PUBLIC-PRIVATE WAGE DIFFERENTIALS
IN TUNISIA: CONSISTENCY AND DECOMPOSITION

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Abstract

In this paper we estimate and decompose the public-private wage differentials for both rural and urban areas, using the 2012 household survey on Tunisian youth. Oaxaca decomposition results suggest that the average public-sector worker earns more than his/her private counterpart. The results suggest that a substantial part of the conditional gap in urban area is actually explained and that public-sector employees in both urban and rural areas have, on average more education. Using unconditional quantile decomposition technique proposed by Firpo et al (2009), we find that in urban area the discrimination effect contributes more to the wage differentials than the characteristics effect at the higher end of the wage distribution. Separate analyses by gender and educational levels reveal a higher public-private sector earning gap for women. Less educated workers are compensated much more in the public sector than in the private sector, while the wage differential for university educated workers decreases rapidly through the distribution.

JEL Classification: J16, J31, J38, J45.

Keywords: wage gap; Public-private sector; Quantile decomposition; Tunisia.

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ملخص

وفي هذا البحث، نقدر ونفسر الفوارق في الأجور بين القطاعين العام والخاص في المناطق الريفية والحضرية على حد سواء، وذلك باستخدام الدراسة الاستقصائية للأسر المعيشية في تونس لعام 2012. وتشير نتائج تحليل أواكساكا إلى أن متوسط العاملين في القطاع العام يكسب أكثر من نظيره الخاص. وتشير النتائج إلى أن جزءا كبيرا من الفجوة المشروطة في المناطق الحضرية يفسر بالفعل وأن موظفي القطاع العام في كل من المناطق الحضرية والريفية لديهم في المتوسط المزيد من التعليم. وباستخدام تقنية التحلل الكمي غير المشروطة التي اقترحها فيربو وآخرون (2009)، نجد أن تأثير التمييز في المناطق الحضرية يساهم بشكل أكبر في الفوارق في الأجور من تأثير الخصائص في نهاية أعلى لتوزيع الأجور. وتبين التحليلات المنفصلة حسب نوع الجنس والمستويات التعليمية وجود فجوة أعلى بين القطاعين العام والخاص في مجال كسب المرأة. ويتم تعويض العمال الأقل تعليما بكثير في القطاع العام أكثر مما يحصلون عليه في القطاع الخاص، في حين أن الفارق في الأجور للعمال المتعلمين بالجامعات ينخفض بسرعة من خلال التوزيع.

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1. Introduction

Public-private wage gap within countries is a topic that has received a great attention in economic literature. Wage parity and equal pay across sectors does not exist as yet within any country, but the size of the wage gap varies considerably. The literature has provided some arguments why private and public sectors employees can be paid differently. One body of research argues that the monopolistic power of the governments could set wages in a non-competitive way (Reder 1975). The relationship between the monopolistic power and non-competitive wage is amplified by the fact that the objective function of the government and the private sectors may differ. Hence, if the private sector is largely guided by the essence of market forces and the principle of profit maximization, the public sector may be driven by political motives such as vote, budget maximization, equity and fairness. Governments are under pressure of being a model employer and not pay low wages to its less skilled workforce (Melly 2005). In turn, another set of research stresses the fact that the wage setting environment and the labour market structures substantially differ between both sectors. For example, it has been shown that union density and collective bargaining tend to be higher in the public sector than in the private sector. Other than the cited reasons, the productivity-related characteristics of employees such as education or experience can also explain the wage gap between the public and private sectors (public sector employees with high education degree should have high wages). The government should ensure the principle of 'equal pay for work of equal value' and target productivity as an instrument to enhance pay. Nevertheless, the pursuit of this goal could have a serious impact on the efficiency of the labour market. If the government pays too much, private-sector workers may be more motivated to leave their sector to take advantage from relatively high-paying jobs in the public sector. This scenario will lead to higher taxes and budget deficits. On the other hand, if the public sector pays too low, it will not find skilled and loyal employees (Melly 2005).

We believe that this question represents a credible policy alternative that merits careful consideration from Tunisian economists and policymakers. In fact, Tunisia has been undergoing significant changes in its wage setting arrangements since the revolution of 14 January 2011. Right after the revolution, and in order to absorb the anger of the Tunisian people and maintain socio-political stability, the government has significantly increased hiring in the public sector. In 2011 and 2012, more than 90000 new hires joined the public sector. Between 2010 and 2014, the total public sector employment rose by 20 percent to 615000 workers, and is today at 795000 corresponding to a ratio of total public employment to total employed workforce of about 24 percent, a level that is three times higher than in Morocco or merging markets such as Chile or Mexico (IMF 2015).[1] The recruitment drive led to a 44 percent increase in the wage bill between 2010 and 2014 (much higher than the 28 percent increase between 2006 and 2009), which has led later to macro-economic imbalances in the country (Brockmeyer et al 2015) and has worsened more and more the public-private wage gap. For example, the wage gap between public and private jobs reaches 40 percent for university graduates (except engineers). Additionally, the public-sector wage premium raises public wage about 18 percent (between 24 and 30 percent for women) above those of the private sector (Achy 2011). Governing the relationship between public and private sectors becomes a priority for the government to ensure the labour market stability. Recently, the Assembly of the Representatives of the People adopted the law on Public Private Partnership (PPP) that aims to mobilize funds for the implementation of cooperative projects in construction, financing and ongoing operation and maintenance of infrastructure assets. This PPP law can play an important role for inclusive and sustainable growth for the case of Tunisia, if it will be well operationalized.

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[1] IMF Country Report No. 15/285.

In this paper, we use recently collected two separate household surveys in urban and rural areas of Tunisia conducted in 2012 by the World Bank in collaboration with the National Statistical Office and the General Commissariat for Regional Development. We use the Oaxaca-Blinder and the unconditional quantile decomposition techniques to analyze the wage differentials both at the mean and along the wage distribution. We find that public sector employees earn more than their private counterpart. Moreover, a substantial part of the conditional gap in urban area is explained by observed characteristics. Our findings reveal also that in urban area the discrimination effect contributes more to the wage differentials than the characteristics effect at the higher end of the wage distribution. Our decomposition results by educational levels show that less educated workers are compensated much more in the public sector than in the private sector.

The article is organized as follows. Section 2 offers a brief review of the existing literature on public/private wage differentials. Section 3 briefly describes the Tunisia's labour market institutions. The data and the used methodology are presented in section 4. Section 5 outlines the empirical results, and section 6 gives some policy implications and concluding remarks.

2. Literature Review

Several empirical works have already addressed the issue of the public-private wage differentials in the case of developed countries. The pioneers' works have focused on US employees (Smith 1976, Quinn 1979, Bellante and Long 1981, Smith 1981). The main result of these studies is the evidence that workers in public sector were paid more than those in private sector. This differential is not explained by productivity's differential but rather by gender and specially by level of government (i.e. federal, state or local). Moreover, other empirical studies addressed public-private wage differential in Europe focusing mostly on mean of the wage distribution. For example, Dustmann and Van Soest (1997) used data from the German Socio-Economic Panel for the years 1984-1993 in order to study the gender gap between earnings distributions of public and private sector workers in Germany. They found that women are better paid than men in the public sector in contrast with private sector. Moreover, using data of Spain household budget survey 1990-1991, Lassibille (1998) estimated separate equations of wage for each gender by public and private sectors. Results confirmed that education and experience and being women are less remunerated in public sector than in private sector in Spain. Recently, most of empirical works have used quantile regressions to examine the varying of the public-private wage gap along the earnings distribution (Cai and Lui, 2011). Muller (2000) has tried to estimate the earning surplus of public sector which is the remaining part of wages differential that cannot be explained by differences endowments. Using data of the Canadian Labour Market Activity Survey 1988-1990, author found that rent payments is highest in public sector and for employees at the lower end of the wage distribution. Melly (2005) used the German Socio-Economic Panel data for the years 1984-2001 and found that employees with only basic schooling and those with more experience do best in the public sector. In addition, quantile decomposition results show that earnings gap between public and private sectors is less explained by employees' characteristics for low end wages. Lucifora and Meurs (2006) used micro data for Great Britan, France and Italy to investigate public-private pay determination. They used quantile regression methods to analyse and decompose the public-private wage gap within and across countries. Their results showed that for the three countries the public sector is found to pay more to low skilled workers respect to the private sector, while the reverse is true for high skilled workers. In addition, they found that females are much better off in the public sector as compared to the private sector. In the same context of European countries, Depalo et al. (2015) extended the public-private wage gap analyze using ten euro-area countries in the period 2004-2007. Analyzing the specific covariates at different quantiles of wage distribution, they found a great heterogeneity across countries. For some countries, public wage distribution is less dispersed than in private sector.

In addition, the public-private pay gap is more explained by endowments in the upper end of and by higher returns at the low end the wage distribution. Moreover, Cai and Liu (2011) used also the quantile regressions to explore how sectoral wage effect varies along the wage distribution in Australia. They found that the most significant proportion of the public-private wage gap is explained by the differences in individual and job characteristics.

As regards the developing countries, recently an extensive literature was developed to documenting the public-private sector wage differential. Many econometric tools have been used but the most one used is the quantile regression in order to avoid with problems owing to treatment of the organizational size, the endogenous sorting of workers between sectors (Morikawa 2016). Panizza and Qiang (2005) used household surveys for 13 Latin American countries in order to investigate wage differential between the public and private sectors. Basing on the quantile decomposition, they found that in majority of these countries, public sector workers are spoiled given the existence of premium that is often higher for women than for men. Mizala et al. (2011) estimated the public-private wage gap for urban workers in eleven Latin American countries for the 1992-2007. They found that public sector employees earn more than private sector counterpart, and that the gap has increased over the 1992-2007. A little further from the Latin American, but always in the case of developing countries, Glinskaya and Lokshin (2007) used the sector selection bias correction and the Propensity score matching methods to investigate differences in wages between public sector, formal-private and informal-causal sectors. They used 1993-94 and 1999-2000 India Employment and Unemployment surveys. They found that public sector wages are higher than formal and informal private sector and these differentials tend to be higher in rural areas, among women and for low-skilled workers. San and Polat (2012) used the quantile decomposition method to determine wage gap between public and private sectors during the 1990s and 2000s in Turkey. Using the 1994 Household Income Distribution and Consumption Expenditure survey and 2008 Household Budget Survey, they found that for lower quantiles the difference in the endowments between sectors explains perfectly the wage gap. However, higer wage gaps are explained more by the sector effect. Recently, following previous researches, Ahmed and McGillivray (2015) investigate Labour Force Surveys for 1999-2000, 2005-2006 and 2009-2010 by using the quantile decomposition to study the public-private wage gap in Bangladesh. They showed that the improvement of female education in Bangladesh and the decline in discrimination against woman have had a substantial effect on reducing the gap in average wages between men and women by 31 percent.

In contrast to developed and developing economies, few studies have explored the wage gap between sectors or genders in African countries. There is Nielsen and Rosholm (2002) who used three cross-sections of Zambian Household surveys from the early nineties which corresponds to economic transition period for this African country. They used the quantile decomposition in order to investigate how effects of the public-private wage gap determinants change at points of the wage distribution and over the time. Their main result was that there is higher gap for some groups of low-skilled employees than groups of high-skilled. Recently, Kippra (2013)'s report investigates this issue about public-private wage gap for Kenyan labour market. Many sources of data are used in this study such as the survey of private and public institutions, the public-sector wage data for 2010 from the government's annual Economic Survey and data from the National Human Resource survey of 2009. Using the matching technique method, Kippra found that wages in private sector are higher than those in public sector. Despite these pronounced inequalities workers in public sector, more specifically who are highly educated, choose to stay in public sector because of job characteristics such as job security, prestige, allowances and other non-wage benefits.

However, by the best of our knowledge there is no study which seeks to investigate the public-private wage gap determinants in Arab countries. This paper tries to fill this gap by analysing

post-revolution public-private wage differentials distribution in Tunisia municipal areas. In particular, this paper focuses on the differences in the relative wages by gender, age, education and region to present evidence on the public-private wage gap structure. Moreover, this paper examines changes in the public-private gas in Tunisia by decomposing wage differentials both at the mean (into endowment and discrimination effects) and along the wage distribution (quantile decomposition).

3. Institutional Background and Wage Structures in Tunisia

Tunisian job market suffers from inefficiencies due to numerous key reasons and many imperfections. State wage policies and trade unions actions, which have made wages exceed the market equilibrium wage, can be considered as sources of wage rigidity in the labor market and may form distortions which can deter some employers and increase unemployment accordingly. In fact, increasing public jobs and the wage gap of public/private suggest that public sector trade unions are so powerful that they dictate their working conditions to different governments especially after the events of January 14, 2011. Indeed, according to the National Institute of Statistics and the Research Center and Social Studies, the total average monthly remuneration in the public service is estimated at 1127 dinars against only 557 dinars in the private sector (see Figure 1).

The earning gap depends in general on three key factors: Differences in qualifications between the public and private sectors, the accumulation of advantages inherited since the independence in the public sector and the role of trade unions in the negotiation of employment contracts. Moreover, the Tunisian labor legislation and the collective bargaining process may impact recruitment mechanisms, industrial relations in wage policies such as minimum wage legislation, the indexation clauses…While the first two factors are non-discriminatory, the last ones suggest that Tunisia is living an exorbitant trade union power that is blocking the process of economic growth.

To explain the main sources of earning gap, we identify the wage determination policy in both public and private sectors and we analyze the economic agents' behavior and economic conditions in Tunisian labor market. It is known that the existence of well-coordinated and strong trade unions is therefore a crucial factor to provide stability of the wage share over time. However, in times of crisis, strong trade unions can negatively affect the macroeconomic stability and increase unemployment such as the current case of Tunisia.

3.1 Wage policy in Tunisia: main features

Overall, wage policy is the image of a certain balance between the interests of the employers (state or enterprise) and workers. It also allows better reconciling between a variety of strategies: workers' trade unions that aim on improving living standards and members working conditions; concerned employers to master or reduce wage costs.

The objective of trade unions in the public or private sectors remains the same: wage review, beneficial wage agreements and improving working conditions. To this end, trade unions act as both government and employers' interlocutors. However, wage-setting differs between public and private sectors. In the private sector, collective bargaining will take place at the national level following the institution of a signed framework collective agreement and a signed social pact between the Tunisian General Labor Union (UGTT) and the Tunisian Union for Commerce, Industry and Handicrafts (UTICA) under State control. These collective bargaining agreements allow the organization of social relations, to fill some gaps of Labor Code for maintaining of social peace. Sectoral agreements are largely inspired from this framework collective agreement. In the case of public civil servants, even if there is no collective bargaining, the trade union intervenes in developing their statutes through its representatives in the establishments. As regards public enterprises employees, each enterprise has its own statute which fixes the wages according to the categories and working conditions.

The trade unions' actions and State wage policies as manifested by collective bargaining (private sector) and increases decreed by employees and public servants constitute distortions to the free functioning of the labor market. The setting of the guaranteed inter-professional minimum wage (SMIG monthly for both regimes 40h/week and 48h/week) is crucial. SMIG is considered as reference in the development of conventional wages. Thus, the control of the SMIG is essential to control the development of the rest of wage. Pay increases granted to minimum wage (SMIG monthly 40h and 48h and the SMAG daily) reflect wage policy. Other wage increases in public and private sectors are calculated based on the SMIG increases,

The negotiation review and wage agreements between trade unions and employers show that the situation differs between public and private employers. Agreements in both sectors are subject to different constraints of the two employers. Those differences explain the public / private wage gap in Tunisia. In the next two sections below, we briefly examine the wage determination in both sectors.

3.2 Wage determination in Tunisian private sector

The main objective of the employers' organization is to maintain the competitive position of Tunisian domestic firms on the market during each wage negotiation cycles. To achieve this objective, firm should keep its average costs comparable to those of the competing ones following each wage agreement. Otherwise, if the wage rises more than productivity, there will be an increase in the market price or a decrease in the profits and market share for firms. Hence, the firm's constraints consist in maintaining their market positions. However, collectives bargaining is not aimed to realize firm's expectations (employment, productivity, rescuing firms in difficulty...). These collectives bargaining are intended primarily to improve the purchasing power of workers. Mostly, the apparent contradiction between UGTT and UTICA gives rise to difficult negotiations. In most cases, the state intervention is necessary to bring the two parties together. Nevertheless, despite the resistance of the UTICA, the tradeoffs setting after the revolution gave rise to increases in market prices.

3.3 Wage determination in Tunisian public sector

In Tunisia, public goods market is characterized by monopolistic behavior. The government public services generate a wage cost but generally have not a market price. They are offered to people with rates below than the market price. Sales prices of public goods are less /equal to production costs. In the absence of any sanction by the market, the Tunisian government exhibit more flexibility in the negotiations wage than to the private employer. After the revolution, representatives of the public sector were less resistance degree than their counterparts in the private sector in order to establish social cohesion. Since 2011, wage increases had inflationary impacts and have only avoid negative effects on public finances (budget deficit and taxation). In conclusion, the public/private wage gap in Tunisia can be summarized in three main reasons. First, given that the government's constraints are not to control the budget deficit after revolution, the public employer was more generous than the private employer in the wage agreements. This laxity of public sector in negotiations is the main origin of the public/private wage gap. Second, the effects of unionization in the public sector are more pronounced than in the private sector. Indeed, according to the recent European Commission report on the social dialogue in Morocco, Tunisia and Jordan, the degree of private-sector unionization is about 15% (250,000 of which 200,000 from UGTT) compared to 60% for the public-sector (including public companies).[2] Third, it remains difficult for private sector unions to organize workers for two main reasons: workers are low-paid and about 80 percent of them worked in small-scale activities (the predominance of small companies).

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[2] European Commission (2016) 'Social Dialogue in Morocco, Tunisia and Jordan, regulations and realities of social dialogue'.

4. Data and Methodology

4.1 Data description

We use data from two separate household surveys in urban and rural areas of Tunisia, called respectively the Tunisia Household Survey on Youth in Urban Areas (THSYUA) and the Tunisia Household Survey on Youth in Rural Areas (THSYRA). Both surveys have been conducted in 2012 by the World Bank in collaboration with the National Statistical Office (*Institut National de la Statistique* or INS) and the General Commissariat for Regional Development (*Commissariat Géneral au developpement Régional* or CGDR). The aim of those surveys was to deeply understand urban and rural inequalities, with a specific focus on economic opportunities for young people aged 15-29 (World Bank 2014). The THSYUA and THSYRA contain information on a range of individual (age, gender, education, marital status, employment status, kind of job, wage earned, migration...) and household-level characteristics (household size, household composition, governorate, and access to basic services). The THSYUA included also information about perceptions and aspirations among youth.

The THSYUA was representative across the seven regions of Tunisia (Greater Tunis; North East; North West; Central East; central West; South East and South West), while the THSYRA was only representative on three regrouped survey regions. The first survey region included coastal governorates in the North and the East of the country. The second survey region included the southern governorates and the third survey region covered the rural interior of Tunisia, the remote areas of central and western Tunisia including the Algerian border (World Bank 2014).[3] For the urban area, the survey covered 4214 households (16995 individuals of which 3936 aged 15-29 years) done in two stage random sampling. At the first, 352 enumeration areas (primary unit of sampling) were selected according the principle of probability proportional to size. At the second, 12 households were randomly selected from each primary unit. The second survey has some sample size of 1400 households (7821 individuals) in the entire rural area of Tunisia.

The sample used in this study, for both urban and rural areas, includes individuals between the ages of 15 and 60 years. We exclude child workers and retired. The official age of retirement is fixed at 60 years old since the independence, but it may be reduced from 60 to 55 years for workers in arduous jobs or unhealthy or demanding tasks. We use the total net income in normal month in Tunisian National Dinars (TND) during past 7 days. Income received in exchange for work is classified in four different categories: work without pay; work with fixed salary; work with variable income; and work with fixed salary and variable income. Table 1 gives the distribution of different categories of work for public and private sectors.

The average monthly earnings of public sector workers were 711 Tunisian Dinar (TND) in urban area, while private sector workers earned an average of 419 TND, giving a public-private wage differential (defined as a ratio of average public and private earnings) of 1.7 (Table 2). The public-private wage differentials were lower in rural than in urban areas (1.5 vs 1.7) (Table 3). Public-private wage differential was largest for urban women (1.94) followed in order by urban and rural mean (1.61 and 1.55 respectively). It can also be seen that differences in earnings between public and private sectors can vary depending on the level of education, region, and marital status. The higher differential is observed among the employees in vocational training living in urban area (2.14). However, public sector workers in vocational training living in rural area are paid less than private sector workers (0.516).

Figure 2 and Figure 3 plot kernel density of the log of monthly earnings for both sectors and genders for urban and rural areas. Figure 1a shows the kernel-density estimation of the log of monthly wage distributions in the public and private sectors, respectively. For both sector, the

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[3] For more details see Annex 1 "Data Sources" of the World Bank 2014 report "*Breaking the barriers to youth inclusion*".

female earning distribution is shifted to the left with respect to the mean's one, but the difference is not very great specifically for the public sector. Figure 2b reports the wage distribution across sectors. For both gender, the public-sector earnings distribution is characterized by a higher density function around the mode, which gives us a preliminary evidence of a sector pay gap in Tunisia. In rural area, the public sector earning distribution is shifted to the right of private sector distribution indicating that public sector workers are paid higher than workers in private sector (Figure 3b). Although those figures are informative, they represent unconditional earning distributions without controlling for observed characteristics of workers in each sector that might significantly affect the wage gap (such as education, region, age and marital status). To overcome this limitation, we use the Oaxaca-Blinder decomposition and quantile decomposition to estimate the wage gap as a function of a number of key observable characteristics, such as gender, age, age squared, region, education level and marital status.

4.2 Methodology

We conduct a decomposition analysis at both the mean and quantiles. We start with an Oaxaca-Blinder decomposition to analyse changes in the public-private and gender wage (for shortness of presentation, we only present the equations for public-private wage decomposition). This method decomposes the change in the wage gap ($\overline{\ln w_{pub}} - \overline{\ln w_{priv}}$) into the component of the raw difference attributable to differences in observed characteristics or endowments (also called explained effect) and to differences in coefficients (unexplained effect or discrimination) or 'wage structure' effect (eq.1 and eq.2). By using the Oaxaca-Blinder decomposition, we can also identify the contribution of individual covariates to the wage gap. Formally, the wage gap between public and private sectors is defined as follows:

$$\overline{\ln w_{pub}} - \overline{\ln w_{priv}} = \underbrace{(\hat{\alpha}_{pub} - \hat{\alpha}_{priv}) + \overline{X_{priv}}(\hat{\beta}_{pub} - \hat{\beta}_{priv})}_{\text{Unexplained}} + \underbrace{\hat{\beta}_{pub}(\overline{X_{pub}} - \overline{X_{priv}})}_{\text{Explained}}, \text{ or as} \qquad (1)$$

$$\overline{\ln w_{pub}} - \overline{\ln w_{priv}} = \underbrace{(\hat{\alpha}_{pub} - \hat{\alpha}_{priv}) + \overline{X_{pub}}(\hat{\beta}_{pub} - \hat{\beta}_{priv})}_{\text{Unexplained}} + \underbrace{\hat{\beta}_{priv}(\overline{X_{pub}} - \overline{X_{priv}})}_{\text{Explained}} \qquad (2)$$

Where $\overline{\ln w_{pub}}$, $\overline{\ln w_{priv}}$ and $\overline{X_{pub}}$, $\overline{X_{priv}}$ are mean log monthly wage earnings and mean characteristics of workers in public and private sectors, respectively. $\hat{\beta}_{pub}$ and $\hat{\beta}_{priv}$ are the estimated vector of returns to worker characteristics.

Besides studying the contribution factors to the wage inequality at the mean, we perform decomposition at different percentiles of the distribution using an Oaxaca-Blinder type decomposition approach based on Recentered Influence Function (RIF) regressions proposed by Firpo et al (2009). This method decomposes the wage gap between public and private sector workers (or between female and male workers) at different points of the wage distributions. Using unconditional quantile decomposition, the wage inequality at the τth quantile can be decomposed as follows:

$$Q_\tau\left(F_{\ln W_{pub}}\right) - Q_\tau\left(F_{\ln W_{priv}}\right) = (\overline{X_{pub}} - \overline{X_{priv}})\hat{\beta}_{pub,\tau} + \overline{X_{priv}}(\hat{\beta}_{pub,\tau} - \hat{\beta}_{priv,\tau}) \qquad (3)$$

Where $Q_\tau\left(F_{\ln W_i}\right)$ is the τth quantile of distribution of log of wage (i = public; private), and $\hat{\beta}_{i,\tau}$ is the estimate of unconditional quantile regression at the τth quantile for sector type i (i = public; private). The first term (($\overline{X_{pub}} - \overline{X_{priv}})\hat{\beta}_{pub,\tau}$) represents the endowment effect, that is, the sector wage gap at the τth quantile due to endowment differentials. The second term $\overline{X_{priv}}(\hat{\beta}_{pub,\tau} - \hat{\beta}_{priv,\tau})$) measures the public-private wage gap at the in the τth quantile due to the different returns (also known as discrimination effect). The estimation of equation (3) comprises two steps. The first step of decomposition requires estimation of the RIF regressions to generate unconditional quantile regression estimates for each sector. The RIF of the

dependent variable for each sector can be estimated according to following equation (when the unconditional quantile regression is linear (Firpo et al. 2009)):

$$\text{RIF}\left(\ln W_i; Q_\tau, F_{\ln W_i}\right) = Q_\tau + \frac{\tau - I(\ln W_i \leq Q_\tau)}{f_{\ln W_i}(Q_\tau)}, \text{ and} \qquad (4)$$

$$E\left[\text{RIF}\left(\ln W_i; Q_\tau, F_{\ln W_i} | X\right)\right] = X\beta \qquad (5)$$

The second step decomposes the sector wage gap into explained and unexplained components across quantiles in a similar spirit as the Oaxaca-Blinder decomposition under the linearity assumption between the RIF and explanatory variables. More specifically, for any unconditional quantile, the equivalent Oaxaca-Blinder decomposition can be written as:

$$\hat{\Delta}_\tau = \left(\overline{X_{\text{pub}}} - \overline{X_{\text{priv}}}\right)\hat{\gamma}_{\text{pub},\tau} + \overline{X_{\text{pub}}}\left(\hat{\gamma}_{\text{pub},\tau} - \hat{\gamma}_{\text{priv},\tau}\right) \qquad (6)$$

Where $\hat{\Delta}_\tau$ is the estimated wage differential between public and private sectors at the τth quantile and $\hat{\gamma}_{\text{pub},\tau}$; $\hat{\gamma}_{\text{priv},\tau}$ are the estimated coefficients obtained by computing the RIF over the set of variables for public and private sectors at the τth quantile, respectively.

A potential argument against decomposing wage gaps between public and private sectors using Oaxaca-Blinder decomposition at both the mean and quantiles is the sector selection bias caused by unobserved individual characteristics. Indeed, the workers have to make a choice between working in the public sector or the private sector. To overcome these possibilities, we use the two-step Heckman selection methods (1979). We estimate at the first stage the sector of employment choice model. The estimate of the inverse Mills ratio, from the first stage, was included as a variable in public and private wage equations that feed into the OB decompositions.

The estimate of the inverse Mills ratio $\hat{\lambda}i$, i = (P, R), from this equation was included as a variable with an estimated coefficient $\hat{\theta}P$ in the public and $\hat{\theta}R$ in the private sector wage equations that feed into the OR decompositions.

5. Empirical Results

Table 4 provides the results of Oaxaca-Blinder decomposition at the mean of log-average monthly wage gap between public and private sectors for both urban and rural areas. For each area, the Table shows two findings: the magnitude of the total public-private wage gap, and the decompositions of this gap into the portions due to explained attributes and returns to observable attributes. The vector of regressors includes, age, age square/100, gender, education level, region and marital status. The reference for region variable is greater Tunis, the reference for educational category is 'no education level' and the reference for marital status is 'not married'.

The size of the total average log-wage gap between public and private sectors ranges from 0.448 in rural area to 0.502 in urban area when the wage equations are estimated with OLS. The positive earning differential between the public and private sectors indicates that higher wages are paid to public workers whatever the area. This first result is in line with most previous studies on public-private wage gap showing that public sector worker earns more than his/her private counterpart. For example, Mizala et al (2011) by using matching methods confirmed this hypothesis for urban workers in eleven Latin American countries, for the 1992-2007 period. They added that the raw public-private gap increased in all the countries except Coasta Rica and Paraguay. Melly (2005) argued that only public woman worker earns more than her private counterpart, while men are paid more in private sector.

Table 4 suggests that a substantial part of the conditional gap in urban area is actually explained (the explained part reaches 65% of the total gap), while for the rural area the explained component is lower than the unexplained components (44% vs 56%). The explained part of the

decompositions can be broken down into the contribution of each regressor. In light to the large number of regressors and in order to better interpret the decomposition results, we divide the regressors into four sub-groups: demographic (including age, age squared/100, and gender); education (basic education, secondary education, vocational training, and higher education); marital status (single, married, widowed and divorced) and region (Greater Tunis, Northeast, Northwest, central East, Central West, Southeast and Southwest). As indicated in Table 4, public sector workers in urban area have, on average, more education and this factor explains 0.56 of the 0.502 gap. The education factor explains by itself 0.7 (70 percent) of the total explained attributes for urban workers. The effect of education as a source of wage is much more important for rural workers. It explains 1.25 of the total explained attributes and 0.58 of the total gap. Table A1 in the appendix shows the results of OB decomposition with adjustment for sample selection bias.

In addition to Oaxaca-Blinder decomposition of the average natural logarithms of monthly wage gap between public and private sectors for both rural and urban areas, we decompose differences in the distribution of the public and private sectors based on Recentered Influence Function (RIF) regressions proposed by Firpo et al (2009). We provide decompositions only for three quantiles: the 25th, the 50th (median) and the 75th. Table 5 (table A2 presents the RIF results with adjustment for sample selection bias) and Figure 4 summarize the results of unconditional quantile decomposition. Figure 4 shows that the public/private wage gap becomes negative at the top of the distribution (from the p80) if we only consider the fixed salary (without variable income such as commission, bonus as well as all other pay supplements). This result seems logical, since many pay supplements represent an important part of public's earnings than private's sector in Tunisia, which explains the low exit rate and low mobility of workers from public to private sector. The results in Table 5 show the existence of significant differences across the wage distribution, with the part explained by observed characteristics greater at the bottom of the distribution (51% in p25) and lower and non-significant at the top of the distribution (2% in p75). In the case of rural area, we also find that the part explained by observed characteristics is greater at the bottom of the distribution (135% in p25), although it tends to decrease along the wage distribution (70% in p75). In summary, we find that the whole wage gap in favour of public workers is explained by differences in characteristics for rural workers (even if the share of observed characteristics has decreased for 135% to 70% among the wage distribution, it remains always significant and greater than the part explained by unobserved attributes). However, for urban workers the part of wage gap explained by observed characteristics has decreased rapidly from 51% to 2% and becomes insignificant (the size of discrimination effect is larger at higher deciles). Table 6 resumes the decomposition of public/private wage gap at the average and for five quantiles (10th, 25th, 50th, 75th and 90th) by gender and educational level for only urban area.[4]

From table 6, it is obvious that the public-private sector log wage gap is higher by more than 0.2 log wage points for women in Tunisian urban area (0.659 for women compared to 0.431 for men). The results show also that a substantial part of the conditional public-private gap for women in urban area is actually explained (88.3% of total public-private gap are explained by women's observed characteristics vs 56.4% for men). A higher public-private sector earning gap for women may indicate considerable private sector disadvantage and/or progressive public sector pay policies in Tunisia. The quantile decomposition shows however, the existence of higher public-private gaps for males at the bottom and the end of the distribution (0.17 and 0.19 log wage points for males in p10 and p90 respectively). Low pay differences between men

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[4] For rural area, the total number of observations becomes small enough to make the decomposition by gender and level of education.

and women are observed towards the median of the distribution (0.01 in p25 for male, 0.07 in p50 for male and 0.06 in p75 for female).

For education, we divide our urban sample into primary, secondary and university educated individuals. The Oaxaca-Blinder decomposition results (the last column in Table 6) show the existence of significant wage differential whatever the level of education, and that public workers are always paid more than private ones. The quantile decomposition shows however that less educated workers are compensated much more in the public sector than in the private sector. Among the five quantiles of the distribution, the differential is significant for basic education, while it is not significant for the secondary educated employees (except at the top of the distribution, where the differential becomes significantly negative). It is also interesting to note that the wage differential for university educated workers decreases rapidly through the distribution and becomes negative but not significant at the p90. This result is of critical importance, showing that Tunisia has an insignificant wage differential for university educated employees at the high end of the wage distribution. Hence, the choice of the sector has no significant effect on the wage differential for educated people.

6. Conclusion and Policy implications

Using the 2012 Tunisia Household survey on youth in urban and rural areas, we find that public employees tend to receive higher wages than those working in the private sector, with this wage gap is greatly explained by the observed characteristics. Looking at the wage differential by gender and by educational levels, our findings reveal that public/private gap is more important for women than for men and that less educated employees are compensated much more in the public sector.

The empirical results found in this study will help us to explore the determinants of wage gap between public and private sectors as well as between men and women. The sign of overall wage inequality, its decomposition into endowment and returns effects and their ranking at various population quantiles can help policy makers develop targeted policies related to employment, unemployment and wages policy that bring together all the actors including the labour organisations and training (UGTT, UTICA, universities, research institutions, etc). This would require a concerted and sustained effort of the government for both public and private sectors in order to absorb the country's growing workforce and maintain socio-political stability for years to come.

Governing the relationship between public and private sectors is a priority for the government to ensure the labour market stability. Recently, the Assembly of the Representatives of the People adopted law on public private partnership (PPP) that aims to mobilize funds for the implementation of major projects (covering the design, construction, financing and ongoing operation and maintenance of infrastructure assets). This PPP law can play an important role for inclusive and sustainable growth in the country, if it will be well-operationalized.

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Figure 1: Average Salary (TND/employee) for Both Public and Private Sectors
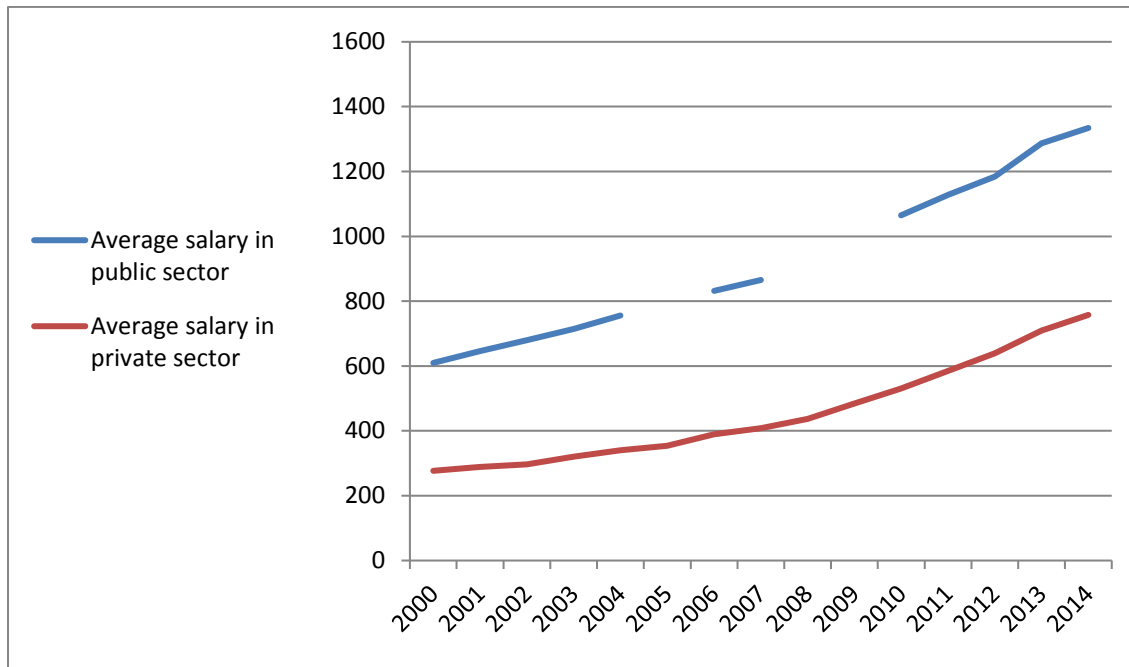
Figure 2a: Kernel Density Estimates of Monthly Net Log-Earnings, Divided by Sector (urban area)
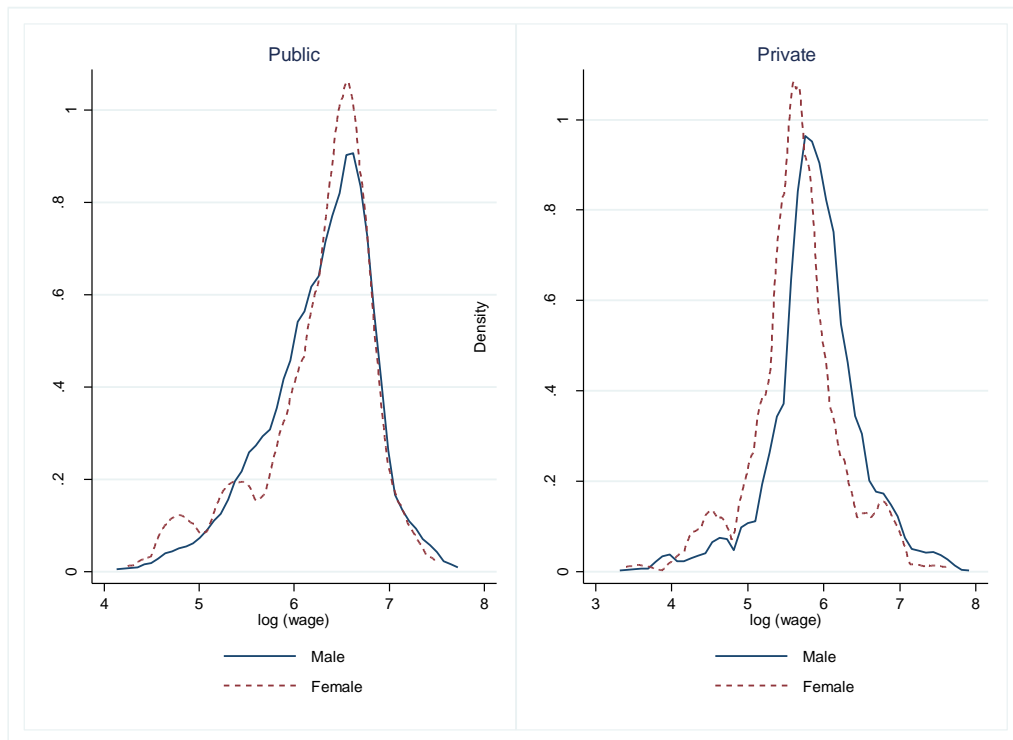
Figure 2b: Kernel Density Estimates of Monthly Net Log-Earnings, Divided by Gender (urban area)
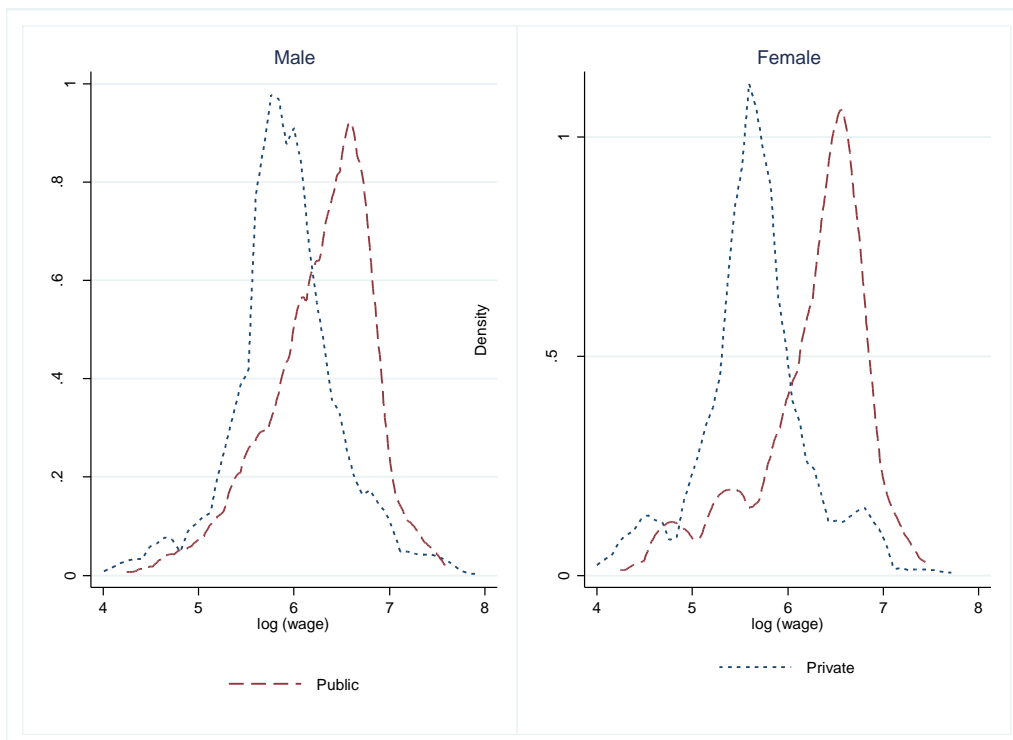
Figure 3a: Kernel Density Estimates of Monthly Net Log-Earnings, Divided by Sector (rural area)
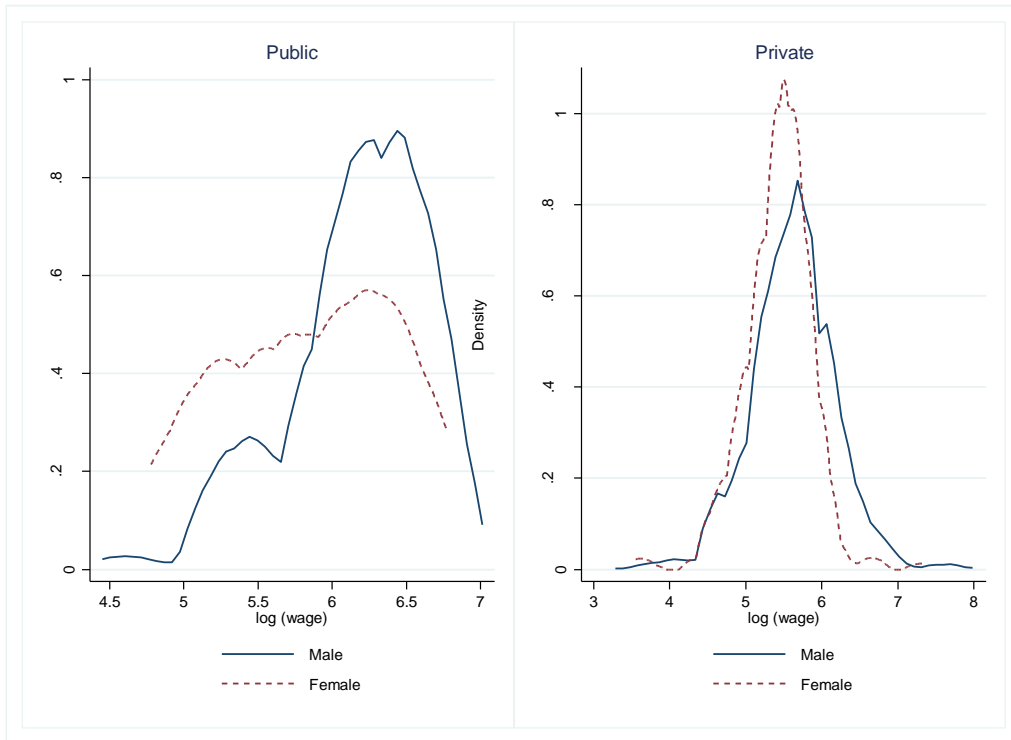
Figure 3b: Kernel Density Estimates of Monthly Net Log-Earnings, Divided by Gender (rural area)
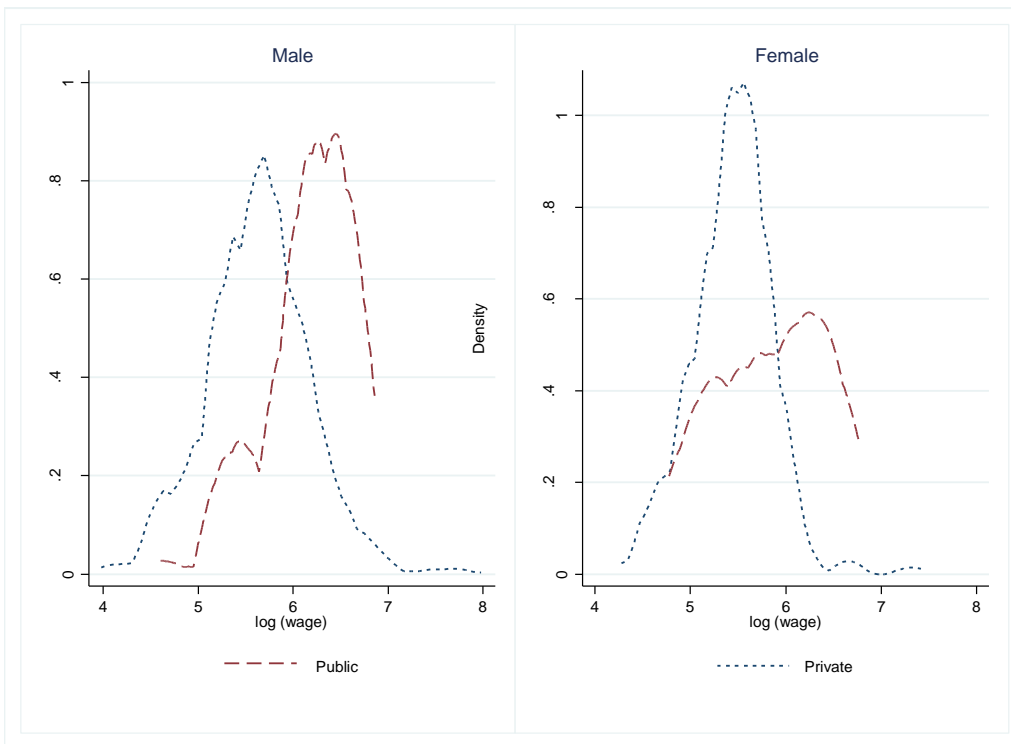
Figure 4: Quantile Decomposition of Public/Private Wage Gap
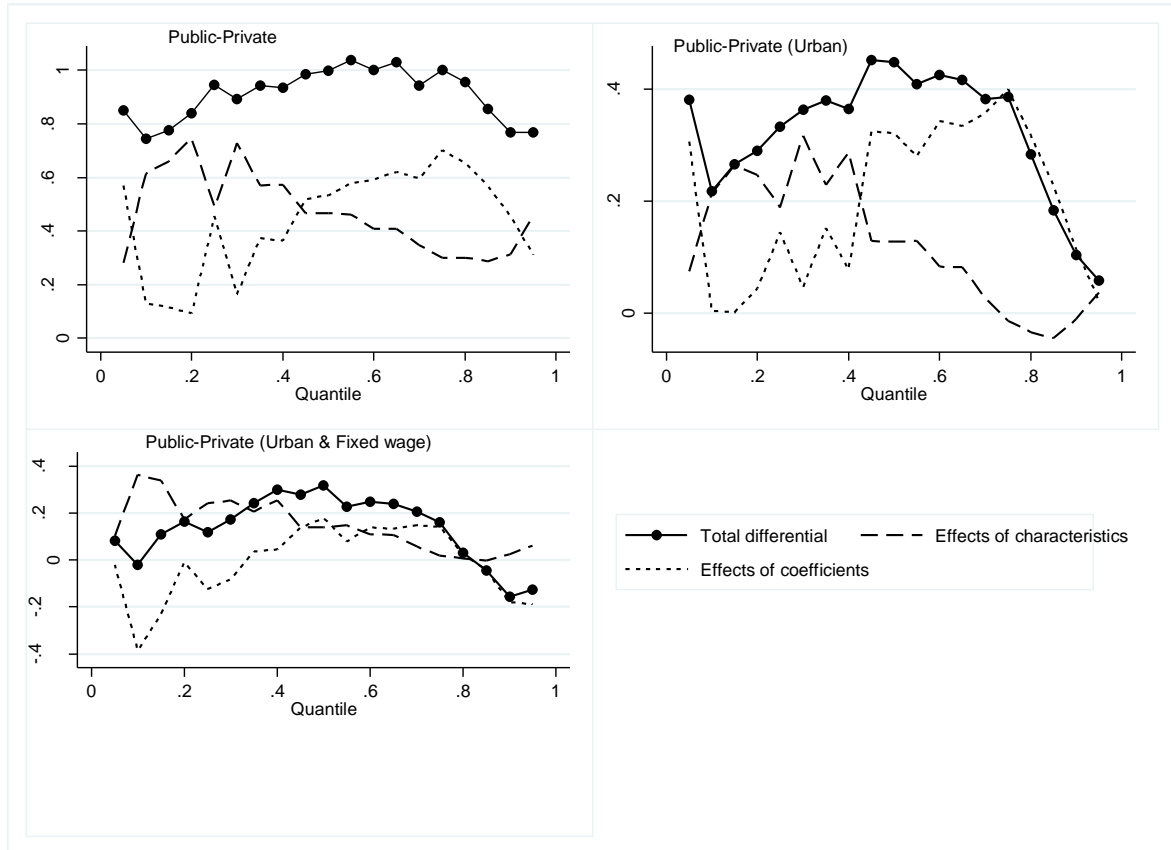
Table 1: Distribution of Work Categories by Sectors

	Public sector		Private sector	
	# observations	%	# observations	%
Without pay	14	1	35	1.94
Fixed salary	1334	95	1229	67.28
Variable income	41	3	442	24.21
Fixed salary with variable income	13	1	120	6.58
Total	1402		1826	

Table 2: Descriptive Statistics of Monthly Earnings for Public and Private Sectors (urban area)

	Average Monthly earnings for public sector (1)	Average Monthly earnings for private sector (2)	Ratio ((1)/(2))
Monthly earnings	711 (984)	419 (464)	1.697
Education			
Basic Education	432 (524)	331 (398)	1.305
Secondary education	589 (699)	411 (381)	1.433
Vocational Training	887 (1646)	415 (176)	2.137
University	955 (1180)	763 (732)	1.252
Region			
Greater Tunis	787 (986)	477 (400)	1.650
North East	750 (1176)	393 (627)	1.908
North West	536 (271)	271 (137)	1.978
Central East	740 (1145)	390 (523)	1.897
Central West	564 (280)	381 (340)	1.480
South East	663 (1025)	377 (287)	1.759
South West	688 (1395)	355 (180)	1.938
Gender			
Male	731 (1073)	453 (491)	1.614
Female	668 (756)	345 (389)	1.936
Marital Status			
Single	469 (774)	387 (436)	1.212
Married	597 (915)	442 (430)	1.351
Widowed	522 (372)	584 (1413)	0.894
Divorced	454 (372)	278 (107)	1.633

Table 3: Descriptive Statistics of Monthly Earnings for Public and Private Sectors (rural area)

	Average Monthly earnings for public sector (1)	Average Monthly earnings for private sector (2)	Ratio ((1)/(2))
Monthly earnings	476 (211)	315 (263)	1.511
Education			
Basic Education	327 (134)	288 (206)	1.135
Secondary education	508 (202)	349 (278)	1.456
Vocational Training	228 (141)	442 (703)	0.516
University	562 (200)	490 (417)	1.147
Region			
Greater Tunis	373 (203)	347 (195)	1.075
North East	605 (193)	314 (223)	1.927
North West	447 (202)	285 (164)	1.568
Central East	500 (219)	357 (368)	1.401
Central West	457 (196)	305 (239)	1.498
South East	404 (236)	304 (359)	1.329
South West	507 (195)	269 (126)	1.885
Gender			
Males	507 (203)	326 (270)	1.555
Female	393 (211)	264 (222)	1.489
Marital Status			
Single	450 (227)	309 (228)	1.456
Married	494 (213)	324 (302)	1.525
Widowed	N.A	413 (254)	
Divorced	391 (190)	311 (127)	1.257

Table 4: Decomposition in Mean of the Monthly Earnings Between Public and Private Sectors

	Urban Area		Rural Area	
	Coefficients	**Std.Err**	**Coefficients**	**Std.Err**
Overall				
Public sector	6.348***	(0.018)	6.023***	(0.062)
Private sector	5.846***	(0.016)	5.576***	(0.018)
Total wage gap	0.502***	(0.024)	0.448***	(0.064)
Explained attributes	0.327***	(0.025)	0.197**	(0.079)
Unexplained	0.175***	(0.028)	0.251***	(0.084)
Explained attributes				
Demog	0.106***	(0.019)	-0.038	(0.038)
Education	0.226***	(0.017)	0.247***	(0.065)
Statut	0.026**	(0.011)	0.001	(0.015)
Region	-0.031***	(0.007)	-0.014	(0.023)
Unexplained				
Demog	0.366	(0.310)	0.595	(0.653)
Education	0.057***	(0.022)	0.012	(0.043)
Statut	0.031	(0.036)	0.015	(0.050)
Region	0.012	(0.025)	0.241	(0.176)
Constante	-0.290	(0.306)	-0.611	(0.690)
# Observations	2702		1186	
Public	1192		89	
Private	1510		1097	

Note: Demographic: age, age-square/100, gender (male as reference modality); Education: basic education, secondary education, vocational training, university (basic education as reference modality); Marital Status: single, married, widowed, divorced (single as reference modality); Region: Northeast, Northwest, Central East, Central West, Southeast, Southwest (Greater Tunis as reference modality).

Table 5: Quantile Decomposition of Monthly Earnings between Public and Private Sectors

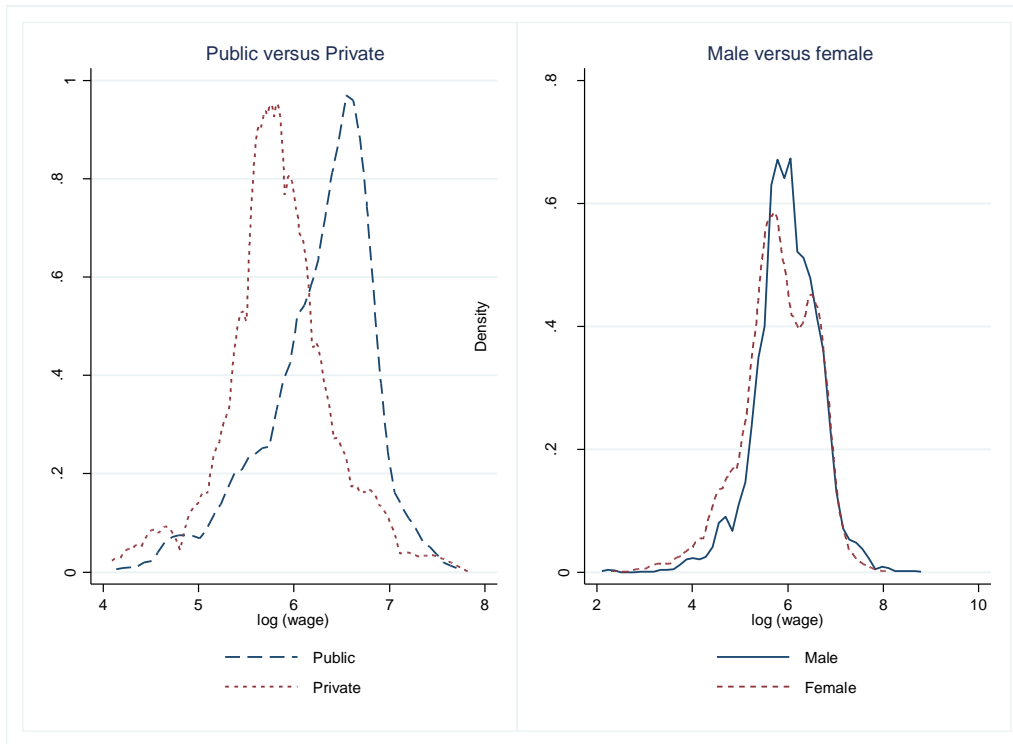|	Urban Area			Rural Area		
	25th	**50th**	**75th**	**25th**	**50th**	**75th**
Overall						
Public	5.616***	5.988***	6.205***	4.557***	5.095***	5.257***
	(0.048)	(0.050)	(0.051)	(0.253)	(0.254)	(0.261)
Private	5.281***	5.540***	5.799***	3.994***	4.219***	4.407***
	(0.035)	(0.037)	(0.040)	(0.062)	(0.066)	(0.0703
Total wage gap	0.335***	0.447***	0.406***	0.562**	0.876***	0.849***
	(0.060)	(0.062)	(0.065)	(0.261)	(0.262)	(0.270)
Explained attributes	0.172***	0.140**	0.009	0.758**	0.629*	0.593*
	(0.067)	(0.069)	(0.071)	(0.345)	(0.345)	(0.354)
Unexplained	0.162*	0.308***	0.396***	-0.196	0.247	0.257
	(0.089)	(0.092)	(0.095)	(0.422)	(0.420)	(0.431)
% of explained part	51.34	31.32	2.22	134.88	71.80	69.85
Explained attributes						
Demog	0.038	-0.004	-0.046	-0.042	0.076	0.059
	(0.059)	(0.061)	(0.062)	(0.158)	(0.159)	(0.166)
Education	0.113***	0.102**	0.016	0.722**	0.445	0.4249
	(0.039)	(0.041)	(0.041)	(0.318)	(0.312)	(0.320)
Statut	0.022	0.030	0.024	0.020	0.031	0.029
	(0.037)	(0.038)	(0.039)	(0.046)	(0.051)	(0.051)
Region	-0.001	0.012	0.016	0.057	0.077	0.080
	(0.022)	(0.022)	(0.023)	(0.079)	(0.086)	(0.087)
Unexplained						
demog	0.652	0.090	-0.493	-1.424	-1.261	-2.100
	(0.978)	(1.014)	(1.048)	(3.429)	(3.413)	(3.503)
education	0.074	-0.0467	-0.250***	0.317	0.196	0.132
	(0.069)	(0.072)	(0.075)	(0.208)	(0.207)	(0.213)
statut	-0.018	-0.015	-0.066	0.014	0.066	0.050
	(0.111)	(0.115)	(0.120)	(0.244)	(0.244)	(0.250)
region	0.013	0.083	0.093	0.373	0.058	0.058
	(0.076)	(0.079)	(0.082)	(0.919)	(0.916)	(0.942)
cons	-0.558	0.196	1.113	0.523	1.189	2.115
	(0.972)	(1.001)	(1.040)	(3.634)	(3.618)	(3.714)
# observations	2889	2889	2889	1570	1570	1570
Public # observations	1287	1287	1287	108	108	108
Private # observations	1602	1602	1602	1462	1462	1462

Table 6: Quantile Decomposition of Monthly Earnings Between Public and Private Sectors by Gender and Education
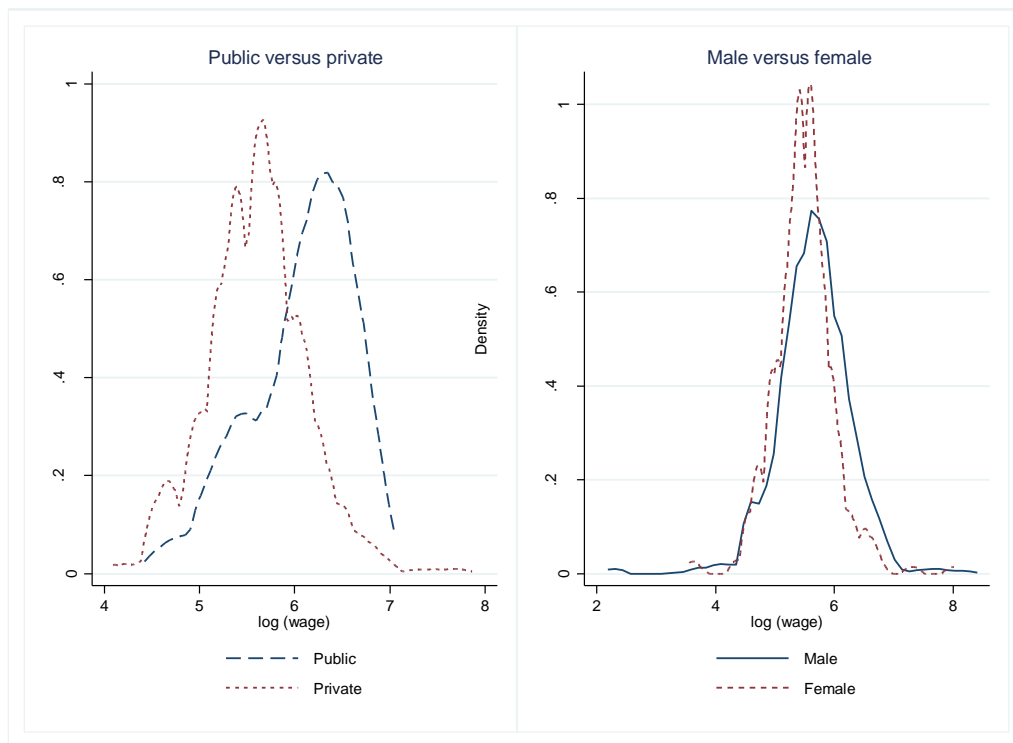
| | Urban Area | | | | | |
	10th	25th	50th	75th	90th	Average
By gender						
Only Men (# observations = 1892)						
Total wage gap	0.221***	0.290***	0.487***	0.392***	0.274***	0.431***
	(0.080)	(0.071)	(0.075)	(0.078)	(0.090)	(0.029)
Explained attributes	0.167**	0.097	0.067	-0.018	0.041	0.243***
	(0.076)	(0.064)	(0.067)	(0.068)	(0.077)	(0.026)
Unexplained	0.054	0.193**	0.421***	0.410***	0.232**	0.189***
	(0.108)	(0.095)	(0.099)	(0.103)	(0.116)	(0.032)
% of explained part	75.6	33.4	13.8	-4.6	15.0	56.4
% of unexplained part	24.4	66.6	86.2	104.6	85	43.6
Only Women (# observations = 810)						
Total wage gap	0.105	0.310***	0.422***	0.450***	0.085	0.659***
	(0.153)	(0.114)	(0.111)	(0.115)	(0.140)	(0.041)
Explained attributes	1.494***	0.904***	0.313	0.020	0.150	0.582***
	(0.311)	(0.223)	(0.217)	(0.221)	(0.233)	(0.061)
Unexplained	-1.390***	-0.593**	0.109	0.431	-0.065	0.077
	(0.339)	(0.246)	(.241)	(0.247)	(0.268)	(0.063)
% of explained part	1423.0	291.6	74.2	4.4	176.5	88.3
% of unexplained part	-1323	-191.6	25.8	95.6	-76.5	11.7
By level of education						
Basic Education (# observations = 259)						
Total wage gap	0.355***	0.229**	0.323***	0.355***	0.438***	0.260***
	(0.109)	(0.098)	(0.086)	(0.095)	(0.109)	(0.037)
Explained attributes	0.013	0.065	0.007	-0.010	0.022	0.152***
	(0.114)	(0.106)	(0.09)	(0.100)	(0.114)	(0.041)
Unexplained	0.342**	0.164	0.316***	0.3648***	0.417***	0.108**
	(0.153)	(0.140)	(0.122)	(0.137)	(0.155)	(0.050)
% of explained part	3.7	28.4	2.2	-2.8	5.02	58.5
% of unexplained part	96.3	71.6	97.8	102.8	94.98	41.5
Secondary education (# observations = 777)						
Total wage gap	0.010	0.087	0.051	0.040	-0.312**	0.369***
	(0.127)	(0.112)	(0.115)	(0.120)	(0.160)	(0.038)
Explained attributes	0.284**	0.095	0.104	0.071	0.023	0.165***
	(0.142)	(0.122)	(0.126)	(0.129)	(0.134)	(0.036)
Unexplained	-0.274	-0.008	-0.054	-0.031	-0.335	0.205***
	(0.184)	(0.163)	(0.168)	(0.173)	(0.205)	(0.048)
% of explained part	2840	109	204	178	-7.4	44.7
% of unexplained part	-2740	-9	-104	-78	107.4	55.3
University education (# observations = 727)						
Total wage gap	0.558***	0.398***	0.247*	0.077	-0.041	0.225***
	(0.147)	(0.146)	(0.150)	(0.158)	(0.188)	(0.048)
Explained attributes	0.131	0.041	-0.036	0.007	-0.058	0.079**
	(0.122)	(0.110)	(0.111)	(0.115)	(0.135)	(0.036)
Unexplained	0.427**	0.357***	0.283	0.070	0.016	0.146***
	(0.187)	(0.180)	(0.184)	(0.192)	(0.230)	(0.053)
% of explained part	23.5	10.3	14.6	9.1	141	35.11
% of unexplained part	76.5	89.7	85.4	90.9	-41	64.9

Appendix

Figure A1: Kernel Density Estimates of Monthly Net Log-Earnings (urban area)

Figure A2: Kernel Density Estimates of Monthly Net Log-Earnings (rural area)

Table A1: Decomposition in Mean of the Monthly Earnings Between Public and Private Sectors with Adjustment for Sample Selection Bias

	Urban Area		Rural Area	
	Coefficients	Std.Err	Coefficients	Std.Err
Overall				
Public sector	6.348***	(0.018)	6.045 ***	(0.052)
Private sector	5.846***	(0.016)	5.573***	(0.017)
Total wage gap	0.502***	(0.024)	0.471***	(0.055)
Explained attributes	0.318***	(0.025)	0.210**	(0.068)
Unexplained	0.184***	(0.028)	0.262***	(0.072)
Explained attributes				
Demog	0.183***	(0.071)	0.166	(0.117)
Education	0.308***	(0.075)	1.936*	(1.164)
Statut	0.036**	(0.014)	0.041	(0.048)
Region	-0.031***	(0.007)	-0.013	(0.017)
Mills ratio	-0.178	(0.156)	-1.921	(1.312)
Unexplained				
Demog	-1.185	(1.013)	1.549	(2.239)
Education	-0.151	(0.134)	0.199	(0.658)
Statut	-0.009	(0.046)	-0.007	(0.365)
Region	0.011	(0.025)	0.389**	(0.155)
Mills ratio	-0.753	(0.541)	1.626	(5.541)
Constant	2.271	(1.688)	-3.494	8.737
# Observations	2702		1186	
Public	1192		89	
Private	1510		1097	

Note: Demographic: age, age-square/100, gender (male as reference modality); Education: basic education, secondary education, vocational training, university (basic education as reference modality); Marital Status: single, married, widowed, divorced (single as reference modality); Region: Northeast, Northwest, Central East, Central West, Southeast, Southwest (Greater Tunis as reference modality).

Table A2: Quantile Decomposition of Monthly Earnings between Public and Private Sectors with Adjustment for Sample Selection Bias

	Urban Area			Rural Area		
	25th	50th	75th	25th	50th	75th
Overall						
Public	5.616***	5.988***	6.205***	4.660***	5.042***	5.206***
	(0.048)	(0.050)	(0.051)	(0.245)	(0.226)	(0.235)
Private	5.281***	5.540***	5.799***	3.996***	4.194***	4.410***
	(0.035)	(0.037)	(0.040)	(0.057)	(0.061)	(0.065)
Total wage gap	0.335***	0.447***	0.406***	0.664***	0.847***	0.796***
	(0.060)	(0.062)	(0.065)	(0.252)	(0.235)	(0.244)
Explained attributes	0.202***	0.137*	-0.000	0.583*	0.398	0.409
	(0.072)	(0.075)	(0.076)	(0.352)	(0.328)	(0.340)
Unexplained	0.133	0.310***	0.406***	0.081	0.450	0.387
	(0.093)	(0.096)	(0.099)	(0.424)	(0.398)	(0.413)
% of explained part	60.3	30.65	0.000	87.80	46.98	51.38
Explained attributes						
Demog	-0.204	0.020	0.033	0.383	0.037	-0.080
	(0.228)	(0.237)	(0.242)	(0.616)	(0.570)	(0.591)
Education	-0.152	0.128	0.103	3.940	-0.625	-1.589
	(0.245)	(0.255)	(0.260)	(7.161)	(6.706)	(6.95)
Statut	-0.009	0.033	0.034	0.052	-0.020	-0.034
	(0.046)	(0.048)	(0.049)	(0.166)	(0.151)	(0.158)
Region	-0.003	0.011	0.016	0.000	0.022	0.028
	(0.021)	(0.022)	(0.023)	(0.054)	(0.051)	(0.053)
Mills ratio	0.568	-0.056	-0.186	-3.791	0.984	2.084
	(0.521)	(0.539)	(0.551)	(7.99)	(7.487)	(7.759)
Unexplained						
demog	-0.051	1.011	-2.290	-0.950	-10.789	-15.488
	(3.027)	(3.146)	(3.286)	(12.07)	(11.597)	(12.08)
education	-0.029	0.079	-0.494	-1.569	-3.789	-4.985
	(0.403)	(0.419)	(0.438)	(3.559)	(3.423)	(3.570)
statut	-0.049	0.011	-0.112	-1.513	-2.400	-2.976
	(0.142)	(0.147)	(0.153)	(1.940)	(1.874)	(1.956)
region	0.015	0.083	0.091	0.908	0.546	0.573
	(0.076)	(0.079)	(0.083)	(0.868)	(0.819)	(0.851)
Mills ratio	-0.556	0.496	-0.869	-14.124	-31.785	-41.609
	(1.624)	(1.687)	(1.758)	(30.072)	(28.876)	(30.09)
constant	0.804	-1.372	4.081	17.328	48.667	64.872
	(5.046)	(5.243)	(5.475)	(47.185)	(45.338)	(47.25)
# observations	2889	2889	2889	1570	1570	1570
Public # observations	1287	1287	1287	108	108	108
Private # observations	1602	1602	1602	1462	1462	1462