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## Exploring the Impact of Reforms to the Moroccan Vocational Educational System: A Policy Analysis

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# Exploring the Impact of Reforms to the Moroccan Vocational Education System: A Policy Analysis

Brahim Boudarbat and Daniel Egel  
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## Abstract

In 1984, Morocco implemented an ambitious reform of its vocational training (VT) system, with the main goal of increasing youth employment by making the system more adaptive to the constantly evolving needs of the labour market. We analyze three types of programs that were implemented as part of these reforms using data on graduates from urban vocational training facilities who completed their studies in 2000. While we find that both the privatization of vocational training and policies designed to encourage small business formation were largely ineffective, we show that participation in a traineeship after graduation has a lasting and strongly positive impact on subsequent labor market outcomes. We provide evidence that these results are robust to correction for selection by estimating the average treatment effect of the programs following Imbens (2004).

## 1 Introduction

High unemployment among youth, and recent graduates in particular, is endemic to the countries of the Middle East and North Africa (MENA) region. The average rate of youth unemployment in this region at 26% is nearly half again as large as the next highest region of Sub-Saharan Africa where youth unemployment is “only” 18%. And in several countries of the MENA region, the unemployment rate is staggeringly high. Indeed, both Algeria and Palestine have unemployment rates close to 40 percent and Tunisia has a rate just over 30 percent (Assaad and Roudi-Fahimi 2007)

While the short-term economic, emotional and psychological impacts of this unemployment can be quite devastating, there are also important long-term effects for the future economic and political stability of the region. On the one hand, as this youth unemployment is heavily concentrated among recent graduates of secondary schools and higher education programs, it stunts the skill development of these youth by denying them opportunities to apply their education. On the other hand, this unemployment may result in both the political and social exclusion of this generation of educated youth. Indeed, without access to employment these youth remain dependent on their families and remain at home unmarried until they can find employment (Middle East Youth Initiative, 2007).

Recognizing the severity of this situation, a number of countries in the MENA region are developing programs to help alleviate the problem. While a variety of policies are being considered, they typically focus on measures to either improve the efficacy of education by improving curriculum and access and by increasing the flexibility of the labor market. Generally these educational initiatives try to alleviate skill mismatch between the educational system and labor market by providing readily applied skills while efforts to increase turnover in the labor market are intended to improve access for recent graduates. An example is Iran where various reforms of the vocational education system have attempted since the late 1990s and a variety of financial

incentives for small firms to form and join the formal sector have been recently implemented (Salehi-Isfahani and Egel 2007).

Unfortunately there is little available policy analysis to help guide the development of these types of programs, despite the fact that similar policies have been attempted in the recent past in the region. Indeed in Morocco, a variety of reforms to the educational and labor markets were attempted throughout the 1980s and 1990s. One major aspect of these was a series of policies designed to reform various aspects of the Morocco's vocational training system.

During the 1980s and 1990s, in response to a rapidly rising unemployment rate, the Moroccan government enacted several of policies designed to improve the efficacy of technical and vocational training. One effort was the expansion and improvement of vocational training programs in 1984, which was designed to assist youth in gaining access to the private labor market by providing them with skills that were practical and appropriate. Later extensions of this program include a co-operative training program beginning in 1996 that sought to involve students in the private labor market during their vocational schooling and an apprenticeship program. Additionally, policies designed to encourage recent graduates of these programs to form small businesses by providing tax or other incentives were implemented in the 1990s (see citeN{BL2007} for a more detailed review).

Here we use longitudinal post-graduation data for graduates' of vocational training in Morocco to analyze the efficacy of two specific reforms of the vocational training program. In the first case we focus on employment outcomes after the variety of program innovations that were attempted. Second, we explore the impact of policies designed to encourage recent graduate to set-up small enterprises in the formal sector.

In general, these policies seem to have been largely ineffective. Indeed, graduates of vocational training programs, whose programs were specifically designed to reduce unemployment by providing graduates with useful skills, are among the population groups who are the most exposed to unemployment risks. Data from the Moroccan labor force survey (LFS) indicate that in 2006 the unemployment rate was 34.8% among VT graduates with Specialization certificates, 21.8% among those with Qualification certificates and 15.6% among Technicians compared to a national average of 9.7%. Also, data from the Moroccan Department of VT show that about 40% of 2000 graduates were still unemployed in 2004 for a national average of 11.6% in the same year (Bouarbat 2007).

And the extraordinary low take-up rates of policies designed to encourage self-employment among graduates is demonstrated by low take-up rates. Law 16/87, which was designed to encourage small business formation through a preferential tax program, was targeted to have approximately 1,000 participants annually. However, in practice this program only had an average of 100 annual participants reaching a total of less than 600 youth during the first six years of its application.<sup>1</sup>

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<sup>1</sup> Other programs which provide technical and financial assistance to young entrepreneurs are also far from achieving their objectives. For instance, the program "Moukawalati" (my enterprise) aimed at attracting university graduates toward self-employment, participated in the creation of 600 small businesses so far, whereas the

The high unemployment rate among recent graduates of vocational training programs is particularly perplexing in light of the fact that these programs were specifically designed to provide employable skills and they were very selective in choosing applicants with only around 20% of total applicants accepted. Importantly it seems that despite the training provided by these programs, familial connections still remain the strongest predictor of employment outcomes (Montmarquette 1996, Boudarbat 2007). Further, while these vocational programs do provide specific skills that are useful in a particular vocation, they are not very effective in preparing individuals for the realities of the private labor market. Graduates are unwilling to take low paying jobs that offer valuable experience and instead delay employment in hopes of obtaining high wages that they feel their education entitles them to.

Here we also provide evidence suggesting that the failure of 16/87, which was designed to provide incentives to small business formation in the formal sector, can be largely attributed to two factors. The first is that the program seems to have been poorly publicized as nearly 80% of the eligible individuals were simply unaware that it existed. On the other hand, and perhaps more importantly, this program was simply unable to adjust for the increased costs associated with joining the formal sector.

Understanding these programs may also help us understand why individuals choose to locate in the informal labor market.

## 2 Review of the Literature

Some papers to include in the review:

- [Martin and Grubb \(2001\)](#): Almost all evaluations show that special measures for disadvantaged youth are not effective. Holds for public training programs, targeted wage subsidies and public sector job creation schemes.
- [Heckman, Lalonde, and Smith \(1999\)](#): This finding is echoed by who conclude that the experimental and non-experimental literature for the United States indicate that employment and training programs are not beneficial to youth

On training Programs:

- [Friedlander, Greenberg, and Robins \(1997\)](#): who review the variety of government training programs in the United States targeted at the economically disadvantaged, find that there are no positive impacts on youth
- [Adda, Costa Dias, Meghir, and Sianesi \(2007\)](#): Training programs - which account for a large proportion of programs - have little effect on outcomes, while job experience programs have a positive impact
- [Larsson \(2003\)](#) finds that two major training programs for youth in Sweden were ineffective
- [Kluve \(2006\)](#): Youth programs in Europe and the US show either no or negative effects.
- [El-Hamidi \(2006\)](#): Egypt. After correcting for self-selection, vocational training has higher returns than general secondary education for men but not

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initial objective was creating 30,000 enterprises by 2008. Hence, the realizations are only 2% of the expectations.

for women. Control using Heckman and adding a bunch of covariates. (These results look really weak)

- [Lechner \(2000\)](#): Despite large public expenditures, the evidence indicates that there are no positive short term impacts of vocational training programs in Eastern Germany on employment probabilities, earnings and career prospects (?) Long-run effect is positive though only 'partially' significant.

About Small Business Assistance:

- [Galasso and Almeida \(2007\)](#): Argentinian program provides financial and technical support. Only very small and selected subset of beneficiaries are attracted to this type of program. Positive impact only for individuals who were young and more educated.
- [Rodriguez-Planas \(2007\)](#): Small business assistance works best for more educated workers.

Employment Services:

- [VanReenen \(2004\)](#) Finds that a "New Deal" type program in the UK has led to a 20 percent increase in employment rates, where the majority of the effectiveness of this program can be explained by the employer wage subsidy. One-fifth of effect explained by job search assistance.
- [Kluve \(2006\)](#): While direct employment programs in the public sector appear detrimental, wage subsidies and "Services and Sanctions" can be effective in increasing participants' employment probability.
- [Rodriguez-Planas \(2007\)](#): Employment Services more successful than small business assistance.
- [Betcherman, Olivas, and Dar \(2004\)](#): "While there are few studies in developing countries, evaluations in Latin America do find positive impacts for programs that integrate training with remedial education, job search assistance, and social services."
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Apprenticeships (?):

- [Harhoff and Kane \(170\)](#): German apprentices do not fare significantly better than US high-school graduates. German system has been very unsuccessful for working with 'minority' youth suggesting that it may only be successful in a homogenous society.
- [Bennell and Segerstrom \(1998\)](#): Enterprise-based apprenticeships are usually the most cost-effective for skilled manual workers/artisans.
- [Adda, Costa Dias, Meghir, and Sianesi \(2007\)](#): Training programs - which account for a large proportion of programs - have little effect on outcomes, while job experience programs have a positive impact.

Morocco:

- [Agenor and Aynaoui \(2003\)](#): Look at potential impact of labor market policies by simulating the effect of a cut in the minimum wage and a reduction in payroll taxation. Analysis builds off of a quantitative framework that incorporates the size of the public sector, etc.
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Correcting for Selection:

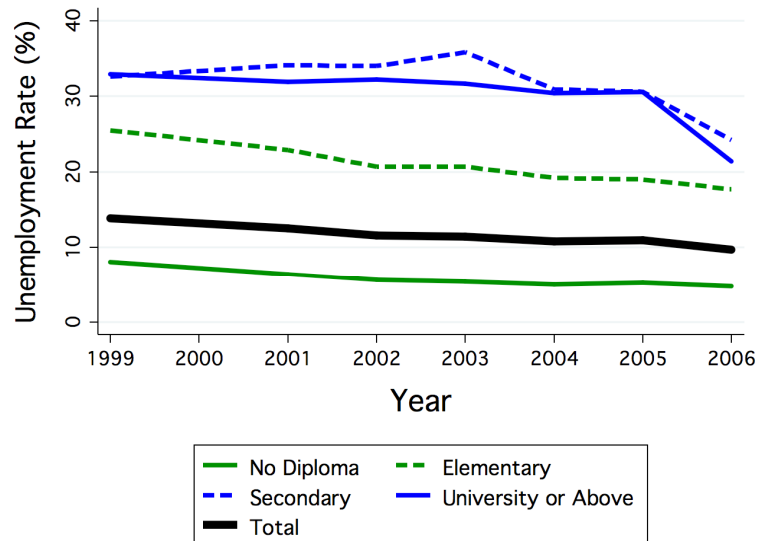
- The difficulty with estimating the impact of vocational training programs

without an experimental control group is a well known [Lalonde \(1986\)](#).

### 3 The Moroccan Labor Market

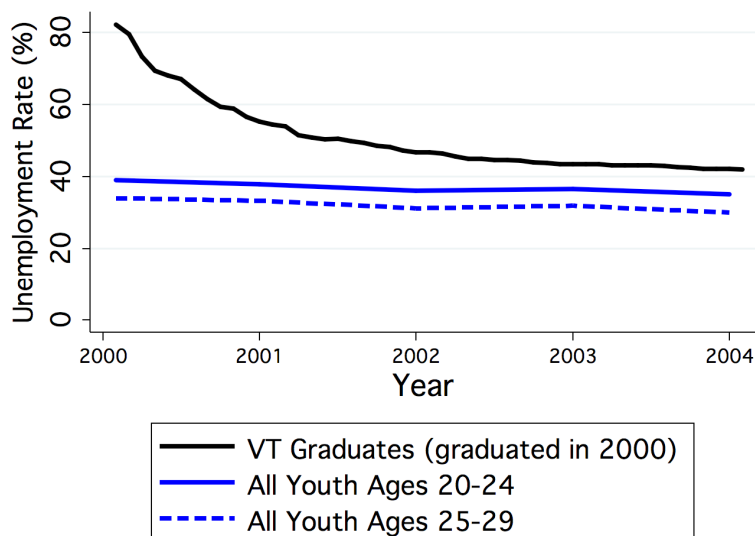
- Unemployment in Morocco is very high.
- Need to correct the following figure... looks wrong.

Figure 1: Unemployment Rates in Morocco



Things are even worse for graduates of vocational training centers. Despite the variety of efforts to improve the vocational training system and to make it more responsive to the labor market, job prospects for graduates of these programs are quite poor. As seen in Figure 2, the unemployment rate among recent graduates of these programs is extraordinarily high. Though the unemployment rate for all youth is itself very high, with rates among comparable aged youth nearly 40 percent, the unemployment rate among vocational graduates is close to 60 percent one year after graduation and is nearly 50 percent even two years after school.

Figure 2: Unemployment Rates among VT Graduates



Boudarbat (2007) highlights the factors favoring or hindering employment of this population. Using a duration analysis applied to the length of unemployment before the first job, the author finds that training geared to informal activities offers a greater potential for employment. There are, however, factors unrelated to training which significantly affect the hazards of quitting unemployment. For example, social networks (personal connections) increase substantially access to employment, particularly for girls. In the same vein, the father's profession is instrumental, with children of managers and skilled trades are more likely to find employment. An early study by Montmarquette, Mourji, and Garni (1996) on OFPPT graduates leads to very similar findings.

## 4 Description of the Policy Measures

### 4.1 Increasing youth participation in vocational training: the 1984 reform

In 1984, the VT system underwent a crucial reform, whose goal was to make it a genuine tool for socio-economic development in a context marked by rising unemployment among graduates and high drop-out rates. One of the reform's main goals was the development of human resources and social promotion by providing training to a greater number of young people. At the same time, a qualitative goal was to better adapt the system to the constantly evolving needs of the labour market and to improve graduates' employment.

The first year of the reform (1984) saw a spectacular increase in the number of trainees, with 66% more than in 1983. A sustained growth rate was maintained thereafter in both public and private sectors (see Figure 2). The number of graduates from public VT centres (school-based and co-operative education only) increased by 3.5% on average per year between 1984 and 2003. The development of private sector training was even greater under the impetus of public authorities. The number of graduates from the private sector increased by 6.5% on average per year between 1988 and 2003. Moreover, the number of private training institutions reached 1650 in 2003, compared to only 584 in 1992, which corresponds to the net creation of about 100 institutions on average per year. If these trends continue, the private sector's training capacity will soon exceed that of the public sector, a situation that is desired by the government, which is seeking to transfer the cost of training to individuals and their families. footnote{ Training in public schools is fully subsidized, whereas students pay tuitions at private schools. }

If training by apprenticeship and evening courses are taken into account, the annual number of graduates of all forms of VT reached 81,000 in 2002, which is an increase of 11% in a single year, and the government intends to increase further this number since it has set the goal (in November 2002) of training 400,000 young people between 2005 and 2007.

Figure: Evolution of Number of Vocational Training Graduates in Public and Private Sectors (school-based training and co-operative education only)

*(Don't have figure in paper...)*

Source: Statistics from the Secrétariat d'État chargé de la formation professionnelle

By level of training, the number of graduates at the qualification and technician levels has stagnated somewhat from the mid-1990s onwards, whereas the number of graduates at the specialization and specialized technician levels increased continuously. The progression of the specialized technician level has been extremely strong. Since its creation and up till 2003, the number of graduates at this level has increased by 26.2% per year on average. During the same period, the average annual growth rate for the number of graduates has been 4.8% for the specialization level, versus 1.9% for the qualification level, and barely 1.1% for the technician level. The specialization level, which the government at one point wanted to abolish, seems to be benefiting from the increase in children's enrolment rates, but also from the economy, which offers few advantages to the high qualification levels. As for the specialized technician level, it seems to be benefiting from the difficult employment situation of university graduates to attract large numbers of young people who are finishing their secondary studies, but also to enhance its importance within public programs.

The demand for VT in public centres is very high among youth. For example, in 2003, the demand by young people was 4.5 times greater than the spaces available in the public training sector. This high demand is partly explained by the fact that the training in public centres is entirely subsidized by the government, which allows young people to enjoy free training.

As regards girls' access to VT, there are few disparities in comparison to boys. Of all graduates trained between 1990 and 2003, 46% are women. In the private sector, 62% of graduates are women, versus only 35.1% in the public sector.

Parallel to the quantitative development, Moroccan VT system has experienced qualitative improvement in order to meet the needs of the labor market. The persistence of a high unemployment rate among graduates enticed the government to introduce new forms of training, which favor training on the workplace and involves employers in setting programs and providing trainings.

## 4.2 Improving the quality of training: New forms of training

During late 1990s and early 2000s, the VT system experienced three new initiatives aimed at improving the skills of graduates by closing the gap between these skills and the needs of the labor markets. One common way to achieve this objective was increasing the share of the training that takes place on the (real) workplace.

### 4.2.1 Co-operative training

This form of training stipulates that at least half of the training period must be spent in a workplace and at least a third must take place in a VT centre. Thus, students receive a large part of their training in the workplace, which puts them in touch with the reality of the world of work and allows them to develop a profile that corresponds to the needs and specificities of businesses. Under these conditions, access to employment should become easier for co-operative education graduates.



The first co-operative education pilot projects started in 1993, but it was only in 1996-1997 (after Law 36.96 was passed) that this form of training was generalized across the country, with about a thousand trainees at the time. The number of trainees then increased to 16,240 in 2004-2005 and it is expected to reach 21,000 in the public VT sector by 2007-2008. However, despite this development, co-operative education does not seem to be positioning itself as a preferred form of training. Indeed, though co-operative education was set up before apprenticeship training, the second form seems to be more appreciated, with its share in the training system (in terms of number of trainees) expected to increase from 12.5% in 2003 to 18% in 2007, versus 7.6% and 7.4% for co-operative training. High employment rates among apprenticeship training graduates could explain the growth in this form of training, set against the stagnation of co-operative education. However, it will have to be seen whether these trends will persist over time.

#### 4.2.2 Vocational training by apprenticeship

The implementation of this form of training was aimed at facilitating youth employment, saving some arts and crafts trades which are dying and ensuring training that is adapted to the specificities of a rural environment for rural youths. Apprenticeship training is moreover considered to be a means for the social and employment integration of young people, in particular those who leave the education system too early or who do not meet the conditions of age or educational level required to have access to school-based or co-operative VT. It also involves developing and regulating a form of training which has always existed, by using the economic structure of small and medium-sized businesses/industries (SMB/SMI). Apprenticeship training has also been recommended by the Charte nationale d'éducation et de formation as a means leading to youth employment and as way to improve skilled labour in SMBs/SMIs.

Practically, at least 80% of the training period must be spent in a workplace, and completed with a period to at least 10% for general and technological training in a training centre. Thus, in apprenticeship training, the share of the training period that takes place in a workplace is higher compared to co-operative training, in which this share ranges between a minimum of 50% and a maximum of 67%. The training period varies from one to two years according to the trades and qualifications of the apprenticeship training. The latter can lead to a diploma (specialization and qualification levels) or be qualifying only (a certificate that recognizes the skills acquired).

#### 4.2.3 The skills-based approach

VT seems from now on to be oriented towards a new teaching method that draws on the skills-based approach (SBA). Thus, a large-scale project is being set up with the assistance of Canadian cooperation.<sup>2</sup> The goal is to strengthen the links between the vocational training system and its economic environment by designing training programs based on the skills required by workers who are currently in the labour market. For the Secrétariat d'État chargé de la formation professionnelle (State

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<sup>2</sup> The Canadian International Development Agency granted CAN\$10 million worth of financial assistance.

Secretariat for VT), which is piloting the project: “The SBA leads to defining the means of an appropriate material and educational organization (educational strategy, evaluation tools, infrastructure, human and material resources), and implementing, in the training institutions, training programs which allow their graduates to be immediately operational and to be able to perform tasks or activities given to them upon their entry to the labour market.”

This approach was implemented in 2003 with a four-year experimental phase that included the setting up of five reference institutions related to the five training sectors: (1) textile/clothing industries, (2) tourism/hotel and catering industry, (3) tertiary (in particular information and communication technology), (4) mechanical, metallurgical and electrical industries, and (5) agriculture.

A second phase, also four years long, will help to evaluate the first phase and generalize the approach to the entire vocational training system.

### 4.3 Improving graduates employment

Naturally, the abovementioned initiatives have the final objective of facilitating the transition between training and employment. In fact, they were dictated by the worsening of the employment of graduates of VT and of other education system components (see section 3).

One of the aims of the structural adjustment policies implemented in August, 1983 was to assign to the private sector a more important role in the economy, especially in the creation of jobs. Because of financial constraints, the public sector is no longer able to sustain its role as main employer of educated workers. Labor market policies developed since 1983 aim at surmounting problems that face graduates when they search for employment (for example, lack of information on the labor market and/or lack of a first professional experience). Self-employment was also (and is still) considering as one good option not only for those who cannot find paid work, but also for talented ones.

One main policy on this direction consists of granting loans at preferential interest rates to graduates who wish to start their own business.<sup>3</sup> Unfortunately, these programs mainly favour highly educated workers (i.e., those with post-secondary education). VT graduates, especially those from low training levels were somewhat excluded. Yet, a law entitled 16/87 was designed exclusively for VT graduates. This program, implemented early 1990s, provides tax exemptions for young entrepreneurs holding vocational training diplomas.<sup>4</sup> In addition, Law 16/87 listed 20 trades that could be carried out only by graduates holding vocational training diplomas or by experienced workers who succeed at professional aptitude tests. This regulation, which aimed at protecting graduates from competitiveness from uneducated workers

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<sup>3</sup> Since late 1980s, these loans were granted under a program called “Young Entrepreneurs’ Loans.” A new integrated program called “Moukawalati” was implemented and includes selection of candidates and technical assistance for starting small businesses.

<sup>4</sup> Equipments bought to start the business are taxes free for VT graduates (the tax on added value is 20% currently). Also, businesses do not pay taxes for 5 years, then pay 50% during the following 5 years.

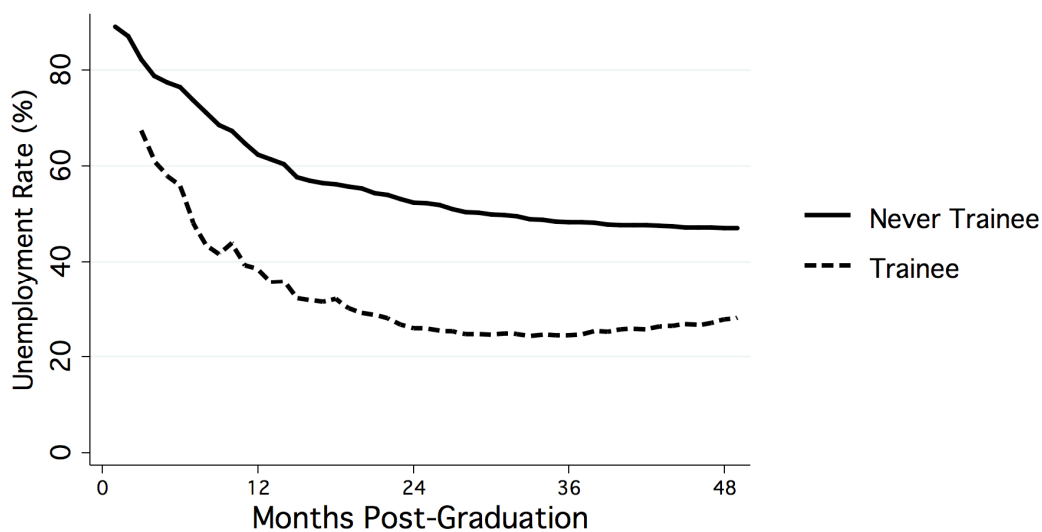
or those trained on-the-job has never been implemented.

## 5 Data

Here we draw on data from two longitudinal surveys (the follow-up of VT graduates-FVTG) conducted by the Moroccan Department of Vocational Training to explore the apparent failure of these programs. Data are of 1993 and 2000 cohorts, each surveyed four years after graduation. The FVTG collects relevant information on the evolution of the situation of graduates on the labor market during the four years following their graduates. The main aim is to examine the factors which favor or slow down their access to employment. It also aims at gauging the graduates' opinions on the quality of the training compared to the reality of the workplace. Finally, the investigation grants a particular interest to self-employment among graduates. The 2004 study touched a sample of 6,381 graduates (i.e., 10% of 2000 graduates), of which 3,167 are girls and 90% are aged 20 to 30. The survey was carried out by direct interviews during the summer 2004. The questions about the evolution of the labor force status are retroactive covering the period going from July 1, 2000 to July 31, 2004.

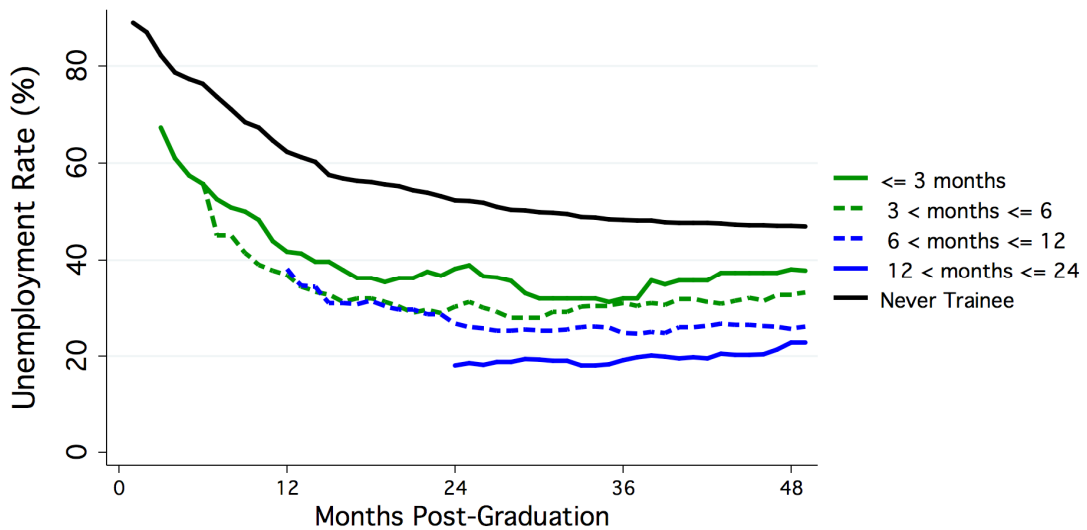
## 6 Traineeship Programs

Figure 3: Comparing Trainees with other VT Graduates<sup>1</sup>



1: The Trainee" line includes all individuals who have completed their traineeship program by the corresponding month.

Figure 4: Length of Traineeship<sup>1</sup>



1: The plot for each group of trainees begins at the end of the range for that group.

## 6.1 Controlling for Selection using IPW

Here we are interested in estimating the average impact of the traineeship program on the participants in the program. This is equivalent to estimating the average treatment effect among the treated (ATT). In our case, the ATT is the difference in the unemployment rate among those in a traineeship program and the unemployment rate for those same individuals if they had not participated in a traineeship program. This ATT can be written as

$$ATT = E[U_T - U_N | 1]$$

where  $U_T$  is the unemployment among the treated,  $U_N$  is the unemployment among the non-treated and  $T$  is a binary indicating treatment or not.

While we observe  $E[U_T | T = 1]$ , we do not observe the counterfactual unemployment rate  $E[U_N | T = 1]$  directly. If the decision to participate in a traineeship was random, so that  $E[U_N | T = 1] = E[U_N | T = 0] = E[U_N]$ , then we could estimate the ATT using the prevailing unemployment rate among all vocational graduates. However, this is unlikely to be the case.

Though participation in the traineeship program is non-random...

The decision to participate in a traineeship program is likely similar to the model for voluntary training programs as presented in [Friedlander, Greenberg, and Robins \(1997\)](#).

- Following Friedlander et al. (1997) we can model the impact of a voluntary training program as

$$Y_{it} = a_t X_i + b_t P_{i0} + \varepsilon_{it}$$

$$P_{i0} = c_0 Z_i + \omega_{i0}$$

where  $i$  indexes individuals,  $t$  indexes months and

- $Y_{it}$  is an economic outcome of interest,

- $P_{i0}$  is whether a treatment program was selected,
  - $X_i, Z_i$  are vectors of possibly overlapping exogenous variables.
- Here we are interested in the unemployment rate so that  $Y_{it}$  will denote the employment status of individual  $i$  at time  $t$

Two Step Estimator:

- 1) Calculate the propensity of being treated using a logit
  - Include the following variables: specialization, region, field of study, father's vocation, gender, age and age-squared
  - Impute the propensity to be treated as  $\hat{e}$
- 2) Calculate  $E[U_N | T = 1]$  as

QuickTime™ and a  
TIFF (Uncompressed) decompressor  
are needed to see this picture.

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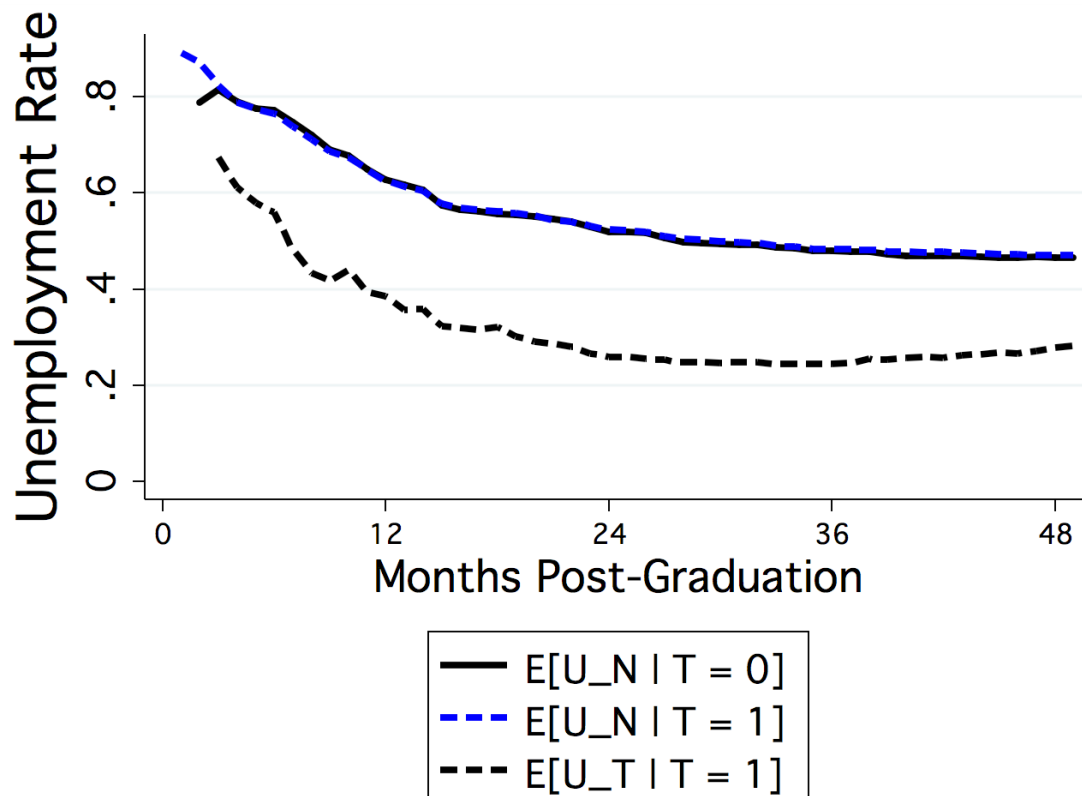
ATT requires one important assumption:

$$E[U_N | X ; T] = E[U_N | X ]$$

- Selection on observables or unconfoundedness
- Selection on observables only required for non-participants
- Assumes participation decision for non-participants is independent of their unemployment outcome conditional on observables
- Results suggest that selection has little effect on our estimates
- Effect of traineeship controlling for selection at each month post-graduation is difference between dashed blue and dashed black line

$$ATT = E[U_T - U_N | 1]$$

Figure 5: Effect of Traineeships after Controlling for Selection using HIR



## References

Adda, J., M. Costa Dias, C. Meghir, and B. Sianesi (2007, October). Labour market programmes and labour market outcomes: a study of the Swedish active labour market interventions. Working Paper Series 2007:27, IFAU - Institute for Labour Market Policy Evaluation.

Agenor, Pierre-Richard & Aynaoui, Karim El, 2003. "**Labor market policies and unemployment in Morocco : a quantitative analysis**," Policy Research Working Paper Series 3091, The World Bank.

Bennell, P. and J. Segerstrom (1998). Vocational education and training in developing countries: Has the World Bank got it right? International Journal of Educational Development 18 (4), 271{287.

Betcherman, G., K. Olivas, and A. Dar (2004). Impacts of active labour market programs: New evidence from evaluations with particular attention to developing and transition countries. Washington: World Bank Social Protection Discussion Paper (0402).

Boudarbat, B. (2007). La situation des diplômés de la formation professionnelle sur le marché du travail au Maroc : une analyse sexo-spécifique à l'aide des modèles de durée. Revue Canadienne d'études du Développement 28 (2), 293{314.

El-Hamidi, F. (2006). General or vocational schooling? evidence on school choice, returns, and 'sheepskin' effects from Egypt 1998. Journal of Economic Policy Reform 9 (2), 157{176.

Friedlander, D., D. Greenberg, and P. Robins (1997). Evaluating government training programmes for the economically disadvantaged. Journal of Economic Literature 35, 1809{1855.

- Galasso, E. and R. Almeida (2007). Jump-starting self-employment? evidence among welfare participants in argentina". World Bank Policy Research Working Paper (4270).
- Harhoff, D. and T. J. Kane (170). Is the German apprenticeship system a panacea for the u. s. labor market? *Journal of Population Economics* 10, 171{196.
- Heckman, J., R. Lalonde, and J. Smith (1999). The economics and econometrics of active labor market programs. In O. Ashenfelter and D. Card (Eds.), *Handbook of Labor Economics*, Vol. 3a. (North-Holland, Amsterdam).
- Imbens, G. W. (2004). Nonparametric estimation of average treatment effects under exogeneity. *The Review of Economics and Statistics* 86 (1), 4{29.
- Kluve, J. (2006, March). The effectiveness of european active labor market policy. *IZA Discussion Papers* 2018, Institute for the Study of Labor (IZA).
- Lalonde, R. J. (1986, September). Evaluating the econometric evaluations of training programs with experimental data. *The American Economic Review* 76 (4), 604{620.
- Larsson, L. (2003, Autumn). Evaluation of swedish youth labor market programs. *The Journal of Human Resources* 38 (4), 891{927.
- Lechner, M. (2000). An evaluation of public-sector-sponsored continuous vocational training programs in east germany. *The Journal of Human Resources* 35 (2), 347{375.
- Martin, J. and D. Grubb (2001). What works and for whom: a review of oecd countries' experiences with active labour market policies,. IFAU - Institute for Labour Market Policy Evaluation Working Paper Series(14).
- Montmarquette, C., F. Mourji, and A. Garni (1996). L`insertion des diplômés de la formation professionnelle dans le marché du travail Marocain : une application des modèles de durée. *Région et Développement* 3.
- Rodriguez-Planas, N. (2007). What works best for getting the unemployed back to work: Employment services or small-business assistance programmes? evidence from romania. *IZA Discussion Papers* 3051, Institute for the Study of Labor (IZA).
- VanReenen, J. (2004). Active labour market policies and the british new deal for youth in context. In D. Card, R. Blundell, and R. Freeman (Eds.), *Seeking a Premier Economy: The Economic Effects of British Economic Reforms, 1980-2000*. Chicago University Press.