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Subjective expectations and occupational choices in low-income countries

Evidence from an information experiment in Mozambique

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Subjective Expectations and Occupational Choices in Low-Income Countries: Evidence from an Information Experiment in Mozambique

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Abstract

This paper investigates the role of subjective expectations in shaping occupational choices among university students in Mozambique. We do so by combining tailored survey data collected under different scenarios with an experimentally generated panel of beliefs obtained through a randomized information treatment. We find that students tend to under-estimate returns to higher education in the self-employment sector, while over-estimating them in the private and public sector. However, they respond to the information by revising their beliefs as well as stated occupational choices. Results from the empirical analysis suggest that: i) students do sort into occupations according to average expected earnings; ii) students tend to avoid occupations with high earnings variance and low probability of finding a job suggesting an important role played by expected riskiness; iii) disregarding such uncertainty might lead to overestimating the importance of expected average earnings.

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1. Introduction

This paper investigates the role of subjective expectations about education and labor market returns in shaping individuals' future occupational choices in Mozambique. We do so by combining tailored survey data collected under different scenarios with an experimentally generated panel of beliefs obtained through a randomized information treatment administrated to over 800 students.

The transition from school to the labour market is receiving growing attention among economists and policy makers, especially in developing countries. Recent studies provide empirical evidence on the significant role played by perceived expected returns in influencing forward-looking decision-making processes and individual behavior (Manski, 2004; Jensen 2010; Attanasio 2009; Delavande et al. 2011). In developing countries, in particular, new evidence on individual expected returns on high-stake decisions (such as education, health, labour and migration choices) is helping to shed light on fundamental issues related to the lack of development and growth (e.g. Attanasio and Kaufmann, 2009; Delavande and Kohler, 2009; Mckenzie et al. 2013). Indeed, getting to know people's subjective expectations and how they act upon them might provide, ceteris paribus, direct evidence on the relevance and severity of imperfections (in the credit, insurance or information market) in determining actual behavior. This is a particularly relevant issue in developing contexts where uncertainty on *ex-ante* economic returns may be a significant driver of high-stake lifetime decisions, such as education or occupation, due to market imperfections and risky environments.

Hence, this paper uses first-hand survey data - collected under different scenarios and conditional on information treatments - to study the role of subjective expectations in educational and occupational choices among university students in Maputo.

Standard economic theory points to career motivations and own future labour earnings as main determinants of human capital investment and occupational choices. Even though there is a large literature estimating labor market returns with observed earnings data, it has been emphasized that it is the returns *perceived* by students (and/or their parents) that will influence actual decisions (e.g. Manski 1993; Jensen, 2010). Moreover, a major methodological problem is that (ex-post) earnings are not 'randomly' or exogenously determined. For example, more educated individuals generally end up earning more or occupation-specific earnings may be biased by unobservable ability or preference. A similar problem is also biting *perceived* earnings, since positive subjective expectations may actually reflect idiosyncratic tastes for a specific outcome.

This paper aims at tackling these methodological issues and assessing the *causal* impact of individual earning expectations on occupational choices. We do so by collecting data on expectations for a number of possible alternatives (i.e. about the future chosen alternative as well as all counterfactuals) and combine them with an information treatment about actual wages, by educational level and sector, in the Mozambican labor market. This allows us to construct for each student the individual-specific expected 'return' (in terms of own earnings) to choosing one option (e.g. one particular type of human capital or occupation) *vs* another one. Since we collect occupational choices conditional on graduation vs drop-out, before and after the information treatment, we can also directly assess how *changes* in expectations about returns to human capital investment affect *changes* in occupational choices. Hence, under the assumption that tastes are fixed over the short time span over which we collect the panel survey, our analysis wipes out choice differentials due to individual preferences or 'tastes'. In other words, by exploiting the time-series variation in expectations, our fixed effects estimates deliver the unbiased causal impact of perceived earnings expectations on individual stated choices. We run the same analysis on the variance in the ex-ante economic returns in order to

investigate the asymmetric effect of different moments in the subjective expectations distribution, and how people react to them making up their own mind over intertemporal choices.

Mozambique is a suitable context for our research questions since the country has been growing steadily during the last decade and the same holds for rates of returns to higher education, which have also been rising. Yet, the youth unemployment rate remained high over the period, especially for tertiary educated youngsters, and the demand for skilled workers has been growing more rapidly than supply (Mario et al.2003, WB 2007, 2011). Our findings point to a significant role of subjective expectations in explaining human capital investments and occupational choices in the Mozambican labor market.

We find that students tend to under-estimate returns to higher education in the self-employment sector, while over-estimating them in the private and public sector. However, they do respond to the information by revising their beliefs as well as stated occupational choices. Results suggest that: i) students sort into occupations according to average expected earnings; ii) students tend to avoid occupations with high earnings variance and low probability to find a job suggesting an important role played by expected riskiness; iii) disregarding such uncertainty might lead to overestimating the importance of expected average earnings.

2. Eliciting subjective expectations and the information experiment

In 2017 we designed and administrated a tailored student survey in two major Universities in Maputo, i.e. Universidade Eduardo Mondlane (UEM) and Politecnica. The survey aimed at collecting data on subjective expectations about future earnings and employment probability under different scenarios related to university completion, sectoral choices, and migration decisions, along with a set of standard demographic and socio-economic individual indicators.

The survey questionnaire, administrated to undergraduate students, was organised in three different following modules:

Module I included questions on (i) individual preferences, where we elicit risk and time preferences; (ii) subjective expectations and sectoral choices, where we elicit expectations about own and population outcomes (probability of finding a job and expected earnings) conditional on future hypothetical occupation choices, as well as student's career plans (i.e. the likelihood to choose each specific sector); (iii) subjective expectations conditional on hypothetical field of study, where we elicit subjective expectations about own and population outcomes (probability of finding a job and expected earnings) conditional on hypothetical (counterfactual) major choice and occupational choice probabilities; (iv) subjective expectations and migration choices, where we elicit subjective expectations about employment probability and wages, both in Mozambique and abroad, as well as willingness to migrate in the future; (v) individual characteristics, where we collect standard socio-economic characteristics and family background of students.

The II Module included (i) the information treatment (T), which entailed the provision of information about actual distribution of earnings drawn from official labor market databases. It is divided in two parts, the first referring to potential earnings in different sectors in Mozambique (the data source is the most recent IOF collected by INE in Mozambique), the second related to potential earnings outside Mozambique (the data source is EUSILC); (ii) post-treatment subjective expectations and sector/migration choices, where we replicate most of the questions of the first module. This is done in order to capture how students have changed their subjective expectations as well as their stated future decisions in response to the information treatment.

2.1 Data collection

Overall, the process of data collection ran between April and May 2017 in different faculties of interest (Social Sciences, Sciences, Engineering and Economics) at UEM and Politenica.

Our final sample of students is a random selection from the longer list of available students and, among them, only about 6% were eventually not able to participate in the survey for personal reasons. Each student, under the supervision of the enumerators, individually filled in the paper questionnaire, the duration of which was about 1 hour. After finishing Module I, students were introduced to the "information treatment", by the enumerators, and then left to complete the second part of the questionnaire individually. At the end of the questionnaire, students were offered cold drinks, water and snacks. At the end of each day, a quality check was carried out by survey enumerators and manager.

Our final sample is made of 982 student questionnaires – 931 from UEM and 51 from Politecnica, broken down as follows: Science: 301; Economics: 201; Engineering: 279; Social Science: 177; Other: 24.

Out of the total, 822 random students received the 'information treatment' and completed both the first and second part of the questionnaire. In 571 of the cases, the "complete" treatment was administrated, i.e. the actual average and distribution of wages (divided by sector and educational levels) were provided to the respondents. In the remaining cases the "partial" treatment was administrated, i.e. only the actual average income was provided to the students. Finally, 160 students in the sample received no treatment: in this case the questionnaire, slightly different from the others, was composed by one main part only. Assignment to each of the treatments and to the no-treatment group was randomized at the faculty level.

3. Descriptive statistics and preliminary analysis

Table 1 reports sample characteristics by gender (we also report the significance level of the t-test for differences in observed characteristics by gender). Interestingly females have parents

that are more educated than the parents of boys—this points to (positive) selection of female students (only daughters of educated parents are enabled to enrol in university). Moreover, the bottom of Table 1 shows that men and women choose different college majors, with women being more concentrated in Economics and Science, men more concentrated in Engineering, while there is no significant difference in enrolment in Social Sciences.

Table 2 reports beliefs about future occupational choices conditional on human capital levels (i.e. getting the degree vs dropping-out). Our survey elicited beliefs about the probability of choosing to work in each different sector (including no work).

3.1. Beliefs about self-expected earnings and population averages

We start by studying the respondents' beliefs about population earnings in Mozambique by each of the three major occupations and two educational levels. In particular, we study the error that students make in predicting the average earnings in the population. Figure 1 reports the percent "error" in these beliefs relative to the true values. Such error is measured as truth minus belief, so that a positive (negative) error indicates an under-estimation (over-estimation) of the true population earnings. The errors made by students are substantial, and population earnings are systematically overestimated. The largest overestimations occur for the public sector for graduate individuals, and for the self-employment sector for the drop-outs.

Next, we analyse the self-beliefs about *own* earnings if the student were to choose each one of the three occupations, and conditional on finishing vs dropping out from university. In particular we analyse whether students perceive their expected earnings above or below the average ones in the population. Figure 2 shows that, on average, students believe their self-earnings will be higher than the relevant population earnings. This feature is common to the three occupations and is consistent with the fact that our sample consists of students that are of particularly high-ability within Mozambique. There is nevertheless substantial heterogeneity,

and a share of individuals do expect to earn less than the average, although the distribution is in general skewed toward the right. Interestingly, the difference between expected self-earning and the population one is positive and larger for women than for men. This is true in the three sectors. Women, perhaps differently from other contexts, seem to be relatively more confident than men, although this result might also be motivated by women being more positively selected in this context than in others.

We next study how students revise their beliefs after the information treatment. Figure 3 plots the distribution of the percent change (post minus pre-treatment) in self-beliefs about earnings for the usual three sectors and two educational levels. The information treatment does indeed induce students to revise their self-earnings beliefs. While in the self-employment sector such revisions are relatively small, we observe larger updates in the public and private sectors. Interestingly in both sectors students usually update their earnings expectations down for the case of graduating, while updating their earnings expectations up for the case of not finishing university.

3.2. Returns to higher education

Our survey elicited expectations about students' *own* earnings if they were to be working full time when they would be aged 30 (we also asked about beliefs for population earnings, and later on we show the relationship between self and population earnings).

In Table 3 we report the log difference in expected earnings with and without the university degree, for each sector, i.e. the expected returns to tertiary education. These are the individual-level beliefs about how each student perceives the effect of human capital on their future earnings. For each individual we then construct a set of log differences in earnings, i.e. our expected Return To higher Education (RTE) as follows:

$$\varphi_i = \ln(E_i(w_{ik}(h=1))) - \ln(E_i\big(w_{ik}(h=0)\big))$$

Where $E_i\left(w_{ik}(h=i)\right)$ is either individual *i*'s or population belief about what her average earnings would be in sectors *k* if she were to complete University degree *h*. $E_i\left(w_{ik}(h=0)\right)$ is then the belief of the same individual but for the case of having no degree $(h=0)$. RTE or φ_i is the individual belief about how her own (or population) expected earnings *w* (at age 30) would change if she were to complete the university degree she is enrolled in rather than dropping out. A positive φ_i suggests the individual perceives a positive return to higher education, and we have this information at occupational level. This individual-level difference (which is collected before making any actual decision and hence can be called the 'ex-ante treatment effect' in the Arcidiano's jargon) is never directly observed in traditional observational data. For our two categories of human capital investment, in Table 3 we report RTE for each sector. These represent the individual's belief about the intensive margin return to a university degree over dropping-out if they were to work in each of the relevant sectors. Overall, female students perceive as much as a 71 percent return at age 30 earnings to completing University rather than quitting and, on average, males perceive a return of 52 percent. The expected returns go beyond 100 percent in the private and public sectors.

Beyond expected returns measured as average ones in the following figure we also explore patterns in heterogeneity of returns. Figure 4 presents the distribution of sector-specific $\varphi_i$for the college *versus* no degree return. Figure 5 reports the distribution of overall $\varphi_i$for the college versus no degree return by gender. The figure suggests that the expected returns to tertiary education are positive for the vast majority of individuals. This is not surprising as the sample is formed by individuals who have already taken the decision to enrol into university. The figures also indicate a substantial dispersion in the distribution of expected returns, with some students expecting a very high return (more than 100 percent difference in earnings) and others a small return, and for a minority even a negative return (in particular the latter holds

substantially for the self-employment sector—the lowest tail of people believe they would earn less in self-employment if they were to graduate rather than had no degree).

Finally, Figure 6 reports the distribution of the 'error' in the perceived occupation-specific returns to education, i.e the log difference in actual (true) and expected earnings with and without tertiary education. The figure shows a positive error for self-employment and a negative error in the cases of private or public sector employment. This points to a significant under-estimation of returns to higher education in the case of self-employment and an average over-estimation for the remaining sectors, especially the public one.

4. Empirical analysis

In this section, we examine patterns in expectations, focusing on beliefs about self-expected earnings of the individual at the age of 30 years as well as the relevant population average earnings.

4.1. Self-beliefs and population beliefs

Do population beliefs predict self-beliefs? First, we examine the relationship between self-beliefs and population beliefs. We run the analysis below because we are ultimately interested in the effect of an exogenous change in expectations on students' employment outcomes. Students will respond to population information (e.g. by revising their self-beliefs or their choices) if (i) they are misinformed about population earnings, and (2) their own earning beliefs are linked to their beliefs about population earnings. The following regressions check for these two points.

The first regression estimates the following equation using baseline data only (pre-treatment information):

$$\ln w_{ki} = b_o + b_1 \ln \overline{w}_{ki} + e_{ki}$$

where the dependent variable is individual i's (log) expected self-earnings in each occupation k and the main independent variable is the i's (log) belief about the population average earnings, again in occupation k. We pool all sectors together and in some specifications include sectors fixed effects. As for now, we focus on expectations conditional on graduating from university.

Estimates in Table 4 indicate that population beliefs are strongly and statistically significantly related to beliefs about self-earnings. Coefficients are robust to the inclusion of individual characteristics (column 2) and to the inclusion of sector-specific fixed effects (column 3). The log-log form of the regressions gives the coefficient estimates an "elasticity" interpretation: the coefficient of 0.45 (column 3) indicates that a 1% increase in population beliefs about average earnings increases beliefs about own earnings by 0.45%. Estimates by gender (columns 4-5) suggest that population beliefs are less informative of own earnings beliefs for women. The *R*2 reported for the regression in column 3 indicates that about 35% of the variation in self-earnings beliefs is explained by population earnings beliefs and sector-specific dummies.

Error in population beliefs and revisions in self-earnings beliefs. Next, we study whether the *revisions* in self-earnings are related to *errors* in population beliefs. We do so by using pre- and post-treatment data. This regression indicates the extent to which the information treatments we provide influence individual beliefs about self-earnings. Causal revisions in response to information would imply a positive relationship between the two. Hence, we regress log earnings revision in self-earnings (post- minus pretreatment) on the log relative error about population earnings (log(truth) – log(belief)) measured before the treatment. That is:

$$(\ln w'_{ki} - \ln w_{ki}) = b_o + b_1 (\ln \overline{w} *_k - \ln \overline{w}_{ki}) + e_{ki}$$

Results (reported in Table 5) indicate that the estimated coefficients are positive and statistically significant at the 1% level. The estimate of 0.25 indicates that a 1% error (under-estimation of population earnings) is associated with a 0.25% upwards revision of self-earnings. The relatively "elastic" response of revisions in self-beliefs to population errors suggests that self-beliefs about earnings are *strongly associated* to the population information we provide. These estimates are larger than the ones found in developed economies. For instance, they are about 3 times larger than those estimated by Wiswall and Zafar (2014) for the US. This result might suggest that the information treatment is more relevant in the Mozambican context, probably because students in Mozambique possess worse information to start with relative to students in a developed country.

Interestingly, in unreported regressions, we find that individuals have more elastic response to the population information in the drop-out scenario whereas individuals enrolled in engineering have the most inelastic response with respect to their peers in other majors.

4.2. Occupational choices and self-beliefs about own earnings

Cross-sectional evidence. Here we examine the relationship between beliefs about occupational choices and future earnings. We first estimate a regression using log expected probability of being employed in each occupation (relative to the public sector) as the dependent variable and log self-beliefs about earnings at the age of 30 years (relative to public sector earnings) as the independent variable. This regression is estimated using only the cross-sectional (pre-treatment) variation across individuals.

The regression takes the form:

$$(\ln p_{ki} - \ln p_{\tilde{k}i}) = b_o + b_1 (\ln \overline{w}_{ki} - \ln \overline{w}_{\tilde{k}i}) + dC_i + v_k + e_{ki}$$

where p_{ki} is *i*'s subjective probability of working in occupation *k*, $\bar{w}_{ki}$ is *i*'s belief about age of 30 years earnings in occupation *k*, *Ci* is a vector of individual-specific characteristics, and v_k is a sector *k* fixed effect. $\tilde{k}$, the reference sector in these regressions, is employee in the public sector. The residual error term is composed by the unobserved relative test difference and an idiosyncratic component.

Results (Table 6) show that a 10% increase in beliefs about self-earnings in an occupation (relative to self-earnings in the public sector) increases the log odds of being employed in that sector (relative to public) by about 1.8% (column 3). Importantly, because we have beliefs about earnings for all sectors (including those not chosen), this type of regression avoids the selection issue inherent in using actual occupation choice and the actual earnings in that chosen occupation.

Interestingly, the probability of finding a job in each sector (relative to the public one) appears to play a significant role. A 10% increase in beliefs about the likelihood of finding a job in a specific occupation (relative to public) increases the log odds of the individual choosing such occupation (relative to public) by about 5% (column 3). Finally, an increase in the standard deviation of expected earnings (relative to public) is negatively associated with the probability of being employed in a specific sector (relative to public). The last two coefficients suggest the importance of the degree of riskiness of an occupation over and above its average expected earnings. The relevance of the riskiness dimension seems to be higher among men and among students closer to the labor market (those in the last year).

Evidence from individual fixed effect specifications. This regression, though, is a cross-sectional-based OLS based only on the baseline pre-treatment beliefs. A key drawback to using only baseline beliefs is that one cannot separately identify the taste component from earnings components. In this regression, the residual contains individual components reflecting

individual variation in tastes for each of the occupations. Therefore, a concern is that the cross-sectional estimate of the relationship between choices and earnings could be biased if beliefs about earnings are correlated with beliefs about tastes for the occupations. To resolve this problem, we estimate the same model as above in individual (within) differences to net out the individual taste components as follows:

$$[(\ln p'_{ki} - \ln p'_{\tilde{k}i}) - (\ln p_{ki} - \ln p_{\tilde{k}i})]$$
$$= b_o + b_1 (\ln \bar{w}'_{ki} - \ln \bar{w}'_{\tilde{k}i}) - (\ln \bar{w}_{ki} - \ln \bar{w}_{\tilde{k}i}) + v_k + e'_{ki} + e_{ki}$$

where *p'* and *w'* are post-treatment observations of choice probabilities and expected earnings.

The estimates of this model are equivalent to using an individual FE estimator. Results are reported in Table 7.

Using the post- and pre-treatment panel data with individual FE, we estimate the choice elasticity, with respect to beliefs about earnings, at 0.08. That is, a 10% increase in beliefs about self-earnings in an occupation (relative to self-earnings in the public sector) increases the log odds of being employed in that sector (relative to public) by about 0.8%. The FE estimate is smaller in magnitude than the estimate of around 0.18 using the cross-sectional OLS estimator, confirming that OLS estimates are upward biased. The FE estimate is statistically significant at the 5% level. The choice elasticity to earnings' standard deviation is negative and significant for men.

The difference between the FE/panel and OLS/cross-sectional estimates suggests that the individual tastes components are positively correlated with beliefs about earnings, and this positive correlation is upwardly biasing the estimates in the cross-section. However, this is not as severe for us as it is in Wiswall and Zafar (2014). This could be suggestive of monetary incentives playing a larger role than innate occupation-specific preferences in a developing country context.

5. Conclusions

The transition from school to the labour market is receiving growing attention among economists and policy makers, especially in developing countries. This paper investigates the role of subjective expectations in shaping occupational choices among university students in Mozambique. We do so by combining tailored survey data collected under different scenarios with an experimentally generated panel of beliefs obtained through a randomized information treatment administrated to over 800 students.

Our findings suggest that students tend to under-estimate returns to higher education in the self-employment sector, while over-estimating them in the private and public sector. However, they do respond to the information by revising their beliefs as well as stated occupational choices. Results suggest that: i) students sort into occupations according to average expected earnings; ii) students tend to avoid occupations with high earnings variance and low probability of finding a job suggesting an important role played by expected riskiness; iii) disregarding such uncertainty might lead to overestimating the importance of expected average earnings. The under-estimation of returns to education in the self-employment sector highlights one potential cause of what many observers indicate as a skill-mismatch in such sector, i.e. the lack of skilled individuals willing to become entrepreneurs. On the other hand, the over-estimation of returns to education in the public sector seems to be consistent with an excess of supply in this sector.

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Figures

Figure 1– Difference between real and perceived average wage in the population

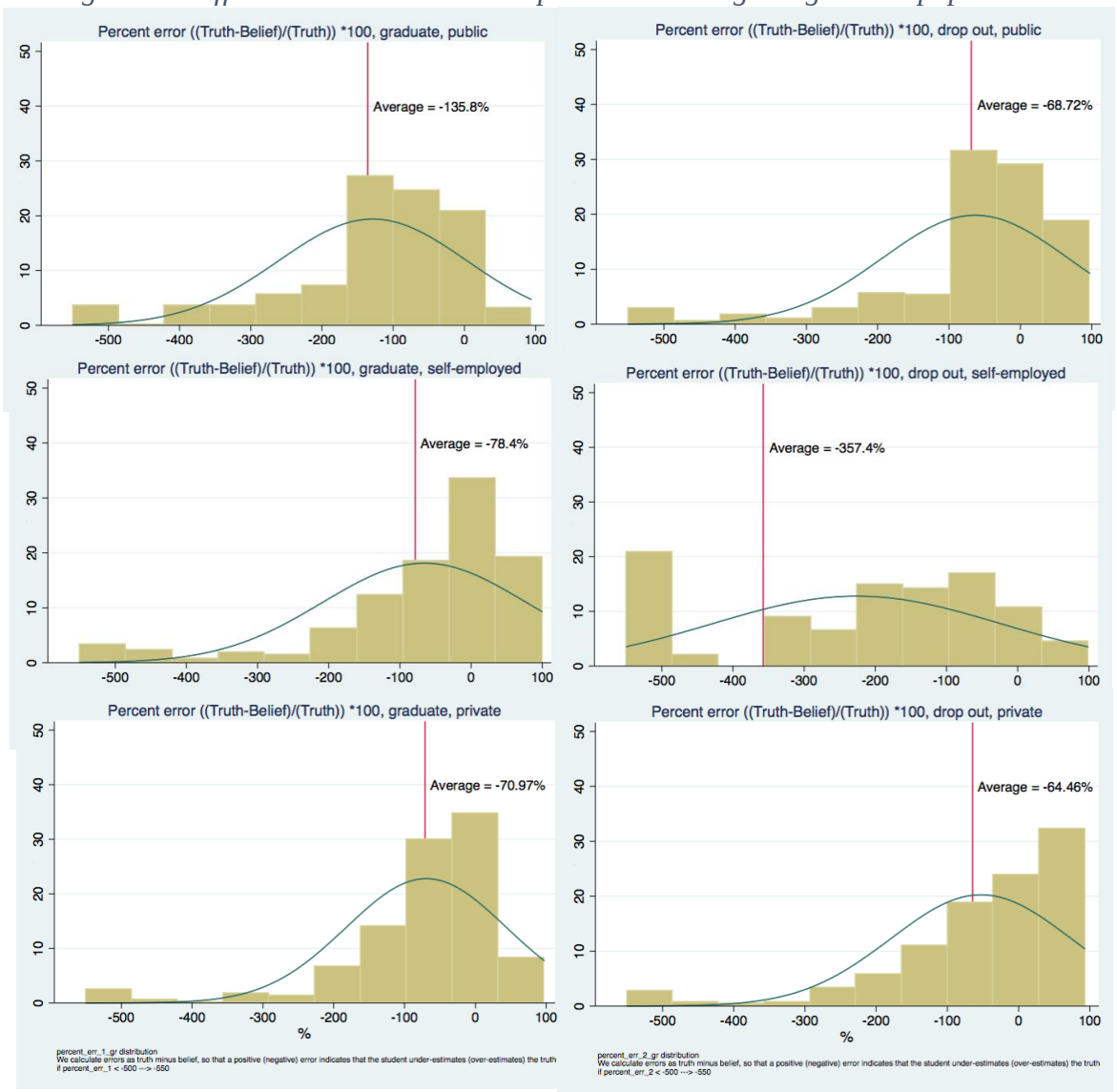


Figure 2– (Self - Population)/Population earnings expectations: by gender

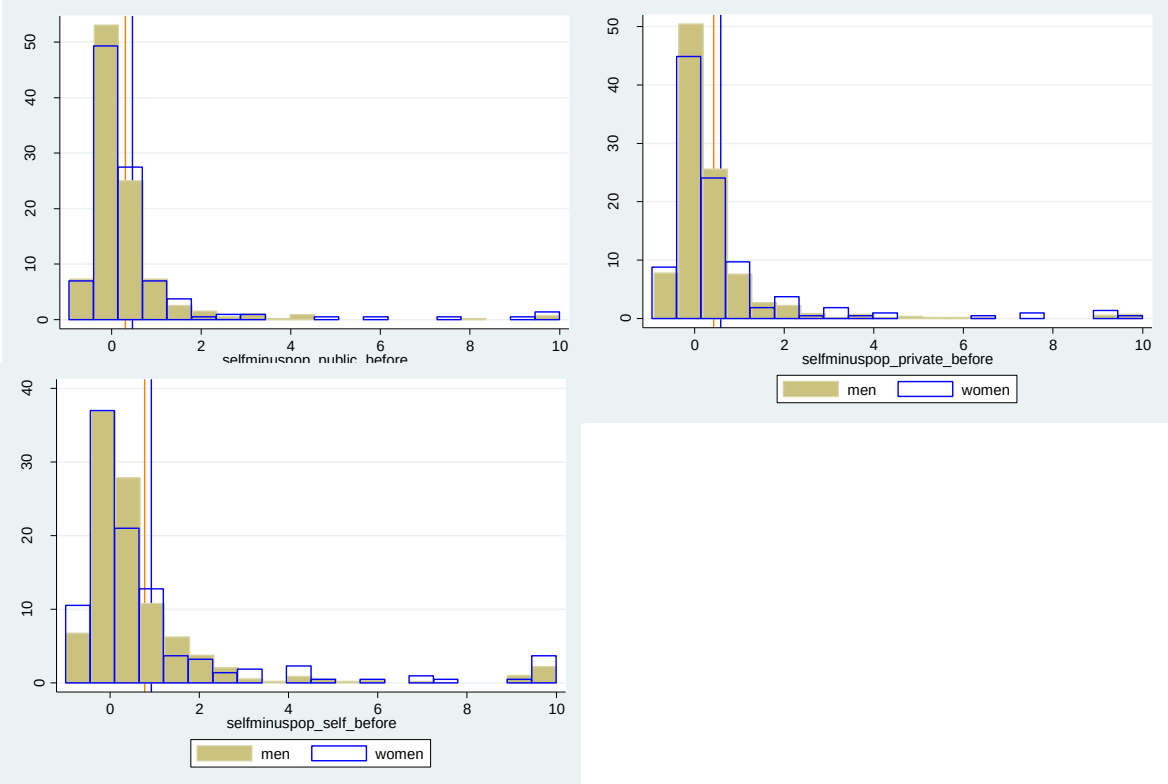


Figure 3– After treatment revision of expected self-earnings (in %)

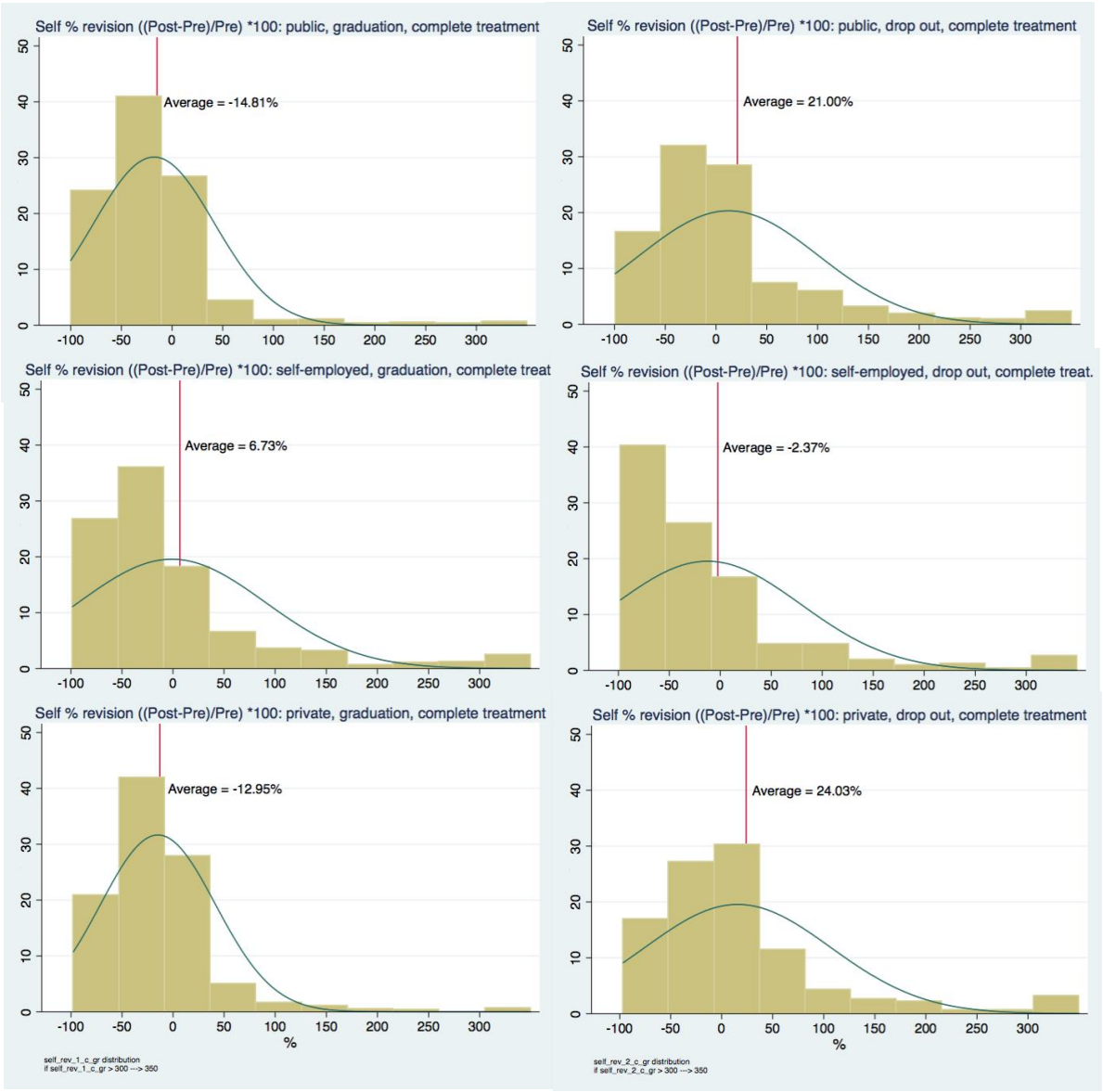


Figure 4– Distribution of Log Difference in Sector-specific Earnings for Graduating vs Dropping-out.

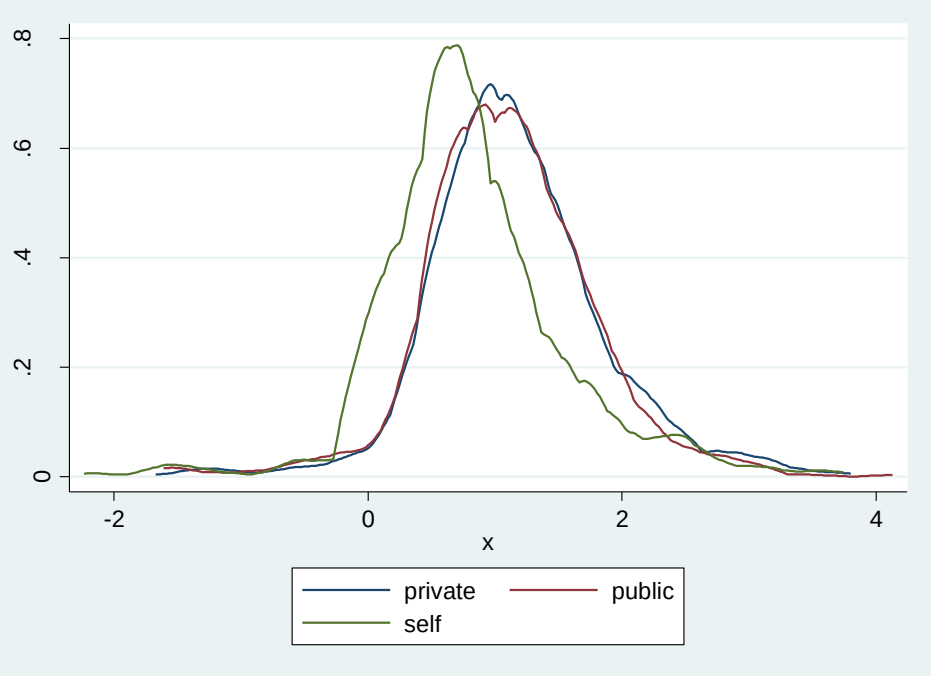


Figure 5– Distribution of Log Difference Overall Earnings for Graduating vs *Dropping-out by Gender.*

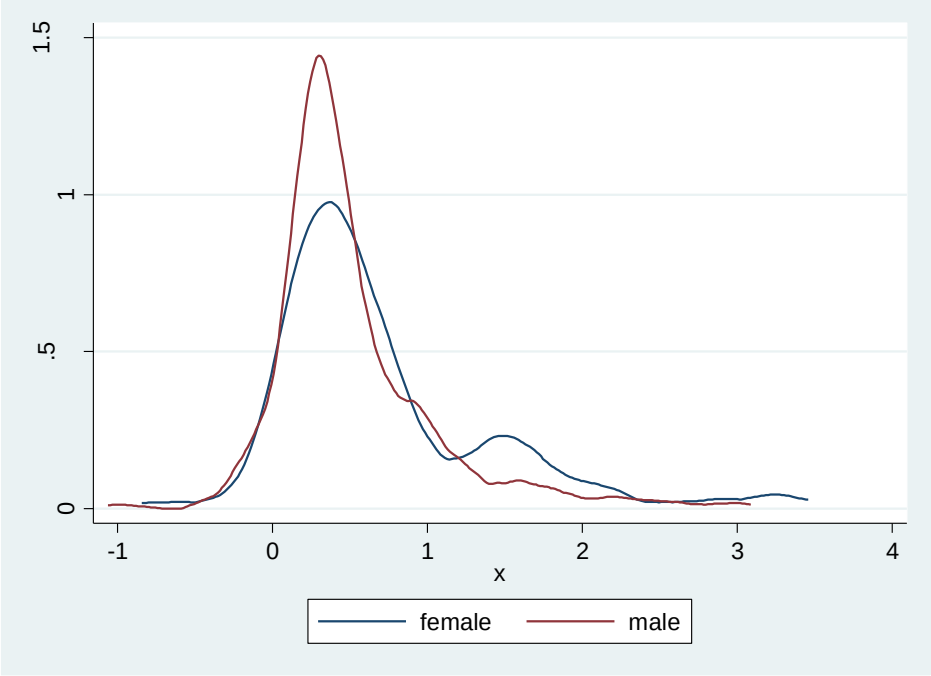
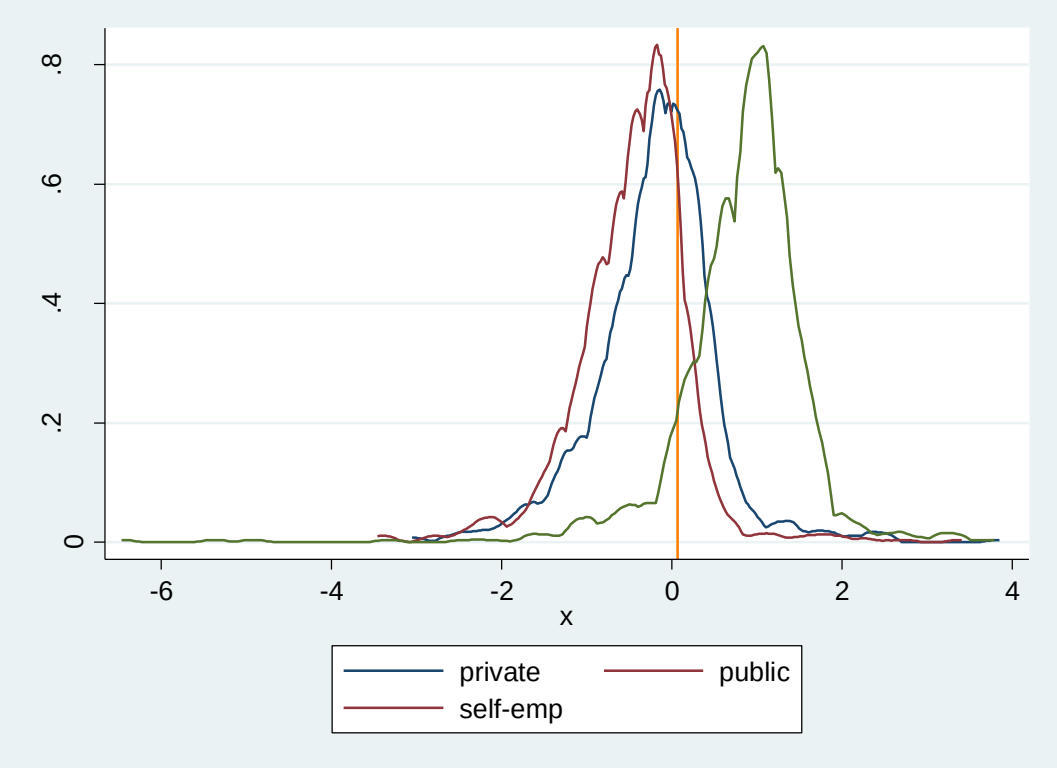


Figure 6– Distribution of Log Difference in Age 30 Sector-specific Actual and Perceived RTE (error in RTE)



Tables

Table 1– Individual characteristics of the sample

	Women	Men	Total
age	21.88**	22.53**	22.35
	[4.47]	[3.73]	[3.95]
father_grad	0.30***	0.14***	0.18
	[0.46]	[0.35]	[0.39]
mother_grad	0.19***	0.08***	0.11
	[0.39]	[0.27]	[0.31]
1st year	0.14	0.18	0.17
	[0.35]	[0.38]	[0.37]
2nd year	0.41	0.35	0.37
	[0.49]	[0.48]	[0.48]
3rd year	0.29	0.26	0.27
	[0.45]	[0.44]	[0.44]
4th year	0.16	0.21	0.19
	[0.37]	[0.40]	[0.40]
Economics	0.28***	0.17***	0.20
	[0.45]	[0.38]	[0.40]
Enginnering	0.13***	0.32***	0.27
	[0.34]	[0.47]	[0.44]
Science	0.40***	0.30***	0.33
	[0.49]	[0.46]	[0.47]
Social_Sciences	0.18	0.21	0.20
	[0.39]	[0.40]	[0.40]
(mean) risk_averse	0.38	0.33	0.34
	[0.49]	[0.47]	[0.48]
N	594	1,538	2132

Notes. Standard deviations in brackets. Significance of the difference between means: *** p<0.01, ** p<0.05, * p<0.1

Table 2– Sectoral choice probability: graduate vs drop-out scenario

	GRADUATE	DROP-OUT
Prob work private sector	0.41	0.28
	[0.16]	[0.20]
Prob work public sector	0.34	0.21
	[0.17]	[0.16]
Prob work self-empl.	0.22	0.39
	[0.16]	[0.24]
Prob Not working	0.04	0.12
	[0.07]	[0.17]

Notes. Standard deviations in brackets.

Table 3– Expected return to tertiary education: by sector

	All (1)	Women (2)	Men (3)
Graduate vs Drop-out--Private sector	1.17	1.25	1.14
	[0.68]	[0.76]	[0.66]
Graduate vs Drop-out--Public sector	1.10	1.26	1.05
	[0.67]	[0.71]	[0.64]
Graduate vs Drop-out--Self-employment	0.83	0.86	0.82
	[0.73]	[0.79]	[0.71]

Notes. Standard deviations in brackets.

Table 4– Self earnings beliefs and population earnings beliefs

	Outcome: Log self-earning beliefs				
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
Log population earnings beliefs	0.516***	0.458***	0.446***	0.365***	0.480***
	(0.0181)	(0.0182)	(0.0181)	(0.0346)	(0.0216)
Individual controls		X	X	X	X
Sector fixed effects			X	X	X
Observations	2,132	2,132	2,132	594	1,538
R-squared	0.276	0.327	0.346	0.288	0.382

Notes. Individual controls include: male indicator, set of dummies for the university major, set of dummies for university cohort, age, risk attitude, employment status, indicator for married, number of children, indicator for father having at least secondary education, indicator for mother having at least secondary education. Sector fixed effects include: public, private, and self-employment. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 5– Revisions in self-earnings beliefs after information treatment

	Outcome: Log earnings revisions (post-pre)				
	(1)	**(2)**	**(3)**	**(4)**	**(5)**
Log population earnings error	0.250***	0.225***	0.237***	0.220***	0.229***
	(0.0229)	(0.0237)	(0.0246)	(0.0403)	(0.0313)
Individual controls		X	X	X	X
Sector fixed effects			X	X	X
Observations	2,120	2,120	2,120	592	1,528
R-squared	0.053	0.066	0.069	0.123	0.068

Notes. Individual controls include: male indicator, set of dummies for the university major, set of dummies for university cohort, age, risk attitude, employment status, indicator for married, number of children, indicator for father having at least secondary education, indicator for mother having at least secondary education. Sector fixed effects include: public, private, and self-employment. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 6– Determinants of sectoral choice (cross section)

	All	All	All	All	All	only women	only men	only first year	only fourth year
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Expected earnings	0.192***	0.183***	0.184***	0.160***	0.170***	0.133*	0.179***	0.505***	0.223**
	(0.0386)	(0.0381)	(0.0382)	(0.0389)	(0.0362)	(0.0702)	(0.0428)	(0.123)	(0.0881)
Expected probability to find a job		0.534***	0.536***	0.489***	0.530***	0.408**	0.566***	0.498**	0.742***
		(0.0945)	(0.0946)	(0.0958)	(0.0892)	(0.195)	(0.101)	(0.251)	(0.198)
Expected SD of earnings			-0.045	-0.045	-0.141*	-0.079	-0.180*	-0.005	-0.325*
			(0.0886)	(0.0885)	(0.0827)	(0.166)	(0.0964)	(0.238)	(0.178)
Individual controls				X	X	X	X	X	X
Sector fixed effects					X	X	X	X	X
Observations	1,238	1,238	1,238	1,238	1,238	328	910	201	241
R-squared	0.020	0.044	0.045	0.067	0.193	0.172	0.219	0.218	0.305

Notes. Individual controls include: male indicator, set of dummies for the university major, set of dummies for university cohort, age, risk attitude, employment status, indicator for married, number of children, indicator for father having at least secondary education, indicator for mother having at least secondary education. Sector fixed effects include: public, private, and self-employment. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

Table 7– Determinants of sectoral choice (panel)

	All	Women	Men
	(1)	(2)	(3)
Expected earnings	0.0806**	0.0396	0.0938**
	(0.0338)	(0.0726)	(0.0379)
Expected SD of earnings	-0.056	0.180	-0.147*
	(0.0709)	(0.143)	(0.0814)
Individual fixed effects	X	X	X
Observations	2,919	760	2,159

Notes. Robust standard errors in parentheses. *** p<0.01, ** p<0.05, * p<0.1

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