THE BREAD AND THE CROSS: AN EMPIRICAL ANALYSIS OF RELIGIOUS DISCRIMINATION IN THE EGYPTIAN LABOR MARKET

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Submitted to the Graduate School of Arts and Social Sciences

in partial fulfillment of the requirements for the degree

of Master of Arts in Public Policy

Sabanci University

August 2014

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Abstract

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Key Words: Religious discrimination, labor market, Egypt, wage discrimination, minority rights

Do Christians face discrimination in the Egyptian labor market? In the last few years, religious discrimination in the Egyptian labor market has been an ongoing debate between the Egyptian government, Christian activists, and international observers. Yet, no systemic empirical study of the issue was provided to enrich the debate with concrete objective evidence. As a result, this paper aims at filling this gap by empirically examining religious discrimination in wages, receipt of non-pecuniary benefits, working conditions, and access to different tracks of employment. Using recent data from the Egyptian Labor Market Panel Survey (ELMPS 2012), this study employs a set of econometric techniques including OLS regression analysis, propensity score matching, Oaxaca-Blinder decomposition, and probit models to determine the forms and extent of religious discrimination in the labor market. Our findings suggest that Christians do not face discrimination in wages, receipt of job's non-pecuniary benefits, and working conditions. However, Christians have a disadvantage in access to wage employment in general, and government employment in particular, proposing religious discrimination as a possible explanation. These results enlighten the debate by defining the areas where discrimination is taking place and policies are needed.

Özet

EKMEK VE HAÇ: MISIR İŞ GÜCÜ PİYASASINDAKİ DİN TEMELLİ AYRIMCILIĞININ AMPİRİK ANALİZİ

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Anahtar Kelimeler: Din ayrımcılığı, işçi piyasası, Mısır, Maaş ayrımcılığı, azınlık hakları

Mısır işgücü piyasasındaki Hristiyanlar ayrımcılığa maruz kalıyor mu? Son bir kaç yılda,iş gücü piyasasındaki din temelli ayrımcılık; hükümetler, Hristiyan aktivistler ve uluslararası gözlemciler tarafından tartışma konusu haline gelmiştir. Fakat, bugüne kadar tartışmayı geliştirecek, konuyla ilgili tarafsız kanıtlar sunacak ampirik bir çalışma henüz yapılmamıştır. Sonuç olarak, bu çalışmada biz maaşlar, ayni haklar, çalışma koşulları ve farklı iş kollarına erişim bağlamında bu konuyu ampirik olarak inceledik. Mısır İşgücü piyasası anketini kullanarak farklı ekonometrik tekniklerle incelemelerde bulunduk. En küçük karelere metodu, propensity score eşleme, Oaxaca – Blinder ayrıştırma ve logit metodlarını kullanarak ayrımcılığın boyutlarını ve kapsamını ortaya çıkarmaya çalıştık. Sonuçlarımız gösterdi ki, Hristiyanlar; maaş, ayni haklar ve çalışma koşulları bağlamında herhangi bir ayrımcılıkla karşı karşıya kalmıyorlar. Fakat Hristiyanların, maaşlı işler bulmakta, özellikle devlet memurluğu bağlamında dezvantajlı olduğunu gösterdik. Bu sonuçlar, ayrımcılığın hangi bağlamda yer aldığı, tanımlanması ve konu ile ilgili politika önerileri oluşturulması için ayrımcılık tartışmasına ampirik katkı sunmaktadır.

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CAPMAS …… …… Central Agency for Public Mobilization and Statistics

ELMPS …… Egyptian Labor Market Panel Survey

ERF …… Economic Research Forum

ILO ……International Labor Organization

Chapter 1

Introduction

In 640 A.D., the Arab Muslim army conquered Egypt, a vital center of Christianity in the ancient world. Centuries of cooperation, conflict, tolerance, violence, revolutions, pacts, external threats, internal divisions, common struggle, messianic visions, holy wars, barbaric clashes, and educated debates shaped the history of the relationship between Muslims and Christians in Egypt. Through a long slow process, the Christian country turned to be the most populous Muslim country in the Middle East. In the midst of the rising tides of globalization and human rights movements, questioning the nature of the relationship between Muslims and Christians became a valid proposition.

In the last few years, the Christian minority has been facing increasing assaults and restrictions on their freedoms. This has increased the pace and intensity of religious activism inside Egypt by the frustrated Christian youth. Along the same lines, the global community has condemned the rising incidents of religious discrimination, calling for actions. On the other hand, the successive Egyptian governments and many domestic players, including some Christians, undermined the claims for religious discrimination. In many instances, Christian activism against discrimination was considered an act of harming the Egyptian national reputation and the international statements on the issue were looked upon as undesirable foreign intervention in domestic national affairs. Accordingly, the debate on religious discrimination remained active, but stagnant in its implications.

Labor market is one of the fields where religious discrimination was repeatedly reported. Access to labor market and returns from labor activities are core sources for individuals' welfare. Also, the economic empowerment of the minority and providing them with equal opportunities would enhance their political participation and sense of belonging. Consequently, discrimination in the labor market could have serious implications. Yet, the claims of the existence of religious discrimination in the Egyptian labor market were not verified empirically. They also lack clear

identification of the forms and scale of religious discrimination, if it were to exist in the first place. As per our knowledge, no study has provided statistical empirical evidence to meet these needs. Accordingly, investigating the existence and understanding the mechanisms and the scale of religious discrimination in the labor market is essential for both domestic and international policy making. Domestically, better informed policy actors are more likely to suggest sound policies and focus on the important aspects. Internationally, identifying the significance of the labor market in the issue of religious discrimination will determine its weight on the talks' agenda between the Egyptian government and the international community.

This study responds to these needs by providing pioneering empirical investigation of religious discrimination in the Egyptian labor market. Although analyzing discrimination in wages is our core contribution, we also examine the possibility of discrimination in the receipt of non-pecuniary benefits, working conditions, labor force participation, employment, access to wage employment, and access to government employment. The used data are obtained from Egypt's Labor Market Panel Survey 2012 (ELMPS 2012) prepared by the Economic Research Forum (ERF) in cooperation with Egypt's Central Agency for Public Mobilization and Statistics (CAPMAS). Our main findings suggest no discrimination in wages, non-pecuniary benefits, working conditions, labor force participation, and employment. There is a possibility of discrimination in access to wage employment in general and the government sector in particular as Christians are less likely to be employed as wage employees or as government workers. However, these differences may also be driven by different preferences for these types of jobs.

The paper starts by surveying the relevant literature before providing a brief background on the issue of discrimination in Egypt. Then, we proceed with our empirical analysis of wages as the main subject. Afterwards, other possible forms of discrimination in the labor market are examined. We conclude by suggesting policy implications based on our findings.

Chapter 2

Literature Review

2.1. Theories of Discrimination

The simplest definition of discrimination is "when equal productivity is not rewarded with equal pay" (Aigner and Cain, 1977; 177). This could be broadened to imply that discrimination is any differentiation in treatment between individuals belonging to different groups in wages, access to employment, work accommodations, promotions… etc, for factors unrelated to their productivity. To explain that phenomenon, the discrimination literature suggests two theoretical frameworks.

Taste-based theories assume that discrimination takes place due to different preferences by various economic agents in the market (Becker, 1957). As economic agents experience disutility from dealing with certain groups in the market, they are willing to pay in order to avoid dealing with the less preferred groups. The classical example of taste-based discrimination is the white employers' discrimination against black workers in the United States. According to Becker (1957), in a competitive market, if employers have different tastes for discrimination, discrimination will cease to exist in the long run. However, if employers have the same prejudice against minority workers, discrimination will persist in the market. In case of discrimination against the minority by co-workers or customers, segregation will be the most likely outcome. For competitive markets, the theory suggests that discrimination is not profitable, and so it is less likely to persist in the long run. However, in markets with imperfect competition, discrimination could become worse and more prevalent. Stiglitz (1973) pointed out that, under monopolies and oligopolies, if the ownership claims are not evenly distributed among different societal groups, their incomes will differ as a result of the variation in their shares of the monopoly rents. For government monopolies, Alchian and Kessel (1962) highlighted that discrimination could be practiced and sustained at no loss in profits as they are not constrained by maximizing profits. Also, labor unions could be monopolized by the majority and exclude the minority which sustains

the latter's disadvantages in the labor market by limiting their bargaining power (Stiglitz, 1973; Cain, 1986).

In contrast to assuming the majority's preferences as the reason for discrimination, statistical discrimination theories propose that decision makers use observable characteristics of individuals as an indicator of their unobserved outcome-relevant characteristics (Fang and Moro, 2011). On one hand, Phelps (1972) argues that the source of inequality between groups is some unexplained exogenous differences between the different groups of workers which are met with imperfect information about worker's productivity from the employer's side. On the other hand, Arrow (1973) claim that average group differences in the aggregate level are endogenously driven in the equilibrium. He assumes no exogenous variations between groups. Decision makers hold asymmetric views about members from different groups which are derived in equilibrium, i.e. "Self-fulfilling stereotypes". In both cases, employers use group characteristics as a proxy for individual's productivity without having a specific taste for a certain group.[1]

Both theoretical frameworks focus on explaining the existence and persistence of discrimination in the labor market. However, they pay less attention to the composition of discrimination. It is usually implied that discrimination takes place on one ground, i.e. race, gender, or class. A more recent body of literature challenged this notion suggesting the complex composition of discrimination. Some economists highlighted the importance of the class-race-gender nexus in explaining the complexities of discrimination in the labor market (Williams, 1987; Darity and Mason, 1998; Brewer, Conrad, and King, 2002). Makonnen (2002) has differentiated between three types of discrimination. First, multiple discrimination takes place on one ground at a time, but is accumulated over time. Second, compound discrimination occurs when discrimination on the bases of two or more grounds adds to each other. Third, intersectional discrimination operates when discriminatory practices on different grounds happen and interact with each other

[1] An alternative, or rather complementary, explanation to the phenomena of group differentials in the labor market, suggested by Goldberg (1982), is that nepotism in favor of the majority could also generate variations in labor market outcomes.[1] In fact, Goldberg finds that a long-run wage advantage in favor of whites is sustained under competitive conditions. Despite the extent of the application of this view, it highlights the complexity of defining the determinants of group differences. The wage differential between two groups could arise as a result of both discrimination pushing the wages of the minority downwards and nepotism raising the majority's wages. Cotton (1988) and Neumark (1988) have decomposed a method to decompose these two effects of overpayment and underpayment on creating the group differentials.

concurrently. The core point made by those scholars is to pinpoint to the fact that the interpretation of the "unexplained" component of group variations could be hardly related to a single form of discrimination.

In a nutshell, the theoretical literature on discrimination is rich and diverse. Taste-based and statistical discrimination theories complement, rather than substitute, each other. Given the convoluted composition of discrimination, any interpretation should be done under clear assumptions and with great caution.

2.2. The Empirical Literature

The empirical literature on discrimination is vast and covering a wide set of topics. Scholars have studied discrimination on bases of gender, race, religion, class, appearance, age, and sexual orientation in both developed and developing countries. Accordingly, there are several research outcomes to be highlighted from the applied literature.

Firstly, discrimination in the labor market is almost a worldwide phenomenon with variant degrees across different countries and different regions within the same country. It is prevalent in both the developed (Yamane, 2011; Metcalf and Rolf, 2010; Foroutan, 2011; Riach and Rich, 1992; Neumark et al., 1995; Khatab et al., 2011, Booth et al, 2012; Bursell, 2007; Duguet et al., 2007; Bursell, 2007) and developing countries (Waran, 2006; Banerjee and Knight, 1985; Chen, 2004; Wei, 2007; Chong and Nopo, 2007; Riach and Rich, 2002; Morento et al., 2004; Lovell, 1993; Desi and Singh, 1989; Kara, 2006; Ashraf and Ashraf, 1998). The level and type of discrimination based on a certain criteria is different from one country to another. For instance, Kara (2006) finds that gender discrimination in wages in Turkey is double its level in Pakistan (Ashraf and Ashraf, 1998). Within the same country, Lovell (1993) reported that while racial discrimination in earnings is almost inexistent in northern Brazil, it is evident in the southern part of the country. In the United States, Mayrl and Saperstein (2012) found that reported discrimination against evangelical Protestants is confined to the South, while discrimination due to political affiliation is more influential in other regions.

Secondly, in many societies, discrimination takes place on multiple grounds interacting with each other. This leads to difficulties in separating the effects of different types of discrimination generating the unequal market outcomes (Yamane, 2011). In India, Waran (2006) finds that

females face wage discrimination in the labor market along with the existing discrimination based on the individual's caste. Similarly, in Israel, Haberfeld and Cohen (2007) highlighted that females earn less than males regardless of their position on the socioeconomic hierarchy, i.e. whether upper Ashkenazim class, middle Mizrahim class, or lower Arab class . Chen (2004) points out that gender discrimination is combined with age discrimination in China. For instance, employers in the manufacturing sector usually displace female workers above 35 years old. In Canada, Sorensen (1995) points out that female immigrants are more likely to face severer discrimination due to both their gender and foreign origin.

Thirdly, the extent of discrimination differs by the type of occupation, sector, and firm's characteristics. Banerjee and Knight (1985) show that, in India, discrimination is the highest in operative jobs and is relatively less in white-collar jobs. Along the same lines, Kara (2006) finds that Turkish women face less discrimination in occupations that are considered public like secretaries or doctors, more discrimination in occupations requiring physical strength, and positive discrimination in female-oriented jobs like nurses . Banerjee et al. (2008) found that discrimination in jobs requiring hard skills and certifications are less likely to happen than in jobs focusing on soft skills (26). For the sectoral differences, discrimination is found to be less in the public sector in both India and Turkey (Banerjee and Knight, 1985; Waran, 2006; Kara, 2006). In India, the private formal sector has more caste-based discrimination than the informal sector (Banerjee and Knight, 1985).[2] These variations extend to the firm level. Carlsson and Rooth (2007) find the level of ethnic discrimination by Swedish firms differ by the number of the employees in the workplace, the degree of personnel turnover, and the size of immigrant population in the firm's municipality. Their rationale behind the fact that larger firms are less likely to discriminate is that they have a more comprehensive and better recruitment process that reduces statistical discrimination (726).

Fourthly, the level of discrimination is responsive to changes in economic and political conditions. For instance, Carlsson and Rooth (2007) find that firms are more likely to

[2] The variation in the degree of discrimination in different sectors is related to the role of social networks (Banerjee and Knight, 1985). Networks are more likely to be employed in the informal private sector where there are no rules for hiring and it mostly depends on personal connections. Although this might lead to segregation in the labor market, it reduces the impact of discrimination in access to employment as a whole. This highlights the role of social networks in determining the market outcomes (Rees, 1966; Booman, 1975; Topa, 2001; Granovetter, 1995; Calvo-Armangol and Jackson, 2004; Tassier and Manczer, 2005).

discriminate against some ethnic groups if availability of jobs is scarce. If this could be generalized, one could predict discrimination to increase in times of recession. In fact, Loureiro, Carneiro, and Sachsida (2004) highlighted that the intensity of discrimination in Brazil increased with consolidation of economic liberalization and macroeconomic stabilization. In the United States, the events of September 2001 have increased the level of discrimination against Muslims (Grisham, 2006; Huang and Kleiner, 2001).[3]

Fifth, in some cases, statistical measures of discrimination could be in contradiction with people's perceptions on discrimination in the labor market. In their survey of the literature on discrimination in Latin America, Chong and Nopo (2007) find that there is a perception of discrimination that coexist with lack of evidence on discriminatory practices. They relate this to either the failure of studies to capture some forms of discrimination, or that the public discourse based on historical experiences of discrimination, which are no more valid, shapes people's perceptions (15). This observation is elucidated by others scholars who highlighted the problems with self-reporting discrimination due to its subjectivity (Beilby and Baron, 1987; Arrow, 1973; Matthews, 2006; Goto et al., 2002; Mendes and Candeias, 2013; Neto, 2006; Brub, 2008; Dailey et al., 2010, Mellor, 2004; Essed, 1991).

Sixth, labor market segregation and discrimination are strongly related. Semyonov's (1988) study on the Arab and Jewish communities in Israel provides a good example of that. If discrimination is prevalent in integrated societies against minorities, then minority groups would seek protection in their own segregated labor markets. This is evident in the contrast between the significant level of income and occupational discrimination faced by Arabs working in bi-ethnic labor market, and those working in mono-ethnic markets in Israel. The latter have strong occupational advantage (264). This provides a hint on the persistence of segregated labor markets in practice.

These general points might not hold in every setting. Still, they provide insights about the phenomenon of discrimination in the labor market. The situation in the developing countries is not expected to be significantly different from their developed counterparts. For the previous points, examples were provided from both developing and developed countries. However, if there

[3] Aslund and Rooth (2005) investigated the impact of 9/11 events on the shifting the attitudes towards Muslims and so the discrimination in the Swedish labor market against them. They couldn't find evidence of increasing discrimination. Their explanation is that discrimination is not based on preferences that changes quickly. However, these different findings underscore the importance of case by case analysis.

is one point to be emphasized regarding developing countries, it is the significant role of "pre-market" discrimination which might attribute most of the disparities between groups to factors related to productivity. In this case, the labor market discrimination rates might be misleading, as the roots of the problem lie somewhere else. This was observed in India (Waran, 2006), Brazil (Saboia and Saboia, 2009; Barros and Reis, 1991; Ramos and Vieria, 2001) and South Africa (Case and Deaton, 1991; Case and Yogo, 1999; Crounch, 1996; Fedderke, De Kadt and Luiz, 2000; Yamauchi, 2005; O'Gorman, 2010). It is to be noted that this property is not unique to developing countries, yet its impact is likely to be higher and more common due to their early stage of development.

2.3. Religious Discrimination

Despite receiving less attention than other forms of discrimination, religious discrimination is well-documented in the literature. Several studies examined discrimination against Muslims in the labor market in the United States (Davila and Mora, 2005; Kaushal et al, 2006; Selim, 2007), Sweden (Aslund and Rooth, 2005;), Australia(Foroutan, 2011), Austria and Germany (Forestenlencer and Al-waqfi, 2010), UK (Khatab et al, 2011; Heath and Martin, 2013), and France (Pierne, 2013). Besides Muslims, discrimination against Irish Catholics in Scotland (Walls and Williams, 2010), Catholics in Northern Ireland (Cradden, 1993; Dingley and Morgan, 2005; Ewing, 2000), and Evangelicals in the US (Mayrl and Saperstein, 2012) was also subject to research efforts. For developing countries, the literature on religious discrimination is very limited. In China, Lu (2009) indicates the existence of religious discrimination against Falun Gong practitioners by removing them from their working places (39). Desi and Singh (1989) found evidence for discrimination in earnings for Sikh men vis-à-vis Hindu high caste men in India. Moreover, Morrison and Jutting (2005) conducted a study for developing countries to investigate the cross country variations in gender discrimination in the labor market by religion. They find that there is a tendency for higher gender inequalities in Muslim countries compared to Christian or Buddhist ones. Also, gender inequalities in labor market participation are higher in Muslim and Hindu countries than Christian and Buddhist ones (1072-1077). This study pinpoints

the need for caution in interpreting the source of discrimination against women in particular when dealing with different religious communities.[4]

Most of these studies underscore discrimination in certain practices in the labor market. However, one important observation is the relation between religious discrimination and appearance. Few researchers drew attention to the fact that discrimination could take place in the labor market based on physical appearance and dressing style, especially in the hiring stage (Corbett, 2007; Muhajan, 2007; Johnson and Higgens, 1987; Rigio and Throcmorton, 1988). The justification for this sort of discrimination is that appearance affects customer's perceptions about the company and its products and services (Bello, 2004). It acts as a technique for marketing (Muhajan, 2007). Besides that, the appearance-based policies by a certain employer stem from the cultural and structural dimensions in the workplace (Green, 2005). So, even if discrimination is practiced on the bases of ethnicity or religion, it is usually severer for those members who are "visibly different" (Anker, 1998, 18). For example, Foroutan (2011) found that Muslim immigrants in Australia who have Middle Eastern and Northern African origins are more likely to face discrimination than Muslim immigrants from sub-Saharan Africa or the pacific Islands as the first's religious identity is more visible through their names and dressing codes (333). So, the link between religion and appearance could provide an explanation of why religious discrimination takes place and why its impact could be severer for some groups like women.

Although scholars of discrimination achieved significant progress in studying religious discrimination, there are two areas that need to be further enhanced. First, the investigation and analysis of religious discrimination in developing countries is very limited given their number, history, and diversity. In fact, as most of the developing countries face institutional challenges that hinders law enforcement and ruled by less democratic regimes that might suppress minority rights, the issue of religious discrimination could be of strong relevance and significant impact on people's lives in those countries. Second, a big part of the existing literature is qualitative and subjective in nature. It depends on interviews and survey research which could lead to the problems of self-reported discrimination discussed earlier. So, more quantitative studies should

[4] For instance, if a study managed to find discrimination against Muslim women living in a Christian country, the discrimination could be practiced by members of the minority's religion due to certain religious beliefs, or the members of the majority's religion. The latter would be religious discrimination, but the first is gender discrimination. This distinction is important for policy implications.

be employed to test for the external validity of the qualitative research findings. Accordingly, there is a need for more quantitative studies of religious discrimination in general, and for developing countries in particular.

2.4. Discrimination in Egypt

Compared to many countries, Egypt is relatively homogenous in terms of its ethnic and religious structure. Accordingly, most of the official data collected on the Egyptian population and labor force surveys overlooked the religious and ethnic characteristics of individuals. This has left researchers with the gender dimension as the core topic of the Egyptian literature on discrimination in the labor market. Although religious and gender discrimination are different in many aspects, understanding the operation of discriminatory practices in labor market through the lens of gender could provide useful insights for discrimination studies in Egypt in general.

The existence of a level of gender discrimination in the labor market is a common conclusion in most, if not all, of the studies. Using 2006 labor survey data, El-Haddad (2009) estimated that female workers receive 37 percent lower wages due to discrimination. This is worse than the 24 percent wage discrimination in 1998 (22).[5] Kandil (2009) reports that discrimination, in absolute terms, has increased from 8% in 1988, to 10% in 1998, then declined to 8.6% in 2006.[6] However, relative discrimination increased over time which conforms to El Haddad (2009) findings. In addition, Kandil (2009) shows that discrimination levels differ by wage quartile and level of education. Absolute discrimination increased along the wage distribution and was higher for the high educated females. This indicates a phenomena of "glass ceiling" in the market (24).

Moreover, discrimination in not homogenous across different economic sectors, but its level differs by sector of employment. Said (2007) finds evidence for gender discrimination in the private and public enterprises, but not in the public sector for the years 1988, 1998, and 2006.[7] Using different data set, Said (2011) discovered that discrimination is the highest in private enterprises, followed by government and then public enterprises. In her study of discrimination in

[5] The difference from the previous study could be related to the data and techniques used.

[6] The absolute discrimination percentage indicates by how much higher is the observed male-female average wage ratio than what would prevail in non-discriminatory setting.

[7] Interestingly, the wage differential and discrimination increased in the public enterprises over time which reflects their institutional shift to resemble the private sector (Said, 2007, 6).

tradable and non-tradable sectors, El Hamidi (2007) elaborated that contribution of discrimination to the gender wage gap has increased between 1998 and 2006 in tradable sectors, while decreasing in non-tradable sectors. In another variation of labor market sectors, Assad (1995) argued that the lower female wages in the unprotected sector of the economy is due to higher discrimination in that sector than the protected one. This discrimination could be even stronger in non-Metropolitan regions, which highlights the regional variation of discrimination levels.

Besides discrimination, gender based labor segregation is also an existent phenomenon in the market and explains part of the gender wage differentials. Although occupational segregation worked in favor of females wages in the government sector, it accounts for about 50 and 35 percent of the unjustified component in the gender gap in the public corporations and the private sector, respectively (Said, 2011). In a more specialized study, El Haddad (2011) examined employment in the Textile industry and identified "concealed discrimination" at the entry point where women are pushed towards low paying firms and occupations, although this is largely due to their limited endowments. The main point is that inter-occupational wage differences and segregation could create unjustified disparities among different labor groups.

These findings on gender discrimination enable us to draw a picture for the phenomenon in the market. Simply stated, discrimination is far from uniformity as it varies across time, sector of employment, and even regions. This property should be taken into consideration while conducting any study on the subject, especially in the Egyptian context. Many forms of labor market discrimination are left untouched in the literature on Egypt including ethnic, religious, and even appearance based discrimination. Accordingly, this study makes use of the newly available data to explore an unvisited dimension of discrimination in the labor market; religious discrimination.

Chapter 3

Religious Discrimination in Egypt

Legally, the Egyptian constitution guarantees freedom of belief and practice of religion for Muslims, Christians, and Jews. Islam is the state's official religion and principles of Sharia law are the primary source of legislation. The state does not recognize non-Ibrahamic religions and unorthodox Islamic sects. Demographically, Sunni Muslims represent the great majority of population, about 90 percent, followed by the Christian minority which constitutes from 8 to 12 percent of the population (Bureau of Democracy, Human Rights, and Labor, 2012).[8] Smaller minorities like Bahai's, Jews, and Shiite Muslims represent insignificant percentage of the population. The majority of Christians belongs to the Coptic Orthodox Church. They have higher concentration in Upper Egypt and the large cities like Cairo and Alexandria. Along with the Copts, there are other Christian communities; the Armenian Apostolic, Catholic, Maronite, Protestant, and Eastern Orthodox churches. The Coptic Church has deep historical roots that go back to early centuries of Christianity. Its Pope in Alexandria is considered the main head of the Christian community in Egypt which gives his church a special official recognition.

Despite the fact that Christians and Muslims coexisted in Egypt for long centuries, their relationship is far from uniformity. In the Twentieth century, one can distinguish between two eras of their relationship, with Sadat's (1970-1981) presidency as the turning point. The classical image of the relationship presents Christians and Muslims as the "two elements of the Egyptian nation." It has its roots in the famous symbol of the cross and the crescent and the historical slogan of "long live the crescent and the cross" which were raised during the Egyptian uprising against the British occupation in 1919. Yet, with the rise of political Islam, Islamic fundamentalism, sectarian violence, and the growing complexities of the domestic political map during Sadat's era, Christians felt increasingly marginalized which pushed the Coptic Church into a face-off with the state. As the Egypt turned towards Western powers during Sadat's era, Coptic immigrants' activism placed the Christian dilemma on the international political agenda.

[8] There are no accurate statistics of Christian population in Egypt.

Although the alignment between the Church and the State was regained during Mubarak's era, most of the challenges facing the Christian community in Egypt were never resolved and maintained their place on the political agenda between Egypt and the West. Thus, the internationalization of the Christian dilemma, the stagnation of state's reactions, and the violent confrontations turned the definition of the relationship between Christians and Muslims from "two national elements" to a "majority and minority."

Generally speaking, according to PEW Research, Egypt maintained high level of government restrictions on religion in 2011 and 2012. In terms of social hostility involving religion, it increased gradually from "high" in 2007 to "very high" in 2012. This indicates that the problem of discrimination is becoming more serious in recent years, especially after the Arab Spring. More specifically, Christian activists and international entities, concerned with religious discrimination, list various violations to religious freedom and equality that affects the Christian community. Christians also have lower political representation relative to their population, holding for example 10 seats in the 518 seat People's Assembly as of December 2010.

Discrimination in the labor market against Christians is a frequent item on the list and was mentioned by many observers. The International Religious Freedom Report 2012, issued by the American Bureau of Democracy, Human Rights and Labor, pinpointed that the government discriminates against Christians in public sector hiring and staff appointments in public universities. There were no Christians serving as presidents, or deans in Egypt's 17 public universities. Also, Christians are underrepresented in senior government positions, the police, the military, and the educational sector. In a hearing in the US Helsinki Commission, the issue of discrimination in the workplace was also ambiguously raised. Since 2007, the International Labor Organization has pointed out to the practice of religious discrimination in the labor market. These international notes on religious discrimination in the labor market find resonance among the Egyptian Christian activists and citizens. On the other hand, the Egyptian government denies these charges of religious discrimination in the labor market. For instance, after the ILO issued its statement on discrimination in Egypt in 2007, the Egyptian Minister of Labor Force and Immigration issued a statement in response to the ILO claims and argued that there is no religious discrimination against Christians in the labor market (Al Ahram, 2007). This denial was translated into governmental inaction towards the issue of discrimination in the labor market.

It is evident that the problem of discrimination against Christians in Egypt occupies an important position in both international and domestic debates. After the Egyptian revolution in 2011, the Christian activism against discrimination was best portrayed in the Maspero sit in that was crushed by the ruling Supreme Council of Armed Forces in October 2011. The incident led to international condemnation. The rise of political Islam and Islamic fundamentalism added to the seriousness of the issue. Internationally and domestically, calls for ending religious discrimination were intensified.

Given these circumstances, two crucial questions should be raised. First, how far do these tensions reflect on the labor market? If discrimination is widely practiced, there are no reasons to believe that labor market would be a neutral zone. The historical experiences of many countries teach us that labor market is an ideal area where discrimination could be exercised. Second, if discrimination is practiced in the labor market, what is its extent and forms? Despite demarking the labor market as a field for discrimination by national and international actors, there is vagueness in defining its forms and measuring its levels. This hinders basing the debate on solid empirical grounds and suggesting the relevant policies and measures. Accordingly, this paper aims at guiding one aspect of the discrimination debate on concrete empirical evidence.

Chapter 4

Data and Descriptive Statistics

4.1. Data

This study employs the Egypt's Labor Market Panel Survey of 2012 (ELPMS 2012), carried out by the Economic Research Forum (ERF) in cooperation with Egypt's Central Agency for Public Mobilization and Statistics (CAPMAS). The ELMPS is a nationally representative panel survey covering a wide set of topics. In its three previous versions, it did not contain information on the religion of the respondents. However, in ELMPS 2012, a recent question on the religion of the individuals was added in a section on marriage patterns. We exploit this question to track its respondents and draw the link between the religion of the participants and their labor market outcomes. Unfortunately, this question is applied only to all ever married individuals irrespective of sex and aged 18-39, which restricts our sample. Furthermore, for most of the study, we disregard those who are not in the labor force or unemployed which cuts our sample down by about half its size. Then, by focusing on wage earners, we would be left with a sample size of 4583 observations. Although the total size of the sample is convenient, the size of the sample for Christian wage earners is only 233 observations. This hinders the breaking down of the data to compare gender or sectoral differences and produce general conclusions accordingly. In addition, in our analysis, we distinguish between three samples; all wage earners, regular wage earners, and full time regular wage earners. Table (4.1.1) shows the detailed numbers of observations for the whole sample and its sub-samples.[9]

4.2. Descriptive Statistics

Table (4.2.2) shows that the two groups have similar gender composition. In terms of regional concentration, more than 60 percent of Christians live in Upper Egypt, where about 45 percent of Muslims live in Lower Egypt. The illiteracy rate among Christians is higher, but also they have larger portion of their population as university graduates. Although the average years of

[9] Weights are not considered for this table only, but are employed in the following tables.

schooling of both groups is the same, distribution of educational attainment is slightly more concentrated at the extremes for Christians.

In terms of labor force participation and employment rates, there are no mentionable differences between the two groups. However, within those who are employed, we could observe some differences in table (4.2.3). Christians, compared to Muslims, are lenient towards being employers at the expense of working in the wage employment sector. This could imply two things. They could be facing discrimination in access to wage employment which pushes them towards establishing their own businesses. Also, in a Weberian sense, Christians could be enjoying a stronger entrepreneurial attitude which directs them towards establishing their own businesses rather than being stuck in the relatively rigid wage employment. Moreover, within the wage employment sector, Christians are more likely to join the private sector at the expense of the government sector. Given that the informal sector of the economy is private, they have slightly higher representation in the informal sector than Muslims. Similar to the previous explanation, this higher tendency to join the private sector could be a result of discrimination in access to government employment, or personal preferences. With regard to job stability, the two groups show strong resemblance.

With respect to job benefits, table (4.2.4) pinpoints that Christian wage earners have a slight advantage in their hourly and monthly wages. For wage earners in the permanent and temporary jobs, Christians earn higher total quarterly wages. Furthermore, the quarterly wage is split into two components; basic and non-basic. The basic component is fixed, while the non-basic component could differ as it contains bonuses, incentives, profit share, supplementary wages, overtime and other payments. Both components are estimated for three months to sum up to the total quarterly wage. Christians enjoy higher basic wages, but lower non-basic wages. This observation presents a paradox that this paper would try to explain in later sections. In terms of non-pecuniary benefits, Muslims have a slight edge in their access to medical and social insurance, but this could be related to their larger concentration in the formal and government sector. Otherwise, the two groups receive similar non-pecuniary benefits.

In a nutshell, there are important regional and educational variations between the two groups. They have similar rates of employment and labor force participation, but different distribution within various employment statuses and economic sectors. These variations could contribute to

the different magnitude and direction of wage gaps between the two groups. The existence of these gaps in average wages suggest that positive and negative religious discrimination could be playing a role in determining wages. However, it seems that religion has less importance in affecting the non-pecuniary benefits.

Chapter 5

Religious Discrimination in Wages

In order to investigate the existence and extent of religious discrimination in wages, we employ three analytical tools. First, we run OLS regression for different variants of Mincer's (1974) equation with a dummy variable for religion. Second, we use propensity score matching on almost the same explanatory variables while considering Christians as the treatment group. Finally, we employ variants of Oaxaca-Blinder (1973) decomposition to break down the wage differentials into their endowment and residual components. We start by elaborating on these techniques, then discussing our main findings.

5.1. Methodology

5.1a. OLS Regression Analysis

Mincer's (1974) human capital earnings function is the basic tool for estimating the wages of individuals by regressing earnings on their human capital endowments represented by their years of schooling and experience. To avoid possible biases in estimation, Mincer's equation underwent several modifications to account for non-linearity of returns to education (Solon, 1987; Belman and Heywood, 1991; Park, 1994), selection bias (Heckman, 1974) and unobserved ability bias (Card, 1999). Accordingly, variants of Mincer's equation are employed in this section to track the significance of the religion of individuals in explaining the variation in their wages.

$$Y = \beta_0 + \beta_1 S + \beta_2 E + B_3 E^2 + e \qquad (5.1a.1)$$

$$Y = \beta_0 + \beta_1 S + \beta_2 E + B_3 E^2 + \beta_4 S^2 + \sum_{i=0}^{k} \alpha_i X_i + e \qquad (5.1a.2)$$

Equation (5.1a.1) represents linear Mincer equation with its most basic variables. Equation (5.1a.2) is the extended Mincer's equation that accounts for non-linearity of education and allows for adding additional controls. For this section, we use three different samples for estimating different variants of Mincer's equation. The first sample is for all wage earners in regular and

irregular jobs, both part time and full time employees. So, we exclude employers, self-employed and unpaid family & subsistence workers from our main working samples due to the unavailability of data on their incomes. Regular wage earners are defined as those who work in permanent or temporary jobs, while the irregular work is in seasonal and casual jobs. Also, we focus only on the earnings from the primary job. Full time employees are defined as those who work for at least 40 hours per week. The second sample is restricted on regular wage earners and the third focuses on full time regular wage earners. The main dependent variables are the log of hourly wages and the log of monthly wages for all samples. In addition, the data contains the detailed composition of wages for regular wage earners in terms of their basic, non-basic, and total wages for the last three months. Accordingly, we run additional regressions for the second and third samples employing each of the log of these three types of wages as dependent variables.[10] The main independent variable is religion of the individual which is captured through a dummy taking a positive value for Christians. The basic controls are years of schooling, years of experience, square of years of experience, square of years of schooling, gender, and region. To account for possible ability biases, we add controls for parental education to capture inherited ability. Moreover, we control for job characteristics by considering the skill level of the job, unionization, fulltime employment, job formality, sector of employment, and economic activity. We do not correct for bias due to selection into wage employment due to the lack of convenient instruments and the relatively small size of the sample.[11] For every sample, we apply and report six main model specifications for each type of wages. In all these specifications, our main concern is the significance of the religion dummy which identifies religion-based wage variations, i.e. religious discrimination.

5.1b. Propensity Score Matching

Matching has been commonly used as a complement to regression analysis in recent applied econometric literature (Angrist and Krueger, 1998; Brand and Halaby, 2006; Dehejia and Wahba, 2002; Heckman, 1997; Heckman et al. 1998; Morris, 2007). Unlike regression, its main

[10] As Card (1999) pointed out, employing different forms of wages as the dependent variables would alter the coefficients of the explanatory variables. Accordingly, checking the findings for different forms of wages would enhance the robustness of our findings.

[11] We experimented with some possible instruments like parental employment status or household size, but the results did not change significantly.

advantage is that it does not assume a specific functional form and so avoids bias due to misspecification of the model. It also does not assume that the impact of religion, belonging to the religious minority, is the same across the two groups, allowing for understanding group differences and creating counterfactual scenarios. Accordingly, we employ propensity score matching through matching the treated with the untreated, Christians with Muslims, in terms of a set of observable characteristics, and then comparing the wages of individuals from both groups with similar propensity scores. Propensity score is defined as the conditional probability of receiving a treatment given the pretreatment characteristics (Rosenbaum and Rubin, 1983). Once the scores are estimated, different methods are used to match the units from the treated and control groups according to them.

To match the treatment and control units, we employ three different techniques of matching; nearest neighbor, kernel, and stratification. Nearest neighbor matching matches every treated unit with a control of the nearest propensity score. Kernel matching works by matching all treated units with a weighted average of all controls with weights that are inversely proportional to the distance between the propensity score of the treated and controls. The last technique, stratification, starts by dividing the range of variation of the propensity score into intervals of same average propensity scores for treatment and controls. Then, within each interval, the differences in the average outcomes of the treated and controls is computed, before estimating the average treatment effect on the treated (ATT) as weighted average of the ATT of each block. Each of these methods represents a point on the tradeoff between quality and quantity of the matches. On one hand, in the nearest neighbor matching, all treated units find a match, but the quality of matching is relatively poor. Given a small sample size, this could be a good strategy to avoid loss of observations, but at the cost of the quality of estimation. On the other hand, the stratification method could discard treated units that have no control available in their block. Unlike nearest neighbor matching, some observations would be discarded to improve the quality of estimation. The Kernel matching represents a middle ground as it matches all the treated with all the controls while paying attention to the accuracy of matching. Despite the pros and cons of the different techniques, none is superior over the other and it is always recommended to apply them to the same data to check the robustness of the results (Becker and Ichino, 2002). Accordingly, we follow this recommendation in our analysis by applying the three techniques and compare their outcomes.

In our study, for the nearest neighbor matching, the two groups are matched on the same variables used in the last specification of the OLS analysis. However, for kernel and stratification techniques, they're matched on schooling, experience, gender, urbanization, mother's education, skill level of the job, job formality, and sector of employment.[12] The ATT is estimated using the three methods.[13] In addition, we do not impose the common support restriction due to the relatively small size of the samples and to avoid losing high quality matches on the boundaries of the common support (Lechner, 2001).

5.1c. Decomposition Analysis

As previously mentioned, despite the usefulness of OLS regression analysis in detecting possible discrimination, it assumes that the wage structure and the coefficients for human endowments and other observable characteristics are the same for both groups. If this assumption is violated, the OLS will lead us to inaccurate conclusions. Hence, a more detailed picture of wage differences between different groups in the labor market is captured by the more often used "decomposition techniques" in the discrimination literature. The most basic decomposition method was developed by Blinder (1973) and Oaxaca (1973). It divides the wage differential between two groups into an "explained" part due to group differences in productivity related observed characteristics, and another "unexplained" part. The latter is usually attributed to discrimination, but it also entails other unobserved factors. This could be summarized in the following equation.

$$R = E\,(Y_M) - E(Y_C) = \{E(X_M) - E(X_C)\}'\beta^* + \{E(X_M)'(\beta_M - \beta^*) + E(X_C)'(\beta^* - \beta_C)\} \qquad (5.1c.1)$$

In this equation, the differential (R) in log wages (Y) of Muslims (M) and Christians (C) is presented. X is a vector of predictors, and β stands for the vector of coefficients. The first part of the equation is the difference in the outcome due to differences in the predictors between the two groups. The second part is the "unexplained" component which is usually attributed to discrimination. This decomposition technique is called "twofold decomposition". A relevant debate to this method is the estimation of β^*. Oaxaca (1973) suggested using the coefficients of the discriminated group. However, Cotton (1988) pointed out that an undervaluation of a group

[12] This change is aimed at satisfying the balancing property for the propensity scores.

[13] The standard errors for these two methods are computed using bootstrap replications.

comes with overvaluation of the other. So, his suggestion is to employ the weighted average of the coefficients of both groups. Neumark (1988) proposed using a pooled regression of both groups for estimating β^*. Jann (2008) highlighted that the pooled approach could lead to overestimation of the explained part which should be tackled by adding a group indicator in the pooled model as an additional covariate. We follow this last approach in our estimation of the twofold decomposition.

Another way to analyze the wage differential is the threefold decomposition. As shown in equation (5.1c.2), this technique breaks down the differential to three parts; endowments effect, the coefficients effect, and an interaction effect for the simultaneous existence of the previous two effects between the two groups (Jones and Kelly, 1984; Daymont and Andrisani, 1984; Jann, 2008).

$$R = E\,(Y_M) - E(Y_C) = \{E(X_M) - E(X_C)\}'\beta_C + E\,(X_C)'(\beta_M - \beta_C) + \{E(X_M) - E(X_C)\}'(\beta_M - \beta_C) \quad (5.1c.2)$$

This equation is expressed from the view point of the Christian group. For instance, the first component predicts the change in the mean earnings of Christians if they had the same predictors' level of their Muslim counterparts. The second part captures the expected change in Christians' mean earnings if they had the same coefficients of Muslim, i.e. received the same returns to their endowments. Unlike the twofold decomposition, the main advantage of this method is that it doesn't entail an assumption on the value of β. We employ this method as our main reference for decomposition analysis to avoid the effects of the assumptions on β. However, we report the results of the twofold decomposition and comment on them whenever they're more insightful.

Similar to our previous analyses, we apply the decomposition techniques on three samples; all wage earners, regular wage earners, and full time regular wage earners. Both monthly and hourly wages are studied for the three samples. Besides that, differences in quarterly basic, non-basic, and total wages are investigated for the second and third samples. In addition, two model specifications are used for decomposition; simple and extended. For the extended form, the set of

predictors[14] includes schooling, experience, parental education, region, gender, sector of employment, formality of employment, economic activity, unionization, and skill level of the job.[15] For the basic form, only years of schooling, experience, gender, region, formality, sector of employment and unionization are used as explanatory variables.

5.2. Main Findings

Taking the OLS analysis as a starting point, tables (5.2.1) to (5.2.12) show that the coefficient of religion is insignificant in almost all the models of hourly and monthly wages for the three samples. The sign of the coefficient is positive which indicates that even if the difference were to be significant, it would be in favor of Christians.[16] This indicates no religious discrimination in both monthly and hourly wages. The story is a bit more different for the detailed wages. Although religion does not explain variations in total quarterly wages, for the second and third samples it has significant and opposite impacts on the basic and non-basic components of quarterly wages. In the case of regular wage earners, the religion dummy has a significant positive impact ranging from 24 to 16 percent on basic wages, and a negative impact in-between 77 and 70 percent on non-basic wages. Similarly, for the regular full time wage earners, being Christian increases the basic wages by amount ranging from 25 to 15 percent, and decreases the non-basic wages by amount in-between 90 to 83 percent. However, given these opposite directions and the relative sizes of both components, the final outcome on the total quarterly wages is insignificant. So, the OLS analysis pinpoints that religion does not affect monthly, hourly, and total quarterly wages. On the other hand, Christians enjoy a positive advantage in basic quarterly wages and face severe disadvantage in non-basic quarterly wages.

The results from matching, in table (5.2.13), are relatively close to the ones from OLS analysis, despite the existence of some differences. Firstly, the ATT obtained from nearest neighbor matching indicates no significant impact of religion on hourly and monthly wages for the three

[14] We also add full time employment and stability of employment as controls in some samples to align the findings with those obtained from OLS and matching.

[15] An important concern in decomposition technique is that the decomposition results depend on the choice of omitted group on the usage of dummies for categorical variables (Jones, 1983; Oaxaca and Ransom, 1999, Nielsen, 2000; Gardeazabal and Ugidos, 2004; Yun, 2005b; Jann, 2008). As we employ a set of categorical predictors, we correct for this problem in our estimation using the deviation contrast transform.

[16] In general, being experienced educated male worker in the formal sector working in a skill-requiring job in the cities is likely to increase both monthly wages and hourly wages.

samples. As exceptions, the ATT is significantly positive for monthly wages of the first sample and hourly wages for the third sample. Interestingly, the ATT for non-basic and total quarterly wages are insignificant. Yet, there is a positive differential in favor of Christians in basic wages of about 19 and 25 percent for the second and the third samples, respectively. Secondly, Kernel matching indicates positive discrimination in monthly and hourly wages for the first sample, and hourly wages for the third sample. Basic wages are higher for Christians by 15 and 18 percent for the second and third samples, respectively. Non-basic wages are lower for the Christians by 52 and 76 percent for the same two samples. Still, religion does not affect the total quarterly wages. Thirdly, stratification matching shows no significant ATT on monthly, hourly, basic and total quarterly wages for the relevant samples. Yet, it asserts the negative ATT for non-basic wages which accounts for 59 and 83 percent for the second and third samples. Despite being close, these results seem hard to reconcile. However, there is convergence between at least two techniques out of the three on the ATT of a certain wage. So, as a generalization, there is no significant ATT in terms of monthly and hourly wages for the three samples with monthly wages for the first sample and hourly wages for the third sample as exceptions. For basic and non-basic wages, there is positive edge for Christians in the first and negative edge in the second, but the magnitudes are slightly lower than those obtained from the OLS estimations.

The decomposition of wage differentials between the two groups provide clearer picture on their sources. The tables from (5.2.14) to (5.2.17) indicate that there is positive wage differential in favor Christians for both monthly and hourly wages across all samples. This ranges from 16 to 20 percent for monthly wages and 14 to 22 percent in hourly wages. At first glance, the simple threefold decomposition indicates that most of the differential is driven by differences in returns to endowments. However, once we control for parental education, economic activity, and skill level of the job, at least half of the variation could be explained in terms of endowments rather than their returns. Endowments' contribution ranges from 11 to 16 percent for monthly wages and from 7 to 12 percent for hourly wages versus about 7 to 9 percent for coefficients' contribution to both monthly and hourly wage differentials. This indicates that the wage differentials are created by variations in endowments which come in favor of Christians, but also without ignoring the existence of positive discrimination in their favor.

Regarding the results of decomposing the detailed wages presented in the tables from (5.2.18) to (5.2.21), there are significant wage differentials in basic, non-basic, and total quarterly wages for the second and third samples. For the second sample, the differential is about 25, 61, and 17 percent for the three forms of wages, respectively. For the third sample, they're slightly higher to be 28, 73, and 20 percent, respectively. Starting from the total wages, endowments explain the larger portion of the difference for both samples. In contrast, the differential in basic and non-basic wages is mostly determined by differences in returns to endowments. The coefficient component of basic wages is significant and positive for both samples which reassures the positive discrimination in favor of Christians. The decomposition of non-basic wage differentials gives more subtle results. The threefold decomposition indicates almost equal and significant contributions by both endowments and their returns to the differential. However, the results from the twofold decomposition indicate that the differential is mostly derived by the unexplained component rather than endowments. In fact, the explained component has similar sign to that of other forms of wages indicating the persistence of the endowments' advantage. So, non-basic wage differential is mostly caused by discrimination. As mentioned previously, the results of the twofold decomposition could be affected by the assumptions on β. So, one could claim that at least half of the variation in non-basic wages between the two groups could not be explained by differences in endowments.

5.3. Discussion

The evidence from OLS and matching suggests that there is no impact of religion on monthly, hourly, and total quarterly wages for the different samples, with few exceptions. However, Christians are more likely to receive higher basic wages and lower non-basic wages. The size of the non-basic wage component is small relative to the basic one, but the impact of religion on basic wages is almost the third of that on the non-basic.

The decomposition analysis presents a more insightful picture. Wage differentials in favor of Christians persist for hourly, monthly, and total quarterly wages. These differentials are largely explained by Christians' advantage in endowments rather than discrimination. Yet, positive discrimination in favor of Christians still contributes to the difference. This positive discrimination component could be due to unobserved factors that are not captured by the model. For example, Christians could prefer working in Christian owned businesses. If these businesses

are more successful than their Muslim counterparts, then they would pay higher wages for their employees. Accordingly, Christians would receive higher wages than Muslims even in similar occupations and activities due to the relatively better performance of their businesses. Although this is hard to prove using the data in hand, there are reasons to suggest this explanation. First, Christian businessmen has shown great success with their businesses contributing to important sectors in the Egyptian economy. The Sawiris family in Egypt, the richest, with their businesses in construction and telecommunication is the best, though not the only, example. Also, we elaborated in the descriptive statistics section that Christians have higher tendency than Muslims to be employers than wage employees which could also hint on their relative positive historical experience as entrepreneurs. Second, the majority of the Christian population either lives or comes from Upper Egypt. This region is known for its strong family ties that are close to the notion of tribal ties. This indicates that a large proportion of Christian businesses could be family based which implies that Christian employees are more likely to work in Christian businesses. Third, being a minority that suffers discrimination would intensify the communal sense among Christians which could direct them to pool their resources to empower themselves. This last factor predicts their high cooperation and business clustering relative to the Muslim majority.[17] So, it is possible that this combination of religious ties, business clustering, and relative business success is what enhances Christian incomes.

With regard to basic and non-basic wages, wage differentials are also significant, but they are mostly explained by differences in returns to endowments. Christians seem to enjoy positive discrimination that fuels at least half of the gap in basic wages. Although their advantage in endowments is persistent for non-basic wages, the extent of negative discrimination is very high that it takes over this advantage. Having said that, it has to be reasserted that the discrimination component might be overestimated due to the model's failure to capture any unobserved characteristics.

These findings impose a puzzle. Religion does not seem to have a significant effect on any of the final forms of wages; hourly, monthly, and total quarterly. However, it plays a role in determining the composition of these wages; basic and non-basic. Christians have a positive edge

[17] A good comparable situation is the growth of Islamists' businesses in Egypt. Due to their political activism, they faced different forms of discrimination that pushed them to establish their own business communities. Their clustering, success, and their "almost minority" situation resembled the Christian situation.

in basic wages, but a negative one in non-basic wages. Also, the differentials in basic and non-basic wages are largely driven by the unexplained component. This necessitates asking why religion plays a role in determining the composition, rather than the sum, of these wages and why its impact on basic and non-basic components goes in opposite directions.

As it is previously mentioned, this unexplained component could entail discrimination or any unobserved characteristics that are not captured by our model. We argue that there are strong reasons to believe in the latter. The explanation starts by differentiating between two types of jobs; one that pays zero non-basic wages, and the other pays positive non-basic wages. By investigating the characteristics of these two sets of jobs, we find important differences. The jobs that pay zero non-basic wages pays significantly higher basic wages and vice versa. The difference in mean basic wages between zero and positive non-basic wage receivers is around L.E. 1000. In other words, there is a tradeoff between basic and non-basic wages. Table (5.3.1) clarifies this tradeoff. The Christians' positive wage advantage is due to their higher concentration in the zero non-basic wage sector which also rewards with higher basic wages. In numbers, 77 percent of Christians work in zero non-basic wage jobs versus 71 percent of Muslims. So, for instance, when we restrict the second sample to positive non-basic wage sector, we find that the religion coefficient in the OLS analysis is insignificant. This indicates that the seemingly Christians' disadvantage in non-basic wages is more likely to be driven by higher concentration in certain jobs rather than actual discrimination in payment.[18] The same reasoning applies to their advantage in basic wages which explains the opposing impacts of religion on both components.

The question that follows is why Christians are more concentrated in the zero non-basic wage sector than the positively paying non-basic wage sector. The two tracks are different in their main sector of employment, occupations, and economic activities. While the first is mostly private (69%), the latter is mostly government sector (64%). Professional, service & sales, and plant & machine operation jobs represent half the occupations with zero non-basic wages, but also with high basic wages. On the other hand, professionals, technicians and associate professionals

[18] When we restrict the sample for positive non-basic wage earners and take basic wages and non-basic wages as independent variables, we find that the religion coefficient is insignificant, but its sign is negative for non-basic wages and positive for basic wages. Focusing on the sign of the coefficient rather than significance, one could claim, generally speaking, Christians prefer jobs with the structure of higher share of basic component and lower share of non-basic wages.

represent 60 percent of the positive non-basic wages sector. Accordingly, it follows that education (34%), manufacturing (15%) and public administration (16%) are the top activities of the positive non-basic wage sector, while manufacturing (20%), whole sale and retail (13%), and education (12%) represent around half of the zero non-basic wage sector. In addition, the average years of schooling is higher in the positive non-basic wage sector than its counterpart, while the average years of experience is less. This is a reflection of the types of activities and occupations that dominates the two sectors.

Given these characteristics, the concentration difference could be driven by two main mechanisms; inter-sectoral and intra-sectoral. In other words, religion of individuals could sort them into government or private sector which affects their non-basic wages, or it could allocate them into the two categories of non-basic wages within private and government sectors. To investigate both mechanisms, we'll start our analysis by the intra-sectoral allocation of labor. By looking at the averages, without any controls, Christians' concentration in the zero non-basic wage sector is 6 % and 10% higher than their Muslim counterparts in the private sector and government sector, respectively. If controls for education, experience, region, parental background and gender were introduced, being a Christian reduces the likelihood of receiving positive non-basic wages by 16 percent in the government sector and 9 percent in the private sector. However, once controls for occupation and economic activity are added, the religion coefficient is insignificant.[19] This indicates that the intra-sectoral distribution of the receivers of zero and positive non-basic wages is better explained by their occupations and economic activities than religion. Similarly, if government and private sectors are pooled and human capital variables were controlled, Christians are less likely to receive positive non-basic wages by 14 percent. Even if controls for economic activity, occupation, and interacting religion with sector of employment were added, the significance of religion persists. Yet, including sector of employment into the model eliminates the significance of religion. Being in the government sector increases the probability of receiving positive non-basic wages by 13 percent. This pinpoints to the fact that affecting the probability of getting into the government sector would affect the likelihood of receiving positive non-basic wages. Accordingly, a probit model is run to investigate this channel. We found that being a Christian significantly decreases the likelihood of

[19] These results are obtained using probit models in table (5.3.2).

joining the government sector by about 7 percent, controlling for the main human capital characteristics and family background. This indicates that the distribution of the two groups between government and private sectors is likely to be an influential channel which shapes the receipt of non-basic wages and the level of basic wages.

Although OLS, matching, and decomposition results highlight opposite directions of religious discrimination in basic wages and non-basic wages, the previous analysis indicates that the story could be less relevant to wage discrimination. The probability of receiving zero non-basic wages and high basic wages, or positive non-basic wages and low basic wages is determined by the sector of employment. Also, within each sector, it is determined by the occupation and economic activity of the job. Given that Muslims and Christians have different levels of concentration in various employment sectors, occupations, and economic activities, their likelihood of receiving the two wage structures is different.[20] The different sectoral distribution between the two groups could be a matter of personal preferences, or discrimination, or any other unobserved factors like personal networks. For instance, Christians could prefer to work in the private sector due to its relative flexibility and chances of growth by clustering their businesses. Also, their high concentration in private sector could be due to discrimination in access to employment in the government sector. These unobserved factors could elaborate the unexplained component in the decomposition results. Accordingly, further investigation of the factors that determines selection of the two groups into these specific sectors, occupations, and economic activities could enrich the analysis. However, given the lack of convenient instruments, we couldn't conduct these further corrections for selection in different models.[21] As a bottom line, the wage differentials in basic and non-basic wages should be considered in their context and within the whole picture. Having done that, it is hard to claim the existence of religious discrimination in both. In other words, if discrimination is to play a role, it is in the channeling of the two groups into different tracks of employment with different wage composition rather than issuing different paychecks for the same work. So, even if the different sectoral choices were due to discrimination, the results

[20] However, it is to be noted that controls for occupation, economic activity, sector of employment, formality, and skill level of the job still fail to capture the difference in job characteristics and alter the significance of religion or discrimination when included during OLS, Matching, and decomposition analyses.

[21] We could not find an instrument that predicts selection without being correlated with wages. Experimenting with some household factors and parental characteristics did not produce any mentionable results.

show that there are ways to escape from this discrimination and end up having the same overall earnings.

To sum up, there is no evidence of religious discrimination against Christians in terms of wages. On the contrary, they enjoy a positive edge that could be explained by their advantage in endowments without ignoring their higher returns as well. In addition, Christians and Muslims have different dominant forms of wage composition which is highly shaped by the two groups' variation in sector of employment, occupations, and economic activities.

Chapter 6

Alternative Venues for Discrimination

The wage analysis highlighted the inexistence of discrimination against Christians. Yet, the evidence on wages does not fully negate any claims of discrimination in the labor market. Discriminatory practices could take place in offering different levels of non-pecuniary benefits to the two groups, or subjecting individuals to different treatment and work conditions in the workplace. Furthermore, discrimination could hinder access to employment at the first place, or act as a channeling factor of the two groups into different paths in the labor market. If these were to be taken into consideration, discrimination in wages will not give the full picture. Accordingly, this section provides preliminary investigation of other possible forms of discrimination in non-pecuniary benefits, working conditions, and access to employment.

6.1. Non-Pecuniary Benefits

Although wages represent the main return to labor, the additional non-pecuniary benefits received by workers affect their total welfare. An ideal job would pay higher wages as well as a generous package of social and medical insurance to protect workers from hazardous events. Furthermore, the ability to have paid vacations and sick leaves are all determinants of the quality of the job. In Esping-Andersen's (1990) terms, these factors would contribute to the workers' ability to "decommodify" themselves. Given the importance of the non-pecuniary component of job benefits, discrimination in its receipt is no less relevant to the level of welfare of individuals than wages. So, to complement our analysis, we examine the possibility of religious discrimination in non-pecuniary benefits.

There are four main benefits that constitute our study of non-pecuniary benefits; social insurance, medical insurance, paid vacations, and sick leaves. Two main methods are applied to investigate the impact of worker's religion on receiving these benefits. First, we construct a score for non-pecuniary benefits that takes the values from 0 to 4, where 0 receives no benefits at all and 4 receives all the four benefits. The incidence of receiving each benefit is represented by a dummy

that takes the value of one for positive receipt of the benefit in the primary job. The non-pecuniary benefits score is the summation of the four dummies. Then, we regress the score on two model specifications using OLS analysis. The first specification controls for the basic human capital and demographic characteristics. The second specification contains additional variables for parental background and job characteristics. We include the religion dummy in both specifications to capture its sign and significance. On one hand, this method is basic and simple to give an initial idea on differences in receiving non-pecuniary benefits between the two groups. On the other hand, it treats all the non-pecuniary benefits equally which undermines the fact that some are more important than others. For instance, receiving social and medical insurance is more important to the welfare of individuals and their families than getting paid vacations. To account for this, we use a second method to look at each benefit separately with the incidence of the benefit as the independent variable. Probit models, with the two previous specifications, are employed for each benefit. Again, the dummy for religion is our main variable of concern.

The results from the OLS analysis presented in the tables from (6.1.1) to (6.1.3) show no impact of religion on the total non-pecuniary benefits received by the worker. Yet, the sign of the religion coefficient is negative which indicates that if the results were to be significant, Christians would receive less non-pecuniary benefits than their Muslim counterparts. Moreover, the model indicates that non-pecuniary benefits are higher for females which might be due to their tendency to receive more maternal benefits. Also, they increase with more schooling and experience. Unionization, sector formality, and working in the government sector contribute significantly to the receipt of non-pecuniary benefits as well. Similarly, the findings from the probit models on the separate benefits are along the same lines. Although the coefficient of religion has a negative sign, it is not significant in any of the models for the different benefits.

In a nutshell, despite the fact that Christians might be receiving less non-pecuniary benefits, the difference is insignificant. This negates the existence of discrimination in non-pecuniary benefits.

6.2. Level of Job Satisfaction and Working Conditions

The preceding analysis of both pecuniary and non-pecuniary benefits provides an objective point of view on discrimination in the market. However, discrimination is also a subjective phenomenon that relates to individual's satisfaction with the working conditions and returns to

labor. If the worker faces discrimination at work, it is likely to be reflected on her levels of job satisfaction. Accordingly, as a complementary to our analysis of job benefits and work environment, we compare the levels of satisfaction of both groups for a set of work and labor market characteristics. It is to be noted that the questions were asked without having religious discrimination on the minds of the respondents. In one way, this could lead to overestimation of the levels of satisfaction as respondents might not exert effort in recalling incidents of discrimination, but also has the advantage of capturing the average experience and ignoring the extremes.

Respondents were asked about their overall level of job satisfaction and their levels of satisfaction for job security, earnings, type of work, number of working hours, work schedule, working conditions, distance to job, and matching between job and qualifications. In any of these factors, discrimination can have an evident role. For example, the minority worker could be assigned worse working schedule, or be forced to work in bad conditions or far regions. Also, discrimination in the labor market could push the minority worker to work in less preferred jobs or ones that do not match her qualifications to avoid unemployment. In that sense, the level of personal satisfaction would reflect these possible situations.

Generally speaking, table (6.2.1) highlights that Christians are more satisfied with their jobs. Around 83 percent of Christians are satisfied with their jobs versus 71 percent for Muslims. This advantage persists even after controlling for other relevant factors as Christians' satisfaction is higher by about 37 percent as shown in table (6.2.2). For the detailed job characteristics and working conditions, Christians show higher levels of satisfaction in all of them. More explicitly, they have higher levels of satisfaction in job security (6%), earnings (5%), type of work (12%), number of working hours (5%), work schedule (3%), working environment (6%), distance to job (8%), and matching between job and qualifications (6%).[22] Although the differences are not large, it negates the idea that Christians are less satisfied with their labor conditions.

In a nutshell, there are no major differences in the levels of job satisfaction between the two groups. This is a continuation of the previous results on wages and non-pecuniary benefits. Altogether, they undermine the claim that religious discrimination in treatment occurs in the workplace.

[22] These values are the difference between summation of "rather satisfied" and "fully satisfied" for both groups.

6.3. Access to Employment

One reason why it might be hard to observe discrimination in wages and non-pecuniary benefits is that discrimination could have occurred one step ahead. In other words, discrimination could take place in access to employment rather than in treatment of the employees. In fact, discrimination on gates of employment could be easier in practice as the benefits of employment are governed by stricter rules especially in the formal sector. Simply, rejecting a job applicant requires less justification than paying him differently. We identify four main labor market checkpoints where discrimination could take place; labor force participation, employment, wage employment, and government sector employment. Then, we trace the evidence for religious discrimination in access to any of these tracks.

If discrimination at the gates of employment is widely practiced in the market, this could lead to four main observations. Firstly, labor force participation rates for the minority group might decline due to the increasing number of discouraged workers. Secondly, the unemployment rate would be higher for the minority group. Thirdly, the minority would try to create their own businesses instead of knocking the closed doors. Thus, we would observe shifting of the minority from wage employment towards being employers or self-employed. This could undermine the impact of discrimination on labor force participation and employment rates. Fourthly, even if the minority managed to access wage employment on equal grounds, discrimination could channel them into specific sectors that are less controlled by the majority. So, access to wage employment by itself would give us a deceptive idea about what happens in the market and the practice of discrimination. Furthermore, the treatment in terms of wages and other benefits could be different within each sector which would make access to different tracks of employment not informative enough on discrimination. This presentation emphasizes that any understanding of the incidence and extent of discrimination in the labor market could not be well accomplished without tracing the individual from the moment she becomes a member in the working population till receiving her monthly checks and benefits. Discrimination could take place at all stages of decision making in the labor market which compose the pieces of the puzzle.

To assess discrimination at these different stages, we use a set of probit models. The dependent variables are dummies that take positive values for not being in the labor force, being unemployed member of the labor force, being employed member of the working population,

being a wage employee, and being wage employee in the government sector. The main controls are demographic and human capital characteristics. Also, a special attention is paid to parental background by including parents' education, their employment status, and father's occupation. The main rationale behind this is the large role of the family in facilitating access to employment and influencing labor market decisions.

The results, summarized in tables (6.3.1) and (6.3.2), of our analysis indicate that religion does not affect the individual's chance in getting into the labor force or being employed. However, it has an influence on access to wage employment and government sector. Being a Christian reduces the probability of getting into the wage employment significantly by about 9 percent. This reflects on Christians' higher probability of being employers or work in the unpaid family and subsistence work. They are more likely to be employers by 4 percent and unpaid and subsistence workers by 4.5 percent. Furthermore, within the wage employment, Christians are less likely to work in the government sector by about 7 percent which leads to their higher concentration in the private sector.

Given these findings, one could see that religion is irrelevant to labor force participation or employment. Instead of affecting access to general employment, religion channels individuals to certain tracks in the labor market. More explicitly, it directs Christians away from employment in the wage sector in general and its governmental jobs in particular. It is hard to tell whether this observation is a consequence of discrimination or personal and communal preferences. Still, religious discrimination in access to these tracks poses itself as a relevant explanation.

6.4. Summary

Similar to wages, there is no evidence of religious discrimination in non-pecuniary benefits and working conditions. Also, religion does not play a role in influencing the decision to join the labor force or the probability of employment. On the contrary, religion impacts access to wage employment, especially its governmental sector. As Christians are less likely to join wage employment and government sector, religious discrimination is suggested as a possible explanation for that observation. Also, if we consider the attractiveness of government jobs due to their better social safety nets and working conditions, discrimination could be a serious concern.

Chapter 7

Conclusions for the Ongoing Debate

The goal of this study was to provide pioneering empirical evidence on religious discrimination in the labor market using various techniques of statistical analysis. Discrimination in the labor market could take place in different forms; wages, non-pecuniary benefits, job conditions, and access to employment. Our investigation suggests no religious discrimination in wages, non-pecuniary benefits, and job conditions in the Egyptian labor market. In these aspects, Muslim and Christian workers are on the same grounds. In addition, the religion of individuals does not affect their probability of joining the labor force or finding employment. Yet, religion plays a role in channeling both groups in different tracks in the labor market. Christians are less likely to join the wage employment compared to Muslims. Instead, they participate more in the labor market as employers and unpaid family & subsistence workers. Within the wage employment, Christians are also less likely to work in the government sector compared to Muslims with the same observed characteristics. The difference in labor market paths taken by the two groups proposes religious discrimination as a potential explanation.

These results enlighten the debate on religious discrimination in the labor market. It defines areas where discrimination may be taking place. The claim that Christians have less accessibility to the government sector is supported by our analysis. However, the proposition of discrimination in the workplace is negated. The results show that Christians and Muslims receive equal levels of wages, medical and social insurance, and even vacations and sick leaves. Christians are also more satisfied with their working conditions than their Muslim counterparts. Combined, these factors represent most of the possible important aspects of the relation between the employee and the workplace. The last main form of discrimination that was raised is the existence of "glass ceiling" against Christians in the government sector. Due to data limitations and the small size of the sample, we could not investigate this point which remains an open possibility of discrimination. Finally, the main policy recommendation of this study is to set clear cut rules in government employment to limit the potential of religious discrimination.

Appendix

Table (4.2.1): Sample Size

	Muslims	Christians	Total
Total Sample	11611	683	12294
Not in the labor force	5150	310	5461
Unemployed[23]	556	35	591
Working	5567	338	5905
Wage Earner	4350	233	4583
Regular Wage Earners	3194	173	3367
Full Time Regular Wage Earners	2477	128	2605

Table (4.2.2): General Descriptive Statistics

	Muslims	**Christians**	**Total**
	%	**%**	**%**
Gender[24]			
Females	59.7	60.4	59.8
Males	40.3	39.6	40.2
Region			
Greater Cairo	15.8	16.1	15.8
Alex, Suez Canal	7.0	9.9	7.2
Urban Lower	10.0	5.7	9.7
Urban Upper	6.2	16.0	6.8
Rural Lower	35.3	5.4	33.7
Rural Upper	25.7	47.0	26.8
Level of Educational Attainment			
Illiterate	18.9	24.5	19.2
Reads & Writes	3.4	1.2	3.3
Less than Intermediate	17.0	9.7	16.6
Intermediate	39.7	40.5	39.7
Above Intermediate	3.6	3.5	3.6
University	16.5	20.1	16.7

[23] Standard unemployment definition such that search is required and the individual is missing if out of the labor force.

[24] The male/female ratio estimated here represents only the portion of the sample of all ever married individuals aged 18-39. This is different from the male/female ratio of the whole population which is split almost equal to one.

Post Graduate	0.9	0.5	0.9
Employment			
Labor Force Participation Rate	53.8	51.8	53.7
Employment Rate	89.4	91.5	89.5

Table (4.2.3): Descriptive Statistics of Employment and Job Characteristics

	Muslims	Christians	Total
	%	%	%
Employment Status			
Wage Employee	65.1	59.8	64.8
Employer	7.0	12.6	7.3
Self-Employed	8.5	9.2	8.5
Unpaid Family Worker	19.4	18.5	19.4
Job Formality			
Informal	57.3	61.9	57.6
Formal	42.7	38.1	42.4
Economic Sector			
Government	19.9	16.8	19.7
Public	3.4	1.6	3.3
Private	75.0	79.9	75.2
Investment	1.3	1.6	1.3
International	0.0	0.0	0.0
Other	0.4	0.2	0.3
Job Stability			
Permanent	73.9	75.9	74.0
Temporary	7.6	8.2	7.7
Seasonal	0.5	0.8	0.6
Casual	17.9	15.1	17.8
Incidence Rates of Additional Job Characteristics			
Work Social Insurance	39.5	34.7	39.2
Medical Insurance	33.7	29.0	33.5
Sick Leave	45.3	45.1	45.3
Paid Leave	46.4	47.3	46.4

Table (4.2.4): Descriptive Statistics of Wages and Human Capital Characteristics

	Muslims		Christians		Total	
	Mean	Std. Dev.	Mean	Std. Dev.	Mean	Std. Dev.
Hourly Wages (L.E)	6.22	15.92	7.02	6.49	6.26	15.6
Monthly Wages (L.E)	1111.7	1247.54	1360.9	1340.16	1123.15	1252.89
Total Quarterly Wages (L.E)	3483.56	4126.86	4443.04	4383.3	3527.68	4143.26
Basic Quarterly Wages (L.E)	3082.84	3989.19	4233.43	4397.56	3135.75	4015.48
Non-Basic Quarterly Wages (L.E)	400.72	1304.82	209.6	671.39	391.93	1283.14
Years of Schooling	9.3	4.9	9.2	5.4	9.3	5
Years of Experience	12.3	6.9	13.1	7	12.4	6.9

Table (5.2.1): OLS Analysis of Monthly Wages for All Wage Earners

	(1)	(2)	(3)	(4)	(5)	(6)
Religion	0.148*	0.102	0.0982	0.0923	0.0809	0.0736
	(2.25)	(1.65)	(1.63)	(1.54)	(1.42)	(1.31)
Years of Schooling	0.0314***	-0.0331***	-0.0229**	-0.0190*	-0.0308***	-0.0230**
	(10.06)	(-3.65)	(-2.59)	(-2.20)	(-3.57)	(-2.67)
Work Experience	0.0536***	0.0346***	0.0376***	0.0295***	0.0393***	0.0299***
	(7.36)	(5.06)	(5.57)	(4.58)	(6.01)	(4.80)
Square Experience	-0.00132***	-0.000845***	-0.000886***	-0.000697**	-0.000872***	-0.000646**
	(-5.10)	(-3.37)	(-3.58)	(-2.93)	(-3.70)	(-2.84)
Square Years of Schooling		0.00369***	0.00271***	0.00191***	0.00345***	0.00240***
		(7.29)	(5.61)	(3.90)	(7.20)	(4.91)
Male		0.369***	0.403***	0.354***	0.241***	0.214***
		(10.94)	(12.48)	(11.00)	(6.70)	(6.23)
Greater Cairo		0.0102	-0.0234	-0.0181	-0.0450	-0.0224
		(0.19)	(-0.46)	(-0.38)	(-0.91)	(-0.47)
Urban Lower		-0.223***	-0.222***	-0.189***	-0.204***	-0.156***
		(-4.61)	(-4.62)	(-4.21)	(-4.32)	(-3.51)
Urban Upper		-0.216***	-0.208***	-0.124**	-0.150**	-0.0659
		(-4.58)	(-4.40)	(-2.71)	(-3.23)	(-1.45)
Rural Lower		-0.276***	-0.244***	-0.173***	-0.198***	-0.128**
		(-6.50)	(-5.67)	(-4.30)	(-4.66)	(-3.20)
Rural Upper		-0.211***	-0.175***	-0.0493	-0.116*	-0.00360
		(-4.62)	(-3.78)	(-1.08)	(-2.52)	(-0.08)
Skill 1				0.142***		0.107***
				(6.26)		(4.47)
Skill 2				0.103***		0.0932***
				(3.71)		(3.45)
Job Formality				-0.00385		0.0676*
				(-0.13)		(1.97)
Unionization				0.152***		0.180***
				(4.71)		(5.69)
Full Time				0.249***		0.150***
				(8.31)		(5.18)
Government Sector					0.0393	-0.0374
					(0.80)	(-0.72)
_cons	6.011***	6.224***	6.120***	5.959***	6.067***	6.081***
	(97.77)	(79.53)	(76.98)	(71.74)	(72.19)	(68.47)
Father's Education			Yes	Yes	Yes	Yes
Mother's Education			Yes	Yes	Yes	Yes
Job Stability				Yes		Yes
Economic Activity					Yes	Yes
N	4521	4521	4521	4521	4521	4521
R^2	0.058	0.127	0.151	0.204	0.192	0.236

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.2.2): OLS Analysis of Hourly Wages for All Wage Earners

	(1)	(2)	(3)	(4)	(5)	(6)
Religion	0.123*	0.0738	0.0705	0.0802	0.0660	0.0672
	(2.37)	(1.49)	(1.46)	(1.67)	(1.41)	(1.49)
Years of Schooling	0.0304***	-0.0406***	-0.0338***	-0.0213**	-0.0322***	-0.0226***
	(11.80)	(-5.96)	(-5.08)	(-3.19)	(-4.86)	(-3.42)
Work Experience	0.0368***	0.0338***	0.0359***	0.0272***	0.0358***	0.0276***
	(6.75)	(6.32)	(6.79)	(5.30)	(6.79)	(5.50)
Square Experience	-0.000949***	-0.000909***	-0.000935***	-0.000709***	-0.000916***	-0.000675***
	(-4.98)	(-4.75)	(-4.95)	(-3.86)	(-4.96)	(-3.81)
Square Years of Schooling		0.00400***	0.00329***	0.00211***	0.00337***	0.00240***
		(9.80)	(8.48)	(5.24)	(8.43)	(5.96)
Male		0.113***	0.139***	0.210***	0.0673*	0.103***
		(3.91)	(4.99)	(7.35)	(2.13)	(3.43)
Greater Cairo		0.0196	-0.0115	-0.000971	-0.0125	-0.00794
		(0.46)	(-0.29)	(-0.03)	(-0.32)	(-0.21)
Urban Lower		-0.141***	-0.143***	-0.139***	-0.121**	-0.110**
		(-3.55)	(-3.63)	(-3.73)	(-3.08)	(-2.95)
Urban Upper		-0.148***	-0.141***	-0.155***	-0.114**	-0.109**
		(-4.01)	(-3.79)	(-4.31)	(-3.07)	(-3.03)
Rural Lower		-0.184***	-0.163***	-0.148***	-0.143***	-0.118***
		(-5.65)	(-4.91)	(-4.66)	(-4.25)	(-3.68)
Rural Upper		-0.0776*	-0.0513	-0.0618	-0.0445	-0.0302
		(-2.22)	(-1.44)	(-1.76)	(-1.23)	(-0.86)
Skill 1				0.100***		0.0708***
				(5.66)		(3.76)
Skill 2				0.0925***		0.0856***
				(3.97)		(3.74)
Job Formality				0.0275		0.0778**
				(1.07)		(2.70)
Unionization				0.131***		0.158***
				(4.61)		(5.57)
Full Time				-0.252***		-0.329***
				(-8.11)		(-10.09)
Government Sector					0.0441	-0.0258
					(1.07)	(-0.62)
_cons	1.146***	1.404***	1.326***	1.416***	1.337***	1.529***
	(23.42)	(23.53)	(21.62)	(21.16)	(20.01)	(20.94)
Father's Education			Yes	Yes	Yes	Yes
Mother's Education			Yes	Yes	Yes	Yes
Job Stability				Yes		Yes
Economic Activity					Yes	Yes
N	4521	4521	4521	4521	4521	4521
R^2	0.068	0.122	0.144	0.216	0.175	0.251

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.2.3): OLS Analysis of Monthly Wages for Regular Wage Earners

	(1)	(2)	(3)	(4)	(5)	(6)
Religion	0.148	0.121	0.118	0.112	0.0838	0.0842
	(1.92)	(1.73)	(1.72)	(1.68)	(1.30)	(1.32)
Years of Schooling	0.0373***	-0.0298**	-0.0222*	-0.0183	-0.0248*	-0.0193*
	(10.11)	(-2.93)	(-2.24)	(-1.89)	(-2.54)	(-1.97)
Work Experience	0.0664***	0.0424***	0.0449***	0.0403***	0.0470***	0.0406***
	(8.47)	(5.75)	(6.17)	(5.81)	(6.74)	(6.10)
Square Experience	-0.00170***	-0.00107***	-0.00108***	-0.000985***	-0.00106***	-0.000928***
	(-5.84)	(-3.79)	(-3.88)	(-3.69)	(-4.11)	(-3.70)
Square Years of Schooling		0.00353***	0.00270***	0.00198***	0.00335***	0.00240***
		(6.37)	(5.13)	(3.77)	(6.46)	(4.49)
Male		0.373***	0.405***	0.356***	0.223***	0.212***
		(11.11)	(12.63)	(10.89)	(6.28)	(6.16)
Greater Cairo		0.0449	0.00393	0.00838	-0.00831	0.00670
		(0.88)	(0.08)	(0.18)	(-0.18)	(0.15)
Urban Lower		-0.216***	-0.218***	-0.186***	-0.181***	-0.148**
		(-4.47)	(-4.51)	(-4.07)	(-3.82)	(-3.27)
Urban Upper		-0.291***	-0.287***	-0.239***	-0.197***	-0.167***
		(-5.83)	(-5.78)	(-4.91)	(-3.99)	(-3.49)
Rural Lower		-0.299***	-0.267***	-0.208***	-0.220***	-0.170***
		(-7.08)	(-6.17)	(-5.09)	(-5.17)	(-4.19)
Rural Upper		-0.256***	-0.218***	-0.137**	-0.145**	-0.0852
		(-5.27)	(-4.42)	(-2.83)	(-3.01)	(-1.82)
Skill 1				0.121***		0.0906***
				(5.17)		(3.79)
Skill 2				0.102***		0.0923***
				(3.66)		(3.41)
Job Formality				0.0122		0.0900**
				(0.41)		(2.70)
Unionization				0.180***		0.209***
				(5.48)		(6.58)
Full Time				0.247***		0.152***
				(8.21)		(5.20)
Government Sector					0.00713	-0.0299
					(0.16)	(-0.71)
_cons	5.878***	6.186***	6.089***	5.836***	6.142***	6.045***
	(85.57)	(77.15)	(74.60)	(69.71)	(66.45)	(64.91)
Father's Education			Yes	Yes	Yes	Yes
Mother's Education			Yes	Yes	Yes	Yes
Job Stability				Yes		Yes
Economic Activity					Yes	Yes
N	3327	3327	3327	3327	3327	3327
R^2	0.087	0.186	0.213	0.258	0.265	0.301

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.2.4): OLS Analysis of Hourly Wages for Regular Wage Earners

	(1)	(2)	(3)	(4)	(5)	(6)
Religion	0.124	0.0984	0.0948	0.102	0.0879	0.0816
	(1.95)	(1.63)	(1.61)	(1.82)	(1.54)	(1.54)
Years of Schooling	0.0461***	-0.0386***	-0.0339***	-0.0268**	-0.0341***	-0.0277**
	(13.77)	(-4.32)	(-3.90)	(-3.03)	(-3.93)	(-3.18)
Work Experience	0.0403***	0.0349***	0.0368***	0.0313***	0.0371***	0.0314***
	(6.36)	(5.58)	(5.94)	(5.24)	(6.00)	(5.35)
Square Experience	-0.00101***	-0.000901***	-0.000895***	-0.000754***	-0.000891***	-0.000705**
	(-4.21)	(-3.75)	(-3.79)	(-3.31)	(-3.87)	(-3.22)
Square Years of Schooling		0.00434***	0.00367***	0.00241***	0.00373***	0.00275***
		(8.85)	(7.95)	(5.04)	(7.96)	(5.72)
Male		0.107***	0.135***	0.233***	0.0703*	0.114***
		(3.55)	(4.72)	(7.93)	(2.14)	(3.60)
Greater Cairo		0.0330	-0.00533	0.00259	-0.00160	0.00261
		(0.72)	(-0.12)	(0.06)	(-0.04)	(0.06)
Urban Lower		-0.127**	-0.129**	-0.133**	-0.106*	-0.0990*
		(-2.93)	(-3.01)	(-3.23)	(-2.47)	(-2.40)
Urban Upper		-0.197***	-0.189***	-0.208***	-0.151***	-0.150***
		(-4.74)	(-4.55)	(-5.09)	(-3.58)	(-3.66)
Rural Lower		-0.178***	-0.151***	-0.148***	-0.132***	-0.120***
		(-5.04)	(-4.14)	(-4.23)	(-3.58)	(-3.38)
Rural Upper		-0.119**	-0.0853*	-0.0924*	-0.0570	-0.0505
		(-2.92)	(-2.04)	(-2.24)	(-1.35)	(-1.24)
Skill 1				0.0960***		0.0646**
				(4.61)		(2.97)
Skill 2				0.0938***		0.0848***
				(3.71)		(3.43)
Job Formality				0.0513		0.101***
				(1.90)		(3.32)
Unionization				0.152***		0.177***
				(5.12)		(5.99)
Full Time				-0.254***		-0.328***
				(-8.10)		(-10.02)
Government Sector					0.0403	-0.0248
					(1.04)	(-0.66)
_cons	0.907***	1.296***	1.210***	1.321***	1.231***	1.503***
	(15.56)	(18.75)	(17.26)	(17.86)	(14.68)	(17.92)
Father's Education			Yes	Yes	Yes	Yes
Mother's Education			Yes	Yes	Yes	Yes
Job Stability				Yes		Yes
Economic Activity					Yes	Yes
N	3327	3327	3327	3327	3327	3327
R^2	0.107	0.158	0.184	0.240	0.212	0.280

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.2.5): OLS Analysis of Monthly Wages for Full Time Regular Wage Earners

	(1)	(2)	(3)	(4)	(5)	(6)
Religion	0.149	0.0833	0.0781	0.0724	0.0594	0.0558
	(1.62)	(1.00)	(0.97)	(0.94)	(0.77)	(0.75)
Years of Schooling	0.0441***	-0.0435***	-0.0343**	-0.0273*	-0.0336**	-0.0253*
	(10.01)	(-3.91)	(-3.12)	(-2.49)	(-3.01)	(-2.23)
Work Experience	0.0494***	0.0358***	0.0361***	0.0333***	0.0381***	0.0348***
	(5.80)	(4.32)	(4.45)	(4.23)	(4.77)	(4.52)
Square Experience	-0.00124***	-0.000895**	-0.000843**	-0.000794**	-0.000846**	-0.000780**
	(-3.94)	(-2.84)	(-2.74)	(-2.64)	(-2.88)	(-2.74)
Square Years of Schooling		0.00458***	0.00363***	0.00255***	0.00384***	0.00272***
		(7.31)	(6.02)	(4.17)	(6.26)	(4.29)
Male		0.333***	0.376***	0.395***	0.242***	0.252***
		(7.38)	(8.86)	(9.42)	(5.31)	(5.67)
Greater Cairo		0.0126	-0.0309	-0.0328	-0.0315	-0.0286
		(0.24)	(-0.61)	(-0.67)	(-0.63)	(-0.59)
Urban Lower		-0.198***	-0.195***	-0.183***	-0.165**	-0.145**
		(-3.88)	(-3.82)	(-3.71)	(-3.25)	(-2.97)
Urban Upper		-0.335***	-0.331***	-0.304***	-0.258***	-0.235***
		(-5.94)	(-5.86)	(-5.51)	(-4.57)	(-4.28)
Rural Lower		-0.289***	-0.262***	-0.231***	-0.233***	-0.199***
		(-6.57)	(-5.75)	(-5.35)	(-5.04)	(-4.55)
Rural Upper		-0.247***	-0.210***	-0.156**	-0.165**	-0.115*
		(-4.53)	(-3.83)	(-2.92)	(-3.10)	(-2.24)
Skill 1				0.152***		0.116***
				(5.75)		(4.18)
Skill 2				0.0995**		0.0877**
				(3.09)		(2.81)
Job Formality				0.0300		0.0863*
				(0.94)		(2.42)
Unionization				0.189***		0.207***
				(4.80)		(5.40)
Government Sector					0.0163	-0.0251
					(0.33)	(-0.52)
_cons	6.000***	6.325***	6.232***	6.120***	6.246***	6.228***
	(77.54)	(72.84)	(69.90)	(69.79)	(62.01)	(63.70)
Father's Education			Yes	Yes	Yes	Yes
Mother's Education			Yes	Yes	Yes	Yes
Job Stability				Yes		Yes
Economic Activity					Yes	Yes
N	2577	2577	2577	2577	2577	2577
R^2	0.088	0.176	0.202	0.236	0.240	0.272

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.2.6): OLS Analysis of Hourly Wages for Full Time Regular Wage Earners

	(1)	(2)	(3)	(4)	(5)	(6)
Religion	0.163*	0.103	0.0957	0.0944	0.0867	0.0830
	(2.14)	(1.49)	(1.44)	(1.47)	(1.36)	(1.35)
Years of Schooling	0.0451***	-0.0467***	-0.0396***	-0.0348***	-0.0388***	-0.0316***
	(11.42)	(-4.86)	(-4.24)	(-3.71)	(-4.20)	(-3.33)
Work Experience	0.0329***	0.0298***	0.0302***	0.0267***	0.0308***	0.0276***
	(4.69)	(4.22)	(4.42)	(4.04)	(4.47)	(4.17)
Square Experience	-0.000790**	-0.000733**	-0.000687**	-0.000629*	-0.000691**	-0.000625**
	(-3.07)	(-2.79)	(-2.70)	(-2.54)	(-2.78)	(-2.59)
Square Years of Schooling		0.00477***	0.00395***	0.00289***	0.00391***	0.00286***
		(8.54)	(7.56)	(5.42)	(7.50)	(5.30)
Male		0.141***	0.180***	0.210***	0.119**	0.130***
		(3.73)	(5.11)	(6.12)	(3.17)	(3.55)
Greater Cairo		0.00385	-0.0361	-0.0374	-0.0327	-0.0310
		(0.08)	(-0.81)	(-0.87)	(-0.74)	(-0.73)
Urban Lower		-0.152***	-0.149***	-0.136**	-0.125**	-0.106*
		(-3.52)	(-3.44)	(-3.25)	(-2.89)	(-2.54)
Urban Upper		-0.258***	-0.250***	-0.231***	-0.203***	-0.184***
		(-5.49)	(-5.31)	(-5.03)	(-4.31)	(-3.99)
Rural Lower		-0.232***	-0.205***	-0.176***	-0.191***	-0.161***
		(-6.20)	(-5.33)	(-4.78)	(-4.91)	(-4.28)
Rural Upper		-0.179***	-0.141**	-0.0933*	-0.117**	-0.0706
		(-3.93)	(-3.04)	(-2.08)	(-2.59)	(-1.60)
Skill 1				0.129***		0.0975***
				(5.85)		(4.16)
Skill 2				0.104***		0.0939***
				(3.96)		(3.66)
Job Formality				0.0981***		0.116***
				(3.67)		(3.78)
Unionization				0.168***		0.175***
				(5.02)		(5.18)
Government Sector					0.0455	-0.00540
					(1.07)	(-0.13)
					(3.96)	(-1.42)
_cons	0.924***	1.319***	1.227***	1.111***	1.207***	1.195***
	(13.70)	(17.92)	(16.07)	(14.88)	(14.04)	(14.52)
Father's Education			Yes	Yes	Yes	Yes
Mother's Education			Yes	Yes	Yes	Yes
Job Stability				Yes		Yes
Economic Activity					Yes	Yes
N	2577	2577	2577	2577	2577	2577
R^2	0.112	0.187	0.217	0.264	0.254	0.292

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.2.7): OLS Analysis of Basic Wages for Regular Wage Earners

	(1)	(2)	(3)	(4)	(5)	(6)
Religion	0.235**	0.215**	0.214**	0.199**	0.157*	0.159*
	(2.85)	(2.96)	(3.01)	(2.87)	(2.42)	(2.45)
Years of Schooling	0.0235***	-0.0425***	-0.0326**	-0.0281*	-0.0328**	-0.0285*
	(5.51)	(-3.66)	(-2.83)	(-2.54)	(-2.92)	(-2.55)
Work Experience	0.0677***	0.0362***	0.0384***	0.0372***	0.0416***	0.0377***
	(8.07)	(4.58)	(4.92)	(4.86)	(5.56)	(5.12)
Square Experience	-0.00180***	-0.000980**	-0.000978**	-0.000954**	-0.000948***	-0.000872**
	(-5.64)	(-3.22)	(-3.28)	(-3.25)	(-3.37)	(-3.16)
Square Years of Schooling		0.00351***	0.00262***	0.00236***	0.00343***	0.00283***
		(5.53)	(4.21)	(3.84)	(5.64)	(4.52)
Male		0.478***	0.512***	0.427***	0.270***	0.255***
		(11.82)	(13.43)	(10.30)	(6.40)	(6.02)
Greater Cairo		0.106	0.0597	0.0589	0.0429	0.0559
		(1.95)	(1.18)	(1.19)	(0.87)	(1.15)
Urban Lower		-0.257***	-0.258***	-0.234***	-0.209***	-0.185***
		(-5.19)	(-5.28)	(-4.90)	(-4.33)	(-3.90)
Urban Upper		-0.365***	-0.364***	-0.308***	-0.244***	-0.220***
		(-7.01)	(-7.11)	(-6.05)	(-4.82)	(-4.39)
Rural Lower		-0.316***	-0.288***	-0.239***	-0.224***	-0.187***
		(-7.35)	(-6.58)	(-5.55)	(-5.17)	(-4.36)
Rural Upper		-0.283***	-0.251***	-0.173***	-0.153**	-0.107*
		(-5.59)	(-4.94)	(-3.35)	(-3.07)	(-2.16)
Skill 1				0.101***		0.0633*
				(3.95)		(2.44)
Skill 2				0.0568		0.0503
				(1.85)		(1.70)
Job Formality				-0.102***		0.0119
				(-3.30)		(0.34)
Unionization				0.122**		0.152***
				(3.28)		(4.28)
Full Time				0.277***		0.165***
				(8.19)		(5.00)
Government Sector					-0.100*	-0.105*
					(-2.17)	(-2.30)
_cons	6.987***	7.263***	7.174***	6.942***	7.306***	7.186***
	(92.61)	(86.79)	(85.13)	(78.62)	(77.35)	(73.81)
Father's Education			Yes	Yes	Yes	Yes
Mother's Education			Yes	Yes	Yes	Yes
Job Stability				Yes		Yes
Economic Activity					Yes	Yes
N	3327	3327	3327	3327	3327	3327
R^2	0.057	0.187	0.214	0.248	0.281	0.298

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.2.8): OLS Analysis of Basic Wages for Full Time Regular Wage Earners

	(1)	(2)	(3)	(4)	(5)	(6)
Religion	0.249*	0.183*	0.185*	0.174*	0.147	0.146
	(2.57)	(2.13)	(2.19)	(2.17)	(1.90)	(1.93)
Years of Schooling	0.0321***	-0.0565***	-0.0438***	-0.0352**	-0.0392**	-0.0317*
	(6.32)	(-4.62)	(-3.62)	(-2.93)	(-3.23)	(-2.57)
Work Experience	0.0515***	0.0316***	0.0319***	0.0312***	0.0347***	0.0326***
	(5.47)	(3.47)	(3.59)	(3.55)	(4.01)	(3.84)
Square Experience	-0.00137***	-0.000862*	-0.000813*	-0.000795*	-0.000785*	-0.000745*
	(-3.86)	(-2.51)	(-2.43)	(-2.40)	(-2.48)	(-2.40)
Square Years of Schooling		0.00465***	0.00354***	0.00272***	0.00376***	0.00288***
		(6.80)	(5.35)	(4.00)	(5.64)	(4.11)
Male		0.455***	0.503***	0.502***	0.313***	0.323***
		(8.03)	(9.65)	(9.44)	(5.66)	(5.88)
Greater Cairo		0.0712	0.0222	0.0211	0.0154	0.0214
		(1.22)	(0.41)	(0.40)	(0.29)	(0.41)
Urban Lower		-0.214***	-0.212***	-0.209***	-0.171***	-0.159**
		(-4.03)	(-4.05)	(-4.00)	(-3.30)	(-3.08)
Urban Upper		-0.384***	-0.383***	-0.357***	-0.286***	-0.270***
		(-6.52)	(-6.60)	(-6.19)	(-4.96)	(-4.74)
Rural Lower		-0.292***	-0.267***	-0.246***	-0.223***	-0.200***
		(-6.41)	(-5.75)	(-5.36)	(-4.73)	(-4.29)
Rural Upper		-0.250***	-0.218***	-0.174**	-0.152**	-0.117*
		(-4.37)	(-3.85)	(-3.03)	(-2.76)	(-2.13)
Skill 1				0.123***		0.0789**
				(4.28)		(2.64)
Skill 2				0.0824*		0.0729*
				(2.35)		(2.15)
Job Formality				-0.0829*		0.00692
				(-2.50)		(0.19)
Unionization				0.157***		0.176***
				(3.57)		(4.13)
Government Sector					-0.102	-0.117*
					(-1.92)	(-2.23)
_cons	7.098***	7.360***	7.269***	7.201***	7.347***	7.329***
	(81.75)	(80.00)	(77.92)	(77.01)	(70.59)	(71.22)
Father's Education			Yes	Yes	Yes	Yes
Mother's Education			Yes	Yes	Yes	Yes
Job Stability				Yes		Yes
Economic Activity					Yes	Yes
N	2577	2577	2577	2577	2577	2577
R^2	0.055	0.168	0.199	0.217	0.246	0.260

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.2.9): OLS Analysis of Non-Basic Wages for Regular Wage Earners

	(1)	(2)	(3)	(4)	(5)	(6)
Religion	-0.770**	-0.922***	-0.929***	-0.812***	-0.695**	-0.706**
	(-3.29)	(-4.09)	(-4.10)	(-3.64)	(-3.10)	(-3.22)
Years of Schooling	0.166***	0.146**	0.114*	0.102*	0.0999*	0.105*
	(10.41)	(2.95)	(2.28)	(2.15)	(2.00)	(2.18)
Work Experience	-0.0269	0.0384	0.0400	0.00150	0.0329	0.00499
	(-0.80)	(1.11)	(1.18)	(0.05)	(0.99)	(0.15)
Square Experience	0.00176	0.000105	0.0000555	0.000807	-0.000244	0.000480
	(1.38)	(0.08)	(0.04)	(0.68)	(-0.20)	(0.41)
Square Years of Schooling		0.000591	0.00165	-0.00292	-0.000816	-0.00404
		(0.21)	(0.57)	(-1.04)	(-0.28)	(-1.39)
Male		-0.994***	-1.024***	-0.597**	-0.358	-0.337
		(-4.98)	(-5.26)	(-2.83)	(-1.59)	(-1.48)
Greater Cairo		-0.932***	-0.880***	-0.837***	-0.808**	-0.815***
		(-3.62)	(-3.48)	(-3.46)	(-3.20)	(-3.38)
Urban Lower		-0.153	-0.187	-0.0976	-0.305	-0.187
		(-0.59)	(-0.73)	(-0.40)	(-1.21)	(-0.77)
Urban Upper		0.431	0.451	0.386	0.119	0.213
		(1.62)	(1.69)	(1.49)	(0.46)	(0.83)
Rural Lower		-0.284	-0.283	-0.186	-0.453*	-0.297
		(-1.29)	(-1.26)	(-0.87)	(-2.05)	(-1.40)
Rural Upper		-0.0126	0.0206	0.0340	-0.230	-0.0567
		(-0.05)	(0.08)	(0.14)	(-0.94)	(-0.24)
Skill 1				0.377**		0.461***
				(3.28)		(3.80)
Skill 2				0.222		0.177
				(1.56)		(1.24)
Job Formality				1.427***		1.165***
				(12.47)		(8.29)
Unionization				0.581***		0.579***
				(3.42)		(3.48)
Full Time				-0.502**		-0.287
				(-3.19)		(-1.79)
Government Sector					0.999***	0.568*
					(4.46)	(2.50)
_cons	-0.0808	0.645	0.617	0.441	-0.381	-0.0125
	(-0.27)	(1.84)	(1.74)	(1.23)	(-0.99)	(-0.03)
Father's Education			Yes	Yes	Yes	Yes
Mother's Education			Yes	Yes	Yes	Yes
Job Stability				Yes		Yes
Economic Activity					Yes	Yes
N	3327	3327	3327	3327	3327	3327
R^2	0.048	0.080	0.095	0.162	0.146	0.184

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.2.10): OLS Analysis of Non-Basic Wages for Full Time Regular Wage Earners

	(1)	(2)	(3)	(4)	(5)	(6)
Religion	-0.901***	-0.933***	-0.986***	-0.923***	-0.816***	-0.831***
	(-3.74)	(-4.01)	(-4.15)	(-3.87)	(-3.43)	(-3.54)
Years of Schooling	0.134***	0.165**	0.121*	0.0985*	0.0865	0.0907
	(7.34)	(3.27)	(2.40)	(2.00)	(1.67)	(1.79)
Work Experience	-0.0462	-0.00125	-0.00314	-0.0279	-0.00659	-0.0221
	(-1.18)	(-0.03)	(-0.08)	(-0.75)	(-0.18)	(-0.61)
Square Experience	0.00229	0.00121	0.00133	0.00170	0.000954	0.00130
	(1.57)	(0.87)	(0.97)	(1.30)	(0.72)	(1.00)
Square Years of Schooling		-0.00180	-0.0000135	-0.00237	-0.000156	-0.00253
		(-0.63)	(-0.00)	(-0.79)	(-0.05)	(-0.81)
Male		-0.960***	-1.024***	-0.816**	-0.595*	-0.622*
		(-3.46)	(-3.81)	(-3.00)	(-1.98)	(-2.08)
Greater Cairo		-0.856**	-0.809**	-0.824**	-0.754**	-0.795**
		(-3.10)	(-2.99)	(-3.20)	(-2.80)	(-3.08)
Urban Lower		-0.219	-0.221	-0.115	-0.299	-0.185
		(-0.77)	(-0.78)	(-0.42)	(-1.07)	(-0.69)
Urban Upper		0.232	0.255	0.276	0.0472	0.147
		(0.78)	(0.86)	(0.95)	(0.16)	(0.51)
Rural Lower		-0.332	-0.301	-0.190	-0.406	-0.273
		(-1.39)	(-1.23)	(-0.81)	(-1.67)	(-1.16)
Rural Upper		-0.237	-0.161	-0.0560	-0.307	-0.113
		(-0.90)	(-0.60)	(-0.22)	(-1.14)	(-0.44)
Skill 1				0.375**		0.456***
				(2.93)		(3.33)
Skill 2				0.0518		0.00000748
				(0.32)		(0.00)
Job Formality				1.362***		1.138***
				(11.00)		(7.66)
Unionization				0.331		0.374
				(1.67)		(1.92)
Government Sector					1.014***	0.644*
					(4.07)	(2.52)
_cons	0.231	0.954*	0.943*	0.424	0.198	0.223
	(0.67)	(2.43)	(2.43)	(1.12)	(0.46)	(0.54)
Father's Education			Yes	Yes	Yes	Yes
Mother's Education			Yes	Yes	Yes	Yes
Job Stability				Yes		Yes
Economic Activity					Yes	Yes
N	2577	2577	2577	2577	2577	2577
R^2	0.036	0.059	0.078	0.133	0.121	0.156

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.2.11): OLS Analysis of Total Quarterly Wages for Regular Wage Earners

	(1)	(2)	(3)	(4)	(5)	(6)
Religion	0.148	0.121	0.118	0.112	0.0839	0.0842
	(1.91)	(1.73)	(1.72)	(1.67)	(1.30)	(1.32)
Years of Schooling	0.0373***	-0.0298**	-0.0222*	-0.0183	-0.0248*	-0.0193*
	(10.11)	(-2.93)	(-2.24)	(-1.89)	(-2.54)	(-1.96)
Work Experience	0.0665***	0.0424***	0.0450***	0.0404***	0.0471***	0.0407***
	(8.47)	(5.75)	(6.17)	(5.82)	(6.74)	(6.10)
Square Experience	-0.00170***	-0.00107***	-0.00108***	-0.000987***	-0.00107***	-0.000930***
	(-5.84)	(-3.79)	(-3.89)	(-3.69)	(-4.11)	(-3.70)
Square Years of Schooling		0.00353***	0.00270***	0.00198***	0.00336***	0.00240***
		(6.37)	(5.13)	(3.77)	(6.46)	(4.49)
Male		0.374***	0.406***	0.357***	0.224***	0.213***
		(11.11)	(12.63)	(10.89)	(6.28)	(6.16)
Greater Cairo		0.0450	0.00396	0.00841	-0.00829	0.00674
		(0.88)	(0.08)	(0.18)	(-0.18)	(0.15)
Urban Lower		-0.217***	-0.218***	-0.186***	-0.181***	-0.148**
		(-4.47)	(-4.51)	(-4.07)	(-3.82)	(-3.27)
Urban Upper		-0.292***	-0.288***	-0.239***	-0.197***	-0.167***
		(-5.82)	(-5.78)	(-4.91)	(-3.99)	(-3.49)
Rural Lower		-0.299***	-0.267***	-0.208***	-0.220***	-0.170***
		(-7.08)	(-6.17)	(-5.09)	(-5.17)	(-4.19)
Rural Upper		-0.256***	-0.218***	-0.137**	-0.145**	-0.0852
		(-5.27)	(-4.41)	(-2.83)	(-3.01)	(-1.82)
Skill 1				0.121***		0.0907***
				(5.17)		(3.79)
Skill 2				0.102***		0.0924***
				(3.66)		(3.41)
Job Formality				0.0122		0.0901**
				(0.41)		(2.70)
Unionization				0.180***		0.209***
				(5.48)		(6.58)
Full Time				0.247***		0.152***
				(8.21)		(5.20)
Government Sector					0.00725	-0.0298
					(0.16)	(-0.71)
_cons	6.975***	7.283***	7.186***	6.933***	7.239***	7.142***
	(101.43)	(90.72)	(87.93)	(82.71)	(78.24)	(76.61)
Father's Education			Yes	Yes	Yes	Yes
Mother's Education			Yes	Yes	Yes	Yes
Job Stability				Yes		Yes
Economic Activity					Yes	Yes
N	3327	3327	3327	3327	3327	3327
R^2	0.087	0.186	0.213	0.258	0.265	0.301

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.2.12): OLS Analysis of Total Quarterly Wages for Full Time Regular Wage Earners

	(1)	(2)	(3)	(4)	(5)	(6)
Religion	0.149	0.0833	0.0781	0.0724	0.0594	0.0558
	(1.62)	(1.00)	(0.97)	(0.94)	(0.77)	(0.75)
Years of Schooling	0.0441***	-0.0435***	-0.0343**	-0.0273*	-0.0336**	-0.0253*
	(10.01)	(-3.91)	(-3.12)	(-2.49)	(-3.01)	(-2.23)
Work Experience	0.0494***	0.0359***	0.0361***	0.0334***	0.0382***	0.0349***
	(5.80)	(4.32)	(4.46)	(4.23)	(4.77)	(4.53)
Square Experience	-0.00124***	-0.000896**	-0.000844**	-0.000795**	-0.000847**	-0.000781**
	(-3.94)	(-2.85)	(-2.74)	(-2.64)	(-2.88)	(-2.74)
Square Years of Schooling		0.00458***	0.00364***	0.00255***	0.00384***	0.00273***
		(7.31)	(6.02)	(4.17)	(6.26)	(4.29)
Male		0.333***	0.377***	0.395***	0.242***	0.252***
		(7.39)	(8.86)	(9.42)	(5.31)	(5.67)
Greater Cairo		0.0126	-0.0309	-0.0329	-0.0315	-0.0287
		(0.24)	(-0.61)	(-0.68)	(-0.63)	(-0.59)
Urban Lower		-0.198***	-0.195***	-0.183***	-0.165**	-0.146**
		(-3.88)	(-3.82)	(-3.71)	(-3.25)	(-2.97)
Urban Upper		-0.336***	-0.331***	-0.305***	-0.258***	-0.235***
		(-5.94)	(-5.87)	(-5.51)	(-4.57)	(-4.28)
Rural Lower		-0.289***	-0.262***	-0.231***	-0.233***	-0.199***
		(-6.57)	(-5.75)	(-5.35)	(-5.04)	(-4.55)
Rural Upper		-0.247***	-0.210***	-0.156**	-0.165**	-0.115*
		(-4.53)	(-3.83)	(-2.92)	(-3.11)	(-2.24)
			(0.47)	(0.49)	(0.34)	(0.43)
Skill 1				0.152***		0.116***
				(5.75)		(4.18)
Skill 2				0.0995**		0.0877**
				(3.09)		(2.81)
Job Formality				0.0301		0.0864*
				(0.95)		(2.42)
Unionization				0.189***		0.207***
				(4.80)		(5.40)
Government Sector					0.0164	-0.0251
					(0.33)	(-0.52)
_cons	7.097***	7.422***	7.329***	7.217***	7.343***	7.325***
	(91.64)	(85.39)	(82.13)	(82.23)	(72.84)	(74.86)
Father's Education			Yes	Yes	Yes	Yes
Mother's Education			Yes	Yes	Yes	Yes
Job Stability				Yes		Yes
Economic Activity					Yes	Yes
N	2577	2577	2577	2577	2577	2577
R^2	0.088	0.176	0.202	0.236	0.240	0.272

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.2.13): The ATT using Matching

	(1) All Wage Earners	(2) Regular Wage Earners	(3) Full Time Regular Wage Earners
Nearest Neighbor			
Monthly	0.183*	0.120	0.170
	(2.31)	(1.40)	(1.82)
Hourly	0.0690	0.0457	0.203*
	(1.02)	(0.54)	(2.47)
Basic		0.192*	0.255*
		(2.09)	(2.52)
Non-Basic		-0.356	-0.398
		(-0.91)	(-0.95)
Total		0.120	0.170
		(1.40)	(1.82)
N	4521	3327	2577
Kernel			
Monthly	0.0985**	0.0831	0.0924
	(2.71)	(1.55)	(1.66)
Hourly	0.0843*	0.0801	0.113*
	(1.96)	(1.60)	(2.06)
Basic Wages		0.147**	0.177**
		(2.71)	(2.99)
Non-Basic Wages		-0.521*	-0.756**
		(-2.20)	(-3.26)
Total Quarterly Wages		0.0832	0.0925
		(1.21)	(1.36)
N0	4350	3194	2477
N1	233	173	128
Stratification			
Monthly	0.0469	0.0295	0.00233
	(0.92)	(0.47)	(0.04)
Hourly	0.0336	0.0207	0.0346
	(1.16)	(0.43)	(0.70)
Basic Wages		0.0993	0.0910
		(1.62)	(1.34)
Non-Basic Wages		-0.593*	-0.829**
		(-2.51)	(-3.24)
Total Quarterly Wages		0.0295	0.00234
		(0.63)	(0.04)
N0	4295	3159	2451
N1	228	170	128

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.2.14): Simple Threefold Decomposition – Monthly Wages

	(1) All Wage Earners	(2) Regular Wage Earners	(3) Full Time Regular Wage Earners
Muslims	6.760***	6.799***	6.867***
	(517.07)	(474.22)	(425.08)
Christians	6.920***	6.972***	7.065***
	(105.07)	(86.50)	(75.67)
Difference	-0.160*	-0.173*	-0.199*
	(-2.39)	(-2.11)	(-2.10)
Endowments	-0.0201	-0.0451	-0.105
	(-0.32)	(-0.61)	(-1.26)
Coefficients	-0.110	-0.117	-0.105
	(-1.92)	(-1.79)	(-1.36)
Interaction	-0.0297	-0.0107	0.0116
	(-0.58)	(-0.19)	(0.19)

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.2.15): Extended Threefold Decomposition – Monthly Wages

	(1) All Wage Earners	(2) Regular Wage Earners	(3) Full Time Regular Wage Earners
Muslims	6.760***	6.799***	6.867***
	(517.70)	(471.62)	(424.88)
Christians	6.920***	6.972***	7.065***
	(106.94)	(88.87)	(74.48)
Difference	-0.160*	-0.173*	-0.199*
	(-2.43)	(-2.17)	(-2.06)
Endowments	-0.110	-0.103	-0.155
	(-1.34)	(-1.03)	(-1.47)
Coefficients	-0.0756	-0.0882	-0.0671
	(-1.38)	(-1.43)	(-0.88)
Interaction	0.0257	0.0178	0.0233
	(0.35)	(0.21)	(0.27)

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.2.16): Simple Threefold Decomposition – Hourly Wages

	(1) All Wage Earners	(2) Regular Wage Earners	(3) Full Time Regular Wage Earners
Muslims	1.744***	1.740***	1.684***
	(167.00)	(135.20)	(118.74)
Christians	1.879***	1.901***	1.899***
	(36.30)	(28.96)	(24.11)
Difference	-0.135*	-0.161*	-0.215**
	(-2.56)	(-2.40)	(-2.69)
Endowments	-0.00836	-0.0222	-0.0694
	(-0.17)	(-0.37)	(-0.99)
Coefficients	-0.0844	-0.111*	-0.132*
	(-1.84)	(-1.98)	(-2.00)
Interaction	-0.0426	-0.0276	-0.0131
	(-1.05)	(-0.57)	(-0.25)

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.2.17): Extended Threefold Decomposition – Hourly Wages

	(1) All Wage Earners	(2) Regular Wage Earners	(3) Full Time Regular Wage Earners
Muslims	1.744***	1.740***	1.684***
	(165.87)	(134.43)	(118.41)
Christians	1.879***	1.901***	1.899***
	(36.00)	(29.39)	(23.92)
Difference	-0.135*	-0.161*	-0.215**
	(-2.54)	(-2.43)	(-2.67)
Endowments	-0.0660	-0.0608	-0.115
	(-0.98)	(-0.74)	(-1.29)
Coefficients	-0.0689	-0.0835	-0.0908
	(-1.54)	(-1.59)	(-1.42)
Interaction	-0.000462	-0.0162	-0.00942
	(-0.01)	(-0.23)	(-0.13)

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.2.18): Simple Threefold Decomposition – Detailed All Regular Wage Earners

	(1) Basic Wages	(2) Non-Basic Wages	(3) Total Wages
Muslims	7.744***	1.841***	7.897***
	(494.02)	(27.97)	(550.31)
Christians	7.990***	1.230***	8.070***
	(94.37)	(5.37)	(100.05)
Difference	-0.246**	0.611*	-0.173*
	(-2.86)	(2.56)	(-2.11)
Endowments	-0.102	0.660	-0.0451
	(-1.09)	(1.84)	(-0.60)
Coefficients	-0.194**	0.751***	-0.117
	(-2.88)	(3.37)	(-1.79)
Interaction	0.0499	-0.800*	-0.0107
	(0.65)	(-2.29)	(-0.19)

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.2.19): Extended Threefold Decomposition – Detailed All Regular Wage Earners

	(1) Basic Wages	(2) Non-Basic Wages	(3) Total Wages
overall			
Muslims	7.744***	1.841***	7.897***
	(495.81)	(28.42)	(547.29)
Christians	7.990***	1.230***	8.070***
	(95.94)	(5.54)	(102.80)
Difference	-0.246**	0.611**	-0.173*
	(-2.91)	(2.64)	(-2.17)
Endowments	-0.177	0.865*	-0.103
	(-1.56)	(2.29)	(-1.03)
Coefficients	-0.163**	0.724***	-0.0882
	(-2.60)	(3.40)	(-1.43)
Interaction	0.0939	-0.978**	0.0177
	(0.96)	(-2.66)	(0.21)

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.2.20): Simple Threefold Decomposition – Detailed All Full Time Regular Wage Earners

	(1) Basic Wages	(2) Non-Basic Wages	(3) Total Wages
Muslims	7.832***	1.587***	7.965***
	(448.97)	(21.96)	(492.69)
Christians	8.116***	0.854***	8.163***
	(84.12)	(3.78)	(87.37)
Difference	-0.284**	0.733**	-0.199*
	(-2.90)	(3.09)	(-2.10)
Endowments	-0.162	0.688*	-0.105
	(-1.59)	(2.01)	(-1.26)
Coefficients	-0.196*	0.859***	-0.105
	(-2.46)	(3.70)	(-1.36)
Interaction	0.0733	-0.815*	0.0116
	(0.88)	(-2.40)	(0.19)

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.2.21): Extended Threefold Decomposition – Detailed All Full Time Regular Wage Earners

	(1) Basic Wages	(2) Non-Basic Wages	(3) Total Wages
Muslims	7.832***	1.587***	7.965***
	(453.90)	(22.43)	(492.44)
Christians	8.116***	0.854***	8.163***
	(82.40)	(3.90)	(86.00)
Difference	-0.284**	0.733**	-0.199*
	(-2.84)	(3.19)	(-2.06)
Endowments	-0.241	0.817*	-0.155
	(-1.94)	(2.46)	(-1.47)
Coefficients	-0.159*	0.854***	-0.0671
	(-2.04)	(3.75)	(-0.88)
Interaction	0.115	-0.938**	0.0233
	(1.08)	(-2.84)	(0.27)

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.2.22): Simple Twofold Decomposition – Monthly Wages

	(1) All Wage Earners	(2) Regular Wage Earners	(3) Full Time Regular Wage Earners
Muslims	6.760***	6.799***	6.867***
	(517.07)	(474.22)	(425.08)
Christians	6.920***	6.972***	7.065***
	(105.07)	(86.50)	(75.67)
Difference	-0.160*	-0.173*	-0.199*
	(-2.39)	(-2.11)	(-2.10)
Explained	-0.0473	-0.0542	-0.0921*
	(-1.63)	(-1.33)	(-2.32)
Unexplained	-0.113*	-0.119	-0.107
	(-1.96)	(-1.80)	(-1.39)

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.2.23): Extended Twofold Decomposition – Monthly Wages

	(1) All Wage Earners	(2) Regular Wage Earners	(3) Full Time Regular Wage Earners
Muslims	6.760***	6.799***	6.867***
	(517.70)	(471.62)	(424.88)
Christians	6.920***	6.972***	7.065***
	(106.94)	(88.87)	(74.48)
Difference	-0.160*	-0.173*	-0.199*
	(-2.43)	(-2.17)	(-2.06)
Explained	-0.0867*	-0.0889	-0.143**
	(-2.36)	(-1.88)	(-3.04)
Unexplained	-0.0736	-0.0842	-0.0558
	(-1.39)	(-1.42)	(-0.78)

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.2.24): Simple Twofold Decomposition – Hourly Wages

	(1) All Wage Earners	(2) Regular Wage Earners	(3) Full Time Regular Wage Earners
Muslims	1.744***	1.740***	1.684***
	(167.00)	(135.20)	(118.74)
Christians	1.879***	1.901***	1.899***
	(36.30)	(28.96)	(24.11)
Difference	-0.135*	-0.161*	-0.215**
	(-2.56)	(-2.40)	(-2.69)
Explained	-0.0481*	-0.0472	-0.0803*
	(-2.42)	(-1.65)	(-2.39)
Unexplained	-0.0874	-0.113*	-0.135*
	(-1.91)	(-2.03)	(-2.05)

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.2.25): Extended Twofold Decomposition – Hourly Wages

	(1) All Wage Earners	(2) Regular Wage Earners	(3) Full Time Regular Wage Earners
Muslims	1.744***	1.740***	1.684***
	(165.87)	(134.43)	(118.41)
Christians	1.879***	1.901***	1.899***
	(36.00)	(29.39)	(23.92)
Difference	-0.135*	-0.161*	-0.215**
	(-2.54)	(-2.43)	(-2.67)
Explained	-0.0683**	-0.0790*	-0.132***
	(-2.66)	(-2.33)	(-3.30)
Unexplained	-0.0672	-0.0816	-0.0830
	(-1.57)	(-1.63)	(-1.39)

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.2.26): Simple Twofold Decomposition – Detailed All Regular Wage Earners

	(1) Basic Wages	(2) Non-Basic Wages	(3) Total Wages
Muslims	7.744***	1.841***	7.897***
	(494.02)	(27.97)	(550.31)
Christians	7.990***	1.230***	8.070***
	(94.37)	(5.37)	(100.05)
Difference	-0.246**	0.611*	-0.173*
	(-2.86)	(2.56)	(-2.11)
Explained	-0.0507	-0.129	-0.0543
	(-1.13)	(-1.09)	(-1.33)
Unexplained	-0.196**	0.740***	-0.119
	(-2.88)	(3.32)	(-1.80)

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.2.27): Extended Twofold Decomposition – Detailed All Regular Wage Earners

	(1) Basic Wages	(2) Non-Basic Wages	(3) Total Wages
Muslims	7.744***	1.841***	7.897***
	(495.81)	(28.42)	(547.29)
Christians	7.990***	1.230***	8.070***
	(95.94)	(5.54)	(102.80)
Difference	-0.246**	0.611**	-0.173*
	(-2.91)	(2.64)	(-2.17)
Explained	-0.0878	-0.0953	-0.0890
	(-1.67)	(-0.74)	(-1.88)
Unexplained	-0.159**	0.706***	-0.0842
	(-2.61)	(3.32)	(-1.42)

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.2.28): Simple Twofold Decomposition – Detailed All Full Time Regular Wage Earners

	(1) Basic Wages	(2) Non-Basic Wages	(3) Total Wages
Muslims	7.832***	1.587***	7.965***
	(448.97)	(21.96)	(492.69)
Christians	8.116***	0.854***	8.163***
	(84.12)	(3.78)	(87.37)
Difference	-0.284**	0.733**	-0.199*
	(-2.90)	(3.09)	(-2.10)
Explained	-0.0888*	-0.107	-0.0922*
	(-2.11)	(-0.88)	(-2.32)
Unexplained	-0.196*	0.840***	-0.107
	(-2.47)	(3.63)	(-1.39)

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.2.29): Extended Twofold Decomposition – Detailed All Regular Wage Earners

	(1) Basic Wages	(2) Non-Basic Wages	(3) Total Wages
Muslims	7.832***	1.587***	7.965***
	(453.90)	(22.43)	(492.44)
Christians	8.116***	0.854***	8.163***
	(82.40)	(3.90)	(86.00)
Difference	-0.284**	0.733**	-0.199*
	(-2.84)	(3.19)	(-2.06)
Explained	-0.139**	-0.0987	-0.143**
	(-2.75)	(-0.73)	(-3.04)
Unexplained	-0.146*	0.831***	-0.0558
	(-1.99)	(3.69)	(-0.78)

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (5.3.1): Average Basic and Total Quarterly Wages According to Non-Basic Wage Payment Status

Average Basic Wages for Zero Non-Basic Wage Sector	L.E. 3269
Average Basic Wages for Positive Non-Basic Wage Sector	L.E. 2269
Average Positive Non-Basic Wage	L. E. 1468
Average Total Quarterly Wages for Zero Non-Basic Wage Sector	L.E. 3269
Average Total Quarterly Wages for Positive Non-Basic Wage Sector	L.E. 3738

Table (5.3.2): Probit Models for Receiving Non-Basic Wages in Private, Government, and All Sectors.

	Pooled		Government Sector		Private Sector	
	(1)	(2)	(3)	(4)	(5)	(6)
Christian	-0.141***	-0.0986	-0.162*	-0.135	-0.0920*	-0.0649
	(-3.50)	(-1.91)	(-2.17)	(-1.90)	(-2.19)	(-1.58)
Male	-0.152***	-0.0375	-0.117**	-0.0695	-0.0411	-0.0223
	(-6.44)	(-1.43)	(-3.16)	(-1.69)	(-1.08)	(-0.54)
Years of Schooling	0.0219***	0.00806**	0.0138*	-0.00191	0.0120***	0.00893**
	(7.95)	(2.62)	(2.40)	(-0.25)	(4.05)	(3.06)
Experience	0.00481**	0.00253	0.00543	0.00680*	0.000128	0.000565
	(2.78)	(1.58)	(1.70)	(2.24)	(0.07)	(0.33)
Government Sector		0.131***				
		(4.49)				
Interaction: Christian * Government Sector		-0.00725				
		(-0.10)				
Region	Yes	Yes	Yes	Yes	Yes	Yes
Parental Education	Yes	Yes	Yes	Yes	Yes	Yes
Economic Activity		Yes		Yes		Yes
Occupation		Yes		Yes		Yes
N	3325	3324	1385	1380	1937	1936

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (6.1.1): OLS Analysis for Total Non-Pecuniary Benefits

	All Wage Earners		Regular Wage Earners		Full Time Regular Wage Earners	
	(1)	(2)	(3)	(4)	(5)	(6)
Christian	-0.134	-0.0168	-0.338*	-0.0404	-0.278	-0.0615
	(-1.10)	(-0.20)	(-2.35)	(-0.38)	(-1.69)	(-0.47)
Years of Schooling	0.191***	0.0178***	0.184***	0.0258***	0.179***	0.0287***
	(30.75)	(4.78)	(23.27)	(4.49)	(19.61)	(4.80)
Experience	0.0743***	0.0333***	0.105***	0.0497***	0.0965***	0.0456***
	(4.68)	(3.82)	(5.71)	(4.58)	(4.37)	(3.88)
Experience Squared	-0.00136*	-0.000909**	-0.00213**	-0.00134***	-0.00179*	-0.00121**
	(-2.42)	(-3.16)	(-3.10)	(-3.53)	(-2.21)	(-2.96)
Male	-1.114***	-0.0919	-0.882***	-0.0820	-0.924***	-0.0692
	(-15.99)	(-1.87)	(-13.19)	(-1.46)	(-10.60)	(-0.98)
Greater Cairo	-0.0751	-0.0496	-0.0728	-0.0898	-0.0799	-0.132
	(-0.63)	(-0.76)	(-0.61)	(-1.23)	(-0.60)	(-1.66)
Urban Lower	-0.412***	-0.267***	-0.414***	-0.340***	-0.502***	-0.403***
	(-3.44)	(-3.98)	(-3.33)	(-4.45)	(-3.60)	(-4.70)
Urban Upper	-0.297**	-0.150**	0.0546	-0.245***	-0.0538	-0.298***
	(-2.58)	(-2.66)	(0.45)	(-3.67)	(-0.38)	(-3.76)
Rural Lower	-0.306**	-0.0946	-0.211*	-0.158**	-0.251*	-0.191**
	(-2.96)	(-1.84)	(-1.99)	(-2.73)	(-2.09)	(-2.90)
Rural Upper	-0.466***	-0.0177	0.0927	-0.0824	0.0317	-0.0897
	(-4.31)	(-0.34)	(0.77)	(-1.29)	(0.23)	(-1.26)
Skill Level 1		-0.0248		-0.0194		0.0163
		(-0.83)		(-0.51)		(0.38)
Skill level 2		0.165***		0.142***		0.169***
		(4.49)		(3.38)		(3.46)
Formal Sector		2.467***		2.604***		2.621***
		(42.29)		(42.34)		(41.05)
Unionization		0.181***		0.224***		0.146**
		(4.08)		(4.78)		(2.68)
Full Time		0.0493		0.0557		.
		(1.07)		(1.14)		.
Government		0.567***		0.587***		0.634***
		(8.27)		(7.89)		(7.81)
_cons	0.367*	-0.00742	0.248	-0.329**	0.375	-0.256*
	(2.18)	(-0.07)	(1.32)	(-2.64)	(1.70)	(-1.99)
Parental Background		Yes		Yes		Yes
Job Stability		Yes		Yes		Yes
Economic Activity		Yes		Yes		Yes
N	4523	4523	3329	3329	2579	2579
R^2	0.300	0.844	0.235	0.778	0.206	0.788

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (6.1.2): Probit Models of Non-Pecuniary Benefits for All Wage Earners

	Social Insurance		Sick Leave		Paid Leaves (Vacations)		Medical Insurance	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Christian	-0.0504	-0.00505	-0.0508	-0.0106	-0.0544	-0.00536	-0.0513	-0.00151
	(-1.36)	(-0.19)	(-1.48)	(-0.30)	(-1.48)	(-0.20)	(-1.39)	(-0.05)
Years of Schooling	0.0462***	0.000219	0.0502***	0.00902***	0.0512***	0.00637***	0.0503***	0.00543***
	(24.15)	(0.10)	(25.85)	(4.07)	(27.12)	(4.59)	(26.17)	(3.45)
Experience	0.0104***	0.00502***	0.00963***	0.00216	0.00969***	0.00168*	0.0115***	0.00276**
	(7.22)	(4.43)	(6.86)	(1.80)	(6.93)	(2.01)	(8.39)	(2.88)
Male	-0.226***	-0.0341*	-0.271***	-0.0107	-0.277***	-0.0200	-0.269***	-0.0329
	(-10.52)	(-2.20)	(-13.03)	(-0.46)	(-13.26)	(-1.24)	(-12.70)	(-1.92)
Greater Cairo	-0.0303	-0.0267	0.0375	0.0452	-0.00507	0.00132	-0.0920**	-0.0561***
	(-0.86)	(-0.98)	(1.16)	(1.84)	(-0.16)	(0.08)	(-2.87)	(-3.31)
Urban Lower	-0.122***	-0.0834**	-0.0884**	-0.0693**	-0.0946**	-0.0524**	-0.122***	-0.0636***
	(-3.68)	(-3.29)	(-2.86)	(-3.01)	(-3.08)	(-3.23)	(-3.87)	(-3.49)
Urban Upper	-0.120***	-0.0671**	-0.0365	-0.0187	-0.0551	-0.0240	-0.0866**	-0.0383*
	(-3.85)	(-2.72)	(-1.20)	(-0.82)	(-1.79)	(-1.45)	(-2.77)	(-2.26)
Rural Lower	-0.103***	-0.0344	-0.0457	-0.0210	-0.0610*	-0.0220	-0.0856**	-0.0320*
	(-3.67)	(-1.45)	(-1.75)	(-1.08)	(-2.34)	(-1.71)	(-3.18)	(-2.11)
Rural Upper	-0.183***	-0.0333	-0.0890**	0.00575	-0.104***	0.00522	-0.135***	-0.0146
	(-6.20)	(-1.30)	(-3.20)	(0.24)	(-3.75)	(0.35)	(-4.71)	(-0.73)
Skill Level 1		0.0327**		-0.00859		-0.0118		0.00456
		(2.94)		(-0.65)		(-1.27)		(0.48)
Skill Level 2		0.0145		0.0265		0.0328***		0.0200
		(1.15)		(1.95)		(3.50)		(1.89)
Formality		.		0.286***		0.228***		0.270***
		.		(21.32)		(25.34)		(24.12)
Unionization		0.0488***		0.0489**		0.0273**		0.0559***
		(3.55)		(3.06)		(2.64)		(4.62)
Full Time		0.0350**		0.0189		-0.00517		0.00474
		(2.61)		(0.90)		(-0.34)		(0.31)
Government		0.00873		0.143***		0.0937***		0.0925***
		(0.44)		(6.33)		(6.03)		(6.28)
Parental Background		Yes		Yes		Yes		Yes
Job Stability		Yes		Yes		Yes		Yes
Economic Activity		Yes		Yes		Yes		Yes
N	4523	2316	4523	3270	4523	4514	4523	4473

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (6.1.3): Probit Models of Non-Pecuniary Benefits for Regular Wage Earners

	Social Insurance		Sick Leave		Paid Leaves (Vacations)		Medical Insurance	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Christian	-0.0860*	-0.0105	-0.0888*	-0.0161	-0.105*	-0.0275	-0.0875*	-0.00967
	(-2.02)	(-0.40)	(-2.20)	(-0.47)	(-2.54)	(-0.91)	(-2.11)	(-0.27)
Years of Schooling	0.0403***	0.000477	0.0460***	0.00880***	0.0470***	0.00884***	0.0470***	0.00721***
	(17.73)	(0.21)	(20.81)	(3.97)	(21.92)	(4.67)	(20.94)	(3.49)
Experience	0.0133***	0.00635***	0.0121***	0.00296*	0.0122***	0.00328**	0.0147***	0.00477***
	(8.07)	(5.31)	(7.44)	(2.49)	(7.55)	(2.91)	(9.14)	(3.88)
Male	-0.190***	-0.0238	-0.240***	-0.00174	-0.243***	-0.0172	-0.243***	-0.0348
	(-8.32)	(-1.46)	(-10.62)	(-0.08)	(-10.71)	(-0.83)	(-10.18)	(-1.54)
Greater Cairo	-0.0250	-0.0319	0.0481	0.0431	-0.00137	-0.000385	-0.105**	-0.0850***
	(-0.67)	(-1.12)	(1.38)	(1.71)	(-0.04)	(-0.02)	(-2.97)	(-3.60)
Urban Lower	-0.120***	-0.0924***	-0.0936**	-0.0741**	-0.101**	-0.0749***	-0.140***	-0.100***
	(-3.41)	(-3.41)	(-2.80)	(-3.18)	(-3.06)	(-3.48)	(-4.01)	(-4.12)
Urban Upper	-0.0384	-0.0883***	0.0551	-0.0329	0.0330	-0.0511*	-0.00813	-0.0681**
	(-1.08)	(-3.45)	(1.52)	(-1.43)	(0.90)	(-2.39)	(-0.22)	(-2.96)
Rural Lower	-0.0824**	-0.0420	-0.0305	-0.0296	-0.0474	-0.0376*	-0.0807**	-0.0553**
	(-2.74)	(-1.70)	(-1.07)	(-1.48)	(-1.68)	(-2.10)	(-2.69)	(-2.61)
Rural Upper	-0.0459	-0.0473	0.0512	-0.00761	0.0367	-0.0115	-0.00681	-0.0392
	(-1.32)	(-1.81)	(1.57)	(-0.31)	(1.11)	(-0.56)	(-0.19)	(-1.45)
Skill Level 1		0.0313**		-0.00604		-0.0138		0.00418
		(2.67)		(-0.46)		(-1.13)		(0.33)
Skill Level 2		0.0193		0.0300*		0.0414***		0.0262*
		(1.45)		(2.19)		(3.32)		(1.97)
Formality		.		0.300***		0.311***		0.377***
		.		(22.48)		(27.56)		(22.64)
Unionization		0.0624***		0.0557***		0.0440**		0.0793***
		(4.32)		(3.52)		(3.20)		(4.97)
Full Time		0.0432**		0.0182		-0.00658		0.0149
		(3.05)		(0.86)		(-0.32)		(0.74)
Government		0.0225		0.154***		0.130***		0.130***
		(1.00)		(6.73)		(5.67)		(6.14)
Parental Background		Yes		Yes		Yes		Yes
Economic Activity		Yes		Yes		Yes		Yes
N	3329	2271	3329	3270	3329	3318	3329	3293

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (6.1.4): Probit Models of Non-Pecuniary Benefits for Full Time Regular Wage Earners

	Social Insurance		Sick Leave		Paid Leaves (Vacations)		Medical Insurance	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Christian	-0.0555	0.00338	-0.0599	-0.0164	-0.0896	-0.0377	-0.0947	-0.0452
	(-1.12)	(0.10)	(-1.30)	(-0.39)	(-1.88)	(-1.01)	(-1.93)	(-1.33)
Years of Schooling	0.0384***	-0.000809	0.0467***	0.0112***	0.0479***	0.0105***	0.0461***	0.00721***
	(14.26)	(-0.34)	(18.36)	(4.47)	(19.43)	(4.80)	(17.67)	(3.34)
Experience	0.0118***	0.00425***	0.0127***	0.00340*	0.0135***	0.00438***	0.0135***	0.00327**
	(6.12)	(3.52)	(6.83)	(2.52)	(7.30)	(3.39)	(7.30)	(2.63)
Male	-0.209***	-0.0116	-0.251***	0.0155	-0.255***	-0.0175	-0.272***	-0.0281
	(-6.67)	(-0.56)	(-8.12)	(0.51)	(-8.16)	(-0.64)	(-8.78)	(-1.01)
Greater Cairo	-0.0254	-0.0459	0.0379	0.0283	-0.0171	-0.0163	-0.0941*	-0.0789**
	(-0.61)	(-1.59)	(0.98)	(1.05)	(-0.45)	(-0.67)	(-2.42)	(-3.04)
Urban Lower	-0.128**	-0.104***	-0.115**	-0.0851**	-0.128***	-0.0884***	-0.162***	-0.119***
	(-3.29)	(-3.67)	(-3.06)	(-3.28)	(-3.42)	(-3.64)	(-4.18)	(-4.57)
Urban Upper	-0.0446	-0.0922***	0.0139	-0.0492	-0.00827	-0.0602*	-0.0451	-0.0827**
	(-1.08)	(-3.48)	(0.34)	(-1.83)	(-0.20)	(-2.46)	(-1.09)	(-3.16)
Rural Lower	-0.0934**	-0.0663**	-0.0365	-0.0293	-0.0648*	-0.0439*	-0.0838*	-0.0554*
	(-2.80)	(-2.70)	(-1.12)	(-1.27)	(-2.02)	(-2.14)	(-2.49)	(-2.32)
Rural Upper	-0.0498	-0.0348	0.0396	-0.00610	0.0204	-0.00163	-0.0225	-0.0480
	(-1.26)	(-1.31)	(1.04)	(-0.21)	(0.53)	(-0.07)	(-0.55)	(-1.62)
Skill Level 1		0.0302*		0.00212		-0.00549		0.0166
		(2.42)		(0.14)		(-0.40)		(1.17)
Skill Level 2		0.0276		0.0298		0.0500**		0.0306*
		(1.84)		(1.80)		(3.27)		(2.02)
Formality		.		0.317***		0.336***		0.387***
		.		(22.21)		(27.73)		(21.49)
Unionization		0.0398*		0.0438*		0.0316		0.0536**
		(2.50)		(2.28)		(1.95)		(3.07)
Government		0.00246		0.174***		0.137***		0.153***
		(0.11)		(6.26)		(4.79)		(6.34)
Parental Background		Yes		Yes		Yes		Yes
Economic Activity		Yes		Yes		Yes		Yes
N	2579	1653	2579	2537	2579	2572	2579	2540

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (6.2.1): Levels of Satisfaction with Working Conditions and Job Properties

	Muslims %	Christians %	Total %
Overall			
Fully Dissatisfied	8.4	4.9	8.2
Rather Dissatisfied	8.7	5.8	8.5
Neutral	12.2	6.2	11.8
Rather Satisfied	27.9	25.0	27.8
Fully Satisfied	42.9	58.1	43.7
Job Security			
Fully Dissatisfied	12.1	8.5	11.9
Rather Dissatisfied	10.9	6.7	10.7
Neutral	9.8	5.5	9.5
Rather Satisfied	20.3	20.7	20.3
Fully Satisfied	35.7	41.4	36.0
Earnings			
Fully Dissatisfied	13.7	10.7	13.5
Rather Dissatisfied	11.6	6.4	11.3
Neutral	10.6	8.3	10.5
Rather Satisfied	24.0	20.7	23.8
Fully Satisfied	25.7	33.9	26.1
Type of Work			
Fully Dissatisfied	7.5	2.2	7.2
Rather Dissatisfied	8.1	5.5	8.0
Neutral	11.2	5.9	10.9
Rather Satisfied	29.1	27.5	29.0
Fully Satisfied	42.8	56.3	43.6
Number of Working Hours			
Fully Dissatisfied	6.8	3.2	6.6
Rather Dissatisfied	8.5	5.6	8.3
Neutral	12.2	8.2	12.0
Rather Satisfied	28.2	24.1	28.0
Fully Satisfied	39.4	48.7	39.9
Work Schedule			
Fully Dissatisfied	6.0	4.1	5.9
Rather Dissatisfied	7.6	3.0	7.3
Neutral	11.4	8.6	11.3
Rather Satisfied	27.6	22.9	27.3
Fully Satisfied	40.0	48.5	40.4
Working Conditions/Environment			
Fully Dissatisfied	7.5	3.5	7.3
Rather Dissatisfied	8.5	5.4	8.4
Neutral	13.2	12.6	13.2
Rather Satisfied	30.1	23.8	29.8
Fully Satisfied	38.7	51.6	39.4
Distance to Job (Commuting)			
Fully Dissatisfied	6.6	2.8	6.4
Rather Dissatisfied	7.4	4.8	7.3
Neutral	10.5	7.0	10.3
Rather Satisfied	25.9	21.8	25.7
Fully Satisfied	45.1	57.3	45.7
Matching Between Job and Qualifications			
Fully Dissatisfied	10.0	5.0	9.7
Rather Dissatisfied	7.0	4.8	6.9
Neutral	9.3	6.9	9.2
Rather Satisfied	23.4	17.1	23.0
Fully Satisfied	44.6	56.8	45.2

Table (6.2.2): OLS Regression Analysis for Level of Overall Job Satisfaction

	Overall Level of Job Satisfaction
Religion	0.368***
	(4.79)
Years of Schooling	0.0227***
	(-4.21)
Work Experience	0.0325**
	(2.94)
Square Experience	0.000760
	(-1.93)
Male	0.263***
	(-4.49)
Greater Cairo	0.00863
	(0.10)
Urban Lower	-0.0124
	(-0.16)
Urban Upper	0.0349
	(0.43)
Rural Lower	-0.106
	(-1.40)
Rural Upper	-0.0593
	(-0.74)
Skill 1	0.109**
	(2.83)
Skill 2	0.223***
	(5.14)
Job Formality	0.501***
	(9.07)
Unionization	0.104*
	(2.03)
Full Time	-0.108*
	(-2.09)
Government Sector	0.268***
	(3.96)
Father's Education	Yes
Mother's Education	Yes
Economic Activity	Yes
N	5997
R^2	0.134

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (6.3.1): Discrimination at Different Gates of Employment

	(1) Not in the Labor Force	(2) Employment	(3) Unemployment	(4) Wage Employment	(5) Government Sector
Christian	-0.00841	-0.0109	0.00715	-0.0942**	-0.0743*
	(-0.50)	(-0.59)	(0.49)	(-3.28)	(-2.18)
Male	-0.552***	0.575***	-0.0256***	0.144***	-0.355***
	(-91.78)	(104.19)	(-4.66)	(9.28)	(-20.27)
Years of Schooling	-0.0110***	0.00131	-0.000601	0.0127***	0.0381***
	(-12.62)	(1.38)	(-0.80)	(8.69)	(17.59)
Household Size	-0.00339*	0.0109***	-0.0000947	-0.0156***	0.00459
	(-2.03)	(5.45)	(-0.06)	(-5.33)	(1.23)
Student	-0.0755*	0.0411			
	(-2.43)	(1.28)			
Experience			-0.00545***	0.0144***	0.00940*
			(-4.70)	(3.87)	(2.29)
Experience Squared			0.000106*	-0.000551***	0.0000744
			(2.42)	(-4.10)	(0.50)
Parents' Education	Yes	Yes	Yes	Yes	Yes
Parents' Employment Status	Yes	Yes	Yes	Yes	Yes
Father's Occupation	Yes	Yes	Yes	Yes	Yes
Region	Yes	Yes	Yes	Yes	Yes
N	12063	12042	6000	5985	4428

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table (6.3.2): Discrimination at Different Employment Statuses

	(1) Wage Employment	(2) Employer	(3) Self Employment	(4) Unpaid Family and Subsistence Work
Christian	-0.0942**	0.0394*	0.00168	0.0446*
	(-3.28)	(2.11)	(0.10)	(2.45)
Male	0.144***	0.0830***	0.0268*	-0.141***
	(9.28)	(5.60)	(2.02)	(-21.46)
Years of Schooling	0.0127***	-0.000653	-0.00517***	-0.00406***
	(8.69)	(-0.62)	(-5.01)	(-5.79)
Experience	0.0144***	0.00351	-0.00932***	-0.00355*
	(3.87)	(1.39)	(-3.37)	(-2.35)
Experience Squared	-0.000551***	0.0000297	0.000326***	0.0000516
	(-4.10)	(0.36)	(3.36)	(0.96)
Household Size	-0.0156***	-0.00136	-0.00183	0.0119***
	(-5.33)	(-0.80)	(-0.80)	(10.25)
Parental Background	Yes	Yes	Yes	Yes
Region	Yes	Yes	Yes	Yes
N	5985	5986	5986	5861

t statistics in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

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