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Educational Mismatch and Regional Disparities: Case of Tunisian Youth Graduates

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Abstract

In this paper, we examine the effects of different categories of determinants factors on the mismatch of educational attainment of youth graduates in Tunisia and the effectiveness of the employment government policies. Our main objective is to consider the regional aspect more especially to distinguish between the inland areas (the West areas) where the youth graduate unemployment is the most higher and the coastal areas (the East areas) where this problem is less important. As our knowledge this paper is the first work in Tunisia that analyses the determinant factors of the mismatch for high-skilled education levels by governorates using the database of the National Employment Agency and Self Employment (ANETI) of the Ministry of Vocational Training and Employment. The results confirm regional disparities in mismatching situation. Individuals from coastal governorates present less chance to be placed within mismatching situation compared to the inland regions where economic activity and development are limited.

Keywords: Educational Mismatch, regional disparities, diploma effects

JEL Classification: C25, J24, J41, O18

1. Introduction

Education is largely considered as investment in human capital which it consists of the knowledge, skills and experience that a person can acquire (Becker 1962). However, sometimes this person can fail in the perfect use of his human capital. At this situation, we speak about the mismatch of education which it implies that the worker has acquired a certain level of education different than what is required to perform his job.

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This problem of mismatching means that resources are not used efficiently when workers have lower return on their investment compared to similarly educated persons whose jobs match appropriately their level of education.

There is now a substantial body of literature addressing the phenomenon of mismatch of education in developed countries. An increasing amount of this literature is interested to give explanation of the mismatch that is consistent with the theories of the labor markets as the human capital theory (Becker 1964), the job competition model (Thurow 1975) or the assignment models (Tinbergen 1956). However, few studies have examined this phenomenon in the developing countries by considering different regions but also few of them are interested to determine factors that affect the mismatch of education in these countries.

Several explanations have been attributed to the phenomenon of mismatching. One of them concerns the career mobility theory (Sicherman and Galor 1990). In fact, at the beginning of his career a person can accept a job which is not conform to his educational level with the aim to move to a higher position later. The signaling theory is also one of the explanations for mismatching. In his model, Spence 1973 considers that the education is a proxy of the ability because the employer cannot evaluate the productivity of a worker at the beginning when he engages him. Many empirical studies had proved that the experience of the worker can explains this phenomenon of mismatching because the young workers are more exposed to this problem than the experienced one (Sicherman 1991).

Another explanation which is the main focus of this study is spatially limited job search area and regions disparities. Jobs and workers are unequally distributed across space which leads to spatial mismatch. Generally, highly educated persons and their jobs are concentrated in the biggest cities and areas where the investment is important. So employees located in the other areas are more likely to have a job which does not match their educational level. Limited job search areas can lead to this problem (Frank 1978).

In general, the individual searches a job in his local labor market. When the job that matches with his qualification is not found, this person chooses between to accept a job that requires different level of education or to be unemployed or also to move to another labor market area (Van Ham 2002).

Several studies have evocated the regional aspect of the educational mismatch in particular the over-education (Büchel and van Ham 2003; Sanromá and Ramos 2004; Hensen and de Vries 2004). People with more qualification choose to move to cities where the return on their investment in human capital is more important (Sjaastad 1962). Human capital will be concentrated in the biggest cities where the people with higher education prefer to live while it plays a crucial role in regional development. It contributes to the increase of the productivity in these regions which leads to the efficiency of their labor market and stimulate the increased flow of information and innovations (Simon 1998; Moretti 2004).

Tunisia is considered as a developing country that has attributed a big amount of his resources to education (7 per cent of the GDP). The government ensures the educational financing from the primary to the higher level. Since the independence, education is free and all Tunisian can beneficiate of this service independently of their gender, region, family and wealth. This policy of educational generalization has contributed every year to the increase of the number of youth graduates from the Tunisian universities. At the same time, the lack of the job creation in the Tunisian economy has amplified the unemployment (14 per cent in 2010) particularly for the graduates (23.3 per cent in 2010). This problem becomes more serious after the revolution. The discrepancies of development between governorates are huge. The inland areas are hit by unemployment of youth graduates (47.7 per cent in Gafsa) more than the coastal area (10.1 per cent Ariana). In order to attenuate this problem and to create job for this category of people, many policies are adopted by the government. Today in addition to this problem of unemployment that characterizes all the country especially the inland region, the youth graduates are obliged to accept a job with required qualification different of his level of education. This phenomenon of mismatch becomes more serious and it depends largely of the regions.

The aim of this paper is to explain the mismatch on the educational level in Tunisia by considering regional differences.

Our objective is to determine the impact of several factors on this phenomenon and to find the governorates where the risk of mismatching is high. The analysis of the educational mismatch in different regions becomes necessary because of the concentration of people with high level of education in the big cities.

The paper discusses if is it important to leave the inland regions in Tunisia and to be concentrated in the coastal regions where the opportunity to have a job that matches the level of education is high. We try also to verify the positive impact of the labor market policies in the sense that young graduates who beneficiate of these policies can have job that matches with his qualification.

As our knowledge, this paper is the first one that analyzes the impact of several factors and labor market policies on the question of educational mismatch in Tunisia by considering the regional aspects particularly the distinction between the inland areas where the unemployment rate of young graduates is the most important and the level of development is low, and the coastal areas where unemployment is less important and there is more development. The database of the National Employment Agency and Self Employment (ANETI) related to the Ministry of Vocational Training and Employment is used for the first time in order to realize this work. This micro-database contains a lot of information about the existing job seekers for the year 2010 and their position in April 2013 in all the agencies of the 24 Tunisian governorates.

The rest of the paper is organized as follows. Next section gives details concerning the data, presents some selected descriptors and the empirical approach. Section 3 summarizes the estimate results of the empirical models and finally, section 4 contains the conclusions.

2. Data and Method

To analyse the determinant factors of mismatching in the case of placement, we use the database of the National Employment Agency and Self Employment (ANETI) of the Ministry of Vocational Training and Employment. This micro-database contains several informations about the existing job seekers for the year 2010 and their position in April 2013 in all the agencies of the Tunisian governorates. We estimate the probability of getting a job in a situation of mismatching using a Logistic model and by considering different characteristics pooled in biographical, school titles, participation in any active labor market policies and regional characteristics.

This study contains four models. The first considers only the governorates of residence in addition to the biographical characteristics, school titles, and participation in active labor policies. The sectors of activities are included in the second model.

The two last models present the same methodology but we replace the governorates of residence by the governorates of placement. So the regional distribution of individuals is according two criteria: the governorates of residence (model 1 and 2) and the governorates of placement (model 3 and 4). Introducing separately these determinants highlights the possibility of divergence among governorates of residence and placement in terms of finding a job in adequacy with the obtained school title.

Our sample is composed by 13537 youth graduates where only 14.4 per cent among them get a job in mismatching situation. The rest of the sample (84.60 per cent) had profited from the different active labor market policy offered by the government. These politics are mainly contract of reinsertion in the active life (CRVA), intrductory course in the professional life of graduates of higher education (SIVP), contract partially financed by the government and voluntary civil contract.

Table 1: School Titles and Mismatching Situation

School titles	Total graduates	Mismatching (per cent)
Higher technician certificate (BTS)	484	42.77
Architecte	14	14.29
Undergraduate level[a]	298	15.77
Postgraduate degree[b]	339	46.90
Technician diploma	3043	7.72
Engineer	595	16.13
Doctorate	1	100
Doctor of Medicine	13	0
Licence or Bachelor degree	5871	12.35
Pharmacist	33	3.03
Veterinarian	3	0
Other titles	6	16.67

a. Undergraduate level : Baccalauréate plus2 years of tertialry education
b. Postgraduate level : Master's degree

In terms of school title (Table 1), statistics show that mismatching affect more the graduates with higher technician certificate and with postgraduate degree.

Table 2: Distribution of Graduates by Sectors of Activities and Mismatching Situation

Sectors of activities	Total graduates	Mismatching (per cent)
Public admisitration	1453	8.67
Agriculture	473	7.40
Building	578	11.94
Commercial sector	1623	23.11
Leather and footwear sector	228	12.72
Manufactural industries except textile	1466	16.37
Mining and energy sector	320	12.50
Fishing	9	11.11
Textile and clothing sector	433	15.70
Tourism	279	15.77
Transport	212	9.43
Others	1798	10.18

According to the distribution of graduates by sectors of activities, placement with mismatching is more relevant in commercial sector (23.11 per cent) and manufactural industries except textile. Those sectors offer jobs to more than the third of the employed persons in this sample. Public administration and agriculture present less jobs opportunities in mismatching situation. In general, access to public administration is subject to concour that ensure the adequacy between demanded school title by jobs and those obtained by candidates.

In this work we focus on the regional distribution of placement within mismatching situation.

Tunisia presents regional disparities in terms of economic activities concentration and opportunities of employment. Coastal regions (Figure 1) present an important economic development than inland regions (regions of the center and the west). This disparity can explain the unemployment of graduates (Figure 2). In fact, graduates in Tunisia suffer of this problem of unemployment but also of mismatching specially of over-education. This phenomenon is more concentrated in inland region where the unemployment rates are the most important (more than 40 per cent).

Figure 1: Regional distribution of graduates by governorates

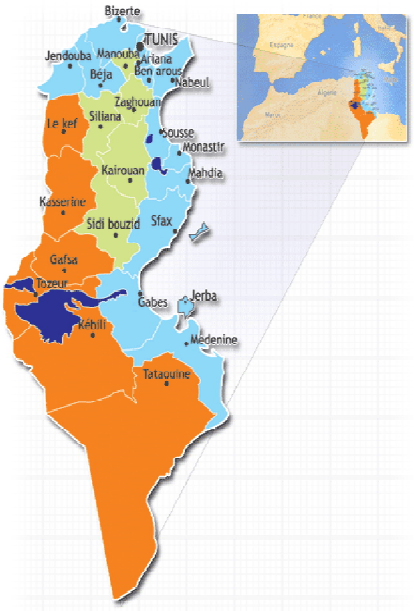
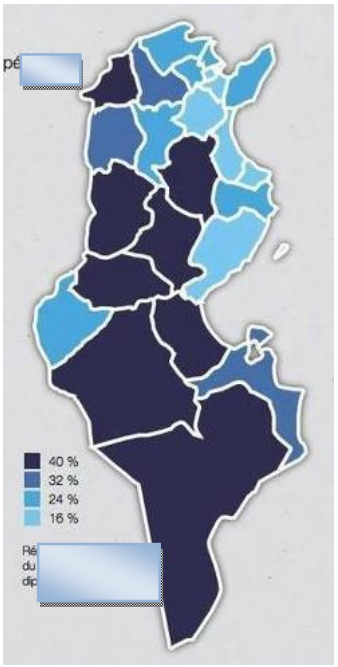


Figure 2 : Unemployment of graduates by governorates



Source: World Economic Forum: Addressing the 100 Million Youth Challenge Perspectives on Youth Employment in the Arab World in 2012 – Juin 2012

In this sample, the distribution of graduates of our sample shows that inland governorates such as Gafsa, Tataouine and Kasserine present the less proportion of placed graduates which is conditioned by a mismatching situation. Governorate of Ariana presents a higher proportion of mismatching (30.42 per cent) but a higher degree of placement (720 graduates).

Table 3: Distribution of Graduates by Governorates of Placement and Mismatching Situation

Governorates of placement	Graduates	Mismatching (per cent)
Gafsa	6	33.33
Kasserine	6	33.33
Tataouine	17	23.53
Kebili	25	16
Kef	27	18.52
Tozeur	33	12.12
Medenine	36	2.78
Jendouba	74	8.11
Sfax	76	5.26
Manouba	133	16.54
Gabes	149	8.05
Seliana	159	9.43
Mahdia	198	4.04
Kairouan	229	28.38
Beja	243	19.75
Zaghouane	365	13.97
Nabeul	434	4.84
Bizerte	462	14.94
Monastir	592	11.82
Ben Arous	667	14.69
Ariana	720	30.42
Sidi Bouzid	1078	7.98
Sousse	1175	12.6
Tunis	2028	13.46

3. Empirical Results

The main objective of this empirical study is to identify the principal determinants of mismatching in the case of placement of the Tunisian higher education graduates. We focus on the regional characteristics such as the governorates of residence and the governorates of placement.

The results of the probit models are presented exclusively in terms of the marginal effects which refer to the exact probability to be in situation of mismatching relatively to each considered characteristic.

The explanatory and discriminate are presented in Table 4. The power of the model to discriminate between positive and negative cases is quantified by the sensitivity, the specificity and the area under the ROC curve. Adding the activities sectors enhance the capacity of the model to discriminate graduates in mismatching situation from the others. The area under the Roc curve moves from a fair capacity to discriminate to a good capacity respectively from the model 1 to the model 2 and from the model 3 to the model 4.

We note that only the models that estimate the probabilities of mismatching present a best explanatory capacity if we introduce the sectors of activities as a determinant of mismatching. The R^2 of Mac Fadden increases from model 1 to 2 and from model 3 to 4. Globally, considering the sectors of activities enhance the explanatory power factors on the probability of being in mismatching situation. Secondly, when we consider the governorates of placement rather than the governorates of residence, models are more relevant in the explanation of the phenomenon.

Table 4: Explanatory and Discriminatory Powers of the Models

	Model 1	**Model 2**	**Model 3**	**Model 4**
Number of obs	10680	7483	6752	6737
Wald chi2	795.98	826.31	710.19	786.40
Prob > chi2	0.0000	0.0000	0.0000	0.0000
Pseudo R2	0.1018	0.1620	0.1507	0.1702
Log pseudolikelihood	-3843.3547	-2613.4297	-2370.7339	-2311.2257
Sensitivity	5.99%	12.85%	9.11%	10.97%
Specificity	98.70%	97.57%	98.08%	97.81%
Correctly classified	85.94%	85.15%	85.20%	85.25%
Area underRoc curve	0.7207	0.7847	0.7781	0.7933

According to the Wald tests (Table 5), the hypothesis that the effects of diploma, sectors of activities and governorates of residence and placement are simultaneously zero is rejected. The governorates of placement present an important explanatory power than the governorates of residence with respectively a Wald test value of 181.13 and 111.32. The regional variables loose their explanatory powers with the introduction of the activities sectors. The Wald test passes from 111.32 to 56.43 for the models with the governorates of residence and from 181.13 to 121.33 for the models with the governorates of placement.

Table 5: Explanatory Powers of Polytomic Variables

	Model 1	Model 2	Model 3	Model 4
Governorate of residence	chi2(19) = 111.32 Prob > chi2 = 0.0000	chi2(18) = 56.43 Prob > chi2 = 0.0000		
Governorate of placement			chi2(21) = 181.13 Prob > chi2 = 0.0000	121.33 Prob > chi2 = 0.0000
Diploma	chi2(8) = 421.35 Prob > chi2 = 0.0000	434.91 Prob > chi2 = 0.0000	336.56 Prob > chi2 = 0.0000	348.13 Prob > chi2 = 0.0000
Sector of activity		160.14 Prob > chi2 = 0.0000		100.17 Prob > chi2 = 0.0000

Biographical characteristics (Table 6) affect significantly the probability to get a job conditionally with mismatching. Men have 1.86 per cent of chance to be in mismatching situation relatively to women in the model with governorates of residence. This probability becomes more important where the model incorporates the governorates of placement. The age present a significant effect in all the models but the probability is less important compared to the others determinants. The marital statue affects the probability to get a job with mismatching situation only for the first model. To be a divorced person is 28.4 per cent of chance to be in mismatching relatively to a single person. For married persons, this probability is only about 2.91 per cent.

Table 6: Biographical Variables Effects on the Mismatching Situation

	Model 1	Model 2	Model 3	Model 4
Man	**0.0186*** **	0.0117	**0.0206** **	**0.0142***
	(0.00680)	(0.00804)	(0.00849)	(0.00830)
Age	**0.00241***	**0.00422** **	**0.00408** **	**0.00421** **
	(0.00136)	(0.00178)	(0.00185)	(0.00183)
Marital statue (Reference :Single person)				
Divorced	**0.284** **	0.156	0.191	0.129
	(0.130)	(0.170)	(0.219)	(0.199)
Married	**0.0291** **	0.0238	0.0187	0.0224
	(0.0138)	(0.0180)	(0.0181)	(0.0184)

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

School titles have the most important explanatory power on the probability to be placed within a mismatching situation (Table 5). According to the empirical results (Table 7), it can be possible to give an order for the probability of the diploma in mismatching situation. Only pharmacists and technicians present less chance to be in mismatching compared to license and bachelor. The engineers present the less probability to be in mismatching situation. They are followed by the undergraduates where their probability is about 3.66 per cent for the first model and grow up to 6.09 per cent if we consider the governorates of placement but the introduction of the activities sectors reduces this probability to 4.52 per cent.

Higher technician certificate (BTS), which is the lowest school title, is more exposed to the phenomenon of mismatching for all the models. This mismatching situation is unanimously an under-education situation. Firms mostly engage graduates with BTS to ensure jobs of technicians but with low salaries.

Alternatively, postgraduate's degree present the highest probability to be in mismatching and more especially in overeducation situation. The probabilities increase when we introduce sectors of activities in each model. To be postgraduate is 39.8 per cent of chance to be in mismatching considering governorates of residence and 36.8 per cent with governorates of placement.

According to the year of diploma, oldest titles are more exposed to the mismatching situation but with a weak probability. However, the participation to the Active Labor Market Policies offered by the government can reduce the probability to be in mismatching situation with a probability between 10 per cent and 12.3 per cent.

Table 7: Diploma Effects on the Mismatching Situation

	Model 1	Model 2	Model 3	Model 4
Diploma (Reference: License and Bachelor degree)				
Higher technician certificate (BTS)	**0.244*** ** (0.0240)	**0.248*** ** (0.0285)	**0.257*** ** (0.0305)	**0.233*** ** (0.0304)
architecte	0.0217 (0.0944)	0.0563 (0.113)	0.0728 (0.119)	0.0647 (0.112)
Undergraduate level	**0.0366*** (0.0217)	0.0413 (0.0255)	**0.0609** ** (0.0280)	**0.0452*** (0.0268)
Postgraduate degree	**0.294*** ** (0.0281)	**0.398*** ** (0.0371)	**0.337*** ** (0.0397)	**0.368*** ** (0.0416)
Technician diploma	**-0.0503*** ** (0.00727)	**-0.0810*** ** (0.00800)	**-0.0740*** ** (0.00859)	**-0.0794*** ** (0.00823)
Engineer	**0.0258*** (0.0152)	0.0167 (0.0172)	0.00947 (0.0173)	0.0178 (0.0176)
Pharmacist	**-0.0843** ** (0.0339)	NA	NA	NA
Other diploma	0.0466 (0.153)	0.283 (0.280)	0.302 (0.277)	0.278 (0.278)
Year of diploma	**0.00969*** ** (0.00201)	**0.0101*** ** (0.00267)	**0.0102*** ** (0.00281)	**0.00860*** ** (0.00272)
Active Labor Market Policy	**-0.104*** ** (0.0112)	**-0.123*** ** (0.0145)	**0.102*** ** (0.0148)	**-0.100*** ** (0.0149)

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

The objective of introducing the sectors of activities as a determinant is to detect sectors where the mismatching situation is more frequent (Table 8). According to the statiscally significant coefficiants, public administration, agriculture, and other sectors present less probabilities to be in mismatching relatively to the sector of reference manufactural industries except the textile. Only comercial sector presents a positive probability of 3.92 per cent for the model with governorates of residence.

Table 8: Sectors of Activities Effects on the Mismatching Situation

	Model 2	Model 4
Sectors of activities (Reference: Manufactural industries except textile		
Public administration	**-0.0875*** **	**-0.0746*** **
	(0.00863)	(0.0102)
Agriculture	**-0.0912*** **	**-0.0875*** **
	(0.0162)	(0.0153)
Building	0.0282	0.0484
	(0.0274)	(0.0309)
Commercial sector	**0.0392*** **	0.0211
	(0.0126)	(0.0137)
Leather and footwear sector	0.000567	0.0304
	(0.0488)	(0.0564)
Mining and energy sector	-0.0320	-0.0379
	(0.0346)	(0.0336)
Textile and clothing sector	0.0151	0.0136
	(0.0193)	(0.0209)
Tourism	-0.00287	0.0131
	(0.0210)	(0.0249)
Transport	-0.0262	-0.0267
	(0.0212)	(0.0247)
Other sectors	**-0.0493*** **	**-0.0467*** **
	(0.00978)	(0.0107)

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

We also introduce regional characteristics in order to analyze the mismatching phenomenon. Regional unemployment rate have no signficant effects on the probability to be in mismatching situation. Only governorates of Ariana, Mahdia, Medenine, Nabeul and Sfax present significant effects on the probabilities of mismatching when they are considered at the same time as governorates of residence and governorates of placement. For the District of Tunis (Ariana, Ben Arous and Tunis), being a resident of Ariana presents 3.33 per cent of chance in less to be in mismatching relatively to the governorate of Tunis. This is not the case when Ariana is a governorate of placement where the probability of mismatching is about 15.4 per cent (Model 3) and 8.93 per cent (Model 4). However, Ben Arous as a governorate of placement presents 3.44 per cent of chance to be in mismatching (model 3).

In general, coastal governorates (Mahdia, Medenine, Nabeul and Sfax) present low probabilities to get a job in mismatching situation relativeley to Tunis even when these governorates are of residence and placement. It is not the case of Bizerte, Beja (coastal and in the north), Zaghouane and Kairouan (inland and in the center) when they are considered as governorates of placement.

In fact, the governorates of Bizerte, Ariana and Ben Arous, which are the nearest to the Capital Tunis, present more chance to be in mismatching situation. But for the coastal governorates there is less chance to be in mismatching compared to the district of Tunis. So more we go on the coastal governorates, more we have a chance to get a job in adequacy with our qualification. It is not the case of the governorates close to the capital and those of the inland regions (Kairouan, Gabes and Zaghouane).

Table 9: Regional Characteristics Effects on the Mismatching Situation

	Model 1	Model 2	Model 3	Model 4
Regional unemployment rate	-0.000419	-0.000288	-8.79e-05	-0.000153
	(0.000628)	(0.000708)	(0.000732)	(0.000712)
Governorate	**of Residence** (reference : Tunis)		**of Placement** (reference : Tunis)	
Ariana	**-0.0333***	0.000859	**0.154*****	**0.0894*****
	(0.0182)	(0.0405)	(0.0206)	(0.0182)
Beja	0.0133	0.0276	**0.110*****	**0.0748****
	(0.0223)	(0.0350)	(0.0330)	(0.0320)
Ben Arous	0.0199	0.0201	**0.0344****	0.00899
	(0.0176)	(0.0295)	(0.0165)	(0.0151)
Bizerte	0.00529	0.0109	**0.0396***	0.0165
	(0.0187)	(0.0302)	(0.0204)	(0.0194)
Gabes	**-0.0553*****	-0.0384	-0.0162	-0.0292
	(0.0159)	(0.0252)	(0.0282)	(0.0252)
Gafsa	-	-	0.125	0.178
			(0.215)	(0.243)
Jendouba	-0.00367	0.0164	-0.0157	-0.0301
	(0.0211)	(0.0335)	(0.0379)	(0.0318)
Kairouan	0.0212	0.0439	**0.152*****	**0.122*****
	(0.0215)	(0.0359)	(0.0336)	(0.0318)
Kasserine	-	-	0.322	0.304
			(0.210)	(0.198)
Kebili	-0.0229	0.0191	-0.00658	0.00417
	(0.0270)	(0.0426)	(0.0473)	(0.0492)
Kef	-0.0270	0.0654	0.104	0.0949
	(0.0200)	(0.0591)	(0.0861)	(0.0835)
Mahdia	**-0.0691*****	**-0.0654*****	**-0.0694*****	**-0.0784*****
	(0.0132)	(0.0189)	(0.0175)	(0.0136)
Manouba	0.000314	-0.00147	0.0494	0.0182
	(0.0193)	(0.0291)	(0.0333)	(0.0294)
Medenine	**-0.0765*****	-0.0289	**-0.0825****	**-0.0896*****
	(0.0118)	(0.0564)	(0.0366)	(0.0242)
Monastir	**-0.0314****	-0.0231	0.0123	-0.0158
	(0.0155)	(0.0257)	(0.0167)	(0.0155)
Nabeul	**-0.0441*****	**-0.0530***	**-0.0646*****	**-0.0564*****
	(0.0155)	(0.0275)	(0.0135)	(0.0145)
Sfax	**-0.0424*****	-	**-0.0621****	**-0.0701*****
	(0.0137)		(0.0272)	(0.0221)
Siliana	-0.0129	-0.00239	-0.000213	-0.0253
	(0.0219)	(0.0321)	(0.0279)	(0.0233)
Sousse	-0.00523	-0.00927	-0.0178	-0.0258*
	(0.0170)	(0.0269)	(0.0154)	(0.0145)
Tozeur	**-0.0766*****	0.0935	0.0452	0.0452
	(0.0146)	(0.0852)	(0.0729)	(0.0722)
Zaghouane	0.0190	0.0331	**0.0661***	0.0366
	(0.0320)	(0.0435)	(0.0376)	(0.0335)

Standard errors in parentheses, *** p<0.01, ** p<0.05, * p<0.1

4. Conclusion

The current economic situation in Tunisia, characterized by high levels of unemployment for the young graduates and for the inland regions compared to the coastal regions, reveals the problem of mismatch of education. This phenomenon means that the education acquired by the worker is largely different of what is required to perform his job.

Our objective in this work is to explain the mismatch on the educational level in Tunisia by considering regional differences. This paper is the first study in Tunisia that evokes the determinants factors of the phenomenon of mismatch and the problem of regional unemployment by distinguishes between coastal and inland areas. We have tried to determine the impact of different factors on this phenomenon and to find the governorates where the risk of mismatch is high. We have tried also to verify the positive impact of the labor market policies in the sense that young graduates who beneficiate of these policies can have job that matches with his qualification.

The high quality of the data procured by the database of the National Employment Agency and Self Employment (ANETI) related to the Ministry of Vocational Training and Employment and the large size of the samples lead to a detailed analysis of the determinants factors of the educational mismatch of these graduates and the effectiveness of government employment policies.

The main results of this paper are that the diploma has a significant effect on the probability to be in mismatchig situation. For the BTS, the mismatching is specifically an undereducation situation. Persons with postgraduate's title are more exposed to over-education. There is a regional disparity in the access of a person to a job in adequacy with its school title. Being a resident or having a job in coastal governorates (the East Regions) reduce the probability to get a job in mismatching situation which is not the case of the inland governorates (the West Regions) of Tunisia.

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