Trade-offs in Parental Spending on Children:
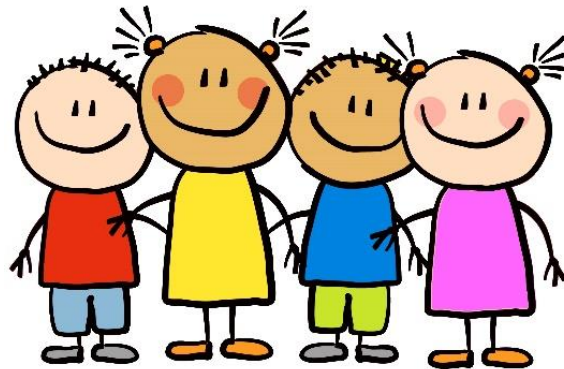## Apparel vs. Education

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Background

■ Mark Lino (USDA – 2016): In 2013 a family in the Higher Income Level (Income greater than $106,500), spent approximately 24% of their income on children.   By contrast, a family in the Lower Income Level (Income less than $61,500) spent 17%.

Literature Review

- Omori (2010): Household income and parental education determine expenditures on education, entertainment, and books.

- Charles (2007): Blacks and Hispanics spend about 30% more on visible goods, after accounting for differences in permanent income. Found that, "This is not really about race in the end. It is simply about what we observe about you and what peer group you belong to."

Literature Review

■ Paulin (2002): Differences in expenditure patterns among families headed by single fathers vs. those headed by single mothers attributable to income, marital status, age.

■ Veblen (1899): "Conspicuous consumption of valuable goods is a means of reputability to the gentleman of leisure," and "failure to consume a mark of demerit."

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Sample Description

- Pooled sample of 79,843 Consumer Units (CU's).

  - Each included at least one child under the age of 18 who was the child of the reference person.

  - Used CE Interview Survey data from 2004 to 2015 Public-Use Microdata (PUMD).

- Excluded CU's with negative income.

Income Groups

Figures in 2015 $US

| Income Quintile	Min	Max	Median	Mean	Count
Quintile 1	($2,618.85)	$7,996.30	$5,954.55	$5,714.20	20135
Quintile 2	$7,996.58	$11,726.21	$9,857.49	$9,851.92	20134
Quintile 3	$11,726.32	$16,158.93	$13,778.86	$13,839.23	20134
Quintile 4	$16,159.12	$22,944.26	$19,036.93	$19,204.70	20134
Quintile 5	$22,944.38	$385,880.80	$30,028.28	$34,777.28	20134

Expenditure Categories

- Focus on categories that we can reasonably assume are directly attributable to children under 18 years of age.
  - ▶ Education
  - ▶ Apparel
  - ▶ Child care
- Calculated expenditure shares as shares of the total of the above expenditures only.

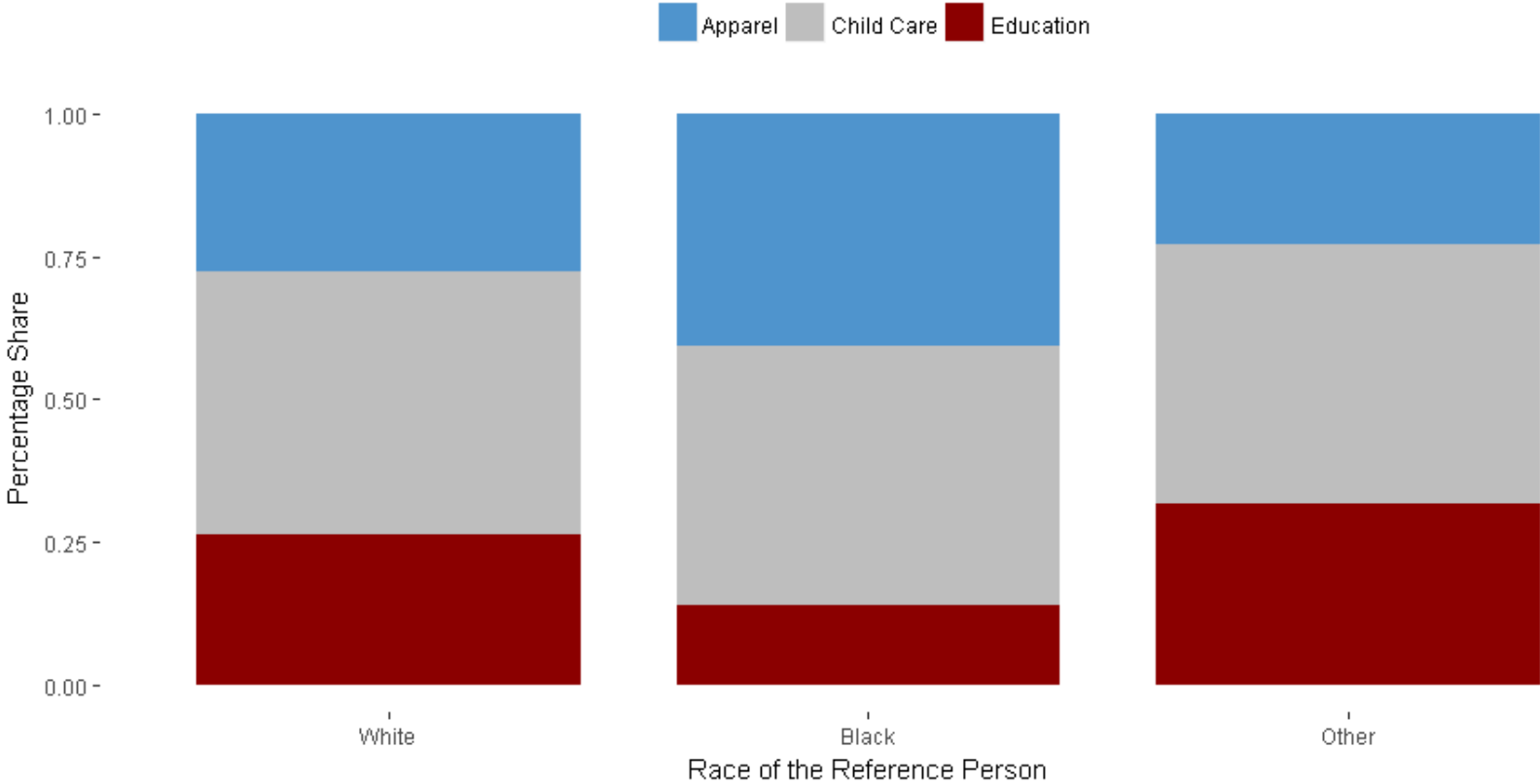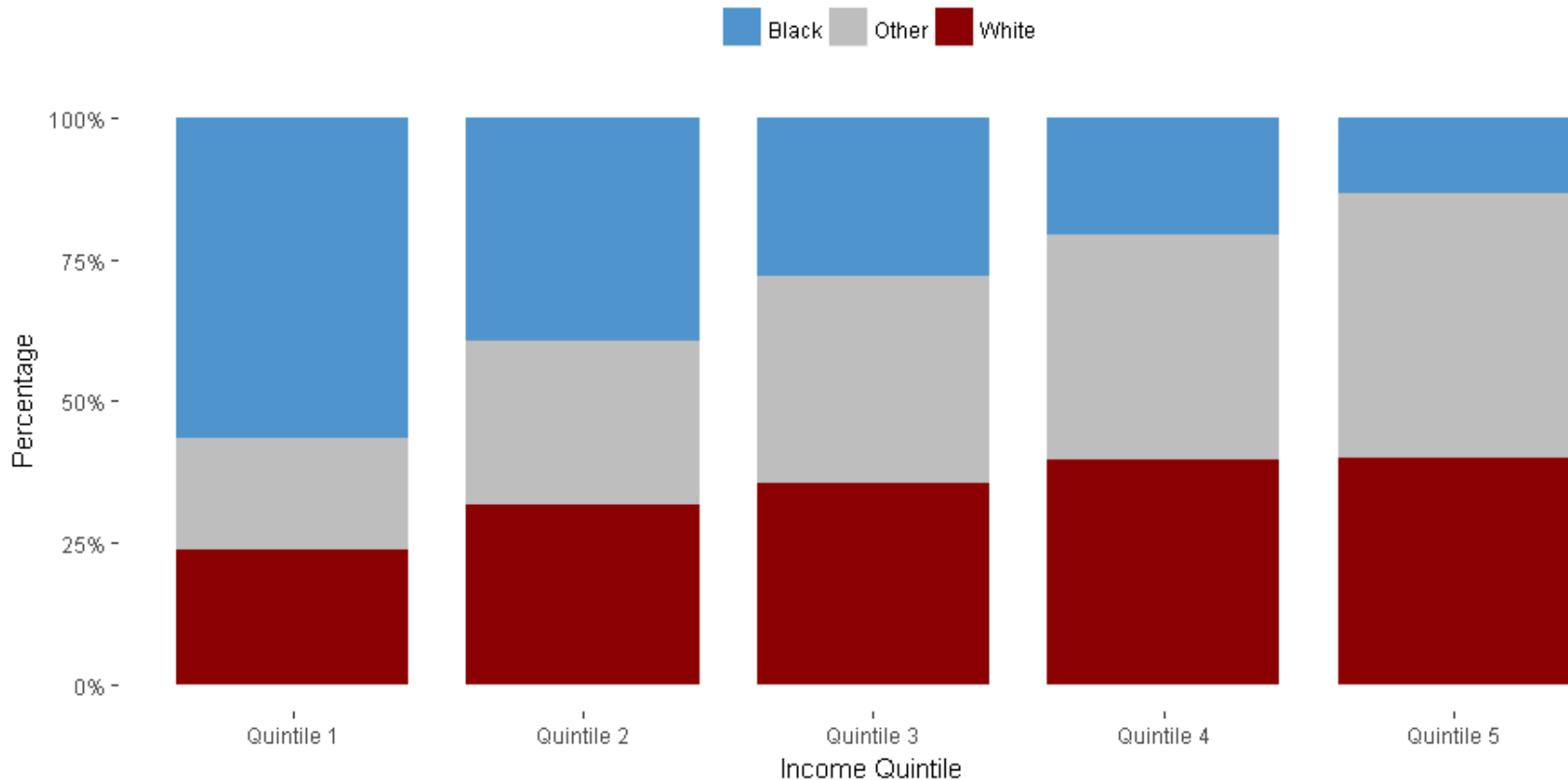# Expenditure Shares by CU's Income Quintile
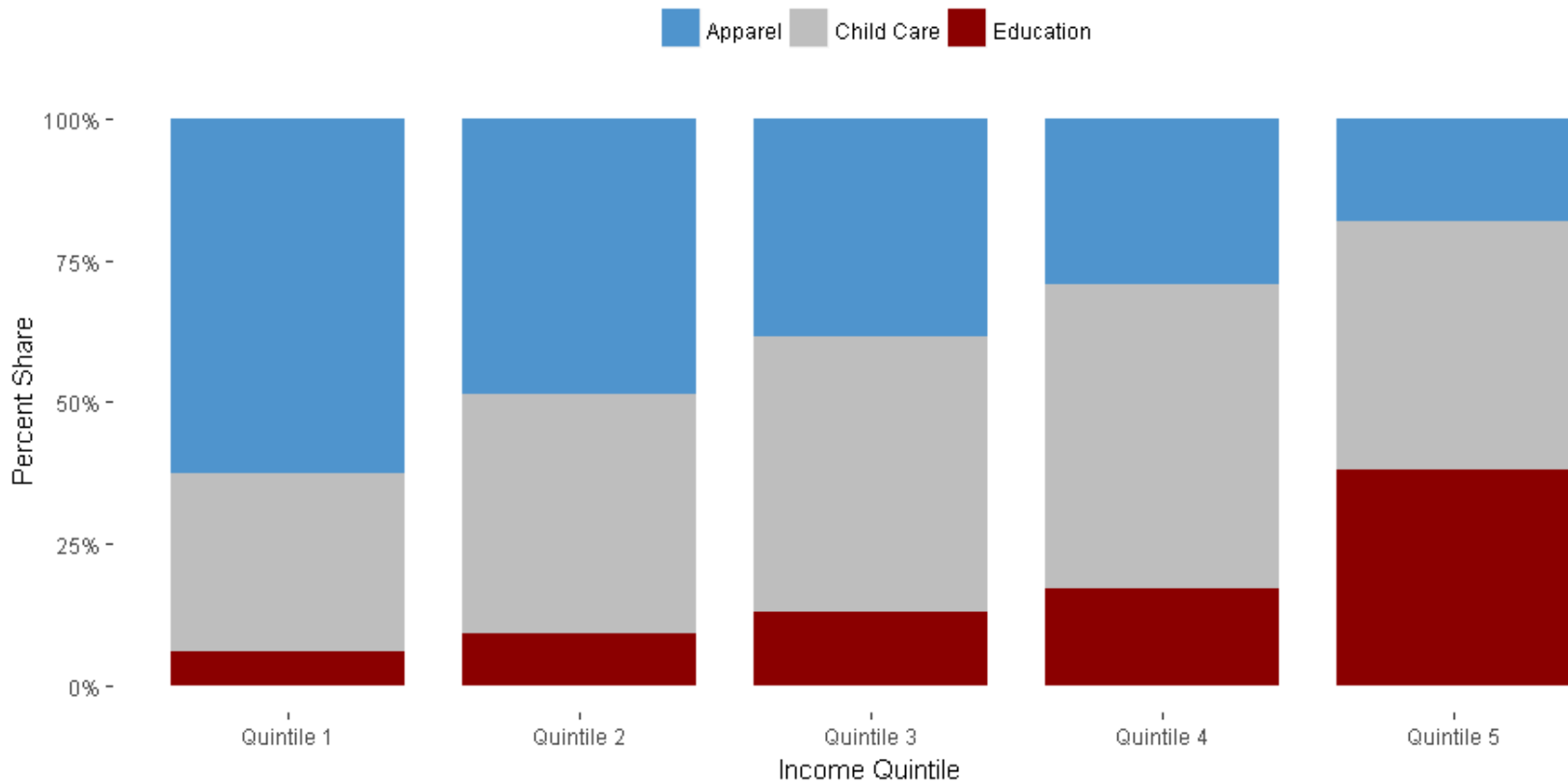
Expenditure Shares by Education of the Reference Person
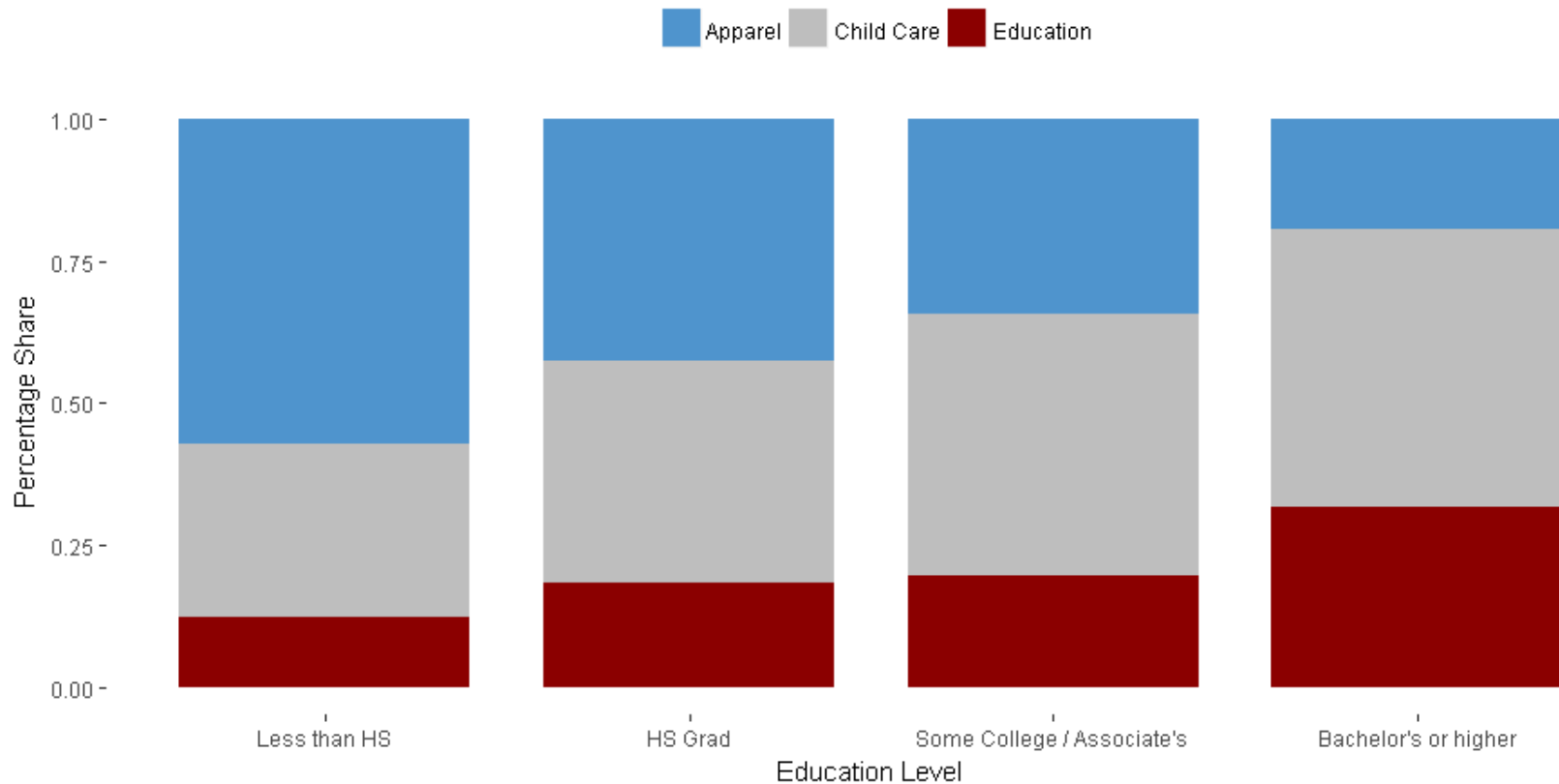
Expenditure Shares by Race of the Reference Person

Distribution of Race of the Reference Person Across Income Quintiles

Calculating Elasticities

- Standard equation

  - $\dfrac{\Delta Quantity}{\Delta Income} = \dfrac{\partial Q}{\partial I} \times \dfrac{I}{Q}$

- Calculating elasticity using a Cragg double-hurdle model

  - Transform distribution using Box-Cox

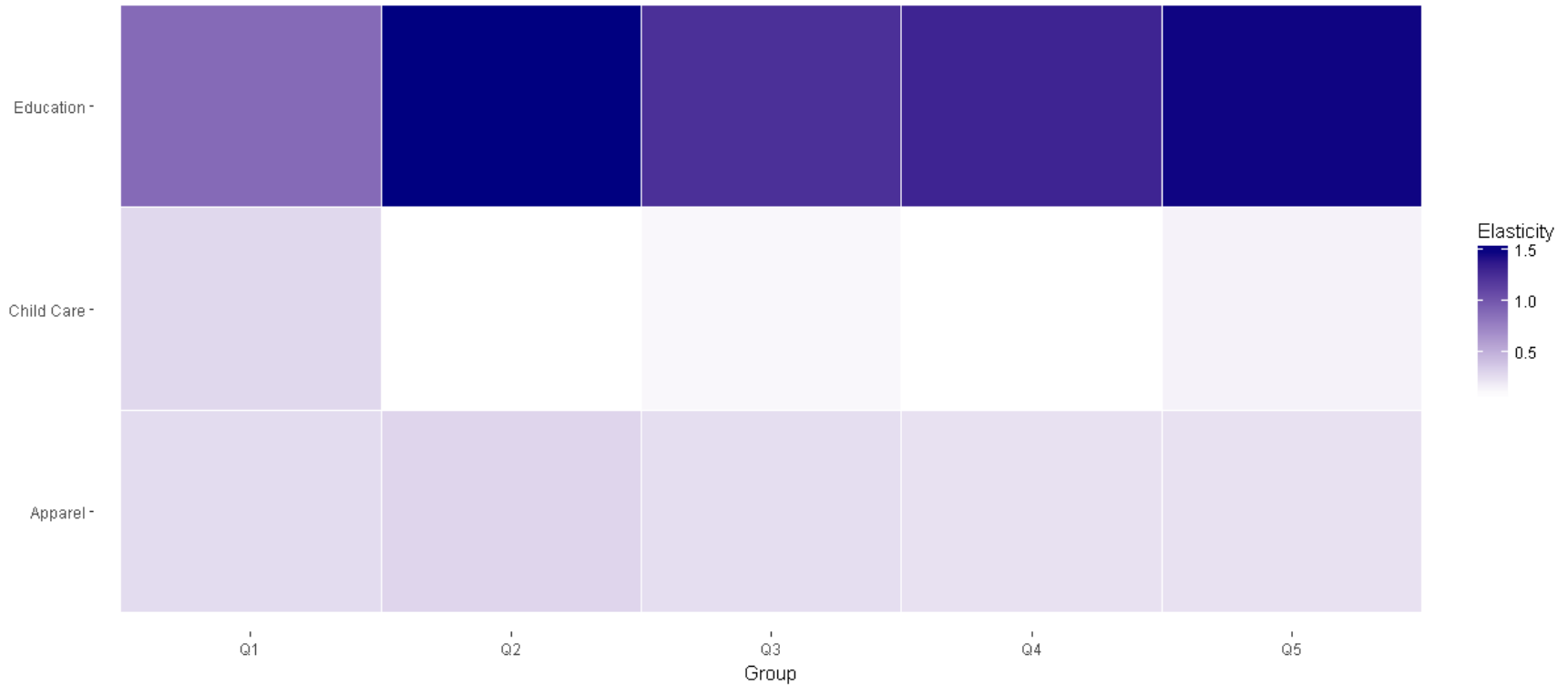 - $\textcolor{red}{\beta_1}$ = Coefficient on total outlays

  - $\epsilon_d = \left(\textcolor{red}{\beta_1} \times \dfrac{\partial I}{\partial Q} \right) \times \left(\dfrac{\bar{I}}{\overline{PQ}} \right)$

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Elasticities

Expenditures	Income Quintile					
	ALL	Q1	Q2	Q3	Q4	Q5
Education	1.725	0.899	1.516	1.25	1.32	1.491
Child Care	0.198	0.286	0.079	0.121	0.079	0.148
Apparel	0.279	0.265	0.298	0.252	0.234	0.236

Elasticities by Income Group

Elasticities by Race
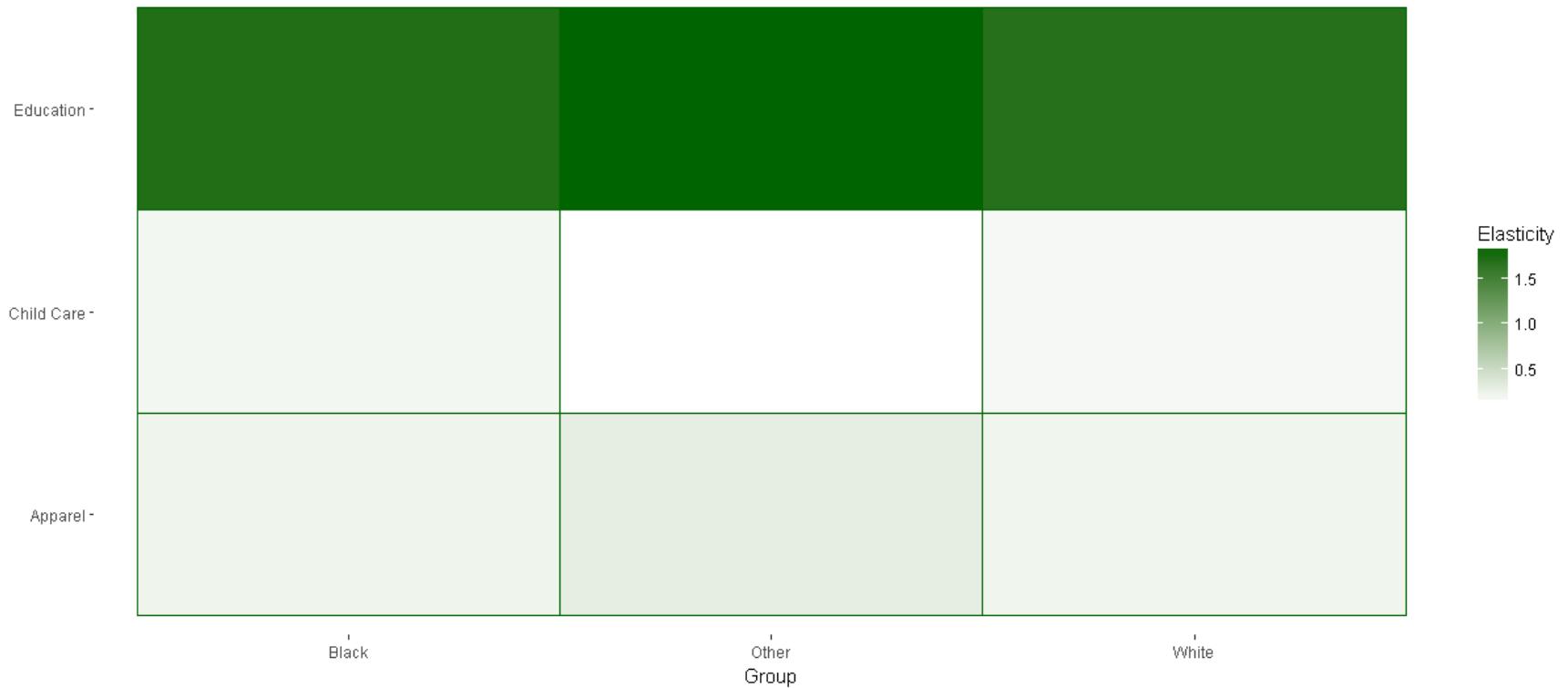
Summary

- Our findings support Omori's finding that household income and parent's education affects expenditures on education and books.

- We find that non-whites spend more on "visible goods" relative to their total income, as posited by Charles, et al., because of the distribution of races across the income quintiles, but income elasticities of demand are consistent across both racial and income groups.

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