

**Labor market intermediation in Morocco: A microeconomic evaluation
for the IDMAJ program, SAADI, A.¹ & LIOUAEDDINE, M.²**

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Abstract:

The main objective of this study is to analyze the link between access to the IDMAJ program and the performance of the national employment promotion agency (ANAPEC).

Specifically, it aims to analyze the effect of ANAPEC on IDMAJ program beneficiaries and non-beneficiaries, and to evaluate the impact of the IDMAJ program on the level of employment. To address this issue, we use the propensity score matching method while mobilizing data from the IDMAJ survey conducted in 2010.

This survey was designed by the Ministry of Employment and Professional Training (MEFP) in collaboration with the National Agency for the Promotion of Employment and Skills (ANAPEC).

The results show that the program has a positive impact on the employment of young graduates, but this employment is characterized by a lower perceived salary and a higher number of working hours.

Key-words: Active labor market program; Propensity score matching; Labor market intermediation; Unemployment of young graduates.

L'intermédiation sur le marché du travail au Maroc : Une évaluation micro-économétrique pour le cas du programme IDMAJ

Résumé :

Cette étude a pour objectif principal d'analyser le lien entre l'accès au programme IDMAJ et la performance de l'agence nationale de promotion de l'emploi (ANAPEC).

De façon spécifique, il s'agit d'analyser l'effet de l'Anapec sur les bénéficiaires de programme IDMAJ et non bénéficiaires, d'évaluer l'impact du programme IDMAJ sur le niveau d'emploi.

Pour répondre à cette problématique, nous utilisons la méthode de l'appariement sur les scores de propension tout en mobilisant des données tirées de l'enquête IDMAJ réalisée en 2010.

Cette enquête été conçue par le ministère de l'Emploi et de la Formation professionnelle (MEFP) en collaboration avec l'Agence nationale pour la promotion de l'emploi et des compétences (ANAPEC).

Les résultats montrent que le programme a un impact positif sur l'emploi des jeunes diplômés, mais cet emploi est caractérisé par un salaire perçu plus faible et un nombre heure de travail plus élevé.

Mots-clés : Programme actif du marché du travail ; Propensity score matching ; Intermédiation sur le marché du travail ; Chômage des jeunes diplômés.

Introduction:

The issue of youth employment has been the subject of intense debate in Morocco in recent years. This debate is guided by the current context, marked by the insufficiency of jobs offered on the labor market, the precariousness of existing jobs and the increase in the number of unemployed, especially among young people, women and the most qualified. In this context, employment policies have attracted growing interest. These policies represent *"all public interventions in the labor market aimed at improving its functioning and reducing the imbalances that may appear in it"*¹

Labor market policies help improve the functioning of the labor market by facilitating matches between labor supply and demand (Jackman, Pissarides and Savouri, 1990). They are organized along two lines: intermediation activities aimed at matching supply and demand in the labor market and other active and passive employment programs. Passive programs include programs that focus on income maintenance when workers are unemployed, while active programs refer to programs aimed at increasing or improving the employment opportunities of the unemployed or inactive to obtain or regain employment.

Active employment policies are generally distinguished according to whether they aim to improve the productivity of participants or to achieve a better match between labor supply and demand. In this sense, intermediation policies are located in the matching with the objective of accelerating the speed of finding a job and the good quality of the job obtained.

In Morocco, experience with active labor market policies is relatively recent. The seriousness of the problem of graduate unemployment was officially recognized by the public authorities. To this end, an objective of reabsorbing the accumulated stock was set and access to the labor market for young people became a priority. Employment intermediation has become one of the key elements that improve the employability of job seekers. Effective intermediation is necessary to reduce transaction costs for job seekers and recruiters, and to avoid mismatches between the available workforce and the skills in demand. Its intermediation services aim not only to accelerate access to the labor market, but also to improve the quality of the match, by putting the most appropriate worker in the right job. Done right, employment intermediation helps reduce job turnover, improve productivity and business growth, and, most importantly, reduce employment discrimination.

¹ GAUTIE, Jérôme. Les politiques de l'emploi. Paris : Vuibert, 1993.

In this context, the Moroccan government, in partnership with the National Agency for the Promotion of Employment and Skills (ANAPPEC), has launched several programs to improve employability in Morocco.

First, the National Agency for the Promotion of Employment and Skills is a Moroccan public institution whose main mission is the organization and implementation of employment promotion programs; through intermediation between young graduates and companies in need of human resources, as well as information and guidance and counseling. ANAPPEC has launched three programs, namely the TAEHIL program, the MOUKAWALATI program, and of course the IDMAJ program.

We will focus on the IDMAJ program which was launched in January 2006 by the Ministry in partnership with ANAPPEC with the aim of improving the employability of young people. It is aimed at young job seekers with a baccalaureate or an equivalent diploma, a vocational training diploma or a higher education diploma, in order to facilitate their integration into the labor market by allowing them to acquire a first professional experience (an internship) of 24 months. On the companies' side, the program will allow them to develop their human resources by recruiting more at lower costs because they benefit from certain exemptions from social and fiscal charges.

The main objective of this study is to analyze the link between access to the IDMAJ program and the performance of the national employment promotion agency (ANAPPEC). Specifically, it aims to analyze the effect of ANAPPEC on IDMAJ program beneficiaries and non-beneficiaries, and to evaluate the impact of the IDMAJ program on the level of employment. The article is organized as follows: section 2 reviews the literature on the theoretical and empirical framework of labor market intermediation and impact evaluation of employment promotion programs, section 3 describes the model specification and estimation strategy, section 4 presents the data mobilized and the stylized facts of the IDMAJ program, section 5 discusses the empirical results, and section 6 presents the conclusions and makes some policy recommendations.

1. Literature review

Since the mid-1970s, governments in developed countries have taken major measures to improve the functioning of the labor market, stimulate employment and thus limit the rise in unemployment. All of these public interventions constitute what is known as employment policy (Cornilleau et al, 1990). The definition and implementation of this policy involve the participation of several actors such as the State, enterprises, workers' organizations, employment agents and job seekers.

Employment policies can be classified into two categories:

- Passive policies: these are limited to supporting the unemployed with measures to limit the consequences.
- Active policies: they aim to reduce unemployment through apprenticeship and training, entrepreneurship, financial aid to businesses, etc.

The impact of active labor market policies on the chance of access to employment has been the subject of much empirical work (Gritz, 1993; Bonnal, Fougère, and Serandon, 1997; Heckman, Lalonde, and Smith, 1999; Magnac, 2000; Gilbert, Kamionka, and Lacroix, 2001; Issehnane, 2009; Lindley et al., 2015; Svabova and Durica, 2017).

Evaluations of employment programs are numerous, with results ranging from the most pessimistic ("subsidized employment is a waste of resources given observed labor market outcomes" Boone and van Ours 2004) to the most optimistic ("the introduction of employment subsidy programs has generally had positive and significant (12-15.6%) labor market effects for youth" - Betcherman et al, 2007). Most authors, however, conclude that the effect of employment subsidies is positive, although modest (Katz 1996; OECD 2005; Kluve 2010; Immervoll and Scarpetta 2012; Neumark 2011; Neumark and Grijalva 2013).

Some evaluations show very positive employment outcomes: Argentina's ProEmpleo (Betcherman et al, 2004), the UK's New Deal for Youth (Van Reenen, 2004), and the US's New Jobs Tax Credit (Bartik and Bishop, 2009).

Betcherman et al. (2004), Kluve (2010) emphasize the importance of three elements to the success of employment subsidy programs: the level of targeting of beneficiary populations, how the program rewards new hires, and the implementation of subsidies in a beneficiary-oriented package. The best results are achieved by combining subsidy policies with training and/or job search assistance (Katz, 1996; Kluve, 2006). Programs target specific subgroups (long-term unemployed or in specific geographic areas) in order to reduce deadweight losses to the economy. The main risk associated with excessive targeting is reduced program participation due to administrative burdens (Martin, 2000; Neumark, 2011).

Angel-Urdinola et al (2010) analyze the characteristics of 75 youth programs in 9 countries in the region: Morocco, Algeria, Tunisia, Egypt, Lebanon, Syria, Jordan and Yemen. The analysis of these programs reveals design flaws that make them ineffective. In fact, most of the programs have no specific objective, resulting in deadweight losses as they support jobs that would have been created anyway.

Broecke (2013) analyzes the effect of the public job subsidy program on higher education graduates in Tunisia (the SIVP program). Graduates benefiting from the program have both a lower probability of being unemployed (-9.8 percentage points) and a higher probability of getting a job in the private sector (+21.5 percentage points).

In a randomized experiment, Jonathan M. Thomas (1997) strongly suggests that unemployed job seekers who use public employment agency (PEA) services have longer unemployment spells than those who choose alternative search methods. Yet in some well-designed experiments in the United States, increased use of PEA services has been associated with faster transitions to jobs. The author argues that nonexperimental studies may be biased in finding a positive relationship between unemployment spell length and PEA use because they ignore the possibility that many job seekers choose PEAs after other search methods have been tried and a period of unemployment has passed.

Reviews of World Bank and OECD evaluations have reached similar conclusions (Betcherman, Olivas, and Dar 2004; Dar and Tzannatos 1999; Martin and Grubb 2001). Overall, these programs are not a panacea for unemployment, but they can improve the employment prospects of some workers if they are carefully designed, targeted, and implemented. In their study, Betcherman, Olivas, and Dar (2004) reviewed the evidence on youth training (generally targeting those with low levels of education) and concluded that the impact of these programs was not very positive.

Their findings corroborated other studies (e.g., Godfrey 2003) that indicated that it is difficult to reverse school failure through training. Based on the impact studies, it appears that the relatively few examples of positive outcomes are limited to comprehensive programs that integrate training with other services such as academic upgrading, job search support, and social services.

Quintini and Martin (2006) point out two weaknesses of active labor market programs in OECD countries. First, these programs can be quite costly, and second, it is extremely difficult to address the problem of highly disadvantaged youth. The authors suggest that the high cost of the programs makes it important to ensure that the exit from unemployment is into real jobs rather than into excessively long education and training programs or expensive job creation schemes. In addition, the evaluation of several programs indicates the need to identify the most vulnerable youth as early as possible in their transition and to provide them with specific assistance. Systematic information on these issues is very limited in the context of developing and transitional countries.

Luc Behaghel, Bruno Crépon, and Marc Gurgand (2014), present the results of a large-scale randomized controlled experiment comparing public and private job-seeker counseling services for people at risk of long-term unemployment, which was provided simultaneously by the public employment agency and private contractors in France. The authors show that the two treatment programs work quite similarly, although the public program has a slightly stronger impact.

In Morocco, impact evaluations of active employment programs are rare. Two studies by Saadi, A. et al, (2021), Chatri, A. et al, (2021), investigated the effect of the IDMAJ program on reducing unemployment and improving employment. They claim that this program has a positive impact but statistically weak unlike previous works in our article we will use the same program but with a larger sample of 1255 treatment group and 253 control group (against previous works they worked with a total sample of 600).

2. Estimation method and strategy

The purpose of our analysis is to estimate, in Rubin's (1974) terminology, the causal effect of the program on the outcomes of an individual participant. For a specific program in a given country, impact evaluation is an exercise that seeks to determine whether the program has had the intended impact and the extent to which these effects are attributable to the program intervention (Judy L. Baker, 2000).

These effects are difficult to assess through a simple comparison of before and after results or between beneficiaries and non-beneficiaries of the program insofar as there are other factors that could influence the results, and they therefore require a methodology based on a comparison of the treatment group, which corresponds to a sample of individuals targeted by the program, and its counterfactual or comparison group, which is a set of individuals who are not beneficiaries of the intervention of the program in question, but who have characteristics similar to the first. In this context of finding the causal effect of the program, the matching method consists of finding one or more control individuals for each treated individual with similar observable characteristics.

As Fougère (2000, p.112) points out, "this is the method that comes closest to controlled experiments because the implementation of these two methods (experimentation and matching) does not depend directly on the value taken by the outcome variables (...) making it possible to evaluate the effectiveness of the scheme".

2.1. The assumptions of the method

The identification of parameters of interest by matching methods requires three assumptions:

Hypothesis 1: The CIA Conditional Independence Assumption.

Potential outcomes are assumed to be independent of treatment conditional on observable characteristics, unaffected by treatment. Formally:

$$(Y_1, Y_0) \perp T | X \Leftrightarrow E(Y_0 | T = 1, X) = E(Y_0 | T = 0, X)$$

T: the treatment exposure indicator.

$$T = \begin{cases} 1 & \text{If individual } i \text{ was exposed to the treatment} \\ 0 & \text{Otherwise} \end{cases}$$

X: the vector of observed covariates of individual i ;

Y_1 and Y_0 : potential outcomes for individual i who is or would have been exposed to the treatment;

This assumption implies that beneficiary selection is based solely on observable characteristics and that all variables that simultaneously affect beneficiary selection and potential outcomes are also observed by the researcher

Furthermore, by controlling for observable characteristics X, this assumption implies that the population distribution can be viewed in this case as the result of random assignment (Brodaty et al., 2007), resulting in two similar groups (a treatment group and a control group).

However, when matching based on observable data requires many variables, matching treated and control individuals is complicated by the difficulty of finding two similar individuals in two groups.

To circumvent this limitation, Rosenbaum and Rubin (1983) proposed a conditional independence hypothesis (CIA) based on propensity scores.¹

$$PS = P(X) = P(T = 1 | X)$$

Rosenbaum and Rubin (1983) also show that while potential outcomes are independent of treatment in terms of observable characteristics X, they are also independent of treatment conditional on a propensity score. The CIA hypothesis, based on the propensity score, is as follows:

$$(Y_1, Y_0) \perp T | P(X) \Leftrightarrow E(Y_0 | T = 1, P(X)) = E(Y_0 | T = 0, P(X))$$

¹ In their seminal paper, Rosenbaum and Rubin (1983) define the term "propensity score" (PS) as the probability that an individual with certain characteristics will receive a particular treatment. In other words, the PS is the conditional probability that an individual will receive a treatment given the observed covariates.

In practice, propensity scores are estimated based on the probability predicted by the Logit or Probit model, which takes into account whether the individual is participating in a treatment or program with a set of observable characteristics.

Hypothesis 2: the overlap assumption

It is assumed that treated and control individuals have similar characteristics. The common support hypothesis implies that individuals with similar characteristics have a positive probability of being a participant or non-participant (Heckman et al., 1999, p. 55). Formally:

$$0 < Pr(T = 1|X = x) < 1$$

This eliminates selection bias, because conditional on the propensity score we have:

$$\begin{aligned} E(Y_0|T = 1, P(X)) &= E(Y_0|T = 0, P(X)) \\ \Rightarrow E(Y_0|T = 1) - E(Y_0|T = 0) &= 0 \end{aligned}$$

Hypothesis 3: The Stable Unit Treatment Value Assumption (SUTVA).

In this assumption, we assume that the treatment only affects the outcome of the treated individual. This means that there is no interference between individuals and therefore no external treatment.

2.2. Method specification

Matching is a non-experimental technique introduced by Rosenbaum and Rubin (1983). It is used to estimate the effect of a program or intervention when we do not have random assignment. The advantage of this method is the elimination of sources of bias by looking for treated and untreated groups with similar characteristics.

Given the objective of this paper is to analyze the effect of the IDMAJ program on the integration of young graduates and the impact of ANAPEC on the professional trajectory of beneficiaries, the interest of policy evaluations focuses primarily on the average effect of the treatment on participants noted ATT (Average Treatment on Treated) and expressed by the equation below:

$$ATT = E(Y_1 - Y_0|T = 1)$$

Decomposing, we obtain:

$$ATT = E(Y_1|T = 1) - E(Y_0|T = 1)$$

$E(Y_0|T = 1)$ is the comparison group and shows the status of the individuals who received the treatment if they had not received it. In practice, such a situation cannot be observed. Therefore,

it is necessary to replace this element with a dummy group constructed from the observed characteristics of individuals not receiving the program.

2.3. Description of data and variables

The data used in this study comes from the "survey of IDMAJ program beneficiaries". In addition to being the first of its kind in Morocco, this survey is characterized by its methodological approach, which seeks to put into perspective the impact of this program on beneficiaries in comparison with a control population of eligible unemployed people who are not beneficiaries. Indeed, the survey simultaneously included a sample of 2,500 beneficiaries and a comparison group of 500. However, for the purposes of this article, two subsamples of the survey will be used to evaluate the impact of the IDMAJ program. The first is a sample of 1,255 beneficiaries and the second is a sample of 252 non-treated individuals.¹

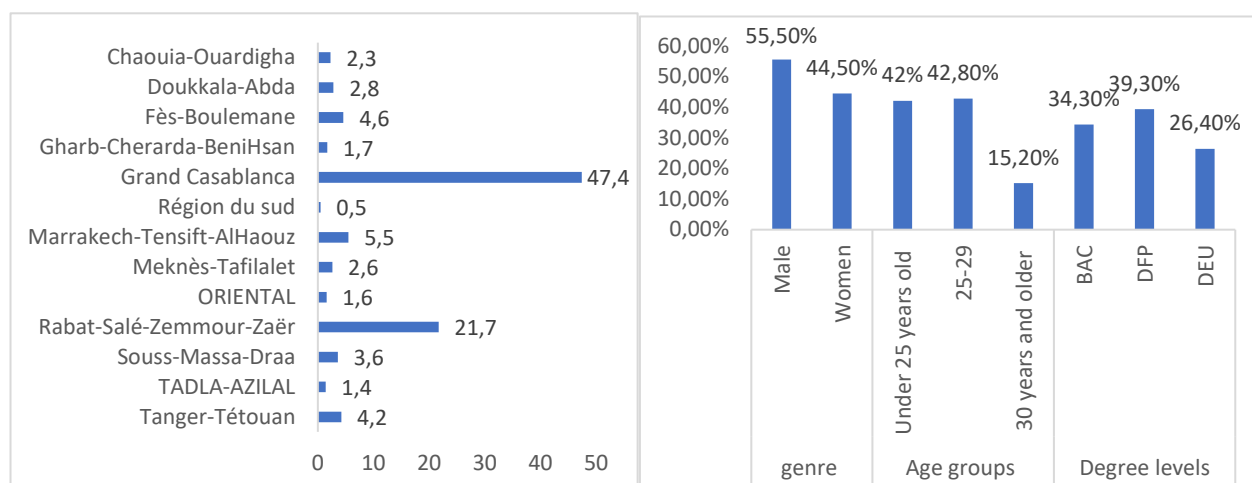
The insertion contract (CI), known as "Idmaj", targets unemployed persons registered with ANAPEC. A CI is a tripartite contract between: (i) a company interested in hiring an eligible job seeker according to the conditions set out in the general provisions of the program; (ii) an eligible job seeker who agrees to take up the position offered by the company according to the same conditions; and (iii) the ANAPEC agency, which is responsible for validating the match and carrying out the administrative follow-up of the implementation of the CI. Each connection (company, beneficiary job seeker) requires the signature of a CI. The latter takes effect on the date of its validation by ANAPEC.

At the end of this contract, the company benefits from the exemption of Income Tax, Social Security charges and Tax on Professional Training up to a ceiling of 6,000 dirhams for a period of 24 months, which can be extended by 12 months in case of final recruitment. Each of the two parties (company and unemployed beneficiary) can break the CI without notice or compensation for the other party.

The beneficiaries of the IDMAJ program are characterized by a more or less balanced distribution between men (55.5%) and women (45.5%). Regarding the geographical distribution, nearly two thirds of beneficiaries reside in the regions of Greater Casablanca (47%) and Rabat Salé Zaer Zemmour (22%). The least represented regions are the South with less than 1% of beneficiaries, Tadla Azilal (1.4%), the Oriental (1.6%) and Gharb Chrarda Béni Hssen (1.7%). And also the survey focuses on job seekers aged under 29 years, the under 25 years and 25 to 29 years represent respectively 42% and 42.8% of the total.

¹ This is the first work that will evaluate the IDMAJ program with this large sample.

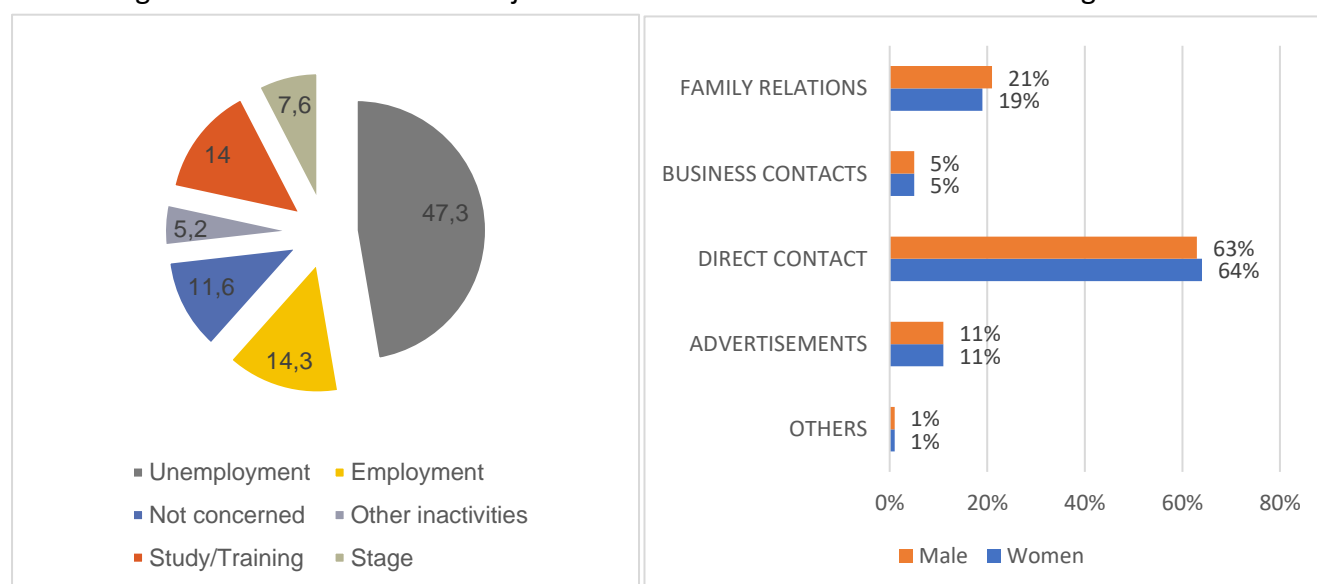
Figure 1: Sociodemographic characteristics of IDMAJ beneficiaries.



Source: Authors' elaboration based on the IDMAJ survey.

The description of the beneficiaries' activity status during the last episode just before the first enrollment in ANAPEC is as follows: almost half of the beneficiaries were looking for a job, 14.3% were employed, 14% were studying, 7.6% were on an internship and 5.2% had an inactive status. For the means used to find a job before registering with ANAPEC, two main means were mentioned among all the means proposed, and in the same proportions by both men and women: direct contacts with employers (nearly 63%), family relations (nearly 20%) and advertisements in various newspapers or magazines (11%).

Figure 2 : IDMAJ beneficiaries' job search status and means before enrolling in ANAPEC.



Source: Authors' elaboration based on the IDMAJ survey.

To assess the effectiveness of the Idmaj program, it is necessary to examine what would have happened to the job seekers who had not gone through the program and to compare this situation with the one they actually experience. Since this is not observable, the solution is to carry out this comparison of career paths with a population of non-beneficiary job seekers resembling the beneficiaries (control group).

The variables used to quantitatively evaluate the role of intermediation in the integration of young graduates are presented in the following table:¹

Table 1 : The variables of the model.

Variable	Description
Treatment variable	
IDMAJ	1 : benefited from the IDMAJ program, 0 : otherwise
Characteristic variables	
Genre	1 : Male, 0 : Female
Father's level of education	Father's education level: 1: No level; 2: Koranic; 3: Primary; 4: College; 5: Secondary; 6: Higher.
Mother's level of education	Mother's education level: 1: No level; 2: Koranic; 3: Primary; 4: College; 5: Secondary; 6: Higher.
Age	The age of each individual
Marital status	1: Single; 2: Married
Teaching sector	1: Public; 0: Private
Perception of the degree	1 : if the individual is well prepared to access a job, 0 otherwise
Internship	1 : if the individual has already done an internship, 0 if not
Father's occupation	1: Employed or retired, 0 otherwise
Outcome variables	
Employment	1 : the individual gets a job, 0 if not
Wage	Wages of each individual
Number of hours worked per week	The number of hours each individual works per week
ANAPÉC	The effect of ANAPÉC on each individual's career trajectory : 1: Positive; 0: Otherwise

Source: Authors' elaboration based on the IDMAJ survey.

¹ The choice of these variables in this study is justified on the basis of the empirical literature.

3. Empirical results

3.1. Interpretation of the results

To analyze the effect of the IDMAJ program on youth employment and career trajectories, it is necessary to compare outcomes before and after program participation. However, given the inability to simultaneously observe the outcomes of individuals before and after entry into the IDMAJ program, an intuitive alternative is to compare the outcomes of those who participated in the IDMAJ program with the outcomes of those who did not participate in the program so that the difference between their outcomes represents the effect of the program. However, the resulting result is only valid if the characteristics of the individuals in the participant group are identical to those of the non-participant groups.

Table 2 presents the means and standard deviation of the selected variables used in our analysis. It should be noted that these variables were used in the estimation to better match the two groups.

Table 2 : Means of the key variables

Variable	Treated			Control			T-statistique
	N. Treated	Mean	Std. Err	N. Control	Mean	Std. Err	
Genre	1252	0.5638978	0.0140206	252	0.5238095	0.0315239	-1.1687
Father's level of education	1179	3.296014	0.0484015	225	3.204444	0.0968344	-0.7721
Mother's level of education	1213	2.08244	0.0420841	240	1.9	0.0787365	-1.8083
Age	1208	33.98841	2.840653	246	30.0122	0.3277691	-0.6313
Marital status	1228	0.7491857	0.0123751	249	0.7228916	0.0284208	-0.8674
Teaching sector	1237	0.8876314	0.0089832	252	0.8730159	0.0210159	-0.6629
Perception of the degree	1252	0.6988818	0.0129701	252	0.6230159	0.0305896	-2.3707
internship	1252	0.4105431	0.0139084	252	0.484127	0.0315438	2.1593
Father's occupation	1142	0.9579685	0.0059405	227	0.969163	0.0114995	0.7841

Source: Authors' calculations, STATA software

Indeed, the weld test shows that, on average, the two groups are similar on all variables except the perception of the degree and the internship.

Therefore, the first step in the matching method is to model the propensity score. Table 3 presents the result of the marginal effects after estimating the Probit model, The results of the Probit model allow us to calculate the propensity scores or probabilities of participation associated with each individual in the sample based on the characteristics of our model.

Table 3 : Propensity score estimation (Probit model: marginal effects at the mean)

Variable	dy/dx	Std. Err.	z	P> z	[95% Conf. Interval]	
Genre	.0368952	.0212184	1.74	0.082	-.004692	.0784824
Father's level of education	-.0066537	.0083218	1.83	0.424	-.0229642	.0096568
Mother's level of education	.0174601	.0095311	240	0.067	-.0012205	.0361406
Age	-.0078099	.0023771	-3.29	0.001***	-.0124689	-.0031509
Marital status	-.0034839	.0249011	-0.14	0.889	-.0522891	.0453213
Teaching sector	.0236287	.032897	0.72	0.473	-.0408482	.0881056
Perception of the degree	.0836623	.0239293	3.50	0.000***	.0367618	.1305628
internship	-.0831169	.0228825	-3.63	0.000***	-.1279657	-.0382681
Father's occupation	-.0303728	.0574359	-0.53	0.597	-.1429452	.0821995

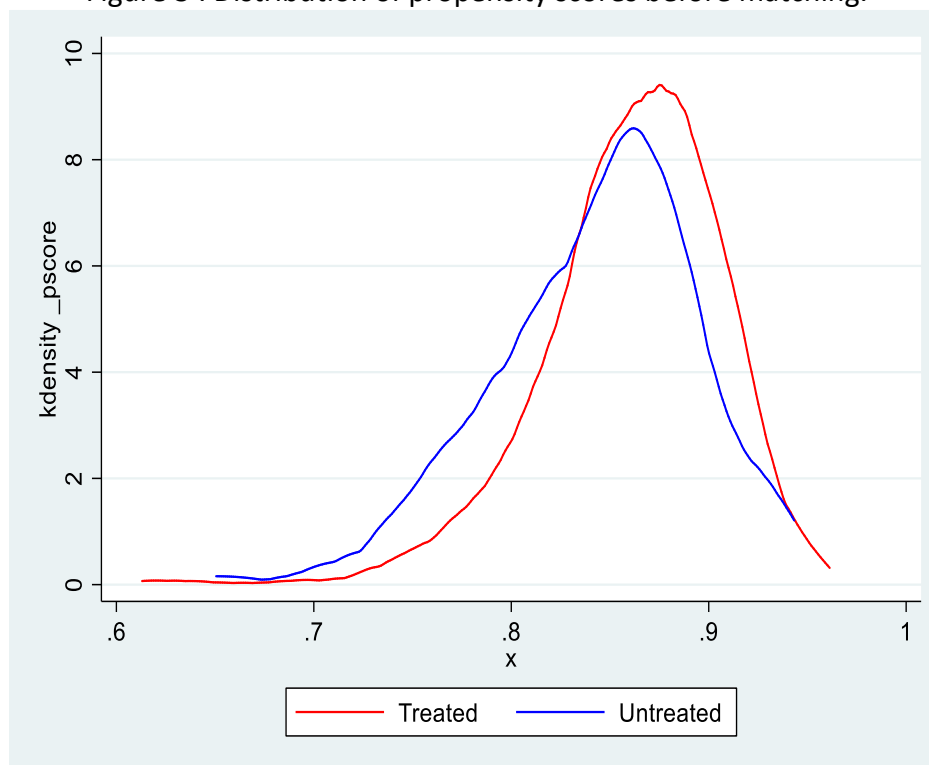
Note: Significance level: *10% ; **5% ; ***1%.

Source: Authors' calculations, STATA software

The results show that the likelihood of participation in the IDMAJ program decreases as individuals' age increases. In addition, individuals with internship experience and a positive perception of their degrees were more likely to join the treatment group.

To this end, Figure 3 presents the visual test of the overlap region of the propensity score distributions between the two treated and untreated groups of the matching methods used. As the figure shows the two curves overlap. So the samples are large enough to make a comparison unbiased by differences in characteristics between individuals in the two groups.

Figure 3 : Distribution of propensity scores before matching.



Source: Authors' calculations, STATA software

The results of the effect of the IDMAJ program on employment and the quality of employment conditions (salary and number of hours worked per week) obtained are presented in Table 5 below. It is observed that the causal effect of IDMAJ program on the employment variable is significant for all three methods (Kernel, Nearest neighbor and radius). This means that individuals who participate in the program enter the labor market with an 11% higher probability than individuals who do not participate in the IDMAJ program, the impact is significant at the 1% level.

These results confirm that active employment programs have a limited positive impact, regardless of the methodological approach adopted, and that they are hardly a panacea against large-scale unemployment (Erhel, 2006).

The estimation of the variables of interest, salary and number of hours worked per week, shows that the IDMAJ program does not guarantee better employment conditions; this result is explained by the negative and significant effect observed by the Radius method on salaries and the number of hours worked per week. In fact, beneficiaries receive an income that is 277 dirhams lower and work two hours longer than that received by non-beneficiaries.

The analysis of the impact of ANAPEC on the career trajectory of each individual shows that the effect of participation in the program on the career trajectory is significant and positive, according to our estimates, this effect (ATT) is greater than 41%.

These results indicate that the active employment program helps individuals enter the labor market. However, this employment is characterized by a lower perceived salary and a higher number of hours worked.

Table 4 : Average Treatment Effect Result (ATT)

	Kernel ¹			Nearest neighbor ²			Radius ³		
Variable	ATT	Std. Err	T-stat	ATT	Std. Err	T-stat	ATT	Std. Err	T-stat
Employment	0.111	0.0382	2.91***	0.105	0.0518	2.04**	0.124	0.0139	8.88***
Wage	-218.84	177.65	-1.23	-262.792	243.297	-1.08	-277.58	58.0361	-4.78***
Number of hours worked per week	1.7611	1.0502	1.68	2.0883	1.4911	1.40	2.0903	0.2953	7.08***
ANAPEC ⁴	0.4165	0.0211	19.67***	0.4118	0.0247	16.65***	0.4206	0.0156	26.91***

Note: Significance level: *10% ; **5% ; ***1%.

Source: Authors' calculations, STATA software

¹ Each treated individual is matched with several individuals from the control group, with weights inversely proportional to the distance between treated and untreated individuals.

² A treated individual is matched with an untreated individual based on the closest propensity score.

³ An untreated individual is matched with an individual in the treated group on the basis of the closest propensity score, subject to some maximum distance.

⁴ The effect of ANAPEC on each individual's career trajectory.

Overall, nearly half of the Idmaj beneficiaries consider that the program has had a positive effect on their professional trajectory, since their professional situation after the insertion contract is better than before their entry.

3.2. Robustness test

After checking for overlaps and The ATT effect, we check the quality of the match using the "pstest" command (developed by Leuven and Sianesi (2012)) in Stata.

This robustness test performs for each variable in the model a t-test for equality of means between the treatment and control groups. It also provides us with overall measures of the balance of Covariates between the treatment and control groups, including the pseudo-R-squared score, the likelihood ratio test value of joint significance of all regressors, the mean and median bias, and Rubin's B and R score. Table 5 compares the unmatched and matched sample and finds that there was a significant reduction in bias in each variable. The pseudo-R-squared score indicates the extent to which the regressors in the model explain the probability of selection into the treatment group (Sianesi, 2004).

Table 5 : Balancing test

Variable	Unmatched Matched	Mean		Biais		t-test
		Treated	Control	%bias	% reduction in bias	
Genre	U	0.60401	0.55303	10.3	62.5	1.11
	M	0.60127	0.62038	-3.9		-0.78
Father's level of education	U	3.312	3.2955	1.1	-1175.8	0.11
	M	3.2917	3.0803	13.6		2.79
Mother's level of education	U	2.1065	1.9318	13.2	-83.8	1.31
	M	2.0739	1.7529	24.3		5.04
Age	U	29.053	29.955	-20.6	60.2	-2.28
	M	29.071	28.712	8.2		1.85
Marital status	U	0.75439	0.7197	7.9	-35.9	0.85
	M	0.75541	0.80255	-10.7		-2.25
Teaching sector	U	0.88095	0.85606	7.4	-84.2	0.81
	M	0.88153	0.92739	-13.5		-3.10
Perception of the degree	U	0.7218	0.71212	2.1	34.2	0.23
	M	0.71975	0.71338	1.4		0.28
internship	U	0.43358	0.53788	-20.9	96.3	-2.24
	M	0.43694	0.43312	0.8		0.15
Father's occupation	U	0.96617	0.96212	2.2	-215.0	0.24
	M	0.96561	0.95287	6.8		1.28

Source: Authors' calculations, STATA software

After matching, there should be no systematic differences in the distribution of covariates between the IDMAJ treated and untreated. Therefore, the pseudo-R-squared should be quite small (Caliendo and Kopenig, 2008). We find that in our case (see Table 6), the regressors explain about 2.2% of the selection in the unmatched sample, whereas in the matched sample, this figure fell to 0.019, which is quite low.

For the treatment and control groups to be sufficiently balanced, Rubin's B statistic must be greater than 25 and Rubin's R statistic must be between 0.5 and 2 (Rubin, 2001). Our Rubin B-statistic of 32.6 and Rubin R-statistic of 1.60 in Table 6 clearly satisfy these conditions. We can therefore conclude that our matching is successful.

Table 6: Rubin's R and B test

Sample	Ps R2	LR chi2	p>chi2	Mean Bias	B	R
Unmatched	0.022	16.52	0.057	9.5	37.9	0.89
Matched	0.019	41.28	0.000	9.3	32.6	1.60

Source: Authors' calculations, STATA software

Overall, the results show that the passage through an active employment program has a beneficial effect on the professional integration of the beneficiaries, regardless of the matching procedure adopted. In other words, benefiting from an employment program has a positive and significant impact on obtaining a regular job.

In light of these results, it is clear that the programs implemented to promote youth employment in Morocco are effective in enabling beneficiaries to access employment, even if the impact on employment is less. In other words, active employment programs reduce the distance to the labor market through employment, but they do not guarantee greater professional stabilization (negative impact on wages).

In short, active employment programs are effective, but the extent of their effectiveness remains controversial. The impact of these measures on access to employment varies according to the way the programs are implemented, the geographical area studied, and the methodology adopted (Heckman, Lalonde and Smith, 1999; Magnac, 2000; Gilbert, Kamionka and Lacroix, 2001; Gerfin and Lechner, 2002; Issehnane, 2009; Lindley et al, 2015; Svabova and Durica, 2017).

Conclusion and perspectives:

This work aims at elaborating an analysis of ALMP in Morocco (the system of intermediation in the labor market and active labor market policies). Motivated by the growing interest in ALMP in Morocco, our work is of both theoretical and practical interest.

The theoretical argument behind the implementation of ALMPs is that they serve two purposes: The first is equity. Indeed, in a context where the meeting of labor supply and demand is dominated by the logic of the social network, ALMP counterbalances the dominant role of the network and thus reduces the risk of exclusion of job seekers with low social capital endowment by helping the disadvantaged unemployed to find a job. The second objective is to increase overall employment by improving the efficiency of the labor market.

The general objective of this paper is to evaluate the causal effect of the IDMAJ program on the integration of young graduates into the Moroccan labor market and the effect of ANAPEC on the professional trajectory of beneficiaries. To do this, we use the quasi-experimental approach based on the propensity score matching method (PSM) as a means of impact evaluation. Our result shows that the program has a positive impact on the integration of young graduates, but this employment is characterized by a lower perceived salary and a higher number of working hours. Given these results, it is necessary that state authorities in collaboration with private sector employers further encourage these programs in order to significantly reduce unemployment and job insecurity in the Moroccan labor market.

The impact evaluation conducted in this study remains partial, and this limitation can be overcome by the availability of different types of data (qualitative and quantitative) reflecting the characteristics of individuals. The impact of the program should also be studied in a dynamic analysis and an evaluation by sector of activity should be conducted. These avenues will certainly lead to improved results in terms of statistics and economic analysis.

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