-white differences in debt across the income distribution. We include college selectivity and graduate school indicators separately into the demographic model first and then analyze a complete model that contains both.

Finally, to tease out the implications of educational debt, we consider whether Asian Americans' higher likelihood of attending more selective colleges and graduate school translate into higher incomes in young adulthood. We predict logged income with an ordinary least-

squares regression and two different interactions. The first is an interaction between race-income groupings and college selectivity to estimate the role of college selectivity in the income of young adults across the income distribution. Next, we perform the same analysis but replace college selectivity with educational attainment. These analyses are performed on the analytic sample used in the early models and control for current enrollment, nativity, parents' education, and gender.

## FINDINGS

Table 1 presents the descriptive statistics for the sample by race and the three categories of parents' income. First, among all of the youth sampled in ELS, disadvantaged Asian in ELS are more likely to attend college than white students from households with the same income, but middle- and high-income Asians are about as likely to attend college as similar whites. This suggests that Asians across the income distribution have college-attendance rates, as suggested by the model minority myth. However, we next investigate possible consequences of Asian students' high rates of college attendance. Among students who attended college, low-income Asians are less likely to use loans than similar whites, but borrow more than similarly disadvantaged white youth. Similarly, Asians from the highest-income families are about as likely to rely on debt as comparable whites, but borrow more than white youth from families that make \$100,001 or more. In contrast, middle-income Asians have similar borrowing patterns to whites from middle-income families. Turning to the average income of young adults who attended college, Asian youth across the income distribution earn similar amounts to whites from comparable households. Together, these descriptive statistics suggest that high- and low-income Asian students may be economically disadvantaged in relation to whites with similar family

resources because they earn comparable amounts to whites, but rely on higher levels of debt on average.

However, there are other differences between Asian and non-Hispanic white college students that may be tied to the disparity in loan usage and debt amount. First, low-, middle-, and high-income Asians are more likely to have a parent with a college degree than whites from similar households and Asian youth across the income distribution are more likely to be first- or second-generation immigrants and less likely to be third or more generation than whites. Low-income Asian students are less likely to attend two-year colleges and moderately-selective 4-year colleges than similar whites, but Asians with parents of all income levels are more likely to attend highly-selective colleges than similar whites. Similarly, both the most and least advantaged Asians are more likely to have a graduate degree at age 26 than similar whites. Finally, low- and middle-income Asian students are less likely to be enrolled in an undergraduate program than similar whites, and low-income Asians are less likely to be enrolled in a Masters' program than disadvantaged whites. Instead, Asians from all socioeconomic backgrounds are more likely to be enrolled in professional doctoral programs, such as medicine, law, or optometry, than whites. These descriptive findings underscore that the differences between Asian Americans and whites depends in part on where parents received their education.

Turning to the multivariate analyses, Table 2 shows how Asian Americans' experiences with educational debt differs from whites depending on their parents' income. Relative to comparable whites, Asian youth from the lowest income households are less likely to borrow educational loans, but rely on higher amounts of debt when they do borrow (Model 1). This pattern holds net of other background characteristics so that low-income Asians borrow 24% more than similar whites, though they remain less likely to borrow (Model 2). In contrast,

middle-income Asians are as likely to rely on loans and borrow similar amounts to comparable whites without any controls, but high-income Asians have similar propensity to borrow but borrow more than advantaged whites, though the pattern is attenuated once background characteristics are included.

Neither institutional explanation seems to be associated with disadvantaged Asians' lower likelihood of borrowing educational loans than similar whites (Models 3 through 5). In fact, the inclusion of college selectivity and graduate school experiences into the models *increases* the difference between low-income Asian and whites' likelihood of borrowing. In contrast, both college selectivity and graduate school are associated with the higher debt loads of low-SES Asians relative to low-SES whites. First, Model 3 introduces college selectivity into the demographic model and shows that relative to two-year colleges or less, students enrolled in more selective institutions borrow more. This is true even of the most selective colleges, in part because the definition of selective colleges includes institutions beyond wealthy, Ivy League universities that can offer their students no-loan financial aid packages. Net of students' background characteristics, college selectivity reduces the differences in debt between low-income white and Asian students by a third so that the difference between the two is no longer statistically significant.

Similarly, Model 4 includes graduate school indicators to the background characteristics model (Model 2). Compared to students enrolled in terminal master's programs, students earning professional doctorates, such as medical degrees or law degrees, borrow 68% more, but students in post-baccalaureate programs or earning academic doctorates rely on less debt. In addition, having already earned a graduate degree is associated with 107% more debt, net of the other controls. As with the college selectivity model, the Asian-white difference in debt among low-

income youth is reduced by half and no longer statistically significant, indicating that low-income Asian youths' graduate school experience is related to their higher debt loads.

The final model includes both college selectivity and graduate enrollment along with students' background characteristics. The relationship between college selectivity and debt as well as graduate school and debt levels remains relatively unchanged. As in the previous two models, low-income Asian youth as well as middle- and high-income Asians rely on similar levels of debt as comparable whites. To illustrate these findings, Figure 1 presents the predicted educational debt for whites and Asians across the income distribution for the final four multivariate models. In all models shown, Asian youth from low-, middle-, and high-income families rely on more debt, though this finding is only statistically significant for low-income Asians net of youths' background characteristics. After the inclusion of institutional characteristics, white students across the income distribution rely on similar levels of debt. This suggests that high-income white youth leverage their resources to attend higher quality undergraduate institutions and graduate school, but that this requires considerable educational debt for them as well. A similar pattern is observed Asian youth, though low- and high-income Asians rely on more debt than middle-income Asians, even after considering institutional characteristics. Overall, Figure 1 demonstrates how critical institutional characteristics are to understanding students' educational debt, while also illustrating the ways in which this intersects with race and socioeconomic status.

Given that the Asian-white differences in debt among low-income youth is partially attributable to graduate school and college selectivity, it is critical to understand whether they see the same economic benefits to these institutions as similar white students. The base model in table one compares logged income at age 26 for Asian youth across their parents' income to

similar whites without any interactions. In this model, Asian youth earn similar amounts to white youth net of institutional and demographic factors. Interestingly, attending a highly-selective college does not provide an income benefit relative to the less-selective four-year colleges, though students from highly-selective colleges earn more relative to those who attended two-year colleges. Consistent with previous work (Brand and Halaby 2006), this provides some evidence that highly-selective colleges may not be beneficial in the labor market at least in terms of income at age 26. Similarly, students with a graduate degree earn 40% less than students with a Bachelors degree, though this may be because students who completed graduate degrees have less labor market experience than students who do not have graduate degrees.

The college selectivity model compares the association between the race-parent income groupings and young adults' income for each of the college selectivity ranks. Middle- and high-income white youth who attended highly-selective colleges earn similar incomes to low-income whites who attended similar colleges, suggesting that more selective colleges may be a path to social mobility for white students. Moreover, comparing the incomes of low-SES white youth from highly-selective colleges to less selective colleges shows that there is no earnings gain relative to lower-tier four-year colleges, but there is an income benefit to highly-selective colleges relative to two-year colleges for both low-SES and middle-SES whites. The findings are similar for high-SES white youth, except that high-SES white youth from less-selective four-year colleges (unclassified and inclusive four-year colleges) earn *more* than low-SES whites from highly-selective colleges, indicating that highly selective colleges may not entirely equalize the advantages of high-SES white youth relative to low-SES whites.

The income benefits of a highly-selective college seem even less certain for Asian students. First, relative to whites who attended highly-selective colleges, low-, middle-, and

high-income Asians who attended similar colleges earn considerably less, indicating that any income benefits of attending selective colleges may only materialize for white students.

Moreover, low-income Asians who attended 2-year or inclusive 4-year colleges earn more than disadvantaged white students who attended highly-selective schools. In addition, middle-income Asians who attended less selective four year colleges earn more than low-SES white students from highly selective colleges. Together, these patterns continue to suggest that the pay-off to highly-selective colleges is negligible for white students and is even less certain for Asian youth.

Finally, the graduate school model shows how the Asian-white gap in income across socioeconomic status varies by educational attainment. Low-SES Asian students who earned a graduate degree earn considerably less than their comparable white peers. While the income difference between disadvantaged white graduate degree holders and disadvantaged white Bachelors' degree holders as well as the income difference between graduate degree holders and those with less than a BA is negligible, disadvantaged Asian students with less than a BA earn more than disadvantaged whites with a graduate degree. Although these findings are concerning for white students, they are especially noteworthy for Asians because low-SES Asians with a graduate degree earned even less than low-SES whites. They provide evidence that the model minority stereotype obscures the ways in which disadvantaged Asians' high educational attainment and performance do not translate into economic rewards relative to similar white students.

## CONCLUSION

The model minority myth is an especially pernicious stereotype derived from Asian Americans' high educational attainment and economic outcomes. Yet, this stereotype obscures

the realms in which Asian youth are disadvantaged as well as the financial costs of their high educational attainment. Extending previous work documenting Asian disadvantage, this study considers whether Asian students are more likely to rely on educational debt and borrow more than white students do, which has implications for racial wealth inequality and the role of higher education in providing social mobility for students of color.

Our findings indicate that relative to similar white students disadvantaged Asians are less likely to borrow educational loans, but borrow more when they rely on debt. Asians from high- or middle-income households have similar borrowing profiles to comparable white students. This finding supports calls to consider the variation in Asian experiences in the United States, rather than treating them as a monolithic group. Doing so overlooks the ways in which Asian youth are disadvantaged and may magnify that disadvantage by diverting resources from low-income Asians. For example, although we do not test it in this study, it is possible that low-income Asian students receive less financial aid from colleges than similar white students because of erroneous conceptions of Asian families' economic resources originating in the model minority myth. Moreover, our findings likely represent a conservative estimate of the Asian-white difference in debt, especially among disadvantaged groups. First, this study focuses on debt from Stafford and Perkins loans, but graduate students may also use PLUS loans or private loans to fund their education. Given the higher graduate school enrollment among Asian students, we may be underestimating their borrowing more than we are for white students. In addition, 26 may be too early of a window to know the full extent of borrowing among students who enroll in graduate school. This may be especially the case for disadvantaged groups who follow a more circuitous path through higher education and may prolong their enrollment, and by extension their borrowing, beyond the age of 26.

This study also shows that the higher debt loads of low-income Asian students, though not the reduced likelihood of borrowing, is associated with their greater likelihood to enroll in higher selectivity colleges and to pursue advanced degrees than white students with similar family resources. Some may argue from a rational-choice perspective that Asian students could avoid debt by attending less selective colleges or forgo graduate school and save their money. However, previous work on Asian students' college experiences argue that they strategically major in fields and prepare for careers in occupations that will limit labor market discrimination (Xie and Goyette 2003). Attending more selective colleges and pursuing advanced degrees may be part of the same strategy for Asian students. Moreover, there is a consistent narrative in American society that more, and better education, is reliable pathway for social mobility, and this may be even more keenly felt by Asian students who are the subject of the model minority stereotype.

In addition, some may argue that this debt is being wisely invested in postsecondary opportunities that will derive greater returns post-graduation, but previous research is mixed on the economic outcomes for Asians compared to similarly educated whites (Kim and Sakamoto 2010; Kim and Zhao 2014; Sakamoto and Woo 2007; Takei et al. 2013; Woo et al. 2012; Zeng and Xie 2004). Indeed, our findings show that Asian students who attended highly selective colleges and earned either a Bachelors or graduate degree earn less than whites with the same level of education and who attended schools with similar selectivity. If highly selective colleges and graduate degrees are part of a strategy to circumvent labor force discrimination, it does not appear to be working for young Asians. Moreover, lower earnings in the young adult years may hamper Asian youths' ability to build wealth and have implications for intergenerational wealth transmission.

In addition, this study shows that graduate degrees and highly selective colleges are not associated with higher incomes, at least in the young adult years. This association exists for both white and Asian students, requiring serious re-thinking of social mobility pathways that assume more and better educational institutions benefit their students. That being said, there are limitations to our findings. First, these students are only 26 years old and the gains from these more selective colleges and graduate degrees may not be fully realized yet. In addition, we are unable to control for the amount of time students spend in the labor market, which may be confounding our findings, especially for those students with graduate degrees. Again, though, we suspect that lower earnings in the young adult years may still influence youths' ability to generate wealth, especially if they are faced with educational debt.

Overall, this study finds that low-income Asians are playing by the rules of the game—they are enrolling in college, attending more selective institutions, and enrolling in and completing graduate degrees. Although this should be a recipe for social mobility, it appears as if Asian students are not reaping the same economic benefits of these institutions while still experiencing similar financial risk in terms of educational debt as white students. This has possible implications for social mobility pathways for students of color that deserve further examination. Moreover, by characterizing Asian Americans' as a model minority, the ways in which Asian youth are disadvantaged is obscured. This study seeks to bring to light one such area in which Asian youth may be victims of this pernicious stereotype.

Table 1. Descriptive Statistics by Race and Parents' Income

	\$0-50,000					\$50,001-100,000					\$100,001+				
	Whites		Asian		p	Whites		Asian		p	Whites		Asian		p
	mean	SE	mean	SE		mean	SE	mean	SE		mean	SE	mean	SE	
Likelihood of enrolling in college	0.50	0.02	0.73	0.03	***	0.58	0.02	0.67	0.05		0.59	0.02	0.71	0.04	
Likelihood of Borrowing	0.74	0.03	0.55	0.06	**	0.78	0.02	0.72	0.05		0.59	0.02	0.85	0.03	
Average Debt (\$)	15,036	1,317	18,503	2,760	**	14,404	825	19,893	2,449		17,726	872	31,555	3,863	**
Income (\$)	21,029	1,231	21,829	2,027		26,587	2,112	27,125	2,909		24,592	896	23,569	2,729	
Parents' Attended College	0.20	0.03	0.31	0.06	***	0.28	0.02	0.43	0.05	***	0.31	0.02	0.53	0.06	***
Female	0.63	0.03	0.52	0.05		0.62	0.02	0.59	0.05		0.56	0.02	0.64	0.05	
Nativity															
First-Generation	0.08	0.02	0.61	0.05	***	0.05	0.01	0.49	0.06	***	0.04	0.01	0.36	0.05	***
Second Generation	0.05	0.02	0.27	0.04	***	0.03	0.01	0.42	0.06	***	0.04	0.01	0.42	0.06	***
Third + Generation	0.87	0.03	0.11	0.04	***	0.92	0.01	0.08	0.03	***	0.92	0.02	0.21	0.05	***
College Selectivity															
Two-Year or Less	0.39	0.04	0.31	0.05	*	0.31	0.02	0.18	0.04		0.26	0.02	0.15	0.04	
Unclassified 4-Year	0.10	0.02	0.06	0.02		0.10	0.01	0.10	0.04		0.10	0.01	0.01	0.01	
Inclusive 4-Year	0.10	0.02	0.16	0.03		0.11	0.02	0.10	0.04		0.08	0.01	0.09	0.03	
Moderately Selective 4-Year	0.30	0.03	0.26	0.05	*	0.34	0.02	0.22	0.04		0.37	0.02	0.31	0.05	
Highly Selective 4-Year	0.10	0.02	0.20	0.04	***	0.14	0.02	0.40	0.06	**	0.19	0.02	0.44	0.07	*
Graduate Degree	0.04	0.01	0.08	0.02	**	0.05	0.01	0.11	0.03		0.08	0.01	0.14	0.03	*
Enrollment Type															
Undergraduate	0.43	0.03	0.34	0.05	***	0.39	0.02	0.21	0.04	**	0.35	0.02	0.23	0.05	
Post-baccalaureate	0.01	0.00	0.02	0.01		0.01	0.00	0.00	0.00		0.01	0.00	0.01	0.01	

MA	0.08	0.02	0.02	0.01	***	0.05	0.01	0.09	0.05		0.06	0.01	0.08	0.03	
Academic Phd	0.00	0.00	0.01	0.01		0.01	0.00	0.02	0.02		0.00	0.00	0.00	0.00	
Professional Phd	0.00	0.00	0.07	0.02	***	0.01	0.00	0.07	0.02	***	0.01	0.00	0.13	0.07	*

Note: \*\*\* p<0.001, \*\* p<0.01, \* p<0.05; The sample for proportion enrolled is performed on the entire ELS sample. The remaining descriptive statistics are from the sample of students who attended college and could be linked to NSLDS data.

Table 2. Estimates from Two-Stage Craggit Models Predicting Likelihood of Any Debt (Probit,  $p(y>0)$ ) and Debt among Borrowers (Truncated Regression,  $\ln(y)|y>0$ )

VARIABLES	Race & Parents' Income		Background		+ College Selectivity		+ Graduate School		+ Graduate School & College Selectivity	
	$p(y>0)$	$\ln(y) y>0$	$p(y>0)$	$\ln(y) y>0$	$p(y>0)$	$\ln(y) y>0$	$p(y>0)$	$\ln(y) y>0$	$p(y>0)$	$\ln(y) y>0$
Race & Parents' Income (ref: Whites from Families with Comparable Incomes)										
Asian: \$0-50,000	-0.33***	0.39***	-0.33**	0.24*	-0.41***	0.16	-0.39**	0.12	-0.45***	0.07
	(0.10)	(0.09)	(0.12)	(0.10)	(0.12)	(0.09)	(0.12)	(0.09)	(0.12)	(0.08)
Asian: \$50,001-100,000	-0.10	0.16	-0.13	-0.00	-0.15	-0.05	-0.16	-0.03	-0.17	-0.05
	(0.13)	(0.12)	(0.14)	(0.11)	(0.14)	(0.13)	(0.14)	(0.13)	(0.14)	(0.14)
Asian: \$100,000 +	0.28	0.43*	0.28	0.34	0.23	0.30	0.17	0.13	0.16	0.14
	(0.20)	(0.19)	(0.21)	(0.17)	(0.21)	(0.17)	(0.22)	(0.13)	(0.22)	(0.13)
Controls:										
Female			0.03	0.16***	0.04	0.16***	0.01	0.11***	0.02	0.12***
			(0.04)	(0.03)	(0.04)	(0.03)	(0.04)	(0.03)	(0.04)	(0.03)
Parents' Attended College			0.12*	0.23***	-0.01	0.09**	0.08	0.11***	-0.02	0.03
			(0.05)	(0.03)	(0.05)	(0.03)	(0.05)	(0.03)	(0.05)	(0.03)
Nativity (ref: Third + Generation)										
First Generation			-0.12	0.06	-0.14	0.05	-0.14	0.02	-0.15	0.01
			(0.08)	(0.09)	(0.08)	(0.09)	(0.08)	(0.08)	(0.08)	(0.08)
Second Generation			-0.01	0.08	-0.03	0.04	-0.03	0.05	-0.04	0.02
			(0.10)	(0.06)	(0.09)	(0.06)	(0.10)	(0.06)	(0.09)	(0.06)
Currently enrolled in undergraduate institution			-0.32***	-0.45***	-0.17***	-0.30***	-0.47***	-0.79***	-0.19	-0.62***
			(0.04)	(0.04)	(0.05)	(0.04)	(0.12)	(0.05)	(0.12)	(0.06)
College Selectivity (ref: Two-Year Colleges or Less)										
Unclassified 4-Year Colleges					0.57***	0.57***			0.56***	0.53***
					(0.08)	(0.08)			(0.08)	(0.07)
Inclusive 4-Year Colleges					0.78***	0.61***			0.77***	0.55***
					(0.09)	(0.06)			(0.09)	(0.06)
Moderately-Selective 4-Year Colleges					0.78***	0.78***			0.75***	0.67***

						(0.07)	(0.05)		(0.07)	(0.05)	
Highly-Selective 4-Year Colleges						0.94***	1.04***		0.85***	0.78***	
						(0.07)	(0.06)		(0.08)	(0.06)	
Graduate Degree Currently Studying for (ref: Masters Degree)											
Post-Baccalaureate								-0.26	-0.47*	-0.15	-0.40*
								(0.24)	(0.19)	(0.25)	(0.18)
Academic Doctorate								0.20	-0.61***	0.27	-0.57***
								(0.37)	(0.14)	(0.35)	(0.14)
Professional Doctorate								1.44***	0.68***	1.47***	0.70***
								(0.28)	(0.10)	(0.27)	(0.10)
Earned a graduate degree								0.67***	1.07***	0.42***	0.91***
								(0.11)	(0.04)	(0.11)	(0.05)
Constant for \$0-50,000	0.86***	9.41***	0.94***	9.41***	0.43***	8.79***	1.25***	9.95***	0.54***	9.31***	
	(0.04)	(0.03)	(0.06)	(0.04)	(0.07)	(0.05)	(0.13)	(0.06)	(0.14)	(0.07)	
Constant for \$50,001-100,000	1.28***	9.58***	1.32***	9.49***	0.72***	8.81***	1.62***	10.02***	0.84***	9.33***	
	(0.05)	(0.03)	(0.06)	(0.04)	(0.07)	(0.06)	(0.13)	(0.06)	(0.14)	(0.08)	
Constant for \$100,001 +	1.28***	9.81***	1.25***	9.62***	0.57***	8.86***	1.50***	10.01***	0.66***	9.28***	
	(0.09)	(0.05)	(0.10)	(0.06)	(0.11)	(0.07)	(0.13)	(0.07)	(0.15)	(0.09)	
Sigma		1.05***		1.02***		0.96***		0.95***		0.91***	
		(.01)		(.01)		(.01)		(.01)		(.01)	
Observations	8,670	7,270	8,670	7,270	8,670	7,270	8,670	7,270	8,670	7,270	

Standard errors in parentheses

\*\*\* p<0.001, \*\* p<0.01, \* p<0.05

Figure 1. Predicted Probabilities for Educational Debt by Race & Parents' Income

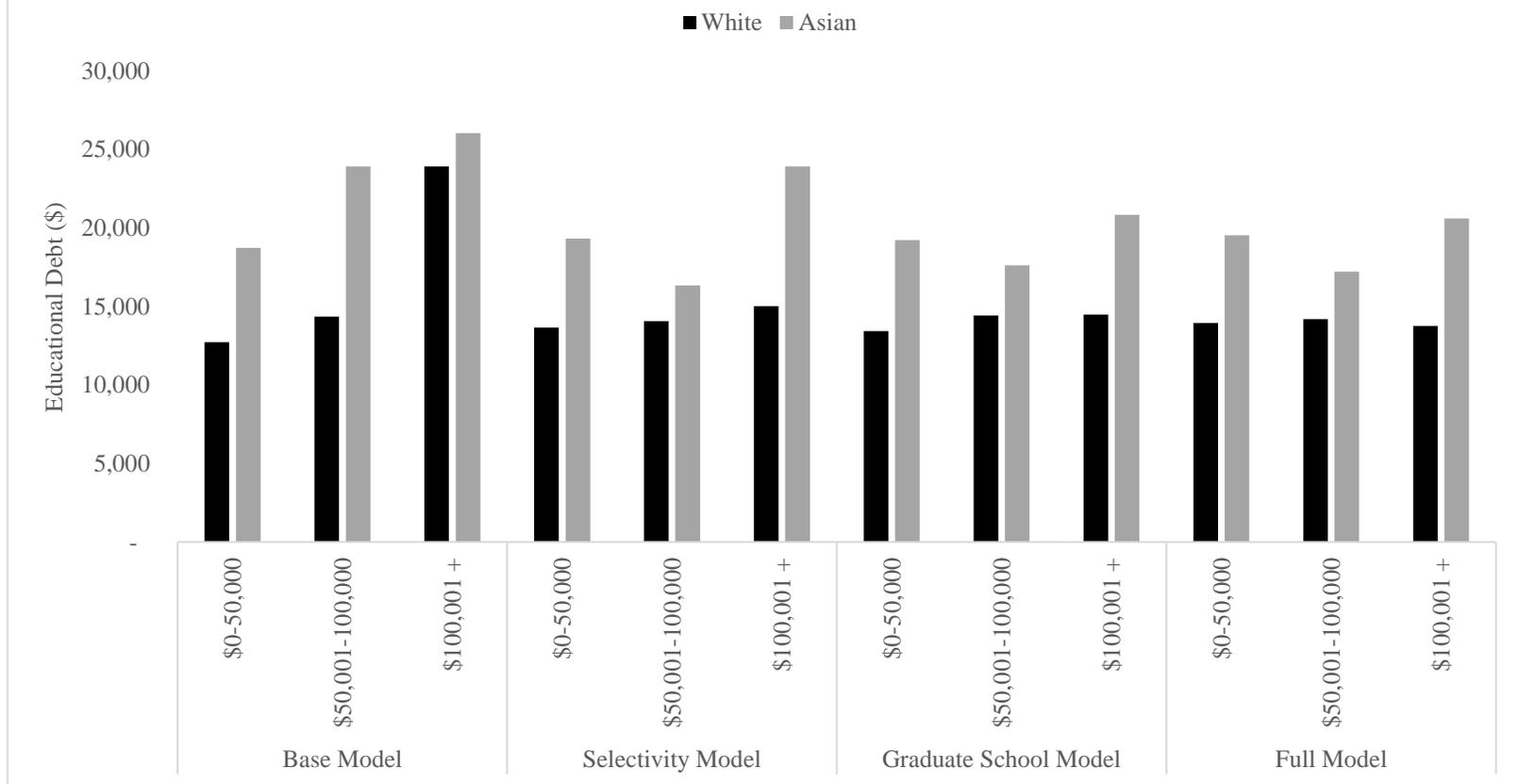


Table 3. Estimates of Logged Income at age 26 by Race and Parents' Income across College Selectivity and Educational Level

VARIABLES	Base Model		+ College Selectivity		+ Graduate School	
	$\beta$	SE	$\beta$	SE	$\beta$	SE
Race & Parents' Income (ref: Whites: \$0-50,000)						
Whites: \$50,001-100,000	0.18	(0.13)	-0.21	(0.23)	-0.08	(0.42)
Whites: \$100,001 +	-0.01	(0.17)	-0.39	(0.26)	-0.54	(0.44)
Asians: \$0-50,000	-0.48	(0.27)	-1.44*	(0.58)	-1.68**	(0.65)
Asians: \$50,001-100,000	-0.34	(0.34)	-1.12*	(0.51)	-0.68	(1.06)
Asians: \$100,000+	-0.99	(0.53)	-1.35*	(0.68)	-0.59	(0.76)
College Selectivity (ref: Highly-Selective Colleges)						
2-Year or Less	-0.61***	(0.16)	-0.89**	(0.28)	-0.60***	(0.16)
4-Year, Unclassified	-0.07	(0.20)	-0.36	(0.36)	-0.06	(0.20)
4-Year, Inclusive	-0.05	(0.17)	-0.56	(0.37)	-0.04	(0.17)
4-Year, Mod. Select	-0.03	(0.11)	-0.20	(0.22)	-0.05	(0.11)
Race & Parents' Income x College Selectivity (ref: Whites: \$0-50,000 from Highly Selective Colleges)						
Whites: \$50,001-100,000 & 2-Year or Less			0.66	(0.40)		
Whites: \$50,001-100,000 & Unclassified 4-Year			0.44	(0.48)		
Whites: \$50,001-100,000 & Inclusive 4-Year			0.78	(0.45)		
Whites: \$50,001-100,000 & Mod. Selective 4-Year			0.35	(0.30)		
Whites: \$100,001+ & 2-Year or Less			0.21	(0.77)		
Whites: \$100,001+ & Unclassified 4-Year			1.30*	(0.57)		
Whites: \$100,001+ & Inclusive 4-Year			1.43*	(0.57)		
Whites: \$100,001+ & Mod. Selective 4-Year			0.42	(0.39)		
Asians: \$0-50,000 & 2-Year or Less			1.56*	(0.76)		
Asians: \$0-50,000 & Unclassified 4-Year			1.46	(0.97)		
Asians: \$0-50,000 & Inclusive 4-Year			2.06**	(0.70)		
Asians: \$0-50,000 & Mod. Selective 4-Year			0.93	(0.69)		
Asians: \$50,001-100,000 & 2-Year or Less			0.26	(1.58)		
Asians: \$50,001-100,000 & Unclassified 4-Year			1.54*	(0.74)		
Asians: \$50,001-100,000 & Inclusive 4-Year			1.91*	(0.94)		
Asians: \$50,001-100,000 & Mod. Selective 4-Year			1.49*	(0.71)		
Asians: \$100,001+ & 2-Year or Less			-0.90	(3.30)		
Asians: \$100,001+ & Unclassified 4-Year			-0.04	(1.90)		
Asians: \$100,001+ & Inclusive 4-Year			1.97	(2.54)		
Asians: \$100,001+ & Mod. Selective 4-Year			0.54	(1.15)		
Educational Attainment (ref: Graduate Degree)						
Less than BA	-0.18	(0.17)	-0.20	(0.16)	-0.43	(0.35)
Bachelors Degree	0.40**	(0.15)	0.40*	(0.15)	0.46	(0.35)
Race & Income x Educational Attainment						
Whites: \$50,001-100,000 x Less than a BA					0.43	(0.46)
Whites: \$50,001-100,000 x BA					-0.01	(0.47)
Whites: \$100,001+ x Less than a BA					0.88	(0.56)
Whites: \$100,001+ x BA					0.34	(0.50)
Asians: \$0-50,000 x Less than a BA					1.71*	(0.69)
Asians: \$0-50,000 x BA					0.73	(0.78)
Asians: \$50,001-100,000 x Less than a BA					0.74	(1.24)
Asians: \$50,001-100,000 x BA					-0.01	(1.15)
Asians: \$100,001+ x Less than a BA					-0.83	(1.23)
Asians: \$100,001+ x BA					-0.81	(1.12)

Constant	9.56***	(0.20)	9.79***	(0.25)	9.70***	(0.35)
Observations	8,670		8,670		8,670	

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Note: \*\*\* p<0.001, \*\* p<0.01, \* p<0.05; All models include controls for current enrollment status, nativity, parents' education, and gender. The models are analyzed on the analytic sample of young adults across race and the income distribution.

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