

The Determinants of Children's and Adolescents' Time Use

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Children and Adolescent Time Self-Investments

- Time as a resource input to cognitive and non-cognitive outcomes
 - Focus on parental time (Becker, 1965; Hill and Stafford, 1974; Leibowitz 1974, 1977), esp childhood (Cunha and Heckman, 2007; Del Boca et al., 2017)
 - Children's own time or Self-investments (Borga, 2018; Del Boca, Monfardini, and Nicoletti, 2017)
- Time spent on an activity as a reflection of an individual's demand for it or the outcome perceived (Becker, 1965)
- Increasing independence as children grow older (10-14 years, Lunberg, Romich, and Tsang, 2009; Dauphin et al., 2011)
- "how children spend their time and the activities they participate in most likely have important implications for the type of adults they become" (Sandberg, 2011)

Children and Adolescent Time Self-Investments

- Relatively scant economic literature exploring (a) time use as an outcome, and (b) of children and adolescents
 - housework, studying and homework, watching TV (Bianchi and Robinson, 1997; Gager, Cooney, and Call, 1999)
 - by characteristics (Wight et al. 2009) such as parental education, employment, family income (Bianchi and Robinson, 1997; Hofferth and Sandberg, 2001), child's gender (Bonke, 2010)
- No differentiation between supervised and unsupervised time while doing the activities – implication for risk behaviors (Aizer, 2004)
 - Because younger sample, supervised anyway
- Issue of adding-up constraint, trade-off

Research Objectives and Strategy

- **Research Objective:**

- To examine the determinants of children and adolescents' time use patterns

- **Research Strategy:**

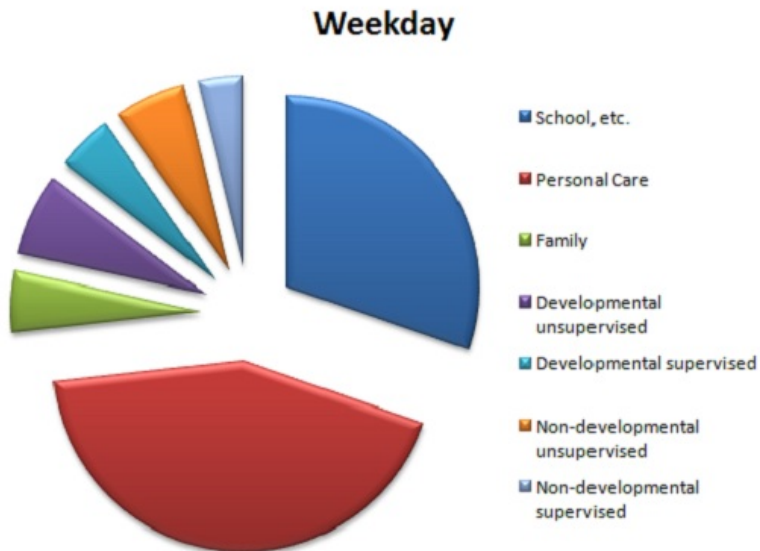
- **Economic share equation** to address adding-up constraint
- Child and family characteristics
- Differentiate between supervised vs. unsupervised time
- Differentiate between discretionary and non-discretionary time
- Differentiate between developmental and non-developmental activities

Data Description

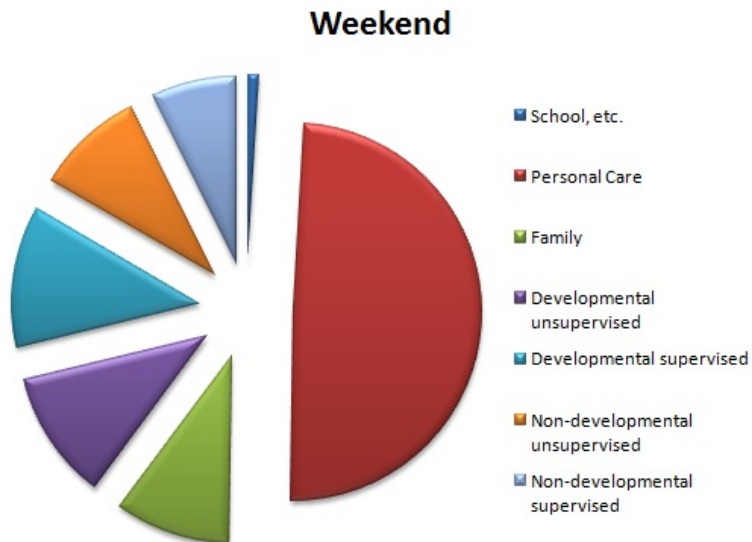
PSID-CDS: 3 waves (1997, 2002/03, 2007); subset to children of 2-parent households with family size of 2 to 5; age 5-18

- Family-specific characteristics through the PSID (father and mother education, employment; family income)
- Child-specific characteristics (age, gender, race, family size, birth order, Behavioral Problem Index)
- Time diaries for both weekday and weekend
 - Non-discretionary: school, personal care, sleep
 - Family activities: housework, household conversations, meals, market work
 - Developmental: studying, reading, play, games, outdoor activities, clubs
 - Non-developmental: watching TV, video games, passive leisure

Time Use on a Weekday



Time Use on a Weekend



Differences in Time Use by Characteristics, Weekday

	NONDISC	FAMACT	DEVA	DEVS	NDEVA	NDEVS
Male			(+)**	(+)*		
Black	(+)**	(-)**	(-)**	(-)**	(+)**	
With sibs					(-)**	(+)**
First-born					(-)**	
Mom Educ			(+)**	(+)**	(-)**	(-)**
Mom Employ	(+)**		(-)*			(-)**
Dad Educ			(+)**	(+)*		(-)**
Dad Employ				(-)**	(+)*	(-)**

Differences in Time Use by Characteristics, Weekend

	NONDISC	FAMACT	DEVA	DEVS	NDEVA	NDEVS
Male	(-) ^{***}	(-) ^{***}	(+) ^{***}	(+) ^{***}		
Black		(-) ^{**}	(-) [*]		(+) ^{***}	
With sibs					(-) ^{**}	(+) ^{***}
First-born						
Mom Educ			(+) ^{**}			(-) ^{**}
Mom Employ	(-) ^{**}				(+) ^{**}	
Dad Educ						(-) [*]
Dad Employ		(+) ^{**}			(+) ^{**}	(-) ^{***}

Results for Weekday Observations

Reference: female, non-black, with siblings, first-born, with mothers of less than high school, mothers unemployed, with fathers of less than high school, fathers unemployed

	NONDISC	FAMACT	DEVA	DEVS	NDEVA	NDEVS
Male						
Black			-0.0112*		0.0590*	
Only child						
Latter-born			-0.0083*			
Mom HS grad			0.0177*			
Mom college			0.0240*			
Mom employed	0.0217**		-0.0080*			
Dad educated						
Dad employed						
Year 2002	0.0025*	-0.0085**	0.0142*			
Year 2007	0.0145*	-0.0099**				

Results for Weekend Observations

Reference: female, non-black, with siblings, first-born, with mothers of less than high school, mothers unemployed, with fathers of less than high school, fathers unemployed

	NONDISC	FAMACT	DEVA	DEVS	NDEVA	NDEVS
Male	-0.0231**	-0.0206***	0.0215*	0.0341***		
Black					0.0119*	
Only child			0.0258*			-0.0641**
Latter-born						
Mom HS grad		-0.0244***	0.0291*	0.0280*		-0.0325*
Mom college						-0.0384*
Mom employed						
Dad educated						
Dad employed		0.0375**				
Year 2002						
Year 2007		-0.0094*		-0.0215**	0.0148*	

Summary and Conclusions

- ① **Maternal education** impacts time on developmental activities (supervised and unsupervised), consistent with Vandewater, Bickman, and Lee (2006) – Intergenerational transmission
 - Trade-off: Less time on non-developmental and family activities
- ② Less time on development, more on non-discretionary for those with employed mothers – time constraints of working mothers, consistent with Coneus, Goeggel, and Muehler (2009). (**unemployed moms**)
- ③ More developmental (supervised and unsupervised) if **male**, particularly on weekends.
 - Trade-off: Less time on non-developmental and family activities
- ④ Black children spend more time on non-developmental activities. (**Non-blacks**)
 - Trade-off: Less time on developmental
- ⑤ Year dummies as trend:
 - increasing pattern on developmental unsupervised time in weekdays
 - decreasing pattern on family activities, weekdays and weekends (Hofferth and Sandberg, 2000)

Next Steps

- Compare siblings within a family by removing household observable characteristics through fixed effects

Thank you!
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