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THE IMPACT OF NON-COGNITIVE INDIVIDUAL CHARACTERISTICS ON MIGRANT INTEGRATION [*]

Cátia Batista[‡] Rita Mira Vaz[§]

December 2023

Abstract

Migrant integration is crucial for ageing European economies to reap the rewards of immigration. Using innovative individual-level integration measures based on survey data collected in the Lisbon Metropolitan Area, we test the hypotheses that impatience, risk aversion and grit influence the integration of immigrants across three main dimensions: labour market, social inclusion, and active citizenship. We find that risk aversion positively impacts social integration, and active citizenship is positively impacted by higher impatience levels. Despite Portugal having some of the best immigrant integration policies, our evidence shows that informal barriers to migrant integration remain. Individual non-cognitive characteristics of migrants can help to overcome these barriers.

Keywords: Migration; Integration; Assimilation; Risk Aversion; Impatience; Time Preferences; Grit; Portugal.

JEL Codes: J61; O15; F22.

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1. Introduction

Portugal has a long history of immigration, with a large fraction of immigrants originating from its former colonies in sub-Saharan Africa. Cape Verdeans are the third-largest group of non-Portuguese nationals residing in Portugal, representing 5% of the total of non-Portuguese residents. Despite Portuguese being the official language of Cape Verde and its language of instruction, theoretically reducing language barriers compared to other immigrant groups, the labour market outcomes for Cape Verdeans have been subpar in comparison to Portuguese nationals. As in other countries, immigrants in Portugal often underperform natives in the labour market, while struggling to access healthcare, housing, and documentation. Nevertheless, Portugal stands out in the top 5 countries in the Migrant Integration Policy Index (MIPEX 2020) ranking,[3] an index measuring the quality of immigrant integration policies, alongside countries like Sweden, Finland, and Canada.

Immigrants being well integrated in the host society is crucial for the benefits of immigration to be realized. In European ageing economies, immigrants constitute a significant share of the workforce (migrant workers in Northern, Western, and Southern Europe represented 18.4% of total workers in 2019[4]), not stealing the natives' jobs, but rather complementing them (Martins, Piracha and Varejão 2018). Moreover, immigrants contribute to improving the demographic imbalances and increasing innovation in the host countries. Our paper contributes to the general question of what determines the integration of immigrants.

Most of the economic literature on immigrant integration has focused on labour market integration, as it is a key driver for immigrants' success in their host countries. Departing from Chiswick's Immigrant Assimilation Hypothesis, cross sectional and panel data studies were

[3] This ranking allows comparisons between governments across 56 different countries, regarding what are doing to promote migrants' opportunities to participate in society.
[4] International Labor Organization. 2021. *ILO Global Estimates on International Migrant Workers*. International Labor Office, 1–74. Accessible at: https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_808935.pdf.

conducted in several contexts, testing, and confirming the hypothesis that time spent in the host country was key for immigrants to economically assimilate, closing the gap between migrants and natives.

Dustmann (1996) is one of the first economics papers that considered integration as a holistic concept. Focusing on the social assimilation of immigrants, and using data for Germany, this paper found that personal characteristics, nationality, and family context did impact migrant's integration. Importantly, the paper used a subjective measure of integration, in which respondents were asked whether they felt more German than their true nationality, reflecting the feeling of identity with the respective country of origin.

In our paper, integration is defined as a broad phenomenon, in general terms regarded as the convergence of immigrants' outcomes to those of natives. In practice, we will focus on three main areas of integration: employment, social inclusion, and active citizenship. For each of these areas, we built an index, using a survey-based dataset with questions that range from wages and hours worked, to measures of closeness to natives, and to psychometric questions on time and risk preferences, based on the methodology proposed by Anderson (2008) and whose construction is detailed in Section 4.1. of the paper.

We examine the role of impatience, risk attitude and grit of Cape Verdean migrants in explaining their integration in the Lisbon Metropolitan Area. Using innovative individual-level integration measures, we test the hypotheses that impatience, risk aversion, and grit have an effect on the integration of immigrants across three main dimensions: employment, social inclusion, and active citizenship. These non-cognitive characteristics have been shown to play crucial roles in determining several success measures in people's lives. Because integrating in a new society is a significant challenge, that might require a specific set of skills, such as resilience, patience,

passion for long term goals, and some enthusiasm for a big new adventure, it is relevant to understand the extent to which time and risk preferences and grit influence migrant integration.

Our contribution to the literature is two-fold. On the one hand, we contribute to the literature on immigrant integration, by testing novel determinants of integration: the role that non cognitive characteristics of migrants play in their successful integration in a host country. On the other hand, we contribute to the behavioural economics literature, by analysing the role that time and risk preferences and grit play as predictors of success, not only in professional contexts, as has been previously addressed in the literature, but also in other aspects of one's life, such as healthcare, mental health, closeness to people from a different nationality, and citizenship (e.g., regularising, having national tax and health identification numbers).

2. Literature Review and Theoretical Framework

The general question of what determines successful migrant integration has been addressed in the economic literature by several authors. Chiswick (1978) explains the economic assimilation of immigrants in the United States, arguing that recently arrived migrants have strong incentives to acquire host-country-specific human capital, which improves their labour market relative position, comparing to natives. One of the key investments that migrants do is in learning the local language, as it allows them to expand their employment and social opportunities, speeding up the assimilation process. Integration policies in the host country have also been studied to play a role in facilitating immigrant integration. However, the effects of these interventions depended a lot on the features of the programs and on the context in which they were set up[5].

[5] For example, interventions promoting training specifically designed for immigrants have increased earnings and decreased social benefits, by improving communication between caseworkers and immigrants through individualized integration plans, as in Sarvimaki (2010, 2016), but no differences in the effectiveness of training programs between natives and immigrants were found, when programs enhancing occupation-specific knowledge demanded by the labour market were implemented, as in Thomsen (2013).

Even though early literature has focused on language skills and education as being the key determinants to immigrant integration (Chiswick 1978, 1991; Borjas 1985, 1994; Dustmann 1994), more recent papers have found that not only large educational differences persist over time, due to underutilization of immigrants' skills (Kiker et al. 1997; Mattoo et al. 2008; Chiswick and Miller 2009; Bah 2018), but also that immigrant networks might be just as important for integration, by reducing information asymmetries that immigrants face when they arrive to the host country (Batista and Costa 2016). Two other possible determinants of integration refer to institutional settings in the host country and to individual characteristics of migrants (demographic characteristics and personality traits). Demographic characteristics of migrants were addressed in early literature, namely in Dustmann (1996). In this paper, we test for the possibility that non-cognitive traits of migrants do play a role in their integration.

Integration has been measured using several variables in the literature. Most used measures within the employment scope have been employment rates, earnings, welfare dependency, time spent in training, regular employment finding rate, immigrant mother's labour market participation, being idle, and hourly wages[6].

Within the scope of social inclusion, integration has been often assessed in the literature using health and healthcare measures, such as insurance coverage, immigrants' usage of preventative and ambulatory care, decreased emergency care in hospitals, likelihood of going more than a year without a doctor's visit, probability that the migrant has a usual place for care, probability of an emergency room visit, health expenditures, and early childcare attendance[7].

[6] See, among others, Sarvimaki and Hamalainen (2010, 2016), Butschek and Walter (2014), Clausen et al. (2009), Heinesen and Rosholm (2013), Joona and Nekby (2012), Aslund and Johansson (2011), Battisti, Giesing, and Laurentsyeva (2018), Richardson and Berg (2013), Thomsen, Walter, and Aldashev (2013), Jahn and Rosholm (2014), Brucker et al. (2018), Vikman (2013), Hardoy and Schøne (2010), Edin, Fredriksson, and Aslund (2004).
[7] See, among others, Cornelissen et al. (2018), Bronchetti (2014), Bozorgmehr and Razum (2015).

Immigrant integration in what active citizenship is concerned has been addressed in the literature with outcome variables that relate to legalization, nationalization, and naturalization. In fact, the citizenship, residency, and work permits, probability of working in traditional illegal occupations, geographical mobility, crime conviction rates and usual labor force participation measures were commonly used in this literature branch[8].

Before we move into the data and the empirical analysis, it is worth discussing the theoretical predictions regarding the effect of non-cognitive characteristics on integration. Specifically, we expect that these effects differ depending on the characteristic we are considering and the area of integration under analysis.

The effect of time preferences on labour market integration was predicted to be ambiguous, as more impatient migrants might have lower reservation wages, which would lead them to accept worse job offers (either with lower wages, or worse conditions) rather than waiting for better ones, or they might assign a lower value to the future benefits of searching for a job, and thus exert less effort in doing so. DellaVigna and Paserman (2005) found evidence favouring the second alternative if preferences are hyperbolic. This holding in our sample, more impatient migrants would exhibit lower levels of labour market integration.

How impatience affects social integration is also unknown. By the same token, more impatient people could assign a lower value to the future benefits of being socially included in the host country, such that they would exert less effort in trying to integrate. Contrarily, more impatient migrants could also accept every opportunity to integrate (build new relationships and social ties, and use them to get access to healthcare, food, and accommodation support for instance), rather than waiting for better opportunities. If the low effort effect dominates, we can expect

[8] See, among others, Devillanova, Fasani, and Frattini (2018), Amuedo-Dorantes, Malo, and Munõz-Bullón (2013), Kaushal (2006), Barcellos (2010), Orrenius and Zavodny (2015), Damm and Dustmann (2014)

that more impatient migrant would fare worse in terms of social inclusion. If instead the second effect dominates, we can expect that more impatient migrants integrate better in social terms.

Regarding active citizenship, we expect that more impatient migrants prefer to take care of regularising sooner than later. However, more impatient migrants might assign a lower value to the future benefits of being regularised, such that they would exert lower effort. Hence, the impact of impatience on active citizenship depends on which effect dominates.

Literature shows evidence in favour of migrants being more risk-loving than the ones left behind (Jaeger et al. (2010)). The authors find that individuals who are more likely to take risk are also more willing to migrate. This result points that risk attitude is a plausible determinant of migration, especially because the authors control for several demographic characteristics and test for reverse causality. But because we are comparing different levels of risk aversion amongst a migrant population, this is not an issue for our analysis.

Our predicted effects of risk loving attitudes on integration depend on the area of integration we consider. Regarding employment, we expect that more risk loving migrants have less stable employment conditions: having shorter or no contracts or being self-employed more often. However, how risk aversion affects wages and labour productivity is unknown. It can be that risk taking people are more entrepreneurial and that, it being valued by employers, they have better working conditions. But it can also be that these people are more impulsive, or less trust-worthy, and that being the case, their employers might prefer more risk averse people, which will therefore have better working conditions. Which effects are stronger is unknown.

In what social inclusion is concerned, we expect that more risk loving people integrate better in social terms, because they are more willing to adopt new habits, to make new social ties, and to try new ways of living. However, we are unsure about how this affects poverty and (self-reported) health outcomes. Regarding perceptions of closeness to the Portuguese, when

comparing to closeness to Cape Verdeans by taking the difference between the two, we expect that more risk-taking migrants feel relatively closer to the Portuguese, and therefore the effect of risk taking on such measures should be negative.

Regarding active citizenship, we expect that more risk-taking people feel less stressed about regularizing their legal status. That being the case, the effect of risk loving attitudes on active citizenship integration index (and outcomes) should be negative. We expect this to be the case for every outcome except the ones regarding satisfaction with the support received, for which the effect is ambiguous. It can be that risk averse people are more demanding, and if that is the case, they can either insist until they are satisfied, or feel less satisfied with the support received, despite the level of support given to them.

Grit, a non-cognitive trait defined as "perseverance and passion for long-term goals" (Duckworth et al. 2007), has been discussed as a predictor of success, both in the professional domains, as well as in other aspects of life. Duckworth et al. (2007) estimated grit to impact educational attainments of adults, GPA of Ivy Leage undergraduates, retention in United States Military Academy West Point cadets and ranking in the National Spelling Bee. Eskreis-Winkler et al. (2014) found that grittier individuals were less likely to drop out of their life commitments; grittier soldiers were more likely to complete an Army Special Operations Forces selection course, grittier sales employees were more likely to keep their jobs, grittier students were more likely to graduate from high school, and grittier men were more likely to stay married.

Regardless of the area of integration that we consider, we expect that grittier migrants have higher levels of integration. For most economic migrants, the decision to migrate is one that requires some degree of adventure, passion for new challenges, and typically involves quite some planning and reflection. Similarly to risk attitudes, we posit that there is some positive migrant selection on grit, such that grittier people are the ones who are more likely to migrate.

Nevertheless, the integration process itself, if it is to be affected by personal characteristics, should be easier for someone who is less likely to drop out of their life commitments. If people are more perseverant, they should achieve better labour market outcomes and levels of integration, they should put more effort into building new social ties and achieving higher social integration, and they should have higher chances of being successful in what active citizenship is concerned.

3. Data

The present study uses a dataset comprising a sample of 799 Cape Verdean immigrants aged between 18 to 65 years, residing in the Lisbon Metropolitan Area, who arrived in Portugal not more than five years prior to the survey. Data collection took place between September 2020 and June 2021. To ensure maximum trust among participants, in-person surveys were conducted by trained Cape Verdean enumerators in Cape Verdean Creole. Data was collected in 12 municipalities in the Lisbon Metropolitan Area.

In addition, preliminary data from the Portuguese 2021 census was employed to perform a comparative analysis of overqualification situations among both Cape Verdean nationals and Portuguese nationals residing in Portugal, aged between 25 to 64 years old, both by educational attainments and by professional group, as defined in the International Standard Classification of Professions[9], from now on referred to as "CITP". Although the data is at the aggregate level, it still enables a stylized comparison to be made. A detailed discussion of this brief analysis is presented in Section 5.1.1.

3.1 Descriptive statistics

Table 4 in the Appendix summarizes the main information regarding the descriptive statistics of our sample. Regarding gender, we have that 56% of the sample are women whereas 44% are

[9] "Classificação Internacional Tipo de Profissões"

men. The average migrant in our sample is 28 years old and arrived in Portugal 2 years and 4 months ago. Around 80% of the migrants in our sample have completed high school, and close to 20% of the sample owns a higher education degree. Close to 65% of the sample is an employee, whereas 15% are students and another 15% are unemployed. Only 13% of the sample is married or living as a couple, and only 8% of the sample speak Portuguese at home (the rest speaks Creole). The most frequent religion is the catholic (77% of the sample is catholic).

Time and risk preferences were elicited through survey questions. The first variable measuring impatience is the reported willingness to pay to receive a lottery prize of 1000€ now instead of receiving it in one year, in a hypothetical game. The variable measuring impatience in intervals assigns a category "Patient", "Somewhat Impatient", or "Impatient" to respondents, based on their willingness to pay. If they are not willing to pay any positive value, they are labelled as "Patient". If they are willing to pay between 0 and 100€ (100€ and 1000€), they are labelled as "Somewhat Impatient" ("Impatient"). The first variable measuring risk attitudes is the switching point in a 15-rounds game, in which respondents must choose between a lottery and a fixed amount in every round. The expected value of the lottery is equal to the fixed amount in round 11. From round 1 to round 10 (12 to 15), the expected value of the lottery is higher (lower) than the fixed amount. The more rounds the respondents opt for the lottery (i.e., the higher the switching point), the more risk loving (or the less risk averse) they are. The second measure of risk preference is based on a hypothetical game in which respondents are told to imagine that they received a 100€ prize to spend as they please. Then, they are asked for the amount they would like to invest in a gamble with zero expected value. The more a migrant wish to invest in this gamble, the more risk loving he is. The third measure of risk aversion is the first principal component of the first two risk measures. Grit is measured through 12 questions in which respondents must say to which extent they agree with the sentences presented to them. Their answers are then combined in a normalized index.

Migrants in our sample are, on average, willing to pay 76.48€ to receive 1000€ today and not in a year time and invest 39.70€ out of 100€ in a zero-expected-value-gamble, on average. In the normalized index of grit, our sample of migrants has, on average, 0.6138.

The two variables that we use to measure impatience are correlated with one another, with a coefficient of correlation of 0.77, and exhibit little correlation with the variables measuring risk attitudes and grit. The two variables measuring risk attitude are also correlated, albeit with a coefficient of correlation of 0.29, lower than the one for the measures of impatience. These are also largely uncorrelated with the measure of grit.

4. Empirical Strategy

4.1. Integration Indexes

The integration of immigrants in European societies has become a pressing issue in recent decades. In April 2010, the ministers of the European Union, during the European Ministerial Conference on Integration in Zaragoza, agreed on a Declaration that reinforced the principles that should govern the integration of immigrants in the EU. Four policy areas were identified as priority areas for monitoring the outcomes of integration across EU countries: Employment; Education; Social Inclusion; and Active Citizenship.

Because our paper focuses on adult population, the educational area is not as relevant for our sample. Consequently, our areas of interest are Employment, Social Inclusion, and Active Citizenship. For each integration area, we built an Integration Index, following the methodology proposed by Anderson (2008), using inverse-covariance weights. Because we are unsure which variables inside each index are more relevant in explaining integration in each area as a whole, what this inverse-covariance weighting does is ensuring that outcomes that are highly correlated with each other receive less weight, while outcomes that are uncorrelated and thus represent new information receive more weight. The resulting indexes have unitary standard deviations

and approximately zero mean. This is particularly interesting in the context of our analysis, as it gives us some confidence that all the variables that we are including in our index are being weighted to the extent that they bring about some new information to the index.

Table 5 in the Appendix presents, for each of the areas of interest, how and why each individual-level variable included in the Index is an important integration measure (its definition, unit of measurement, and how it measures integration).

4.2. Estimation strategy and threats to identification

Our empirical strategy is Ordinary Least Squares (OLS) Estimation with controls. For each pair of explanatory and outcome variables, we will run the following regression:

$$integration\_measure_i = \alpha + \beta * characteristic_i + \partial * X_i + \varepsilon_i \,, \qquad (1)$$

where $integration\_measure_i$ is the integration measure for migrant *i,* $characteristic_i$ is the explanatory variable (impatience, risk aversion, or grit) of the migrant *i*, X_i is a set of controls for migrant *i*, and ε_i is the error term.

Our parameter of interest is $\hat{\beta}$, which measures the impact of impatience, risk aversion, or grit on the integration outcome variable. In our main specification, standard errors are clustered at the level of the municipality.

As controls, we introduce migrants' characteristics that are likely to influence the role our explanatory variables play on integration, to prevent omitted variables from biasing our results. According to the Immigrant Assimilation Hypothesis (IAH) proposed by Chiswick (1978), which immigrants develop destination human capital and, as a result, earnings are expected to improve with the time spent in the host country, but at a decreasing rate. Because this effect is likely to hold in other integration outcomes as well (not only earnings), time since migration is included as a control, as well as other demographic characteristics that are posited to influence

integration and non-cognitive characteristics, such as age, gender, and educational attainments, as discussed in the next subsection.

4.3. Threats to identification

To ensure validity of our econometric approach, explanatory variables must be exogenous. Exogeneity of these characteristics is supported by the literature as follows.

4.3.1. Exogeneity of time and risk preferences and grit

Our regressions would yield biased estimates of the causal impact of impatience, risk aversion and grit, if these characteristics were endogenously determined. Evidence suggests that these non-cognitive skills might be correlated with other demographic characteristics, such as gender, age, and level of education. In fact, according to Wang et. al. (2016), hyperbolic time preferences are a global and prevalent phenomenon, and time preferences are correlated with gender and age[10]. Kirby et. al. (2002) found that discount rates of 154 Tsimane' Amerindians were positively (negatively) correlated with age (educational levels). Moreover, this paper does not find a correlation between impatience and one's wealth, nutritional status, or drug use. Further, the authors argue that a person's discount rate is a somewhat stable characteristic[11].

Jaeger et al. (2010) find no evidence that migration affects risk attitudes, rather that causality runs in the opposite direction, with the willingness to take risks positively impacting the probability of migration. Moreover, individual risk aversion is posited to be constant over time in several papers. Brunnermeier and Nagel (2008) find that wealth changes do not affect households' risky assets investment share, and Chappori and Paiella (2011) also find an

[10] This correlation of impatience and gender is also discussed by Bjorklund and Kipp (1996), whereby they argue that women show lower levels of impatience than men. This hypothesis is tested and verified by Silverman (2003). However, a field experiment in Denmark, assessed by Harrison et al. (2002) finds that discount rates are not significantly different for men and women, and appear to decline with age.

[11] Harrison et al. (2005) also argues that discount rates are quite constant over time. Another study finding evidence supporting the hypothesis that time preferences are stable over time is Meier and Sprenger (2015), where the authors find that estimates of discount parameters, elicited by incentivized intertemporal choice experiments, are unchanged over two years.

insignificant elasticity of risky asset share to wealth. Harrison, Johnson, McInnes and Rutström (2005) finds evidence for risk aversion measures to be stable over time, by giving the same subjects the same test, five to six months apart.

Gibson et al. (2016), analysing evidence on migration from a developing to a developed country (from Tonga to New Zeeland), finds no impact of migration on time and risk preferences, providing evidence favouring treating these characteristics as time-invariant.

The literature results described above justify that we include age, gender, and educational attainments as controls in our main specification of the model. Moreover, there is sufficient literature to suggest that, after controlling for these demographic characteristics, we can regard time and risk preferences as being stable across all the other dimensions, in particular, that they are not impacted by the extreme event of emigration.

According to Rego et al., (2019a), there are two components of grit: a self-attributed, innate part, and a conveyed part. The authors argue that these may be conceptually distinct: while the former may be considered a personality trait or a non-cognitive characteristic, the latter refers to behavioural manifestations that do not necessarily mirror the "true" self-attributed grit. Due to data limitations, we were unable to distinguish between the two components, and hence assumed it to be innate, and thereby exogenous.

4.3.2. Heckman sample selection model

There is the possibility that migrants self-select into answering some questions, namely all those who report migrants' satisfaction with the support received in some area (health, psychological support, food, accommodation, documentation, legal, and tax filling support). These binary variables measure whether the individual reported receiving the support he needed, conditional on having reported that he needed help in each area. It could be that migrants do not report needing help at random. If people reporting needing help are, on average, more demanding than

those who did not report, this might correlate with other non-cognitive characteristics such as our explanatory variables. In this case, our estimates will suffer from sample selection bias. Hence, we estimate the Heckit sample selection correction procedure proposed by Heckman (1979), which allows to test for sample selection bias, and obtain consistent estimates if we happen to face this issue.

A sample selection model is specified by two equations: an observation or regression equation and a selection equation. The first equation considers the mechanisms determining whether the individual *i* reports needing help in a given area:

$$satisfied_1 = \alpha_1 X_1 + \beta_1 * characteristic_1 + u_1 \; observed \; only \; if \; r_2 = 1 \qquad (2)$$

where $satisfied_1$ is a latent endogenous variable denoting whether the individual *i* reports that their need in a certain area is satisfied, conditional on reporting having need help in that area; X_1 is our set of controls; and $characteristic_1$ is the non-cognitive skill of the individual under analysis (i.e. impatience, risk-loving attitude, or grit).

The second equation is called the selection equation, and considers a proportion of the sample for whom the satisfaction with the help received is observed, and the mechanism determining the selection process:

$$r_2 = \begin{cases} 1 \; if \; {r_2}^* > 0 \\ 0 \; if \; {r_2}^* \leq 0 \end{cases} \qquad (3)$$

$${r_2}^* = \theta x + v_2 \qquad (4)$$

where x is a set of explanatory variables determining the decision of reporting needing help in that area. The explanatory variables used depended on the specific area and are detailed in Table 6 in the Appendix. We used the Heckman selection model as a robustness test and verified that our results hold when sample selection is accounted for. In fact, both the magnitude and the significance level of our coefficient estimates remain largely unchanged when we use the

Heckit. Hence, and having found evidence that sample selection is not what is driving our results, we proceeded the analysis with OLS. Results using the Heckman selection model for each variable can be found in the Appendix.

5. Empirical Results

5.1. Employment

We find no significant impact of impatience, risk aversion or grit in our measure of employment integration. For all measures of the non-cognitive characteristics, the estimated coefficients are not significantly different from zero, as shown in Table 1.

Given the inability of finding significant impacts on the employment index, in Table 7 in the Appendix we turn our attention to the possibility that the characteristics under question do play a role in explaining the integration level of migrants in some of the dimensions that are included in the index. We find significant negative effects of impatience on the likelihood that a migrant reports his demand for work support from institutions (such as immigrant associations, CNAIM, CLAIM[12] or other) as being satisfied. Contrasting this result with our theoretical predictions, we seem to be facing the second alternative, such that more impatient migrants value the future benefits of getting work support less, thereby exerting less effort in trying to get such support. Importantly, this result is robust to multiple hypothesis testing, as indicated by the Romano-Wolf low p-value (Damian et al. 2020). Table 7 also reports a negative effect on the probability that a migrant is idle[13], and a positive effect on work income, total income, on the probability that a migrant is an employee, conditional on being employed (as opposed to being self-employed), and on the plans that the migrant has to change his work situation (they are planning to change more aspects of their work situation). Moreover, risk aversion increases

[12] "*Centro Nacional de Apoio à Integração de Migrantes"* is the National Centre of Support to Migrant Integration in Portugal. "*Centros Locais de Apoio à Integração de Migrantes"* are the Local Centres of Support to Migrant Integration in Portugal.
[13] People who do not have positive earnings and are not enrolled in education.

Table 1 - Effect of non-cognitive characteristics on the Employment Integration Index (Inverse Covariance Weighted)

		(1) Employment Index	(2) Employment Index	(3) Employment Index	(4) Employment Index	(5) Employment Index	(6) Employment Index
Time preferences	Max. willingness to pay to receive 1000 euros now and not in a year time	0.0002					
		(0.0001)					
	Impatience measured in intervals		0.0021				
			(0.0343)				
Risk preferences	Switching point			0.0000			
				(0.0043)			
	How much one would invest in the gamble				-0.0004		
					(0.0005)		
	Risk attitude first principal component					-0.0072	
						(0.0151)	
Grit	Grit Index (normalized)						0.0302
							(0.0553)
Controls	Years since migration	0.2064***	0.2022***	0.2019***	0.2024***	0.2019***	0.1985***
		(0.0384)	(0.0380)	(0.0370)	(0.0376)	(0.0371)	(0.0413)
	Years since migration (squared)	-0.0338***	-0.0333***	-0.0333***	-0.0334***	-0.0333***	-0.0327***
		(0.0075)	(0.0075)	(0.0073)	(0.0075)	(0.0074)	(0.0080)
	Age	0.0288***	0.0290***	0.0290***	0.0290***	0.0290***	0.0286***
		(0.0041)	(0.0041)	(0.0042)	(0.0043)	(0.0042)	(0.0044)
	Female	-0.1351*	-0.1358*	-0.1359*	-0.1364**	-0.1367**	-0.1361*
		(0.0618)	(0.0617)	(0.0630)	(0.0629)	(0.0635)	(0.0616)
	Educational attainments	-0.0032	-0.0033	-0.0033	-0.0032	-0.0032	-0.0032
		(0.0021)	(0.0021)	(0.0022)	(0.0021)	(0.0022)	(0.0021)
	Observations	799	799	799	799	799	799
	R-squared	0.0619	0.0615	0.0615	0.0617	0.0616	0.0617

Notes: Robust standard errors clustered at the level of the municipality are in parentheses. Every column reports the OLS estimated coefficients of the impact of non-cognitive characteristics on the Employment Index of integration. The first variable measuring impatience is the reported willingness to pay to receive a lottery prize of 1000€ now instead of receiving it in one year, in a hypothetical game. The variable measuring impatience in intervals assigns a category "Patient", "Somewhat Impatient", or "Impatient" to respondents, based on their willingness to pay. If they are not willing to pay any positive value, they are labelled as "Patient". If they are willing to pay between 0 and 100€, they are labelled as "Somewhat Impatient". If they are willing to pay between 100€ and 1000€, they are labelled as "Impatient". The first variable measuring risk attitudes is the switching point in a 15-rounds game, in which respondents must choose between a lottery and a fixed amount in every round. The expected value of the lottery is equal to the fixed amount in round 11. From round 1 to round 10, the expected value of the lottery is higher than the fixed amount, and it is lower than the fixed amount from round 12 to 15. The more rounds the respondents opt for the lottery, the more risk loving (less risk averse) they are. The second measure of risk preference is based on a hypothetical game in which respondents are told to imagine that they received a 100€ prize to spend as they please. Then, they are asked for the amount they would like to invest in a gamble with zero expected value. The more a migrant wish to invest in this gamble, the more risk loving he is. The third measure of risk aversion is the first principal component of the first two risk measures. Grit is measured through 12 standard questions in which respondents must say to which extent they agree with the sentences presented to them. Their answers are then combined in a normalized index.
*** p<0.01, ** p<0.05, * p<0.1.

the work income, the hourly wage, and the probability that a migrant is employed. Finally, grittier migrants are overqualified more often, work more weekly hours, and have more unstable contracts, on average, *ceteris paribus*. However, these results are not robust to multiple hypothesis testing, as indicated by their large Romano-Wolf p-values.

5.1.1. Overqualification

To provide a more comprehensive analysis of the overqualification of immigrants, we present in this section a comparative (non-causal) overview of overqualification situations for three different groups of people: our sample of Cape Verdean migrants living in Portugal at most for five years[14], working age (25-64 years old) Cape Verdean-born people living in Portugal, and working age Portuguese-born people living in Portugal. Data for these groups comes from a preliminary version of Census 2021.

Results of this descriptive analysis are presented in Tables 8 and 9, in the Appendix, accompanied by a detailed discussion of the comparative analysis on overqualification situations, which is presented after Table 9.

Overall, the most striking difference in overqualification when comparing Portuguese-born with Cape Verdean-born people is for (all) the qualification levels (BSc, MSc, and PhD), where the percentage of overqualified Cape Verdean workers more than doubles the percentage for the Portuguese. Regarding differences per sector, we see that the largest differences between Portuguese and Cape Verdean-born people are in the sectors of Administrative Personnel and Plant and Machine Operators and Assembly Workers. For every sector for which we have data, we see that our sample of recently arrived migrants faces overqualification situations much

[14] Construction of the measure of overqualification in our sample was complicated by the fact that we do not know exactly in which CITP group each worker belongs to (migrants were only asked in which sector they worked in), which makes it a less accurate measure than the ones used for Census data.

more often. There is a large difference between Cape Verdean born and recently arrived Cape Verdeans.

In our migrant sample, we had that around 20% of the immigrants were overqualified overall (109 out of 536 workers). This overall percentage of overqualification compares with a 4.5% of overqualified Portuguese-born people and with 5.1% of overqualified Cape Verdean-born people, from the Census data. This is suggestive evidence that situations of overqualification tend to become less common as time spent in the host country increases, as the main difference between the two Cape Verdean groups that we are considering is that our sample of immigrants is restricted to people that have been in Portugal for five years or less.

5.2. Social Inclusion

Table 2 reports estimates of the impact of impatience, risk aversion and grit on social integration. More risk averse migrants have significantly better levels of integration, to what social inclusion is concerned. One additional euro invested in the gamble decreases the Social Inclusion Index by 0.0033, significant at the 1% level. We find no significant impact of impatience or grit in our measure of social inclusion.

Because we are not sure of which variables matter the most to assess the level of social integration of migrants, we build an index including important factors that contribute to such integration. Table 10 reports estimates of the impact of our characteristics of interest on the different components of the Social Inclusion Index.

Negative effect of being more prone to take risks on the social inclusion variables is concentrated around the variables reporting satisfaction with support received from institutions. To explain these results, our reasoning is that more risk loving immigrants, being typically more entrepreneurial and prone to take initiatives (as shown by Batista and Umblijs, 2014), may seek health support more often, even when they are under more vulnerable or risky situations, and

Table 2 - Effect of non-cognitive characteristics on the Social Inclusion Integration Index (Inverse Covariance Weighted)

		(1) Social Inclusion Index	(2) Social Inclusion Index	(3) Social Inclusion Index	(4) Social Inclusion Index	(5) Social Inclusion Index	(6) Social Inclusion Index
Time preferences	Max. willingness to pay to receive 1000 euros now and not in a year time	-0.0004					
		(0.0004)					
	Impatience measured in intervals		0.0101				
			(0.0315)				
Risk preferences	Switching point			-0.0062			
				(0.0054)			
	How much one would invest in the gamble				-0.0033***		
					(0.0008)		
	Risk attitude first principal component					-0.0705**	
						(0.0240)	
Grit	Grit Index (normalized)						-0.0529
							(0.0809)
Controls	Years since migration	0.1719*	0.1858**	0.1837**	0.1882**	0.1846**	0.1906**
		(0.0849)	(0.0831)	(0.0806)	(0.0847)	(0.0817)	(0.0783)
	Years since migration (squared)	-0.0274*	-0.0291*	-0.0288*	-0.0303*	-0.0294*	-0.0298*
		(0.0151)	(0.0149)	(0.0147)	(0.0153)	(0.0150)	(0.0142)
	Age	0.0138***	0.0131***	0.0132***	0.0128***	0.0128***	0.0140***
		(0.0026)	(0.0027)	(0.0025)	(0.0023)	(0.0025)	(0.0020)
	Female	-0.2458***	-0.2429***	-0.2468***	-0.2473***	-0.2513***	-0.2432***
		(0.0530)	(0.0520)	(0.0508)	(0.0496)	(0.0478)	(0.0500)
	Educational attainments	0.0056**	0.0057**	0.0059**	0.0064**	0.0063**	0.0057*
		(0.0025)	(0.0026)	(0.0025)	(0.0023)	(0.0023)	(0.0026)
	Observations	799	799	799	799	799	799
	R-squared	0.0358	0.0327	0.0334	0.0426	0.0390	0.0334

Notes: Robust standard errors clustered at the level of the municipality are in parentheses. Every column reports the OLS estimated coefficients of the impact of non-cognitive characteristics on the Employment Index of integration. The first variable measuring impatience is the reported willingness to pay to receive a lottery prize of 1000€ now instead of receiving it in one year, in a hypothetical game. The variable measuring impatience in intervals assigns a category "Patient", "Somewhat Impatient", or "Impatient" to respondents, based on their willingness to pay. If they are not willing to pay any positive value, they are labelled as "Patient". If they are willing to pay between 0 and 100€, they are labelled as "Somewhat Impatient". If they are willing to pay between 100€ and 1000€, they are labelled as "Impatient". The first variable measuring risk attitudes is the switching point in a 15-rounds game, in which respondents must choose between a lottery and a fixed amount in every round. The expected value of the lottery is equal to the fixed amount in round 11. From round 1 to round 10, the expected value of the lottery is higher than the fixed amount, and it is lower than the fixed amount from round 12 to 15. The more rounds the respondents opt for the lottery, the more risk loving (less risk averse) they are. The second measure of risk preference is based on a hypothetical game in which respondents are told to imagine that they received a 100€ prize to spend as they please. Then, they are asked for the amount they would like to invest in a gamble with zero expected value. The more a migrant wish to invest in this gamble, the more risk loving he is. The third measure of risk aversion is the first principal component of the first two risk measures. Grit is measured through 12 standard questions in which respondents must say to which extent they agree with the sentences presented to them. Their answers are then combined in a normalized index.
*** p<0.01, ** p<0.05, * p<0.1.

they are unable to receive this support because of unofficial barriers to access that prevent immigrants from getting the support they need even when they are legally entitled to it, as we learned from public health officers during fieldwork in the Greater Lisbon metropolitan area. However, and importantly, these effects of risk attitudes on individual variables do not survive multiple hypothesis testing, as indicated by the large Romano Wolf p-values, and should hence be carefully interpreted.

5.3. Active Citizenship

We found a positive impact of impatience on the Active Citizenship Index of integration. As shown in Table 3, we found that when measuring impatience in three intervals, being "Somewhat Impatient" instead of "Patient", or "Impatient" instead of "Somewhat Impatient" increases the Active Citizenship Index by 0.1210, significant at the 10% level. Our predictions for the impact of impatience on active citizenship were ambiguous, as they depended on the set of characteristics that were relevant to navigate the Portuguese bureaucratic system, thereby achieving higher levels of citizenship integration. Results point to the effect of more impatient migrants preferring to regularise sooner than later as being the dominant effect.

We also found a positive effect of risk aversion on the Active Citizenship Index of integration, such that one additional euro invested in the gamble decreases the index by 0.0018, significant at the 1% level. This result is in line with our theoretical predictions, where we posited more risk-taking people to feel less stressed about regularizing their legal status.

We find no significant impact of grit in the Active Citizenship Integration Index.

Table 11 in the appendix reports estimates for the impact of impatience, risk aversion and grit on the variables that compose the Active Citizenship Integration index, separately. One finding reported in Table 11 is the impact that risk preferences and grit play on the satisfaction with the tax filing support received from institutions. One additional euro invested in the gamble

Table 3 - Effect of non-cognitive characteristics on the Active Citizenship Integration Index (Inverse Covariance Weighted)

		(1) Active Citizenship Index	(2) Active Citizenship Index	(3) Active Citizenship Index	(4) Active Citizenship Index	(5) Active Citizenship Index	(6) Active Citizenship Index
Time preferences	Max. willingness to pay to receive 1000 euros now and not in a year time	0.0003					
		(0.0003)					
	Impatience measured in intervals		0.1210*				
			(0.0587)				
Risk preferences	Switching point			-0.0039			
				(0.0055)			
	How much one would invest in the gamble				-0.0018***		
					(0.0004)		
	Risk attitude first principal component					-0.0397*	
						(0.0182)	
Grit	Grit Index (normalized)						-0.1214
							(0.1073)
Controls	Years since migration	0.2885***	0.2952***	0.2804***	0.2829***	0.2810***	0.2947***
		(0.0581)	(0.0543)	(0.0594)	(0.0598)	(0.0581)	(0.0550)
	Years since migration (squared)	-0.0311***	-0.0319***	-0.0301***	-0.0310***	-0.0305***	-0.0323***
		(0.0094)	(0.0089)	(0.0095)	(0.0096)	(0.0093)	(0.0088)
	Age	0.0139***	0.0124***	0.0142***	0.0140***	0.0140***	0.0159***
		(0.0028)	(0.0028)	(0.0028)	(0.0026)	(0.0027)	(0.0027)
	Female	-0.1430**	-0.1369**	-0.1464**	-0.1464**	-0.1487**	-0.1434**
		(0.0548)	(0.0547)	(0.0546)	(0.0546)	(0.0544)	(0.0515)
	Educational attainments	-0.0078**	-0.0077*	-0.0078**	-0.0075*	-0.0075*	-0.0080**
		(0.0035)	(0.0036)	(0.0035)	(0.0035)	(0.0035)	(0.0034)
	Observations	799	799	799	799	799	799
	R-squared	0.0850	0.0925	0.0855	0.0872	0.0848	0.0861

Notes: Robust standard errors clustered at the level of the municipality are in parentheses. Every column reports the OLS estimated coefficients of the impact of non-cognitive characteristics on the Active Citizenship Index of integration. The first variable measuring impatience is the reported willingness to pay to receive a lottery prize of 1000€ now instead of receiving it in one year, in a hypothetical game. The variable measuring impatience in intervals assigns a category "Patient", "Somewhat Impatient", or "Impatient" to respondents, based on their willingness to pay. If they are not willing to pay any positive value, they are labelled as "Patient". If they are willing to pay between 0 and 100€, they are labelled as "Somewhat Impatient". If they are willing to pay between 100€ and 1000€, they are labelled as "Impatient". The first variable measuring risk attitudes is the switching point in a 15-rounds game, in which respondents must choose between a lottery and a fixed amount in every round. The expected value of the lottery is equal to the fixed amount in round 11. From round 1 to round 10, the expected value of the lottery is higher than the fixed amount, and it is lower than the fixed amount from round 12 to 15. The more rounds the respondents opt for the lottery, the more risk loving (less risk averse) they are. The second measure of risk preference is based on a hypothetical game in which respondents are told to imagine that they received a 100€ prize to spend as they please. Then, they are asked for the amount they would like to invest in a gamble with zero expected value. The more a migrant wish to invest in this gamble, the more risk loving he is. The third measure of risk aversion is the first principal component of the first two risk measures. Grit is measured through 12 standard questions in which respondents must say to which extent they agree with the sentences presented to them. Their answers are then combined in a normalized index.
*** p<0.01, ** p<0.05, * p<0.1.

decreases the likelihood that a migrant has their demand for tax filling support being satisfied by 0.2 p.p. (significant at the 5% level), and a unit increase in the normalized index of grit decreased the probability that this demand is satisfied by 15.8 p.p. (significant at the 1% level). These results are robust to sample selection (*Heckit* model estimates are in Table 19 in the Appendix), but do not survive multiple hypothesis testing, as indicated by the large Romano Wolf p-values. We expected that more risk loving people would exhibit lower levels of integration in what active citizenship is concerned, but the estimated negative effect of grit on the satisfaction with the tax filling support received goes against our predictions. We predicted that grittier migrants would be better integrated in what active citizenship is concerned. However, the estimated results indicate that grittier individuals may be more diligent in finding and asking for support and therefore go through more negative experiences asking for the support they needed from institutions.

5.4. Assimilation Hypothesis

We find supporting evidence for the assimilation hypothesis[15] in every area of integration, whereby immigrant outcomes improve with years spent in the host country, at a decreasing rate. The magnitude and significance of the estimated coefficients for time spent in the host country (level and squared) are the largest in Active Citizenship, and the lowest around Social Inclusion. Older migrants exhibit better integration levels in all three areas. Being a woman is associated with integrating worse in the areas of Employment and Social Inclusion, but this effect if not significantly different from zero for Active Citizenship. The association between educational attainments depends on the area of integration that we are considering. Albeit not being significantly different from zero in the case of Employment, larger educational attainments are associated with significantly better levels of social inclusion and worse levels of citizenship.

[15] Detailed discussion of the assimilation hypothesis for every area of integration can be found on the Appendix.

6. Concluding remarks

This paper contributes to the general research question of what determines the successful integration of migrants in the host country. We exploit variation in impatience, risk attitudes and grit of immigrants to understand to which extent these characteristics determine their integration in the labour market, in social terms, and in what active citizenship is concerned. The paper therefore contributes to the literature on immigrant integration, by testing for the possibility that non cognitive characteristics of migrants do play a role in their integration, as well as to the literature on the behavioural effects of time and risk preferences and grit on several aspects of an immigrant's life.

Overall, our results point to a limited impact of impatience, risk aversion and grit on integration in the labour market. Regarding social inclusion, we find a positive effect of risk aversion on integration. Less risk averse people report lower levels of satisfaction with the health and accommodation support received from institutions, conditional on reporting that they needed health support, even if this result is not robust to multiple hypothesis testing. Neither impatience nor grit seem to impact social integration. Active citizenship is positively impacted by higher levels of impatience and risk aversion. Even though grit has no overall effect on citizenship integration, we find that being grittier decreases the likelihood that a migrant has their demand for tax support being satisfied, even if this result does not resist multiple hypothesis testing.

Given our results, we can conclude that institutions supporting immigrants' integration do seem to play an important role, as often migrants report not having received the support they needed. Also, the fact that impatience positively impacts the Active Citizenship Integration Index, suggests that migrants who prefer to regularize sooner than later exhibit higher levels of citizenship integration overall. Our results suggest that, even if Portugal has some of the best immigrant integration policies in the world, as pointed out by the country's high score in the MIPEX Index, reality seems to differ from the theory. In fact, there seems to be in place informal

barriers to full migrant integration, some of which non-cognitive characteristics of migrants may help to overcome.

Future research should be conducted to address some limitations of the paper. First, using cross sectional data does not allow us to investigate how the relationships between migrant integration and the individual non-cognitive characteristics of immigrants change over time. Non-cognitive characteristics might have different relative importance in determining integration as migrants spent more time in the host country, which could be assessed by following these people over time. Also, it would be important to test for the mechanisms leading to our results, as well as testing for other determinants of integration that are still understudied in the literature. In particular, it would be relevant to understand which role hosting institutions and hosting society perceptions regarding migrant integration play in the social integration of immigrants.

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Appendix

Table 4 - Descriptive Statistics

	Mean	SD	N	Min	Max
Panel A - Individual demographic characteristics					
Female	0.5607	0.4966	799	0	1
Age	27.51	7.26	799	18	65
Years Since Migration	2.33	1.3	799	0	5
Educational Attainments					
Completed Primary School	0.0213	0.1444	799	0	1
Completed High School	0.7909	0.4138	799	0	1
Completed Higher Education	0.1952	0.3966	799	0	1
Main Occupation					
Employee	0.6496	0.4774	799	0	1
Self-employed	0.03	0.1708	799	0	1
Student	0.1539	0.3611	799	0	1
Retired	0.0013	0.0354	799	0	1
Unemployed	0.1539	0.3611	799	0	1
Marital Status					
Married or living as a couple	0.1252	0.3311	799	0	1
Single / Divorced / Widow	0.8748	0.3311	799	0	1
Language spoken at home					
Portuguese	0.0826	0.2755	799	0	1
Crioule	0.9149	0.2792	799	0	1
Religion					
Catholic	0.771	0.4205	799	0	1
Non-religious	0.1439	0.3512	799	0	1
Panel B - Explanatory Variables (time and risk preferences and grit)					
Degree of impatience					
Max. willingness to pay to receive 1000 euros now and not in a year time	76.48	129.74	799	0	1000
Risk attitude					
Number of rounds for which one chooses a lottery over a fixed amount	5	4.4	799	0	15
How many euros one invests in a gamble	39.7	30.64	799	0	100
Grit					
Grit Index (normalized)	0.6138	0.5312	799	-2	2
Panel C - Employment descriptives					
Overqualified	0.2034	0.4029	536	0	1
Work Income	651.3	254.48	548	0	2300
Weekly hours worked	38.47	13.73	562	0	108
Hourly Wage	4.08	2.14	491	0	35
Total Income	523.09	352.49	791	0	2600
Satisfied Demand for Work support	0.2456	0.4309	452	0	1
Employment Contract					
Permanent	0.233	0.4231	545	0	1
Temporary (for more than 1 year)	0.1486	0.356	545	0	1
Temporary (for less than 1 year)	0.3982	0.49	545	0	1

No Contract	0.1615	0.3683	545	0	1
Panel D - Social Inclusion descriptives					
At risk of poverty	0.4159	0.4932	791	0	1
Self-reported health status	3.66	0.84	797	1	5
Felt limited due to health issues	2.66	0.59	797	1	3
Satisfied demand for health support	0.2456	0.4311	338	0	1
Satisfied demand for psychological support	0.093	0.2913	172	0	1
Satisfied demand for support with accommodation	0.155	0.3625	329	0	1
Satisfied demand for food support	0.1773	0.3829	203	0	1
Difference in closeness to a Cape Verdean and to a Portuguese woman	1.36	1.75	799	-4	6
Difference in closeness to a Cape Verdean and to a Portuguese man	1.19	1.77	799	-4	6
Panel E - Active Citizenship Descriptives					
Has a national tax number	0.9775	0.1485	799	0	1
Has a social security number	0.8158	0.3879	798	0	1
Has a national health number	0.6801	0.4667	797	0	1
Steps taken in SEF					
Searched for info. to get a residency permit	0.8999	0.3004	799	0	1
+ Tried to schedule an appointment at SEF	0.8915	0.3112	719	0	1
+ Scheduled an appointment at SEF	0.8894	0.3139	687	0	1
+ Went to an appointment at SEF	0.8552	0.3522	656	0	1
Has a temporary residency permit	0.9113	0.2846	575	0	1
Has a permanent residency permit	0.0365	0.1877	575	0	1
Satisfied demand for legal support	0.1429	0.351	168	0	1
Satisfied demand for support w/ documentation	0.4069	0.4917	521	0	1
Satisfied demand for tax filling support	0.03023	0.4599	354	0	1

Table 5 - Dependent Variables (Integration)

	Unit of measurement	Definition	Reflection on integration
Panel A - Employment			
Not Overqualified	Binary variable	Equals one for people with any level of tertiary education complete (BSc, MSc or PhDs) that is currently working in an occupation that requires such level of education (CITP 4 a CITP 9), or who haven't completed any level of tertiary education.	Better integrated migrants are not overqualified more often
Work Income	Euros	Inverse hyperbolic sin transformation of monthly work income. This transformation allows for an interpretation of results in percentual terms, but, contrary to the log transformation, it does not imply loss of the observations equal to zero.	Better integrated migrants have larger incomes, because they should work more hours or because they earn a higher hourly wage
Weekly Hours Worked	Hours	Hours worked per week.	Better integrated migrants work more hours per week
Hourly Wage	Euros per hour	Hourly wage.	Better integrated migrants earn a higher hourly wage, as they are more productive in the labour market
Total Income	Euros	Inverse hyperbolic sin transformation of monthly total income. This transformation allows for an interpretation of results in percentual terms, but, contrary to the log transformation, it does not imply loss of the observations equal to zero.	Better integrated migrants have larger total incomes, because they can have larger work incomes or because they receive social transfers
Idle	Binary variable	Equals one for people who do not have positive earnings and are not enrolled in education.	Better integrated migrants are idle less often.
Employed	Binary variable	Equals one for people who are employed.	Better integrated migrants are employed more often
Employee	Binary variable	Equals one for people who are employees (rather than self-employed), conditional on being employed.	Because our sample only includes migrants arriving to Portugal from 2017 onwards, we posit that better integrated migrants are employees more often
Contract Stability	4-level variable ranging from "No contract" to "Permanent Contract"	The level of contract stability depends on the contract type, conditional on being employed and not self-employed. Contract types can be: "No Contract", "Temporary (less than 1 year) Contract", "Temporary (more than 1 year) Contract", and "Permanent Contract".	Better integrated migrants have more stable contracts

Satisfied Demand for Work support	Binary variable	Equals one if the migrant received support in finding work, conditional on having reported needing help in this area.	Better integrated migrants have their demand for work support satisfied more often
Plans to Change Work Situation	8-level variable ranging from not planning on changing anything about their work situation, to planning to change 8 different things about their work situation	Options of things one is planning to change include finding a job in an area that they like, a job that is better paid, a more stable job, a job that is closer to home, being promoted, starting a business, expanding their business, or having a better schedule.	We posit better integrated migrants to be planning to change something (and more things) about their work. Notably, the question is regarding what they are **planning** to change, not about what they **would like to** change
Panel B - Social Inclusion			
At risk of poverty	Binary variable	Equals one for people who are at the risk of poverty, that is, with a net disposable income of less than 60% of the national median. In 2021, it corresponds to someone earning a net income of less than 551€ per month.	Better integrated migrants are at risk of poverty less often
Plans to Change Something About their Life	Binary variable	Equals one for people who are planning to change at least one thing about their life (other than work-related). Includes getting married, having a baby, bringing someone to Portugal, rent a home, improve their health, get to know more people in Portugal, etc.	We posit better integrated migrants to be planning to change something about their life. Notably, the question is regarding what they are **planning** to change, not about what they **would like to** change
Self-reported health status	5-level variable ranging from “Very poor” to “Very good”	Measures self-reported health status in a general perspective.	Better integrated migrants have better self-reported health status, either because their health is better, or because they are optimistic about it
Felt limited due to health issues	3-level variable ranging from “Very limited” to “Not limited at all”	Measures how limited people felt in the 6 months prior to the interview in conducting daily life activities.	Better integrated migrants feel less limited doing daily life activities
Mental Health Index (Normalized)	Normalized index of mental health (mean zero) and ranging from -2 to 2.	Normalized index of mental health based on nine questions regarding mental health, whose answers range from "Do not agree at all" to "Completely agree".	Better integrated migrants exhibit higher levels of mental health
Satisfied demand for health support	Binary variable	Equals one if the migrant received health support, conditional on having reported needing help in this area.	Better integrated migrants have their demand for health support satisfied more often
Satisfied demand for psychological support	Binary variable	Equals one if the migrant received psychological support, conditional on having reported needing help in this area.	Better integrated migrants have their demand for psychological support satisfied more often

Satisfied demand for support with accommodation	Binary variable	Equals one if the migrant received support with accommodation, conditional on having reported needing help in this area.	Better integrated migrants have their demand for support with accommodation satisfied more often
Satisfied demand for food support	Binary variable	Equals one if the migrant received food support, conditional on having reported needing help in this area.	Better integrated migrants have their demand for food support satisfied more often
Closeness measures: *Difference in closeness to a Cape Verdean from a Portuguese woman* *Difference in closeness to a Cape Verdean from a Portuguese man*	7-level variables ranging from feeling distant to feeling very close to someone	Pictures of four different people were shown to each respondent, in a randomized way, corresponding to a Cape Verdean woman, a Portuguese woman, a Cape Verdean man, and a Portuguese man. Measures were constructed subtracting (separately for men and women) the degree of closeness to the Portuguese man or woman to the Cape Verdean man or woman, respectively. Measures how close one feels to the Portuguese, as compared to how close he feels to a similar Cape Verdean.	Better integrated migrants have a smaller difference in closeness
Panel C - Active Citizenship			
Has a tax number	Binary variable	Equals one if the migrant has a tax number.	Better integrated migrants have tax numbers more often
Has a social security number	Binary variable	Equals one if the migrant has a social security number.	Better integrated migrants have social security numbers more often
Has a health number	Binary variable	Equals one if the migrant has a health number.	Better integrated migrants have health numbers more often
Process at SEF: *Searched for information to get a residency permit* *+ Tried to schedule an appointment at SEF* *+ Scheduled an appointment at SEF* *+ Went to an appointment at SEF* *Has a temporary residency permit* *Has a permanent residency permit*	Binary variables conditional on having completed the previous step. The exception to this rule regards the last one described ("Has a permanent residency permit"), which is conditional on "Went to an appointment at SEF"	To acquire residency permits, migrants need to go through a long process at SEF (Portuguese Foreign Office). These variables correspond to the subsequent steps migrants need to take during the process.	Better integrated migrants complete more steps of this process

Satisfied demand for legal support	Binary variable	Equals one if the migrant received legal support, conditional on having reported needing help in this area.	Better integrated migrants have their demand for legal support satisfied more often
Satisfied demand for support w/ documentation	Binary variable	Equals one if the migrant received support with documentation, conditional on having reported needing help in this area.	Better integrated migrants have their demand for support with documentation satisfied more often
Satisfied demand for tax filling support	Binary variable	Equals one if the migrant received tax filling support (e.g., filling income statements), conditional on having reported needing help in this area.	Better integrated migrants have their demand for tax support satisfied more often
Plans to Obtain documentation	Binary variable	Equals one if the migrant is planning on obtaining documentation.	We posit better integrated migrants to be planning to obtain documentation. Notably, the question is regarding what they are **planning** to obtain, not about whether they **would like to** obtain
Difficulty in Obtaining Documentation	Binary variable	Equal to one if the migrant reported not being able to obtain documentation.	Better integrated migrants are less likely to report not being able to obtain documentation

Table 6 - Variables used in the Heckman Selection Model

Heckman selection model	
Outcome Variable	**Explanatory Variables determining the decision of reporting needing help in that area**
Satisfied demand for work support	Dummy variables for "Planning to find a better-paid job" and "Planning to bring someone to Portugal"
Satisfied demand for health support	Self-reported health status and Dummy variables for "Planning to get documentation" and "Planning to improve one's health (healthier habits)"
Satisfied demand for psychological support	Mental Health Index (normalized)
Satisfied demand for support with accommodation	Dummy variables for "Planning to bring someone to Portugal" and "Would like to be promoted"
Satisfied demand for food support	Mental Health Index (normalized) and Dummy variable for "Planning to bring someone to Portugal"
Satisfied demand for legal support	Mental Health Index (normalized)
Satisfied demand for support w/ documentation	Dummy variable for "Planning to find a better-paid job"
Satisfied demand for tax filling support	Dummy variables for "Planning to find a better-paid job" and "Planning to be promoted"

Table 7 - Employment Integration Index Deconstructed (with Romano-Wolf Multiple Hypothesis Testing Correction)

		(1) Not Overqualified	(2) Work Income	(3) Weekly Hours Worked	(4) Hourly Wage	(5) Total Income	(6) Idle	(7) Employed	(8) Employee	(9) Contract Stability	(10) Satisfied Demand for Work Support	(11) Plans to Change Work Situation
Time Preferences	Max. willingness to pay to receive 1000 euros now and not in a year time	-0.0001	0.0005*	-0.0004	-0.0004	0.0014***	-0.0002**	0.0001	0.0001	-0.0002	-0.0002***	0.0007***
		(0.0001)	(0.0002)	(0.0047)	(0.0003)	(0.0003)	(0.)	(0.0001)	(0.0001)	(0.0002)	(0.)	(0.0002)
		[0.6139]	[0.5743]	[0.9802]	[0.6139]	[0.2871]	[0.1881]	[0.7921]	[0.6139]	[0.7822]	[0.0594]	[0.3069]
	Impatience measured in intervals	-0.0228	0.0757	0.4495	0.0013	0.1622***	-0.0275*	-0.0067	0.0205*	-0.042	-0.0441**	0.3009***
		(0.0141)	(0.0625)	(0.436)	(0.0705)	(0.0435)	(0.0086)	(0.0185)	(0.009)	(0.0464)	(0.0172)	(0.066)
		[0.6931]	[0.8218]	[0.8515]	[0.9901]	[0.3465]	[0.4455]	[0.9505]	[0.5248]	[0.8515]	[0.4752]	[0.2673]
Risk Preferences	Switching point	0.0003	-0.0088	0.0817	-0.0286	0.0124	-0.0028	0.0008	0.0022	0.0039	0.0068	-0.0098
		(0.0021)	(0.0091)	(0.0938)	(0.0269)	(0.0234)	(0.0026)	(0.0043)	(0.0015)	(0.0064)	(0.0042)	(0.0091)
		[1.0000]	[0.8218]	[0.8218]	[0.8218]	[0.9010]	[0.8218]	[1.0000]	[0.7723]	[0.9010]	[0.6733]	[0.8218]
	How much one would invest in the gamble	-0.0008	-0.0013	0.0097	-0.0023	-0.0019	0.0001	-0.0006**	0.0006	0.002	0.0003	-0.0033
		(0.0005)	(0.0007)	(0.0093)	(0.0016)	(0.0022)	(0.0003)	(0.0002)	(0.0005)	(0.0017)	(0.0006)	(0.0034)
		[0.7228]	[0.7228]	[0.7921]	[0.7723]	[0.7921]	[0.7921]	[0.6733]	[0.7723]	[0.7921]	[0.7921]	[0.7921]
	Risk attitude first principal component	-0.0122	-0.0411*	0.3495	-0.1048*	-0.0023	-0.0047	-0.0075	0.0149	0.0412	0.0224	-0.0794
		(0.0089)	(0.0214)	(0.3162)	(0.0514)	(0.0928)	(0.0113)	(0.0105)	(0.0097)	(0.0352)	(0.0164)	(0.0729)
		[0.7426]	[0.6733]	[0.8119]	[0.6733]	[0.9604]	[0.8119]	[0.8119]	[0.7228]	[0.8119]	[0.7426]	[0.8119]

Grit	Grit Index (normalized)	-0.0554**	0.1167	2.1588***	0.2277	0.1876	-0.0147	0.0292	-0.0173	-0.1506*	-0.0118	-0.0981
		(0.0158)	(0.0937)	(0.6771)	(0.1816)	(0.1308)	(0.0108)	(0.0412)	(0.0165)	(0.0687)	(0.0218)	(0.0687)
		[0.2475]	[0.6436]	[0.2673]	[0.6436]	[0.6436]	[0.6436]	[0.6436]	[0.6436]	[0.4752]	[0.6436]	[0.6436]
	Observations	536	548	552	491	791	790	799	543	513	452	799
	Controls Included	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Robust standard errors clustered at the level of the municipality are in parentheses. Romano-Wolf p-values are in squared-parentheses. Every column reports the OLS estimated coefficients of the impact of non-cognitive characteristics on the integration measure belonging to the Employment Index of integration. The first variable measuring impatience is the reported willingness to pay to receive a lottery prize of 1000€ now instead of receiving it in one year, in a hypothetical game. The variable measuring impatience in intervals assigns a category “Patient”, “Somewhat Impatient”, or “Impatient” to respondents, based on their willingness to pay. If they are not willing to pay any positive value, they are labelled as “Patient”. If they are willing to pay between 0 and 100€, they are labelled as “Somewhat Impatient”. If they are willing to pay between 100€ and 1000€, they are labelled as “Impatient”. The first variable measuring risk attitudes is the switching point in a 15-rounds game, in which respondents must choose between a lottery and a fixed amount in every round. The expected value of the lottery is equal to the fixed amount in round 11. From round 1 to round 10, the expected value of the lottery is higher than the fixed amount, and it is lower than the fixed amount from round 12 to 15. The more rounds the respondents opt for the lottery, the more risk loving (less risk averse) they are. The second measure of risk preference is based on a hypothetical game in which respondents are told to imagine that they received a 100€ prize to spend as they please. Then, they are asked for the amount they would like to invest in a gamble with zero expected value. The more a migrant wish to invest in this gamble, the more risk loving he is. The third measure of risk aversion is the first principal component of the first two risk measures. Grit is measured through 12 standard questions in which respondents must say to which extent they agree with the sentences presented to them. Their answers are then combined in a normalized index. Not Overqualified is a binary variable equal to one for people with any level of tertiary education complete (BSc, MSc or PhDs) that is currently working in an occupation that requires such level of education (CITP 4 a CITP 9), or who haven't completed any level of tertiary education. Work (total) income is the inverse hyperbolic sin transformation of monthly work (total) income. Weekly hours worked is the number of hours worked per week. Idle is a binary variable equal to one for people who do not have positive earnings and are not enrolled in education. Employed is a binary variable equal to one for people who are employed. Employee is binary variable equal to one for people who are employees (rather than self-employed), conditional on being employed. Contract Stability is a 4-level variable ranging from "No contract" to “Permanent Contract". The level of contract stability depends on the contract type, conditional on being employed and not self-employed. Satisfied Demand for Work support is a binary variable equal to one if the migrant received support in finding work, conditional on having reported needing help in this area. Plans to Change Work Situation is an 8-level variable ranging from not planning on changing anything about their work situation, to planning to change 8 different things about their work situation.

*** p<.01, ** p<.05, * p<.1

Table 8 - Difference in overqualification (% total by educational level) by country of origin

Educational level	Portuguese (25-64)	Cape Verde (25-64)
Bachelors	16.2%*	38.09%
Masters	8.77%	19.89%
PhD	2.76%	6.76%

* It reads: "16.2% of Portuguese-born people aged 25-64 owning a bachelor's degree is currently working in a sector that does not require such level of qualification."

Table 9 - Difference in overqualification (% total by CITP) by group of interest

CITP	Portuguese (25-64)	Cape Verde (25-64)	Our sample
4: Administrative Personnel	23.05%*	31.74%	NA
5: Personal, Protection and Security Services and Salesmanship	8.91%	9.87%	21.39%
6: Agriculture, Fishing and Forest	2.92%	0.83%	NA
7: Skilled Workers in Industry, Construction and Craftsmen	1.47%	1.65%	18.18%
8: Plant and Machine Operators and Assembly Workers	1.29%	5.18%	25%
9: Non-Qualified Workers	2.56%	3.12%	21.17%

* It reads: 23.05% of Portuguese-born people aged 25-64 working as "Administrative Personnel" is overqualified, i.e., has completed a bachelors, masters, or PhD degree.

Discussion of the comparative analysis on overqualification situations

From the qualification's standpoint, 16% of the Portuguese-born population aged 25-64 that has completed a BSc is working in sectors that do not require such level of qualifications. This percentage is 9% for people owning a MSc and 3% for people owning a PhD. However, 38% of Cape Verdean-born population aged 25-64 living in Portugal that own a BSc is currently working in sectors that do not require such level of qualifications. This percentage is 20% for people owning a MSc and 7% for people owning a PhD.

We also looked at which percentage of the population is overqualified by occupational sector. Only CITP 4 (Administrative Personnel) to CITP 9 (Non-Qualified Workers) can have overqualified workers, because CITP 1 [16], CITP 2, and CITP 3 do require some degree of higher education.

Firstly, 23% of the Portuguese-born population aged 25-64 working as Administrative Personnel is overqualified (i.e., owns some degree of higher education – BSc, MSc or PhD), whereas this percentage is of 32% for Cape Verdean born people. 9% of the Portuguese-born population aged 25-64 working in Personal, Protection and Security Services and Salesmanship is overqualified, whereas this percentage is of 10% for Cape Verdean born people, and 21% for our sample of immigrants. For the sector of Agriculture, Fishing and Forest, the percentages are lower for Cape Verdean-born people, but this is also a reflection of the reduced number of Cape Verdean employees in this sector: percentages are of 3% for Portuguese-born and 1% for Cape Verdean-born. For the sector of Skilled Workers in Industry, Construction and Craftsmen, 1% of the

[16] CITP 1: Representatives of the legislative power and of executive bodies, directors, and executive managers; CITP 2: Specialists in intellectual and scientific activities; CITP 3: Technicians and mid-level professions

Portuguese-born population is overqualified, whereas this percentage is of 2% for Cape Verdean born people, and 18% for our sample of immigrants. For the sector of Plant and Machine Operators and Assembly Workers, 1% of the Portuguese-born population is overqualified, whereas this percentage is of 5% for Cape Verdean born people, and 25% for our immigrant sample. Finally, for the sector of Non-Qualified Workers, the percentage of overqualified Portuguese-born population is roughly the same as it is for Cape Verdean born people: 3%; whereas in our immigrant sample this percentage is of 21%.

Table 10 - Social Inclusion Integration Index Deconstructed (with Romano-Wolf Multiple Hypothesis Testing Correction)

		(1) Not at Risk of Poverty	(2) Plans to Change Something About his Life	(3) Self-Reported Health Status	(4) Mental Health Index (Normalized)	(5) Feels Limited due to Health Issues	(6) Satisfied Demand for Health Support	(7) Satisfied Demand for Psychological Support	(8) Satisfied Demand for Accommodation Support	(9) Satisfied Demand for Food Support	(10) Closeness to a Portuguese Man	(11) Closeness to a Portuguese Woman
Time Preferences	Max. willingness to pay to receive 1000 euros now and not in a year time	-0.0001	-0.0001	0.0001	0.0000	-0.0002*	-0.0003*	-0.0002	0.0000	0.0002	0.0002	-0.0007
		(0.0001)	(0.)	(0.0002)	(0.0002)	(0.0001)	(0.0001)	(0.0002)	(0.0001)	(0.0001)	(0.0003)	(0.0007)
		[0.9010]	[0.8515]	[0.9505]	[0.9901]	[0.6634]	[0.6436]	[0.8515]	[0.9901]	[0.8515]	[0.9010]	[0.8515]
	Impatience measured in intervals	-0.0076	0.0109	0.0542**	-0.0059	0.0005	-0.0206	-0.0584**	0.0156	0.0311	-0.0066	-0.1237
		(0.0124)	(0.0164)	(0.0233)	(0.0427)	(0.0317)	(0.0227)	(0.0215)	(0.0224)	(0.0326)	(0.0362)	(0.0883)
		[0.9406]	[0.9406]	[0.6040]	[1.0000]	[1.0000]	[0.8911]	[0.5347]	[0.9208]	[0.8911]	[1.0000]	[0.8119]
Risk Preferences	Switching point	0.0014	0.0000	-0.0062	-0.0076	0.0018	0.0031	-0.0002	0.0058	0.0080	-0.0202	-0.0202
		(0.0033)	(0.0021)	(0.0043)	(0.0056)	(0.0059)	(0.0058)	(0.0036)	(0.0049)	(0.0044)	(0.0121)	(0.0129)
		[1.0000]	[1.0000]	[0.9010]	[0.9010]	[1.0000]	[0.9703]	[1.0000]	[0.9010]	[0.7822]	[0.8119]	[0.8713]
	How much one would invest in the gamble	-0.0002	-0.0009*	-0.0009	0.0003	0.0000	-0.0022***	0.0005	-0.0011**	0.0002	-0.0003	-0.0037**
		(0.0003)	(0.0004)	(0.001)	(0.0011)	(0.0003)	(0.0006)	(0.0005)	(0.0004)	(0.0005)	(0.0011)	(0.0013)
		[0.9010]	[0.6535]	[0.8911]	[0.9703]	[0.9703]	[0.2772]	[0.8713]	[0.4356]	[0.9703]	[0.9703]	[0.4455]
	Risk attitude first principal component	-0.0005	-0.0148	-0.0304	-0.0138	0.0051	-0.0303	0.0077	-0.0058	0.0205	-0.0537	-0.1110**
		(0.0127)	(0.0094)	(0.0235)	(0.0294)	(0.0151)	(0.0211)	(0.0132)	(0.0148)	(0.0166)	(0.0368)	(0.0493)
		[1.0000]	[0.7426]	[0.7921]	[0.9604]	[0.9802]	[0.7723]	[0.9604]	[0.9802]	[0.8119]	[0.7723]	[0.5644]

Grit	Grit Index (normalized)	0.0535	0.0363	0.0336	-0.068**	-0.0315	-0.1316*	0.0041	-0.0235	-0.0282	-0.0390	-0.1579
		(0.0517)	(0.0267)	(0.0544)	(0.0268)	(0.0244)	(0.0686)	(0.0444)	(0.0322)	(0.0665)	(0.1594)	(0.127)
		[0.9307]	[0.8317]	[0.9604]	[0.6436]	[0.8515]	[0.7426]	[0.9703]	[0.9604]	[0.9703]	[0.9703]	[0.8515]
	Observations	791	799	797	710	797	338	172	329	203	799	799
	Controls Included	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Robust standard errors clustered at the level of the municipality are in parentheses. Romano-Wolf p-values are in squared-parentheses. Every column reports the OLS estimated coefficients of the impact of non-cognitive characteristics on the integration measure belonging to the Social Inclusion Index of integration. The first variable measuring impatience is the reported willingness to pay to receive a lottery prize of 1000€ now instead of receiving it in one year, in a hypothetical game. The variable measuring impatience in intervals assigns a category "Patient", "Somewhat Impatient", or "Impatient" to respondents, based on their willingness to pay. If they are not willing to pay any positive value, they are labelled as "Patient". If they are willing to pay between 0 and 100€, they are labelled as "Somewhat Impatient". If they are willing to pay between 100€ and 1000€, they are labelled as "Impatient". The first variable measuring risk attitudes is the switching point in a 15-rounds game, in which respondents must choose between a lottery and a fixed amount in every round. The expected value of the lottery is equal to the fixed amount in round 11. From round 1 to round 10, the expected value of the lottery is higher than the fixed amount, and it is lower than the fixed amount from round 12 to 15. The more rounds the respondents opt for the lottery, the more risk loving (less risk averse) they are. The second measure of risk preference is based on a hypothetical game in which respondents are told to imagine that they received a 100€ prize to spend as they please. Then, they are asked for the amount they would like to invest in a gamble with zero expected value. The more a migrant wish to invest in this gamble, the more risk loving he is. The third measure of risk aversion is the first principal component of the first two risk measures. Grit is measured through 12 standard questions in which respondents must say to which extent they agree with the sentences presented to them. Their answers are then combined in a normalized index. At risk of poverty is a binary variable equal to one for people who are at the risk of poverty, that is, with a net disposable income of less than 60% of the national median. Plans to Change Something About their Life is a binary variable equal to one for people who are planning to change at least one thing about their life (other than work-related). Self-reported health status is a 5-level variable ranging from "Very poor" to "Very good" measuring self-reported health status in a general perspective. Felt limited due to health issues is a 3-level variable ranging from "Very limited" to "Not limited at all". Mental Health Index (Normalized) is a normalized index of mental health (mean zero) and ranging from -2 to 2. Satisfied demand for health / psychological / accommodation / food support is a binary variable, equal to one if the migrant received health / psychological / accommodation / food support, conditional on having reported needing help in this area. Closeness measures are 7-level variables ranging from feeling distant to feeling very close to someone native.

**** p<.01, ** p<.05, * p<.1*

Table 11 - Active Citizenship Integration Index Deconstructed (with Romano- Wolf Multiple Hypothesis Testing Correction)

		(1) Has Tax No.	(2) Has Social Security No.	(3) Has Health No.	(4) Searched for Info to get a Residency Permit	(5) + Tried to Schedule an Appoint-ment at SEF	(6) + Schedu-led an Appoint-ment at SEF	(7) + Went to an Appoint-ment at SEF	(8) Has Temporary Residency Permit	(9) Has Permanent Residency Permit	(10) Satisfied Demand for Legal Support	(11) Satisfied Demand for Documen-tation Support	(12) Satisfied Demand for Tax Filling Support	(13) Plans to Obtain Documen-tation	14) Difficulty in Obtaining Documen-tation
Time Preferences	Max. willingness to pay to receive 1000 euros now and not in a year time	0.0000	0.0000	-0.0002***	0.0001**	0.0000	0.0001	0.0000	-0.0001*	0.0000	-0.0003***	-0.0001	-0.0002	0.0003***	0.0000
		(0.)	(0.0001)	(0.0001)	(0.)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0002)
		[0.9604]	[1.0000]	[0.4455]	[0.5347]	[1.0000]	[0.8515]	[0.8911]	[0.7426]	[1.0000]	[0.3366]	[0.8515]	[0.8614]	[0.3366]	[1.0000]
	Impatience measured in intervals	0.0034	0.0141	-0.0351***	0.0223*	0.0137	0.0252**	0.005	-0.0077	-0.0047	-0.0367**	0.0228	-0.002	0.0910**	-0.0027
		(0.0075)	(0.0216)	(0.0097)	(0.0114)	(0.0135)	(0.008)	(0.0169)	(0.0179)	(0.0073)	(0.0143)	(0.0213)	(0.0241)	(0.0375)	(0.0294)
		[0.9802]	[0.9109]	[0.4257]	[0.7129]	[0.9010]	[0.4851]	[0.9802]	[0.9802]	[0.9307]	[0.6634]	[0.8911]	[0.9901]	[0.6832]	[0.9901]
Risk Preferences	Switching point	0.0001	0.0008	-0.0031	-0.0008	-0.0013	-0.004	0.0012	0.0026	-0.0036**	-0.0004	0.0004	0.0006	0.0013	0.0139***
		(0.0007)	(0.0033)	(0.0039)	(0.0015)	(0.002)	(0.0023)	(0.0026)	(0.0022)	(0.0014)	(0.0053)	(0.008)	(0.0046)	(0.0033)	(0.0021)
		[0.9901]	[0.9901]	[0.9604]	[0.9901]	[0.9802]	[0.6436]	[0.9901]	[0.8614]	[0.4455]	[1.0000]	[1.0000]	[0.9901]	[0.9901]	[0.1188]
	How much one would invest in the gamble	0.0000	0.0003	-0.0005*	-0.0001	-0.0002	-0.0001	0.0002	0.0004	-0.0004	0.0000	-0.0006	-0.0024***	-0.0013***	0.0000
		(0.0001)	(0.0004)	(0.0002)	(0.0002)	(0.0003)	(0.0001)	(0.0004)	(0.0004)	(0.0003)	(0.0016)	(0.0005)	(0.0005)	(0.0003)	(0.001)
		[0.9505]	[0.9208]	[0.7426]	[0.9208]	[0.9208]	[0.9505]	[0.9505]	[0.8515]	[0.8515]	[1.0000]	[0.8515]	[0.3465]	[0.3465]	[1.0000]
	Risk attitude first principal component	0.0009	0.0067	-0.0152	-0.0041	-0.0058	-0.0111*	0.0059	0.0135	-0.0153	-0.0006	-0.0089	-0.0410**	-0.0184	0.0377**
		(0.0037)	(0.0136)	(0.0117)	(0.0033)	(0.0064)	(0.0061)	(0.0092)	(0.0089)	(0.0085)	(0.0324)	(0.0188)	(0.016)	(0.0103)	(0.0163)
		[0.9406]	[0.9406]	[0.8020]	[0.8020]	[0.8812]	[0.7129]	[0.9208]	[0.7228]	[0.7129]	[0.9901]	[0.9406]	[0.5050]	[0.7129]	[0.5644]

Grit	Grit Index (normalized)	-0.0036	0.0156	0.0147	-0.0229	0.0245	-0.0301	-0.0205	-0.0117	0.0018	-0.0159	-0.0124	-0.1584*	-0.0696	0.0847
		(0.0042)	(0.0348)	(0.0337)	(0.0169)	(0.0149)	(0.0231)	(0.0242)	(0.0197)	(0.0048)	(0.0541)	(0.0259)	(0.085)	(0.046)	(0.0515)
		[0.8812]	[0.9703]	[0.9703]	[0.8020]	[0.7822]	[0.8020]	[0.8812]	[0.9505]	[0.9703]	[0.9703]	[0.9703]	[0.7426]	[0.7822]	[0.7822]
	Observations	799	798	797	799	719	687	656	575	575	168	521	354	799	401
	Controls Included	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Notes: Robust standard errors clustered at the level of the municipality are in parentheses. Romano-Wolf p-values are in squared-parentheses. Every column reports the OLS estimated coefficients of the impact of non-cognitive characteristics on the integration measure belonging to the Employment Index of integration. The first variable measuring impatience is the reported willingness to pay to receive a lottery prize of 1000€ now instead of receiving it in one year, in a hypothetical game. The variable measuring impatience in intervals assigns a category “Patient”, “Somewhat Impatient”, or “Impatient” to respondents, based on their willingness to pay. If they are not willing to pay any positive value, they are labelled as “Patient”. If they are willing to pay between 0 and 100€, they are labelled as “Somewhat Impatient”. If they are willing to pay between 100€ and 1000€, they are labelled as “Impatient”. The first variable measuring risk attitudes is the switching point in a 15-rounds game, in which respondents must choose between a lottery and a fixed amount in every round. The expected value of the lottery is equal to the fixed amount in round 11. From round 1 to round 10, the expected value of the lottery is higher than the fixed amount, and it is lower than the fixed amount from round 12 to 15. The more rounds the respondents opt for the lottery, the more risk loving (less risk averse) they are. The second measure of risk preference is based on a hypothetical game in which respondents are told to imagine that they received a 100€ prize to spend as they please. Then, they are asked for the amount they would like to invest in a gamble with zero expected value. The more a migrant wish to invest in this gamble, the more risk loving he is. The third measure of risk aversion is the first principal component of the first two risk measures. Grit is measured through 12 standard questions in which respondents must say to which extent they agree with the sentences presented to them. Their answers are then combined in a normalized index. "Has a tax number" is a binary variable equal to one if the migrant has a tax number. "Has a social security number" is a binary variable equal to one if the migrant has a social security number. "Has a health number" is a binary variable equal to one if the migrant has a health number. To acquire residency permits, migrants need to go through a long process at SEF (Portuguese Foreign Office). Columns (4) to (9) report estimated effects on variables corresponding to the subsequent steps migrants need to take during the process, from searching for information to get a residency permit to actually having a permanent residency permit. Satisfied demand for legal / documentation / tax filling support is a binary variable, equal to one if the migrant received legal / documentation / tax filling support, conditional on having reported needing help in this area. "Plans to Obtain documentation" is a binary variable equal to one if the migrant is planning on obtaining documentation. "Difficulty in Obtaining Documentation" is a binary variable equal to one if the migrant reports not being able to obtain documentation.

**** p<.01, ** p<.05, * p<.1*

Most of the deconstructed results found in Tables 7, 10, and 11 do not resist Multiple Hypothesis Testing, as shown by the large Romano-Wolf p-values. These results are presented and briefly discussed in this part of the Appendix.

Results presented in Table 7 are described and discussed in the main text.

In Table 10, we can observe that impatience has a negative effect on whether the migrant felt limited to conduct daily life task due to health issues and on the satisfaction with health and psychological support received, and a positive effect on the self-reported health statues. Moreover, being less risk averse has also a negative effect on the probability that the migrant is planning to change something about his life, on the satisfaction with the health and accommodation support received (as discussed in the main text), and on the relative closeness to Portuguese women. Also, being grittier has a negative effect on the mental health index and on the satisfaction with the health support received. However, these effects do not resist to multiple hypothesis testing.

Table 11 reports a negative impact of impatience on the probability of having a health number, a temporary residency permit, and of being satisfied with the documentation support received. On the other hand, impatience has a positive effect on searching for information on how to get a residency permit, scheduling an appointment at SEF, and planning on obtaining documentation. Moreover, being less risk averse decreases the probability that a migrant has a health number, has scheduled an appointment at SEF, has a permanent residency permit, and is planning to obtain documentation. Contrarily, being more risk loving increases the probability that a migrant was unable to obtain documentation. Another finding reported in Table 11 is the impact that risk preferences and grit play on the satisfaction with the tax filing support received from institutions. One additional euro invested in the gamble decreases the likelihood that a migrant has their

demand for tax filling support being satisfied by 0.2 p.p. (significant at the 5% level). A unit increase in the normalized index of grit decreased the probability that this demand is satisfied by 15.8 p.p. (significant at the 1% level). These results are robust to sample selection (*Heckit* model estimates are in Table 19 in the Appendix), but do not survive multiple hypothesis testing. Discussion of this result is provided in the main text.

Discussion of the evidence found favouring the Immigrant Assimilation Hypothesis

We find supporting evidence for the assimilation hypothesis in our Employment Index of integration, whereby immigrant integration improves with years spent in the host country, at a decreasing rate. Moreover, older migrants have significantly better levels of employment integration, whereas being a woman is associated with integrating significantly worse in the labour markets, and the coefficients for educational attainments *per se* are not significantly different from zero.

We find supporting evidence for the assimilation hypothesis in our Social Inclusion Index of integration, whereby immigrant integration improves with years spent in the host country, at a decreasing rate. However, magnitude and significance of these estimates are lower than they were in the case of integration in the labour market. Moreover, older migrants have significantly better levels of social integration, whereas being a woman is associated with integrating significantly worse in social terms, and larger educational attainments are associated with significantly better levels of social integration.

We also find supporting evidence for the assimilation hypothesis in our Active Citizenship Index of integration, whereby immigrant integration improves with years spent in the host country, at a decreasing rate. Magnitude and significance of these estimates are larger than they were in the case of labour market and social inclusion integration. Moreover, older migrants have significantly better levels of citizenship integration, whereas being a woman is associated with integrating significantly worse in the citizenship terms, although the significance levels of the latter estimates are much lower than they were in the cases of both labour market and social inclusion. Interestingly, educational attainments are associated with significantly worse levels of citizenship integration.

Table 12 - Heckman Selection Model - Satisfied Demand for Work Support

	(1) Satisfied Demand for Work Support	(2) Satisfied Demand for Work Support	(3) Satisfied Demand for Work Support	(4) Satisfied Demand for Work Support	(5) Satisfied Demand for Work Support	(6) Satisfied Demand for Work Support
Max. willingness to pay to receive 1000 euros now and not in a year time	-0.0002***					
	(0.0000)					
Impatience measured in intervals		-0.0448***				
		(0.0161)				
Switching point			0.0069*			
			(0.0040)			
How much one would invest in the gamble				0.0004		
				(0.0006)		
Risk attitude first principal component					0.0230	
					(0.0157)	
Grit Index (normalized)						-0.0113
						(0.0218)
Years since migration	-0.0795	-0.0795	-0.0711	-0.0730	-0.0717	-0.0714
	(0.0508)	(0.0497)	(0.0522)	(0.0524)	(0.0532)	(0.0519)
Years since migration (squared)	0.0147	0.0147	0.0135	0.0137	0.0136	0.0134
	(0.0102)	(0.0100)	(0.0106)	(0.0106)	(0.0108)	(0.0104)
Age	0.0033	0.0038	0.0034	0.0032	0.0032	0.0034
	(0.0027)	(0.0027)	(0.0025)	(0.0026)	(0.0026)	(0.0024)
Female	-0.0262	-0.0293	-0.0184	-0.0236	-0.0202	-0.0236
	(0.0224)	(0.0221)	(0.0237)	(0.0223)	(0.0227)	(0.0226)
Educational attainments	0.0020	0.0020	0.0018	0.0020	0.0018	0.0021
	(0.0015)	(0.0016)	(0.0015)	(0.0014)	(0.0014)	(0.0015)
IV: Planning to find a better-paid job	0.2367***	0.2368***	0.2358***	0.2370***	0.2371***	0.2362***
	(0.0688)	(0.0689)	(0.0691)	(0.0683)	(0.0690)	(0.0688)
IV: Planning to bring someone to Portugal	0.2230	0.2248	0.2256	0.2234	0.2247	0.2232
	(0.2783)	(0.2793)	(0.2778)	(0.2782)	(0.2780)	(0.2783)
Observations	799	799	799	799	799	799
Pseudo R^2	.z	.z	.z	.z	.z	.z

Notes: Robust standard errors clustered at the level of the municipality are in parentheses. Every column reports the Heckman Selection model estimation of the coefficients of the impact of non-cognitive characteristics on the integration measure. The first variable measuring impatience is the reported willingness to pay to receive a lottery prize of 1000€ now instead of receiving it in one year, in a hypothetical game. The variable measuring impatience in intervals assigns a category "Patient", "Somewhat Impatient", or "Impatient" to respondents, based on their willingness to pay, as in all previous tables. The first variable measuring risk attitudes is the switching point in a 15-rounds game, in which respondents must choose between a lottery and a fixed amount in every round. The more rounds the respondents opt for the lottery, the more risk loving (less risk averse) they are. The second measure of risk preference is based on a hypothetical game in which respondents asked for the lump-sum amount they would like to invest in a gamble with zero expected value. The third measure of risk aversion is the first principal component of the first two. Grit is measured through 12 standard questions in which respondents must say to which extent they agree with the sentences presented to them. Their answers are then combined in a normalized index.
**** p<.01, ** p<.05, * p<.1*

Table 13 - Heckman Selection Model - Satisfied Demand for Health Support

	(1) Satisfied Demand for Health Support	(2) Satisfied Demand for Health Support	(3) Satisfied Demand for Health Support	(4) Satisfied Demand for Health Support	(5) Satisfied Demand for Health Support	(6) Satisfied Demand for Health Support
Max. willingness to pay to receive 1000 euros now and not in a year time	-0.0003**					
	(0.0001)					
Impatience measured in intervals		-0.0244				
		(0.0219)				
Switching point			0.0031			
			(0.0055)			
How much one would invest in the gamble				-0.0022***		
				(0.0006)		
Risk attitude first principal component					-0.0295	
					(0.0204)	
Grit Index (normalized)						-0.1299*
						(0.0669)
Years since migration	-0.0480	-0.0398	-0.0388	-0.0388	-0.0361	-0.0336
	(0.0532)	(0.0494)	(0.0462)	(0.0548)	(0.0507)	(0.0477)
Years since migration (squared)	0.0160*	0.0150*	0.0150*	0.0145	0.0143	0.0137
	(0.0093)	(0.0089)	(0.0083)	(0.0097)	(0.0090)	(0.0085)
Age	0.0002	0.0002	-0.0000	-0.0004	-0.0003	0.0016
	(0.0040)	(0.0043)	(0.0041)	(0.0038)	(0.0040)	(0.0040)
Female	-0.0529**	-0.0529**	-0.0531**	-0.0492**	-0.0513**	-0.0497***
	(0.0218)	(0.0219)	(0.0217)	(0.0216)	(0.0211)	(0.0172)
Educational attainments	0.0038**	0.0038**	0.0038**	0.0041**	0.0040**	0.0037***
	(0.0016)	(0.0016)	(0.0016)	(0.0018)	(0.0017)	(0.0013)
IV: Self-reported health status	-0.2584***	-0.2586***	-0.2592***	-0.2609***	-0.2596***	-0.2592***
	(0.0319)	(0.0323)	(0.0328)	(0.0336)	(0.0332)	(0.0331)
IV: Planning to get documentation	0.3315***	0.3316***	0.3304***	0.3285***	0.3299***	0.3277***
	(0.0457)	(0.0445)	(0.0445)	(0.0425)	(0.0436)	(0.0422)
IV: Planning to improve one's health (healthier habits)	0.5355**	0.5329**	0.5303**	0.5224**	0.5277**	0.5317**
	(0.2244)	(0.2199)	(0.2179)	(0.2130)	(0.2141)	(0.2187)
Observations	797	797	797	797	797	797
Pseudo R^2	.z	.z	.z	.z	.z	.z

Notes: Robust standard errors clustered at the level of the municipality are in parentheses. Every column reports the Heckman Selection model estimation of the coefficients of the impact of non-cognitive characteristics on the integration measure. The first variable measuring impatience is the reported willingness to pay to receive a lottery prize of 1000€ now instead of receiving it in one year, in a hypothetical game. The variable measuring impatience in intervals assigns a category "Patient", "Somewhat Impatient", or "Impatient" to respondents, based on their willingness to pay, as in all previous tables. The first variable measuring risk attitudes is the switching point in a 15-rounds game, in which respondents must choose between a lottery and a fixed amount in every round. The more rounds the respondents opt for the lottery, the more risk loving (less risk averse) they are. The second measure of risk preference is based on a hypothetical game in which respondents asked for the lump-sum amount they would like to invest in a gamble with zero expected value. The third measure of risk aversion is the first principal component of the first two. Grit is measured through 12 standard questions in which respondents must say to which extent they agree with the sentences presented to them. Their answers are then combined in a normalized index.
**** p<.01, ** p<.05, * p<.1*

Table 14 - Heckman Selection Model - Satisfied Demand for Psychological Support

	(1) Satisfied Demand for Psychologi-cal Support	(2) Satisfied Demand for Psychologi-cal Support	(3) Satisfied Demand for Psychologi-cal Support	(4) Satisfied Demand for Psychologi-cal Support	(5) Satisfied Demand for Psychologi-cal Support	(6) Satisfied Demand for Psychologi-cal Support
Max. willingness to pay to receive 1000 euros now and not in a year time	-0.0002					
	(0.0003)					
Impatience measured in intervals		-0.0568*				
		(0.0315)				
Switching point			0.0008			
			(0.0039)			
How much one would invest in the gamble				0.0004		
				(0.0005)		
Risk attitude first principal component					0.0090	
					(0.0135)	
Grit Index (normalized)						-0.0156
						(0.0465)
Years since migration	0.0397	0.0370	0.0398	0.0409	0.0402	0.0410
	(0.0569)	(0.0597)	(0.0541)	(0.0541)	(0.0537)	(0.0557)
Years since migration (squared)	-0.0059	-0.0057	-0.0058	-0.0061	-0.0059	-0.0060
	(0.0089)	(0.0092)	(0.0086)	(0.0086)	(0.0086)	(0.0088)
Age	-0.0069***	-0.0065***	-0.0070***	-0.0072***	-0.0071***	-0.0068***
	(0.0016)	(0.0016)	(0.0017)	(0.0017)	(0.0017)	(0.0020)
Female	0.0528*	0.0524*	0.0509	0.0526	0.0522	0.0500
	(0.0313)	(0.0315)	(0.0338)	(0.0353)	(0.0340)	(0.0347)
Educational attainments	-0.0008	-0.0010	-0.0009	-0.0011	-0.0010	-0.0009
	(0.0024)	(0.0023)	(0.0022)	(0.0025)	(0.0023)	(0.0023)
IV: Mental Health Index (normalized)	0.6429***	0.6418***	0.6429***	0.6424***	0.6426***	0.6430***
	(0.1359)	(0.1371)	(0.1346)	(0.1346)	(0.1344)	(0.1349)
Observations	710	710	710	710	710	710
Pseudo R^2	.z	.z	.z	.z	.z	.z

Notes: Robust standard errors clustered at the level of the municipality are in parentheses. Every column reports the Heckman Selection model estimation of the coefficients of the impact of non-cognitive characteristics on the integration measure. The first variable measuring impatience is the reported willingness to pay to receive a lottery prize of 1000€ now instead of receiving it in one year, in a hypothetical game. The variable measuring impatience in intervals assigns a category "Patient", "Somewhat Impatient", or "Impatient" to respondents, based on their willingness to pay, as in all previous tables. The first variable measuring risk attitudes is the switching point in a 15-rounds game, in which respondents must choose between a lottery and a fixed amount in every round. The more rounds the respondents opt for the lottery, the more risk loving (less risk averse) they are. The second measure of risk preference is based on a hypothetical game in which respondents asked for the lump-sum amount they would like to invest in a gamble with zero expected value. The third measure of risk aversion is the first principal component of the first two. Grit is measured through 12 standard questions in which respondents must say to which extent they agree with the sentences presented to them. Their answers are then combined in a normalized index.
**** p<.01, ** p<.05, * p<.1*

Table 15 - Heckman Selection Model - Satisfied Demand for Accommodation Support

	(1) Satisfied Demand for Accommoda-tion Support	(2) Satisfied Demand for Accommoda-tion Support	(3) Satisfied Demand for Accommoda-tion Support	(4) Satisfied Demand for Accommoda-tion Support	(5) Satisfied Demand for Accommoda-tion Support	(6) Satisfied Demand for Accommoda-tion Support
Max. willingness to pay to receive 1000 euros now and not in a year time	-0.0000					
	(0.0001)					
Impatience measured in intervals		0.0157				
		(0.0226)				
Switching point			0.0057			
			(0.0048)			
How much one would invest in the gamble				-0.0011***		
				(0.0004)		
Risk attitude first principal component					-0.0062	
					(0.0145)	
Grit Index (normalized)						-0.0240
						(0.0336)
Years since migration	-0.0850***	-0.0831***	-0.0851***	-0.0900***	-0.0852***	-0.0826***
	(0.0282)	(0.0268)	(0.0266)	(0.0238)	(0.0258)	(0.0266)
Years since migration (squared)	0.0071	0.0069	0.0070	0.0081	0.0072	0.0069
	(0.0075)	(0.0074)	(0.0075)	(0.0067)	(0.0072)	(0.0075)
Age	0.0037	0.0034	0.0039	0.0037	0.0036	0.0038
	(0.0026)	(0.0025)	(0.0025)	(0.0027)	(0.0026)	(0.0026)
Female	0.0068	0.0073	0.0120	0.0032	0.0054	0.0087
	(0.0401)	(0.0394)	(0.0444)	(0.0419)	(0.0427)	(0.0406)
Educational attainments	-0.0009	-0.0010	-0.0013	-0.0006	-0.0008	-0.0011
	(0.0017)	(0.0016)	(0.0019)	(0.0019)	(0.0019)	(0.0018)
IV: Planning to bring someone to Portugal	0.5222***	0.5221***	0.5220***	0.5222***	0.5223***	0.5225***
	(0.1491)	(0.1494)	(0.1494)	(0.1491)	(0.1492)	(0.1497)
IV: Would like to be promoted	-0.3397***	-0.3402***	-0.3391***	-0.3433***	-0.3403***	-0.3396***
	(0.1215)	(0.1217)	(0.1213)	(0.1236)	(0.1223)	(0.1218)
Observations	799	799	799	799	799	799
Pseudo R^2	.z	.z	.z	.z	.z	.z

Notes: Robust standard errors clustered at the level of the municipality are in parentheses. Every column reports the Heckman Selection model estimation of the coefficients of the impact of non-cognitive characteristics on the integration measure. The first variable measuring impatience is the reported willingness to pay to receive a lottery prize of 1000€ now instead of receiving it in one year, in a hypothetical game. The variable measuring impatience in intervals assigns a category "Patient", "Somewhat Impatient", or "Impatient" to respondents, based on their willingness to pay, as in all previous tables. The first variable measuring risk attitudes is the switching point in a 15-rounds game, in which respondents must choose between a lottery and a fixed amount in every round. The more rounds the respondents opt for the lottery, the more risk loving (less risk averse) they are. The second measure of risk preference is based on a hypothetical game in which respondents asked for the lump-sum amount they would like to invest in a gamble with zero expected value. The third measure of risk aversion is the first principal component of the first two. Grit is measured through 12 standard questions in which respondents must say to which extent they agree with the sentences presented to them. Their answers are then combined in a normalized index.
**** p<.01, ** p<.05, * p<.1*

Table 16 - Heckman Selection Model - Satisfied Demand for Food Support

	(1) Satisfied Demand for Food Support	(2) Satisfied Demand for Food Support	(3) Satisfied Demand for Food Support	(4) Satisfied Demand for Food Support	(5) Satisfied Demand for Food Support	(6) Satisfied Demand for Food Support
Max. willingness to pay to receive 1000 euros now and not in a year time	0.0002					
	(0.0003)					
Impatience measured in intervals		0.0196				
		(0.0278)				
Switching point			0.0063			
			(0.0050)			
How much one would invest in the gamble				-0.0003		
				(0.0007)		
Risk attitude first principal component					0.0092	
					(0.0200)	
Grit Index (normalized)						-0.0214
						(0.0785)
Years since migration	-0.0525	-0.0550	-0.0581	-0.0575	-0.0541	-0.0542
	(0.0732)	(0.0701)	(0.0704)	(0.0703)	(0.0722)	(0.0673)
Years since migration (squared)	0.0174	0.0179	0.0184	0.0185	0.0177	0.0179
	(0.0158)	(0.0151)	(0.0150)	(0.0151)	(0.0154)	(0.0148)
Age	-0.0023	-0.0022	-0.0014	-0.0019	-0.0017	-0.0017
	(0.0040)	(0.0038)	(0.0034)	(0.0037)	(0.0036)	(0.0041)
Female	0.0269	0.0270	0.0354	0.0235	0.0340	0.0291
	(0.0753)	(0.0749)	(0.0725)	(0.0788)	(0.0757)	(0.0760)
Educational attainments	-0.0008	-0.0008	-0.0010	-0.0009	-0.0010	-0.0011
	(0.0014)	(0.0014)	(0.0013)	(0.0015)	(0.0014)	(0.0017)
IV: Mental Health Index (normalized)	0.3997***	0.3995***	0.3995***	0.3993***	0.3992***	0.3993***
	(0.0497)	(0.0495)	(0.0493)	(0.0493)	(0.0493)	(0.0493)
IV: Planning to bring someone to Portugal	0.3386***	0.3390***	0.3392***	0.3395***	0.3397***	0.3396***
	(0.0830)	(0.0821)	(0.0819)	(0.0814)	(0.0812)	(0.0810)
Observations	710	710	710	710	710	710
Pseudo R^2	.z	.z	.z	.z	.z	.z

Notes: Robust standard errors clustered at the level of the municipality are in parentheses. Every column reports the Heckman Selection model estimation of the coefficients of the impact of non-cognitive characteristics on the integration measure. The first variable measuring impatience is the reported willingness to pay to receive a lottery prize of 1000€ now instead of receiving it in one year, in a hypothetical game. The variable measuring impatience in intervals assigns a category "Patient", "Somewhat Impatient", or "Impatient" to respondents, based on their willingness to pay, as in all previous tables. The first variable measuring risk attitudes is the switching point in a 15-rounds game, in which respondents must choose between a lottery and a fixed amount in every round. The more rounds the respondents opt for the lottery, the more risk loving (less risk averse) they are. The second measure of risk preference is based on a hypothetical game in which respondents asked for the lump-sum amount they would like to invest in a gamble with zero expected value. The third measure of risk aversion is the first principal component of the first two. Grit is measured through 12 standard questions in which respondents must say to which extent they agree with the sentences presented to them. Their answers are then combined in a normalized index.
*** *p<.01, ** p<.05, * p<.1*

Table 17 - Heckman Selection Model - Satisfied Demand for Legal Support

	(1) Satisfied Demand for Legal Support	(2) Satisfied Demand for Legal Support	(3) Satisfied Demand for Legal Support	(4) Satisfied Demand for Legal Support	(5) Satisfied Demand for Legal Support	(6) Satisfied Demand for Legal Support
Max. willingness to pay to receive 1000 euros now and not in a year time	-0.0002***					
	(0.0001)					
Impatience measured in intervals		-0.0358				
		(0.0378)				
Switching point			0.0012			
			(0.0065)			
How much one would invest in the gamble				-0.0012		
				(0.0007)		
Risk attitude first principal component					-0.0167	
					(0.0274)	
Grit Index (normalized)						-0.0307
						(0.0486)
Years since migration	-0.0343	-0.0361	-0.0347	-0.0515	-0.0417	-0.0349
	(0.0777)	(0.0720)	(0.0819)	(0.0841)	(0.0881)	(0.0787)
Years since migration (squared)	0.0046	0.0051	0.0044	0.0078	0.0058	0.0046
	(0.0143)	(0.0131)	(0.0152)	(0.0154)	(0.0163)	(0.0149)
Age	0.0019	0.0022	0.0017	0.0020	0.0019	0.0019
	(0.0032)	(0.0034)	(0.0032)	(0.0031)	(0.0031)	(0.0032)
Female	-0.0200	-0.0217	-0.0285	-0.0357	-0.0324	-0.0267
	(0.0753)	(0.0548)	(0.0768)	(0.0766)	(0.0782)	(0.0724)
Educational attainments	-0.0001	-0.0001	-0.0005	0.0004	-0.0001	-0.0005
	(0.0011)	(0.0025)	(0.0015)	(0.0013)	(0.0016)	(0.0012)
IV: Mental Health Index (normalized)	0.2407*	0.2397***	0.2395*	0.2395*	0.2383*	0.2396*
	(0.1271)	(0.0818)	(0.1274)	(0.1266)	(0.1273)	(0.1256)
Observations	710	710	710	710	710	710
Pseudo R^2	.z	.z	.z	.z	.z	.z

Notes: Robust standard errors clustered at the level of the municipality are in parentheses. Every column reports the Heckman Selection model estimation of the coefficients of the impact of non-cognitive characteristics on the integration measure. The first variable measuring impatience is the reported willingness to pay to receive a lottery prize of 1000€ now instead of receiving it in one year, in a hypothetical game. The variable measuring impatience in intervals assigns a category "Patient", "Somewhat Impatient", or "Impatient" to respondents, based on their willingness to pay, as in all previous tables. The first variable measuring risk attitudes is the switching point in a 15-rounds game, in which respondents must choose between a lottery and a fixed amount in every round. The more rounds the respondents opt for the lottery, the more risk loving (less risk averse) they are. The second measure of risk preference is based on a hypothetical game in which respondents asked for the lump-sum amount they would like to invest in a gamble with zero expected value. The third measure of risk aversion is the first principal component of the first two. Grit is measured through 12 standard questions in which respondents must say to which extent they agree with the sentences presented to them. Their answers are then combined in a normalized index.
**** p<.01, ** p<.05, * p<.1*

Table 18 - Heckman Selection Model - Satisfied Demand for Documentation Support

	(1) Satisfied Demand for Documenta-tion Support	(2) Satisfied Demand for Documenta-tion Support	(3) Satisfied Demand for Documenta-tion Support	(4) Satisfied Demand for Documenta-tion Support	(5) Satisfied Demand for Documenta-tion Support	(6) Satisfied Demand for Documenta-tion Support
Max. willingness to pay to receive 1000 euros now and not in a year time	-0.0001					
	(0.0001)					
Impatience measured in intervals		0.0222				
		(0.0211)				
Switching point			0.0004			
			(0.0080)			
How much one would invest in the gamble				-0.0005		
				(0.0005)		
Risk attitude first principal component					-0.0083	
					(0.0190)	
Grit Index (normalized)						-0.0119
						(0.0259)
Years since migration	0.1200***	0.1273***	0.1248***	0.1230***	0.1237***	0.1262***
	(0.0218)	(0.0205)	(0.0215)	(0.0190)	(0.0214)	(0.0228)
Years since migration (squared)	-0.0104***	-0.0115***	-0.0111***	-0.0108***	-0.0109***	-0.0113***
	(0.0036)	(0.0036)	(0.0035)	(0.0033)	(0.0034)	(0.0038)
Age	-0.0015	-0.0019	-0.0016	-0.0017	-0.0017	-0.0015
	(0.0025)	(0.0027)	(0.0025)	(0.0025)	(0.0025)	(0.0025)
Female	-0.0553	-0.0579	-0.0569	-0.0581*	-0.0585	-0.0572
	(0.0357)	(0.0365)	(0.0400)	(0.0352)	(0.0371)	(0.0358)
Educational attainments	0.0036***	0.0037***	0.0036***	0.0037***	0.0037***	0.0036***
	(0.0012)	(0.0011)	(0.0011)	(0.0012)	(0.0011)	(0.0011)
IV: Planning to find a better-paid job	0.2004***	0.1992***	0.2002***	0.1983***	0.1994***	0.2000***
	(0.0722)	(0.0721)	(0.0721)	(0.0733)	(0.0725)	(0.0725)
Observations	799	799	799	799	799	799
Pseudo R^2	.z	.z	.z	.z	.z	.z

Notes: Robust standard errors clustered at the level of the municipality are in parentheses. Every column reports the Heckman Selection model estimation of the coefficients of the impact of non-cognitive characteristics on the integration measure. The first variable measuring impatience is the reported willingness to pay to receive a lottery prize of 1000€ now instead of receiving it in one year, in a hypothetical game. The variable measuring impatience in intervals assigns a category "Patient", "Somewhat Impatient", or "Impatient" to respondents, based on their willingness to pay, as in all previous tables. The first variable measuring risk attitudes is the switching point in a 15-rounds game, in which respondents must choose between a lottery and a fixed amount in every round. The more rounds the respondents opt for the lottery, the more risk loving (less risk averse) they are. The second measure of risk preference is based on a hypothetical game in which respondents asked for the lump-sum amount they would like to invest in a gamble with zero expected value. The third measure of risk aversion is the first principal component of the first two. Grit is measured through 12 standard questions in which respondents must say to which extent they agree with the sentences presented to them. Their answers are then combined in a normalized index.
**** p<.01, ** p<.05, * p<.1*

Table 19 - Heckman Selection Model - Satisfied Demand for Tax Filling Support

	(1) Satisfied Demand for Tax Filling Support	(2) Satisfied Demand for Tax Filling Support	(3) Satisfied Demand for Tax Filling Support	(4) Satisfied Demand for Tax Filling Support	(5) Satisfied Demand for Tax Filling Support	(6) Satisfied Demand for Tax Filling Support
Max. willingness to pay to receive 1000 euros now and not in a year time	-0.0002					
	(0.0001)					
Impatience measured in intervals		-0.0042				
		(0.0234)				
Switching point			0.0010			
			(0.0046)			
How much one would invest in the gamble				-0.0024***		
				(0.0005)		
Risk attitude first principal component					-0.0388**	
					(0.0158)	
Grit Index (normalized)						-0.1537*
						(0.0836)
Years since migration	-0.2021***	-0.1967***	-0.1945***	-0.1998***	-0.2027***	-0.1650***
	(0.0290)	(0.0319)	(0.0239)	(0.0239)	(0.0226)	(0.0270)
Years since migration (squared)	0.0388***	0.0381***	0.0377***	0.0384***	0.0387***	0.0333***
	(0.0062)	(0.0067)	(0.0054)	(0.0049)	(0.0049)	(0.0040)
Age	-0.0029	-0.0031	-0.0032	-0.0029	-0.0032	-0.0015
	(0.0041)	(0.0042)	(0.0043)	(0.0040)	(0.0042)	(0.0033)
Female	-0.0304	-0.0324	-0.0316	-0.0344	-0.0369	-0.0261
	(0.0233)	(0.0233)	(0.0243)	(0.0226)	(0.0236)	(0.0281)
Educational attainments	0.0029*	0.0028*	0.0028	0.0039***	0.0034**	0.0027*
	(0.0016)	(0.0016)	(0.0017)	(0.0015)	(0.0017)	(0.0016)
IV: Planning to find a better-paid job	0.2832***	0.2839***	0.2839***	0.2760***	0.2797***	0.2726***
	(0.0485)	(0.0477)	(0.0476)	(0.0485)	(0.0480)	(0.0491)
IV: Planning to be promoted	0.3918***	0.3922***	0.3925***	0.3908***	0.3887***	0.3919***
	(0.0959)	(0.0949)	(0.0939)	(0.0954)	(0.0952)	(0.0975)
Observations	799	799	799	799	799	799
Pseudo R^2	.z	.z	.z	.z	.z	.z

Notes: Robust standard errors clustered at the level of the municipality are in parentheses. Every column reports the Heckman Selection model estimation of the coefficients of the impact of non-cognitive characteristics on the integration measure. The first variable measuring impatience is the reported willingness to pay to receive a lottery prize of 1000€ now instead of receiving it in one year, in a hypothetical game. The variable measuring impatience in intervals assigns a category "Patient", "Somewhat Impatient", or "Impatient" to respondents, based on their willingness to pay, as in all previous tables. The first variable measuring risk attitudes is the switching point in a 15-rounds game, in which respondents must choose between a lottery and a fixed amount in every round. The more rounds the respondents opt for the lottery, the more risk loving (less risk averse) they are. The second measure of risk preference is based on a hypothetical game in which respondents asked for the lump-sum amount they would like to invest in a gamble with zero expected value. The third measure of risk aversion is the first principal component of the first two. Grit is measured through 12 standard questions in which respondents must say to which extent they agree with the sentences presented to them. Their answers are then combined in a normalized index.
**** p<.01, ** p<.05, * p<.1*

Table 20 - Survey questions supporting our explanatory variables

<table>
<tr><th>Explanatory Variable</th><th>Question in Portuguese</th><th>Translation to English</th></tr>
<tr><td colspan="3">Degree of impatience</td></tr>
<tr><td>Max. willingness to pay to receive 1000 euros now and not in a year time</td><td>Suponha que ganha 1.000€ numa lotaria. No entanto, apenas receberá este prémio dentro de exatamente um ano. Quanto está disposto a pagar, no máximo, para receber os 1.000€ já e não daqui a um ano?</td><td>Suppose that you earn €1,000 in a lottery. However, you will only receive this prize in exactly one year's time. How much are you willing to pay, at most, to receive the €1,000 now and not a year from now?</td></tr>
<tr><td colspan="3">Risk attitude</td></tr>
<tr><td>Switching Point</td><td>O jogo seguinte tem várias rondas.
Em cada ronda vamos pedir-lhe que indique qual seria a sua escolha entre duas opções: receber uma determinada quantia de dinheiro fixa ou participar numa lotaria.
Se escolher a lotaria teria 50% de hipóteses de ganhar 100€ e 50% de hipóteses de não ganhar nada. Ou seja, em cada 10 pessoas que entram na lotaria, 5 ganham 100 euros e 5 não ganham nada.
[Entrevistador: Em cada ronda, explique as opções, qual é a quantia fixa e os resultados possíveis da lotaria. Indique se o(a) respondente escolhe a quantia fixa ou a lotaria. Use as folhas de apoio para ilustrar as diferentes escolhas para cada ronda.]

Vamos começar. Ronda 1: prefere a quantia fixa de 0€ ou a lotaria em que pode receber ou 0€ ou 100€
[Entrevistador: Faça a questão desta forma para todas as rondas. Pode selecionar NS/NR nas rondas em que o(a) respondente não der uma resposta.]

<table>
<tr><th>Ronda</th><th>Quantia Fixa</th><th>Lotaria</th><th>0 = Quantia fixa; 1 = Lotaria</th></tr>
<tr><td>1</td><td>0€</td><td>0€ / 100€</td><td></td></tr>
<tr><td>2</td><td>5€</td><td>0€ / 100€</td><td></td></tr>
<tr><td>3</td><td>10€</td><td>0€ / 100€</td><td></td></tr>
<tr><td>4</td><td>15€</td><td>0€ / 100€</td><td></td></tr>
<tr><td>5</td><td>20€</td><td>0€ / 100€</td><td></td></tr>
<tr><td>6</td><td>25€</td><td>0€ / 100€</td><td></td></tr>
<tr><td>7</td><td>30€</td><td>0€ / 100€</td><td></td></tr>
<tr><td>8</td><td>35€</td><td>0€ / 100€</td><td></td></tr>
<tr><td>9</td><td>40€</td><td>0€ / 100€</td><td></td></tr>
<tr><td>10</td><td>45€</td><td>0€ / 100€</td><td></td></tr>
<tr><td>11</td><td>50€</td><td>0€ / 100€</td><td></td></tr>
<tr><td>12</td><td>55€</td><td>0€ / 100€</td><td></td></tr>
<tr><td>13</td><td>60€</td><td>0€ / 100€</td><td></td></tr>
<tr><td>14</td><td>65€</td><td>0€ / 100€</td><td></td></tr>
<tr><td>15</td><td>70€</td><td>0€ / 100€</td><td></td></tr>
</table>
</td><td>The following game has several rounds.
In each round we will ask you to indicate what your choice would be between two options: to receive a certain amount of lump sum money or to participate in a lottery.
If you choose the lottery, you would have a 50% chance of winning €100 and a 50% chance of winning nothing. In other words, out of every 10 people who enter the lottery, 5 win €100 and 5 win nothing.
[Interviewer: In each round, explain the options, what the lump sum is, and the possible outcomes of the lottery. Indicate whether respondent chooses the lump sum or the lottery. Use the handouts to illustrate the different choices for each round].

Let's begin. Round 1: do you prefer the lump sum of €0 or the lottery where you can receive either €0 or €100
[Interviewer: Ask the question this way for all rounds. You may select DK/NA for rounds where respondent does not provide an answer].

<table>
<tr><th>Round</th><th>Fixed Quantity</th><th>Lottery</th><th>0 = Fixed Quantity; 1 = Lottery</th></tr>
<tr><td>1</td><td>0€</td><td>0€ / 100€</td><td></td></tr>
<tr><td>2</td><td>5€</td><td>0€ / 100€</td><td></td></tr>
<tr><td>3</td><td>10€</td><td>0€ / 100€</td><td></td></tr>
<tr><td>4</td><td>15€</td><td>0€ / 100€</td><td></td></tr>
<tr><td>5</td><td>20€</td><td>0€ / 100€</td><td></td></tr>
<tr><td>6</td><td>25€</td><td>0€ / 100€</td><td></td></tr>
<tr><td>7</td><td>30€</td><td>0€ / 100€</td><td></td></tr>
<tr><td>8</td><td>35€</td><td>0€ / 100€</td><td></td></tr>
<tr><td>9</td><td>40€</td><td>0€ / 100€</td><td></td></tr>
<tr><td>10</td><td>45€</td><td>0€ / 100€</td><td></td></tr>
<tr><td>11</td><td>50€</td><td>0€ / 100€</td><td></td></tr>
<tr><td>12</td><td>55€</td><td>0€ / 100€</td><td></td></tr>
<tr><td>13</td><td>60€</td><td>0€ / 100€</td><td></td></tr>
<tr><td>14</td><td>65€</td><td>0€ / 100€</td><td></td></tr>
<tr><td>15</td><td>70€</td><td>0€ / 100€</td><td></td></tr>
</table>
</td></tr>
</table>

<table>
<tr><td>How many euros one invests in a gamble</td><td>Imagine que recebe um presente de 100€ que pode gastar como quiser.
Tem possibilidade de investir esse dinheiro num jogo. Nesse jogo, pode ganhar ou perder. Normalmente, em cada 10 pessoas que jogam este jogo, 5 ganham e 5 perdem.
Se ganhar, recebe 150% do valor que investiu no jogo, ou seja, o valor que investiu mais metade (por exemplo, se investir 100€ e ganhar recebe 150€) dentro de um dia.
Se perder, fica com metade do valor que investiu no jogo (se investir 100€, e perder recebe 50€) dentro de um dia.
Pode escolher investir no jogo a totalidade do presente (100€), uma parte ou nada.
Quanto investiria neste jogo arriscado, mas que pode ser lucrativo?</td><td>Imagine you receive a gift of €100 that you can spend as you wish.
You have the possibility to invest that money in a game.
In this game, you can win or lose. Normally, in every 10 people who play this game, 5 win and 5 lose.
If you win, you receive 150% of the value you invested in the game, that is, the value you invested plus half (for example, if you invest €100 and win, you receive €150) within one day.
If you lose, you keep half of the amount you invested in the game (if you invest €100 and lose, you get €50) within one day.
You can choose to invest the entire gift (€100), a portion or nothing at all.
How much would you invest in this risky but potentially profitable game?</td></tr>
<tr><td colspan="3">Grit</td></tr>
<tr><td>Grit Index (normalized)</td><td>Por favor indique até que ponto se identifica com as seguintes afirmações:
<table><tr><td></td><td>Não é nada parecido comigo</td><td>Não é muito parecido comigo</td><td>De certa forma parecido comigo</td><td>Parecido comigo</td><td>Muito parecido comigo</td></tr><tr><td>a) Mantenho-me interessado nos meus objetivos mesmo que demore muito tempo (meses ou anos) a alcançá-los.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr><tr><td>b) Consigo explicar, em menos de 10 palavras, o que tenciono realizar na minha vida.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr><tr><td>c) O meu trabalho está de acordo com os meus valores pessoais mais importantes.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr><tr><td>d) Eu identifico-me com o trabalho que faço. Para mim, o meu trabalho não é só o que faço, mas uma parte essencial</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr></table></td><td>Please indicate to what extent you identify with the following statements:
<table><tr><td></td><td>It's not like me at all</td><td>It's not much like me</td><td>Some-what like me</td><td>Look like me</td><td>A lot like me</td></tr><tr><td>a) I stay interested in my goals even if it takes a long time (months or years) to achieve them.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr><tr><td>b) I can explain, in less than 10 words, what I intend to achieve in my life.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr><tr><td>c) My work is in line with my most important personal values.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr><tr><td>d) I identify with the work I do. For me, my work is not only what I do, but an essential part of who I am.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr><tr><td>e) For some reason, I never get bored with my work. I'm always learning new things.</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td></tr></table></td></tr>
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daquilo que sou.					
e) Por alguma razão, nunca me aborreço com o meu trabalho. Estou sempre a aprender coisas novas.	1	2	3	4	5
f) Penso sobre o meu trabalho mesmo em sonhos e quando sonho acordado.	1	2	3	4	5
g) Sou muito trabalhador. Continuo a trabalhar mesmo quando os outros decidem fazer uma pausa.	1	2	3	4	5
h) Os obstáculos não me desencorajam. Não desisto facilmente.	1	2	3	4	5
i) Todos os dias tento fazer uma coisa melhor do que fiz no dia anterior.	1	2	3	4	5
j) Estou constantemente a pedir informação às outras pessoas sobre como posso melhorar.	1	2	3	4	5
k) Nunca estou completamente satisfeito com o meu desempenho.	1	2	3	4	5
l) Acabo aquilo que começo.	1	2	3	4	5

f) I think about my work even in dreams and when I daydream.	1	2	3	4	5
g) I am very hardworking. I keep working even when others decide to take a break.	1	2	3	4	5
h) Obstacles do not discourage me. I don't give up easily.	1	2	3	4	5
i) Every day I try to do one thing better than I did the day before.	1	2	3	4	5
j) I am constantly asking other people for information on how I can improve.	1	2	3	4	5
k) I am never completely satisfied with my performance.	1	2	3	4	5
l) I end what I start.	1	2	3	4	5