

## **Agency, income inequality and subjective well-being. The case of Uruguay**

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### **Abstract**

The aim of this chapter is to provide an empirical illustration of the evolution of agency levels and distribution in Uruguay, during a time span characterized by rapid economic growth and a decline in income inequality and poverty. Using panel data, we build fuzzy sets based indicators in four agency domains: control, choice, change and community. Whereas overall agency and those aspects more connected to economic agency and command over means exhibit a progressive evolution, increases in internal motivation are higher in the middle of the distribution, and power in the community shows bigger improvements in the top strata. We also conclude that there is not a strong correlation among agency and subjective well-being, both in levels and variations. However, when this association is statistically significant, it exhibits a positive sign, and the same observation holds in the case of income. These findings are not consistent with the adaptive preferences hypothesis.

Keywords: agency, Uruguay, panel data, inequality, adaptive preferences

## I. Introduction<sup>1</sup>

Drawing on Sen's work on well-being and agency freedoms, David Crocker has highlighted the relevance of the latter to carry out interpersonal comparisons and to orient development evaluations and policies (Crocker, 2008; Crocker and Robeyns, 2010). In his writings, he has pointed out that agency freedom is the nuclear point in Sen's work and emphasizes the difference among agents and patients in normative thinking and development policies: while the former carry out the actions they decide to be involved in, the latter are those who suffer actions (see, for example, Crocker, 2008).

Agency is a complex and difficult concept to operationalize because it is multidimensional and entails comparing individual goals and their fulfillment (Gasper, 2007). Furthermore, some authors have argued that agency assessments can be subject to the criticism of adaptive preferences (Burchardt, 2009), as long as one's selected goals can be determined by one's possibilities.

Although some advances have been made, there are still scarce empirical agency assessments, both in developed and developing countries. In empirical grounds, little is known on whether agency levels vary through the life course, and how this evolution relates to the socio-economic structure in which individuals are embedded. Do variations in inequality in command over resources affect agency disparities? To which extent these potential changes entail increasing agency gaps or they reduce initial inequalities? Do certain socio-economic strata experience and benefit to a greater extent of agency changes through the life cycle? Which variables are associated to agency gains and losses? Does this evolution vary by agency domain? Does increased agency prevent the formation of adaptive preferences or does it lead to frustration? As long as the answers to these questions require information that follow the same individuals through time, there is scarce empirical evidence on these aspects, particularly for developing countries.

The recent evolution of living standards in Latin American countries provides a very interesting scenario to address the questions raised in the previous paragraph. Whereas high inequality levels still persist, most countries in the region have experienced rapid economic growth in the last fifteen years, led by a substantial increase in the demand and price of resource based commodities, coupled with a substantial fall in income

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<sup>1</sup> This research has been carried out at the interdisciplinary Ethics, Economics and Justice Research Group (Universidad de la Republica, Uruguay), for which David's writings have been an illuminating reference, particularly in our work on agency, adaptive preferences and social pathologies. Besides, he has been enthusiastically supporting the Latin American and the Caribbean Association for the Study of Human Capabilities (ALCADECA, by its Spanish acronym) since its creation in 2006 at Mexico City, generously devoting his precious time to participate at our meetings and encouraging the network to continue its work. More recently, David has also provided very relevant insights based on his work on deliberative democracy, to a research project attempting to identify the dimensions of development valued by the Uruguayan population that our group has been carrying out in the last four years.

poverty and inequality (Cruces et al., 2011; ECLAC, 2012). Although there are significant variations by country, most authors attribute this favorable evolution to increasing employment among low-skilled workers; rising wages and labor earnings; educational progress (particularly in Brazil); stronger labor market institutions, i.e. minimum wages and wage setting mechanisms; the expansion of non-contributory cash transfer schemes; and the upraise of center-left political regimes (López-Calva and Lustig, 2010; Cornia, 2010; Gasparini and Lustig, 2011).

A crucial point from a capability perspective is to understand whether these recent improvements in access to resources also implied expanded opportunities and were coupled with multidimensional well-being and agency gains. In the first case, there is abundant literature showing a varied situation by domain: apparently inequality also fell in those dimensions more connected with income and access to resources, whereas health and educational disparities did not decrease in the last decade (ECLAC, 2015). However, little is known in the case of agency as data sources allowing to measure it are scarce in the region.

The purpose of this chapter is to provide an empirical illustration for Uruguay of the evolution of agency levels and inequality, and its relation with subjective well-being, in a period that followed a severe economic crisis, and was characterized by rapid economic growth, coupled with a reduction in income inequality and a decline in monetary poverty (Amarante, Colafranceschi and Vigorito, 2012).<sup>2</sup> Many redistributive reforms, such as the inception of the income tax, a health reform, restoration of centralized wage-setting mechanisms and expansion of non-contributory cash transfers were carried out during this period in which, for the first time, a center-left coalition (*Frente Amplio*) governed the country.

In this context, we aim to understand whether these improvements in the sphere of command over economic resources translated into increases in agency levels and lowered its disparities. We also analyze the effects of agency variations on individual subjective well-being, in order to identify whether they led to increased adaptation to circumstances or to more frustration and discomfort, if gains were not coupled with expanded opportunities.

To carry out this empirical exercise, we consider agency as a matter of degree and not as a dichotomy among those who have it and those who lack of it. We estimate agency indicators drawing on fuzzy sets techniques, considering the four dimensions proposed by Alkire and Ibrahim (2007): control, choice, change and community. The data we use were gathered in *Estudio Longitudinal del Bienestar en Uruguay* (ELBU), a longitudinal study carried out by Instituto de Economía to perform multidimensional well-being and agency assessments. The sample is representative of children attending the first grade of primary public schools in 2004 and their families (85% of the cohort) in urban areas, which account for 87% of the Uruguayan population. The whole data set

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<sup>2</sup> Between 2004 and 2014, income inequality fell from 0.453 to 0.380 (Gini index), whereas income poverty was reduced from 40% to 10% (national poverty line). GDP annual growth rate was 5.9% and average household income grew 5.4% a year.

comprises four waves, and this chapter is based on the 2006 and 2011/12 ones and covers Montevideo and the metropolitan area (60% of the population).

This study might be of interest to provide evidence on the evolution of agency levels and inequality for a developing country, as there are few empirical studies providing quantitative assessments of agency, and even less have the information to follow-up individuals through time. As Burchardt (2009) has pointed out, carrying longitudinal assessments of agency is a key element to prevent findings from the problem of adaptive preferences, particularly when evaluations are based on self-reported information.

Our main results show that agency presents a very different evolution by domain. Total agency and the domains that refer to control and choice show a pro-poor redistribution. Meanwhile, the individual change dimension shows higher increases in the middle of the income distribution, whereas the change in the community shows a regressive pattern, with higher gains in the top. In regard to the links among agency and subjective well-being, we find that there is not a strong correlation among the two, and hence, the latter is not a good proxy for the former. However, in all the cases in which the association is statistically significant, it exhibits a positive sign, contradicting the adaptive preferences hypothesis.

The chapter is organized as follows. Section II presents a general framework and reviews agency operationalizations carried out in the empirical literature, with a particular focus on results regarding its evolution, disparities and relation to socio-economic inequality and subjective well-being. Section III contains methodological details on the information we used and the main methods. Section IV gathers our main results and section V concludes.

## **II. Agency and subjective well-being**

In his often quoted Dewey lectures, Sen presents an initial definition of agency freedom as: "...what the person is free to do and achieve in pursuit of whatever goals or values she regards as important. A person's agency aspect cannot be understood without taking not of his or her aims, objectives, allegiances, obligations, and –in a broad sense- the person's conception of the good." (Sen, 1985; pp. 203).

Well-being freedom is more restrictive than agency freedom and, Sen (1985; 1999) argues, the two need to be considered separately. Whereas the former refers to capabilities and functionings and it is focused on specific objectives, agency freedom cannot be examined in relation to a pre-established object. Hence, interpersonal rankings might differ depending on whether they are carried out in terms of well-being or agency.<sup>3</sup>

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<sup>3</sup> In the two cases, achievements are differentiated from freedoms.

According to Sen, agency is valuable: i) intrinsically; ii) instrumentally; and iii) constructively, as the agent freely scrutinizes, shapes, forms values and interchanges and changes perspectives (Sen, 1999). Through democratic participation, agency can be exerted individually or by groups.

In opposition to Sen, Nussbaum (2000), argues that capabilities embody both well-being and agency aspects and points out that considering well-being separated from freedoms can be attributed to utilitarianism. In the presentation of her very well-known list of universal combined capabilities, Nussbaum points out that practical reason and affiliation organize and are necessary to achieve the other capabilities, making its search really human. These two dimensions have a clear agency content as long as they refer to goals to pursue and the capacity to achieve them. Crocker (2008) has pointed out the limitations of disregarding the capability-agency distinction.

In his first formulations, Sen differentiated agency success (which can be due to others) from instrumental agency (due to own effort or participating in a joint initiative), whereas later in his writings, he acknowledged that for agency freedom to hold, the person needs to be involved in the process (Sen, 1999). Agency freedom can reinforce or contradict well-being freedom. As it has been clearly stated by Crocker (2008), one's well-being does not exhaust one's motivations or objectives and agency freedom provides normative space for the sacrifices individuals may do in order to achieve goals that they value. "We exercise agency or control not when our goals are merely realized, but when, in addition, we intentionally realize or contribute directly or indirectly to the realization of our goals" (Crocker, pp. 156). These goals might be self-regarding or other-regarding. Crocker (2008) specifies five requirements for a person to be an agent with respect to a certain action: i) self-determination; ii) reason, deliberation and orientation to base this decision; iv) action: to have an active role; v) impact on the world to contribute to bring about change (pp.157).

Rather than making these conditions necessary and sufficient for agency to develop, the more one is fulfilled, the more the person is an agent. As Reich (2002, quoted in Crocker and Robeyns, 2010) states: "agency is a matter of degree rather than an on/off condition".

By the same token, Cortina (2009) argues that agency freedom is a key element in Sen's work and goes further raising the following questions, that are unanswered in the capability framework: In which dimensions is it necessary to empower people and why? What about real opportunities and processes?

Another relevant characteristic of agency freedom is that rather than being static throughout the life course, it varies in the life time and it is sensitive to political and social transformations (Dreze and Sen, 1995). As well-being, individual agency is generated and achieved in a certain socio-economic context, that might foster or deter its development. Alsop et al (2006) remarks that people's agency can be constrained by the opportunity, social and political structures in which people live.

In the last two decades, mainstream economics has devoted increased interest in subjective well-being as a new way of carrying out cardinal utility comparisons, and as an alternative paradigm to income based well-being assessments (Clark, Fritjers and

Shields, 2008). Although the adaptive preferences critique (Elster, 1983; Sen, 1999; Nussbaum, 2000) prevents from basing interpersonal comparisons in subjective information, the links among subjective well-being and the capability approach need to be further explored and there are some recent efforts in this direction (Comim, 2008).

Gasper (2007) argues that subjective well-being might be related to achievement but not necessarily to agency freedom:

“freedom not matched by achievement would often be a source of frustration, subjective ill-being, so that agency freedom and subjective well-being can easily move in opposite directions” (pp.355).

If prospects of living a better life are raised but not materialized due to opportunities constraints, frustration might arise (Bart et al, 2013; Graham and Behrman, 2010). Bart et al. (2013) coin the expression “frustrated freedom” to refer to those cases in which agency increases are coupled with reductions in subjective well-being. In line with Crocker (2008) view, reduced subjective life satisfaction might reflect an explicit purpose of agency freedom. The opposite phenomenon is adaptive preferences (Elster, 1983; Sen, 1999; Nussbaum, 2000), in which aspirations are adjusted to achievements, and subjective well-being might be higher for those persons experiencing higher agency deprivation. However, a third possibility is that agency changes might have no effects on subjective well-being. In what follows we will analyze the empirical relation among these two concepts.

## II.1 Operationalizing agency

There is scarce quantitative research assessing agency indicators, although measurement has received considerable attention in the related empowerment literature. As the preceding section illustrates, agency is a complex and difficult to operationalize concept and very demanding in terms of data requirements, particularly in the case of quantitative assessments.

As in the case of well-being indicators, a first decision refers to focus on measuring agency freedom or achievement. The difficulties in measuring freedom to achieve have been highlighted by many authors (see for example Gasper, 2007; Pogge, 2002; Burchardt, 2009), as they entail interpersonal comparisons of goals and their fulfillment.

Some decisions involve selecting intrinsic or instrumental indicators, context specific or universal ones, and unit of analysis (Narayan, 2005). Alkire (2005), Alkire (2008) and Alkire and Ibrahim (2007) address the complexities of building such indicators and present some criteria and proposals, mainly focused on carrying out international comparisons. Their departing point is that Sen’s account of agency entails (Alkire, 2008): i) multiple aims in relation to goals; ii) effective power and control; iii) other-regarding concerns; iv) relatedness to goals the person values; and v) responsibility for the state of affairs. The first four are clear guidelines to build agency indicators.

Most proposals focus on direct control and less clearly reflect effective power. One caveat of the control measures is that is not known whether choice brings about the desired results. Effective power has been measured using efficacy measures (Bandura, 1989) aiming at capturing to what extent people select the resources they want to

mobilize. Self-determination theory states that behavior goes from a continuum of more to less autonomy, with intrinsic motivation in one extreme and external control in the other (Ryan and Deci, 2000). In the first case, the individual acts according to her own interest whereas in the second one, the motives are punishment or external reward. This framework provides insights on motivation that are very useful to build agency indicators.

Based on Rowlands (1997) classification, Alkire and Ibrahim (2007) propose agency and empowerment indicators considering four domains: *control* over personal decisions, *choice* referred to autonomy in specific domains and household decision making and *changing* aspects in one's life at the individual level and at the community level. On this basis, it is possible to create a set of indicators covering the varied aspects in which agency (and empowerment, understood as agency variation) can be observed. The first dimension aims at assessing power in everyday life decisions. The second deepens into decision making in the household sphere, assessing the existence and use of choice at this level. The last two are concerned with the ability to change: while the third one focuses on the individual sphere, the fourth investigates the capacity to promote change in the community in relation with other community members. The authors review several indicators available in international surveys and previous work to reflect these domains, and make a proposal on this basis. Drawing on this proposal, later in this chapter we present an operationalization of the four dimensions for the Uruguayan case.

Ruesga and Pick (2014) also operationalize agency specifically oriented to interventions and policy design. They label this construct as agentic empowerment. The dimensions used by these authors are in close relation to Nussbaum's practical reasoning capability. The main variables assessed are self-efficacy, self-determination, control over my behavior, independent thinking, identification of needs of change, fear to succeed, recognition of own learning, context perception and control over the environment.

One relevant issue in building agency indicators refers to the use of subjective information and its potential biases. Advancing well-being freedom and other-regarding concerns can turn out in the fact that increased agency generates lowered well-being. Alkire and Ibrahim (2007) present an example for Kerala, where the more illustrated women were the ones that present lower autonomy levels. In a similar vein, Burchardt (2009) argues in favor of basing agency assessments on panel data to understand its dynamics, as cross-sectional appreciations of agency and well-being are problematic due to adaptation. As in the case of utility, accomplishment of aspirations can be easier if goals are lower, and hence, subjective information is a problematic indicator to carry out interpersonal comparisons of advantage.

“Only if the capability set from which agency goals are formed and the capability set within which they are pursued are evaluated can we begin to properly assess the degree of substantive freedom he or she enjoys. Of course, this is even more demanding informationally than assessments of capability that treat goals and preferences as exogenous; but, with suitable longitudinal data, a typology of capability as autonomy can be produced” (Burchardt 2009, pp. 16).

Bart et al (2013) label “agency belief” to psychological and personal characteristics, differentiating it from observed agency. However, agency beliefs are not necessary accompanied by agency achievements due to opportunity and structural constraints. In their empirical exercise for rural Mozambique, these authors operationalize agency belief using a survey question that captures whether individuals believe that they can make decisions that could impact their lives (destiny/fatality question, see section III.3), and a question drawing on self-determination theory that reflects subjective perception on the degree to which the person considers she can make decisions by herself.

## II.2 Previous findings<sup>4</sup>

In their research on the effects of agency belief (operationalized as destiny and gender power in the household) and wealth on subjective well-being in Mozambique, Bart et al (2013), observe that there is a positive correlation among the two, and that at a given level of wealth, people with higher agency tend to report higher subjective well-being. At the same time, at a given agency level, those interviewees with lower command over economic resources (measured on the basis of a durable goods index) report less subjective well-being than those in higher places. These findings are consistent with the frustrated freedom hypothesis raised by the authors (and referred in section II.1).

Based on a mixed methods approach, Klein (2014) carried out a study at the urban fringe of Bamako (Mali) focusing on psychological agency. She found out that psychological dimensions of purposeful agency were a legitimate enabler of action. Internal motivation and self-belief were not mechanical results from structural constraints and external environment, but they rather result from the person’s understanding. In her fieldwork, informants highlighted the role of encouragement by peers, positive envy and watching others succeed (understood as solidarity in seeing people in similar situations succeed), rather than socio-economic conditions.

In a cross-country empirical study based on surveys to students at four universities, Chirkov et al (2003) find out that autonomy is not related to individualism and can coexist with varied cultural practices. They also conclude that the more autonomy is internalized, the higher well-being the person experiences. For the four countries they considered (Korea, Russia, Turkey and the United States), they found a positive association among autonomy (measured as degree of internalization) and subjective well-being.

However, in opposition to the evidence mentioned in the previous paragraphs, in her research based on the 1970 British Cohort, Burchardt (2009) finds that, among young people, aspirations and their fulfillment are highly correlated to intergenerational advantage. Hence, agency goals are subject to adaptive preferences and, as in the case of utility and subjective well-being, interpersonal comparisons are problematic.

There are two previous cross-sectional studies addressing agency indicators in the case of Uruguay based in the 2006 wave of the data base used in this study. Burdín et al

<sup>4</sup> We restrict our literature review to those papers that explicitly address agency.



(2008) analyze four dimensions: life, affiliation, practical reason and political and material control over the environment. They find scarce overlapping among achievements across agency. Agency levels are higher in the case of men, more educated individuals and non-poor households. Based on the same domains, Burstin et al (2010) find very similar results, but point out that average differences in affiliation are less pronounced than in practical reason and control over the environment. By carrying out a multivariate analysis of the evolution of subjective well-being in several domains, they discard the adaptive preferences hypothesis in general. However, they find weak evidence that those population groups with lower agency levels are more prone to adaptation.

The previous review shows that there is mixed evidence in regard to the links among agency levels, adaptation and subjective well-being. However, although the contexts and methods are very different and might explain some of the differences, it must be noticed that Burchardt (2009) is the only paper based on longitudinal data.

### III. Methodology

In this section we provide an overview of the methods used to build agency indicators (III.1). After that, we describe the main features of the database used in this study (III.2) and we present the indicators and variables used in the analysis for each domain (III.3).

#### III.1 Methods

In order to build agency indicators that reflect the idea that agency is a continuum and not a binary variable, we use fuzzy sets logics, originally developed by Zadeh (1965). This approach overcomes the binary logic 0, 1 and moves it to the interval of the infinite values between  $[0,1]$ . This methodology has been extensively used to carry out poverty and vulnerability analysis from the capability approach perspective (Betti, Cheli, Lemmi and Verma, 2006). The set-up of threshold levels and the dichotomization of the population in two excluding groups hides the fact that deprivation is a matter of the degree, not a clear condition free of ambiguity. The fuzzy set theory replaces the traditional approach to the demarcation of poverty, or another characteristic, through of a binary function that assigns people to two non-overlapping sets (poor and non-poor) by a generalized function, which varies between zero and one. As it is the case of poverty, agency measurement faces the problem of vertical vagueness; that is, the arbitrariness involved in the specification of a threshold, for one or many dimensions.

The generalized function is usually referred as the membership function. Larger values indicate higher degrees of membership. In more formal terms, we can denote as  $X$  the population,  $A$  is the fuzzy set, and  $\mu_A(x)$  assumes values between 0 and 1, where 1 refers to

those individuals having the A characteristic (agency) and 0 to those who not having it (agency poverty); intermediate values are assigned according to the probability of belonging to set A. Binary variables are a particular case, where no intermediate situations can be distinguished.

Cheli and Lemmi (1995) define a particular group of membership functions that directly arise from the empirical distribution of the variables under study and it is defined as:

$$(1)$$

where  $F(x)$  is the empirical distribution function of variable  $x$ , *increasingly sorted in k*.

Aggregation in dimension  $j$  can be defined as:

$$(2)$$

where  $i$  are the basic indicators used in each particular dimension and  $w_i$  is the weight of each indicator, defined:

$$(3)$$

And for each dimension  $j$

$$(4)$$

To compute the overall agency index, we give equal weight to each dimension (0.25).

### III.2 Data

The analysis presented in this chapter is based on two waves of the longitudinal study *Estudio Longitudinal del Bienestar en Uruguay*, that started in 2004 and has been carried out by *Instituto de Economía* to investigate multidimensional well-being.<sup>5</sup>

The study follows a representative sample of households with children attending the first year of primary school at public institutions in Montevideo and urban areas in 2004. Eighty-five percent of the children living in these areas attend public schools, so our analysis is representative of this population and probably is underestimating the richer income strata. The sampling frame of this survey is the 2002 Height Census undertaken in all public schools in Uruguay. To date, three waves (2004, 2006 and 2011/12) have been completed and the fieldwork of the fourth one is carried out at present.

This chapter is based on the 2006 and 2011/12 waves, as questions on agency were included since the 2006 wave, which covered Montevideo and the metropolitan area. In that year, 1,185 households were included and 758 were found in 2011/12. Panel attrition is 30.08% and there are no substantial biases in the loss in terms of socio-economic characteristics, although the probability of finding elder household heads and

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<sup>5</sup> Information on this data-set, survey questionnaires and micro-data can be found at <http://www.fcea.edu.uy/estudio-del-bienestar-multidimensional-en-uruguay.html>

households outside Montevideo was slightly higher. We run a probit model on the loss to test whether there were biases in the variables used in the agency operationalizations, but we rejected this hypothesis.<sup>6</sup>

Table 1 depicts the main sample characteristics. It can be noticed that most respondents were women and there is a gradient in terms of age, education and income.

| Table 1. Sample characteristics                     |      |        |       |
|-----------------------------------------------------|------|--------|-------|
|                                                     | Obs. | Mean   | SD    |
| Age                                                 | 757  | 41.411 | 7.919 |
| Sex (% Male respondents)                            | 758  | 0.047  | 0.213 |
| Region (% outside Montevideo)                       | 758  | 0.190  | 0.393 |
| Marital status (%)                                  |      |        |       |
| Divorced (2011/12)                                  | 758  | 0.189  | 0.391 |
| Divorced (2006)                                     | 758  | 0.150  | 0.358 |
| Widower (2011/12)                                   | 758  | 0.037  | 0.189 |
| Widower (2006)                                      | 758  | 0.028  | 0.164 |
| Average years of education (adults aged 22 or more) | 758  | 10.413 | 3.474 |
| Persons per room                                    |      |        |       |
| 2011/12                                             | 755  | 1.697  | 1.091 |
| 2006                                                | 758  | 1.858  | 1.361 |
| Employment rate among respondents                   |      |        |       |
| 2011/12                                             | 758  | 0.740  | 0.439 |
| 2006                                                | 758  | 0.594  | 0.491 |
| Log. per capita household income                    |      |        |       |
| 2011/12                                             | 749  | 8.384  | 0.853 |
| 2006                                                | 756  | 7.870  | 0.987 |

The survey questionnaire collected information on housing characteristics, income, labor force participation and education of all household members, health data for the reference child at school (including anthropometric measures) and a wide range of questions on agency, well-being, attitudes and opinions from the adult in charge of the child.

### III.3 Agency dimensions and operationalization

As it has been widely acknowledged there is no consensus on the list of capabilities that must be considered to carry out interpersonal comparisons of well-being, leading to “horizontal vagueness” (Qizilbash, 2003). At the empirical level, this problem can be expressed as a trade-off between redundancies because of overlapping variables and the risk of not including relevant ones. The same considerations hold in the case of agency. As it was mentioned above, following Alkire and Ibrahim (2007), we consider control,

<sup>6</sup> We donot include these estimations in this chapter due to space constraints, but they are available on request to the authors.

choice, change and community as the four agency domains. Table 2 presents the questions, variables and indicators chosen in each case.

Control and choice identify power within the household and in this case the indicators chosen refer to economic agency and own command over means, understood as a pre conditions to exert agency. In the case of control, autonomous income reflects the income generating capacity of the individual and it includes personal labor, pension and capital income. To approximate permanent income and the surrounding household conditions, we also include a composite index reflecting access to a set of durable goods. The durable goods index used multiple correspondences analysis to compute the weight of each item. (Table A.1). Choice is a proxy of bargaining power within the household and is operationalized as the proportion of the respondent's autonomous income over total household income.

Of course, this indicator is insufficient to describe agency. As Gasper (2007) put it: Income is an alternative measure of agency freedom, but extremely imperfect since so much of life passes outside the reach of money or can be undetermined by it (pp. 355). However, generation and command over resources in a market society are necessary conditions to exert agency (Haveman and Bershader, 2001; Bojer, 2000). These dimensions are very close to Nussbaum's material control over the environment capability.

Change refers to self-perceived degree of command over one's life. Here we include indicators coming from two separate questions which have extensively in previous literature. The first one reflects who does the respondent think will contribute to a more extent to a change in her life and it is usually referred to as locus of control. The second one refers to the role of destiny versus own command over one's life. According to this perspective, individuals develop external or internal locus of control, in regard to one's actions and its consequences (Rotter, 1966). People with internal locus of control believe they control their own fate and take personal responsibilities for the result of their actions. Meanwhile, those with external locus of control believe that their lives are result of destiny. A higher degree of internal locus of control can be linked to increased agency and self-determination.

Finally, community refers to aspects reflecting one's place in relation to others and self-perceived capacity of changing things in one's context and environment. We include here questions related to four different domains: i) family; ii) neighbors and friends; iii) reference group and colleagues; and iv) community in general. The rationale for including the four domains is that feelings of acceptance and power can vary significantly in each of them.

| Table 2. Dimensions, variables and indicators |                                                                                                                                                                                                                            |                                                                                                        |
|-----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| Dimension                                     | Variable/question                                                                                                                                                                                                          | Indicator                                                                                              |
| Control                                       | Autonomous income                                                                                                                                                                                                          | Respondent's labor+pension+capital income                                                              |
|                                               | Durable goods composite index                                                                                                                                                                                              | Goods included and weights in Table A.1                                                                |
| Choice (Economic)                             | % own autonomous income in household income                                                                                                                                                                                | Share (%)                                                                                              |
| Change                                        | Who do you think will contribute to a change in your life?                                                                                                                                                                 | You; Your family; Another person/group of persons; Local/National government; God/Religion; Other/N.A. |
|                                               | Some people believe they can decide their own destiny, while others think they do not have control over their destiny. Please, to what extent do you believe you can decide your own destiny?                              | Destiny; Mainly destiny, Half destiny, half ourselves; Mainly ourselves; We do our destiny             |
| Community                                     | Have you recently felt that you play a relevant role in family events or in your community?                                                                                                                                | No 0<br>Yes 1                                                                                          |
|                                               | Were you prevented from taking part in a social event due to not having the appropriate clothes?                                                                                                                           | No 0<br>Yes 1                                                                                          |
|                                               | Do you feel that your opinions are considered among your family members, neighbors or friends?                                                                                                                             | No 0<br>Yes 1                                                                                          |
|                                               | Please imagine a nine steps ladder. In the lower level, there are located those people with no power, whereas in the highest level, there are those people who have a lot of power. Where do you consider you are located? | Scale ranging from 1 to 9                                                                              |

To build fuzzy sets based agency indicators, the last step is to determine the lower and upper thresholds by dimension (Table 3), indicating no agency or full agency. For the variables connected to income and resources, we built relative thresholds. For the Destiny and Locus of Control questions, the bounds respectively reflect complete external or internal control. The remaining are binary variables.

|                         | Lower bound (=0)                 | Upper bound (=1)    |
|-------------------------|----------------------------------|---------------------|
| Durable goods index     | 25th percentile                  | 75th percentile     |
| Autonomous income       | 50% of the median                | 150% of the median  |
| Autonomous income share | 50% of the median                | 150% of the median  |
| Destiny                 | Everything is determined by fate | We make our destiny |
| Locus                   | God                              | You                 |
| Role                    | 0                                | 1                   |
| Social events           | 0                                | 1                   |
| Opinions                | 0                                | 1                   |
| Power ladder            | 1                                | 9                   |

#### IV. Main results

In the first part of this section, we describe the evolution of agency and subjective well-being in order to identify mobility patterns and inequality trends (IV.1). After that, we carry out a brief analysis on the determinants of agency levels and variations, focusing on demographic and socio-economic variables (IV.2). To conclude, we investigate the association among past and current agency levels and the variations in subjective well-being in several domains (IV.3), in order to test the adaptive preferences hypothesis versus the frustrated freedoms one.

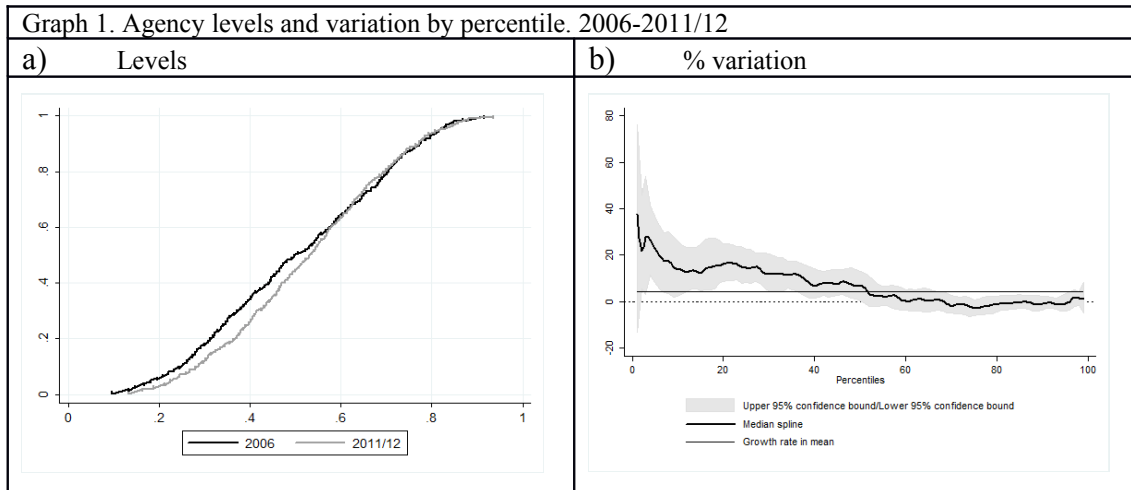
##### IV.1 Agency and subjective well-being: levels and trends

###### *Agency*

The four dimensions chosen reflect different aspects of agency, as the low correlation coefficients among the different domains attest, except for the cases of change and control (Table A.2). However, between the two waves, this correlation falls from around 0.7 to 0.5.

We first analyze the levels and evolution of overall agency as a whole and throughout the agency distribution (Graph 1). Panel a) depicts cumulative agency levels by centile of the composite agency index in each period. It can be noticed that the 2011/12 distribution dominates the 2006 one until the median, indicating a more pronounced improvement in agency for the lower fractiles. This progressive evolution can be

corroborated in Panel b), where it is clear that the lower agency strata have experienced higher increases. Whereas average variation is around 4.25% (black horizontal line) the variation for the first quintile ranges from 40 to 15%, and falls to 0 for those strata above the median. Hence, the lower strata accrued higher agency levels in the period under study.



Note: in panel a) the horizontal axis represents agency percentiles and the vertical one is the cumulative agency level up to a certain percentile; in panel b) the horizontal axis corresponds to agency percentiles and the vertical one depicts the average variation in agency for each percentile between 2006 and 2011/12 as a proportion of the 2006 average agency level in the same percentile.

Source: own elaboration based on ELBU data.

In order to assess whether this increase in agency followed the equalizing pattern observed in Uruguay in terms of income inequality, Graph 2 depicts average agency levels by 2006 per capita household income centile and domain, for the two time periods considered in this study.

Total agency exhibits an upwards sloping gradient, ranging from 0.4 to 0.6 with higher agency levels for the richest sectors. Unsurprisingly, this means that an individual's position in the income distribution is coupled with higher agency freedom. In terms of identifying the income strata that experienced more gains, the overall composite agency indicator (OCAI) shows a clear pattern with higher increases for the poorer strata (Graph 2, panel a.). Comparing 2006 to 2011/12, it can be noticed that the lower income strata improved their situation, whereas the higher ones remained constant or slightly declined. Consistent with this evolution, panel f. shows a monotonic progressive pattern with higher increases for the lower percentiles.

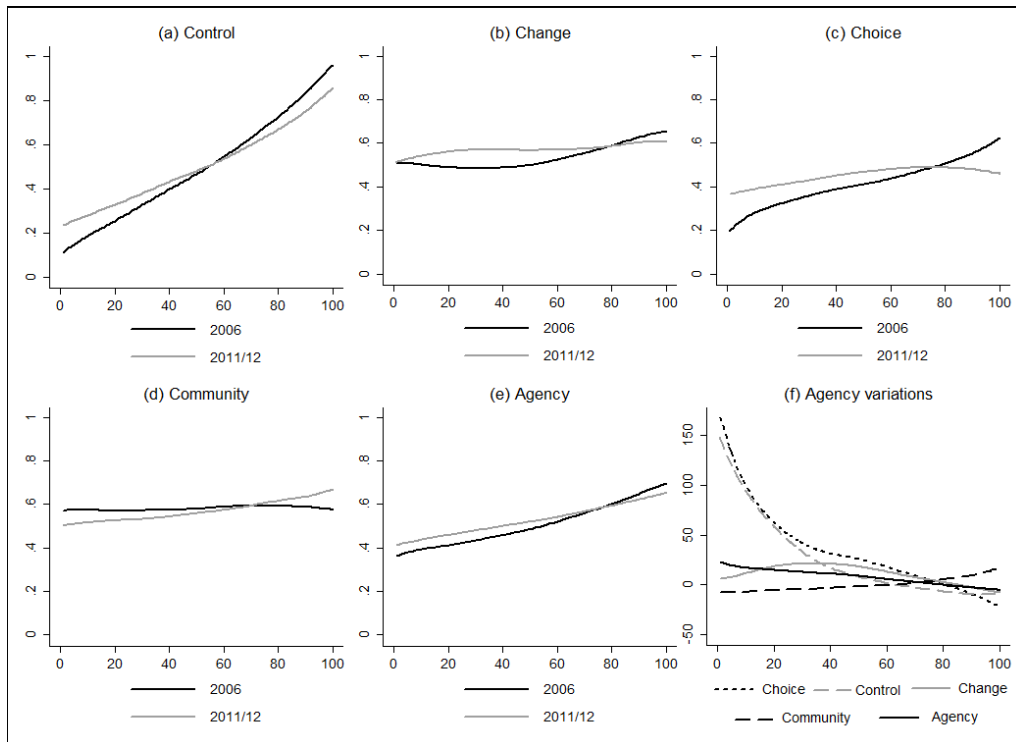
However, by checking the remaining panels, it can be easily observed that both levels and evolutions show very different patterns by domain. Control is the most unequal dimension, with average values ranging from around 0.15 in the bottom percentiles to almost 0.90 in the top ones. Choice presents similar characteristics, although inequality is considerably lower. Meanwhile, change and community show a comparatively

reduced gradient (0.4 to 0.6), indicating lower inequality. At the same time, choice and control were the domains that experienced bigger increase rates.

The four domains present different trends in regard to inequality in agency gains: whereas control and choice show a progressive pattern, change exhibits an intermediate situation, with more gains in the middle of the distribution. Community shows a regressive trend, with higher increases for the richer sectors.

As the previous literature shows for the case of multidimensional well-being in Latin American and in Uruguay, this evolution suggests that those agency components more closely related to income and the private life sphere became less unequal in the period under analysis. However, the change and community domains and, hence, those spheres closely related to public life, became more unequal, particularly the latter.

Graph 2. Average agency by domain and 2006 per capita household income percentile, and inequality indexes. 2006 and 2011/12



Note: in all panels the horizontal axis represents 2006 per capita household income percentiles. In panels a) to e) the vertical axis depicts agency levels in percentiles, whereas in panel e) it shows the percentilic variation in average agency levels respect to the 2006 average in the percentile.

Source: own elaboration based on ELBU data.

The previous analysis considers average evolutions by fractile and individual upwards and downwards movements can compensate. Exploding the panel nature of the data-set used in this paper, allows assessing to what extent upwards and downwards movements coexisted in each dimension. In order to do that, for each domain we first comment



briefly its general evolution based on transition matrixes and then we single out the evolution of each component.

Table 4 shows individual transitions by dimension. In each case we built terciles in the two periods and computed the corresponding transition matrixes. First of all, it can be noticed that mobility levels vary significantly across dimensions. In the OCAI, approximately 50% of the interviewees remained in the same position.

|           | Lower | Equal | Higher | Total |
|-----------|-------|-------|--------|-------|
| Control   | 20.3  | 59.1  | 20.6   | 100.0 |
| Choice    | 23.0  | 48.9  | 28.1   | 100.0 |
| Community | 32.4  | 37.4  | 30.2   | 100.0 |
| i         | 31.7  | 38.0  | 30.4   | 100.0 |
| Total     | 24.2  | 50.7  | 25.1   | 100.0 |

Source: own elaboration based on ELBU data.

Control emerges as the domain that presents a high degree of inertia: 60% of the interviewees remained in the same position in the two periods. As this dimension is composed by autonomous income and access to durable goods, this aspect might be reflecting the rigidity of the social structure, as well as potential long run deprivation and limits in income generating capacity. Although economic growth was significant in the period and employment experienced a fast increase, this evolution indicates that relative positions were highly stagnant. When we single out each component, it turns that 61%, in the case of income, and 57%, in the case of durable goods, of the respondents remained in the same strata, whereas upwards and downwards movements were at around 20%.

Choice also presents a high level of inertia, with 49% of the interviewees remaining in the same situation. It must be noticed that own participation in household income can vary due to changes either in ones' labor status and earnings or due to changes in the labor and earnings of the remaining adults in the household. Also, changes in family composition can turn out in changes in the number of income earners, and hence, in variations of autonomous income shares of household members. Overall, 23% of the interviewees entered the labor force, 51% remained employed, 8% retired and the remaining were unemployed. In the first wave, 62.2% of the interviewees were income earners and this proportion raised to 75.3% in the second wave, due to improved economic conditions in the country.

Change presents a higher degree of mobility (only 38% remained in the same position), than the previous domains. The two variables included here, locus of control and fatality show a movement towards increased self-reliance and then, upwards movements outweighed downwards ones. The destiny question, reflects a substantial proportion of

the sample moving from fatalistic positions to a higher belief in their capability of changing their lives (Table 5).

| Table 5. Fatality Levels and transition, 2006-2011/12 |         |                |                              |                  |                   |       |
|-------------------------------------------------------|---------|----------------|------------------------------|------------------|-------------------|-------|
| 2011/12                                               | 2006    |                |                              |                  |                   | Total |
|                                                       | Destiny | Mainly destiny | Half destiny, half ourselves | Mainly ourselves | We do our destiny |       |
| Destiny                                               | 2.6     | 1.5            | 3.1                          | 1.1              | 2.7               | 10.9  |
| Mainly destiny                                        | 0.4     | 0.4            | 0.7                          | 0.3              | 0.8               | 2.6   |
| Half destiny, half ourselves                          | 2.3     | 1.3            | 9.0                          | 3.9              | 5.2               | 21.8  |
| Mainly ourselves                                      | 2.6     | 1.5            | 9.0                          | 5.5              | 7.0               | 25.5  |
| We do our destiny                                     | 4.3     | 3.8            | 8.9                          | 7.5              | 14.8              | 39.2  |
| Total                                                 | 12.1    | 8.5            | 30.6                         | 18.3             | 30.5              | 100.0 |

Source: own elaboration based on ELBU data.

In the case of locus of control, there is also a movement towards internal positions (Table 6). However, the proportion of individuals reporting that God/religion are the most relevant factors producing a change in their lives increased.

| Table 6. Locus of control. Levels and transition, 2006-2011/12 |      |        |                      |                           |              |           |       |
|----------------------------------------------------------------|------|--------|----------------------|---------------------------|--------------|-----------|-------|
| 2011/12                                                        | 2006 |        |                      |                           |              |           | Total |
|                                                                | You  | Family | Another person/group | Local/National government | God/Religion | Other/N.A |       |
| You                                                            | 37.2 | 11.6   | 1.3                  | 6.2                       | 1.5          | 2.0       | 59.8  |
| Your family                                                    | 7.0  | 4.1    | 0.1                  | 1.1                       | 0.4          | 2.2       | 14.9  |
| Another person/group of persons                                | 0.5  | 0.7    | 0.0                  | 0.1                       | 0.0          | 0.1       | 1.5   |
| Local/National government                                      | 6.1  | 2.0    | 0.1                  | 1.7                       | 0.7          | 0.9       | 11.5  |
| /Religion                                                      | 4.6  | 1.7    | 0.9                  | 1.5                       | 1.1          | 0.8       | 10.6  |
| Other/N.A.                                                     | 0.8  | 0.4    | 0.0                  | 0.4                       | 0.0          | 0.3       | 1.8   |
| Total                                                          | 56.2 | 20.4   | 2.5                  | 10.9                      | 3.6          | 6.3       | 100.0 |

Source: own elaboration based on ELBU data.

The community domain reflects a very similar situation to change, with only 38% of the interviewees remaining in the same position. Notice that the three components of this dimension show a decrease in the answers reflecting positive agency levels (Tables 7.a and 7.b). The four questions are consistently uncovering a loss of empowerment in the different spheres they refer to. This result is in contrast with what was observed in the other three dimensions and its causes need to be further studied.

| Table 7.a Transitions in variables associated to the community domain. 2006-2011/12 |      |      |       |
|-------------------------------------------------------------------------------------|------|------|-------|
| 2011/12                                                                             | 2006 |      |       |
|                                                                                     | No   | Yes  | Total |
| <i>Clothing</i>                                                                     |      |      |       |
| No                                                                                  | 78.6 | 7.9  | 78.6  |
| Yes                                                                                 | 14.2 | 7.2  | 21.4  |
| Total                                                                               | 84.9 | 15.1 | 100.0 |
| <i>Role</i>                                                                         |      |      |       |
| No                                                                                  | 10.3 | 22.5 | 32.8  |
| Yes                                                                                 | 17.4 | 49.8 | 67.2  |
| Total                                                                               | 27.8 | 72.2 | 100.0 |
| <i>Opinion</i>                                                                      |      |      |       |
| No                                                                                  | 1.8  | 8.7  | 10.5  |
| Yes                                                                                 | 17.4 | 49.8 | 67.2  |
| Total                                                                               | 7.9  | 92.1 | 100.0 |

Source: own elaboration based on ELBU data.

| Table 7.b Transitions in variables associated to the community domain. Power in the community scale. 2006-2011/12 |           |                    |            |       |
|-------------------------------------------------------------------------------------------------------------------|-----------|--------------------|------------|-------|
| 2011/12                                                                                                           | 2006      |                    |            | Total |
|                                                                                                                   | Low (1-3) | Intermediate (4-6) | High (7-9) |       |
| Low (1-3)                                                                                                         | 7.5       | 14.5               | 5.3        | 27.3  |
| Intermediate (4-6)                                                                                                | 12.6      | 28.7               | 10.7       | 51.9  |
| High (7-9)                                                                                                        | 3.0       | 10.5               | 7.2        | 20.8  |
| Total                                                                                                             | 23.1      | 53.7               | 23.2       | 100.0 |

Source: own elaboration based on ELBU data.

However, these patterns in agency levels and evolution might result not only from socio-economic differences, but also from divergences in valuations on their relevance and subjective well-being associated to each domain, by socio-economic strata. In the remainder of this section, we present some evidence on these aspects.

#### *Subjective well-being and valuations by domain*

In the 2006 ELBU wave, a question was included in order to capture the well-being dimensions people value and have reason to value. Respondents were asked to rate each domain included in the survey questionnaire in a scale ranging from 1 to 9. After that, they were able to add new items to the list. Average valuations produce the following ranking: health (8.84), education (8.82), income (8.56), home decision-making (8.26), leisure (7.54) and social participation (6.64). As Burstin et al. (2010) notice, this ranking supports the components of the human development index.

At the same time, information on subjective well-being was gathered on the basis of a life satisfaction question ranging in a scale from 1 (not satisfied at all) to 5 (very

satisfied): life in general, economic situation, leisure, decision making at home and social participation. These domains can be vaguely related to the different agency domains analyzed in this chapter. Economic situation can be connected to control; leisure and decision making at home to change and choice; and social participation to community.

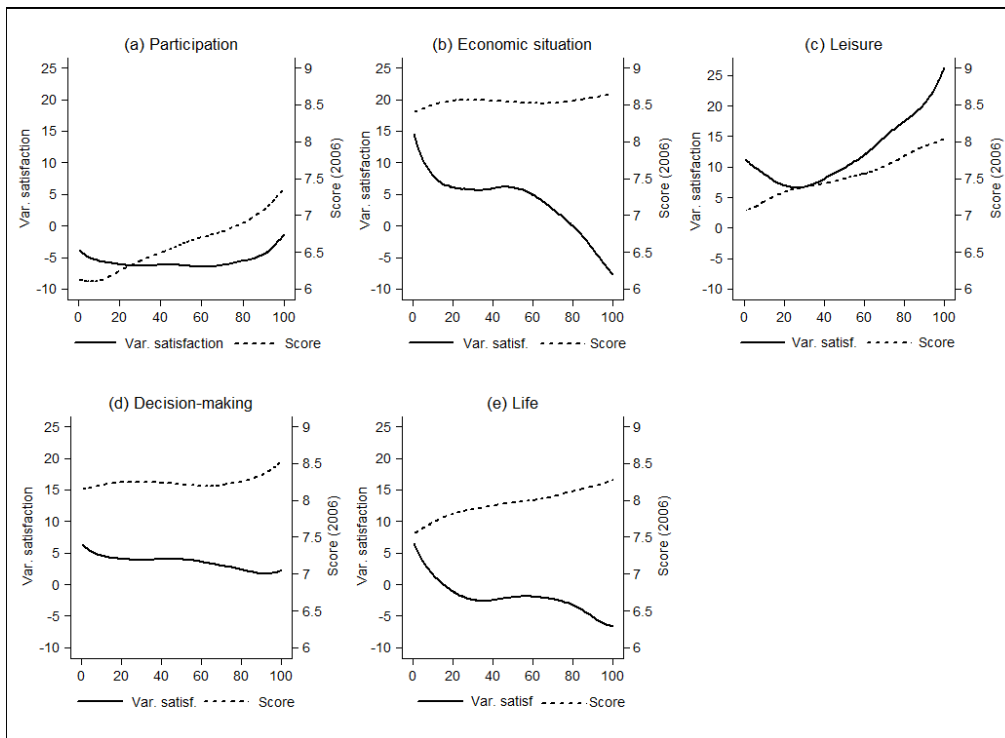
Graph 3 depicts the relation among the average valuation reported for each domain in 2006 and subjective well-being 2011/12 -2006 variations in the same domain, by 2006 per capita household income percentile.<sup>7</sup>

The valuation of one's economic situation does not show a gradient by income strata, whereas valuations in the remaining domains increase with income. This is in line with recent qualitative evidence from focus groups carried out in Montevideo, which shows that higher income strata value leisure and social participation to a greater extent than poorer ones, whose attention is mainly captured by generating income to meet their basic needs (Rivero et al, 2016). The graph also shows that subjective well-being increases were not necessarily achieved in the most valued dimensions. For instance, increases in satisfaction were higher in the case of leisure than in the case of economic situation, whereas the latter is more valued than the former.

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<sup>7</sup> As in the case of the graphs on agency domains, the graphs are smoothed using non parametric regressions.

Graph 3 Average life satisfaction level and average 2006 evaluation by domain and 2006 per capita household income percentile



Note: in all panels the horizontal axis represents 2006 per capita household income percentiles. The vertical axis in the left hand side depicts average variations in life satisfaction (%) and the right hand side one, measures average valuation of a certain dimension in 2006.

Source: own elaboration based on ELBU data.

There are also several patterns by income strata in regard to the valuation and change in satisfaction by domain. In the case of social participation, there was a negative variation for all income groups. However, losses were lower among the richer ones. This is consistent with the evolution of community agency presented earlier in this section, also showing a regressive pattern.

Economic situation is the opposite case as higher strata experienced lower gains than poorer groups. This pattern is in line with the fact that inequality fall and income gains were higher among lower income strata and might also be consistent with the adaptive preferences hypothesis. In the case of leisure, satisfaction gains were higher among richer groups, which are the ones that value this dimension the more. In fact, the gains curve is steeper than the valuation one. Hence, the adaptive preferences hypothesis cannot be mechanically raised without a multivariate analysis to support it. It also follows from this section, that the higher agency gains were obtained in the dimensions that are most valued by the interviewees. However, subjective well-being did not move in the same way.

## IV.2 Socio-economic determinants of agency

To single out the variables associated to higher agency levels, we run ordinary least squares regressions on the covariates of 2011/12 agency levels, for the four domains and the OCAI.

We included a set of demographic and socio-economic covariates and, in a second stage, a group of lagged (2006) agency variables in the respective domain. Demographic variables included sex, age, marital status in 2011/12 and 2006 and current region of residence. The socio-economic covariates comprised current and past income, average years of schooling of adults in the household, past and present employment status of the interviewee and past and present crowding. Table 8 depicts the set of estimates including lagged agency and in Table A.3, contains the other set of regressions. In most cases, the coefficients maintained their significance and magnitude in the two specifications, suggesting that agency levels reflect an independent effect from the remaining covariates. In the comments that follow, we point out when this was not the case.

Past agency in the specific domain exhibited a positive sign and was significant in all cases, reflecting agency persistence through the life cycle: those individuals with higher agency levels in the past, are most likely to maintain their position in subsequent periods. The magnitude of the coefficient ranges from more than one third in the case of control to almost 10% in the case of change.

In regard to demographic variables, age was not significant in all the domains. Considering that there is a significant gradient in this variable among the respondents, agency evolution is not reflecting a life-cycle profile. Being a male respondent was associated to higher agency levels in all cases except for community, where it was not significant.<sup>8</sup>

Lagged income was not significant in all cases, and present income was significant and positive in the cases of change, control, community and the composite index. In the first case it was around 16% and in the latter one, it varied between 3 to 4%. Average years of education of the adults in the household had a positive effect on change, choice and community. However, in the second case, the effect lost significance when past agency was included in the estimation. Finally, lagged employment status was significant in all cases, except for choice. This effect is always negative and more precise when lagged and past agency are included. At the same time, contemporary employment remains negative in the case of community. In the cases of change, control and overall, the current variable exhibits a positive sign.

Table 8 – Regression analysis: Agency levels and variations. OLS

|         | Levels              |                    |                     |                     |                      | Variations        |                  |                   |                   |                   |
|---------|---------------------|--------------------|---------------------|---------------------|----------------------|-------------------|------------------|-------------------|-------------------|-------------------|
|         | Change              | Choice             | Control             | Community           | Agency               | Change            | Choice           | Control           | Community         | Agency            |
|         | (1)                 | (2)                | (3)                 | (4)                 | (5)                  | (6)               | (7)              | (8)               | (9)               | (10)              |
| Y (t-1) | 0.345***<br>(0.036) | 0.076**<br>(0.036) | 0.246***<br>(0.045) | 0.185***<br>(0.051) | 0.247***<br>(0.041)  |                   |                  |                   |                   |                   |
| Age     | -0.001<br>(0.001)   | -0.002*<br>(0.001) | 0.002<br>(0.001)    | 0.0003<br>(0.0005)  | -0.00004<br>(0.0006) | -0.002<br>(0.002) | 0.001<br>(0.002) | -0.001<br>(0.001) | 0.0001<br>(0.002) | 0.0002<br>(0.001) |

<sup>8</sup> Choice exhibits the highest magnitude in this effect, where the gender differential fluctuates in the interval 14-17%.

|                                        |           |          |           |          |           |          |           |           |          |           |
|----------------------------------------|-----------|----------|-----------|----------|-----------|----------|-----------|-----------|----------|-----------|
| Sex (1=Male)                           | 0.067**   | 0.014    | 0.144***  | 0.007    | 0.069***  | -0.034   | 0.058     | 0.036     | -0.098*  | 0.0002    |
|                                        | (0.030)   | (0.030)  | (0.039)   | (0.018)  | (0.019)   | (0.070)  | (0.050)   | (0.041)   | (0.051)  | (0.031)   |
| Region (1=Canelones)                   | 0.005     | -0.002   | -0.052**  | 0.029*** | 0.004     | -0.044   | -0.046    | 0.002     | 0.089*** | 0.016     |
|                                        | (0.018)   | (0.016)  | (0.025)   | (0.011)  | (0.012)   | (0.040)  | (0.030)   | (0.023)   | (0.031)  | (0.018)   |
| Marital status (1=Yes)                 |           |          |           |          |           |          |           |           |          |           |
| Divorced (t)                           | -0.020    | 0.0001   | 0.120***  | -0.012   | 0.014     | 0.025    | 0.089**   | -0.030    | -0.072** | -0.010    |
|                                        | (0.020)   | (0.017)  | (0.029)   | (0.010)  | (0.013)   | (0.046)  | (0.035)   | (0.025)   | (0.035)  | (0.021)   |
| Divorced (t-1)                         | -0.021    | 0.018    | 0.018     | 0.005    | 0.016     | -0.064   | -0.058    | -0.015    | 0.028    | -0.011    |
|                                        | (0.021)   | (0.019)  | (0.034)   | (0.010)  | (0.016)   | (0.051)  | (0.042)   | (0.026)   | (0.032)  | (0.024)   |
| Widower (t)                            | -0.128*** | 0.041    | 0.133*    | -0.026   | -0.005    | 0.059    | 0.048     | -0.114**  | -0.013   | -0.014    |
|                                        | (0.041)   | (0.031)  | (0.073)   | (0.021)  | (0.025)   | (0.081)  | (0.073)   | (0.052)   | (0.096)  | (0.038)   |
| Widower (t-1)                          | 0.162***  | -0.007   | 0.082     | 0.036    | 0.065***  | -0.063   | -0.034    | 0.062     | -0.068   | -0.016    |
|                                        | (0.040)   | (0.044)  | (0.072)   | (0.035)  | (0.023)   | (0.101)  | (0.078)   | (0.059)   | (0.124)  | (0.050)   |
| Log. per capita household income (t)   | 0.140***  | -0.009   | -0.010    | 0.005    | 0.036***  | -0.020   | -0.058**  | 0.086***  | 0.016    | 0.0005    |
|                                        | (0.013)   | (0.011)  | (0.019)   | (0.007)  | (0.008)   | (0.027)  | (0.023)   | (0.015)   | (0.022)  | (0.013)   |
| Log. per capita household income (t-1) | -0.006    | 0.003    | -0.010    | 0.006    | 0.001     | -0.025   | 0.003     | -0.073*** | 0.013    | -0.014    |
|                                        | (0.010)   | (0.008)  | (0.014)   | (0.005)  | (0.007)   | (0.022)  | (0.016)   | (0.012)   | (0.017)  | (0.011)   |
| Educational environment                | 0.010***  | 0.003    | -0.005    | 0.004*** | 0.002     | -0.011** | -0.008*   | -0.00002  | 0.011*** | -0.002    |
|                                        | (0.002)   | (0.002)  | (0.003)   | (0.001)  | (0.002)   | (0.005)  | (0.004)   | (0.003)   | (0.004)  | (0.002)   |
| Overcrowding (t)                       | -0.005    | -0.010   | -0.025*** | -0.003   | -0.010*** | -0.028*  | -0.027**  | -0.002    | -0.022*  | -0.019*** |
|                                        | (0.006)   | (0.007)  | (0.010)   | (0.003)  | (0.004)   | (0.016)  | (0.011)   | (0.008)   | (0.012)  | (0.006)   |
| Overcrowding (t-1)                     | -0.009    | -0.007   | 0.005     | -0.0005  | -0.004    | -0.015   | 0.011     | 0.011**   | 0.005    | 0.001     |
|                                        | (0.005)   | (0.005)  | (0.009)   | (0.003)  | (0.004)   | (0.013)  | (0.010)   | (0.005)   | (0.011)  | (0.005)   |
| Employment (t)                         | 0.204***  | 0.016    | 0.411***  | -0.0001  | 0.156***  | 0.007    | 0.375***  | 0.180***  | -0.003   | 0.148***  |
|                                        | (0.017)   | (0.016)  | (0.024)   | (0.009)  | (0.011)   | (0.038)  | (0.032)   | (0.021)   | (0.028)  | (0.018)   |
| Employment (t-1)                       | -0.066*** | 0.010    | -0.078**  | -0.019** | -0.029**  | 0.016    | -0.437*** | -0.230*** | -0.036   | -0.182*** |
|                                        | (0.018)   | (0.014)  | (0.031)   | (0.008)  | (0.013)   | (0.037)  | (0.030)   | (0.021)   | (0.027)  | (0.017)   |
| Constant                               | -0.941*** | 0.380*** | 0.231     | -0.006   | -0.144**  | 0.677*** | 0.541***  | -0.087    | -0.317*  | 0.174     |
|                                        | (0.105)   | (0.090)  | (0.157)   | (0.058)  | (0.068)   | (0.238)  | (0.189)   | (0.110)   | (0.191)  | (0.114)   |
| Observations                           | 743       | 673      | 743       | 651      | 595       | 673      | 743       | 743       | 651      | 595       |
| R-squared                              | 0.673     | 0.042    | 0.455     | 0.090    | 0.525     | 0.026    | 0.369     | 0.294     | 0.066    | 0.253     |

Robust standard errors in parentheses, \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Source: own elaboration based on ELBU data.

However, the factors associated to agency levels are not necessary informative on the determinants of agency gains. To shed some light on this point, we regressed the proportional variation in the OCAI and each agency domain, against the variables used in the levels equation, except for lagged agency (Table 8, columns 6 to 10). As it was hinted from the graphics and the levels regressions, patterns are considerably different by domain.

In the case of control, agency gains were independent from sex, age and region. Meanwhile, increases in this domain were positively associated to contemporary per capita income and negatively to lagged income, and the same pattern is observed in the case of employment. The association to negative outcomes in 2006 reflects the progressive pattern observed in the previous graphics, whereas the positive association to 2011/12 probably reflects the contemporary achievements that are also explaining agency gains.

In the choice domain, increased gains were positively associated to current divorced status, probably reflecting, again, the fact that there are less earners in that household and hence, the interviewee's participation in total income increases. Choice gains are negatively associated both to contemporary per capita household income and lagged income. There is also a negative association to educational achievements in the household and to crowding, reflecting a progressive increase pattern.

Change increases are negatively associated to education (exhibiting again a progressive pattern) and the remaining variables were non significant. This is probably indicating that the determinants of these variations are not related to demographic and socio-economic variables, but might be connected to other psychological and environmental outcomes.

Community gains were positively associated to currently living in Montevideo. In regard to income, it shows a regressive pattern as illustrated in graph 2, being positively associated to lagged per capita household income. By the same token, they are positively associated to education.

To conclude this section, it must be remarked that OCAI variations were negatively associated to per capita household income in 2006, consistent with a progressive increase pattern. Meanwhile, no effect of contemporary income was found. Finally, and consistent with the progressive pattern already mentioned, it exhibits a negative association to not being employed in 2006 and it was negatively related to contemporary employment in 2011.

To sum up, the determinants of agency levels are very similar by domain and persistence varies significantly, suggesting different rigidities and evolution in the period under study. Meanwhile, agency gains show very different patterns and it seems that in the period under study, the gap by socio-economic stratum has been narrowed, in consistency to reduced income inequality. However, the situation is different by domain, and community related agency presents a regressive pattern. General economic



environment effects, changes in political regimes, among other factors need to be singled out to understand this negative evolution.

#### IV.2 Agency, subjective well-being and adaptive preferences

A second purpose of this chapter is to study the relation among agency changes and subjective well-being, to single out whether adaptive preferences are mediating agency gains. Were higher agency levels/variations associated to bigger changes in life satisfaction?

We analyzed the association among levels (Table A.4) and variations (Table A.5) in subjective well-being (dependent variable) in each domain and the same demographic (sex, age, region of residence and present and past marital status) and socio-economic (present and lagged average household income, education and past and lagged crowding) variables considered in the previous section. We also included the contemporary and lagged OCAI, and in a separate specification, we included the four agency domains. In all cases, the coefficients of the demographic and socio-economic variables remained steady when the agency indexes were added to the estimations. Due to space constraints, in what follows, we only comment the effects of income, education and agency domains.

##### Levels

Average years of education completed by the adults at the household are significant and positively related both to life and decision making satisfaction.

Current per capita household income was significant only in the case of economic satisfaction, but this effect disappears when agency variables are included. This is reasonable as long as control is related to autonomous income and it is possibly more directly related to the individual's perception. Lagged income is significant in the cases of economic situation and decision-making. In the latter case it shows a negative sign consistent with the adaptive preferences hypothesis: all the remaining things equal, those interviewees with lower income in the baseline experienced higher satisfaction in the domain. In the case of economic situation, this hypothesis does not hold.

Lagged satisfaction in the respective domain was always positive and significant. Persistence was higher in the cases of life satisfaction and economic situation (around 0.35), whereas leisure was in an intermediate position (0.25), and participation and decision making are the dimensions with lowest persistence (0.19 and 0.145).

In regard to the agency variables, change and lagged OCA were not significant in any case. Contemporary OCAI presented a significant and positive effect in the cases of life and participation satisfaction. However, it was not significant in the remaining dimensions.

Contemporary control is positively associated to life, economic and decision making satisfaction. In the second case, there is also a very strong effect of the opposite sign for the lagged variable.

Contemporary community agency is positively related to all domains, with huge coefficients, consistently exhibiting the strongest effects in the case of social participation satisfaction. However, the lagged community indicator was significant and positive only in the cases of life and decision-making satisfaction and shows a weak negative effect in the case of economic satisfaction.

## Variations

We also run regressions in variations to single out which population groups experienced higher satisfaction variations and how this correlates with agency movements. Consistent with the findings in levels, average years of education completed by the adults at the household are significant and positive in all the domains except for social participation.

Income variations were significant and positively associated to changes in life, economic situation and decision making satisfaction. However, significance vanished when control was included in the case of economic situation and when choice was included in the case of decision-making.

In most cases there was no association among variations in subjective well-being and agency. There were specific cases where a positive association was found, and in most of them it referred to the same domain. For instance, in the case of participation, only the community domain proved to be positively associated to declared variations in satisfaction. In the same vein, economic situation satisfaction was positively associated to control. Leisure and decision making were positively (but sometimes weakly) associated to community.

Most associations were positive, reflecting scarce space for the adaptive preferences hypothesis. This is consistent with the findings by Bart et al (2013), Chirkov et al. (2003) and Klein (2014).

## V. Concluding remarks

The empirical exercise carried out in this chapter shows that, in the case of Uruguay, agency levels are unequally distributed in favor of those individuals with higher socio-economic advantage. In the period under study, characterized by a significant reduction in income poverty and economic resources inequality, agency evolution showed a progressive pattern in those domains connected to command over means. However, in terms of motivation and self-determination, those individuals in the middle of the income distribution in 2006 accrued higher gains in the period under study. A regressive variation pattern is observed in those agency domains related to public life. Hence,

increased agency in terms of command over resources coexists with a retraction in power in the public sphere. The reasons explaining these results need to be further investigated.

The comparison among valuation by domains and agency change turns out that agency increases occurred in those dimensions most valued by the interviewees, but not necessarily in those where subjective well-being gains were higher.

The association among subjective well-being and agency levels and variations is weak, implicating that the former is not a proxy for the latter. In most of the cases in which the association among the two was statistically significant, it exhibited a positive sign. The same observation holds for lagged and contemporary income. These findings are not consistent with the adaptive preferences hypothesis.

Finally, it must be noticed that community agency was positively associated to satisfaction gains in most domains.

Further research is needed in order to assess the stability of these findings in periods of economic decline and to assess whether these results hold in other population groups and regions.

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## Annex

Table A.1 Variables included in and weights obtained from multiple correspondence analysis

| Variable                | Categories<br>(has a ...) | Weights   |           |
|-------------------------|---------------------------|-----------|-----------|
|                         |                           | Wave<br>1 | Wave<br>2 |
| Boiler                  | No                        | 2.088     | 2.335     |
|                         | Yes                       | -0.712    | -0.589    |
| Cooker                  | No                        | 0.302     | 0.211     |
|                         | Yes                       | -0.697    | -0.378    |
| Micro-wave oven         | No                        | 1.014     | 1.491     |
|                         | Yes                       | -1.735    | -1.155    |
| Music equipment         | No                        | 1.292     | 0.971     |
|                         | Yes                       | -0.592    | -0.416    |
| Dishwasher              | No                        | 0.069     | 0.052     |
|                         | Yes                       | -2.671    | -2.369    |
| Clothes iron            | No                        | 1.592     | 1.543     |
|                         | Yes                       | -0.618    | -0.653    |
| Vacuum cleaner          | No                        | 0.668     | 0.719     |
|                         | Yes                       | -2.044    | -1.699    |
| Car                     | No                        | 0.494     | 0.644     |
|                         | Yes                       | -2.014    | -1.762    |
| Telephone<br>(landline) | No                        | 1.527     | 1.490     |
|                         | Yes                       | -0.766    | -0.917    |
| Mobile telephone        | No                        | 1.530     | 1.057     |
|                         | Yes                       | -0.441    | -0.064    |
| Video or DVD            | No                        | 1.231     | 1.305     |
|                         | Yes                       | -1.063    | -0.545    |
| Refrigerator            | No                        | 2.685     | 3.171     |
|                         | Yes                       | -0.242    | -0.115    |
| Washing machine         | No                        | 1.633     | 2.334     |
|                         | Yes                       | -0.999    | -0.675    |
| TV                      | No                        | 0.603     | 0.906     |
|                         | Yes                       | -1.166    | -1.049    |
| Computer                | No                        | 0.774     | 1.704     |
|                         | Yes                       | -1.929    | -1.208    |
| Internet connection     | No                        | 0.156     | 1.475     |
|                         | Yes                       | -2.846    | -1.428    |
| Heater                  | No                        | 1.192     | 1.024     |
|                         | Yes                       | -0.986    | -0.718    |
| Inertia 1st Dim.        |                           | 94.03     | 92.93     |

Table A.2 Correlation among agency dimensions. 2006 and 2011/12

|           | Control | Change | Choice | Community | Agency |
|-----------|---------|--------|--------|-----------|--------|
| 2006      |         |        |        |           |        |
| Control   | 1.000   |        |        |           |        |
| Change    | 0.133   | 1.000  |        |           |        |
| Choice    | 0.701   | 0.075  | 1.000  |           |        |
| Community | 0.077   | 0.005  | 0.064  | 1.000     |        |
| Agency    | 0.825   | 0.461  | 0.811  | 0.351     | 1.000  |
| 2011/12   |         |        |        |           |        |
| Control   | 1.000   |        |        |           |        |
| Change    | 0.060   | 1.000  |        |           |        |
| Choice    | 0.534   | 0.031  | 1.000  |           |        |
| Community | 0.211   | -0.045 | -0.021 | 1.000     |        |
| Agency    | 0.786   | 0.453  | 0.717  | 0.380     | 1.000  |

Table A.3 Regression results. Dependent variable: agency levels

|                                        | Change<br>(1)        | Choice<br>(2)       | Control<br>(3)       | Community<br>(4)    | Agency<br>(5)        |
|----------------------------------------|----------------------|---------------------|----------------------|---------------------|----------------------|
| Age                                    | -0.001<br>(0.001)    | -0.002**<br>(0.001) | 0.002<br>(0.001)     | 0.0004<br>(0.0005)  | -0.0002<br>(0.0006)  |
| Sex (1=Male)                           | 0.083***<br>(0.030)  | 0.018<br>(0.026)    | 0.171***<br>(0.040)  | 0.006<br>(0.017)    | 0.076***<br>(0.017)  |
| Region (1=Canelones)                   | 0.007<br>(0.019)     | -0.006<br>(0.015)   | -0.054**<br>(0.026)  | 0.017*<br>(0.010)   | -0.007<br>(0.011)    |
| Marital status (1=Yes)                 |                      |                     |                      |                     |                      |
| Divorced (t)                           | -0.015<br>(0.021)    | -0.001<br>(0.016)   | 0.131***<br>(0.029)  | -0.008<br>(0.010)   | 0.026**<br>(0.012)   |
| Divorced (t-1)                         | -0.025<br>(0.022)    | 0.028<br>(0.018)    | 0.043<br>(0.033)     | 0.0007<br>(0.010)   | 0.013<br>(0.014)     |
| Widower (t)                            | -0.136***<br>(0.049) | 0.042<br>(0.032)    | 0.161*<br>(0.085)    | -0.024<br>(0.021)   | 0.012<br>(0.029)     |
| Widower (t-1)                          | 0.214***<br>(0.048)  | -0.013<br>(0.043)   | 0.120<br>(0.085)     | 0.049<br>(0.033)    | 0.099***<br>(0.029)  |
| <b>Objective Well-being</b>            |                      |                     |                      |                     |                      |
| Log. per capita household income (t)   | 0.169***<br>(0.013)  | -0.014<br>(0.010)   | 0.006<br>(0.019)     | 0.008<br>(0.006)    | 0.044***<br>(0.007)  |
| Log. per capita household income (t-1) | 0.030***<br>(0.010)  | 0.007<br>(0.008)    | -0.013<br>(0.014)    | 0.004<br>(0.004)    | 0.008<br>(0.006)     |
| Educational environment                | 0.016***<br>(0.003)  | 0.004**<br>(0.002)  | -0.004<br>(0.004)    | 0.004***<br>(0.001) | 0.004***<br>(0.001)  |
| Overcrowding (t)                       | -0.006<br>(0.007)    | -0.009<br>(0.006)   | -0.024***<br>(0.009) | -0.002<br>(0.003)   | -0.009**<br>(0.004)  |
| Overcrowding (t-1)                     | -0.019***<br>(0.006) | -0.006<br>(0.005)   | 0.003<br>(0.009)     | -0.001<br>(0.002)   | -0.006<br>(0.004)    |
| Employment (t)                         | 0.217***<br>(0.017)  | 0.021<br>(0.015)    | 0.423***<br>(0.024)  | 0.0007<br>(0.008)   | 0.162***<br>(0.010)  |
| Employment (t-1)                       | 0.021<br>(0.017)     | 0.008<br>(0.014)    | 0.039*<br>(0.022)    | -0.020**<br>(0.008) | 0.013<br>(0.010)     |
| Constant                               | -1.390***<br>(0.103) | 0.391***<br>(0.087) | 0.130<br>(0.157)     | 0.009<br>(0.057)    | -0.227***<br>(0.062) |



|              |       |       |       |       |       |
|--------------|-------|-------|-------|-------|-------|
| Observations | 743   | 729   | 743   | 689   | 679   |
| R-squared    | 0.629 | 0.038 | 0.424 | 0.064 | 0.503 |

Robust standard errors in parentheses, \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Source: own elaboration based on ELBU data.

Table A.4 Regression results. Dependent variable: subjective well-being (levels)

|                                                     | Life<br>(1a)         | Participati<br>on<br>(1b) | Economic<br>situation<br>(2a) | Leisure<br>(2b)     | (3a)                 | (3b)                 | Decision-making<br>(4a) (4b) |                     | (5a)                 | (5b)                |
|-----------------------------------------------------|----------------------|---------------------------|-------------------------------|---------------------|----------------------|----------------------|------------------------------|---------------------|----------------------|---------------------|
| Y (t-1)                                             | 0.333***<br>(0.057)  | 0.273***<br>(0.057)       | 0.176**<br>(0.089)            | 0.150*<br>(0.089)   | 0.349***<br>(0.044)  | 0.311***<br>(0.044)  | 0.279***<br>(0.051)          | 0.269***<br>(0.051) | 0.185**<br>(0.074)   | 0.142**<br>(0.070)  |
| Age                                                 | -0.006<br>(0.006)    | -0.005<br>(0.006)         | 0.011<br>(0.009)              | 0.011<br>(0.009)    | -0.006<br>(0.006)    | -0.005<br>(0.006)    | -0.002<br>(0.007)            | -0.0005<br>(0.007)  | 0.006<br>(0.005)     | 0.006<br>(0.005)    |
| Sex<br>(1=Male)                                     | -0.032<br>(0.222)    | -0.017<br>(0.232)         | -0.032<br>(0.342)             | 0.0302<br>(0.361)   | -0.111<br>(0.183)    | -0.111<br>(0.183)    | 0.429<br>(0.272)             | 0.467*<br>(0.278)   | -0.155<br>(0.228)    | -0.146<br>(0.233)   |
| Region<br>(1=Canelo<br>nes)                         | -0.219*<br>(0.122)   | -0.241**<br>(0.120)       | 0.594***<br>(0.192)           | 0.515***<br>(0.196) | 0.216*<br>(0.119)    | 0.163<br>(0.111)     | 0.415***<br>(0.140)          | 0.384***<br>(0.139) | 0.0718<br>(0.107)    | 0.041<br>(0.108)    |
| Marital<br>status<br>(1=Yes)                        |                      |                           |                               |                     |                      |                      |                              |                     |                      |                     |
| Divorced<br>(t)                                     | -0.376***<br>(0.124) | -0.325***<br>(0.125)      | -0.230<br>(0.207)             | -0.192<br>(0.206)   | -0.559***<br>(0.116) | -0.443***<br>(0.113) | -0.204<br>(0.155)            | -0.148<br>(0.159)   | 0.164<br>(0.113)     | 0.213*<br>(0.117)   |
| Divorced<br>(t-1)                                   | -0.038<br>(0.143)    | 0.002<br>(0.136)          | -0.023<br>(0.230)             | 0.057<br>(0.232)    | 0.028<br>(0.146)     | 0.054<br>(0.138)     | -0.049<br>(0.179)            | -0.033<br>(0.184)   | -0.326**<br>(0.144)  | -0.260*<br>(0.143)  |
| Widower<br>(t)                                      | -0.582**<br>(0.237)  | -0.410*<br>(0.239)        | -0.255<br>(0.426)             | -0.160<br>(0.454)   | 0.0482<br>(0.212)    | 0.288<br>(0.209)     | -0.495<br>(0.371)            | -0.382<br>(0.356)   | 0.159<br>(0.225)     | 0.323<br>(0.221)    |
| Widower<br>(t-1)                                    | 0.623**<br>(0.273)   | 0.537*<br>(0.276)         | -0.364<br>(0.651)             | -0.322<br>(0.635)   | 0.540*<br>(0.297)    | 0.407<br>(0.286)     | 1.110***<br>(0.407)          | 1.108***<br>(0.375) | -0.380<br>(0.350)    | -0.447<br>(0.331)   |
| Log. per<br>capita<br>household<br>income (t)       | 0.072<br>(0.070)     | -0.014<br>(0.079)         | -0.204*<br>(0.123)            | -0.217<br>(0.147)   | 0.186**<br>(0.0792)  | 0.015<br>(0.089)     | 0.101<br>(0.081)             | 0.065<br>(0.091)    | 0.0217<br>(0.061)    | -0.071<br>(0.076)   |
| Log. per<br>capita<br>household<br>income (t-<br>1) | -0.073<br>(0.055)    | -0.061<br>(0.061)         | 0.0324<br>(0.098)             | -0.044<br>(0.106)   | 0.0372<br>(0.0570)   | 0.113*<br>(0.061)    | 0.010<br>(0.068)             | 0.042<br>(0.071)    | -0.089**<br>(0.044)  | -0.101*<br>(0.0516) |
| Educationa<br>l<br>environme<br>nt                  | 0.032**<br>(0.014)   | 0.024<br>(0.015)          | 0.010<br>(0.023)              | -0.007<br>(0.024)   | 0.0354**<br>(0.0158) | 0.024<br>(0.016)     | 0.018<br>(0.019)             | 0.010<br>(0.020)    | 0.039***<br>(0.0136) | 0.029**<br>(0.0143) |
| Overcrowd<br>ing (t)                                | -0.063<br>(0.052)    | -0.0776<br>(0.050)        | -0.023<br>(0.074)             | -0.026<br>(0.075)   | -0.0348<br>(0.0419)  | -0.054<br>(0.038)    | 0.031<br>(0.054)             | 0.018<br>(0.052)    | -0.0229<br>(0.045)   | -0.0340<br>(0.046)  |
| Overcrowd<br>ing (t-1)                              | -0.008<br>(0.033)    | -0.001<br>(0.031)         | -0.058<br>(0.062)             | -0.048<br>(0.062)   | 0.018<br>(0.041)     | 0.015<br>(0.038)     | -0.002<br>(0.048)            | -0.003<br>(0.047)   | -0.002<br>(0.027)    | 0.007<br>(0.029)    |
| Employe<br>ment (t)                                 | -0.203*<br>(0.118)   | -0.078<br>(0.120)         | -0.286<br>(0.193)             | -0.162<br>(0.198)   | -0.0717<br>(0.132)   | 0.0676<br>(0.136)    | 0.040<br>(0.147)             | 0.184<br>(0.151)    | 0.0120<br>(0.107)    | 0.102<br>(0.115)    |
| Employe<br>ment (t-1)                               | -0.128<br>(0.108)    | -0.024<br>(0.130)         | -0.0295<br>(0.179)            | 0.112<br>(0.186)    | -0.0903<br>(0.123)   | -0.0341<br>(0.135)   | -0.027<br>(0.144)            | 0.111<br>(0.162)    | -0.230**<br>(0.102)  | -0.131<br>(0.119)   |
| <b>Agency</b>                                       |                      |                           |                               |                     |                      |                      |                              |                     |                      |                     |
| Overall<br>agency (t)                               | 0.659**<br>(0.326)   |                           | 1.358**<br>(0.534)            |                     | 0.409<br>(0.339)     |                      | -0.141<br>(0.396)            |                     | 0.185<br>(0.275)     |                     |
| Overall<br>agency (t-<br>1)                         | 0.121<br>(0.306)     |                           | -0.110<br>(0.541)             |                     | -0.116<br>(0.330)    |                      | -0.332<br>(0.414)            |                     | 0.447<br>(0.273)     |                     |
| Control (t)                                         |                      | 0.626**<br>(0.280)        |                               | 0.284<br>(0.484)    |                      | 1.166***<br>(0.300)  |                              | 0.247<br>(0.357)    |                      | 0.524*<br>(0.283)   |
| Control (t-<br>1)                                   |                      | -0.233<br>(0.285)         |                               | 0.360<br>(0.454)    |                      | -0.982***<br>(0.287) |                              | -0.624*<br>(0.333)  |                      | -0.0142<br>(0.273)  |
| Change (t)                                          |                      | 0.108<br>(0.139)          |                               | 0.271<br>(0.234)    |                      | -0.125<br>(0.146)    |                              | -0.0223<br>(0.179)  |                      | -0.105<br>(0.124)   |
| Change (t-<br>1)                                    |                      | -0.005                    |                               | 0.230               |                      | -0.096               |                              | 0.115               |                      | 0.101               |

|                 |          |          |           |          |          |         |         |         |          |          |
|-----------------|----------|----------|-----------|----------|----------|---------|---------|---------|----------|----------|
| 1)              | (0.140)  | (0.255)  | (0.154)   | (0.193)  | (0.129)  |         |         |         |          |          |
| Choice (t)      | -0.360*  | 0.0656   | -0.747*** | -0.511** | -0.401** |         |         |         |          |          |
|                 | (0.189)  | (0.335)  | (0.207)   | (0.243)  | (0.204)  |         |         |         |          |          |
| Choice (t-1)    | 0.0287   | -0.468   | 0.475**   | 0.00796  | 0.0443   |         |         |         |          |          |
|                 | (0.202)  | (0.332)  | (0.218)   | (0.263)  | (0.197)  |         |         |         |          |          |
| Community (t)   | 0.714*** | 1.251*** | 0.778***  | 0.604**  | 0.560*** |         |         |         |          |          |
|                 | (0.211)  | (0.334)  | (0.197)   | (0.251)  | (0.186)  |         |         |         |          |          |
| Community (t-1) | 0.420**  | -0.110   | 0.253     | 0.191    | 0.347**  |         |         |         |          |          |
|                 | (0.191)  | (0.327)  | (0.192)   | (0.237)  | (0.176)  |         |         |         |          |          |
| Constant        | 2.393*** | 2.780*** | 3.170***  | 3.545*** | 0.009    | 0.616   | 1.612** | 1.227   | 3.177*** | 3.869*** |
|                 | (0.681)  | (0.817)  | (1.129)   | (1.336)  | (0.676)  | (0.759) | (0.765) | (0.926) | (0.594)  | (0.714)  |
| Observations    | 595      | 595      | 496       | 496      | 594      | 594     | 588     | 588     | 588      | 588      |
| R-squared       | 0.172    | 0.207    | 0.055     | 0.079    | 0.230    | 0.286   | 0.094   | 0.121   | 0.072    | 0.106    |

Robust standard errors in parentheses, \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Source: own elaboration based on ELBU data

Table A.5 Regression results. Dependent variable: subjective well-being (variations)

|                                        | Life      |          | Participation |         | Economic situation |           | Leisure |          | Decision-making |          |
|----------------------------------------|-----------|----------|---------------|---------|--------------------|-----------|---------|----------|-----------------|----------|
|                                        | (1a)      | (1b)     | (2a)          | (2b)    | (3a)               | (3b)      | (4a)    | (4b)     | (5a)            | (5b)     |
| Age                                    | -0.006    | -0.006   | 0.009         | 0.01    | -0.001             | 0.0002    | 0.005   | (0.006)  | 0.004           | 0.004    |
|                                        | (0.007)   | (0.007)  | (0.010)       | (0.010) | (0.007)            | (0.007)   | (0.008) | (0.008)  | (0.006)         | (0.006)  |
| Sex (1=Male)                           | 0.033     | 0.076    | -0.205        | -0.134  | -0.012             | -0.027    | 0.269   | 0.312    | -0.124          | -0.092   |
|                                        | (0.300)   | (0.309)  | (0.406)       | (0.421) | (0.226)            | (0.236)   | (0.318) | (0.320)  | (0.230)         | (0.234)  |
| Region (1=Montevideo)                  | -0.272**  | -0.286** | 0.606***      | 0.532** | 0.173              | 0.124     | 0.421** | 0.365**  | -0.025          | -0.063   |
|                                        | (0.130)   | (0.130)  | (0.213)       | (0.218) | (0.134)            | (0.130)   | (0.168) | (0.165)  | (0.110)         | (0.114)  |
| Marital status (1=Yes)                 |           |          |               |         |                    |           |         |          |                 |          |
| Divorced (t)                           | -0.343**  | -0.325** | -0.241        | -0.164  | -0.722***          | -0.642*** | -0.149  | -0.068   | 0.253*          | 0.307**  |
|                                        | (0.145)   | (0.150)  | (0.218)       | (0.221) | (0.142)            | (0.144)   | (0.178) | (0.183)  | (0.130)         | (0.133)  |
| Divorced (t-1)                         | 0.231     | 0.221    | 0.064         | 0.088   | 0.198              | 0.163     | 0.017   | -0.043   | -0.327**        | -0.319** |
|                                        | (0.166)   | (0.166)  | (0.260)       | (0.260) | (0.166)            | (0.166)   | (0.211) | (0.216)  | (0.153)         | (0.153)  |
| Widower (t)                            | -0.667**  | -0.667** | -0.508        | -0.394  | 0.113              | 0.248     | -0.697* | -0.631   | 0.238           | 0.326    |
|                                        | (0.289)   | (0.298)  | (0.474)       | (0.492) | (0.267)            | (0.279)   | (0.408) | (0.413)  | (0.308)         | (0.317)  |
| Widower (t-1)                          | 0.932***  | 0.952*** | -0.197        | -0.114  | 0.839**            | 0.772**   | *       | *        | -0.432          | -0.471   |
|                                        | (0.316)   | (0.315)  | (0.615)       | (0.630) | (0.392)            | (0.380)   | (0.489) | (0.481)  | (0.375)         | (0.373)  |
| Log. per capita household income (t)   | 0.068     | 0.077    | -0.234*       | -0.277* | 0.065              | -0.057    | 0.109   | 0.056    | -0.003          | -0.062   |
|                                        | (0.081)   | (0.097)  | (0.138)       | (0.167) | (0.094)            | (0.112)   | (0.095) | (0.105)  | (0.072)         | (0.095)  |
| Log. per capita household income (t-1) | -0.163*** | -0.156** | 0.036         | -0.030  | -0.144**           | -0.054    | -0.004  | 0.067    | -0.119**        | -0.127** |
|                                        | (0.060)   | (0.065)  | (0.111)       | (0.123) | (0.065)            | (0.069)   | (0.080) | (0.079)  | (0.052)         | (0.061)  |
| Educational environment                | 0.031*    | 0.029*   | 0.011         | -0.009  | 0.051***           | 0.046**   | 0.028   | 0.021    | 0.037**         | 0.028*   |
|                                        | (0.016)   | (0.017)  | (0.025)       | (0.026) | (0.018)            | (0.018)   | (0.022) | (0.023)  | (0.015)         | (0.016)  |
| Overcrowding (t)                       | -0.021    | -0.022   | -0.036        | -0.036  | -0.005             | -0.018    | 0.076   | 0.067    | -0.008          | -0.012   |
|                                        | (0.054)   | (0.053)  | (0.007)       | (0.072) | (0.054)            | (0.053)   | (0.057) | (0.054)  | (0.048)         | (0.049)  |
| Overcrowding (t-1)                     | 0.001     | 0.003    | -0.072        | -0.066  | -0.011             | -0.03     | 0.023   | 0.009    | -0.034          | -0.030   |
|                                        | (0.037)   | (0.037)  | (0.064)       | (0.064) | (0.040)            | (0.039)   | (0.056) | (0.055)  | (0.032)         | (0.033)  |
| Employment (t)                         | -0.168    | -0.068   | -0.187        | -0.031  | 0.018              | 0.063     | 0.271   | 0.407**  | 0.080           | 0.174    |
|                                        | (0.136)   | (0.146)  | (0.202)       | (0.211) | (0.155)            | (0.165)   | (0.172) | (0.177)  | (0.125)         | (0.137)  |
| Employment (t-1)                       | -0.050    | -0.055   | -0.143        | -0.099  | 0.022              | 0.048     | 0.133   | 0.137    | -0.174          | -0.172   |
|                                        | (0.117)   | (0.139)  | (0.188)       | (0.199) | (0.141)            | (0.151)   | (0.166) | (0.186)  | (0.115)         | (0.134)  |
| <b>Agency</b>                          |           |          |               |         |                    |           |         |          |                 |          |
| Var. overall agency                    | 0.644*    |          | 1.139**       |         | 0.162              |           | -0.410  |          | 0.131           |          |
|                                        | (0.385)   |          | (0.561)       |         | (0.406)            |           | (0.488) |          | (0.322)         |          |
| Overall agency (t-1)                   | 0.498     |          | 1.141         |         | -0.135             |           | -0.536  |          | 0.274           |          |
|                                        | (0.442)   |          | (0.716)       |         | (0.465)            |           | (0.621) |          | (0.409)         |          |
| Var. Control                           |           | 0.058    |               | 0.412   |                    | 0.871**   |         | 0.263    |                 | 0.266    |
|                                        |           | (0.350)  |               | (0.530) |                    | (0.379)   |         | (0.433)  |                 | (0.328)  |
| Var. Change                            |           | 0.290*   |               | 0.368   |                    | -0.236    |         | -0.167   |                 | -0.024   |
|                                        |           | (0.159)  |               | (0.245) |                    | (0.183)   |         | (0.208)  |                 | (0.145)  |
| Var. Choice                            |           | -0.043   |               | -0.182  |                    | -0.448*   |         | -0.606** |                 | -0.321   |
|                                        |           | (0.237)  |               | (0.378) |                    | (0.258)   |         | (0.294)  |                 | (0.223)  |

|                 |         |         |         |         |         |         |         |         |         |         |
|-----------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Var. Community  | 0.497** |         | 0.925** | *       |         | 0.424*  |         | 0.579** |         | 0.496** |
|                 | (0.242) |         | (0.339) |         |         | (0.240) |         | (0.286) |         | (0.221) |
| Control (t-1)   | -0.068  |         | 0.735   |         |         | -0.278  |         | -0.628  |         | 0.237   |
|                 | (0.368) |         | (0.554) |         |         | (0.353) |         | (0.458) |         | (0.339) |
| Change (t-1)    | 0.273   |         | 0.654*  |         |         | -0.214  |         | 0.017   |         | 0.021   |
|                 | (0.218) |         | (0.380) |         |         | (0.248) |         | (0.298) |         | (0.200) |
| Choice (t-1)    | 0.034   |         | -0.366  |         |         | 0.071   |         | -0.069  |         | -0.175  |
|                 | (0.269) |         | (0.450) |         |         | (0.286) |         | (0.360) |         | (0.259) |
| Community (t-1) | 0.470   |         | 0.404   |         |         | 0.356   |         | 0.355   |         | 0.414   |
|                 | (0.325) |         | (0.457) |         |         | (0.311) |         | (0.386) |         | (0.287) |
| Constant        | 0.536   | 0.203   | 0.794   | 1.485   | 0.277   | 0.570   | -1.287  | -1.554  | 0.538   | 0.945   |
|                 | (0.759) | (0.983) | (1.203) | (1.438) | (0.815) | (0.963) | (0.841) | (1.014) | (0.620) | (0.836) |
| Observations    | 595     | 595     | 496     | 496     | 594     | 594     | 588     | 588     | 588     | 588     |
| R-squared       | 0.057   | 0.066   | 0.042   | 0.061   | 0.081   | 0.110   | 0.040   | 0.064   | 0.039   | 0.054   |

Robust standard errors in parentheses, \*\*\* p<0.01, \*\* p<0.05, \* p<0.1. Source: own elaboration based on ELBU data