

Ethnic Diversity and Prosocial Behavior in Early Childhood: Evidence from a Field Study in German Kindergartens

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1. Introduction

In increasingly diverse societies, understanding how early exposure to ethnic and cultural differences influences children's social preferences is both a psychological and political imperative. Social behaviors such as altruism, fairness, and cooperation, which are often shaped during early childhood, form the foundation of civic life and can influence long-term attitudes toward redistribution, inclusion, and intergroup solidarity (Fehr & Schmidt, 1999). A key factor in this developmental process is the environment in which children interact with peers. Specifically, the ethnic and migrant composition of early educational settings may play a significant role in shaping children's prosocial behavior and their perception of in-group and out-group members (Schneeweis, 2015; Zárate, 2023).

This study investigates whether the ethnic and migrant composition of German kindergartens is associated with greater prosocial behavior, measured through a coin allocation task among native German children. The central research question is: Does a more diverse kindergarten environment correspond with increased generosity among German children toward peers? Guided by the contact hypothesis, which posits that meaningful intergroup contact can reduce prejudice and promote empathy under certain conditions, the main hypothesis of this study is that German children exposed to higher levels of ethnic and migrant diversity will exhibit more altruistic behavior (Allport, 1954).

This research contributes to the literature in three key ways. First, it introduces behavioral data on early childhood prosociality, a developmental stage that is crucial in the context of ethnic diversity (Olson & Spelke, 2008). Second, it bridges behavioral economics and political economy by examining how early intergroup exposure might influence values related to fairness, cooperation, and inclusion (Fehr & Schmidt, 1999; Felfe & Lalive, 2010; Felfe & Nollenberger, 2015). Third, the study complements and extends existing empirical work by using an incentivized experimental task to directly measure generosity, rather

than relying on self-reported attitudes or academic outcomes (Falk & Heckman, 2009). This study finds no statistically significant association between group-level ethnic diversity in kindergarten groups and prosocial allocation. The findings suggest that mere exposure to diversity does not influence early unconditional prosocial behavior. The results remain insignificant and low in magnitude across all regressions and robustness check.

2. Literature Review

2.1 Early Prosocial Behavior and Group Preferences in Childhood

The roots of prosocial behavior, including fairness, altruism, and cooperation, begin in early childhood and have been extensively studied through experimental economics and developmental psychology. Fehr, Bernhard, and Rockenbach (2008) conducted a foundational study in this area, showing that young children aged 3 to 8 exhibit strong fairness preferences that intensify with age. Using allocation games, they demonstrated that children are willing to sacrifice personal gains to achieve egalitarian outcomes. The researchers found a notable shift around age 7, where fairness norms become internalized and more consistently guide children's choices. Their results challenge the notion that fairness is solely a social construct learned later in life, instead positing that prosocial tendencies are both early-emerging and developmentally shaped. In a complementary study, Olson and Spelke (2008) examined the foundations of cooperation in preschool-aged children. Through a series of controlled experiments, they found that even very young children display a preference for equal distributions and reciprocal behavior, suggesting an early sense of justice. However, their findings also showed that children demonstrate in-group favoritism, preferring individuals who are similar in language or appearance, and often allocating more to them. This duality of innate fairness and early bias underscores the importance of social environments in shaping how and toward whom prosocial behaviors are expressed. These foundational works provide the theoretical basis for expecting both generosity and bias in young children, while

highlighting the potential for environmental factors like ethnic diversity to shift these tendencies.

2.2 Peer Effects and Social Behavior in Diverse Educational Contexts

The role of diversity in shaping children's behavioral development has been increasingly explored through studies of peer effects in educational settings. Schneeweis (2015), using administrative data from Austrian schools, investigated the impact of immigrant concentration on student outcomes. Her study found that while a high proportion of immigrant peers can adversely affect the academic outcomes of migrant students such as increasing the likelihood of grade repetition it does not negatively influence native students' academic performance. Although the study focuses on cognitive rather than behavioral outcomes, its findings indicate that native children are not academically disadvantaged by diversity, thereby raising the question of whether diversity might positively affect their social behaviors instead.

Addressing this question more directly, Zárate (2023) conducted a field experiment using random dormitory assignments in Peruvian boarding schools. The study demonstrated that peer composition significantly influences students' development, with effects varying by gender. For boys, being assigned to dormitories with socially skilled peers improved their own sociability. However, the study also found that girls exposed to higher-achieving peers experienced a negative impact on their academic performance, likely due to a drop in self-confidence. Zárate's results highlight the potential for diverse peer interactions to enhance socio-emotional development while also underscoring the importance of considering gender-specific and psychological factors.

2.3 Ethnic Diversity and Social Preferences: Experimental Evidence

Recent experimental work by Anderberg, Dahl, Felfe, Rainer, and Siedler (2024) provides direct evidence on how ethnic diversity influences social preferences among school-aged children. In their study of German primary school classrooms, the authors used incentivized behavioral games to measure

cooperation, trust, and in-group favoritism. Their key finding is that greater ethnic mixing reduces discriminatory behaviors and increases trust and cooperation across group lines. These effects are interpreted through the lens of the contact hypothesis, which posits that sustained exposure to out-group members can reduce prejudice under the right conditions. Crucially, the study found that diversity not only reduces in-group bias but also promotes generalized prosociality. This research is directly aligned with the focus of this present thesis, which applies a similar logic, though at an earlier developmental stage, to examine how ethnic and migrant diversity in kindergartens affects generosity among native German children.

2.4 Childcare, Early Environments, and Long-Term Development

Another relevant stream of literature concerns the long-term developmental effects of early childcare environments. Felfe and Lalive (2010) exploited the quasi-natural experiment of German reunification to examine how early childcare affects cognitive and non-cognitive outcomes. They found that children who attended formal childcare in East Germany, where universal childcare was more prevalent, displayed improved outcomes later in life. Their analysis highlights how structured early environments influence development beyond immediate academic skills.

Expanding on this line of research, Felfe, Nollenberger, and Rodríguez-Planas (2015) studied the impact of universal childcare on emotional development. They found that childcare benefits children's long-term non-cognitive outcomes, particularly those from disadvantaged backgrounds. These results suggest that the institutional context in early childhood can have lasting effects on social behavior and emotional regulation skills, which are closely tied to prosociality.

2.5 Contribution of the Present Study

Despite the breadth of research on early prosociality, peer effects, and ethnic diversity, relatively few studies examine how diversity in early childhood settings specifically kindergartens influences prosocial behavior in native

children using direct behavioral measures. While Anderberg et al. (2024) offer experimental evidence from primary schools, and Zárte (2023) provides valuable insight into adolescent peer dynamics, the developmental stage of preschool-aged children remains underexplored. Moreover, studies like those of Fehr et al. (2008) and Olson and Spelke (2008) confirm the malleability of social preferences in early childhood, suggesting that this is a critical period during which diversity exposure might shape long-term social attitudes. This thesis addresses this empirical and theoretical gap by examining whether greater exposure to ethnic and migrant diversity in German kindergartens is associated with more generous behavior among native German children. Using data from the KIDS'n'GROUPS field study and a coin distribution task, the project seeks to find an association / correlation between diversity and prosocial allocation. In doing so, it contributes to the literature by combining behavioral experimental methods with observational diversity measures in a developmental context, thus offering new insight into how early social environments influence the formation of inclusive and cooperative norms.

3. Theoretical Framework / Hypotheses

This study builds on interdisciplinary theoretical perspectives from developmental psychology, behavioral economics, and intergroup relations to explore how early exposure to diversity may influence prosocial behavior among children. The central premise is that ethnic and migrant diversity in early childhood environments shapes social preferences through repeated interpersonal interactions and exposure to difference. Three core mechanisms are particularly relevant to understanding this relationship: in-group favoritism, perceived similarity and empathy, and the contact hypothesis.

3.1 In-group Favoritism and Early Social Categorization

Children begin categorizing others based on observable traits such as skin color, language, or accent from an early age, with research showing that in-group favoritism emerges as early as preschool (Aboud, 2003; Dunham et al., 2011). This favoritism manifests in preferential treatment, increased trust, and prosocial

behavior directed toward those perceived as similar. Experimental studies by Olson and Spelke (2008) demonstrate that even young children show a clear preference for allocating resources to individuals who share linguistic or physical characteristics with them. Such behavior suggests that group boundaries real or perceived can significantly shape early expressions of generosity.

This baseline tendency toward in-group favoritism implies that, in homogeneous environments, children may develop and reinforce egoistic preferences.

Conversely, environments that offer regular, meaningful contact with out-group peers may disrupt this pattern by increasing the salience of shared human traits and fostering broader prosocial attitudes and generosity.

3.2 The Contact Hypothesis and Reduction of Intergroup Bias

The contact hypothesis (Allport, 1954) provides a central theoretical framework for predicting the effects of diversity on social attitudes and behavior. According to this theory, under the right conditions, intergroup contact reduces prejudice and promotes mutual understanding. These conditions include equal status among group members, cooperation toward shared goals, and institutional support many of which are naturally embedded in early educational settings such as kindergartens.

Empirical evidence from school settings supports this framework. Anderberg et al. (2024) find that classroom diversity in Germany reduces discriminatory behavior and enhances cross-group cooperation among older children. While their study focuses on primary school students, the logic of the contact hypothesis may apply even earlier. In kindergarten settings, where play and social interaction are central to the learning experience, children routinely collaborate with peers from various backgrounds. This sustained, low-conflict contact may foster more generous sharing norms and strengthen prosocial tendencies, particularly among native children who might otherwise develop more limited patterns of giving. Thus, the contact hypothesis predicts that children exposed to more diverse peer environments could show greater

generosity. This prediction forms the empirical basis for the hypotheses tested in this study.

3.3 Hypothesis

Based on the theoretical mechanisms discussed, the study formulates the following primary hypotheses regarding the impact of kindergarten diversity on the generosity of native German children:

Increased ethnic and migrant diversity in a kindergarten is associated with more overall generosity among native German children.

This hypothesis reflects the idea that diversity fosters inclusivity and generosity through repeated exposure and reduced social distance. It aligns with the contact hypothesis and findings from the behavioral literature suggesting that diverse environments can enhance empathy and fairness across group lines (Allport, 1954).

4. Data and Methodology

This study leverages unique experimental data collected during the KIDS'nGROUPS field project (KIDS'nGROUPS, 2024, June 19), implemented by the Chair of Applied Microeconomics at the University of Konstanz in kindergartens across Germany. The analysis done in this paper is made solely with this data. The primary objective of the data collection was to examine whether early exposure to ethnically and linguistically diverse peer environments affects prosocial behavior in young children specifically, among native German children. To this end, the study employed a behavioral economics experiment designed to elicit social preferences through an incentivized game, blending methodological rigor with age-appropriate playfulness.

4.1 Field Study Design and Data Collection

The data was collected using an interactive, gamified experimental task, individually administered to each child. The game featured a friendly, animated

guide providing visual and auditory instructions, specifically developed to maintain attention and comprehension among preschool-aged participants. This child-centric design facilitated voluntary, focused participation while minimizing stress and cognitive overload.

Children were introduced to a virtual scenario in which they were asked to allocate four coins between themselves and another child. Importantly, the recipient was presented as a generic peer who closely resembled the participant in appearance, rather than differing systematically in gender, hair color, or skin tone. This setup means that the sharing decisions reflected each child's general prosocial behavior rather than allocation toward an ingroup or outgroup recipient.

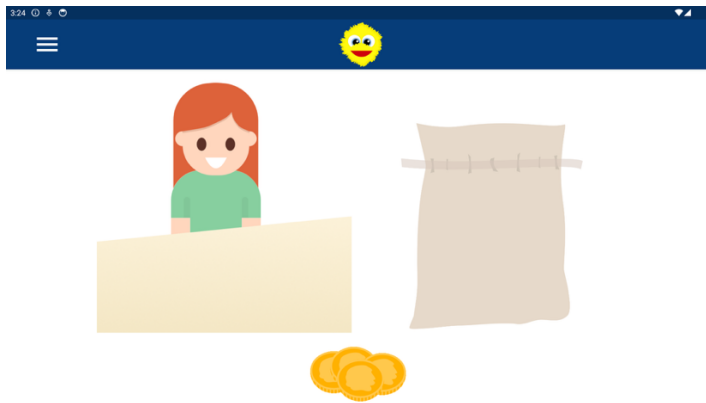


Figure 1 Dictator game

The experimental design followed best practices in experimental economics by introducing real monetary stakes: children could later redeem their retained coins for actual toys. This incentive-compatible setup ensured that observed behaviors reflected genuine preferences rather than hypothetical or socially desirable responses (Falk & Heckman, 2009). The number of coins kept served as a direct behavioral measure of generalized altruism and egoism.

The study leverages naturally occurring variation in group-level diversity within each kindergarten and group. Specifically, measures of heritage diversity (based on spoken languages) and visible diversity (skin and hair color) were calculated

at the group level. These contextual diversity indicators were then used as predictors to examine whether exposure to more diverse peer environments was associated with higher or lower general generosity.

4.2 Definitions and Classifications

A central analytical task is the classification of both child characteristics and the diversity composition of peer groups. To capture multiple dimensions of diversity and behavior, I define the following key constructs.

Prosocial vs. Egoistic Behavior

Each child was given four coins to distribute. Behavior is categorized as egoistic if a child kept more than two coins (i.e., more than half), and as prosocial if they retained two or fewer. This binary operationalization aligns with previous experimental economics studies (Fehr et al., 2008), where allocations more generous than an even split are interpreted as altruistic.

Visible Diversity

At the start of the game, each child created an avatar resembling themselves by selecting their skin tone and hair color on a five-point scale, from lightest (1) to darkest (5). A child was classified as visibly migrant if they selected a value higher or equal to 3 for both traits. The share of visibly migrant children in each group was then computed, allowing for quantification of group-level visible diversity.

Heritage (Linguistic) Diversity

To capture cultural-linguistic diversity, children were asked which languages they spoke at home. If a child reported speaking only German, they were classified as native German. If they reported speaking both German and another language, or only another language, they were classified as having a migrant background.

4.3 Regression Models

To assess the relationship between kindergarten diversity and children's generosity, I estimate two key regression models.

Model 1: Heritage Diversity and Generosity

This model estimates whether the proportion of children with a migration background (based on language use) in a peer group correlates with the likelihood that a native German child exhibits prosocial behavior. The main independent variable is the share of heritage diversity in the group.

Model 2: Visible Diversity and Generosity

This specification investigates whether the proportion of visibly migrant peers influences generosity. The primary regressor is the share of visibly migrant children based on avatar self-selection. Both models are estimated as linear probability models, with fixed effects for kindergartens to account for unobservable institutional or neighborhood-level factors. The outcomes of interest are various measures of generosity, described below.

4.4 Outcome Variables

The analysis uses three dependent variables to capture different facets of children's generosity. The first measure is the total number of coins shared, ranging from zero to four, which serves as a continuous indicator of generosity. The second outcome, referred to as *Generosity Dummy 1*, is a binary variable equal to one if the child gave more than two coins and zero otherwise. The third outcome, *Generosity Dummy 2*, takes the value of one if the child gave at least one coin and zero if no coins were shared. These measures allow the study to examine both the intensity of generosity and the likelihood of meeting specific generosity thresholds.

4.5 Regression Analysis and Estimation Strategy

Formally, the estimation equation is:

$$Y_{\{igk\}} = \alpha + \beta X_{gk} + \gamma Z_i + \delta_k + \varepsilon_{igk} \quad (1)$$

In this specification, $Y_{\{igk\}}$ denotes the outcome variable for child i in group g of kindergarten k , measured either as the continuous number of coins given (coins_given) or as a binary generosity indicator (generosity_dummy1 or generosity_dummy2). The key explanatory variable, $X_{\{gk\}}$, captures the share of migrant-background children in group g of kindergarten k , measured in two ways: heritage diversity (heritage_div_group) and visible diversity (visible_div_group). The vector of child-level controls, Z_i , includes the child's age in years, gender, and skin-color category. Kindergarten fixed effects, ε_{igk} account for unobserved characteristics shared by all groups within the same kindergarten. The error term, ε_{igk} , is clustered at the group or kindergarten level to account for potential within-cluster correlation. This setup identifies β from variation in diversity between groups within the same kindergarten, holding constant all kindergarten-level factors.

The key independent variable diversity share is constructed using the following syntax in R:

```
group_diversity <- kids_data_clean %>%  
group_by(kigaaid, id_group) %>%  
summarise(heritage_div_group = mean(migrant, na.rm = TRUE),  
visible_div_group = mean(visibly_migrant, na.rm = TRUE), .groups = "drop")
```

This ensures that variation in diversity is measured at the group level, allowing for identification based on differences within kindergartens.

4.6 Control Variables & Fixed Effects

To account for observable heterogeneity, the regressions include the following controls: Gender (dummy for female), Age (in years), and Skin color category (factor variable based on the child's own appearance in the avatar-selection task).

Controlling for the child's own skin color is important to separate the effect of peer group diversity from any direct influence of the child's own visible traits on generosity. In addition, kindergarten fixed effects (δ_k) are included to absorb all institution-level characteristics that might confound the relationship between diversity and generosity such as curriculum, teacher behavior, facilities, or prevailing social norms ensuring that comparisons are made only between children in different groups within the same kindergarten.

4.7 Challenges and Identification Issues

Several limitations must be acknowledged. First, measurement error may arise because avatar-based classifications do not perfectly correspond to children's actual appearance. Children might select traits based on aesthetic preference or simple misunderstanding of the task, leading to potential misclassification. Second, perception bias is inherent in the reliance on self-perceived ethnicity or skin tone. While perceptions may differ from external classifications, this subjectivity is theoretically consistent with the study's focus on children's lived experiences and how they understand social categories. Third, non-random assignment poses a key identification challenge. The diversity of a child's peer group is not randomly determined. Although kindergarten fixed effects help isolate variation within institutions by comparing children in different groups of the same kindergarten, the analysis remains correlational rather than causal, as unobserved factors could still confound the estimates. The estimated coefficients should be interpreted as capturing association rather than a causal effect due to the simplicity of this paper's methodology.

5 Results

5.1 Descriptive Statistics

The descriptive statistics reveal that, on average, children in the sample gave 1.33 coins out of a possible four, indicating moderate generosity overall. A large

majority (76.3%) gave at least one coin, while only a small minority (6.3%) gave more than two coins.

This pattern closely mirrors Fehr et al.'s findings that young children often engage in some level of sharing, but high-cost generosity or "costly sharing" as they call it which is giving away more than half of their endowment is relatively rare. The diversity measures show that, on average, heritage diversity within groups was 16.5%, while visible diversity was lower, at 3.8%, with substantial variation across kindergartens. The average age was 4.5 years, covering a range from 2 to 7 years old. These figures indicate a sufficient variation to further explore allocation behaviour in the researched kindergartens.

Table 1: Summary statistics of dataset

Variable	Mean	Median	Min	Max
coins given	1,328	1,000	0,000	4,000
generosity dummy 1	0,063	0,000	0,000	1,000
generosity dummy2	0,763	1,000	0,000	1,000
heritage div	0,165	0,133	0,000	0,857
visible div	0.038	0,000	0,000	0,600
age	4,506	5,000	2,000	7,000

5.2 Correlation Matrix

Table 2 presents the correlation matrix of the key variables analyzed in this study, computed exclusively for native German children ($is_german = 1$). The variables include the continuous measure of generosity (coins given), two binary generosity dummies, measures of ethnic diversity at the kindergarten group level (heritage diversity and visible diversity), and age. The correlations between the generosity variables reveal expected positive associations. Specifically, the continuous measure of coins given is moderately correlated with generosity dummy 1 ($r = 0.577$) and generosity dummy 2 ($r = 0.761$), indicating consistency across these different operationalizations of prosocial behavior. The two generosity dummies exhibit a weaker correlation with each other ($r = 0.144$),

suggesting they capture somewhat different thresholds or dimensions of generosity.

The ethnic diversity variables represent group-level proportions of children with migrant backgrounds in each kindergarten group, based on parental heritage (heritage diversity) and on visible traits such as skin and hair color (visible diversity).

These two diversity measures are moderately correlated ($r = 0.392$), reflecting related but distinct aspects of ethnic diversity within the kindergarten environment. Importantly, neither diversity measure shows meaningful correlation with generosity indicators in this native German subsample (heritage diversity and coins given: $r = 0.026$; visible diversity and coins given: $r = -0.003$). This lack of substantial bivariate association suggests that, among native German children, ethnic diversity at the group level does not strongly relate to individual generosity.

Overall, the correlation matrix highlights strong relationships among generosity variables, a moderate association between the two diversity indicators, but little to no direct bivariate relationship between ethnic diversity and generosity among native German children. These findings emphasize the importance of multivariate analyses to explore potential conditional effects and interactions between ethnic diversity and prosocial behavior in the broader, more diverse sample.

Table 2: Variable Correlation Matrix

Variable	coins given	dummy1	dummy2	heritage div	visible div	age
coins given	1,000	0,577	0,761	0,026	-0,003	0,030
dummy1	0,577	1,000	0,144	0,026	0,019	-0,102
dummy2	0,761	0,144	1,000	0,012	-0,012	0,122
heritage div	0,026	0,026	0,012	1,000	0,392	0,004
visible div	-0,003	0,019	-0,012	0,392	1,000	0,010
age	0,030	-0,102	0,122	0,004	0,010	1,000

5.3 Regression Results

Table 3 presents the baseline regression results examining the relationship between group-level ethnic diversity and prosocial behavior among children, operationalized through three dependent variables: the continuous measure of coins given and two binary generosity indicators (generosity greater than 2 coins, and generosity at least 1 coin). The analysis distinguishes between two forms of diversity: linguistic heritage diversity (Panel A) and visible ethnic diversity (Panel B). Focusing first on linguistic heritage diversity in Panel A, the estimated coefficients for `heritage_div_group` consistently show a negative sign across all three generosity outcomes, yet none reach statistical significance and are small in magnitude.

This lack of significance indicates that within the sample of native German children, the proportion of linguistically migrant children in a kindergarten group does not have a measurable impact on the generosity behavior of these children, whether generosity is viewed continuously (coins given) or categorically (exceeding specific generosity thresholds). The direction of the coefficients might suggest a weak negative association, but given the large standard errors and p-values well above conventional thresholds, these findings do not provide evidence for any association. Individual-level controls reveal nuanced patterns. Gender, represented by the female indicator, is associated with slightly higher generosity in some models, notably a positive and statistically significant effect on the likelihood of giving at least one coin.

Panel B, which substitutes visible ethnic diversity for linguistic heritage diversity, yields parallel conclusions. The coefficient on `visible_div_group` is negative but far from significant in any model specification, indicating no detectable association of the share of visibly migrant children in a kindergarten group on native children's generosity. The consistency of coefficients and lack of significance patterns across the two diversity measures reinforces the consistency

of the finding that ethnic diversity, measured either through linguistic background or visible traits, does not directly predict prosocial behavior in this sample.

It is noteworthy that the adjusted R-squared values remain extremely low across all models, ranging from approximately 0.006 to 0.033. This suggests that a large proportion of the variance in generosity remains unexplained by this model. It may also imply that prosocial behavior is influenced by a complex interplay of individual, contextual, and perhaps unmeasured social factors beyond the scope of this analysis. However given the simplicity of this model paired with the high standard errors and high p values this is unlikely, and a lack of association could rather be attributed to the scope of this model.

In summary, the regression results presented in Table 3 suggest that group-level ethnic diversity within kindergartens, whether defined by linguistic or visible migrant status, does not exert a statistically significant influence on the generosity behaviors of native German children.

Due to the lack of statistical significance, high p-values, and a low adjusted R-squared, this model cannot be considered statistically significant or to have explanatory power.

These findings underline the necessity for more advanced modeling approaches to fully capture the relationship between ethnic diversity and children's prosocial behavior.

Table 3: Baseline Regression Results (Group-Level Means & Allocation Variables)

	Coins Given	Generosity > 2	Generosity ≥ 1
A: Linguistically Migrant	(1)	(2)	(3)
heritage_div_group	-0.06 (0.204)	-0.014 (0.051)	-0.039 (0.089)
c2_female	0.074 (0.04)	-0.003 (0.01)	0.048 (0.017)**
age	0.041 (0.02)*	-0.022 (0.005)***	0.057 (0.009)***
factor(c2_skinc)2	-0.03 (0.061)	-0.002 (0.015)	-0.033 (0.027)
factor(c2_skinc)3	-0.136 (0.16)	-0.023 (0.04)	-0.07 (0.07)
factor(c2_skinc)4	-0.718 (0.299)*	-0.079 (0.075)	-0.275 (0.129)*
factor(c2_skinc)5	-0.662 (0.699)	-0.044 (0.175)	-0.206 (0.303)
	0.0145	0.006	0.033
B: Visibly Migrant	(1)	(2)	(3)
visible_div_group	-0.281 (0.408)	-0.009 (0.102)	-0.074 (0.177)
c2_female	0.075 (0.04)	-0.003 (0.01)	0.048 (0.017)**
age	0.04 (0.02)*	-0.023 (0.005)***	0.057 (0.009)***
factor(c2_skinc)2	-0.03 (0.061)	-0.002 (0.015)	-0.033 (0.027)
factor(c2_skinc)3	-0.123 (0.162)	-0.023 (0.04)	-0.066 (0.07)
factor(c2_skinc)4	-0.692 (0.301)*	-0.078 (0.075)	-0.268 (0.13)*
factor(c2_skinc)5	-0.64 (0.699)	-0.042 (0.175)	-0.2 (0.303)
R ²	0.015	0.006	0.033
Observations	3070	3070	3070
* p < 0.1, ** p < 0.05, *** p < 0.01 Adjusted R ² used Std. Error in brackets			

5.4 Robustness Check

Table 4 presents the results from the robustness check in which the analysis is conducted at the kindergarten level rather than the individual native German child level. In this specification, all variables are averaged within each kindergarten, resulting in one observation per kindergarten (N = 94). The dependent variable is the average number of coins given by native German children in the kindergarten, and the explanatory variables capture the kindergarten's mean heritage diversity, mean visible diversity, average age, and percentage female.

The results indicate that neither heritage diversity nor visible diversity is significantly associated with average generosity when comparing across kindergartens. The coefficient for heritage diversity is close to zero (-0.003 , $SE = 0.216$), while the coefficient for visible diversity is positive but imprecisely estimated (0.559 , $SE = 0.614$). These estimates suggest no robust evidence of a relationship between overall diversity exposure and average generosity at the kindergarten level.

Overall, this kindergarten-level analysis supports the earlier within-kindergarten fixed effects findings by showing that, even when comparing across kindergartens, there is no clear evidence that higher diversity is linked to higher or lower average generosity among native German children. Once again results show no statistical significance.

Table 4: Kindergarten-Level Regression (Average at kigaid level)

	Avg Coins Given
Kindergarten Fixed Effects	<i>I</i>
heritage div	-0.003 (0.216)
visible div	0.559 (0.614)
age	-0.132(0.096)
pct female	0.062 (0.200)
R ²	0.034
Observations	94
* $p < 0.1$, * * $p < 0.05$, * * * $p < 0.01$ Multiple R ² used Std. Error in brackets	

6 Discussion

Across a range of specifications, greater ethnic diversity in kindergarten peer groups measured either as heritage diversity or visible diversity shows no statistically significant association with native German children's generosity in a neutral allocation task. At face value, this is a null finding. In context, however, it is informative. The task elicits generalized altruism toward an anonymous peer

rather than targeted altruism toward an out-group recipient. This distinction matters for how early experiences might shape long-run political preferences, such as support for redistribution, openness to diversity, or cooperation at the group level. Political economy research typically links support for redistribution and inclusive institutions to beliefs about deservingness, social distance, and reciprocity. Early contact could reduce perceived distance to out-groups and thereby potentially soften opposition to inclusive policies. The present evidence does not contradict the possibility that diverse early environments shape later intergroup fairness norms; it simply shows that, at this age and in this task, unconditional prosociality does not vary with exposure to diversity.

6.1 Limitations

It is crucial to emphasize that this bachelor's thesis does not establish any causal relationship. The statistical insignificance of the main coefficients already limits the strength of interpretation. More fundamentally, the technical approach is too simple to support causal claims: the models rely on a single cross-sectional dataset, basic fixed effects, and lack a robust identification strategy such as panel data, difference-in-differences, or instrumental variables. Consequently, unobserved sorting of children into groups, omitted variable bias, and reverse causality remain plausible alternative explanations for the observed patterns.

7 Conclusion

This study analyzed whether greater ethnic and migrant diversity in German kindergartens is associated with more generous allocation behavior among native German children. Across correlation analyses, within-kindergarten fixed-effects regressions, and kindergarten-level robustness checks, We find no statistically significant association between group-level diversity and generosity toward an identical peer. Additionally magnitudes of coefficients remain consistently low across all regressions.

The paper contributes to political economy and behavioral economics in two ways. First, it brings incentivized behavioral measurement to an understudied developmental window, complementing work that relies on attitudes or academic outcomes. Second, it distinguishes heritage from visible diversity two conceptually related but empirically distinct channels while using within-institution comparisons to limit confounding by kindergarten-level factors.

7.1 Future Research

Several avenues for future research follow naturally. Measures of contact quality, teacher practices, cooperative task frequency, classroom climate, would help unpack mechanisms. Stronger identification could come from policy shocks (e.g., sudden changes in local placement or enrollment rules), difference-in-differences, or IV regressions. Measurement can be improved with parent-verified migrant backgrounds, and repeated tasks to quantify behavioral stability.

Finally, comparative work across societies with different cultural baselines more individualistic versus more collectivist would illuminate whether the allocation behavior of different natives children changes when exposed to more diversity in early educational institutions. Cross-country designs could standardize tasks while leveraging institutional variation in childcare systems, migration histories, and curriculum. Tracking cohorts longitudinally into adolescence and early adulthood would connect early contact to downstream attitudes about redistribution, immigration, and cooperation, closing the loop between micro-level behavior in kindergarten and macro-level preferences that shape democratic life in the political economy.

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