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## The long and winding road – Labour market integration of refugees in Norway

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# The long and winding road - Labour market integration of refugees in Norway

Ines Hardoy and Tao Zhang*

**Abstract**

Large waves of refugees have arrived in Europe on a regular basis in recent decades. We know little about the impact of labour market policies intended to improve the labour market integration of refugees and their reunited family members. Using rich longitudinal data from Norway of the past 30 years, we study the impact of different labour market programs for refugees and their reunited families. We find no lock-in effects while the program is in process. On the contrary, program participation seems to function as a springboard to working life. W*ork practice* seems to be particularly suitable for refugees to enhance employability while *training* enhances ordinary education. *Wage subsidies* do not seem to have the desired impact and can be an indication that it may have been used too early in the integration process.

**Keywords:** refugees, labour market programs, effect evaluation, time-of-event analysis

**JEL classification:** C41, J22, J61, J68

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*1. Introduction*

In 2017, nearly six hundred thousand first-time asylum seekers applied for international protection in the Member States of the EU in 2018. World trends seem to indicate that refugee flows will not end any time soon. At the same time, the rapid pace of change, automatization and robotization in the receiving countries poses a challenge for those with low skills, no/little education and/or lack of language skills (Acemoglu and Restrepo 2017; Dauth et al. 2017; Michaels and Graetz 2018). European countries have invested vast public resources to facilitate the integration of refugees in the European labour market. Yet there is meagre knowledge about the effects of these active labour market policies (ALMPs). The purpose of this study is to contribute to fill the gap by studying the case of Norway.

Norway is interesting for several reasons. First, Norway has had a steady and substantial influx of refugees over the last decades. According to figures from UNHCR, of all the European countries, Norway is one of the main receiving countries of refugees from the refugee crisis of the last 4–5 years (in proportion of total population). Second, Norway has a very compressed wage structure, particularly at the bottom of the wage distribution, which means that the wage level for unskilled employees is relatively high. This puts refugees in direct competition with other immigrants for this labour market segment. Third, Norway has a long tradition in the implementation of labour market policies and has spent considerable resources to this end over time. An efficient allocation of labour market measures that raises the refugees' competences and language skills and makes them more attractive to potential employers is considered essential for their successful labour market integration.

This paper evaluates the impact of ALMPs in Norway during the last three decades. The sample covers all refugees and their reunited families ages 18 to 65 getting their residence in Norway during the period 1992–2015. We focus on the impact of four major ALMPs on three distinct outcomes, namely, job, education and social security. We distinguish between the effects while the measure is ongoing and after the measure is completed. Moreover, we do separate analyses for the period before and after 2004 when the Introductory Program (IP) was launched, the reason being that IP was a major effort to improve skills, in particular language skills, of the refugees and their reunited family members.

To investigate the impact of ALMP we use the mixed proportional competing risks hazard model of Abbring and van den Berg (2003), described in detail in Gaure et al. (2007). In addition to the usual explanatory variables typically included in such analyses, we model the individual's unobserved heterogeneity with a discrete mass point distribution. Røed and Raaum (2006), Claussen et al. (2009), Hardoy and Zhang (2010) and Heinesen et al. (2013) are examples of recent applications of this framework in the field of program evaluation.[2]

The literature on the impact of ALMPs on the foreign-born is scant, particularly when it comes to refugees. Butschek and Walter (2014) wrote the first and only systematic review of the effect of ALMPs on immigrants. Their meta-analysis included 33 European studies and concluded that wage subsidies were the only programs

[2] Appendix B contains a formal account of the model. The method has been criticised on the basis that the proportionality assumption seldom holds in practice. However, it has been shown (Raaum and Røed 2006) that the proportionality assumption is not necessary if one has access to time-varying observed characteristics and that the more time-varying explanatory variables that can be controlled for in the analysis, the greater the probability of identifying causal relationships.

they would recommend to policy-makers. A study by Clausen et al. (2009) is one of the very few studies and the only one from Scandinavia focussing on refugees in particular. It studied the impact of the Danish IP, a three-year program very similar to the Norwegian one, but used data from 1999. Our study is the first to attempt to identify the causal effect of labour market measures for refugees in Norway, and uses recent data.[3]

Refugees share several common features with non-western immigrants. The proportion with low or no education is higher in these two disadvantaged groups and they often have a cultural background quite different from ethnic Norwegian. Both these features contribute to making the process of integration more demanding and long-lasting. However, one major difference between refugees and non-western immigrants is that the former are more likely to have experienced wars and deprivation and consequently more likely to have traumas and psychological challenges. Hence, the process of integration and the success of active labour market policies for refugees might differ from what is beneficial for ordinary immigrants.

Our findings indicate that *work practice* seems to be particularly suitable for refugees to enhance employability while *training* enhances ordinary education. *Wage subsidies* do not seem to have the desired impact and can be an indication that it may have been used too early in the integration process. Contrary to what the literature suggests, we do not find a lock-in effect while participating in ALMPs. Rather, our analyses indicate that ALMP participation is a springboard to working life and ordinary education. We interpret this as the consequence of the benefits of expanding the refugees' network and coming in contact with working life in Norway. Furthermore, the impact of ALMP was weaker in the period 2004–2014, than in the period 1993–2002. One possible reason may be that in addition to language courses the Introductory Program entails a comprehensive follow-up and individualised mapping of capabilities and potentials, as well as a broader availability of opportunities such as the possibility of taking ordinary education. Before 2004, ALMP was mostly what was available to refugees in a systematic way.

The paper proceeds as follows. Section 2 describes the target group and gives an account of how they fare in the labour market. Section 3 provides an overview of the institutional setting, and section 4 gives an overview of the empirical research with an emphasis on Nordic countries. Section 5 outlines the model, while section 6 presents the data and provides descriptive statistics. In section 7 we discuss results and policy implications from simulations and in section 8 we present our conclusions.

## *2. Refugees in Norway and their labour market adaptation*

The number of refugees in Norway has increased significantly since the beginning of the 1980s. A large share of the refugees come from non-western countries. The exception is the refugee flow from Eastern Europe in the 1990s resulting from the Balkan crises. Today, 4.3 percent of Norway's population has a refugee background, and refugees account for 30.6 percent of all immigrants.

[3] Noticeably, of the 93 estimates, about half are German studies, and these are for the most part unpublished studies using the method of matching and arriving at insignificant effects.

Compared to other immigrants, refugees have greater challenges in adapting to the labour market. While nearly 80 percent of immigrant workers were employed in 2017, the corresponding proportion for refugees was 45 percent (Olsen 2018b). Many struggle to acquire permanent jobs. The use of social security benefits is more common among some groups of refugees than others and it varies with time since arrival (Bratsberg et al. 2017; Olsen 2018a). On average, refugees have less education than other immigrants, and many lack education altogether. Unemployment is about three times as high among immigrants as in the rest of the population, and the highest unemployment is registered among immigrants from refugee countries. This gap has been stable over time. Furthermore, Bratsberg et al. (2017) showed that there are clear signs of labour market integration in the first years after arrival, but that the integration process is reversed after only 5–10 years. From then on, there are increasing employment disparities between immigrants and the Norwegian-born, and increasing social security dependence among immigrants.

The weak labour market attachment of refugees and their reunited families can be explained in various ways. Education and professional experience may affect their labour market adaptation. Some refugees come to Norway with education that is not directly transferable to the Norwegian labour market. In addition, some refugees come from countries with an educational system of a lower standard than the Norwegian system. Both low-level education and low-quality education have negative impacts on productivity and employment opportunities. Norway is the European country with the lowest share (3 percent) of such jobs (Calmfors et al. 2019). At the same time, previous studies indicate that immigrants (including refugees) are overqualified for the jobs they do (Hardoy and Schøne 2014). Further, taking education in Norway is associated with better results in the labour market even if the education acquired in Norway is at a lower level than the education they arrived with (Bratsberg et al. 2017). This is because acquiring language skills and cultural understanding, as well as a formal Norwegian education, increases their competence and productivity, which in turn will make the immigrant more attractive to employers.

Generally, immigrants get less stable jobs than natives do, they are more sensitive to downturns, have a higher chance of losing their jobs when downsizing and have a greater tendency to work in companies that go bankrupt (Bratsberg et al. 2017). Not least, many refugees have experienced traumas and physical and mental disorders of various kinds. Some of the disorders and health problems may surface immediately after arrival, while others may surface after some time, sometimes triggered by later experiences. This may contribute to the refugees being more likely to become dependent on social security after some years of residence. Low skills, low wages and underemployment are also associated with an increased risk of falling into a ‘welfare trap’ or ‘inactivity trap’.

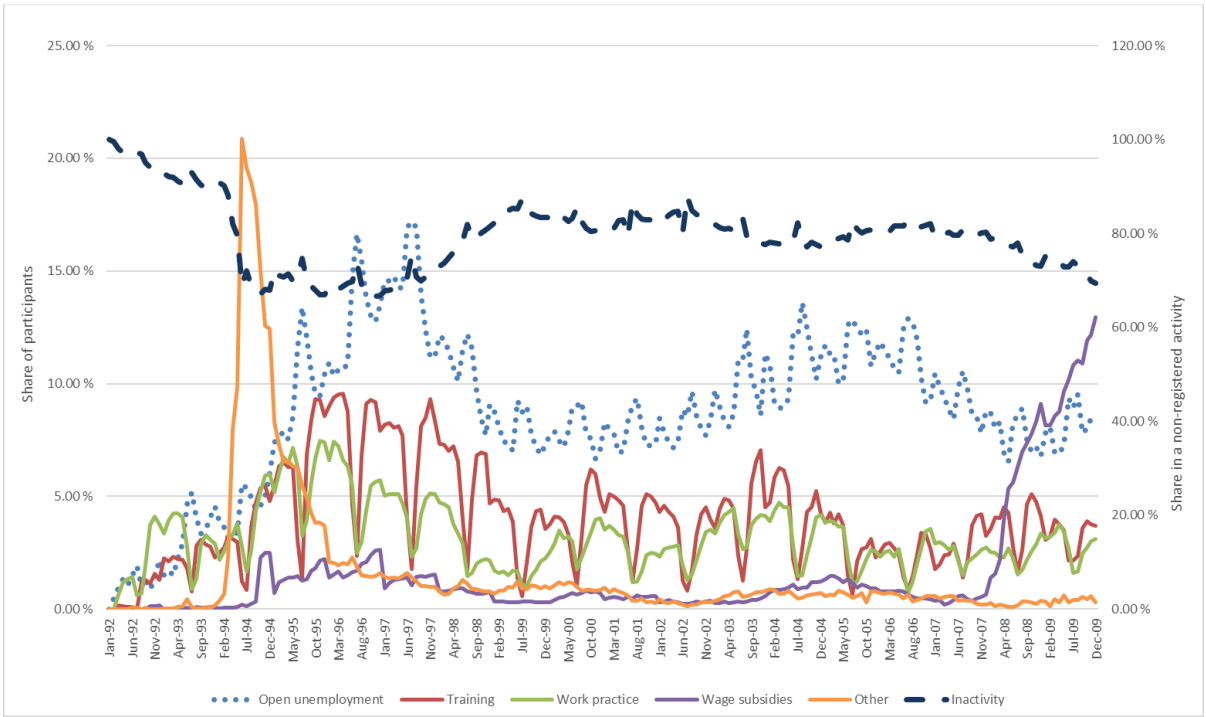
### *3. Labour market policies*

In order to counteract the negative consequences of unemployment and inactivity, Norway pursues an active labour market policy. The idea is that as unemployed people increase their skills by participating in labour market measures, their productivity and expected wage in the labour market will increase. The objective of labour market measures is to qualify and/or provide work training to enhance their employability or to start an education and reduce the likelihood of having to depend on the social security system (Calmfors 1994).

The Introductory Program (IP) is the most important public measure for newly arrived refugees in Norway. Under the Introduction Act, all refugees and their reunited family members between 18 and 55 years of age are entitled and obliged to participate in the IP within two years of obtaining their residency. This applies from September 1, 2004, for anyone who became a resident as of September 1, 2003, or later. The law exempts those who "do not need basic qualifications", such as people who go straight into paid work or ordinary education, or people who for medical or social reasons are unable to take advantage of the program. In addition, one can take paid leave from IP in case of illness or birth. About 65 to 70 percent of refugees and their reunited family members participate in IP (Joyce 2017).

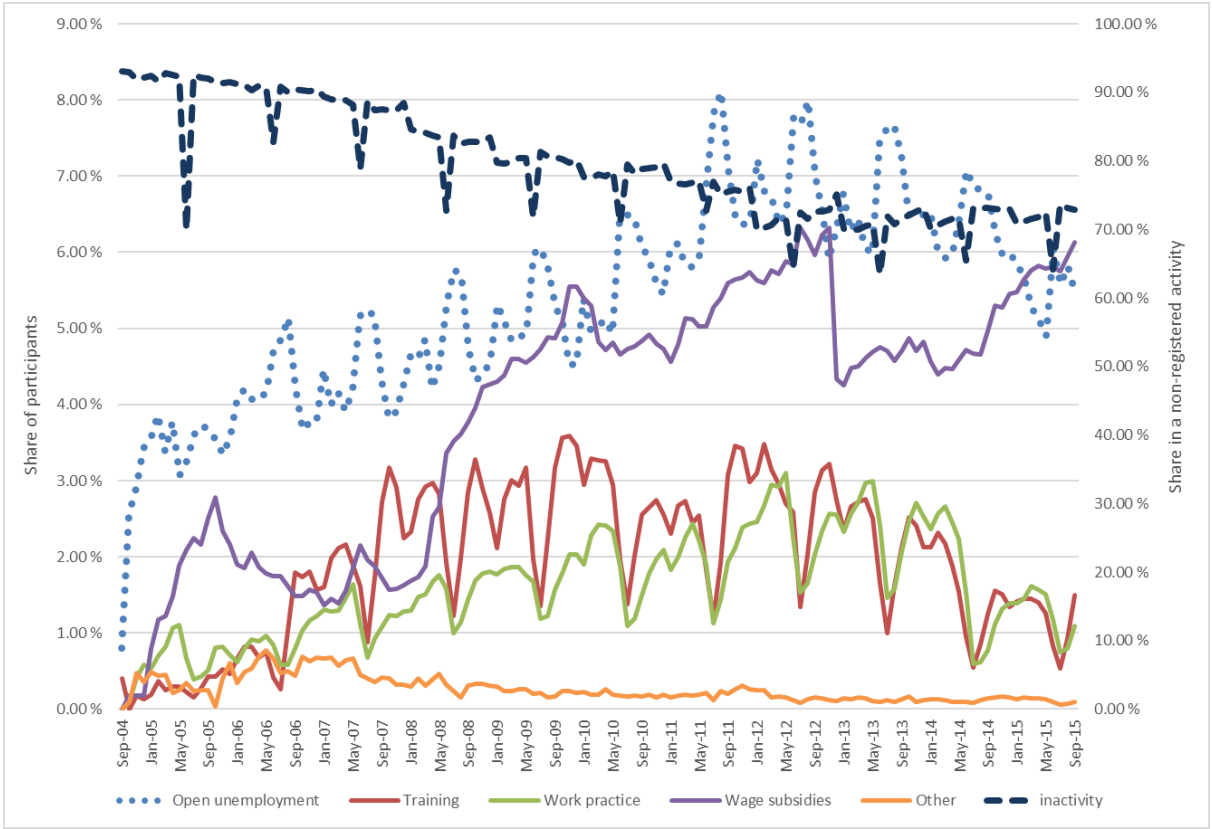
IP has led to a harmonisation of public subsidies and gives refugees the right and obligation to a full-day, individualised setup arranged by the municipality where they have their residence. The scheme comprises courses in Norwegian (up to 550 hours) and Norwegian life and society (50 hours). In addition, participants in IP can participate in ALMPs or take ordinary education at a primary or a lower secondary school. The courses are free of charge. It is also possible to apply for up to an additional 2400 hours, which must be taken within five years of starting IP. The municipalities receive state subsidies to cover costs and are obliged to provide IP on a full-time basis, all year round, to all entitled refugees living in their municipality**.** Participation entitles refugees the right to a benefit amounting to twice the National Insurance basic amount (2G). Participants below the age of 25 are entitled to 2/3 benefits. In the case of unjustified absence, the benefit is reduced. Provided the refugee participates in IP full-time, he/she is entitled to work on the side while maintaining the full benefit. The IP benefit is not affected by eventual wealth either.

*Figure 1. The share of participants in ALMP and inactivity, per month. Period before IP.*



IP and ALMP are closely related. Prior to IP, refugees and their reunited families were offered participation in ALMP as the sole measure of labour market integration. With the launching of IP in 2004, refugees continued to be offered ALMP, but as part of a broader package of measures and closer follow-up. Figure 1 shows the share of participants in ALMP and open unemployment (with reference in left vertical axis) and inactivity (right vertical axis) among all eligible refugees that came to Norway in the period 1992–2002, prior to IP. We followed them for a maximum of 10 years or until their transition to employment, education or social security lasted for more than three consecutive months.[4] Looking from left to right in Figure 1 shows that the percentage of openly unemployed varied from 5 to over 15 percent and that participation in training and work practice among those arriving before 2002 was stable and cyclical. Notice the sharp increase in wage subsidies towards the end of the period, from below 5 percent in 2007 to almost 15 percent by the end of 2009. This coincides with increased political emphasis on the use of wage subsidies to enhance the employability of this target group. Since this group arrived before 2002, it is clear that wage subsidies were only used after the integration process had come quite a long way. Lastly, Figure 1 also shows that except for the period just after arrival, a stable 70 to 80 percent of refugees were had non-registered activity during the period 1994–2009 (with reference in the right vertical axis). The non-register activity may be studying languages or applying for jobs, the point is that the activity is not in official registers.

*Figure 2. The share of participants in ALMP and* non-registered activity, *per month. Period after IP*




[4] The appendix provides a detailed description of the measures, as well as definitions of absorbent transitions. We grouped ALMPs in the standard way of grouping used both in Norway and internationally (Martin and Grubb 2001)

Figure 2 is equivalent to figure 1 but comprises those arriving in Norway from 2004 and later, after the launching of IP. The figure shows a lower participation in ALMP as well as lower open unemployment among refugees and their reunited family members, compared to the period prior to IP. Unemployment reached a maximum of 15 percent before IP and 8 percent after IP. Training and work practices were 2–3 percent after IP and 5–10 percent before IP. The share with wage subsidies was close to zero most of the time prior to IP and in the order of 5–6 percent from 2009 onwards. The proportion of the refugees in a non-registered activity declined over the whole period after IP.[5] Nevertheless, the share in a non-registered activity has noticeably remained at over 70 percent for most of the period 2004–2015.

*4. Program evaluations: State of the art*

There are a number of Norwegian studies on the impact of ALMPs on different measures of success and failure. Few studies, though, have focused on the effect of participating in ALMP for immigrants, and none has investigated their impact on refugees. In particular, there is a lack of analyses that use methods which take into account the fact that individuals are heterogeneous, not only in terms of observable characteristics such as ethnicity, education, work experience, age and gender, but also regarding unobservable characteristics such as motivation, personality, intelligence and social abilities.

A few Scandinavian studies focusing on non-western immigrants need to be mentioned. Kvinge and Djuve (2006) used the method of matching to analyse the impact of ALMPs on non-western immigrants who became unemployed in February 2003; they found that wage subsidies was the measure that seemed to work the best, but at the same time it was the measure used the least. We previously analysed the impact of ALMP on immigrants in general, using the same methodological approach as in this paper and covering the period 1993–2007 (Hardoy and Zhang 2010). We concluded that there were significant lock-in effects while the programs were in progress. After program completion, training courses and wage subsidies have a positive effect on the chances of obtaining ordinary work, while work practice has no impact. The positive effects decrease though with duration of unemployment after participation. All in all, the impacts of ALMP on immigrants are ambiguous.

Two Danish studies investigated the case of refugees (Clausen et al. 2009) and immigrants (Heinesen et al. 2013). Both used the same methodological framework as in this paper. Clausen et al. (2009) studied the impact of ALMP in Denmark among newly arrived refugees in the period 2000–2002. Their study shows a clear lock-in effect while on IP except while participating on wage subsidies. Wage subsidy is also the only program to have a positive employment impact after program participation. The period of analyses by Heinesen et al. (2013) is from 1997 to 2004, covering the period before and after the introduction of the Danish IP in 1999. They arrived at conclusions very similar to the above. However, it is worth noting that the impact found by Clausen et al.

[5] 'Non-registered activity' includes non-registered job search, housework and NEETs and disregards IP participation since we do not have access to such data.

(2009) who focused on refugees are weaker than those found by Heinesen et al. (2013) for non-western immigrants in Denmark.

During the period 2003–2006 some municipalities of Sweden introduced work practice targeted at immigrants. To improve the quality of the match, the skills of the participants were closely investigated before program participation. The follow-up of both participants and employers was also intensified. Åslund and Johansen (2011) studied the impact of this measure using a diff-in-diff framework. They found positive employment effects on the order of 15 percent. The latest Nordic contribution to the literature is by Sarvimäki and Hämäläinen (2016) who studied the impact of a reform targeted at immigrants with a short period of residence in Finland. The reform consisted of making ALMPs more efficient by individualised mapping of skills and preconditions. The period of analysis was 1996–1998 and they used a regression discontinuity framework created by the introduction of the individualised service. They found positive earning effects and suggested that improved matching of pre-existing skills and available jobs explained their results.

Several studies investigate the functioning and achievement of IP in Norway. A political goal of IP has been that 70 percent of participants were in ordinary employment or in ordinary education one year after finishing the program. This goal has been achieved for men, but not for women (Enes 2016). Djuve and Kavli (2015) showed that 60 percent of the participants were in ordinary employment or in ordinary education within one to two years after completion of IP. Several studies show that there is a great variation between municipalities in terms of offers and goal achievements. There is little evidence that IP achieves better results when organised by the Norwegian Labour and Welfare Administration (NAV) than by a private entity (Tronstad 2015), but municipalities that cooperate with the voluntary sector seem to do better (Djuve and Kavli 2015), and close follow-up is important for success (Rambøll 2011). When it comes to personal characteristics, the surveys show that younger people gain entry into the labour market faster than older people do and that men get work faster than women (Enes 2014). However, among those with higher education the gender differences are smaller (Blom and Enes 2015).

## 5. *The model*

We investigate how participation in ALMP affects transitions to one of the following three outcome categories: job, education and social welfare. The model used is a mixed proportional competing risk hazard model (Abbring and van den Berg 2003), described in detail in Gaure et al. (2007). The generic characteristics of the model is that it uses information on the timing of events to identify causal relationships. For example, if an ALMP participant gets a job immediately after exiting the program, it is more likely that program participation has had a larger effect on the job probability, than if the person gets a job a long time after ALMP completion. A special feature of the model is that in addition to the usual explanatory variables typically included in such analyses, it allows individuals to vary with regard to unobserved characteristics that affect transitions along different dimensions, and also that these characteristics may be correlated. This is important for our study. Take ability for instance: an individual who is eager to take advantage of job opportunities may also be more likely to

participate in and benefit from labour market measures. If we disregard any positive relationship of this type, we would overestimate the employment effect of participating in labour market measures.

Earlier applications of the mixed proportional hazard model and formal presentations of the theoretical job search model foundation are by Lalive et al. (2005) and Boon and van Ours (2006). Clausen et al. (2009), Heinesen et al. (2013) and Kyyra et al. (2019) are examples of recent applications. The method permits individual variations with respect to unobserved variables that affect the transition to different temporary and absorbing states, and allows that these characteristics are correlated. This is crucial for identification. Most representations of this model have spell observations as the unit of analysis, rather than individuals, and spells of participation are compared to spells of non-participation. In our case, the units of analysis are refugees arriving to Norway and we follow them until a transition to an absorbing state (or until the observation is censored), such that each refugee is contributing one spell only. In the following paragraphs, we give a short formal presentation of the model.

The hazard rate for an individual *i* to make a transition from the original state *j* to a different state *k* can be formulated (omitting individual's subscript *i*) as:

$$(1)\quad \theta_{jk}\left(t \mid \mathbf{X}_{jkt}, v_k\right) = \lim_{\Delta t \to 0} \frac{P(t \le T_{jk} \le t + \Delta t, K = k \mid T_{jk} \ge t, \mathbf{X}_{jkt}, v_k \forall K)}{\Delta t} = \lambda_{jk}(t) \cdot \phi(\mathbf{X}_{jkt}) \cdot v_k$$

where $\lambda_{jk}(t)$ is the underlying baseline hazard rate pertaining to transition *k*; $\phi(\mathbf{X}_{jkt})$ is the structural term, while the vector $\mathbf{X}_{jkt}$ contains observable characteristics, such as age, gender, educational attainment and country of origin. $v_k$ captures the effect of unobserved heterogeneity. We have discrete time units in our register data and we measure duration in months. Let *t* be the underlying continuous time and let *d* be the discrete time unit (month), we can then define the (monthly) integrated hazard within the interval *[d-1,d]* as:

$$\int_{d-1}^{d} \theta_{jk}(u \mid \mathbf{X}_{jkt}, v_k) du = \int_{d-1}^{d} \lambda_{jk}(u) \cdot \phi(\mathbf{X}_{jkt}) \cdot v_k du\,.$$

Define $\lambda_{jkd} = \log\left(\int_{d-1}^{d} \lambda_{jk}(u) du\right)$, $\phi(\mathbf{X}_{jkt}) = \exp(\mathbf{X}_{jkt}'\beta_{jk})$, and $\mu_k = \log(v_k)$.

The transition-specific *probability* for the interval *[d-1,d]* can then be written as:

$$(2)\quad h_{jkd} = \left(1 - \exp\left(-\sum_k \exp(\lambda_{jkd} + \mathbf{X}_{jkd}'\beta_{jk} + \mu_k)\right)\right) \times \frac{\exp(\lambda_{jkd} + \mathbf{X}_{jkd}'\beta_{jk} + \mu_k)}{\sum_k \exp(\lambda_{jkd} + \mathbf{X}_{jkd}'\beta_{jk} + \mu_k)}$$

That is, for an individual, the transition probability from state *j* to state *k* at each calendar month *d* is the joint probability of: 1) the overall probability of a transition; and 2) the probability of a specific transition, given a transition is taking place.

The effect of program participation on the transition probability is defined by a vector $\Delta_{kd}$, encompassing the effect on a transition from state *j* to state *k while* participating in program, and the effect of exiting to state *k after* completion of program. For the sake of simplicity, we assume that the treatment effect of the same program is the same for all individuals; therefore, the $\Delta_{kd}$ enters the hazard rate model proportionally just like the other explanatory variables. In addition, we control for the business cycle situation through the entire period by including the quarterly county-level unemployment, denoted by $\sigma_{kd}$.

That is,

$$h_{jkd} = \left(1-\exp\left(-\sum_k \exp(\lambda_{jkd}+\sigma_{kd}+\mathbf{X}_{jkd}'\beta_{jk}+\Delta_{kd}+\mu_k)\right)\right) \times \frac{\exp(\lambda_{jkd}+\sigma_{kd}+\mathbf{X}_{jkd}'\beta_{jk}+\Delta_{kd}+\mu_k)}{\sum_k \exp(\lambda_{jkd}+\sigma_{kd}+\mathbf{X}_{jkd}'\beta_{jk}+\Delta_{kd}+\mu_k)} \quad (3)$$

Notice also that all explanatory variables in equation (3) affect the transition probability proportionally. This is an important assumption of the model, which is difficult to test empirically. However, the more flexibly the model is specified, the better. [6]

$\mu_k$ captures the unobserved individual characteristics, as depicted above. We use the modelling framework described in Gaure et al. (2007), where we impose a non-parametric probability distribution for $\mu_k$ by assuming that the distribution of $\mu_k$ can be characterised by a certain number of discrete points (mass points) with their associated probabilities. It is reasonable to assume that $\mu_k$ values between different transitions are correlated, which we also take into account in our model. Given the nature of transitions (jobs, education, and welfare dependence), it is intuitive to assume that for instance, individuals with high probability for a welfare dependence transition are likely to have a negative job prospective. If we were to ignore the correlations between the unobserved heterogeneities, such as between job and social security, the estimated treatment effect will be biased.

Lastly, our model assumes that refugees cannot anticipate program participation. The non-anticipation assumption states that individuals should not have private information about the exact timing of treatment. Anecdotal stories suggest that newly arrive refugees have little expectations and most of them are just happy to be safe and have a roof over their heads. Moreover, finding suitable programs for newly arrived refugees is time-consuming and difficult to achieve. Language and cultural barriers as well as a mismatch or a lack of skills and competences make this process less predictable. Hence, there is little reason to suspect that anticipation effects are of substantial concern.

By rearranging the terms and simplifying, the likelihood function to be maximised can be written as:

$$L_{ijk} = h_{ijk}(d_{jk}, v_{lk})^{y_{djk}} \cdot \prod_{s=1}^{d_{jk}-1} (1-h_{ijk}(s, v_{lk}))^{1-y_s} \quad (4)$$

[6] Gaure et al. (2007) and Brink (2007) have shown through Monte Carlo studies that flexible modeling, as we have used here, uncovers "true" causal parameters.

where $d_{jk}$ is the spell duration; $y_{d_{jk}}$ is the censoring indicator, which takes the value 1 if the spell is censored, 0 otherwise; $v_{ik}$ is the vector of the combinations of mass points related to the unobserved heterogeneity for transition from state *j* to state *k*. The number of mass points is determined in the maximising process together with the other parameters. Raaum and Røed (2006) point out that it requires a relatively large number of observations and enough variation of the time-varying explanatory variables in order to distinguish the effect of unobserved heterogeneity from other effects. Hence, accessibility to a large data set and time-varying variables is essential to providing reliable estimates.

*6. Data, variables and descriptives*

Our sample is comprised of all refugees (primary or quota) and their reunited family members who came to Norway during the period 1992–2015. This data is linked to administrative individual register data from Statistics Norway. The database contains information on demographic characteristics, such as age, gender, civil status, residence in Norway and country background, as well as ongoing and completed education, jobs, income, transfers and social security benefits.[7] The structure of the data permits us to follow individuals over time in terms of earnings, civil status and conditions in and outside the labour market.[8] We account for regional differences by including a dummy for each county and we also control for regional quarterly open unemployment.

We focus on three outcome variables: ordinary employment, ordinary education and social security. They are defined as absorbing states and are described in detail in the appendix. While the first two are definitely measures of success of ALMP, the third measure is not so clear. A transition to social security can reflect that the program did not have the intended effect. On the other hand, if through participation in an ALMP it is concluded that the person is incapable of taking up work at all, then a transition to temporary or permanent disability pension is a desirable outcome.

The impact of ALMP on the probability of exiting to one of these absorbing states can be divided in two separate effects. One is the effect while participating in ALMP, often referred to as the lock-in effect, because job search effort decreases when one is busy participating in a program. Hence, compared to a non-participant, the likelihood of finding a job is lower. The other is the impact after program completion. The post-participation effect needs to be positive for the program to be successful. We concentrate on ordinary labour market measures and consider participation in rehabilitation measures as a transition to temporary social security benefits.

The scope and content of ALMP has changed throughout the period of analysis, mainly to meet the needs of economic cycles, changing composition of participants and improved knowledge of what works for whom. We group programs into four main categories following the conventions used in international literature: *training, wage subsidies, employment measures* (rarely used after 2004) and *work practice*. Training is classroom courses,

[7] Table 1 in the appendix shows descriptive statistics of the variables that are used in the analyses.

[8] Unfortunately, access to variables on number and age of children is not available.

wage subsidies and employment measures are on-the-job training in the private and public sectors respectively, and work practice is a combination of on-the-job and off-the-job training. In addition, we have a residual category, *other measures*, which includes measures that cannot be grouped into the main categories.

Because the implementation of IP marks a major policy change in the follow-up of refugees by caseworkers, we carry out separate analyses for the period prior and after the launching of IP. Refugees who became resident from September 2003 onwards are in principle supposed to participate in IP. However, as mentioned above, we do not have access to information about who refugees participate in IP or when, nor if participate in IP along with ALMP or sequetional. Moreover, the data shows that some people who were residents before IP was launched also participated, even though they were not entitled. Hence, we have excluded from the analyses refugees who got their residence between September 2002 and September 2004. This means that we have a pre- and a post-period of eleven years each.

It is worth noting that differences in the effect of ALMP before and after IP implementation cannot be interpreted solely as the result of IP. Improved Norwegian proficiency as a result of IP may improve the accessibility, quality and returns from participation in ALMP and in that way improve the employability of refugees. However, other mechanisms may also come into play. For instance, the launching of IP in 2004 coincides with the enlargement of the EU, followed by large inflows of migrating workers from Eastern Europe. Since they often compete for the same type of jobs, this could have delayed or worsened the employability of refugees in the period after 2004. The great recession of 2008 also affected inflows from EU countries while also affecting the Norwegian economy as a whole.

In effect evaluations of ALMP, one usually studies the effect of participation in ALMP (the event) on the likelihood of transition from a spell of unemployment. This is not so entirely in our case. In this study, the spell starts when the refugee is granted residence in a municipality. During the period that follows, the refugee is expected to integrate into Norwegian society. This 'introductory phase' terminates when the refugee gets work, begins an education or becomes a social security recipient for at least three consecutive months. Furthermore, the spell is censored if the 'introductory phase' lasts more than 10 years, if the refugee does not experience any transition until September 2015, or if he/she dies or emigrates before that time.

As mentioned above, we regard transitions to jobs, ordinary education and social security as absorbent transitions, while unemployment and participation in ALMP are temporary events in the initial period of the integration process, which (possibly) affect later adaptation in the labour market. We have a total of six such temporary events: registered unemployment and not on ALMP, training, wage subsidies, employment measures, work practice and other measures.

We include the usual individual characteristics: gender, age, education, country of origin, county of residence and duration of residence in Norway. We divide refugees in three groups: primary refugees, quota refugees and reunited family members. This is because these groups differ; for example, quota refugees have a much higher likelihood of remaining in Norway than other refugees (Bratsberg et al. 2016). In addition, the model controls for seasonal and cyclical fluctuations throughout the period of analysis by including county quarterly unemployment rates as explanatory variables.

Table 1 presents descriptive statistics of refugees and their reunited family members. There are about as many men as women and the average age is 31 years both in the pre- and post-periods. After IP, there are relatively more refugees with lower education (primary school/unknown education). One in five is a UN quota refugee and approximately one quarter are reunited family members. There have been changes over time as to country of origin: while in the period before IP many came from Kosovo, Bosnia, Sri Lanka and Vietnam; Eritrea, Sudan and Ethiopia are important refugee countries after 2004. The refugee influx from Afghanistan, Iraq and Iran, however, has been steady over the last 25 years.

*Table 1. Individual characteristics of the target group, divided by before and after IP.*

| | Before IP | After IP |
|---|---|---|
| **Proportion of men** | 0.49 | 0.53 |
| **Average age** | 31.09 | 30.59 |
| **Education: Primary school at most** | 0.47 | 0.57 |
| **Lower secondary** | 0.19 | 0.26 |
| **Upper secondary** | 0.20 | 0.70 |
| **University** | 0.14 | 0.10 |
| **Refugee: Primary** | 0.59 | 0.65 |
| **UN quota refugees** | 0.15 | 0.11 |
| **Reunited family** | 0.26 | 0.24 |
| | | |
| **Number of persons** | 34 155 | 62 800 |
| **Total number of observations** | 1 442 170 | 1 859 763 |
| | | |
| **Average spell duration (months)** | 42 | 30 |
| **# of transitions*: To work** | 22 200 (0.65) | 24 560 (0.39) |
| **To education** | 4339 (0.13) | 3108 (0.50) |
| **To social security** | 4621 (0.14) | 6295 (0.10) |

*In parenthesis the share among actual transitions, i.e. disregarding censored observations

As regards ALMP characteristics, the duration of training courses is, on average, shorter after rather than before IP, which may be partly due to a more active and rapid follow-up in connection with IP. On average, it took 3.5 years for refugees to get an ordinary job, start an education or become a social security recipient in the period before IP and 2.3 years in the period after. At the same time, as expected, a much larger share of refugees did not experience a transition and were therefore censored (47 percent in the period after IP compared to 5 percent in the period before IP). This is mainly because many are not likely to have lived long enough in Norway to

experience a transition in the period after IP. Of those who experience a transition, the share that has a transition to employment is 71 percent before IP and 72 percent after IP.

*7. Results*

Table 2 shows results from the regressions on the effect of ALMPs. We carried out separate analyses for the periods before and after IP. In each analysis, we estimated the competing risks model with three competing outcomes. We show estimates of the impact of ALMP during participation and after completion. The appendix includes estimates of the other regressors. Estimates cannot be interpreted as effects on the transition probabilities directly, since, as equation (2) shows, the likelihood of a transition to one state depends also on transitions to all other states. The sign, however, gives an indication of whether the impact is positive or negative.[9]

Results show that while refugees participate in measures the chances of experiencing a transition to work increase, indicating no sign of the lock-in effect. This is the case for all ALMP before IP and all ALMP except for wage subsidies after IP. Recall that in our analysis we do not have the traditional spell of unemployment as with mainstream effect evaluation studies, where the state of non-participation is unemployment itself. In our study, the alternative to non-participation is in fact inactivity. One possible interpretation of no lock-in effect in our case is that ALMP is, to a greater extent than for the population at large, the first encounter refugees have with working life in Norway, and hence to a greater extent where job opportunities materialise. Note that refugees have limited opportunities in the labour market and for many the alternative would be inactivity. Many of them have a poor proficiency of the Norwegian language, a very limited social network and little or no experience in the Norwegian labour market. Many do not have an approved/certified education from the county of origin either. Thus, any activity involving being in contact with the Norwegian society (even to register as open unemployed) has potentially a positive effect.

*Table 2. ALMP effects on transition to work, education and social security while on programs and after program completion. Before and after IP. Estimates and standard errors.*

| **To work** | | | | |
|---|---|---|---|---|
| | **Before 2003** | | **After 2004** | |
| ***While on ALMP*** | **Est** | **Se** | **Est** | **se** |
| **Training** | 0.7023* | 0.0284 | 0.8419* | 0.0360 |
| **Other programs** | 0.4722* | 0.0501 | 0.8007* | 0.0901 |
| **Wage subsidies** | 0.9396* | 0.0449 | -0.0603 | 0.0402 |
| **Work practice** | 0.9817* | 0.0290 | 1.2247* | 0.0354 |
| **Employment programs** | 1.1456* | 0.1110 | | |
| ***After ALMP*** | | | | |
| **Training** | 0.8441* | 0.0248 | 0.6899* | 0.0312 |
| **Other programs** | 0.2983* | 0.0262 | 0.2727* | 0.0541 |

[9] However, when the estimate $\hat{\beta}$ is sufficiently small, the $\hat{\beta} \approx \left(\exp(\hat{\beta}) - \exp(0)\right) \cdot 100\%$ is approximate to the percentage of the effect of the covariate on the hazard rate.

| | | | | |
|---|---|---|---|---|
| **Wage subsidies** | 0.6406* | 0.0409 | -0.0155 | 0.0378 |
| **Work practice** | 0.6546* | 0.0236 | 0.8309* | 0.0324 |
| **Employment programs** | 0.4098* | 0.0947 | | |
| **To ordinary education** | | | | |
| ***While on ALMP*** | | | | |
| **Training** | 0.4933* | 0.0725 | -1.2024* | 0.2108 |
| **Other programs** | 0.3455* | 0.1085 | -0.5020 | 0.3570 |
| **Wage subsidies** | -0.3539* | 0.1363 | -1.9254* | 0.1923 |
| **Work practice** | -1.1114* | 0.1010 | -1.8121* | 0.2225 |
| **Employment programs** | -1.9283* | 0.7287 | | |
| ***After ALMP*** | | | | |
| **Training** | 2.9369* | 0.0442 | 1.7407* | 0.0584 |
| **Other programs** | 0.2748* | 0.0551 | 0.7305* | 0.1201 |
| **Wage subsidies** | -0.0240 | 0.1004 | -0.4794* | 0.0878 |
| **Work practice** | 0.0198 | 0.0524 | 0.2902* | 0.0769 |
| **Employment programs** | -0.0191 | 0.2570 | | |
| **To social security** | | | | |
| ***While on ALMP*** | | | | |
| **Training** | -0.0601 | 0.0841 | 0.5455* | 0.0673 |
| **Other programs** | 0.6428* | 0.1338 | 1.2877* | 0.1485 |
| **Wage subsidies** | 0.9099* | 0.1023 | 1.4123* | 0.0436 |
| **Work practice** | 0.4749* | 0.0833 | 0.5822* | 0.0708 |
| **Employment programs** | 0.2054 | 0.5326 | | |
| ***After ALMP*** | | | | |
| **Training** | 0.2093* | 0.0576 | 0.1206* | 0.0453 |
| **Other programs** | -0.0850 | 0.0605 | 0.2618* | 0.0750 |
| **Wage subsidies** | 0.3405* | 0.0868 | 0.6298* | 0.0444 |
| **Work practice** | 0.0105 | 0.0499 | -0.1720* | 0.0498 |
| **Employment programs** | -0.0531 | 0.2211 | | |

Note: * indicates 5 percent significance level.

The pattern changes when it comes to education. The likelihood of refugees interrupting participation in a labour market program to take ordinary education is lower, both before and after IP. There is one exception, however. Before but not after IP, the likelihood that a participant in training experiences a transition to ordinary education increases. This may indicate that IP better meets educational needs, such that those whose intention is entering ordinary education avoid participating in training, which does not give them the qualifications they are after and/or that the caseworker considers appropriate. Otherwise, the results show that participants in work-related measures such as work practice and wage subsidies interrupt participation in ALMP to become social security recipients. This occurs both before and after IP. This can be an indication that caseworkers use ALMP as a

sorting mechanism; when working capacity is uncertain, refugees are placed in an ALMP before eventually being placed in a vocational rehabilitation program or being granted disability benefits.

The after-program effect suggests that ALMP contributes positively to the probability of obtaining work. Training and work practice have the most positive effects, both before 2003 and after 2004. Wage subsidies, on the other hand, had significant positive effects before IP, but not after. It is uncertain why this might be the case. Before IP, relatively few refugees participated in wage subsidies, while many more participated in recent years, as figure 2 shows. Increased sizing may come at the expense of quality (Calmfors et al. 2002). Wage subsidies have traditionally been used as the last of a chain of measures and/or the participants have been among the most skilled. Maybe the escalation in the use of wage subsidies in recent years means that it was offered/used too early in the integration process and hence has functioned, to a lesser extent, as a springboard to ordinary employment.

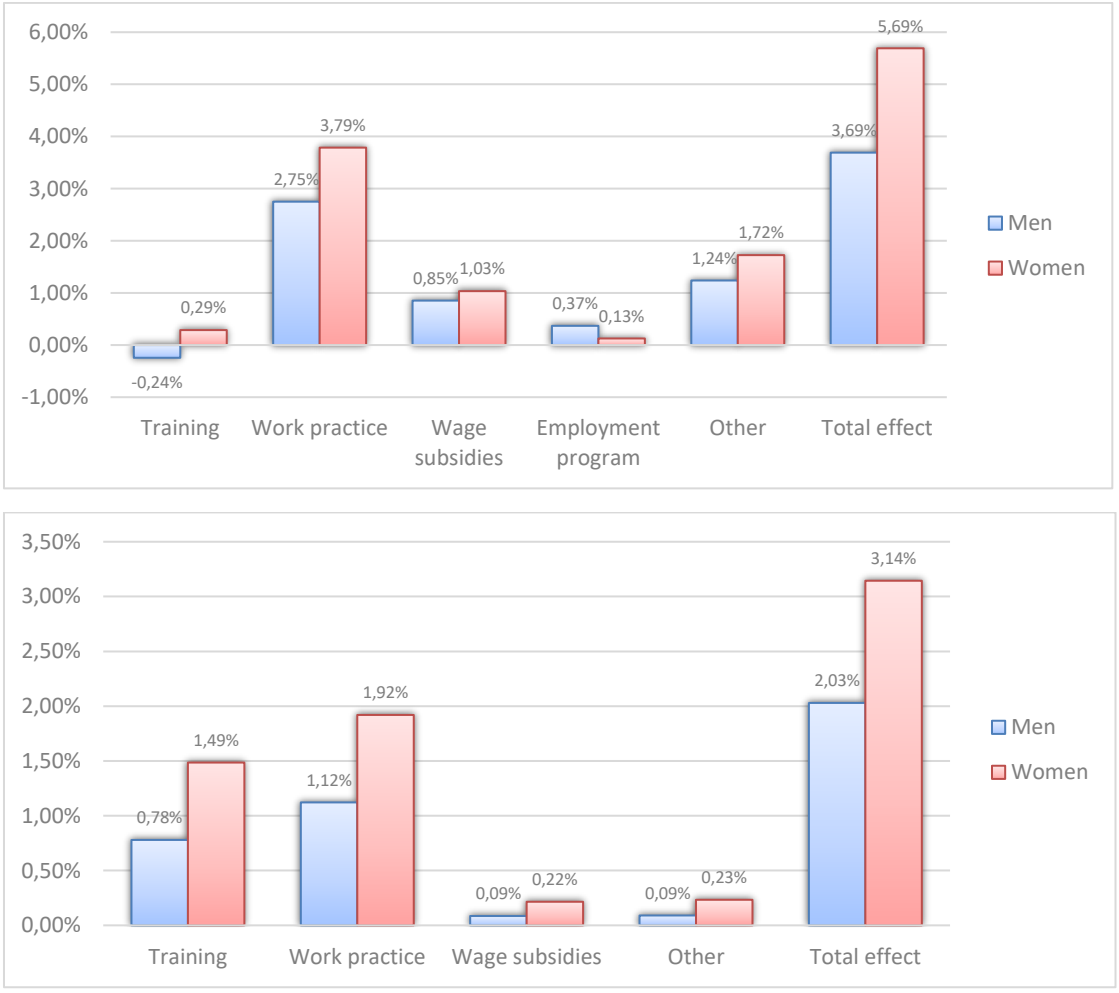
After ALMP completion, the effect of participation on the probability of starting in ordinary education is positive for all programs with an element of training/qualification in it, as is the case with work practice and training. The effect of training is large, especially before IP, and may be an indication that IP is addressing some of the educational needs previously addressed by ALMP, such as extensive language courses and elementary education. There is also an increased transition to social security after program completion for all measures apart from work practice. This again seems to indicate that ALMPs are used by the labour authorities to get an understanding of the skills and working capabilities of the refugees. It is noteworthy that work practice appears to reduce the transition to social security after the measure is completed. One possible explanation is that for refugees, as different from other job seekers, the alternative is more likely to include inactivity and little contact with potential workplaces.

From a political viewpoint, it is often desirable to obtain an aggregate measure of the overall effect of ALMP rather than of the effects during and after programs, separately. This is important, not only for the design of ALMPs in the future, but also because an aggregate impact assessment can be used in cost-benefit analyses of the economic effects of measures for both the individuals involved and for society. However, an aggregate measure is not simply the sum of these two effects.

Our approach is to use simulation techniques. To derive aggregate effects, we use information from all individuals in our sample and all estimates from the regression, including the estimates for the individual's observed characteristics (gender, age, education, immigrant status, civil status, etc.), estimates of baseline hazard, estimates of program effects and estimates of unobserved heterogeneity distributions. First we simulate the "adjustment spells" of the refugees, based on the predicted competing hazard rates and derive the outcomes of these spells in a counterfactual state assuming that the programs have no effects on any of the transitions. The outcomes of this state serve as the baseline for comparison. Then the same method is used to simulate the course of events under the assumption that participation has the estimated effect. By comparing the calculated outcomes of all spells under different scenarios relative to the baseline, we derive a measure of the aggregate effects of the ALMPs on transitions to employment, ordinary education and social security. As an example, let the total number of job transitions be $J_0$ in the baseline scenario where none of the programs has any effect. Let the total number of job transitions be $J_t$ when only *training* has an effect (both during participation and after completion).

Then the relative change $E_t = \frac{J_t - J_0}{J_0}$ gives rise to an aggregate measure of the total effect of *training* on the job transition.

*Figure 3. Simulated effects by gender on the transition to work. Before IP (top) and after IP (bottom).*




Note: In the graph on the bottom for Figures 3, 4 and 5, there is no mention of *Employment program* as in the top graphs. Is it because it was rarely used after the introduction of IP in 2004.

Figure 3 shows the aggregate simulated effects on the transition to ordinary employment. We calculate the impact of each program separately and of all programs taken together, by gender and before and after IP was launched. Figure 3 shows that while work practice has a positive effect both before and after IP, training has a positive effect only after IP. Admittedly, these positive effects are relatively modest. The largest effect is a 4 percent increase. The aggregate effect of wage subsidies is very modest before IP and especially after IP. As mentioned above, this differs from previous findings, from both Norway and other countries, which point out that the closer the measures are to normal working conditions, the greater the chances of success.

The total effect on employment in the final columns, that is, the effect of all programs combined, is positive before and after IP and for men and women alike, but it is stronger in the pre- than in the post-period. One possible explanation may be that IP provides extensive courses in Norwegian proficiency, as well as close and

frequent follow-up and individual guidance. A more tailored service should lead to greater chances of success, which in turn might diminish the relevance of ALMP for this group in particular. However, we cannot rule out that IP, being a 2-3-year full-time arrangement, has led to an increase in the quantity of measures at the expense of quality, compared to prior to IP. Importantly, the launching of IP coincided with the enlargement of the EU, which increased immigration from East European countries and hence lead to a greater competition for low-skilled jobs.

*Figure 4. Simulated effects by gender on transition to ordinary education. Before IP (top) and after IP (bottom).*

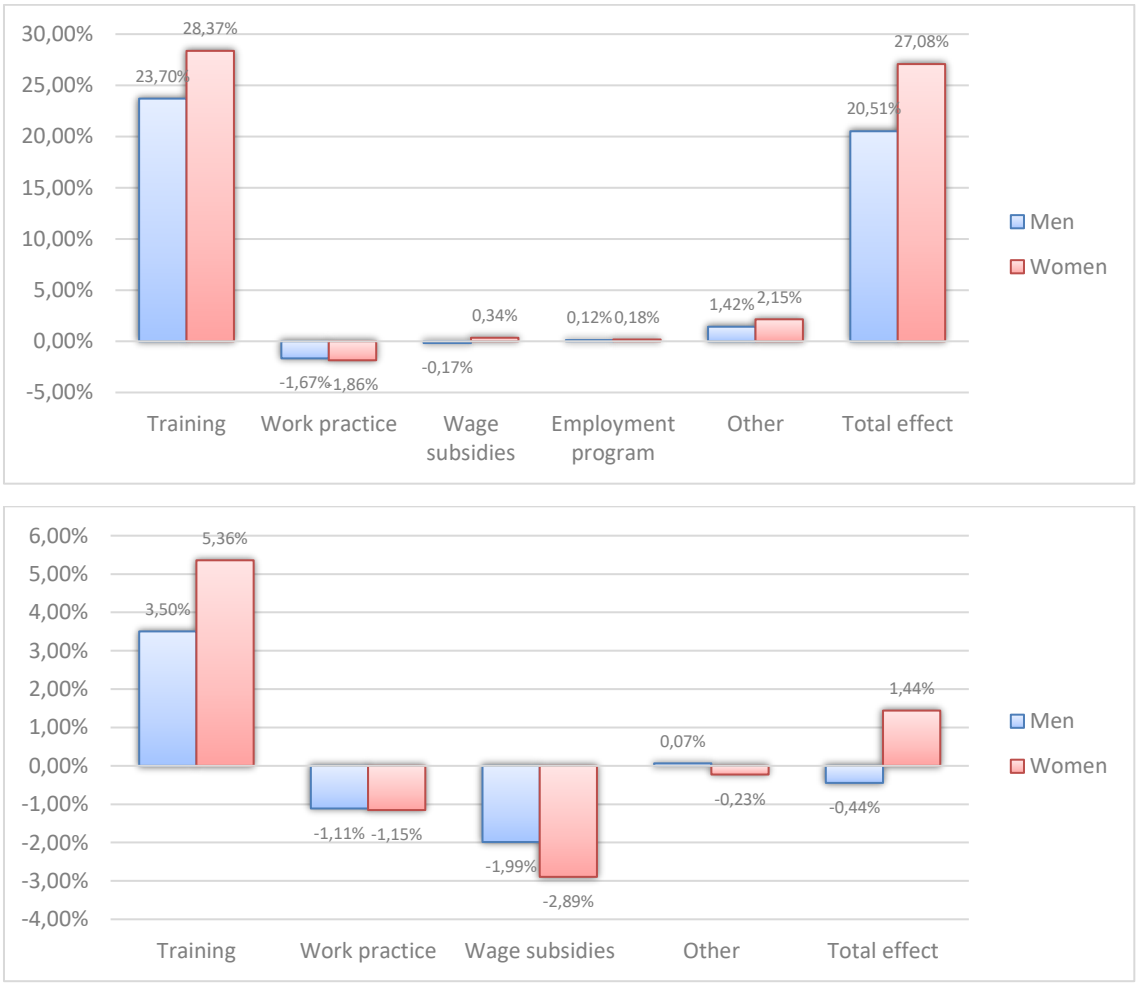



Figure 4 shows simulated effects as in figure 3, but with the outcome variable as transitions to education. Note that the scale is very different before and after IP. Here we see a large effect of training (classroom courses) in the period before IP, a nearly 30 percent increase for women and 24 percent for men. In the period after the launching of IP, the effect of training is still positive, but much smaller. This is most likely because before IP many took language courses as an ALMP, while after IP extensive language courses became compulsory for all refugees. It may also reflect the fact that refugees without basic education participated in training before IP because other options were not available. After the launching of IP, those lacking elementary school were entitled to ordinary compulsory education as part of IP. That work-oriented measures do not have a positive

effect on education is maybe not so surprising. It is indicative that those wanting to qualify themselves do not choose work-oriented ALMPs. It may also reflect that caseworkers succeed in helping refugees sort out their labour market prospects.

*Figure 5. Simulated effects by gender on the transition to social security. Before IP (top) and after IP (bottom).*

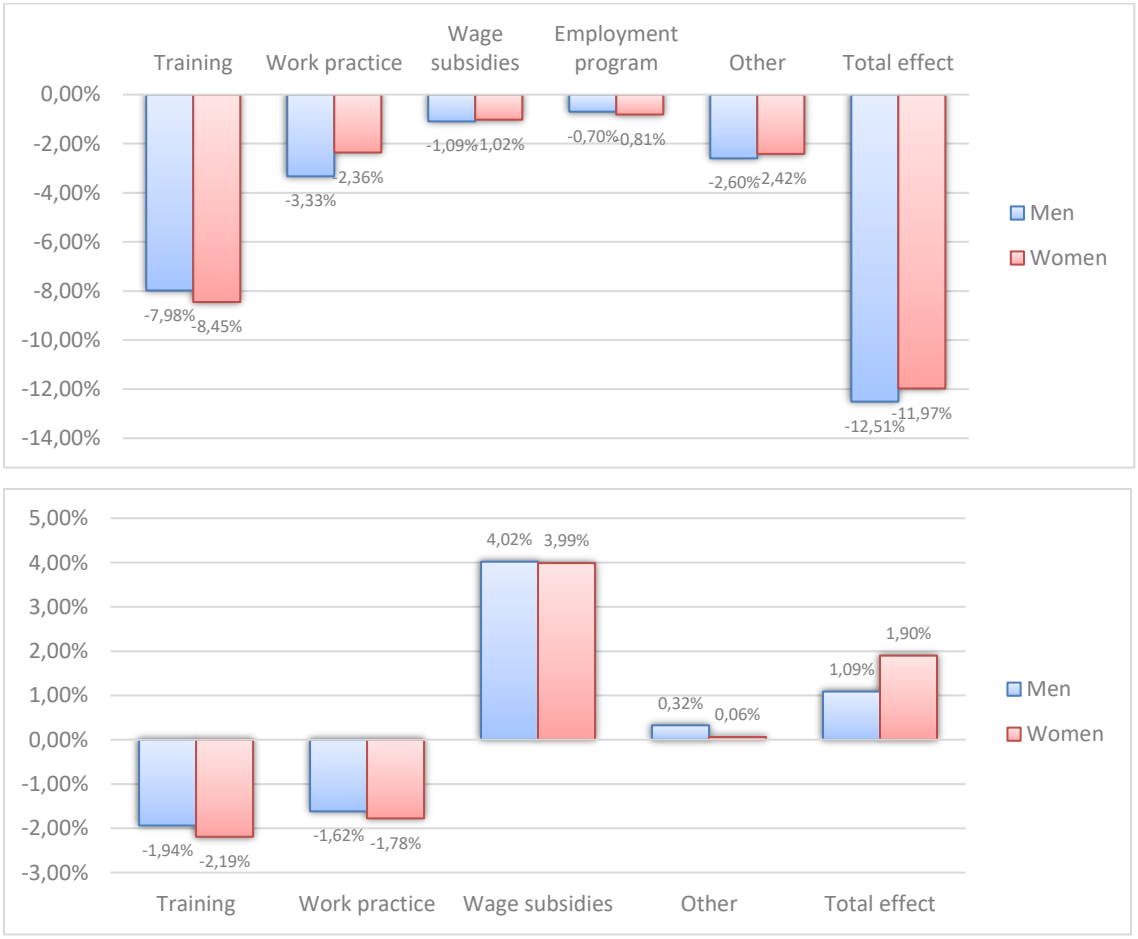



Figure 5 shows the simulated aggregate effects on the transition to social security. Notably, when interpreting results, it is important to keep in mind that temporary social security schemes, such as work-related benefits, measures for persons with reduced working capacity and other temporary social insurance schemes, are regarded as a transition to social security, in the same way as absorbing social security schemes like disability pension and old age pension. The overall message in figure 5 is that ALMPs largely contribute to reduce a transition to social security before IP. This can indicate that prior to IP, ALMP had the intended effect of helping to reduce welfare dependency. After IP, ALMP seems to function as a sorting mechanism such that the participants and caseworkers are using ALMP to identify those who are not fit for the labour market and would benefit more from participating in vocational rehabilitation programs instead. This could explain the lower effect of ALMP after IP.

*8. Summary and conclusions*

This is the first evaluation of ALMPs for refugees in Norway on their chances of getting a job, starting an education or receiving social security. The period of analysis is from 1992 to 2015, and we apply a hazard rate model with competing risks. We control for individual observed and unobserved characteristics, as well as seasonal and economic fluctuations in the economy. It is worth noting that the number of refugees and their reunited family members is relatively limited. Fewer observations make the results somewhat more uncertain. Moreover, our analyses do not capture the effect of ALMPs for the refugee inflows of the most recent years since many of them were still participating in the introductory program (IP) at the end of the period of analysis.

We classify programs in the same manner as the international literature on ALMP. The four program categories we focus on are: training measures, work practice, wage subsidies and employment programs. In addition, we have a residual category comprising smaller programs that are difficult to place in the groups above. We carry out separate analyses for before and after the launch of IP in September 2004 with the purpose of facilitating the integration and improving the employability of refugees and their reunited family members. IP is a full-time program lasting for 2–3 years and refugees have the right and duty to take courses in Norwegian proficiency and Norwegian society, ALMPs and ordinary education. The subsidy is of the order of 20,000 euros a year.

We study the likelihood of exiting to ordinary job, education or social security, both while participating in ALMP and after ALMP completion, separately. Contrary to standard findings, we do not find lock-in effects on employment probability while the measures are in progress. The results are, however, in line with some Norwegian studies focusing on disadvantaged groups such as youth that have not completed secondary education (von Simson 2016) and non-western immigrants (Hardoy and Zhang 2010). A positive transition to work while on an ALMP can be explained by the fact that the alternative for refugees is to remain inactive and mostly isolated, with little contact with Norwegian society. While participating in ALMPs, refugees and their reunited family members take the first step into Norwegian life and society, extending their options and possibilities. This contributes to giving refugees a foothold in the labour market and/or they become aware of the need for upskilling. In this sense, ALMPs can be regarded as a stepping-stone to work and education. Participation in ALMPs seems to also be used by caseworkers to map the possibilities and limitations of the refugees while being exposed to the Norwegian society through program participation and when necessary, for placing refugees in vocational rehabilitation programs targeted at those with health issues.

With the help of simulations, we have obtained measures of aggregate program effects, that is, the combination of the effect while participating in ALMPs and the effect after ALMPs completion. This is a more interesting measure from a policy point of view. Calculations indicate that work practice, which provides a combination of on-the-job and off-the-job training, has a positive effect on the chances of getting work, both before and after IP. However, the effects are very modest, of the order of 4 percent and 2 percent, respectively.

Empirical evidence converges in the wisdom that measures that resemble regular working conditions as much as possible function best (Card et al 2017). But there is also some evidence suggesting that training programs can be advisable in times of low economic activity or recessions (Norlund 2009). Our study suggests that wage subsidies do not seem to be effective for refugees in terms of enhancing employability. Our findings are in line with two Danish studies (Claussen et al. 2009; Heinesen et al. 2013), which showed that the effect of wage

subsidies is weaker for refugees than for non-western immigrants in general. We find that the negative effect of wage subsidies is more salient in the period after 2004. There are several potential explanations. After IP, wage subsidies were escalated considerably. Increased sizing may have affected the quality of the match. Also, in the period after 2004, wage subsidies may have been used earlier in the integration process than was optimal to have the desired effect. And last but not least, the enlargement of the EU in 2004 may have also led to increased competition for the same segment of jobs that foreign workers apply and are qualified for.

Many refugees need upskilling and to acquire skills and competences to meet the needs of the Norwegian labour market. As expected, the aggregate effect of training has a strong effect on the likelihood of entering education. The effect is particularly strong before IP. The effect after IP, though still positive and significant, is a lot smaller. At least two mechanisms are at play. One is that before IP, the possibility of taking Norwegian language courses and ordinary education was very limited. With IP, ordinary elementary education became available and Norwegian language courses considerably escalated, reducing the need to enrol in labour market programs for educational purposes.

As regards the effect of ALMP on the likelihood of receiving social security, the simulations suggest that ALMP contributes to reduce the likelihood of receiving social security before IP. After IP, findings indicate that participation in ALMPs contributes to increasing the transition to social security schemes. The increased likelihood seems to be driven by the increase in refugees exiting wage subsidies to become social security recipients. One possible explanation is that the measures were used to a greater extent as a sorting/selection mechanism in the after period, in a manner such that intensified individualised counselling revealed work incapacities and a need for vocational rehabilitation programs or disability pension difficult to observe before IP. It could also be the case that program participants in the after period are drawn from a pool of refugees with weaker labour market potential, and that those with better potential had sufficient assistance with the language courses and the close and intensive follow-up provided by IP.

The results must be understood within the framework of the target group under investigation. The road to integration in Norwegian society as a refugee is long. Many refugees and their reunited family members struggle with physical and mental ailments caused by life before arriving in Norway. Many lack elementary education and/or skills or have skills that are not suited to the Norwegian labour market. This makes insertion in the labour market strenuous. These obstacles can be reduced through participation in labour market measures that take into account the challenges faced by refugees and are well adapted to the needs of the labour market.

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*Appendix A: Definitions*

Program types:

i) Training: classroom course intended to help job seekers qualify for job vacancies and prevent the exclusion of people at risk of falling out of work or in an uncertain employment situation and in need of qualification. Labour market courses are often short vocational courses, and the composition of the courses varies according to the needs in the labour market. Duration is up to 10 months.

ii) Wage subsidies: employment with regular pay and working conditions. Wage subsidies are provided to ordinary private companies (and to public enterprises, but to a very limited extent) for a limited part of the time the job seeker is employed. Duration is a maximum of one year. This category also includes the following measures of varying and considerably less scope than wage subsidies in the period: temporary workplaces, job creation and self-employment subsidies.

iii) Employment measures: employment in the public sector only. The measure has been associated with incapacitating work and little training in relevant work. Little used after 2004.

iv) Work practice: Primarily aimed at newcomers in the labour market who need to try out their opportunities there. The purpose is for the participant to gain work experience and thus improve their chances of getting work.

iv) Other labour market measures (rest category).

Absorbent transitions (in the following order):

1. Transition to work: if the person obtains work via the employee register and keeps the job for at least the three consecutive months. Valid working conditions are defined by a relationship that lasts at least one month, and which has a total salary of more than NOK 5,000. If we cannot find a valid working relationship in the employee register, we try to use salary information for the entire year to estimate whether the person is in employment. We do the following: first we count how many months of the calendar years were not registered in employment. Then we divide the annual salary into the "unexplained" months. If the monthly salary calculated in this way exceeds NOK 5,000, we define this as a transition to work.

2. Transition to education: if the person is registered in education during three consecutive months; or if an education starts before the month of transition, but does not end within the three months immediately after the transition is observed.

3. Transition to social security: if the person is registered on social security that starts within three months. All social security benefits are included here. Examples of social security benefits are: sickness benefit, rehabilitation allowance, parental benefit, support allowance, transition benefit, social assistance (financial benefit), introduction benefit, disability benefits and old-age pension. If the person is registered in a vocational rehabilitation measure (for persons with reduced working capacity), we also define it as a transition to social security.