Teens and Twenties: cultural and preferences differences in the uses of time in Spain

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Abstract

In this paper, we analyze differences in the use of time between teenagers and young adults in Spain, with a focus on differences according to the nationality of individuals. Using the Spanish Time Use Survey for the years 2002/03 and 2009/10, we analyze the time devoted to the different time use categories by both teenagers and young adults. We find differences in time allocation decisions between the two groups, which also depend on the nationality of the respondents, pointing to cultural differences as a factor affecting time allocation decisions.

Key words: time allocation, teenagers, adults, culture

JEL classification: J13, J16, J22

1. INTRODUCTION

Since Becker's seminal work on time allocation decisions (Becker, 1965), many papers analyzing the time allocation decisions of individuals have been published. Among the reasons to investigate this topic, we find that the time individuals spend on their daily activities is important for their well-being, as individuals experience "hedonic flows of pleasure or pain" (Kahneman et al., 2004, Kahneman and Krueger; 2006; Krueger, 2007; Sevilla et al., 2012). The analysis of the uses of time is important, given the limitations of GDP as a measurement of well-being and development (Folbre, 2006). Stiglitz, Sen and Fitoussi (2009) propose a broad range of measures to evaluate quality of life, including time spent in unpaid work, child care, and care of others.

Much work has been done analyzing teenagers' time allocation (Cardoso, Fontainha and Monfardini, 2010; Hagell et al., 2012). The analysis of teenagers and young adults, and their habits, is of interest because the ways teenagers and young adults live, and the habits they form during this period can exert significant influence on the rest of their lives. As argued by Cardoso, Fontainha and Monfardini (2010), socialization, as part of leisure time, can enhance the human capital of teenagers and young adults, as it may affect personal interaction skills. But differences in cultural origins may suppose differences in time allocation decisions, as prior evidence has shown that culture affects the behavior of individuals (Furtado, Marcen and Sevilla, 2013). Furthermore, foreign-born individuals may have different access to leisure facilities because of their language limitations, or may have relatively reduced networks of interaction with others. Within this framework, it is interesting to analyze who devotes more time to work, study, homework, and leisure, with a focus on differences in the nationality of individuals.

We study teenagers aged 13 to 19 years old, and young adult, aged 20 to 26 years old, using the Spanish Time Use Survey (STUS) for the years 2002/03 and 2009/10, with a focus on differences in time allocation decisions between the two groups. We find that the males devoting the least time to work, and more time to study, is the group of non-Spanish teenagers, followed by the group of Spanish young adults. In the case of female respondents, in comparison with non-Spanish young adults, non-Spanish teenagers, Spanish young adults and Spanish teenagers devote 1.82, 0.98, and 1.04 more hours per day to study time, respectively. In the case of housework, in

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comparison with non-Spanish young adults, Spanish young adults and Spanish teenagers devote 1.15 and 0.21 fewer hours per day.

The rest of the paper is organized as follows. Section 2 describes the data. Section 3 describes the econometric model, and Section 4 presents the main results. Section 5 sets out our main conclusions.

2. DATA

We use the 2002–2003 and 2009-10 Spanish Time Use Survey (STUS), a representative sample of 20,603 and 9,541 households, respectively, containing information on daily activities, compiled from the completion of a personal diary, and household and individual questionnaires. The survey includes an activities diary that all members of the household aged 10 and older complete on a selected day. We select teenagers aged between 13 and 19 years old, and young adults aged between 20 to 26 years old, from both databases.

We define the following variables of time use activities: work, study, housework, sleep, food and drink, other personal care, and leisure. Given the importance of analyzing leisure activities separately (Campaña, Molina and Ortega, 2016), leisure time is disaggregated in 4 sub-categories: social time and fun, sports and outdoor activities, hobbies and games, and media time.

[Table 1 about here]

Table 1 shows the time devoted to these activities by Spanish teenagers and young adults, measured in minutes per day. We develop our analysis separately by gender, given previous evidence showing that the time use patterns of males and females are different (Gimenez-Nadal and Sevilla, 2012). We compare the time devoted to the different activities by male teenagers and young adults, on the one hand, and female teenagers and young adults, on the other. We observe that male and female teenagers devote more time to study, sleep, and leisure, including more time to sports and outdoor activities, hobbies and games, and media time, in comparison to young adults. In contrast, male and female teenagers devote less time to work, food and drink, and other personal care, in comparison to young adults.

3. ECONOMETRIC MODEL

We estimate OLS regressions on the time devoted to the different time use categories, by gender, and we estimate the following equation:

$$T_i = \alpha + \beta_1 Teenager_i + \beta_2 Spanish_i + \beta_3 Spanish_i * Teenager_i + \gamma X_i + \eta Day_i + \varepsilon_i \qquad (1)$$

where T_i represents the time devoted to the reference activity by individual "i", and $Teenager_i$ is the variable indicating whether the individual is a teenager (1) or a young adult (0). $Spanish_i$ denotes whether the respondent is Spanish (1) or not (0). The vector X_i includes standard individual and household characteristics (Connelly and Kimmel, 2009, Sevilla-Sanz, Gimenez-Nadal and Fernandez, 2010) such as age and its square, education, living in an urban (1) area or rural area (0), and whether the respondent lives in a single family (1) or not (0). Furthermore, given the possible effect of culture on the behavior of individuals (see Furtado, Marcen and Sevilla (2013) for a review), we have included an interaction term between the teenager status of respondents, and whether the respondent is Spanish or not. Finally, we include vectors of dummy variables to control for the day of the week the diary was filled in, and the region of residence of the respondent.

4. RESULTS

Table 2 shows the results of estimating Equation (1) on the different uses of time for males (Panel A) and females (Panel B). In the case of males, we find that teenagers devote 2.01 fewer hours per day to work, while they devote 1.98 more hours per day to study, in comparison with young adults, a result that is consistent with the fact that a higher proportion of teenagers are enrolled in school or college education. When we focus on the Spanish/non-Spanish status, we observe that Spanish young adults devote 1.45 fewer hours to work, and 1.20 more hours to study, in comparison to non-Spanish young adults. Spanish teenagers devote 1.49 more hours per day to work in comparison to non-Spanish young adults. These results indicate that the group of people devoting the least time to work, and more time to study, is the group of non-Spanish teenagers, followed by the group of Spanish young adults.

In the case of female respondents, results for work time are marginally significant, while we find statistically-significant differences in study and housework time. For study time, in comparison with non-Spanish young adults, non-Spanish teenagers,

Spanish young adults, and Spanish teenagers devote 1.82, 0.98 and 1.04 more hours per day to study time, respectively. In the case of housework, in comparison with non-Spanish young adults, Spanish young adults and Spanish teenagers devote 1.15 and 0.21 fewer hours per day, respectively.

For the rest of the activities, the only statistically-significant difference is found in leisure time, where Spanish teenagers devote 1.71 fewer hours per day to leisure in comparison with non-Spanish young adults.

5. CONCLUSION

In this paper, we analyze differences in the time devoted to different activities, between teenagers and young adults. We find that the group of males devoting the least time to work, and more time to study, is the group of non-Spanish teenagers, followed by the group of Spanish young adults. In the case of female respondents, in comparison with non-Spanish young adults, non-Spanish teenagers, Spanish young adults and Spanish teenagers devote more hours per day to study time. In the case of housework, in comparison with non-Spanish young adults, Spanish young adults and Spanish teenagers devote fewer hours per day to this activity.

We show evidence that Spanish individuals may have different behavior regarding their time allocation decisions in comparison with the non-Spanish. The extent to which these differences are due to cultural differences, differences in the size and complexity of social networks, opportunity costs, or in the opportunities of access to college education or the labor market, are worthy of analysis. While differences in cultural values and/or preferences may be difficult to treat in terms of policy interventions, if such differences are due to differences in access to the labor market and the college education system, public policies aimed at equalizing such differences may be useful. We leave the analysis of the channels through which these differences emerge for future research.

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Table 1. Average time devoted to the different activities, by gender and teenager/young adult status

	Males				Females			
	Teenagers	**Young adults**	**Difference**	**p-value**	**Teenagers**	**Young adults**	**Difference**	**p-value**
Work time	36.81	206.53	-169.73	0.00	22.16	148.38	-126.23	0.00
	(132.74)	(254.68)			(98.22)	(218.04)		
Study time	204.29	81.17	123.12	0.00	222.68	94.53	128.15	0.00
	(224.99)	(164.85)			(234.06)	(171.51)		
Housework time	37.26	47.49	10.23	0.00	76.68	134.27	-57.59	0.00
	(62.46)	(79.91)			(93.30)	(146.17)		
Sleep time	558.41	523.36	35.05	0.00	546.03	521.82	24.22	0.00
	(129.24)	(153.42)			(125.75)	(140.02)		
Food and drink time	101.88	104.70	-2.82	0.03	102.89	106.93	-4.04	0.00
	(50.16)	(57.14)			(48.72)	(53.54)		
Other personal care time	45.56	48.23	-2.67	0.00	57.88	58.45	-0.57	0.30
	(30.50)	(33.55)			(37.09)	(42.81)		
Leisure time	385.56	341.31	44.25	0.00	337.12	290.97	46.15	0.00
	(196.48)	(198.01)			(182.11)	(173.69)		
Social time and fun	117.57	127.05	-9.48	0.01	119.78	112.08	7.70	0.02
	(148.27)	(148.82)			(137.48)	(135.48)		
Sports and outdoor activities	63.05	45.43	17.62	0.00	43.37	35.36	8.00	0.00
	(92.826)	(77.99)			(75.62)	(63.83)		
Hobbies and games	75.39	45.57	29.82	0.00	41.19	22.49	18.70	0.00
	(102.43)	(92.14)			(73.38)	(54.38)		
Media time	122.53	114.64	7.89	0.00	126.48	111.13	15.36	0.00
	(105.22)	(111.51)			(102.06)	(100.25)		
Observations	2505	2775			2597	2986		

Notes: Standard deviations in parentheses. Sample is restricted to respondents aged between 13 and 26 years old from the 2002/03 and 2009/10 Spanish Time Use Survey. The time devoted to the different activities is measured in minutes per day. Teenagers are individuals aged between 13 and 19 years old, young adults are individuals aged between 20 and 26 years old.

Table 2 OLS Regressions on the time devoted to the different activities, by gender and teenager/young adult status

	(1) Work	(2) Study	(3) Housework	(4) Sleep	(5) Food and Drink	(6) Other Personal Care	(7) Leisure
				Panel A: Males			
Teenager	-2.01**	1.98***	-0.68*	-0.64	-0.40	-0.29*	1.81*
	(0.86)	(0.59)	(0.37)	(0.62)	(0.31)	(0.15)	(0.93)
Spanish	-1.45*	1.20***	-0.61*	-0.56	-0.01	-0.01	0.85
	(0.75)	(0.30)	(0.33)	(0.40)	(0.28)	(0.10)	(0.66)
Teenager*Spanish	1.49*	-0.75	0.52	0.48	0.36	0.08	-1.71**
	(0.77)	(0.52)	(0.37)	(0.51)	(0.31)	(0.13)	(0.83)
Age	-0.01	-0.61**	-0.23	0.25	-0.05	0.03	0.64*
	(0.28)	(0.29)	(0.15)	(0.23)	(0.16)	(0.05)	(0.33)
Age squared	0.01	0.01*	0.01	-0.01	0.00	0.00	-0.02**
	(0.01)	(0.01)	0.00	(0.01)	0.00	0.00	(0.01)
Middle school	-0.14	-0.16	0.27**	0.11	0.18	0.02	-0.20
	(0.27)	(0.26)	(0.13)	(0.23)	(0.12)	(0.05)	(0.33)
High school	-0.10	0.77**	0.22	-0.43	0.30**	-0.11*	-0.61
	(0.40)	(0.32)	(0.17)	(0.30)	(0.15)	(0.06)	(0.41)
Professional training	-0.41	-0.17	0.20	-0.12	0.43**	-0.04	0.19
	(0.42)	(0.33)	(0.18)	(0.32)	(0.22)	(0.09)	(0.43)
College	-0.26	1.78***	-0.02	-0.90*	0.51*	-0.12	-1.06*
	(0.73)	(0.52)	(0.22)	(0.50)	(0.29)	(0.07)	(0.54)
Urban	-0.18	0.13	-0.13	0.46***	-0.11	0.02	-0.16
	(0.23)	(0.21)	(0.10)	(0.17)	(0.10)	(0.04)	(0.25)
Single family	-0.08	-0.33	-0.05	0.41*	0.00	0.09	-0.21
	(0.30)	(0.29)	(0.11)	(0.23)	(0.12)	(0.06)	(0.37)
Constant	1.48	8.56***	3.41**	6.55***	2.21	0.96*	-0.14
	(2.55)	(3.01)	(1.51)	(2.22)	(1.52)	(0.51)	(3.34)
Observations	5,280	5,280	5,280	5,280	5,280	5,280	5,280
R-squared	0.18	0.21	0.07	0.06	0.12	0.09	0.07
				Panel B: Females			
Teenager	-0.91*	1.82**	-0.72	-0.32	-0.10	-0.08	0.31
	(0.54)	(0.73)	(0.52)	(0.58)	(0.23)	(0.15)	(0.87)
Spanish	-0.78*	0.98***	-1.15***	-0.06	0.22	-0.06	0.62
	(0.44)	(0.27)	(0.35)	(0.25)	(0.15)	(0.10)	(0.46)
Teenager*Spanish	0.90*	-1.76**	0.94**	(0.03)	0.19	0.15	(0.30)
	(0.50)	(0.69)	(0.46)	(0.52)	(0.20)	(0.14)	(0.76)
Age	-0.37	-0.35	0.22	-0.45**	0.00	0.16**	0.47
	(0.26)	(0.29)	(0.25)	(0.21)	(0.13)	(0.07)	(0.35)
Age squared	0.01**	0.00	0.00	0.01*	0.00	-0.00**	-0.01*
	(0.01)	(0.01)	(0.01)	(0.01)	0.00	0.00	(0.01)
Middle school	0.12	0.27	-0.24	-0.10	0.18	0.02	-0.28
	(0.23)	(0.29)	(0.24)	(0.23)	(0.13)	(0.07)	(0.36)
High school	0.15	1.03***	-0.87***	-0.10	0.41***	0.06	-0.95**
	(0.30)	(0.32)	(0.29)	(0.27)	(0.15)	(0.09)	(0.43)
Professional training	1.07***	0.22	-0.77**	-0.72**	0.20	0.18*	-0.35
	(0.38)	(0.32)	(0.36)	(0.33)	(0.18)	(0.10)	(0.50)
College	0.85*	0.64	-1.94***	-0.27	0.55***	0.27**	-0.30
	(0.45)	(0.39)	(0.35)	(0.34)	(0.17)	(0.11)	(0.53)
Urban	-0.05	0.39**	-0.48***	0.21	0.00	0.04	-0.19
	(0.17)	(0.19)	(0.16)	(0.15)	(0.09)	(0.05)	(0.23)
Single family	0.32	0.00	-0.26	-0.08	-0.14	0.05	0.24
	(0.24)	(0.27)	(0.19)	(0.22)	(0.13)	(0.07)	(0.32)
Constant	3.18	7.57**	-0.74	13.10***	1.21	-0.42	1.64
	(2.36)	(3.10)	(2.32)	(2.12)	(1.37)	(0.65)	(3.56)
Observations	5,583	5,583	5,583	5,583	5,583	5,583	5,583
R-squared	0.21	0.29	0.21	0.24	0.11	0.11	0.12

Notes: Standard errors in parentheses. Sample is restricted to respondents aged between 13 and 26 years old from the 2002/03 and 2009/10 Spanish Time Use Survey. Teenagers are individuals aged between 13 and 19 years old, young adults are individuals aged between 20 and 26 years old. Day (Ref.: Friday) and Region dummy variables are also included in the regressions. Time devoted to time use activities is measured in hours per day. *Significant at the 90 percent level **Significant at the 95 percent level *Significant at the 99 percent level.