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Abstract

This paper examines whether the employment agencies program adopted by the Algerian government in 2008, have impacted the labor force behavior. Using repeated cross-section data from the Household Survey on Employment from 1997 to 2014, and a difference-in-difference method with heterogeneous effects across gender and cities, we estimate whether the new program has reduced unemployment. Whether it is through the insertion of the unemployed into the labor market or if it has a positive effect on unemployment by pushing people to participate more within the labor force . Our results show that offering fixed term contracts through employment agencies, has pushed people to have more labor force participation. However and because the employment agencies 's way in getting job is still weak , the impact on labor market insertion was no significant. By taking the heterogeneous effects across gender and cities, the findings indicate that primary education women who are living far from the cities center have less chance even in labor market insertion or in labor force participation.

Keywords: Algeria, Heterogeneous Effect, Labor Force Behavior.
JEL Classifications: J38.

1. Introduction

Labor market policies bring together measures to combat unemployment, support job creation and/or ensure the sustainability of existing jobs (L'Horty, 2013). There has been considerable about the efficacy of labor market policies. For instance, increasing the flexibility of employment is presumed to lead to a lower level of unemployment (Nickell et al., 2005, Bassanini and Duval, 2009). Similarly, training provided to unemployed youth is presumed to have a positive impact on their long-term employment outcome. However, some of these policies have been criticized as cost ineffective (Bunel et al., 2012).

In this study, I assess the implementation of labour market policies of Algeria . I focus on the period after 1997, when preliminary schemes to fight unemployment and poverty were first implemented . To the best of my knowledge, this is the first impact assessment of such policies in Algeria (Musette, 2013; Benhabib 2017)

The rising unemployment rate over the period from 1987-1997 followed a fall in oil prices. The Structural Adjustment Plan (1994-1997), caused the loss of 400,000 jobs in state-owned enterprises in 1998 (Musette et al., 2003). Unemployment peaked at almost 30 percent in 2000, then reverted and dropped from 10-11% percent in 2009 to 2016 (ONS, 2012, 2017); meanwhile, the rise in oil prices fueled an increase in both export earnings and public expenditure throughout three plans: 2001-2004, 2005-2009 and 2010-2014.

In Algeria, threefold typology of active labour market policies have been implemented: support for business creation or self-employment, professional inclusion with fixed-term contracts or temporary jobs, and training and job search assistance for the unemployed in order to improve access to the labour market. This typology uncovers into three generations. The first generation (1989-1997) attempts to mitigate the negative shock of the Structural Adjustment Plan upon the labour market. During the second generation (1998-2007), the National Employment Agency (ANEM) adjusts vacancies and labour supply and the National Agency for Microcredit Management (ANGEM) provides subsidized credit to small businesses. The third generation starts in 2008 with the implementation of the Action Plan promoting employment and fighting unemployment, bringing in incentives for employers and social security coverage for employees.

In this paper, my main focus is the third generation of the active labor market and its impact on the labor market behavior The action plan is supposed to push more people into unemployment in order to place them with employment agencies in the future. However, the impact likely varies between the cities and gender. Rural cities are not only poor but also suffer numerous social and economic disadvantages as well. Thus, people living in these areas are less likely to obtain a job using other methods that are not a part of the labor market program. The impact, also, might varies across gender because females are usually exposed to less mobility between areas making it more difficult for them to obtain a job.

This paper is structured as follows. Section two tackles the relevance of of historic Algerian policies . Section three talks about employment agencies and their role in matching : supply and demand adjustment on the labor market. Section four gives the conceptual framework and research methodology and section five is reserved for data sources and empirical specification. I finish by summarizing the results and suggesting policy recommendations.

2. Algeria employment policies

Following the implementation of the Structural Adjustment Program (SAP) in 1994, Algeria experienced dramatic changes in its labor market, including increasingly large cohorts of new entrants to its labor market, a rise in female labor force participation, and increased layoffs due to economic restructuring. Layoffs have been particularly notable in the public sector, where more than 413 000 jobs were eliminated between 1990 and 2000 (Souag and Assaad 2018). These changes have triggered a significant increase in unemployment, which peaked in 2000 due to the spread of informality and growth in the share of non-permanent jobs. The growing unemployment rate for youth and, in recent years, for young graduates has likely contributed to destabilization and political unrest. However, the reversal of the oil price decline and the concomitant increase in receipts from the export of hydrocarbon allowed the government to substantially increase its spending from 2000 to 2013.

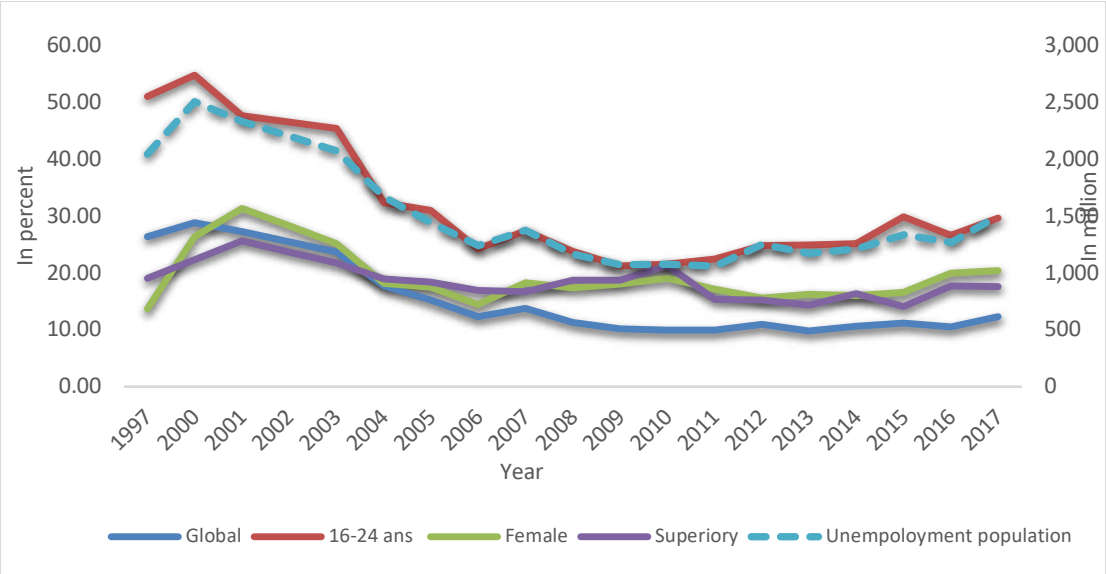
Algeria opted for a series of ambitious programs to foster investment, growth and employment, starting with the Support Plan for Economic Recovery (2001-2004), followed by the Supplementary Support Plan for Growth (2005-2009), and the Five-year Development Plan (2010-2014). According to the OECD typology (2015), active labor market policies have emerged in Algeria in three forms: support for business creation or self-employment, integration through fixed-term contracts jobs and improving the employability of the unemployed through training / retraining and help with job search.

Musette (2011) classifies these interventions into three generations. The first generation covers the period 1989-1997 and aims to cushion the negative effects of SAP in the labor market. It results in the creation, since 1994, of the National Unemployment Insurance Fund (CNAC), the Social Development Agency (ADS) and the National Youth Employment Support Agency (ANSEJ). The second generation (1998-2007) led to the establishment of the National Employment Agency (ANEM) and the National Agency for Microcredit Management (ANGEM) in addition to the ADS. The third generation starts in 2008 and corresponds to the implementation of the Action Plan to Promote Employment and Fight Unemployment by creating a new program called Dispositif d'Aide a l'Insertion Professionnelle (DAIP).

Since 2002, the unemployment rate in Algeria has declined (Figure 1). In 2001, the unemployment rate was 27.3 percent, with 2.3 million unemployed individuals. It began declining in 2002, dropping to 13.8 percent, eventually reaching 1.4 million unemployed

individuals by 2007. This decline, however, was insufficient in light of the government's target unemployment rate of 10 percent. The unemployment rate around 10 or 11 percent between 2009 and 2014.

Figure 1: Algeria's Unemployment trends from 1977 to 2017

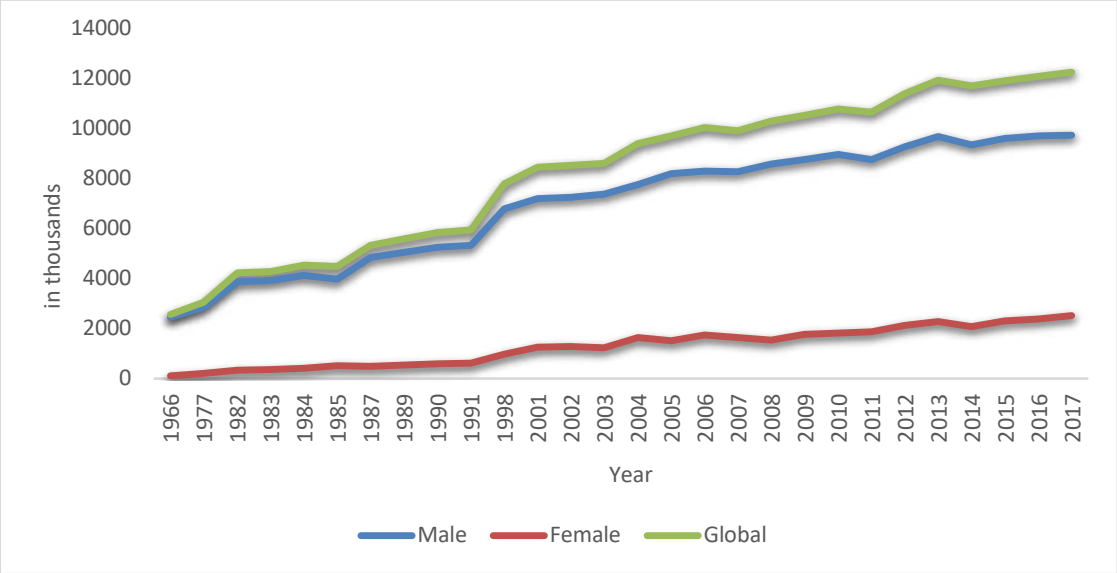


Source: Author from ONS data.

Until the late 1990s, the labor supply in Algeria was characterized by low labor force participation, especially among women. In 1966, the active population was estimated at 2.4 million people with 0.10 million active women and 2.56 million active men. In 2017 and after almost 50 years, the active population was close to 12.27 million people with 9.57 million males and 2.52 million active women (Figure 2).

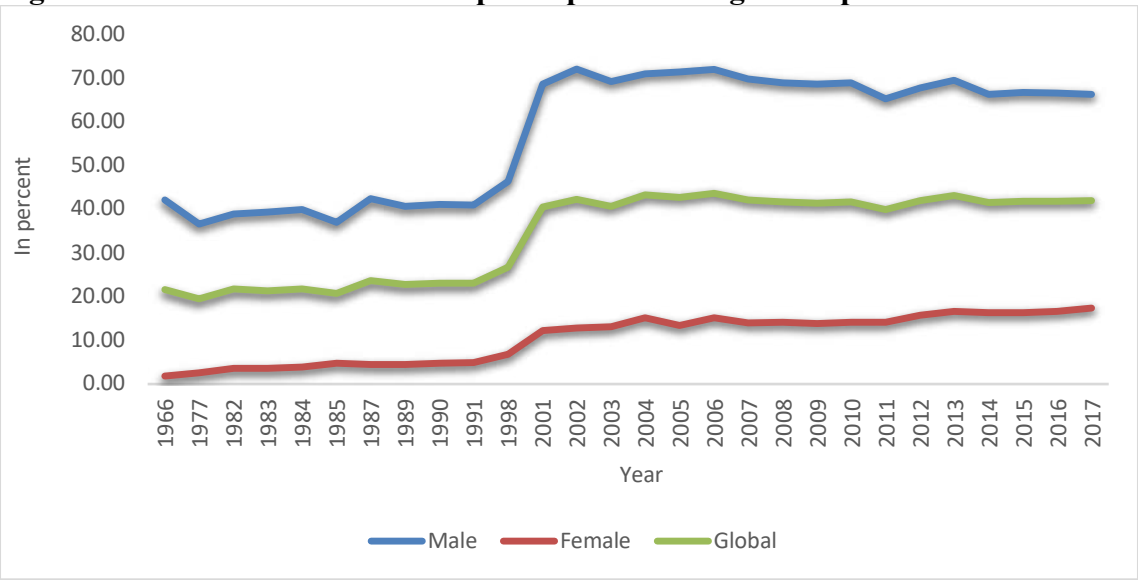
In terms of evolution, for some periods, the labor force population was changing more slowly than the working age population, which caused for these periods low labor force participation rates (Figures 2). From 1966 to 1988, the labor force participation rates were low for both sexes. Starting in the 2000s, there was a substantial increase in labor force participation. In 2010, the labor force participation rate stood at 41.7% overall, 69% for men, and 14.2% for women. This was an increase from 1998 of 14.94, 22.67, and 7.34 percentage points for each group, respectively. In 2017, labor force participation rates were close to 66% for men, 17.40% for women, and 42% overall.

Figure 2: Evolution of Active Population in Algeria



Source: Author from ONS data bases.

Figure 3: Evolution of labor force participation in Algeria in percent



Source: Author from ONS data bases.

3. Literature review and empirical studies

Most literature that assesses employment policies in Algeria is descriptive. The CNES[2] (2002, 2010) conducted two studies on employment policy assessment that did not include impact evaluation. The World Bank (2010) conducted an assessment of Algeria's employment policies without studying the impact on the labor market. The ILO undertook a comparative analysis of labor market intermediation in the three Maghreb countries (Barbier, 2007). In 2010, the ILO put together a synthesis of labor market policies for some Arab countries including Algeria (Musette 2014). Adair and Bellache (2008, 2009) assessed the policies tackling job creation in very small businesses (microenterprises), whereas

[2] The National Economic and Social Council

Hammouda (2009) focused on the impact of employment policies from aggregate data rather than micro econometric analyses.

Souag and Assaad (2018) investigated the effects of active labor market policies, and in particular the introduction of the Action to Promote Employment and Fight Unemployment on formalizing employment in the Algerian economy. At the macro level, Souag and Adair (2018) have concluded that the economic growth and introduction of active labor market policies in Algeria have contributed to the observed reduction in unemployment. However, the question of whether the employment policy measures have actually had an effect on unemployment has not yet been addressed for Algeria (Musette, 2014, Benhabib 2017). So, has it contributed to the reduced unemployment rate by making the insertion of the unemployed easier? Or has it had a positive effect on the unemployment rate by pushing people to participate more in labor force by offering public and secured jobs? Was the impact homogenous or heterogeneous depending on municipality and areas?

Beside women's disadvantage in the labor force (ILO 2017)[3], people living in rural areas will be not be affected in the same as people living in urban areas. People in rural areas tend to be more disadvantaged in their access to jobs and opportunities compared to those living in urban areas. Is placing inclusive employment at the heart of economic policies a realistic chance to move out of poverty, support gender equality, and generate job-rich growth and prosperity for all? (ILO 2017) conducted research on this question that can help understand the conditions under which the DIAP is especially effective or ineffective; it can also help inform policy design.

4. Labor market matching in Algeria

Just after their independence, the Algerian government had established The National Labor Office [4] to take over job intermediation and framework of the policy on promoting employment and combating unemployment. The National Labor Office was a public institution of an administrative nature since 1971, which includes the organization of the National Labor Office to change its name in 1990 and become the National Employment Agency.

In 2004, the ANEM reinstated its monopoly on job intermediation: integrating private placement services, incorporating municipalities and requiring companies to inform ANEM if of any vacancies or new job creation. ANEM continues to modernize and improve its public services. Between 1990 and 2004, it was compulsory for all employers to inform ANEM about all their vacancies. But employers were not penalized or fined if they failed to do so, however, beginning 2004 employers have been penalized if they do not comply. The public

[3] Women being over-represented in low-skilled and low salary work and are often considered secondary earners in the household

[4] Decree No. 62-99 of November 29, 1962.

service is exempt from this requirement. Vacancies for civil servants are published on the website of the Public Service Directorate.

In 2006, the ANEM acquired a new legal status. Its legal character was changed from a public institution of an administrative nature to a public institution with special management. The decree that was enacted specified its mission and the way in which the agency was organized. It is under the supervision of the Ministry of Labor, Employment and Social Security. The decree also defined the agency's functions with regard to the regulation of the labor market.

At the end of 2006, the ANEM benefited from the rehabilitation program for the development of its network (various operating agencies, whether state or local), as well as the strengthening of management skills for its frameworks, particularly the development of management and service delivery. The number of its local agency doesn't stop increasing to improve its national representation.

The new program passed into law in April 2008 called the Professional Integration Assistance Device (DAIP) [5] has started in the end of 2008, and was amended in 2010 by entrusting its management, monitoring, evaluation and control to ANEM in relation with the wilaya[6] Directorate of Employment (DEW).

The new program was designed to assist young, new entrants in the labor force to find jobs by proposing wage subsidies, as described in Table 1. To benefit from this program, people should be unemployed, registered in the employment agency (ANEM), and should not be more than 35 years old and not less than 18 years old. The program is intended for three categories of people: - Young graduates of higher education and young technicians from vocational training institutions under the contract of insertion of graduates (CID) : - Young people from secondary education, vocational training or having completed an apprenticeship under the professional integration contract (CIP) : - Young people without training and without qualification under the contract training insertion (CFI). After having, one type of subsidy (CID, CIP or CFI), people can apply for CTA where the costs are shared between the government and employers. Other subsidies can be offered by other interventions (such as social inclusion programs) managed by the ADS, which is designed to fight poverty.

[5] Dispositif d'Aide a l'Insertion Professionnelle Executive Decree No. 08-126 of April 19, 2008

[6] Governorate

Table 1: Professional Integration Assistance Device (DAIP)

Program	Nature	Duration	Compensation	Comment
DAIP vocational inclusion assistance mechanism for young people, run under the Ministry of Labor, consists in three categories:				
Graduate inclusion contract (CID)	First-time jobseekers, graduates of tertiary education or senior technicians who receive support for their sustainable recruitment, priority within public and private economic sector	Economic enterprises: 1 year Administration: 1.5 year	University graduates: DA[7] 15,000[8] per month Senior technicians: DA 10,000[9] per month The employer's contribution to social security is paid by the State.	Only benefit first-time job seekers. This measure replaces the pre-employment contract for graduates (CPE).
Professional inclusion contract (CIP)	Young, first-time jobseekers leaving secondary education or vocational education and training (VET) centers (CFPA) (including apprentices)	Firms: 1 year, nonrenewable Public and administration: 1 year, renewable	In firms: DA 8 000[10] per month In public and administration: DA 6,000[11] per month The employer's share of contributions to Social security is covered by the State.	Only benefit first-time job seekers. At the end of the CIP contract ANEM may propose a subsidized work contract (CTA) in firms. In case of refusal, the person loses the right to remain in the CIP.
Training Inclusion contract (CFI)	Targets young Jobseekers without training or qualifications; they are placed in various work projects initiated by local authorities or by different sectors for the duration of the project	1 year, non-renewable	DAIP vocational integration assistance mechanism for young people, run under the Ministry of Labor, Employment and Social Security, consists of three categories)	
Subsidized work contract (CTA)	Proposed when one of the above contracts comes to an end (and sometimes earlier if the employer agrees)	3 years	Labor costs shared between government and employer:	

*The National Guaranteed Minimum Wage in January 2008 was 12000 DA, 15000 DA in January 2010 and it is 18000 from January 2012. Source: Executive Decree No. 15-177 of July 6, 2015 supplementing Executive Decree No. 15-59 of February 8, 2015, setting out the constituent elements of the guaranteed minimum wage in Algeria. The compensation for CID was 12000 DA in 2008 and becomes 15000's after the DAIP amendment in 2010.

From the creation and until now, the number of ANEM local agency doesn't not stop increasing to improve its national representation (see figure 4). Before the action plan, there were 226 local agencies and after the action plan and its modification, 37 new local agencies were created, resulting in 263 total agencies.

[7] Algerian Dinar : 1 $ =118 DA in 2019 .

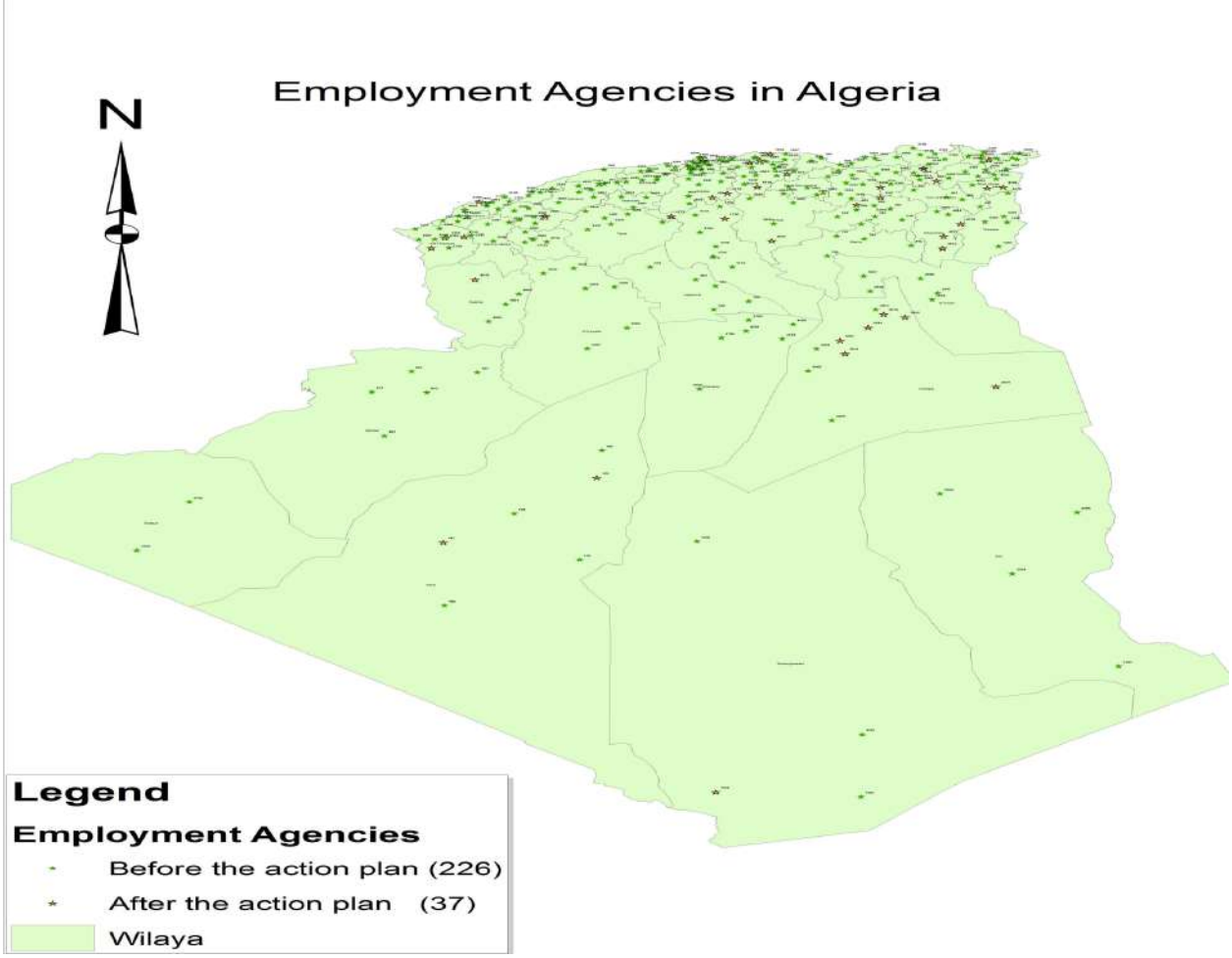
[8] It presents around 62.5 % in the The National Mean Wage.

[9] It presents around 41.66 % in the The National Mean Wage.

[10] It presents around 33.33 % in the The National Mean Wage.

[11] It presents around 25 % in the The National Mean Wage.

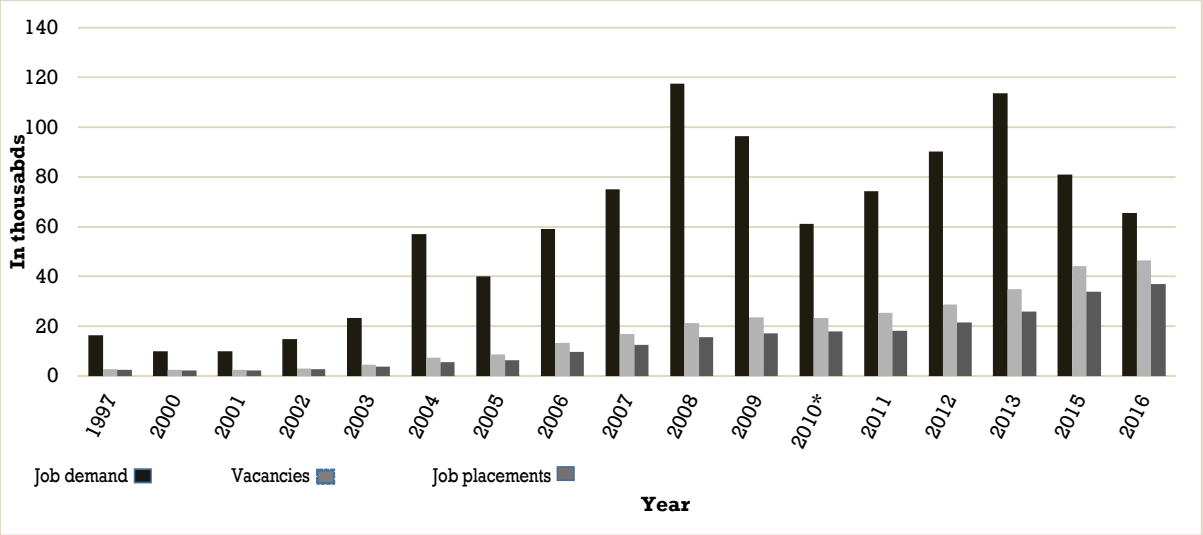
Figure 4: Employment Agencies in Algeria



The trend in employment agency placements follows the trend in job vacancies, with a widening gap since 2004 (See Figure 5). The private sector absorbed three out of four placements in 2016, 90 percent being fixed term contracts (ANEM, 2017).

Beginning in 2008 and peaking in 2011, the DAIP (including its three components CID, CIP and CFI) supplied an annual average of 245,000 fixed-term contracts to young people between 2008 and 2016. Over 2009-2016, the CTA provided an annual average of 33,000 permanent contracts.

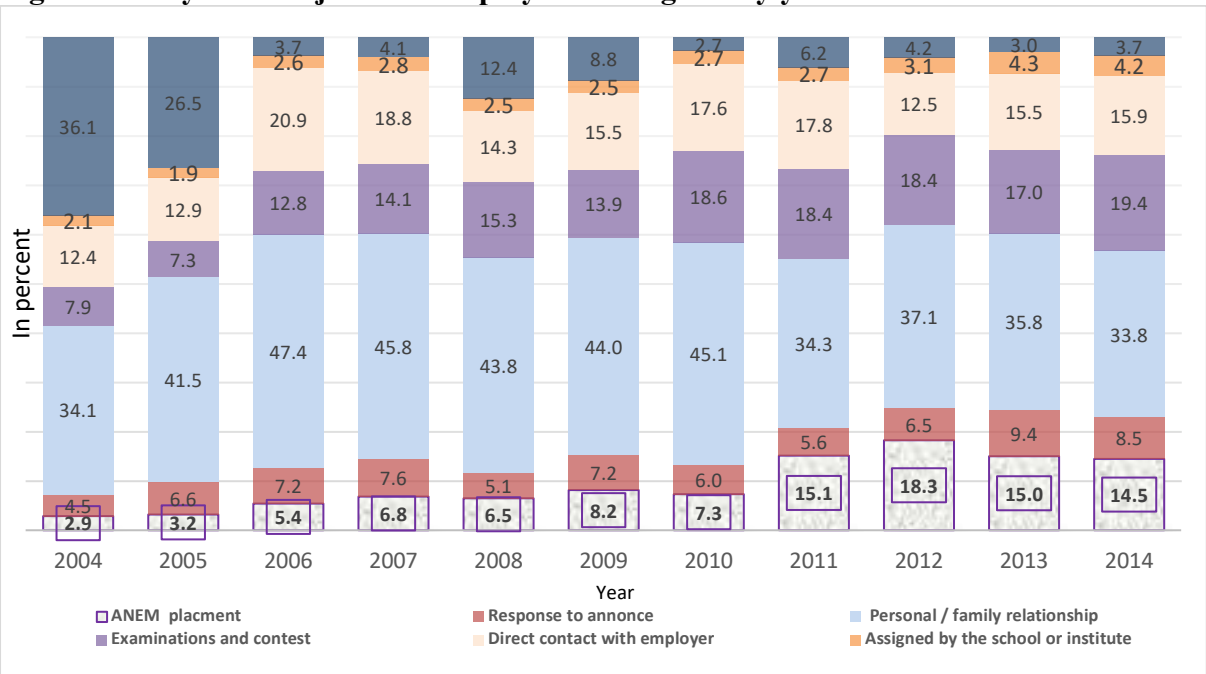
Figure 5. Job application, vacancies and job placements - 1997-2016



Source: Author from ONS data bases.

However, in Algeria the role of the ANEM in intermediation in the labor market is still very weak (see Figure 6). The share of people who responded that they found a job through the ANEM in 2004 was less than 3%. In 2014, 10 years after the implementation of the rehabilitation program, use remained low; less than 15 percent of respondents found a job through ANEM. More common methods to find jobs included personal/family relationships (33.8%), direct contact with employers (15.9%), or through entrance and professional exams and certifications (19.4%).

Figure 6: Ways to find jobs for employees in Algeria by year



Source: Author from ONS data bases.

5. Conceptual framework and research methodology

The main contribution of this study is to provide an evaluation of the effects of active labor market programs on labor force behavior in Algeria. I evaluate its impact on the probability of moving an individual from being out of the labor force to being unemployed, from being out of the labor force to being employed, and from unemployed to being employed, using retrospective data about the individual's past employment status and contemporaneous data on their current status. So, the individual statuses for each of the two time periods include inactive, unemployed or employed.

I start by first providing a diagnosis on the dynamics of labor market flows in Algeria across the three distinct labor market states: unemployment, employment and labor force inactivity. Using the current and the prior individual statuses, I design the mobility process of individuals between three states on the labor market as a homogeneous Markov chain in discrete time. Using Markov chains, I estimate all the annual transitions between the three states from 2001 to 2014.

The treatment variable, DAIP, is unobservable for those out of the labor force. Thus, to evaluate the impact of DAIP on labor force behavior, I use a proxy for treatment. The data includes a variable for ANEM placement for unemployed and employed individuals, but not for those out of the labor force. For employed people, by educational achievement I can identify what type of subsidy (CID, CIP or CFI) he or she has benefited from. The treatment variable for these sections of the population is obtained from the interaction of the two variables (placed by the ANEM or not and educational attainment) but are missing for other categories of the population (not in labor force).

I use a proxy variable and estimate heterogeneous effects through municipalities and municipality. Rural municipalities are not only poor but suffer numerous other social and especially economic disadvantages as well. People in rural areas have few opportunities to find jobs outside labor market programs. To capture the heterogeneous effect, I use distance to the city center. The theory is that people living near or in the city center have greater economic opportunity than those farther from the center. To correct the heterogeneity between municipalities, I add some local control variables (population, ….).

5.1. Transition

Let Y_t be a homogeneous Markov process defined on a three space of discrete states mutually exclusive and exhaustive $E = \{1, \dots, \dots, 3\}$, where the three states are employed, unemployed, and outside of the labor force. The fundamental characteristic of the Markov chain is that the conditional probability of each $\mathrm{Y_t}$ at time *t* depends only on the previous valueY_{t-1}, that is to say:

$$P(Y_t = j/Y_{t-1}, Y_{t-2}, \dots, \dots, \mathrm{X}_1) = P(Y_t = j/Y_{t-1}) \qquad \text{where} \quad j = \{1,2,3\} \qquad (1)$$

Let $P_{ij}(t)$ be the probability of observing the individual in state j at time t while he/she was in state i at time t-1. In a formal way, the transition probabilities are defined with the following equations:

$$P_{ji}(t) = P\ (Y_t = j/Y_{t\text{-}1} = i) \qquad (2)$$

For $j, i = (1, \dots, 3)$ and $(t = 1, \dots, t)$; where: $\sum_{j=1}^{3} P_{ji} = 1$.

The probabilities of occupation in the states j are unconditional (marginal). They correspond to the probabilities that the person r occupies the states j at time t:

$$\pi_{\mathrm{j}}(t) = P\ (Y_{rt} = j) = \sum_{\mathrm{i}=1}^{3} P_{ij}(t)\ P\ (Y_{t\text{-}1} = i) \qquad (3)$$

For $j = (1, \dots, \dots, k)$ where $\sum_{j=1}^{3} \pi_{\mathrm{j}}(t) = 1$.

In a matrix form:

$$\pi(t) = P'(t)\ \pi(t\text{-}1) \qquad (4)$$

Where: $\pi(\mathrm{t})$ is a vector of 3 dimension and $P'\ (t)$ is the transpose of the matrix of transition probabilities at time t of dimension $3*3$ such as :

$$\pi(t) = \begin{bmatrix} \pi_1(t) \\ \vdots \\ \pi_3(t) \end{bmatrix} \qquad P(t) = P\ (Y_t = j/Y_{t\text{-}1} = i) = \begin{bmatrix} P_{11} & \dots & P_{13} \\ \vdots & P_{ij} & \vdots \\ P_{31} & \dots & P_{33} \end{bmatrix}$$

Where: $\pi_{\mathrm{j}}(\mathrm{t}) \geq 0$ for $j = (1, \dots, 3)$ and $P_{ji} \geq 0$ for $i, j = (1, \dots, \dots, 3)$

After a series of t multiplications, we have:

$$\pi(t) = P'(t)\ P'(t\text{-}1)\ P'(t\text{-}2)\ \dots P(1)\ \pi(0) \qquad (5)$$

Where: $\pi(0)$ is the vector of initial probabilities.

Discrete time matrices are computed as the maximum likelihood estimator for p_{ij} is $\widehat{p}_{ij} = \frac{N_{ij}}{N_{i.}}$ where N_{ij} is the total number of transitions from state i to state j and $N_{i.}$ is the total number of observations initially in the state.

5.2 Impact Evaluation

We are interested in examining the causal heterogeneous effect across gender and cities of the DAIP on labor force behavior in Algeria. We evaluate the impact through the probability of moving in one year an individual from U to E, O to E and O to U (insertion + participation). The main idea behind our identification strategy is that the DIAP will likely affect the insertion of the unemployed person and will push more people to participate to the labor force by offering public and secured jobs but in different ways.

Let Y_{it} be the outcome indicator for $\mathrm{i} = \{1,2,3\}$.

Thus : $\mathrm{Y_{1t}} = \mathrm{j}$ if individual has moved from state employed to state j where $j = \{\text{employed, unemployment, outside of labor force}\}$.

: $Y_{2t} = j$ if individual has moved from state unemployment to state j where $j = \{\text{employed, unemployment, outside of labor force}\}$.

: $Y_{3t} = j$ if individual has moved from state outside of labor force to state j where where $j = \{\text{employed, unemployment, outside of labor force}\}$.

The treatment dummy variable T_i=1 if individual was placed by the ANEM , T_i=0, otherwise.

Since I do not have information on the treatment for all individuals, I use a proxy variable which captures the degree of exposure to ANEM services at the municipality level. There is data on employed and unemployed individuals' registration and/or placement through ANEM, but people out of the labor force do not have data on interaction with ANEM. So, by municipality, I account for the proportion of people in the labor force who are treated (placed through ANEM) or registered. So, the treatment proxy becomes:

$$T_r = \frac{Numbrer\ of\ \ peaple\ in\ labor\ force\ treated\ or\ registred\ in\ employment\ agencies}{Total\ \ population\ in\ labor\ force}$$

$$Where \quad r = 1 \ \ to\ 1541$$

I also assume also, that the effect is not same throughout localities and regions and through out gender. The being exposed to the treatment depends of the distances from the city center and differs for women comparing to men.

I define a dummy variable $\boldsymbol{Post}$, which takes on the value of 1 for the period after the implementation of the Action Plan, 2009 to 2014 (the last date for which we have data) and 0 for the period prior to its implementation: 1997-2007.

To estimate the average treatment effects we have to compare samples of participants and non-participants before and after the intervention (as indicated by the variable $\boldsymbol{Post = 0,1}$). Because we are missing a treatment variable for outside labor market individuals, we estimate the reduce form.

Lets Y_{it}^* the utility derived by the individual when he is moving from state $\boldsymbol{i}$ to state $\boldsymbol{j}$. The individual must make a choice between the three state structuring labor market. This choice is made by comparing the utilities from the various possibilities, and it focuses on the option that corresponds to the maximum utility. By assuming that this unobserved latent variable Y_i^* is a linear function of some observable characteristics *X*, the proxy variable of the treatment, the distance, post and sex dummy variables , the error terms and the interactions:

$$Y_i^* = \beta_0 + \beta_1 Dis + \beta_2 T_r + \beta_3 Sex + \beta_4 Post + \beta_5 Dis{*}Sex + \beta_6 T_r{*}Sex + \beta_7 Post{*}Sex + \beta_8 T_r{*} Dis + \beta_9 T_r{*} Dis{*}Sex + \boldsymbol{\beta_{10}} T_r{*}Post + \boldsymbol{\beta_{11}} T_r{*}Post{*}Sex + \beta_{12} Dis{*}Post + \beta_{13} Dis{*}Post{*}Sex + \boldsymbol{\beta_{14}} T_r{*} Dis{*}Post + +\boldsymbol{\beta_{15}} T_r{*} Dis{*}Post{*}Sex + \lambda X + \varepsilon_i \quad \text{..................(6)}$$

$$(i = 1,2,3) \quad \text{and } r = 1 \ \ to\ 1541$$

, we can use the multinomial logit to estimate parameters:

$$\text{P}(Y_i = j) = F\ (\beta_0 + \beta_1 Dis + \beta_2 T_r + \beta_3 Sex + \beta_4 Post + \beta_5 Dis{*}Sex + \beta_6 T_r{*}Sex + \beta_7 Post{*}Sex + \beta_8 T_r{*} Dis + \beta_9 T_r{*} Dis{*}Sex + \boldsymbol{\beta_{10}} T_r{*}Post + \boldsymbol{\beta_{11}} T_r{*}Post{*}Sex + \beta_{12} Dis{*}Post + \beta_{13} Dis{*}Post{*}Sex + \boldsymbol{\beta_{14}} T_r{*} Dis{*}Post + \boldsymbol{\beta_{15}} T_r{*} Dis{*}Post{*}Sex + \lambda X) \ldots\ldots\ldots \quad (7)$$

$$(i = 1,2,3 \ : j = 1,2,3)$$

Where: F is the logit cumulative function and $\boldsymbol{\varepsilon}$ is the error terms ($\varepsilon_i \rightarrow logit\ (0, \sigma_i^2)$). The general effect of the program on the outcome is captured by the coefficient (β_{10}). The coefficients $\boldsymbol{\beta_{11}}$ and $\boldsymbol{\beta_{14}}$ capture gender heterogeneous effects and distance heterogeneous effects respectively and the $\boldsymbol{\beta_{15}}$ catches the simultaneous heterogeneous effects of gender and cities. The coefficient β_0 is a constant , and the coefficients β_1, β_3, *and* β_4 captures the individual effects of distance, ANEM exposition effect and time effects, which are assumed to be independent of the treatment. The gender interactions and

distance interactions effects are captured by the other coefficients. X is a matrix of co-variates and λ is a vector of their coefficients.

6. Data sources and empirical specification

I use official data from a set of household employment surveys conducted by the National Statistics Office (ONS) during the period ranging from1997 to 2014. For this survey, the sample is a stratified random sample of households drawn from the population and housing census (RGPH) carried out every 10 years. The purpose of this survey is to provide statistics on employment , unemployment also labor force participation , but it contains no income data (Table A1).

Given that treatment is targeted at 18 to 35-year olds of three different education levels, I consider for each program the relevant ages for finishing education. So, for university graduates, I include people from age 22 and for primary and secondary level we start at age 18 to make sure that it corresponds to the ages the program targeted. We conduct separate analyses for men and women and by level of education, I identify three groups.

To account for heterogeneity between areas, 2008 census data are used as controls at the local level. It is socioeconomic data collected at the municipality level including population, urban/rural, access to water, access to electricity, access to infrastructure, labor market participation education rate and wilaya fixed effectss to take in consideration the disparities between the different governorates.

As mentioned above, I consider the test on the 2008 implementation and its 2010 modification The main difference that has been made is that the program after 2010 became managed by the ANEM with a greater local presence (more than 250 local agencies). We evaluate the impact of the implementation in 2008 and modification in 2010 on the probability of moving an individual from U to E, O to E and O to U in one year.

Before conducting analysis with logit models, I estimate at the municipality level the probability of having an ANEM office in order to identify observable characteristics of the municipality that correlate to treatment. In this model 2008 census data are used and added to the wilaya [12]fixed effectss to take in consideration the disparities between the different governorates. The local municipality control variables used are population, access to water, access to electricity, access to infrastructure, education rate, global activity rate, and women's activity rate. They are constructed in one indicator variable (indicator of municipalities' wealth) which takes score from 1 to 10. Once that is done we modelized the probability to be registered in ANEM by the distance, distance square, some individuals characteristics (education, age, age square, …), some interaction effect (distance * female, ..) and 2008 census data as controls at the municipality level . We conduct separate analyses for men and

[12] A Wilaya is synonymous with governorate

women because men and women behave differently in labor market, there is reason to believe that they may be affected differently by the distance.

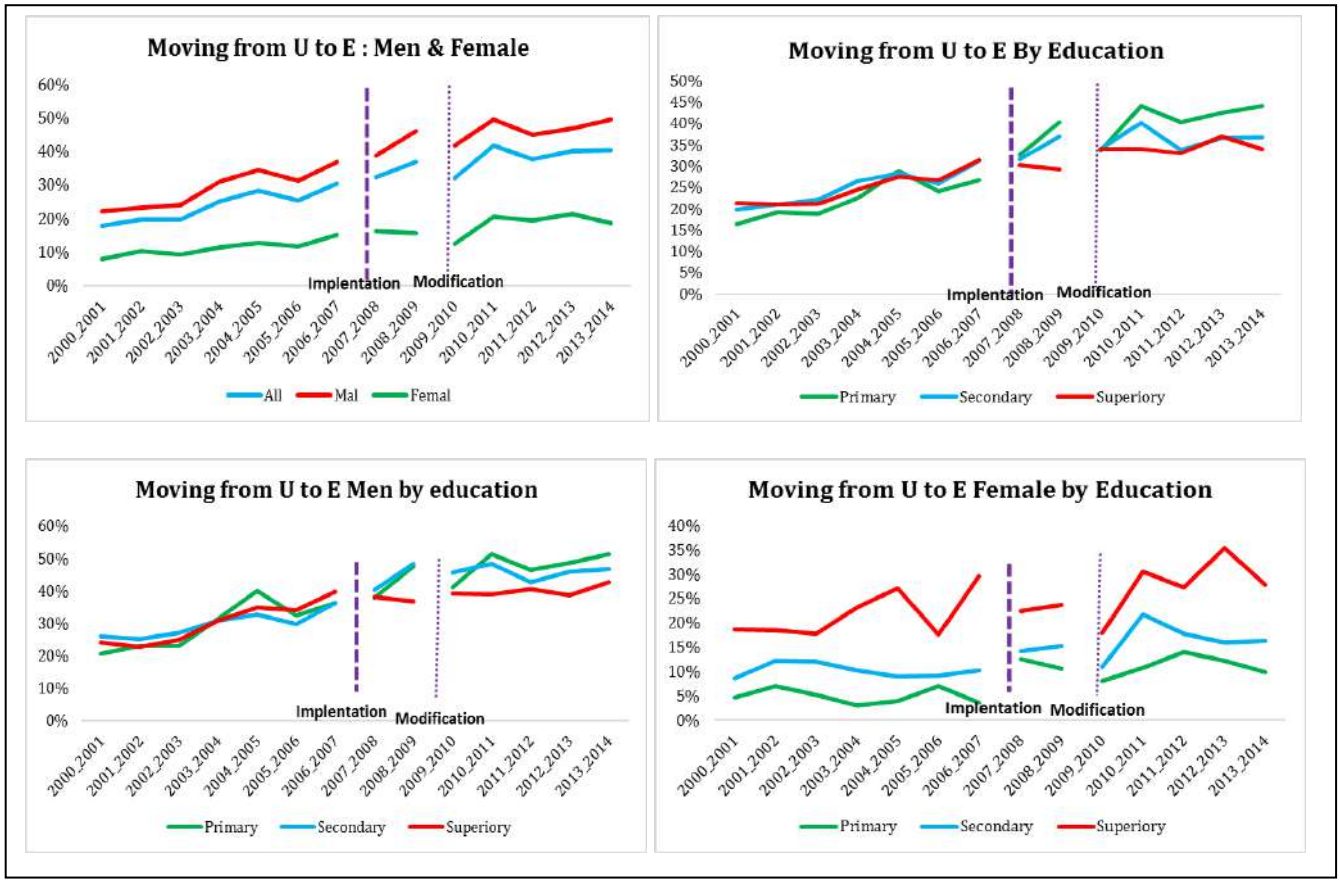
Table A2 shows the distribution of workforce by ANEM registration. Registered people tend to be younger and are more likely to be female than those who are not registered. They are also more likely to be educated, especially at the university levels, but not at the secondly level. In terms of residence, rural people are less likely to get ANEM registration compared to people living in urban areas.

7. Results

7.1 Transition

From 2000 to 2003 (Figure 6), it was difficult to find a job for Algerian workers during the first year of unemployment both for men and women. We observe that approximately 20% of men and around 10% of women who were initially unemployed moved to an employed status. In 2004 the situation had been improved relatively but only for men: the transition rate has reached around 38% just before the implementation of the action plan. This improvement is the consequence of the rise in oil prices which increased both export earnings and public expenditure throughout development plans: 2001-2004, 2005-2009 and 2010-2014. After the public intervention, we notice a higher level of mobility from unemployment state to employment state but only for men. More than 40 percent of those who were unemployed in the previous year became employed in current year. For women, the change is noticed after the modification in 2010: a rise in unemployment-employment transition probability from 12% percent to more than 20%. At the education level, before the implementation of the program, the mobility scheme for men was the same for the three level of education: around 30 % of people who were looking for a job in the previous year find one. After the intervention, the ability of the Algerian economy to absorb jobseeker has increased but only for people with primary or secondary level of education. The insertion problem persists for higher level of education people. For women, the situation is reversed: women with post-secondary degrees are more likely to be employed, followed by women with secondary education.

Figure 6: Moving from Unemployment to Employment status



Source: Author from ONS data base.

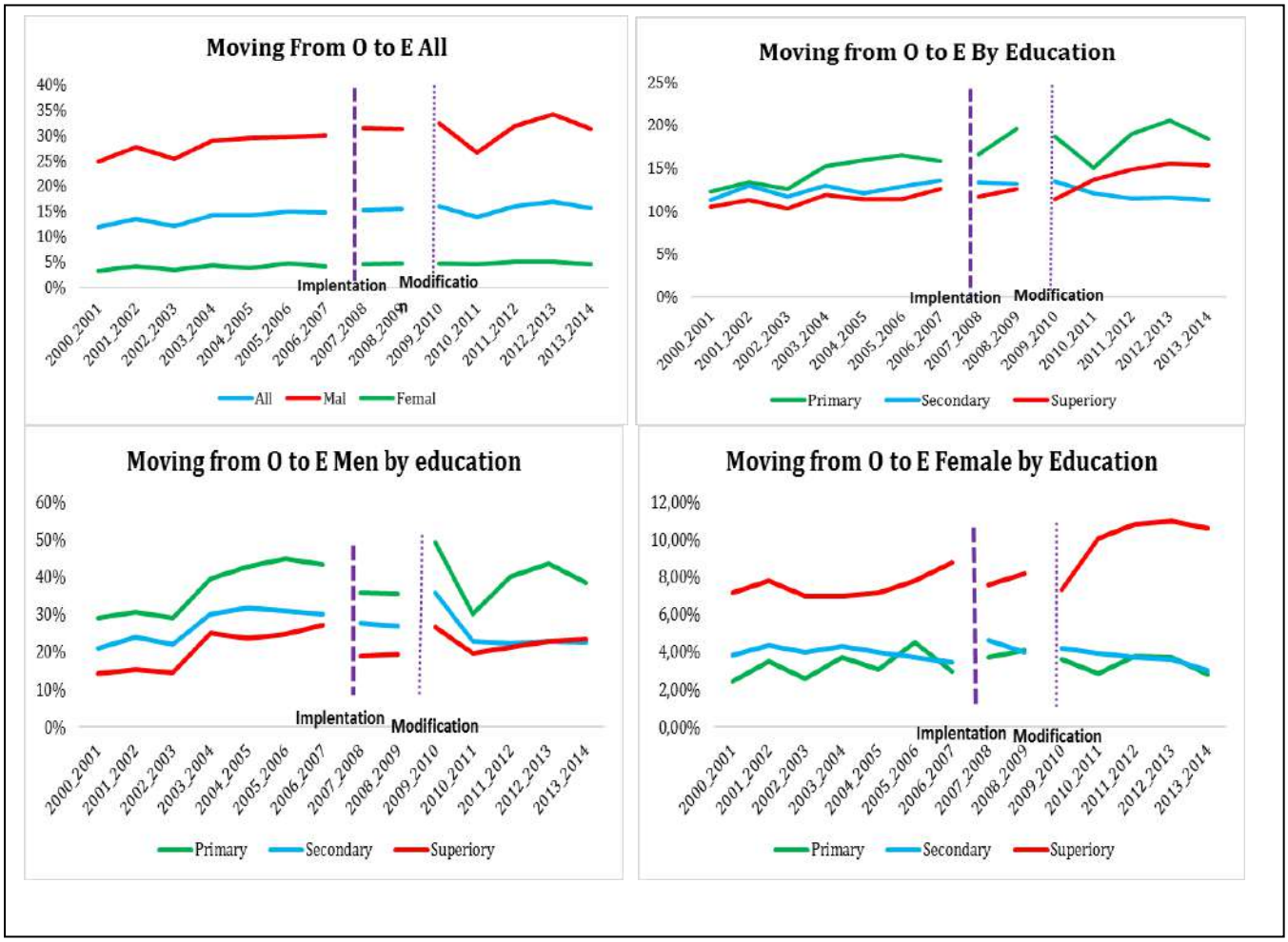
Moving from outside the labor market status to employment status in the case of Algeria is very critical because it reflects the capacity of the economy to create new jobs. Such an economy based on public expenditure and public employment creation. In general, transition probabilities remain very low before and after the public intervention, especially for women we notice mobility rates of less than 5 % (figure 7).

A separate analysis by education and gender shows that men with low level of education are more likely to get job after just having leaved school. The implementation in 2008 of the action plan does not mark this probability but it has been market by the modification in 2010 where it reaches the peak around 50 percent. However, the effect remains temporary, one year after its implementation unemployment returned to his initial level.

Graduated women are those who are more concerned by the mobility and affected by the action plan. The period 2001-2004 was the catch-up period in terms of participation in the labor market, women with high levels of education have recorded 4 percentage points more than other women in terms of moving from outside labor force to employment status. After that and just before the implementation of the action plan, the transition probability for the three levels of education remains weak and under 5 percent. After the implementation, the probability of moving for highest educated women is going up to reach around 8 percent. The

modification in 2010 does mark more this probability: it exceeds 10 percent after the modification.

Figure 7: Moving from Outside Labor Force to Employment status



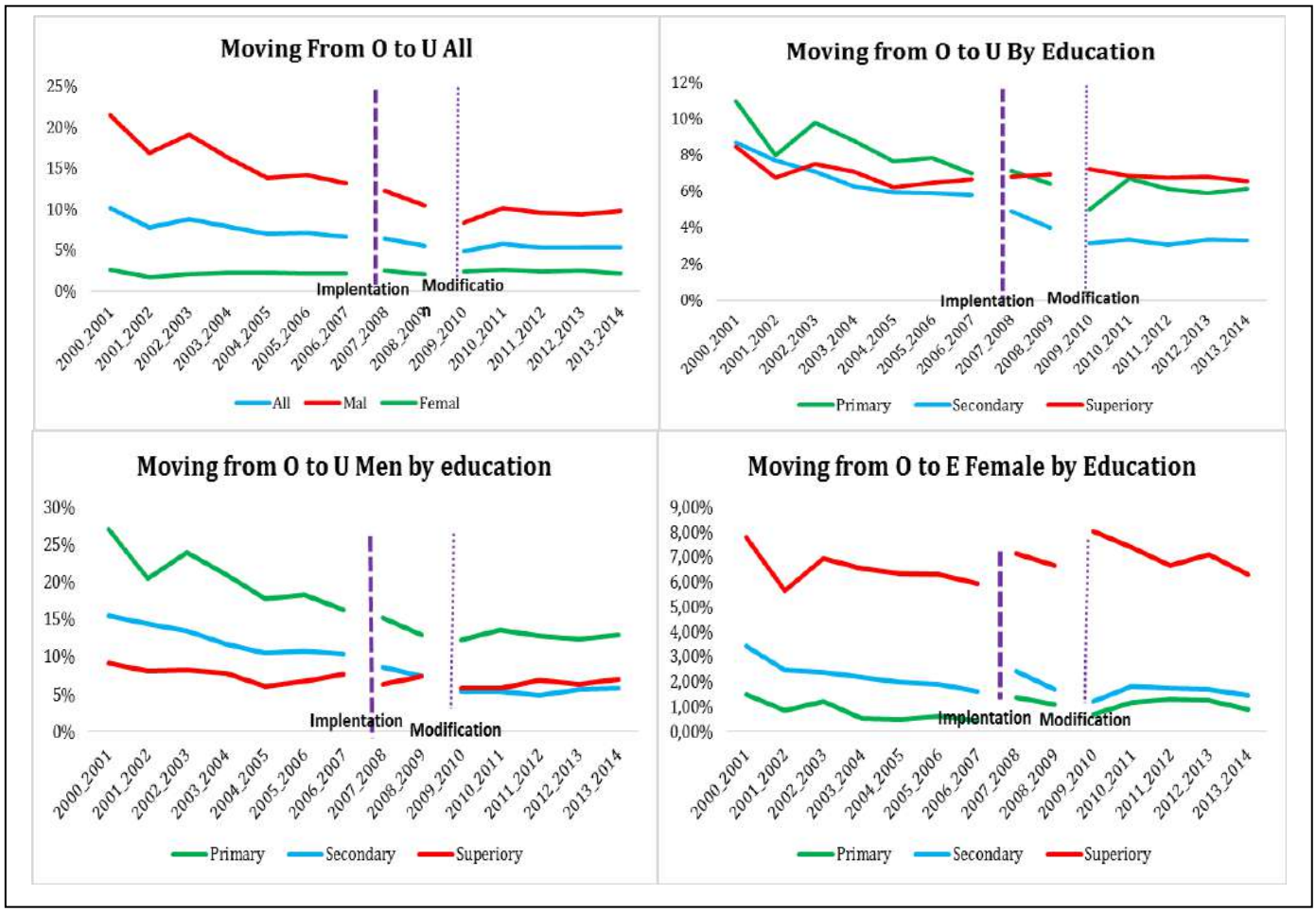
Source: Author from ONS data base.

The public interventions did not really mark the moving from outside the labor market status to unemployment status for men. After many fluctuations and long downward trends, the implementation in 2008 and the modification in 2010 of the program have contributed to getting a small recovery than a stabilization of probability of transition around 10 %. By education, it shows that after the interventions people who achieved the secondary level become less likely to move from outside the labor force to unemployment compared to other people.

However, for women the improving is more visible, specifically, for those women who graduated from a university. After the interventions, the finding indicates a going up of the mobility for university graduated women compared to those women who did not graduate

passing from around 1 percent to more than 7 percent . However, it still remains weak indicating the low labor force participation of women in Algeria but it raises a behavioral change for this category of women.

Figure 8: Moving from Outside labor force to Unemployment status



Source: author from ONS data bases.

7.2 Econometric result

Our logit model designed to estimate the probability to have ANEM office at the municipality level by the density as the main explicative variables, wilaya fixed effectss, and the indicator of municipality's wealth shows (see A3 in appendix) that the decision made by the public authorities to have or not a ANEM office depends specially on the density. Municipalities with higher population densities are more likely to have ANEM office. The finding confirms the idea that ANEM mapping in Algeria is not targeting specific objectives, but it is almost random and depends on general indictor (density).

Using a logit model for men and women we estimated the probability of an individual to be registered to the ANEM. The main explicative variable is the distance. After controlling at the individual level for education, age, age squared, and at the commune level the local

commune characteristics used before, Wilaya fixed effect and rural /urban stratification, our findings (see A4 in appendix) indicate that the impact of the distance on registration is not significant for men but is negative and significant for women. The interaction of female and distance considered in the global model confirms the finding and shows the disadvantage of distance for women. The results state that the mobility handicaps women to register but for men it does not play any role. The education and age coefficient ‘s have the expected sign: the more individuals are educated and older the more likely they are to be registered. The negative sign of the age squared coefficient validates the concavity of age effect. People living in the urban areas are those who have a better chance to be registered.

I now discuss the DID results shown in appendix (Tables A5 to A10). The distance to the city center is interacted with the *Post dummy* and treatment (proxy variable) to give the DID heterogeneous effects, which under the identifying assumptions identify the effect of the DIAP on vocational integration and labor force participation. I use a multinomial logit equation to estimate, by education, three different models, each with a broader set of controls. The first is the DID model without individual characteristics. The second model controls for age and age squared. The third model adds a linear time trend and some conjectural variables such as real GDP growth rate, inflation rate and unemployment rate. For each model of the three, I include 2008 census data used before to control heterogeneity.

In general, even before or after the interventions in the labor market, those who are more exposed to use ANEM services are less likely to move from unemployment to employment or from labor force nonparticipation to employment but they are more likely move from labor force nonparticipation to unemployment (moving from O to U) than those not exposed to ANEM. However, after both interventions, people seem to have more job opportunities (moving from U to E or from O to E) or to participate more in the labor force (moving from O to U). Before taking gender or cities into consideration, the DIAP’s coefficient for all moving estimations was negative or not significant which confirms the weakness of ANEM’s intervention in the labor market and confirms that people use other ways to find a job. Nevertheless, when we control for gender heterogeneity, our findings indicated that women, compared to men, are more likely to be employed after both interventions in the labor force, and more likely to participate but only after the early intervention. Through the areas, it is shown that even after both interventions, secondary education people who live far from the city center are less likely to transit from unemployment status to employment status, but they are more likely to transit from inactive status to employment status.

The distance constitutes a barrier for moving except for highly educated people, it’s effect is not consistent. Our estimations make a difference across gender and show that women are disadvantaged. The findings have indicated also that primary education women who live far from the cities center are less likely to transit even in getting a job or in participation. It is also shown that these women, even if they are more exposed to the treatment, are less likely to get a job compared to primary educated men. The difference was significant in 2008 and remains significant in 2010.

8. Conclusion

The objective of this contribution is to evaluate the employment agency programs on the labor market behavior. Using cross section data over 1997-2014 we have designed a test of insertion and participation by evaluating the impact on the probability of moving an individual from being outside the labor force to being unemployed, from outside the labor force to being employed and from unemployed to being employed,

I started our analysis by providing a diagnosis on the dynamics of labor market flows in Algeria across unemployment, employment, and inactivity states. Using Markov chain estimation, I estimated all the annual transitions between the three states from 2001 to 2014.

The transition results have shown that the after the intervention, the ability of the Algerian economy to absorb jobseekers has increased but only for men with primary or secondary levels of education. The insertion problem persists for highly educated men. For women, the situation is reversed: graduated university women are more likely to get a job followed by graduated secondary level women. The public interventions did not really mark the moving from outside labor market status to unemployment status for men. However, for women the improving is more visible, specifically, for those who graduated from a university. Yet, it still remains weak indicating the low labor force participation of women in Algeria, but it raises a behavioral change for this category of women.

It has also shown that the decision made by the public authorities to have or not have an ANEM office at the commune level depends mainly on the density. Communes that have higher concentrations of people are more likely to have an ANEM office. The finding confirms the idea that ANEM mapping in Algeria is not targeting specific objectives but it is almost random and depends on general indictor (density).

The findings also indicated that the impact of the distance from the city center on ANEM registration is not significant for men but it is negative and significant for women. This result has stated that the distance handicaps women 's mobility but it doesn't for men. By controlling for education, the distance continues to represent a barrier for moving except for highly educated people, it's effect is not consistent.

For the impact evaluation of DAIP on labor force behavior, I used a proxy variable and I estimated a heterogeneous effect throughout cities and gender. The finding indicated that even before or after the interventions, the role of the ANEM in the labor market matching is still weak compared to the other ways for getting a job. People who are more exposed to ANEM services are less likely to obtain a job, but they are more likely to participate in the labor force than other people. This result states that offering fixed term contracts through ANEM , has pushed people to have more ANEM registration which means more labor

force participation. However, because the ANEM's way to obtain a job is still weak , the impact on insertion was not significant.

By taking gender heterogeneity, the results indicated that women compared to men are more likely to get a job after both interventions, and more likely to participate but only after the early intervention. Throughout the areas, it has been shown that even after both interventions, secondary education people who live far from the city center have less chances to transit from unemployment status to employment status, but they are more likely to transit from inactive status to employment status. Finally and by taking areas and gender heterogeneity together , the finding indicate that women with a primary education who live fa from the cities center are less likely to transit even in getting a job or in participation. These women, even if they have more exposure to the treatment, are less likely to get a job compared to men with a primary education. The difference was significant in both interventions. These women have less economic opportunities to be active and therefore they should be more targeted in terms of employment policies.

This contribution calls for completion, with regard to the impact of the DIAP upon the duration of job placement. We concluded some significant impacts on the insertion, but we ignore the quality of ANEM placement. This opens the way for other works.

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Appendix

Table A1 : Comparison of labour force surveys methodologies from 1997 to 2014

Years	**1997**	**2001(A)**	**2001((B)**	**2002**	**2003**	**2004**	**2005**	**2006**
Sample Size (Households)	6457	6923	6360	6596	6457	14847	14939	14323
Base of survey	RGPH 87	RGPH 98	RGPH98	RGPH 98	RGPH98	RGPH 98	RGPH 98	RGPH 98
Reference period	Last week in Septemb er	Last week in September	Last week in December	Last week in March	Last week in September	Last week in September	Last week in September	Last week in September
Individual situation on T	15 year and more	15 year and more	15 year and more	15 year and more	15 year and more	15 year and more	15 year and more	15 year and more
Individual situation on T-1	15 year and more	15 year and more	15 year and more	15 year and more	15 year and more	15 year and more	15 year and more	15 year and more
Years	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**
Sample Size (Households)	14866	14000	14000	14592	14939	14323	14866	14000
Base of survey	RGPH 98	RGPH 2008	RGPH 2008	RGPH200 8	RGPH 2008	RGPH 2008	RGPH 2008	RGPH 2008
Reference period	Last week in Septemb er	Last week in September	Last week in September	Last week in September	Last week in September	Last week in September	Last week in September	Last week in September
Individual situation on T	15 year and more	15 year and more	15 year and more	15 year and more	15 year and more	15 year and more	15 year and more	15 year and more
Individual situation on T-1	15 year and more	15 year and more	15 year and more	15 year and more	15 year and more	15 year and more	15 year and more	15 year and more

Source: authors from ONS ‘s data bases.

Table A2: T test of Workforce Across ANEM Registration

	ANEM registration	No ANEM registration	Difference
Number of Obs	33,622	273,537	
Age	30.92	35.66	-4.742***
	(0.050)	(0.022)	(0.066)
Female	0.373	0.147	0.225***
	(0.002)	(0.0006)	(0.002)
Primary	0.495	0.669	-.0170***
	(0.002)	(0.0008)	(0.002)
Secondary	0.213	0.213	-0.0001
	(0.002)	(0.0007)	(0.002)
Superior	0.29	0.117	0.173***
	(0.002)	(0.0006)	(0.001)
Rural	0 .354	0.33	0.024***
	(0.002)	(0.0008)	(0.001)
Semi-rural	0.28	0.29	-0.01
	(0.002)	(0.0008)	(0.002)
Peri-Urban	0.195	0.194	0.0007
	(0.002)	(0.0007)	(0.002)
Urban	0.169	0.184	-0.014***
	(0.002)	(0.0007)	(0.002)
Distance	3.277	2.391	0.885***
	(0.100)	(0.026)	(0.082)

Source: authors from ONS ‘s data bases.

Table A3: Probability to have ANEM office at the commune

Probability to have local employment agency	Coefficient
Density	**0.313*****
	(0.002)
Commune Rich Indicator	
Rich _2	**-0.937*****
	(0.016)
Rich _3	**-0.177*****
	(0.022)
Rich _4	**0.283*****
	(0.025)
Rich _5	**-0.214*****
	(0.028)
Rich _6	**-0.056***
	(0.030)
Rich _7	**-0.536*****
	(0.032)
Rich _8	**0.186*****
	(0.034)
Rich _9	**-0.393*****
	(0.037)
Rich _10	**-1.180*****
	(0.044)
_cons	-3.933***
	(0.032)
Wilaya fixed effect	**Yes**
_cons	**-3.933*****
	(0.032)

r2_p = 0.134, * p<0.10, ** p<0.05, *** p<0.01

Source: Author from ONS's data bases

Table A4: The probability for individual to be registered to the ANEM

18_35 year	All	Men	Women
Female (mal is reference)	1.044***		
	(0.017)		
Age	0.359***	0.268***	0.492***
	(0.020)	(0.023)	(0.039)
Age square	-0.007***	-0.006***	-0.010***
	(0.000)	(0.000)	(0.001)
Education (Primary is the reference)			
Secondary	0.321***	0.097***	1.015***
	(0.030)	(0.036)	(0.064)
Superior	1.139***	0.963***	1.501***
	(0.032)	(0.043)	(0.057)
Distance	-0.081	0.026	-0.274**
	(0.074)	(0.091)	(0.121)
Distance * female	-0.005***		
	(0.001)		
Strate IFAD definition (rural is the reference)			
Semi-rural	-0.059*	-0.039	-0.072
	(0.032)	(0.035)	(0.075)
Peri-Urban	0.114***	0.112**	0.071
	(0.040)	(0.046)	(0.090)
Urban	0.189***	0.147**	0.216*
	(0.057)	(0.068)	(0.117)
Strate IFAD definition * Education			
Semi-rural* Secondary	0.07	-0.012	0.104
	(0.046)	(0.056)	(0.093)
Semi-rural * Superior	0.143***	0.180***	0.086
	(0.044)	(0.061)	(0.083)
Peri-Urban* Secondary	-0.022	-0.076	-0.026
	(0.051)	(0.063)	(0.103)
Peri-Urban* Superior	-0.130***	-0.042	-0.119
	(0.048)	(0.068)	(0.091)
Urban * Secondary	-0.157***	-0.039	-0.391***
	(0.056)	(0.069)	(0.112)
Urban* Superior	-0.486***	-0.268***	-0.472***
	(0.052)	(0.074)	(0.100)
Distance * State IFAD definition			
Distance * Rural	0.086	-0.021	0.273**
	(0.074)	(0.091)	(0.121)
Distance Semi-rural	0.083	-0.026	0.277**
	(0.074)	(0.091)	(0.121)
Distance * Peri-Urban	0.082	-0.026	0.274**
	(0.074)	(0.091)	(0.121)
_cons	-9.138***	-7.526***	-10.576***
	(0.548)	(0.653)	(1.050)
Control variables	Yes	Yes	Yes
r2_p	0.106	0.037	0.101
N	1.70E+05	1.37E+05	32910

* p<0.10, ** p<0.05, *** p<0.01. Source: Author from ONS's data bases

Table A5: Heterogeneous effect of the implementation in 2008 on moving from U to E , rrr coefficient

	Primary			Secondary			Highest		
	Model 1	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**
Treatment (Proportion)	**0.071*****	**0.066*****	1.442	**0.001*****	**0.001*****	**0.005****	0.295	0.255	20.894
	(0.071)	(0.066)	(1.920)	(0.003)	(0.002)	(0.012)	(1.072)	(0.926)	(89.672)
Female	0.826	0.817	0.818	**0.340*****	**0.343*****	**0.343*****	0.755	0.776	0.782
	(0.178)	(0.176)	(0.175)	(0.084)	(0.085)	(0.085)	(0.208)	(0.214)	(0.214)
Female * Treatment	**0.001****	**0.001***	**0.001***	14.35	12.15	8.191	6.902	7.035	6.039
	(0.003)	(0.003)	(0.004)	(6.310)	(5.350)	(3.620)	(3.460)	(3.520)	(3.004)
Post	**2.453*****	**2.456*****	**1.753*****	**2.366*****	**2.365*****	1.166	**2.075****	**2.082****	1.395
	(0.227)	(0.228)	(0.226)	(0.438)	(0.439)	(0.289)	(0.645)	(0.647)	(0.526)
Post * Female	**0.456****	**0.461****	**0.466****	0.98	0.968	0.995	**0.264*****	**0.262*****	**0.260*****
	(0.174)	(0.175)	(0.177)	(0.494)	(0.489)	(0.503)	(0.117)	(0.116)	(0.115)
Distance (KM)	**0.967****	**0.966****	**0.967****	**0.940***	**0.942***	**0.943***	0.955	0.954	0.959
	(0.016)	(0.016)	(0.016)	(0.031)	(0.031)	(0.031)	(0.035)	(0.035)	(0.035)
Female * Distance	0.984	0.985	0.987	0.994	0.993	0.994	1.004	1.003	1.004
	(0.013)	(0.013)	(0.013)	(0.017)	(0.017)	(0.017)	(0.018)	(0.018)	(0.018)
Distance square (KM)	1.000	1.000	1.000	1.000	1.000	1.000	**1.000****	**1.000***	**1.000****
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Female * Distance square	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Treatment* Post	**0.117***	**0.110***	**0.004*****	0.627	0.663	0.064	0.004	0.005	0.000**
	(0.148)	(0.140)	(0.006)	(1.533)	(1.624)	(0.189)	(0.018)	(0.021)	(0.000)
Female * Treatment* Post	**2.65****	**2.11****	**1.77****	1.695	1.868	2.353	1.24	1.16	1.41
	(1.29)	(1.03)	(8.59)	(10.634)	(11.744)	(14.813)	(7.66)	(7.17)	(8.63)
Treatment* Distance	1.034	1.029	1.008	**1.242*****	**1.230****	**1.202****	0.975	0.987	0.941
	(0.044)	(0.044)	(0.043)	(0.103)	(0.103)	(0.100)	(0.204)	(0.207)	(0.196)
Female * Treatment * distance	1.324	1.299	1.265	1.028	1.039	1.027	0.785	0.787	0.785
	(0.247)	(0.243)	(0.235)	(0.250)	(0.254)	(0.250)	(0.256)	(0.256)	(0.254)
Distance * Post	1.003	1.003	1.001	**1.011****	**1.010****	**1.009***	0.995	0.995	0.992
	(0.003)	(0.003)	(0.003)	(0.005)	(0.005)	(0.005)	(0.011)	(0.011)	(0.011)
Female * Distance* Post	**1.026***	1.024	1.023	0.968	0.968	0.965	1.007	1.007	1.006
	(0.015)	(0.015)	(0.015)	(0.025)	(0.025)	(0.025)	(0.021)	(0.021)	(0.021)
Treatment * Distance *Post	0.955	0.96	0.98	**0.805*****	**0.813****	**0.832****	0.999	0.988	1.037
	(0.041)	(0.042)	(0.042)	(0.068)	(0.069)	(0.071)	(0.211)	(0.209)	(0.218)
Female * Treatment * Distance * Post	**0.688***	**0.702***	**0.721***	1.313	1.309	1.342	1.188	1.194	1.203
	(0.136)	(0.139)	(0.142)	(0.387)	(0.387)	(0.397)	(0.408)	(0.410)	(0.411)
Cons	2.842	2.71	**9.845****	0.407	13.419	**4.831***	0.121	**0.001****	0.004
	(2.588)	(2.712)	(10.467)	(0.782)	(28.554)	(10.613)	(0.309)	(0.003)	(0.016)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

r2_p	0.083	0.085	0.088	0.092	0.096	0.099	0.06	0.061	0.065
N	23597	23597	23597	7482	7482	7482	5265	5265	5265

* p<0.10, ** p<0.05, *** p<0.01.
Source: Author from ONS's data bases

Table A6: Heterogeneous effect of the implementation in 2008 on moving from O to E , rrr coefficient

	Primary			Secondary			Highest		
	Model 1	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**
Treatment (Proportion)	0.045	0.045	**0.003****	**0.008****	**0.009***	**0.001****	0.9	0.901	0.714
	(0.090)	(0.091)	(0.006)	(0.019)	(0.021)	(0.004)	(3.067)	(3.068)	(3.025)
Female	**0.379*****	**0.383*****	**0.385*****	**0.314*****	**0.194*****	**0.195*****	**0.549****	**0.563****	**0.561****
	(0.048)	(0.049)	(0.050)	(0.053)	(0.033)	(0.034)	(0.138)	(0.141)	(0.144)
Female * Treatment	0.063	0.063	0.208	10.61	14.16	17.78	13.11	7.37	9.43
	(0.153)	(0.151)	(0.525)	(3.41)	(4.61)	(5.98)	(5.96)	(3.35)	(4.41)
Post	**2.033*****	**2.035*****	**2.380*****	0.878	0.962	1.32	1.229	1.24	1.022
	(0.387)	(0.388)	(0.539)	(0.213)	(0.236)	(0.392)	(0.362)	(0.368)	(0.380)
Post * Female	**0.545****	**0.546****	**0.523*****	1.336	1.000	0.806	0.738	0.668	0.647
	(0.133)	(0.133)	(0.127)	(0.461)	(0.352)	(0.287)	(0.306)	(0.278)	(0.270)
Distance	0.988	0.988	0.977	0.954	0.958	0.957	1.043	1.039	1.035
	(0.028)	(0.028)	(0.025)	(0.035)	(0.036)	(0.035)	(0.029)	(0.029)	(0.029)
Female * Distance	**0.978*****	**0.978*****	**0.978*****	1.002	1.003	1.004	**0.969****	**0.969****	**0.968****
	(0.005)	(0.005)	(0.005)	(0.008)	(0.008)	(0.008)	(0.014)	(0.014)	(0.014)
Distance square	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Female * Distance square	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Treatment* Post	**0.000*****	**0.000*****	**0.007***	0.066	0.03	20.35	0.025	0.022	0.488
	(0.000)	(0.000)	(0.020)	(0.216)	(0.101)	(7.739)	(0.106)	(0.095)	(2.382)
Female * Treatment* Post	**1.03*****	**9.97*****	**5.51*****	0.009	3.918	7.245	4.914	2.726	2.522
	(3.64)	(3.53)	(1.98)	(0.044)	(1.869)	(3.523)	(2.814)	(1.566)	(1.470)
Treatment* Distance	0.932	0.931	1.004	0.893	0.886	0.905	0.898	0.901	0.9
	(0.058)	(0.058)	(0.063)	(0.072)	(0.072)	(0.077)	(0.122)	(0.123)	(0.127)
Female * Treatment * distance	**1.299*****	**1.301*****	**1.294*****	0.899	0.886	0.864	**1.527****	**1.541****	**1.556****
	(0.096)	(0.096)	(0.099)	(0.113)	(0.115)	(0.118)	(0.321)	(0.324)	(0.336)
Distance * Post	0.997	0.996	1.003	0.991	0.991	0.991	0.99	0.989	0.989
	(0.005)	(0.005)	(0.005)	(0.006)	(0.006)	(0.006)	(0.009)	(0.009)	(0.009)
Female * Distance* Post	**1.023*****	**1.023*****	**1.023*****	0.996	0.997	0.996	1.023	1.025	1.026
	(0.006)	(0.006)	(0.006)	(0.008)	(0.008)	(0.008)	(0.016)	(0.016)	(0.016)
Treatment * Distance *Post	1.019	1.02	0.949	1.086	1.092	1.075	1.093	1.093	1.091
	(0.067)	(0.067)	(0.063)	(0.091)	(0.093)	(0.095)	(0.155)	(0.155)	(0.160)
Female * Treatment * Distance * Post	**0.777*****	**0.776*****	**0.781*****	1.11	1.122	1.149	0.709	0.698	**0.689***

	(0.059)	(0.059)	(0.062)	(0.144)	(0.151)	(0.162)	(0.156)	(0.153)	(0.155)
Cons	3.674	5.288	**0.000*****	0.597	**0.000*****	**0.000*****	**0.001****	**0.000*****	**0.000*****
	(4.446)	(6.977)	(0.000)	(1.171)	(0.000)	(0.000)	(0.003)	(0.000)	(0.000)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
r2_p	0.082	0.085	0.074	0.055	0.091	0.1	0.032	0.048	0.055
N	61002	61002	61002	36021	36021	36021	17240	17240	17240

* p<0.10, ** p<0.05, *** p<0.01.
Source: Author from ONS's data bases

Table A7: Heterogeneous effect of the implementation in 2008 on moving from O to U , rrr coefficients

	Primary			Secondary			Highest		
	Model 1	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**
Treatment	0.534	0.627	**1.03*** **	0.123	0.141	**3.06*** **	7.69135	5.51	**5.22*** **
	(1.500)	(1.760)	(3.34)	(0.405)	(0.470)	(1.16)	(3.24)	(2.31)	(2.25)
Female	**0.183*** **	**0.237*** **	**0.212*** **	**0.520*** **	**0.373*** **	**0.331*** **	**2.528*** **	**2.576*** **	**2.384*** **
	(0.041)	(0.054)	(0.045)	(0.117)	(0.085)	(0.070)	(0.682)	(0.694)	(0.597)
Female * Treatment	**0.000*** **	**0.000*** **	**0.000*** **	**0.000** **	**0.000** **	**0.001***	**0.000** **	**0.000** **	**0.000** **
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.003)	(0.000)	(0.000)	(0.001)
Post	**1.946*** **	**1.969*** **	**4.219*** **	0.882	0.957	**2.955*** **	1.403	1.396	**3.392*** **
	(0.493)	(0.501)	(1.364)	(0.295)	(0.323)	(1.205)	(0.464)	(0.462)	(1.266)
Post * Female	**0.261*** **	**0.274*** **	**0.264*** **	**0.484**	**0.386** **	**0.399** **	0.579	0.58	0.624
	(0.109)	(0.115)	(0.108)	(0.222)	(0.178)	(0.180)	(0.224)	(0.225)	(0.233)
Distance	1.034	1.035	1.002	1.004	1.011	1.011	**1.055** **	**1.051** **	**1.053** **
	(0.033)	(0.034)	(0.032)	(0.039)	(0.040)	(0.040)	(0.026)	(0.026)	(0.026)
Female * Distance	**0.975** **	**0.973** **	**0.976** **	**0.971*** **	**0.970*** **	**0.974** **	0.982	0.983	0.985
	(0.011)	(0.011)	(0.010)	(0.011)	(0.011)	(0.010)	(0.013)	(0.013)	(0.012)
Distance square	1.000	1.000	1.000*	1.000	1.000	1.000	1.000	1.000	1.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Female * Distance square	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Treatment* Post	**0.000*** **	**0.000*** **	**0.000*** **	0.02	0.012	**0.000*** **	0.019	0.023	**0.000*** **
	(0.000)	(0.000)	(0.000)	(0.091)	(0.053)	(0.000)	(0.091)	(0.113)	(0.000)
Female * Treatment* Post	**5.12*** **	**1.04*** **	**1.48*** **	**1.09*** **	**1.55*** **	**2.03*** **	**4.22***	**3.47***	**7.22***
	(3.24)	(6.57)	(8.67)	(6.85)	(9.85)	(1.19)	(2.43)	(2.00)	(3.83)
Treatment* Distance	0.986	0.973	0.977	**0.737*** **	**0.730*** **	**0.760*** **	0.808	0.816	0.828
	(0.110)	(0.111)	(0.092)	(0.077)	(0.078)	(0.072)	(0.149)	(0.151)	(0.133)
Female * Treatment * distance	**1.533*** **	**1.576*** **	**1.454*** **	**1.436** **	**1.448***	**1.356***	1.008	0.989	0.991
	(0.248)	(0.258)	(0.209)	(0.264)	(0.274)	(0.224)	(0.276)	(0.271)	(0.240)
Distance * Post	0.996	0.996	0.995	**0.974*** **	**0.974*** **	**0.975*** **	0.985	0.984	**0.983***
	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.007)	(0.010)	(0.010)	(0.009)
Female * Distance* Post	**1.029** **	**1.031*** **	**1.027*** **	**1.029** **	**1.031** **	**1.027** **	1.014	1.014	1.013
	(0.012)	(0.012)	(0.011)	(0.012)	(0.012)	(0.011)	(0.014)	(0.014)	(0.013)
Treatment * Distance *Post	1.052	1.065	1.068	**1.371*** **	**1.378*** **	**1.327*** **	1.227	1.217	1.199
	(0.119)	(0.122)	(0.102)	(0.147)	(0.150)	(0.130)	(0.229)	(0.227)	(0.194)
Female * Treatment * Distance * Post	**0.647*** **	**0.626*** **	**0.682*** **	**0.684** **	**0.680** **	**0.721***	1.005	1.021	1.021
	(0.106)	(0.103)	(0.099)	(0.128)	(0.131)	(0.122)	(0.277)	(0.281)	(0.249)
Cons	**0.003** **	0.175	14.68	0.032	**0.000*** **	**0.000*** **	0.029	**0.000*** **	**0.000*** **
	(0.008)	(0.474)	(29.759)	(0.092)	(0.000)	(0.000)	(0.067)	(0.000)	(0.000)

Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
r2_p	0.082	0.085	0.074	0.055	0.091	0.1	0.032	0.048	0.055
N	61002	61002	61002	36021	36021	36021	17240	17240	17240

* p<0.10, ** p<0.05, *** p<0.01.

Source: Author from ONS's data bases

Table A8: Heterogeneous effect of the modification in 2010 on moving from U to E , rrr coefficients

	Primary			Secondary			Highest		
	Model 1	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**
Treatment (Proportion)	0.815	0.767	0.934	0.112	0.102	**0.019****	0.316	0.313	6.846
	(0.625)	(0.589)	(0.911)	-0.162	(0.149)	(0.036)	(0.854)	(0.846)	(21.083)
Female	0.765	0.769	**0.753***	**0.350*****	**0.352*****	**0.358*****	0.762	0.789	0.793
	(0.129)	(0.129)	(0.126)	-0.078	(0.079)	(0.080)	(0.182)	(0.188)	(0.187)
Female * Treatment	**0.005****	**0.004****	**0.009***	4.367	3.932	2.7117	0.373	0.29	0.266
	(0.013)	(0.011)	(0.024)	(15.818)	(14.318)	(9.842)	(1.428)	(1.109)	(1.003)
Post	**3.293*****	**3.260*****	**3.305*****	**4.016*****	**4.000*****	**4.062*****	**3.325*****	**3.368*****	**8.224*****
	(0.332)	(0.329)	(0.460)	-0.882	(0.880)	(1.163)	(1.156)	(1.172)	(3.437)
Post * Female	**0.362****	**0.364****	**0.368****	2.056	1.939	1.884	**0.360****	**0.359****	**0.349****
	(0.167)	(0.168)	(0.171)	-1.39	(1.314)	(1.277)	(0.187)	(0.187)	(0.181)
Distance (KM)	**0.973***	**0.972***	**0.969****	**0.946***	0.949	**0.941***	0.964	0.963	0.962
	(0.015)	(0.015)	(0.014)	-0.03	(0.030)	(0.030)	(0.033)	(0.033)	(0.033)
Female * Distance	1.003	1.003	1.003	0.997	0.997	0.995	1.01	1.01	1.011
	(0.005)	(0.005)	(0.005)	-0.012	(0.012)	(0.012)	(0.013)	(0.013)	(0.013)
Distance square (KM)	1.000	1.000	1.000	1.000	1.000	1.000	**1.000****	**1.000***	**1.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Female * Distance square	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Treatment* Post	**0.001*****	**0.001*****	**0.000*****	**0.000*****	**0.000*****	**0.001*****	**0.000****	**0.000****	**0.000*****
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.002)	(0.000)	(0.000)	(0.000)
Female * Treatment* Post	**7.430*****	**7.360*****	**3.700****	0.024	0.039	0.056	**2.510***	**2.868***	**3.761***
	(3.800)	(3.770)	(1.906)	(1.650)	(0.272)	(0.392)	(1.460)	(1.670)	(2.180)
Treatment* Distance	0.995	0.994	0.994	**1.085***	1.079	1.08	0.875	0.878	0.863
	(0.020)	(0.020)	(0.020)	-0.051	(0.051)	(0.051)	(0.119)	(0.120)	(0.117)
Female * Treatment * distance	1.029	1.026	1.029	0.99	0.996	1.022	0.86	0.863	0.848
	(0.063)	(0.062)	(0.061)	-0.186	(0.187)	(0.193)	(0.186)	(0.187)	(0.184)
Distance * Post	0.998	0.998	0.998	**1.006***	1.005	1.006	0.989	0.989	0.987
	(0.002)	(0.002)	(0.002)	-0.003	(0.003)	(0.003)	(0.009)	(0.009)	(0.009)
Female * Distance* Post	**1.044*****	**1.043****	**1.045*****	**0.947***	**0.947***	**0.946***	0.984	0.984	0.985
	(0.017)	(0.017)	(0.017)	-0.028	(0.028)	(0.028)	(0.020)	(0.020)	(0.019)
Treatment * Distance *Post	1.01	1.011	1.012	**0.897****	**0.901***	**0.902***	1.113	1.112	1.135
	(0.023)	(0.023)	(0.024)	-0.047	(0.048)	(0.048)	(0.160)	(0.159)	(0.162)
Female * Treatment * Distance * Post	**0.621*****	**0.628*****	**0.615*****	1.579	1.581	1.573	1.287	1.297	1.283
	(0.112)	(0.113)	(0.112)	-0.457	(0.458)	(0.458)	(0.333)	(0.335)	(0.332)
Cons	0.998	0.833	**10.927****	0.182	2.348	22.475	0.042	**0.000****	**0.001****
	(0.902)	(0.825)	(11.198)	(0.347)	(4.947)	(48.337)	(0.107)	(0.001)	(0.004)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
r2_p	0.089	0.091	0.096	0.094	0.097	0.104	0.074	0.075	0.08

N	24520	24520	24520	7737	7737	7737	5241	5241	5241

* p<0.10, ** p<0.05, *** p<0.01.
Source: Author from ONS's data bases

Table A9: Heterogeneous effect of the modification in 2010 on moving from O to E , rrr coefficients

	Primary			Secondary			Highest		
	Model 1	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**
Treatment (Proportion)	0.143	0.143	**0.001*** **	0.061	0.06	**0.024***	9.991	10.564	17.923
	(0.211)	(0.211)	(0.001)	(0.109)	(0.109)	(0.054)	(24.080)	(25.567)	(52.238)
Female	**0.275*** **	**0.277*** **	**0.272*** **	**0.305*** **	**0.197*** **	**0.196*** **	**0.455*** **	**0.457*** **	**0.457*** **
	(0.027)	(0.027)	(0.028)	(0.041)	(0.028)	(0.028)	(0.091)	(0.091)	(0.092)
Female * Treatment	2.863	2.876	3.911	**7.033***	**8.226***	**8.973***	14.161	9.025	9.142
	(4.913)	(4.935)	(7.037)	(16.168)	(19.071)	(21.092)	(45.493)	(29.061)	(29.748)
Post	**0.199*** **	**0.199*** **	**0.223*** **	**0.396*** **	**0.421*** **	**0.445** **	0.688	0.68	1.243
	(0.060)	(0.060)	(0.076)	(0.129)	(0.139)	(0.178)	(0.255)	(0.255)	(0.547)
Post * Female	**5.176** **	**5.127** **	**4.888** **	**0.127*** **	**0.210** **	**0.209** **	1.289	1.346	1.38
	(3.715)	(3.681)	(3.487)	(0.098)	(0.161)	(0.161)	(0.680)	(0.717)	(0.731)
Distance (KM)	0.997	0.997	0.997	0.99	0.995	0.994	1.012	1.01	1.007
	(0.023)	(0.023)	(0.023)	(0.030)	(0.030)	(0.030)	(0.026)	(0.026)	(0.026)
Female * Distance	**0.997***	**0.997***	0.997	0.999	0.999	0.999	0.999	0.999	0.999
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.004)	(0.004)	(0.004)
Distance square (KM)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Female * Distance square	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Treatment* Post	13.338	13.244	**5.574***	2.633	1.31	2.488	0.247	0.234	0.067
	(43.993)	(43.692)	(1.874)	(9.226)	(4.660)	(9.284)	(1.001)	(0.959)	(0.291)
Female * Treatment* Post	0.000	0.000	0.000	**5.360***	**7.390***	**7.340***	0.334	0.713	0.567
	(0.001)	(0.001)	(0.002)	(3.980)	(5.500)	(5.460)	(1.908)	(4.112)	(3.271)
Treatment* Distance	**0.946** **	**0.945** **	**0.947***	**0.924*** **	**0.924** **	**0.925** **	0.967	0.961	0.963
	(0.027)	(0.027)	(0.027)	(0.028)	(0.028)	(0.029)	(0.047)	(0.046)	(0.046)
Female * Treatment * distance	1.029	1.029	1.028	0.988	0.986	0.986	1.002	0.999	0.999
	(0.025)	(0.025)	(0.025)	(0.023)	(0.024)	(0.024)	(0.045)	(0.044)	(0.044)
Distance * Post	**1.007***	**1.007***	**1.007***	0.996	0.996	0.996	0.997	0.997	0.997
	(0.004)	(0.004)	(0.004)	(0.004)	(0.005)	(0.005)	(0.006)	(0.006)	(0.007)
Female * Distance* Post	**0.977** **	**0.977***	**0.976** **	1.009	1.009	1.009	0.992	0.993	0.993
	(0.012)	(0.012)	(0.012)	(0.007)	(0.007)	(0.007)	(0.010)	(0.010)	(0.010)
Treatment * Distance *Post	0.926	0.926	0.929	1.06	1.056	1.055	1.005	1.012	1.007
	(0.054)	(0.054)	(0.052)	(0.051)	(0.054)	(0.055)	(0.073)	(0.075)	(0.080)
Female * Treatment * Distance * Post	**1.235***	**1.234***	**1.240** **	0.923	0.922	0.922	1.08	1.073	1.072
	(0.135)	(0.135)	(0.133)	(0.071)	(0.076)	(0.077)	(0.110)	(0.111)	(0.108)
Cons	5.765	7.858		0.769					

			18.561**		**0.000*****	**0.000*****	**0.003****	**0.000*****	**0.000*****
	(7.107)	(10.524)	(25.997)	(1.500)	(0.000)	(0.000)	(0.007)	(0.000)	(0.000)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
r2_p	0.096	0.099	0.109	0.07	0.101	0.111	0.033	0.049	0.059
N	62153	62153	62153	35875	35875	35875	17151	17151	17151

* p<0.10, ** p<0.05, *** p<0.01.

Source: Author from ONS's data bases

Table A10: Heterogeneous effect of the modification in 2010 on moving from O to U , rrr coefficients

	Primary			Secondary			Highest		
	Model 1	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**	**Model 1**	**Model 2**	**Model 3**
Treatment (Proportion)	**4.341***	**3.938***	**3.340*****	0.346	0.426	**1.470*****	**1.808*****	**1.496****	**5.920*****
	(8.662)	(7.845)	(8.120)	(0.876)	(1.088)	(4.430)	(5.188)	(4.293)	(1.800)
Female	**0.100*****	**0.123*****	**0.125*****	**0.411*****	**0.300*****	**0.283*****	**1.939*****	**1.972*****	**1.881*****
	(0.019)	(0.023)	(0.022)	(0.081)	(0.060)	(0.052)	(0.406)	(0.414)	(0.365)
Female * Treatment	0.558	0.705	0.782	0.134	0.14	0.286	**0.002***	**0.004***	**0.007***
	(1.737)	(2.191)	(2.189)	(0.452)	(0.473)	(0.851)	(0.008)	(0.013)	(0.020)
Post	0.600	0.650	**0.165*****	**0.292****	**0.314****	**0.207*****	0.92	0.936	0.95
	(0.224)	(0.244)	(0.078)	(0.142)	(0.152)	(0.122)	(0.342)	(0.349)	(0.396)
Post * Female	3.346	2.526	2.512	0.834	1.287	1.393	0.731	0.726	0.751
	(2.760)	(2.108)	(2.126)	(0.650)	(1.004)	(1.091)	(0.326)	(0.326)	(0.329)
Distance (KM)	1.023	1.024	1.017	1.001	1.009	1.014	1.032	1.031	1.027
	(0.030)	(0.030)	(0.029)	(0.037)	(0.037)	(0.036)	(0.022)	(0.022)	(0.022)
Female * Distance	1.000	1.000	1.000	**0.980****	**0.979****	**0.983****	0.999	1.000	1.000
	(0.005)	(0.005)	(0.005)	(0.008)	(0.008)	(0.008)	(0.007)	(0.007)	(0.006)
Distance square (KM)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Female * Distance square	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Treatment* Post	**0.000****	**0.000****	**0.000*****	30.601	14.538	**0.000****	0.052	0.048	**0.000*****
	(0.001)	(0.001)	(0.000)	(153.713)	(72.969)	(0.000)	(0.219)	(0.204)	(0.000)
Female * Treatment* Post	6.781	9.763	5.825	7.336	6.185	2.518	3.575	3.314	2.175
	(5.696)	(8.286)	(4.981)	(5.763)	(4.871)	(1.940)	(1.806)	(1.682)	(1.055)
Treatment* Distance	1.013	1.011	1.028	**0.813****	**0.805*****	**0.816*****	1.051	1.054	1.06
	(0.063)	(0.064)	(0.060)	(0.067)	(0.067)	(0.060)	(0.078)	(0.079)	(0.077)
Female * Treatment * distance	1.051	1.058	1.041	**1.354****	**1.367****	**1.284****	0.957	0.938	0.944
	(0.083)	(0.084)	(0.080)	(0.187)	(0.189)	(0.157)	(0.109)	(0.109)	(0.101)
Distance * Post	**0.986****	**0.985****	**0.983****	**0.978****	**0.979****	**0.975****	1.002	1.002	1.002
	(0.007)	(0.007)	(0.008)	(0.011)	(0.010)	(0.013)	(0.006)	(0.006)	(0.006)
Female * Distance* Post	0.997	0.998	0.997	**1.037***	**1.036***	1.033	1.000	1.000	0.999
	(0.007)	(0.007)	(0.007)	(0.021)	(0.020)	(0.022)	(0.008)	(0.008)	(0.007)
Treatment * Distance *Post	1.141	**1.151***	**1.173***	**1.337****	**1.335*****	**1.365****	0.952	0.949	0.943
	(0.096)	(0.098)	(0.107)	(0.151)	(0.144)	(0.165)	(0.085)	(0.086)	(0.083)
Female * Treatment * Distance * Post	0.998	0.985	0.999	**0.638****	**0.638****	**0.673***	1.037	1.056	1.055
	(0.088)	(0.088)	(0.088)	(0.139)	(0.136)	(0.146)	(0.131)	(0.137)	(0.127)
Cons		0.015	0.013	0.028			**0.044**		

	0.001* **				**0.000*** **	**0.000*** **		**0.000*** **	**0.000*** **
	(0.002)	(0.041)	(0.036)	(0.080)	(0.000)	(0.000)	(0.100)	(0.000)	(0.000)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
r2_p	0.096	0.099	0.109	0.07	0.101	0.111	0.033	0.049	0.059
N	62153	62153	62153	35875	35875	35875	17151	17151	17151

* p<0.10, ** p<0.05, *** p<0.01.
Source: Author from ONS's data bases