

# Full-time schooling, part-time schooling, and wages: returns and risks in Portugal \*

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## Abstract

The standard wage equation proposed by Mincer (1974) assumes that individuals start working after leaving school, which is not the actual case for many people. Using longitudinal data on Portuguese male workers, former working students, we estimate the total impact of an additional year of full-time schooling on both the mean and the shape of the conditional wage distribution. The same exercise is also performed for part-time schooling. We find that the conditional average wage return to one year of part-time schooling is *much lower* than the analogous return to one year of full-time schooling. However, the conditional wage risk implied by one year of part-time schooling is *much lower* than the analogous risk implied by one year of full-time schooling, thus complicating policy considerations. Nevertheless, we find evidence that the full-time schooling strategy *dominates*, in conditional wage distribution, the part-time schooling strategy. Therefore, in a simple return-risk framework, the choice of working while enrolled in school does not ultimately pay.

Keywords: working students, return to schooling, wage level, panel data.

JEL Classification: I21, J31, C23.

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## 1. Introduction

The seminal work by Jacob Mincer (1974) on *Schooling, Experience and Earnings* is the starting point of a large body of literature dealing with the estimation of an individual-level wage equation where the logarithm of hourly earnings is explained by schooling years, labour-market experience and experience squared.

The Mincerian framework is a corner-stone of modern education economics, although it has some limitations. One of the limitations of the framework concerns with the hypothesis that individuals start working after leaving school, which is quite not the case for many people in many countries. Indeed, as stressed by Audrey Light (2001, p. 65), “students often accumulate substantial work experience before leaving school”.

A recent report summarizing the experiences of eight European countries in 2000 shows that the ratio of working students to total students varies from 48 percent in France to 77 percent in the Netherlands (see Häkkinen, 2006). Despite the numerical relevance of working students, the first attempt of controlling for in-school work experience when estimating the Mincerian return to schooling is relatively recent. Light (2001) uses data from the US National Longitudinal Survey of Youth and finds that disregarding in-school work experience implies a substantial overestimation of the Mincerian return to schooling.

Of course, the study by Audrey Light is not the only, nor the first study in the field. On the contrary, the field is relatively rich in contributions aiming at measuring the average wage return to in-school work. From a theoretical point of view, the academic debate on this issue presents two clear and opposite views. On the one hand, there are those who maintain that working while enrolled in school is positive because it fosters the development of personal responsibility and good work-habits. On the other hand, there

are those who criticize this practice because it interferes with learning activities at school, delaying schooling achievements (see Schoenhals et al., 1998 for a review).

As for the theory, the empirical evidence accumulated in the field so far is also mixed. Many authors find evidence in favour of in-school work in terms of substantial higher wages later in life. Nevertheless, an important study by Hotz et al. (2002) questions this whole body of evidence because sample selectivity is not controlled for. Indeed, the authors find that controlling for this factor completely eliminates the positive impact of in-school work on future earnings.

Another striking feature of the empirical literature, at academic level, concerns with being almost exclusively related to the case of the United States. A recent paper by Häkkinen (2006) is one of the first attempts to fill the gap between the European Union and the United States. The author asks whether it pays to work while enrolled in school in Finland, with results that are in line with those proposed by Hotz et al. (2002).

Summarizing, the existing literature suggests that the earnings return to an additional year of full-time schooling is much higher than the earnings return to an additional year of either in-school work or part-time schooling, which are two sides of the same coin. However, despite a relatively high number of contributions, we believe that some important information is still missing in the existing literature. This information concerns with the estimation of the wage risk of full-time education compared to part-time education. As a matter of example, if an additional year of full-time schooling pays more than an additional year of part-time schooling in terms of average future wage returns, the latter may involve less wage risk than the first. That is, there may be a trade-off between risk and return that the literature has not explored yet.

Starting from the latter consideration, this paper attempts to identify the total average wage returns to full-time schooling and part-time schooling, also comparing the associated wage risks. Hence, from an academic point of view, our paper contributes to the ongoing debate on the return-risk link in education (among others, see Levhari and Weiss, 1974; Pereira and Martins, 2002; Harmon et al., 2003; Hartog et al., 2004; Christiansen et al., 2006; Hogan and Walker, 2007; Andini, 2008a).

Specifically, we aim at answering, in a different way than suggested so far, the question of whether the choice of working while enrolled in school actually pays. As we will see, based on Portuguese data, the answer is complex. Considering average wage returns only, we answer “no”. Therefore, the answer is in line with earlier findings by both Hotz et al. (2002) and Häkkinen (2006). However, considering wage risks only, we answer “yes”. Therefore, considering both returns and risks, the answer to our main research question may appear controversial. Nevertheless, we find that the full-time schooling strategy dominates, in conditional wage distribution, the part-time schooling strategy, thus providing an economic reason for ultimately answering “no”.

## **2. Theoretical background**

If the average wage return to full-time schooling is clearly higher than the average wage return to part-time schooling as suggested by the existing literature, why does the phenomenon of in-school work continue to exist? There are multiple ways of answering this question. For the purpose of this paper, we find interesting the exercise of focusing on return-risk considerations, using a simple model of choice based on unconditional moments.

Let us think at full-time schooling and part-time schooling as two different assets providing random wage returns, say  $\tilde{W}_1 \sim (\beta_1, \sigma_1^2)$  and  $\tilde{W}_2 \sim (\beta_2, \sigma_2^2)$  respectively. Analogously, let us think at schooling as a portfolio of these two assets providing a random wage return, say  $\tilde{W} \sim (\beta, \sigma^2)$ .

Further, following the existing evidence, let us assume that full-time schooling provides a higher average wage return than part-time schooling, i.e.  $\beta_1 > \beta_2$ . In addition, let us assume that the correlation coefficient between the wage returns to full-time schooling and part-time schooling is equal to  $\rho$ . Finally, let us suppose that an individual cares about the mean  $\beta$  and the variance  $\sigma^2$  of the random wage return of the schooling portfolio, i.e. the individual utility function is specified as  $U(\beta, \sigma^2)$  with  $U'(\beta) > 0$  and  $U'(\sigma^2) < 0$ .

Under the hypothesis that an individual maximizes his/her mean-variance utility function, which share of schooling years should be optimally invested in full-time education and in part-time education?

To answer this question, we must first note that the individual faces the following constraint:

$$(1) \quad \tilde{W}S = \tilde{W}_1S_1 + \tilde{W}_2S_2$$

where  $S_1$  is the number of schooling years invested in full-time schooling, and  $S_2$  is the number of schooling years invested in part-time schooling. For sake of simplicity, we assume that the total number of schooling years  $S$  is exogenously given.

Expression (1) simply tells us that the total random wage return provided by  $S$  years of schooling must be equal the total random wage return provided by  $S_1$  years of full-time schooling plus the total random wage return provided by  $S_2$  years of part-time schooling.

Dividing both sides of expression (1) by  $S$ , we obtain the following expression:

$$(2) \quad \tilde{W} = x_1 \tilde{W}_1 + x_2 \tilde{W}_2$$

where  $x_1 = \frac{S_1}{S}$  is the share of schooling years invested in full-time education, while  $x_2 = 1 - x_1$  is the share of schooling years invested in part-time education (note that the expression  $S = S_1 + S_2$  holds).

Using (2), we can easily show that both  $\beta = E(\tilde{W})$  and  $\sigma^2 = \text{VAR}(\tilde{W})$  depend on  $x_1$ , according to the following expressions:

$$(3) \quad \beta = x_1 \beta_1 + (1 - x_1) \beta_2$$

and

$$(4) \quad \sigma^2 = x_1^2 \sigma_1^2 + (1 - x_1)^2 \sigma_2^2 + 2x_1(1 - x_1) \rho \sigma_1 \sigma_2.$$

Therefore, the economic problem of the individual who chooses the optimal share of schooling years to be invested in full-time schooling in order to maximize his/her mean-variance utility function turns out to be the following one:

$$(5) \quad \begin{array}{ll} \text{Max} & U(\beta, \sigma^2) \\ 0 \leq x_1 \leq 1 & \end{array} .$$

Under appropriate parameters' conditions, problem (5) admits the following *internal* solution:

$$(6) \quad x_1^* = \frac{\beta_1 - \beta_2 + \sigma_2^2 - \rho\sigma_1\sigma_2}{\sigma_1^2 + \sigma_2^2 - 2\rho\sigma_1\sigma_2}$$

where  $\alpha = -\frac{U'(\sigma^2)}{U'(\beta)}$  represents a degree of wage risk aversion.

This simple model, mainly inspired by an earlier model for skills developed by Hartog and Vijverberg (2007), helps to show that, although the average wage return to full-time education is higher than the average wage return to part-time education ( $\beta_1 > \beta_2$ ), an individual may optimally choose  $x_1^* \neq 1$ , i.e. to spend a share of schooling years as a working student ( $x_2^* \neq 0$ ), because the wage risks involved in both full-time schooling and part-time schooling also matter for the choice (among other things).

Therefore, it is important to estimate not only the conditional average wage return to both full-time schooling and part-time schooling but also the conditional wage risk

involved in both full-time education and part-time education. This is what we do in the next section.

### 3. Empirical analysis

We use data from the European Community Household Panel 1994-2001 and focus on a sample of Portuguese male workers, aged between 18 and 65, former working students.

The sample is described in Appendix.

Using individual-level panel data, the basic Mincerian model suggests the estimation of the following wage equation:

$$(7) \quad \text{LNW}_{it} = \beta_0 + \beta_1 \text{SCHOOL}_i + \beta_2 \text{POTWORK}_{it} + \beta_3 \text{POTWORK}_{it}^2 + \xi_{it}$$

where LNW represents the natural logarithm of hourly earnings, SCHOOL represents schooling years,  $\text{POTWORK} = \text{AGE} - \text{SCHOOL} - 6$  stands for potential labour-market experience (AGE is individual age), and  $\xi$  is an error term. Letter i represents the individual dimension, while letter t represents the time dimension (annual, in our dataset).

For the purpose of this paper, we suggest three simple departures from the above empirical setting. First, rather than potential labour-market experience, we compute actual full-time labour-market experience. The latter is given by the number of full-time working years actually accumulated by an individual at the date of the interview. This variable is labelled as FULLWORK. Second, we distinguish between years of full-time schooling, labelled as FULLSCHOOL, and years of part-time schooling, labelled as

PARTSCHOOL. Third, as usual with longitudinal data, we control for time and individual effects.

In summary, we estimate the following empirical model:

$$(8) \quad \text{LNW}_{it} = \beta_0 + \beta_1 \text{FULLSCHOOL}_i + \beta_2 \text{PARTSCHOOL}_i + \beta_3 \text{FULLWORK}_{it} + \beta_4 \text{FULLWORK}_{it}^2 + \beta_i + \beta_t + \xi_{it}$$

where  $\beta_i$  and  $\beta_t$  are vectors containing individual and time specific effects, respectively.

To begin with, we deal with the estimation of the conditional average wage returns  $\beta_1$  and  $\beta_2$ , contributing to the existing body of empirical research on the mean earnings effects of in-school work. Afterwards, in order to evaluate and compare the conditional wage risks implied by both full-time education and part-time education, we also provide estimates of  $\beta_1$  and  $\beta_2$  along the conditional wage distribution. Hence, following a seminal article by Buchinsky (1994) for the United States, we contribute to the existing research on within-groups wage inequality in Portugal (among others, see Machado and Mata, 2001; Hartog et al., 2001; Martins and Pereira, 2004; Andini, 2008b).

This paper focuses on the estimation of *total* returns, meaning that all direct and indirect effects of education, either full-time or part-time, on earnings are captured by just two coefficients,  $\beta_1$  and  $\beta_2$  (see Pereira and Martins, 2004; Andini, 2007). Therefore, we

exclude schooling-dependent covariates, such as industry dummies<sup>1</sup>, occupation dummies and potential labour-market experience, from the list of regressors<sup>2</sup>.

To be more precise about the meaning and the relevance of the concept of *total* return to schooling, let us provide a simple example. Let us suppose that one estimates a wage equation including potential labour-market experience as control-variable, such as  $LNW = \beta_0 + \beta_1SCHOOL + \beta_2POTWORK + \varepsilon$ . If this is the case, the coefficient of schooling years  $\beta_1$  does not capture the total effect of schooling on earnings because

that the total effect is given by  $\frac{\partial LNW}{\partial SCHOOL} = \beta_1 - \beta_2$ .

In our simple example, it is possible to recover the total effect of schooling on wages by subtracting the estimate of  $\beta_2$  from the estimate of  $\beta_1$  because we exactly know how *POTWORK* depends on *SCHOOL* ( $POTWORK = AGE - SCHOOL - 6$ ). However, when the mathematical law of the schooling-dependent covariate is unknown (i.e. the general case), the recovering exercise is not possible. Hence, if the objective of the empirical analysis is the total return to schooling, it is important to exclude schooling-dependent covariates from the wage equation and estimate a parsimonious empirical model.

Of course, downsizing the wage equation is a risky exercise because the lower is the number of regressors, the likelier is the possibility that  $\beta_1$  and  $\beta_2$  are inconsistently estimated due to omitted-variable bias. However, the next sub-sections provide several

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<sup>1</sup> Jobs in some industries may require more years of schooling than jobs in other industries.

<sup>2</sup> Pereira and Martins (2004) properly argue that in order “to obtain the full impact of education on wages, one should be careful not to include in the wage equation covariates whose value can depend on education. In the extreme case one should only regress the  $\ln(\text{wage})$  in education.” (p. 526). See also Andini (2007).

arguments supporting the robustness of our conclusions by presenting a number of sensitivity checks.

#### Conditional average wage returns

The OLS estimator suggests that the total average wage return to an additional year of full-time schooling is higher than the corresponding return to part-time schooling. A formal test also confirms that the two coefficients are statistically different. The magnitude of this difference is around 7 percent points (OLS: 0.089 vs. 0.019).

If we allow for the existence of individual specific intercepts, the estimation results do not substantially change. Indeed, the random-effects estimator (RE: 0.085 vs. 0.018) confirm the OLS results. In addition, the between-effects estimator is in line with both the RE estimator and the OLS estimator (BE: 0.084 vs. 0.020). Note that fixed-effects estimates are not presented because both FULLSCHOOL and PARTSCHOOL are time-invariant variables.

Following Hotz et al. (2002), it is important to check whether the RE results are robust to sample-selection issues. As individuals may self-select into part-time schooling, we need to test the hypothesis that sample-selection bias might distort the estimation of the conditional average wage returns to both part-time schooling and full-time schooling. To do so, we use the whole available sample of Portuguese male workers (7207 rather than 3930 obs.), aged between 18 and 65, which includes individuals who have never been part-time students. Then, using this sample, we generate an indicator-variable for the part-time schooling choice. Since in our theoretical model this choice mainly depends on individual-specific unobservable characteristics (such as individual wage-risk aversions as well as individual predictions about unconditional wage returns and

unconditional wage risks), we expect that controlling for individual specific effects, through the RE estimator, is enough to remove sample-selection biases. This hypothesis is tested using the procedure suggested by Nijman and Verbeek (1992) which consists of testing whether the lagged value of the part-time schooling choice variable is significant in the RE model. Not surprisingly, we find that the estimated coefficient is closed to zero (0.018) and is not statistically significant (p-value 0.167).

It is worth stressing that our qualitative results are not at odds with those of Hotz et al. (2002) even in the case that sample selection is not controlled for. Indeed, Hotz et al. (2002) find that disregarding sample selection *overestimates* the average impact of part-time schooling on wages, when using the OLS estimator. Thus, following Hotz et al. (2002), our OLS estimate of the part-time schooling wage return might be overestimated. If so, however, this argument would support the conclusion that the return to part-time schooling is lower than the return to full-time schooling, which is our qualitative conclusion.

Although the RE estimates are found to be robust to sample selection, they might be sensitive to endogeneity issues. Table 1 presents instrumental-variable estimates using indicator-variables of birth years as instruments for our four potentially endogenous regressors in model (8). This choice is motivated by the fact that, as explained in Appendix, all our potentially endogenous regressors are age-related variables. Therefore, the birth years of the individuals in the sample are likely to be correlated with our potentially endogenous regressors and are, of course, independent from the wage level. Although not reported, first-stage statistics confirm this view<sup>3</sup>.

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<sup>3</sup> The whole estimation output is available from the authors upon request.

While the two-stage-least-squares estimates (which disregard individual specific effects) are roughly in line with the OLS estimates (2SLS: 0.098 vs. 0.023), controlling for both individual specific effects and endogeneity substantially changes the estimation results. Indeed, the instrumental-variable-random-effects estimates suggest that the average return to full-time schooling is much bigger than the average return to part-time schooling (IVRE: 0.275 vs. 0.032). The difference between the two coefficients, around 24 percent points, is statistically significant as well as much larger than the one predicted by the basic RE estimator (which disregards endogeneity issues).

To conclude, we believe that the IVRE estimates of the conditional average wage returns to both part-time schooling and full-time schooling are the best approximations of the actual returns among those presented in this paper, i.e. they represent our preferred estimates. Anyway, the main qualitative conclusion of this sub-section is independent of the estimation technique. Whatever is the technique used, our data-set suggests that the part-time schooling wage return for Portuguese males is, on average, significantly lower than the full-time schooling wage return.

### Conditional wage risks

In order to obtain wage-risk estimates comparable with average wage-return estimates, it is important to use not only the same sample and model specification but also a quantile-regression estimator that is conceptually closed to the IVRE (mean) estimator. Such estimator is not currently available and the estimation procedure suggested in this sub-section constitutes the main *methodological* contribution of this paper. Specifically,

in order to control for individual specific effects and endogeneity at the same time<sup>4</sup>, we make a simple transformation of model (8) which exploits the fact that we can use the vector of the individual specific effects provided by the IVRE estimator,  $\hat{\beta}_i$ . We basically transform the dependent variable in model (8) in order to obtain *adjusted* wages which are free from individual specific effects. Afterwards, using the estimator of Arias et al. (2001) which takes into account endogeneity, we estimate the following model:

$$(9) \quad \text{LNW}(\hat{\beta}_i)_{it} = \beta_0 + \beta_{10}\text{FULLSCHOOL}_i + \beta_{20}\text{PARTSCHOOL}_i + \beta_{30}\text{FULLWORK}_{it} + \beta_{40}\text{FULLWORK}_{it}^2 + \beta_{t0} + \xi_{it0}$$

where  $\text{LNW}(\beta_i)_{it} = \text{LNW}_{it} - \hat{\beta}_i$  and  $\theta$  represents a given quantile of the conditional distribution of the adjusted wages  $\text{LNW}(\hat{\beta}_i)_{it}$ .

We label model (9)'s estimates as random-effects-instrumental-variable-quantile-regression estimates (REIVQR) because we take into account both endogeneity and individual specific effects. However, for sake of comparison, we also provide i) simple quantile-regression estimates (QR), which disregard individual specific effects and endogeneity (and are conceptually closed to OLS estimates), ii) instrumental-variable-quantile-regression estimates, which disregard individual specific effects but consider endogeneity (and are conceptually closed to 2SLS estimates), as well as iii) random-effects-quantile-regression-estimates (REQR), which disregard endogeneity but consider individual specific effects (and are conceptually closed to RE estimates).

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<sup>4</sup> The quantile-regression estimator of Koenker (2004) for longitudinal data does not allow to control for endogenous regressors.

Figure 1 presents quantile-regression estimates of  $\beta_1$  and  $\beta_2$  at each decile of the conditional wage distribution, using the sample described in Appendix. Table 2 measures the conditional wage risk in a way that is usual in the literature, i.e. as difference between the return at the ninth decile and the return at the first decile of the conditional wage distribution. Note that the conditional wage risk involved in full-time education is much bigger than the one involved in part-time education (REIVQR: 0.361 vs. 0.061), meaning that there is clear evidence of a trade-off between risk and return<sup>5</sup>. Nevertheless, as shown in Figure 1, the return to an additional year of full-time schooling at the first decile is higher than the return to an additional year of part-time schooling at the ninth decile, meaning that the full-time schooling strategy dominates, in conditional wage distribution, the part-time schooling strategy.

As shown in Figure 2 (QR, IVQR and REQR), the latter result is robust to the estimation technique, even if the REQR estimates do not support the conclusion the full-time schooling strategy is riskier than the part-time schooling strategy (see REQR in Table 2). However, it is worth noting that the REQR estimates do not account for endogeneity which is instead an important issue, as already argued for the estimation of the conditional average wage returns (see IVRE vs. RE estimates). This is the reason why the REIVQR estimates, our preferred estimates, are so different from the simple REQR estimates.

The next section briefly summarizes our conclusions and presents some policy considerations, also discussing the limits of our analysis.

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<sup>5</sup> Further note that the IVRE estimation, performed using the routine available in standard econometric packages such as Stata 9, is consistent with the REIVQR estimation performed using our methodology.

#### **4. Conclusions**

In line with what one may reasonably expect from previous research, we find that the strategy of studying and working at the same time pays, on average, less than the strategy of studying only. The magnitude of the difference is large and should not be disregarded by educational policy-makers in Portugal. The mean earnings return to one additional year of full-time schooling is at least four times larger than the mean earnings return to one additional year of part-time schooling (simple OLS). This suggests that the choice of working while enrolled in school is not worth, in terms of future average labour-market rewards, because one year of full-time schooling provides at least the same average total return as four years of part-time schooling.

If these results would imply the same wage risk, in an oversimplified return-risk world, then our policy recommendations would be relatively easy and twofold. First, universities should strongly limit the access of students to special curricula for working students. Second, public funds supporting the schooling activity of those who cannot finance their studies by themselves should be increased. This public investment would be repaid by higher average national earnings and tax receipts in the future.

However, our results do not imply the same underlying wage risk, thus complicating policy considerations. Indeed, the wage risk of part-time schooling is much lower than the wage risk of full-time schooling, implying that that educational policies fostering full-time education in Portugal would significantly increase within-groups wage inequality in the future. Putting it differently, the existence of different wage risks associated with full-time education and part-time education provides an economic reason for the existence of special curricula for working students, otherwise not justified by the empirical evidence on the average wage return to part-time schooling.

Nevertheless, since the full-time schooling strategy dominates, in conditional wage distribution, the part-time schooling strategy, our final answer to the main research question of this paper is not controversial. Does the choice of working while enrolled in school actually pay? We answer “no” but this answer should be taken with caution because it is exclusively based on return-risk considerations.

A final note is about the fact that the Portuguese working students continue to exist (representing, on average, around 27 percent of former students in our data-set), although our analysis suggests that part-time schooling does not ultimately pay for being associated with a dominated conditional wage distribution. Hence, the reader may wonder whether our results are at odds with the evidence of existing working students. Again, our answer is “no” but, again, this answer should be taken with caution for several reasons. First, we estimate ex-post returns and risks while people make their choices based on their own ex-ante evaluation of returns and risks. Second, the choice of part-time schooling not only depends on the return-risk combination but also on the individual degree of risk aversion. Third, the paper disregards a number of financial issues which are likely to affect the part-time schooling choice, such as borrowing constraints, imperfect capital markets, university fees, scholarships, and so on. Fourth, there are many non-financial factors that also affect the allocation of individual time between work and study.

To conclude, it is worth stressing that our results are consistent with 2005 data showing that Portugal has the lowest percentage of higher-education working students in a sample of eleven European countries. The share is around 20 percent in Portugal, which is ten percentage points below the share of the country with the second lowest share, i.e. Italy with 30 percent (HIS, 2005).

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**Table 1. Conditional average wage returns**

	OLS	RE	BE	2SLS	IVRE
Full-time	0.089	0.085	0.084	0.098	0.275
Part-time	0.019	0.018	0.020	0.023	0.032

All coefficients are significant at 5% level

**Table 2. Conditional wage risks (Q90-Q10)**

	QR	IVQR	REQR	REIVQR
Full-time	0.066	0.172	-0.001	0.361
Part-time	0.022	0.023	0.000	0.061

All differences are significant at 5% level but for REQR

**Figure 1. Conditional wage returns at different quantiles based on REIVQR**

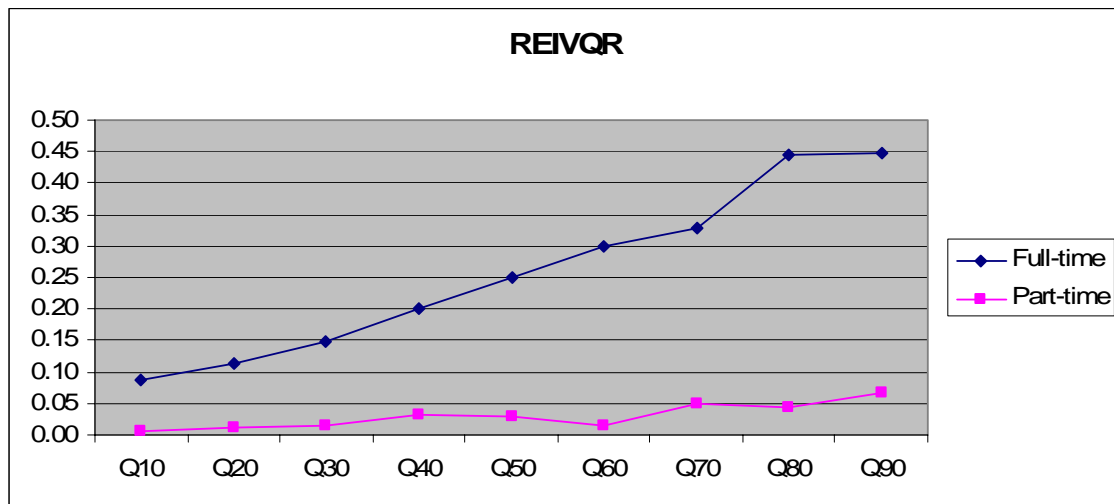
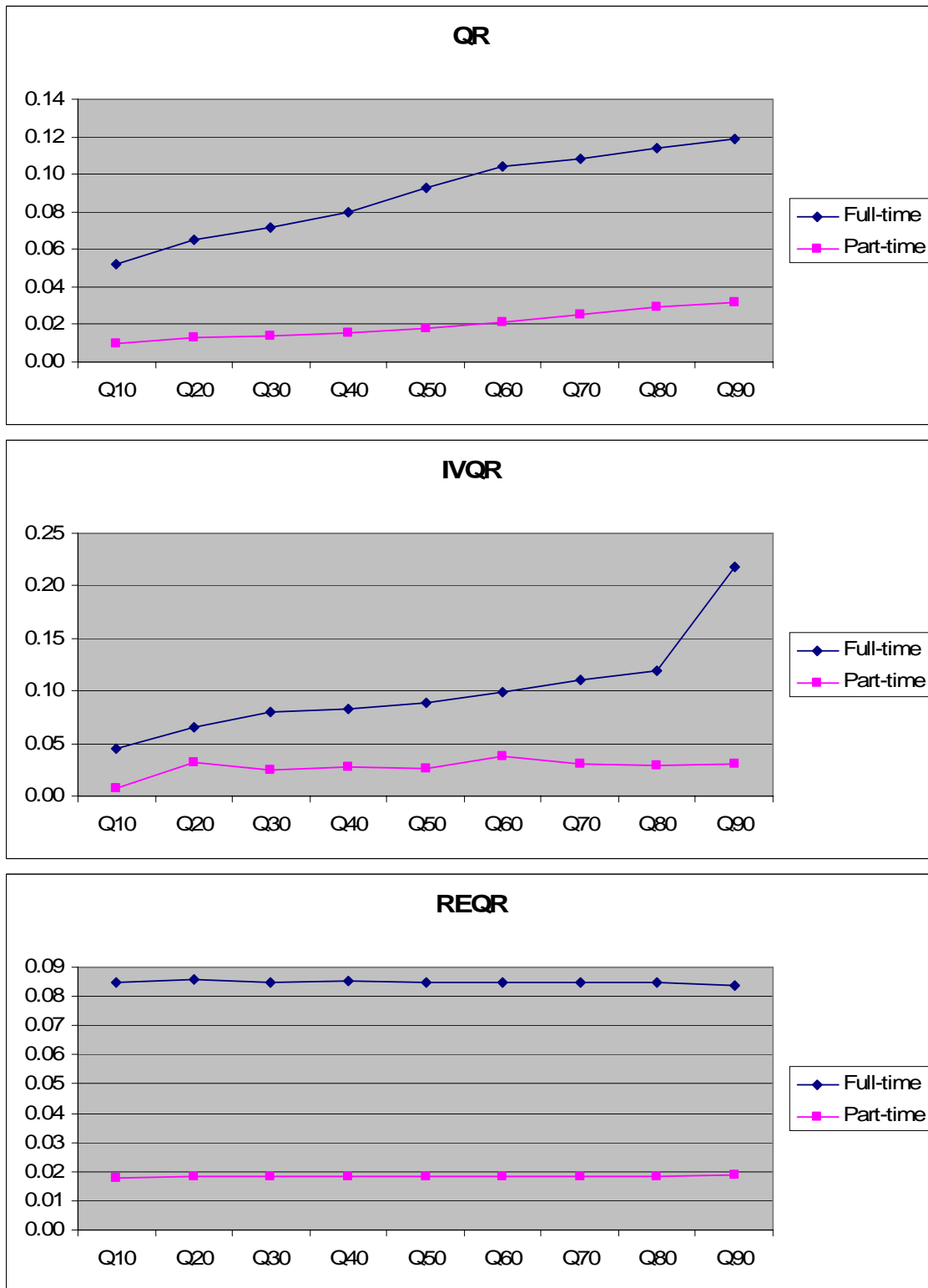


Figure 2. Conditional wage returns at different quantiles based on QR, IVQR and REQR



### Appendix. Summary sample statistics

Variable	Obs.	Mean	S.D.	Min	Max
LNW	3930	6.62	0.65	3.64	10.02
FULLSCHOOL	3930	9.99	4.09	3.00	24.00
PARTSCHOOL	3930	8.31	8.24	1.00	48.00
FULLWORK	3930	16.37	12.46	0.00	54.00

#### Note

In order to derive the variables FULLWORK, PARTSCHOOL and FULLSCHOOL, we use the following three ECHP questions:

PT023) Individual age at the completion of the highest level of general or higher education

PE039) Individual age at the start of the working life (first job or business)

PD003) Individual age

Specifically, we select a sample of Portuguese male workers such that PT023 is strictly higher than PE039 and define the above-referred variables as follows:

PARTSCHOOL = PT023–PE039

FULLSCHOOL = PE039–6

FULLWORK = PD003–PT023

Therefore, it is not surprising that the sample descriptive statistics report that Portuguese male workers, former working students, have on average 10 years of full-time schooling and 8 years of part-time schooling. These numbers, indeed, do not necessarily reflect successfully completed years of schooling. This is an interesting point because the main criticism to in-school work is exactly the argument that working while enrolled in school may delay education achievements.