The School-to-Work Transition in Developing Countries

Björn Nilsson

Routledge
Taylor & Francis Group

Check for updates

The School-to-Work Transition in Developing Countries

BJÖRN NILSSON

IRD, LEDa, DIAL, Université Paris-Dauphine, PSL Research University, Paris, France

ABSTRACT   *Youth bulges in developing countries may carry both a potential for growth via demographic dividends, and ticking political time bombs, depending on the success of authorities in providing youth with adequate opportunities as they transit into the labour markets of the twenty-first century. In this article I examine the theoretical and empirical research on school-to-work transitions (SWT) in developing countries. After a discussion of the attempts at operationalising the concept of school-to-work transitions from a statistical point of view, I review the theoretical settings suitable for analysing the SWT. Despite an extensive search and matching literature, few models seem adapted to developing countries' labour markets, and even fewer are empirically tested. I then examine the determinants of transition lengths at the individual and macro level. Findings indicate that education is not always associated with shorter durations to first employment, and that the reasons may be higher expectations, reservation wages, or queuing. Women generally experience longer transitions in the labour market, and evidence from labour market interventions is mixed. Many factors likely to influence the school-to-work transition have not been studied from the point of view of school-to-work transitions, however, and potential directions for future research are presented.*

1. Introduction

The importance of human capital in the development process has been strongly underlined in the academic and policy discourse over the last 50 years, and education for all has been made a top priority of international organisations such as the UNESCO and the World Bank in the last decades. However, less has been said about what happens after education. Graduation is the end of an educational process, but also the start of another, lifetime process of providing for oneself. In many of the world's poorest countries, youth constitute a majority of the population. It is probably not an overstatement to say that the economic, social and political development of these countries hinges on the capacity of policy-makers to provide them with decent employment prospects. Concomitantly, youth in developing countries face a different set of challenges from youth in developed countries: the concentration of skilled jobs in urban areas and sometimes in the public sector implies that rural youth may have little to gain from education unless they migrate to urban areas; the lack of wage jobs means that self-employment may be the only option for some youth (lack of contractual arrangements and social protection further implies that self-employment may be as good an employment as one gets); severe financial constraints may prevent individuals from creating small-scale businesses, or limit the size and profitability of those created; ethnic or gender discrimination can hinder underprivileged youth in the labour market; and informal decision structures such as the household may assign specific roles to youth, preventing them from pursuing their aspirations. The shaping of good employment policy therefore relies on evidence of good practice from multiple historical and geographical contexts.

Correspondence Address: Björn Nilsson, IRD, LEDa, DIAL, Université Paris-Dauphine, PSL Research University, 75016 Paris, France. Email: nilsson@dial.prd.fr

The keys to making the school-to-work transition (SWT) efficient can be sought in the body of evidence from various programmes, policies, studies, and reports that have been undertaken. Nonetheless, the school-to-work transition is a multiform and dynamic process, and the recommendations derived from any study of SWT are conditional both on the particular context in which the study was undertaken and on the methodological choices and approaches its authors settled on.

The lion's share of the evidence from school-to-work transitions is based on data from high-income countries, essentially from Europe and North America, and while Ryan (2001) and Bradley and Nguyen (2004) have reviewed the evidence of school-to-work transitions in developed countries, to my knowledge no extended review of the evidence from developing countries has been undertaken. This article aims to bridge this gap in the literature. While it should be recognised that developing countries in no way constitute a group of homogeneous economies with similar labour markets and educational systems, they do share a number of factors which distinguish them from developed economies (Campbell, 2013): important shares of informal labour, self-employment, agricultural labour, and unpaid family work; important credit and income constraints; weak social security; important labour market segmentation (public versus private, formal versus informal); and altogether an urban-rural fragmentation interacting with the aforementioned. In light of this and against a backdrop of increased access to education as promoted by the education for all initiative, an extended review of the evidence on the labour market prospects of graduates from developing countries seems warranted.[1] Quintini and Martin (2014) compare school-to-work transitions in eight advanced and eight emerging countries.[2] They find that youth in emerging countries experience longer transitions and leave education earlier, while at the same time having higher rates of inactivity.

The contours of the school-to-work transition are not narrowly defined in the literature. Reversed transitions (going back to school) as well as simultaneous presence in multiple states (working while in school, holding several jobs) are possible, such that the SWT must be considered as a lifelong process within which a number of transitions occur. This is especially important to emphasise inasmuch as these transition processes have become more complex in the last decades, with more long-term unemployment and more job shifts and mismatches (Allen & Van Der Velden, 2007). What is to be deemed a successful labour market destiny might also change over the life cycle: looking at Argentina, Brazil, and Mexico, Cunningham and Salvagno (2011) map out the typical transition patterns of youth and find that they tend to leave school to spend a short time in the informal sector, before moving to the formal sector, and then later in life becoming self-employed. Rather than attempting to narrow down the concept, I shall here initially consider it as an umbrella term for a number of processes all related to the capacity of educational systems to provide individuals with knowledge and capabilities that render them prone to a more successful work-life.

The structure of the paper is as follows. The first section discusses the school-to-work transition concept and the efforts made to operationalise it from a statistical point of view. Section 2 considers how economic theory, and in particular the job search and matching framework, has been mobilised to consider the SWT in developing countries. Section 3 reviews the evidence regarding individual determinants of success in the labour market. Section 4 extends the review to external determinants, discussing labour market policies targeting youth in developing countries. The last section concludes.

2. The imperceptible contours of the school-to-work transition

A 'catch-all term for the activities of young people as they bounce around or struggle along between full-time schooling and full-time, possibly career, employment' (Ryan, 2003), the school-to-work transition[3] can be intuitively thought of as that period of time during which an individual leaves school and finds stable employment. O'Higgins (2008) conveniently distinguishes two main features of the transition: the *success* in achieving an identified outcome, and the *ease* with which this takes place. In essence the question asked is: where are youth headed upon leaving school, and how do they get there? While surely reductive in the characterisation of a complex and dynamic multi-state process, it serves as a useful separator of those elements of the transition that are of a dynamic nature

(smoothness, efficiency, state dependence) from those that are static (and in general describing the state of leave in the transition).

A number of studies, mainly carried out via international organisations such as the ILO and the OECD, have attempted to approach the SWT as a statistical concept. Therein, the school-to-work transition becomes a measurable length, and its blurry delineations need to be fixed. The starting point of the transition is generally taken as 'permanent' school leave (Bowers, 1998), but might be conditioned on a willingness to look for work upon school leave (Matsumoto & Elder, 2010), thereby excluding those who were not destined for the labour market in the first place. One could also argue that the transition starts before graduation: work-study combinations or apprenticeships might constitute stepping stones for individuals, facilitating or even guaranteeing employment immediately upon school leave.[4] The ending point of the transition also requires settling on a decision of what constitutes an achieved transition. While full-time stable employment has been used by the OECD (Bowers, 1998), the ILO's *Work4Youth* has adopted definitions including various qualitative measures of the work experience, such as satisfaction and contract type (Matsumoto & Elder, 2010). Accordingly, a completed transition requires only stable *or* satisfactory employment, even when the latter is temporary- or self-employment.

A range of indicators have been used to assess the smoothness of the transition from school to work using cross-sectional data. While settling on definitions on various aspects of transitions would alleviate some of the confusion reigning around the concept, summing up individual trajectories gives rise to methodological obstacles when data is, as is often the case, cross-sectional in nature. O'Higgins (2008) provides a discussion of duration indicators used in the literature. The OECD uses the age at which a certain percentage of the population has left school (50% or 75% depending on studies), and compares this with the age at which the same percentage has found a job. Essentially, this gives rise to an indicator of the average duration of transitions in the economy. There are several questionable assumptions in this approach (particularly in the context of developing countries), such as the (implicit) assumption that everyone goes to school, ends up in employment, does not go back to education and remains in employment upon entering it (O'Higgins, 2008). Thus, this approach fails to account for individuals who do not enter the labour market upon school leave, who may be numerous in developing countries (in particular women). Fares et al. (2005), applying a similar method, condition the average school leave and work entry ages on the probabilities of ever being in school and work. The authors recognise a problem with the approach: since it is impossible from cross-sectional data to know whether or not individuals in school will later transit into employment, their average age gap can only be interpreted as a transition length if age of school leave is uncorrelated with the probability of future employment. Another problem, linked to this one, is that the data drawn from a single point in time reflects two different cohorts, which only gives rise to a meaningful indicator in the case of a stationary labour market. Finally, the often large shares of informal employment in developing countries require that the data collection process be adapted to properly qualify and quantify shares of informal labour.

Event history data and panel data overcome some of these problems since transitions can be computed directly for the individual. Aggregating individual transitions however still leads to a biased indicator since only those individuals whose transition is completed can be used in the computation. Thus, there is a case for the study of the microeconomic determinants of transition lengths using survival analysis, which provides identified estimators even in the presence of *right-censored* observations. Such studies are numerous (for example Fallon, 1983; Galiani & Hopenhayn, 2003; Khan & Yousaf, 2013; Nordman & Pasquier-Doumer, 2015; and Tansel & Taşçı, 2010) and will be discussed below.

Considering the school-to-work transition process in its most intuitive form (see Figure 1) – as that of a three stage-process beginning with education and ending in an achieved transition – serves as a useful tool for structuring the outline of the following literature review. Individuals enter into educational systems that vary in quality, organisational, and institutional setting. Their success in these systems can be linked to a number of internal and external factors that need not be easily distinguishable. If one's education is – as commonly believed – a determinant of the quality and smoothness of the school-to-work transition, the determinants of 'success' in education are by definition also indirect determinants of success in the SWT. These determinants (family background, institutional setting, innate ability, school inputs, extra-curricular
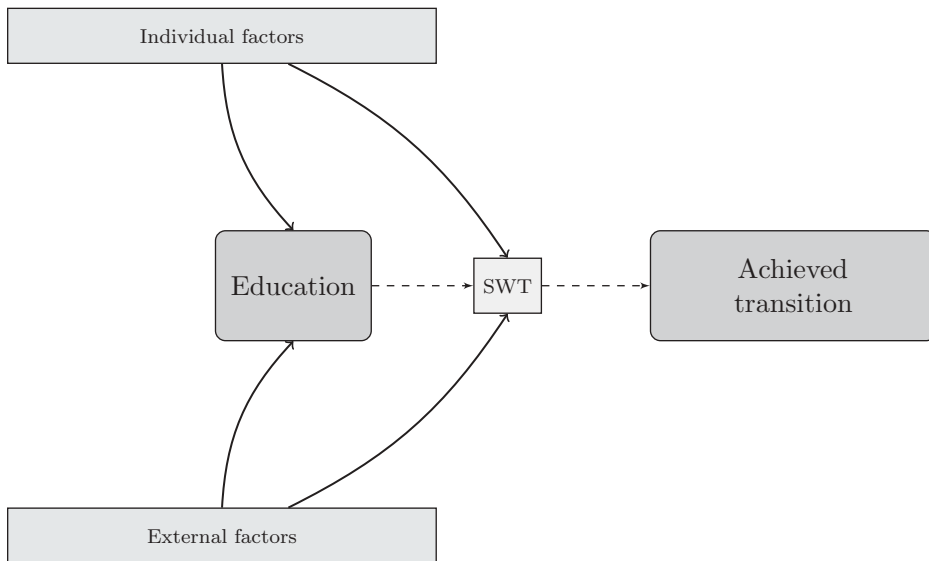
Figure 1. Conceptual chart of the school-work transition process.

help, and so forth) have been studied in the educational literature and will not be covered here. Instead, I focus on three dimensions: the theoretical linkages between the determinants of the SWT and the labour market; the relationship between individual background variables and the SWT; and lastly, the relationship between aggregate factors and individual SWT.

3. The transition environment in theory

3.1. The search and matching literature

Most theoretical work on the transition from education to work is set in the Diamond-Mortensen-Pissarides search and matching framework (Mortensen & Pissarides, 1999). The framework goes beyond the notion that frictionless and centralised labour markets exist, and thus permits accounting for voluntary unemployment, transition arbitrages, state dependence, and other features of modern labour markets that the general equilibrium standard supply and demand framework has difficulties explaining. Concerned with flows between states in the labour market, it provides a good starting point for a theoretical approach to the school-to-work transition, and several authors have derived empirical specifications from such models which can be taken to the data to estimate structural search parameters (Jensen & Westergard-Nielsen, 1987; Wolpin, 1987).

This body of work thus sets the transition from education to employment in an environment with friction, essentially approximating the matching function and its related properties to agents' transition strategies. Although random matching models seem to rationalise a number of empirical findings, they rely on fairly strong assumptions of how graduates (recruiting firms) look for and obtain jobs (employees). Alternative assumptions have been discussed in the literature and are worth mentioning. Directed job search involves workers choosing which firms to apply to (Montgomery, 1991a), possibly applying at several firms simultaneously (Albrecht, Gautier, & Vroman, 2006); the stock and flow approach (Coles & Smith, 1998) considers that a match is not necessarily available for all agents upon their entry to the market. Subsequently, rejected agents disappear from the stock of possible matches for the agents on the other side of the market, and unmatched agents on both sides need to wait for new flows to arrive, yet remain in competition with both old unmatched agents and new ones. This framework thus gives a theoretical explanation for decreasing hazard in unemployment and highlights the importance of initial success in the labour market.

The framework outlined above models the transitions between different states in the labour market. The transition from school to work is but one of those transitions. Its specificity does not, however, preclude it from being studied within a search and matching framework: the various types of frictions possibly operating during the matching process also apply to the school-to-work transition. Two features, however, render this transition particular: the endogeneity of leave from education, and high levels of imperfect information upon labour market entry. As stated above, the search and matching framework has been extended to incorporate the choice of education. In these studies, the optimal amount of education chosen depends on the functioning of the labour market, which in itself reacts to the average educational level of workers in the economy. The possibility of going back to school (notably tertiary education) after an initial period spent in the labour market is an interesting but rare extension to the search literature (Gicheva, 2012), and fits with empirical observations from some developing countries (Pugatch, 2017). Second, imperfect information on both sides of the labour market is what rationalises the search and matching framework. McCormick (1990) investigates this from the lens of high-skilled workers. His framework implies that signalling will prevent such workers from taking up interim work in periods of unemployment, preferring to search as unemployed rather than on the job.

3.2. The matching process in developing countries

In the context of developing countries, many of the research questions opened by extensions to the job search literature might intuitively seem of secondary importance. In particular, one of the most distinctive features of developing countries' labour markets is the size of the informal sector. The search and matching framework has thus recently been extended to incorporate a dualistic labour market with an informal sector (Albrecht, Navarro, & Vroman, 2009; Satchi & Temple, 2009; Ulyssea, 2010; Zenou, 2008). Albrecht et al. (2009) include worker heterogeneity in their model, accounted for by differential productivities in the formal sector (with workers remaining equally productive in the informal sector). This generates varying opportunity costs of informal sector employment, implying that the workers with the highest productivity will reject informal sector work and wait for a formal-sector job,[5] while low-productivity workers will be shut out of the formal sector. If education and productivity are correlated, this environment will allow for longer transitions into work of higher educated individuals, rationalising the *queuing* hypothesis.

In addition to structural differences such as high shares of informality, dualities (urban/rural, public/private) or multiple job holding that are less present in developed countries, the job search process in developing countries' labour markets relies more heavily on social networks rather than formal institutions (Campbell, 2013; Cling, Gubert, Nordman, & Robilliard, 2007). Network extensions to the matching literature include Calvo-Armengol (2004), Calvo-Armengol and Jackson (2004), and Calvo-Armengol and Zenou (2005) and aim to account for the empirical observation that individuals find their jobs not only via formal methods, but also via informal methods or a combination of them. Theoretical predictions therefrom include the fact that the probability of finding a job is increasing in the size of the social network (Montgomery, 1991b; Wahba & Zenou, 2005).

Estimates of formal search models in developing countries are few. The first to estimate a job search model in the context of a developing country were Tunali and Assaad (1992), who study the construction sector in Egypt. They test their theoretical predictions, notably that human capital should increase (decrease) employment (unemployment) durations. However, coefficients do not show up as significant in their Weibull specification (they are, however, of the correct sign). Satchi and Temple (2009) calibrate a matching model on Mexican data, showing that the amplitude of the urban informal sector can be explained solely with matching frictions. Ulyssea (2010), looking at the size of the informal sector, parameterizes a two-sector matching model on Brazilian data, finding that the magnitude of entry costs into the formal sector is a crucial determinant of the size of the informal sector.

A small but rapidly growing literature studies the nature of search frictions in developing countries and have the potential to contribute to the development of more relevant models. This literature, mainly experimental, collects evidence on the effects of interventions designed to modify important

parameters of the job search framework, principally search costs. Groh, McKenzie, Shammout, and Vishwanath (2015) look at the nature of the matching process in Amman, Jordan, by means of a randomised experiment. Interestingly, in a context of high unemployment rates of high skilled youth, and where firms declare having difficulties finding good recruits, smoothing the matching process did not provide a lowering of unemployment in the treatment group. A majority of matches either rejected the interview, or rejected or quickly left a job that was proposed to them. When asked why, a majority of candidates answered that they found the job unsuitable or not right for their career paths. This suggests that reservation utilities (based on more than mere pecuniary factors) rather than informational search frictions explain high-skilled unemployment. Another piece of evidence comes from Ethiopia, where transport subsidies and job application workshops seemed more efficient than job fairs in creating employment (Abebe et al., 2016, 2017). Interestingly though, although the job fair shed light on important mismatches regarding wages, worker quality, and firm requirements, there was evidence of updated beliefs following the fair which translated into a more formal job search. Jensen (2012) uses evidence from a randomised experiment in India where women in selected villages where informed about the existence of a nearby job opportunity, as well as strategic information on how to get a job. As a result of the intervention, women's fertility and likelihood to get married were reduced, and labour market and schooling increased. Interestingly, from a SWT perspective, the intervention also modified women's aspirations in terms of work and fertility during lifetime, showing that a lack of career aspirations can stem from a sense of fatalism, plausibly rooted in cultural contexts.

3.3. Methodological issues

Concerned with flows between states, search and matching theory provides a basis for empirical specifications set in a survival analysis framework. Survival analysis makes use of duration models, relying on the survivor function, $S(t,)$ which designates the probability that a *failure event* – a transition between states in the labour market, for example – will not occur before t. Kaplan and Meier (1958) proposed an early but still much used non-parametric estimation of the survivor function when censoring occurs (such as in the case of labour market transitions studied using survey data). Duration models take as a dependent variable the hazard rate of individuals and as such seem more fitted to deal with transition phenomena than 'static' models. The hazard rate can be interpreted as the instantaneous probability of leaving a state in the labour market, conditional on not having left it thus far, and is generally estimated on samples of workers based on observed characteristics which can be time-varying or constant. The commonly used *proportional hazards* model assumes a baseline hazard for the failure event, and lets variables affect this baseline hazard multiplicatively. Cox (1972) developed a semi-parametric estimator for the hazard rate that does not need an underlying assumption for the baseline hazard, relying on partial likelihood methods. These models typically assume that all observations eventually end in failure, an assumption that might be unrealistic in some subject areas (some unemployed might drop out of the labour force and never find employment). Split-population models relax this assumption and estimate a proportion of the sample who will never experience failure; the remaining observations in the sample are used as a sample from which hazard ratios are estimated.

An important quality for a theoretical model is the possibility for it to be amply tested. Van den Berg (2001) examines the conditions under which duration models, and particularly mixed proportional hazard models, can be considered as reduced forms of a structural search model. Regarding a non-stationary job search model without anticipation; only under special cases requiring strong assumptions will the hazard rate implied by the theoretical model take a multiplicative structure. One such case arises if individuals' reservation wage is always lower than the lowest wage in the market. Similarly, if the wage distribution takes a Pareto form, and the non-work income (or social benefits, in the context of countries with unemployment benefit systems) is null, the hazard rate will be multiplicative in time and in the characteristics of individuals. Another strong assumption that would produce a multiplicative hazard rate is to set the discount rate at infinity, so that individuals do not care about the future.[6] When anticipation is considered, such as in Van den Berg (1990), the

assumptions become even more restrictive. Despite the mixed proportional hazards specification not being derived directly from a theoretical model, it is without a doubt the most popular specification for duration data in economics.

4. Individual factors and the school-to-work transition

The following subsection reviews the evidence available on the impact of various aspects of individuals' educational background on their labour market outcomes. Remaining subsections address gender, social networks, and family background as determinants of school-to-work transitions.

4.1. The importance of education in the labour market

In the matching environment, a key feature of the school-to-work transition process is asymmetry of information: with no previous job experience firms have to infer worker productivity from the little information they have. One important such piece of information is formal qualifications. Various measures of educational qualifications have been introduced as explanatory variables in duration models applied to the transition from school-to-work, although they might not be the sole focus of the studies at hand. The primary transition studied here is the one from school to work; this type of transition is, however, closely related to transitions from unemployment to work in countries where youth unemployment accounts for the major part of unemployment. For example, Serneels (2007) looks at the unemployment duration of a sample of men aged 15–30 who are primarily first time job seekers. Considering the findings from the literature using the transition from school leave to first employment (whatever the kind), results are not homogenous: for example, Matsumoto and Elder (2010) show that the time spent in transition[7] is strictly decreasing in the level of education in both Egypt and Mongolia. Calves, Kobiane, and N'Bouke (2013) also find increasing hazard rates in the level of education using data from Burkina Faso, and Kong and Jiang (2011) find that graduating from a four-year rather than a three-year college programme increases the probability of finding a job quickly (and all the more so when the college is in the top tier). In Egypt, however, Assaad, Binzel, and Gadallah (2010) do not find a significant correlation between educational attainment and duration of the transition to first job. They do, however, find a positive correlation between education level and job satisfaction. This echoes the results from Boutin (2014), who shows that Malian youth with a higher education on average spend more time (six years) finding a first job than primary and secondary graduates (three years), but need less time to find a satisfactory one (nine years versus 12 years).

When the transition considered is that from unemployment to work, a non-monotonic relationship between education and unemployment duration is found in several studies (Galiani & Hopenhayn, 2003 for Argentina; Serneels, 2007 for urban Ethiopia; Sayre & Daoud, 2010 for Ghana; and Tansel & Taşçı, 2010 for Turkey). Such a relationship may appear for several reasons. Reservation wages and quality requirements are likely to be higher for the more highly educated, inducing them to turn down job possibilities more often. This argument is put forward by Fallon (1983), who argues that job seekers in Delhi spend longer time in search when they are more highly educated, since the value of the search is higher. Dickens and Lang (1995) find that unemployed in Sri Lanka with completed O-levels or A-levels have a longer predicted unemployment duration than those with lower levels of schooling. Their study is indicative of a queuing phenomenon, where relatively educated youth with high expectations tend to wait for government jobs, eventually lowering their aspirations as time goes by. Kuchibhotla (2013), however, explains this via an increased tendency of educated youth to engage in training, which is considered a 'non-employment' status. Queuing theory nonetheless does find support in the data. Serneels (2007) argues that credit constraints explain why individuals do not engage in self-employment while waiting for a job opportunity in the public sector, finding evidence of such behaviour in urban Ethiopia. Waiting for government sector jobs is a known feature of African labour markets, but the current generation faces a different labour market from that of their elders. Calves and Schoumaker (2004) talk about a rupture between formal education and access to modern sector employment in Africa. While the well-educated of previous generations had relatively easy access to public sector employment,

the increase in their numbers coupled with economic crises and structural reforms has meant that this option is no longer efficient. The same phenomenon can, however, explain shortened transitions (Assaad et al., 2010): as public sector job opportunities diminish, it is no longer worthwhile to wait for such jobs, and individuals will to a higher extent take up a job in the informal sector, reducing transition lengths. Some authors have focused on reservation wages as a way of approaching the queuing phenomenon. Levinsohn and Pugatch (2010) apply survey data to a job search model for South Africa. Applying reservation wages from survey data to their model suggests that the unemployed receive job offers relatively frequently, but that these are below their reservation wage. Nattrass and Walker (2005), however, conclude that reservation wages are not the cause of unemployment in Cape Town's Khayelitsa district. Serneels (2007) arrives at a similar conclusion for Ethiopian men. Distinguishing small and large firms, Rankin and Roberts (2011) find that between 70 per cent and 80 per cent of young South African males have higher wage expectations than what they are likely to earn by working in a small firm, suggesting that unemployment might be partly caused by young people waiting for employment in large firms. Thus, in most of the studies cited, queuing does arise as a plausible phenomenon explaining relatively long unemployment durations for well-educated workers in development countries.

Somewhat related to queuing, another explanation for higher unemployment rates of the well-educated is the luxury argument: basic survival implies that most youth in poorer regions of the world have no choice but to commit to work that they might deem to be overqualified for,[8] and only those with sufficient resources can afford to be unemployed. Unemployment could therefore be more prevalent in wealthier households. Studies from India, South Africa, and Tanzania however fail to find support for this hypothesis (Fallon, 1983; Kingdon & Knight, 2004; Kondylis & Manacorda, 2008). Skills mismatches constitute another influence on transition lengths. Several authors have investigated whether the unemployment duration is related to educational content. In China, Kong and Jiang (2011) found that engineering and business degrees were associated with short unemployment durations, while law and science graduates experience longer transitions. Science graduates also seem to experience relatively long transitions in Mauritius (Jaunky & Khadaroo, 2007), as do social science graduates. At lower levels of education, Newhouse and Suryadarma (2011) find that male public vocational graduates are more likely to obtain a formal job than graduates from public general education, all the while being no more likely to be in unemployment. Calves et al. (2013) find that having been to a private institution during one's schooling positively influences the hazard rate of transiting to a first paid job, although not when family background variables are introduced. Chuang (1999) looks at the determinants of Taiwanese job seekers unemployment duration; he shows that graduates from public universities fare better than those from private institutions, arguing that this reflects a signalling phenomenon (higher scores are needed to enter public universities). Pugatch (2014) looks at the role of vocational education in South Africa, finding it to be an alternative for those who fail in the general system, albeit conferring similar labour market returns. Pugatch (2017) also considers an often ignored component of the school-to-work transition, namely the dynamics of dropping out and re-enrolling. Using data from South Africa, he finds support for a model of schooling choice based on dynamic updating of the relative returns to pursuit of education.

Are longer transitions for the well-educated associated with less intensive search, less offers available, or more offers turned down? As posited by search theory, the intensity of search will influence the probability of receiving job offers and should thus smooth the transition from school to work. Using the number of channels of search as a measure of search intensity, Nyarko, Baah-Boateng, and Nketiah-Amponsah (2014) find that years of schooling and age positively influence the plurality of channels used for job seekers in Ghana, while previous job experience tends to reduce it. Tasci (2008) shows similar findings for Turkey. Evidence from Egypt suggests education increases job search intensity for women, as does previous job experience (Abdel-Mowla, 2011).

Lastly, since many of the studies cited above do not show causal estimates, it seems important to briefly recall the endogeneity of education in the school-to-work transition. In the relationship between family background and the transition to work, for example, it is likely that education acts as a mitigating factor. The fact that family background variables are important in the labour market has been argued based on the fact that their introduction into wage regressions lowers the coefficients of

returns to education (as in Heckman and Hotz, 1986, for Panama). Krishnan (1996) reflects on this in a study on Ethiopia, and shows a selection effect into the public sector. Her findings suggest that at least half of the family background effect on the estimated return to education in the public sector is due to selection bias. Therefore, it seems reasonable to believe that family background mechanisms, including information and contact sharing, genetic ability endowments, and out-of-school investments impact the nature and length of school-to-work transitions. The help of family members in securing jobs will be briefly discussed in Section 4.3.

4.2. Gender and the transition to work

A series of country reports[9] by the ILO, based on the school-to-work transition surveys, show that women are generally disadvantaged in the school-to-work transition. From reading these reports it seems that in virtually all countries surveyed, the share of women in transition (that is, who are out of school and who have intentions to find work, either now or later) who have found stable or satisfactory work is lower than the equivalent share for men. Women also experience longer transitions in general, whether the transition to stable employment or to satisfactory self-employment be considered. It thus seems that the gender inequalities measured by higher unemployment and lower pay, manifest in many of the world's labour markets, carry on to the length of finding a job. Longer transitions for women are also found in Boutin (2014) for Mali. An analysis for 23 countries is carried out by Manacorda, Rosati, Ranzani, and Dachille (2017), finding that being a woman is a strong predictor of duration lengths. Results from their total sample suggest that women need twice as much time (24.6 months compared to 11.7 months) as men to transit into employment. A significant proportion of this discrepancy however, seems to be due to very large differences in transition lengths for MENA countries. Furthermore, the discrepancy seems not to be driven by educational differences; in many of the ILO reports cited above, women experience longer transitions at all levels of education. It should, however, be noted that the above evidence is largely descriptive. In multivariate regressions, being a woman is associated with a decreased hazard rate in Argentina (Galiani & Hopenhayn, 2003) and in Palestine (Sayre & Daoud, 2010), where the transition from unemployment to work is considered. A negative, not significant effect is found in Burkina Faso by Calves et al. (2013).

The question of why transition differences by gender arise warrants further investigation. Their origins may lie in the different constraints – personal, institutional, and community-related – that women face with respect to men in their transition to adulthood. In some societies, women's agency is strongly limited and transitions of men and women into adulthood are tightly linked to the roles they are presumed to play in society. Childcare is one domain in which women almost universally contribute more time than men. In terms of the school-to-work transition, fertility might immobilise women for extended periods of time, leading to longer transitions. The literature studying the link between fertility and female labour supply in developing countries has indeed produced a majority of negative results (see for example Cáceres-Delpiano, 2012 for an analysis on 40 developing countries), although exceptions exist (Agüero & Marks 2011). It has, however, been suggested that the constraint on female time use is less binding in developing country settings, since childcare alternatives are more abundant there (Behrman & Wolfe, 1984). Related to this argument, evidence from South Africa suggests a strong possibility for teenage mothers to return to school after birth, provided that there is a delay before the birth of a second child (Kaufman, Wet, & Stadler, 2001). In the end, since the negative effect of childbearing on labour supply may be derived from a transition out from the labour market of already employed women, it is unsure how this affects those who are in the process of transiting into it. Direct evidence on this is lacking in the literature and contributions thereto would be a welcome addition to the literature. Bloom, Canning, Fink, and Finlay (2009) run regressions by age group, finding no significant effect on employment status for the group of 15–19 year-olds, and a positive effect for 20–24 year olds. This may reflect the fact that the negative correlation is driven by women leaving their jobs rather than failing to transit into new ones.

Marriage markets and their functioning also generate gender-specific constraints. For men, work is often a prerequisite for marriage, while for women it can be a solution to a failed transition. In such cases, marital transitions and school-to-work transitions are not independent events. An illustration of this occurs in the MENA region, in countries such as Egypt, Syria, and Morocco, where 'waithood' –

that is, waiting for good employment opportunities in order to be able to marry, to establish an independent household, and to transit into adulthood – is common among educated youth (Singerman, 2007). This most likely applies to men to a larger extent than to women in the developing world, since men remain the primary income sources of households. Additionally, social norms related to marital status may condition both labour market status and the types of jobs women are allowed to engage in. In many societies, blue-collar work is acceptable for unmarried women, but less so for married ones (Mammen & Paxson, 2000), related to the role of men in providing for their households 'only a husband who is lazy, indolent and entirely negligent of his family would allow his wife to do such labor' (Goldin, 1994). The implication for low-educated women is that marriage arises as a plausible escape route from the labour market. Conversely, for educated women in some societies, it may make sense to wait for a good job before marriage. This is likely to be especially true if matching in the marriage market is related to both educational and occupational status. As previously mentioned, marriage and fertility may also be answers to failed transitions. Experimental evidence from India, wherein women's labour force opportunities where experimentally increased via the provision of randomly allocated recruiting services, Jensen (2012) showed that labour market participation delays both marriage and fertility.

The above explanations have focused on female labour supply. It may also be that gender-specific demand affects women's transition lengths. Generally speaking, if only a subset of the labour market is accessible to women, this should in a search-theoretic framework result in a lower job proposal rate and consequently a negative impact on women's transition lengths. A smaller job pool may result from social norms, employer discrimination, female preferences, or structural change disproportionately affecting women-intensive sectors. Tasci (2008) finds a lower job search intensity for women in Turkey, and suggests cultural obstacles and limited economic opportunities for women as potential reasons. The study of both job search behaviour and the return to such behaviour is paramount in the discussion on gender differences in transitions, since it helps attributing women's longer transitions to supply side versus demand-side factors. Some authors have investigated both patterns of and *returns* to job search from a gender perspective (for example Keith & McWilliams, 1999), generally finding that women search less than men, but no such study has been carried out for developing countries. To which extent this result generalises to developing country contexts, and whether it reflects less inputs to search or a lower pool of job offers remains an open question. Related to this, the returns to search have been investigated from the lens of employer discrimination. Arceo-Gomez and Campos-Vazquez (2014) study this by sending fake resumes to employers in Mexico. They find that women have superior call-back rates to men across all specifications, but that married women get lower call-back rates than single women.

4.3. Social networks

It has been established that an important share of workers find their jobs via personal contacts (Jackson, 2011; Montgomery, 1991b). Bramoulle and Saint-Paul (2010) develop a model based on the hypothesis that a social tie between an employed and an unemployed worker increases the probability of finding a job of the latter. In their model, *inbreeding*, the probability of forming ties with persons of the same labour market status, explains why negative duration dependence occurs in the transition from unemployment to employment. Short-term unemployed have on average more employed ties, which are depleted with time. A similar result is theorised in Calvo-Armengol and Jackson (2004). These results emphasise the fact that the period of labour market entrance is crucial for individuals' subsequent labour market trajectories. Initial failure in the job search process may hinder and slow down individuals' progress, forcing them to rethink their options. Relatedly, working while in school may provide valuable contacts which can be mobilised to ease the transition into a first full-time job.

To see whether social networks are beneficial in the transition or rather a fall-back option in case of failure, it is crucial to examine whether the types and nature of jobs acquired via social networks differ from those acquired via other channels. Knight and Yueh (2008) find that jobs found via networks amongst

Chinese urban workers migrants are associated with higher wages, suggesting that networks not only facilitate getting a job, but also may have implications on the quality of the job found. Other results from the literature, however, suggest that the successful use of networks to achieve good jobs depends on education; Lassassi and Muller (2013) look at job search methods in Algeria, arguing that human capital seems to be an important factor determining the successful use of social networks to find employment. Contreras, Zapata, Ochoa, and Kruger (2007) reach a similar conclusion for women in Bolivia. There have, however, also been indications that jobs found via networks are of lower quality. Mano, Yamano, Suzuki, and Matsumoto (2011) find that recruitments via social ties in Ethiopia's cut flower industry initially confer lower wages, and recent evidence from Deguilhem, Berrou, and Combarnous (2017) suggests jobs obtained via social ties are of lower quality, at least at the lower end of the job quality spectrum. Finally, social networks might not only aid in finding wage employment but also in the productivity of the self-employed (Fafchamps & Minten, 2002).

The family or the household represents one particular social network. Indeed, individuals' upbringing shapes their beliefs about present and future possibilities offered to them. As early as 1970, Bachman, Kahn, Davidson & Johnston carried out a longitudinal study on US adolescents, showing that an indicator of socio-economic status[10] was a good predictor of both intelligence and knowledge of job opportunities (Bachman, Kahn, Davidson, & Johnston, 1970). Despite Granovetter's postulate, that weak ties are most useful in finding a job, strong ties such as kinship systems also contribute in the job search process, especially for poorer and more vulnerable individuals with low numbers of weak ties (Kuzubas & Szabo, 2015; Wahba & Zenou, 2005), but result in worse jobs (Bian, 1997; Kuzubas & Szabo, 2015). No economic studies of the direct effects of parental characteristics on transition to work have been carried out in developing countries, although such studies would be of high interest in determining to what extent the family network helps and/or restrains youth to take on specific career paths. Parental occupations also shape the transition to employment. This may occur if knowledge about outside opportunities is scarce or there are returns to parental experience in an occupation. A piece of evidence that would point to such an influence in career paths of youth is if second generations in occupations are more productive than first generation ones. Pasquier-Doumer (2013) partially confirms this, showing that while in general second generation self-employed in West Africa do not fare better than first generation ones, those who take up a trade in the family tradition do. Focusing on transition lengths, Nordman and Pasquier-Doumer (2015) look at how labour market transitions in Ouagadougou are affected by social networks, measured by several indicators such as size, strength of ties, and embedded resources. They do not find any effect of network size on the transition hazard from unemployment to employment, but find effects of the fragmentation of siblings and strength of ties.

5. Environmental factors and the school-to-work transition

The present section intends to review the evidence on the role played by environmental factors on the school-to-work transition. Using the term environmental factors is motivated by a willingness to change scales. While previously concerned with individual or family-level characteristics and their impact on individuals' transitions, this sections aims to evaluate how labour market policies and other features of the economic and social environment in which individuals live influence the average individual's transition.

5.1. Institutions and the macroeconomic environment

The law of supply and demand remains an optimal starting point for the analysis of the time it takes for the labour market to absorb new graduates. In the canonical neo-classical model, the wage adjusts to achieve clearance in the labour market. In real life, the wage is not the only thing that might adjust to modifications of supply and demand of workers, and an excess supply of workers might provoke anything from unemployment and unwanted part-time labour to lower quality jobs. This is illustrated in Banerjee, Galiani, Levinsohn, McLaren, and Woolard (2008), who examine the South African labour market since the end of apartheid. At

the time, the country faced institutional constraints[11] preventing real wages from declining to adjust to the increased supply of labour (of African women, especially). This, in combination with a structural change implying an increased relative demand for more qualified labour, meant that unemployment soared, especially amongst lower educated South Africans. Banerjee et al. (2008) also show that transitions into the formal sector as often originate from the informal sector as from unemployment with search, and wonder what this signifies for informal employment as a labour market status. One proposition is that it is suboptimal, and that informal employment is actually job search plus an informal, suboptimal money-generating activity. Another interpretation is that informal employment is a stepping stone into the formal sector (as in Cunningham & Salvagno, 2011). In the end, the extent to which the informal sector translates into a good job and thus an achieved transition is bound to be very context-specific, reflecting heterogeneous gains and sorting mechanisms in the labour market (Radchenko, 2017). The informal sector itself is furthermore likely to be segmented, such that for some individuals, it represents an optimal labour market status while for others, a last resort (Günther & Launov, 2012). Thus, in seeking answers to the question of what works to promote labour market success, it is necessary to evaluate countries' stages of development and the nature of their institutions. One such institution is property rights, whose link to development has been studied by Fergusson (2013), who argues that weak rural property rights over peasant plots may be in the interest of elite landowners since they provide them with cheap rural labour. Another feature of weak property rights is that they force peasants to remain in the rural sector to protect their property, avoiding job opportunities in the urban sector. Contexts with weak property rights may thus significantly narrow down the choice set for newly established rural households, acting as migration brakes. Labour market institutions in their own right, such as unemployment compensation, minimum wages, apprenticeship programmes, and so forth also act on the smoothness of the labour market via determining both firms' and individuals' choice sets. In Latin America, Ulyssea (2010) shows how in a matching model, strong regulations of entry for both firms and workers rationalise both the size of the informal sector and the finding of Cunningham and Salvagno (2011), that workers in three Latin American countries tend to have their first labour market experience in the informal sector. Demand-side considerations may thus be just as important as supply-side considerations, with formalisation constraints on firms' side defining aggregate employment patterns more than unemployment compensation or income taxation.

Minimum wages are another good example of institutional (legislative) constraints that could theoretically impede labour market adjustments and reduce employment in the context of excess supply of labour. Margolis (2014) reflects on the conditions under which the introduction of minimum wages in developing countries can promote growth and reduce poverty. He argues that market frictions and monopsony conditions seem particularly important in developing countries, ensuring that minimum wages come with positive employment effects. However, there are inherent risks of increasing the formal sector, and *in fine* the success of minimum wages hinges on the capacity of countries to enforce legislation, collect relevant data and ensure coverage. Empirical evidence from the introduction of minimum wages in Latin America suggests that the negative employment effect is uncertain. In a panel data study of Mexican and Colombian manufacture, Bell (1997) concludes on a negative effect in Colombia, but no effect in Mexico. She argues that this is because the minimum wage is not binding in Mexico, while it is in Colombia. Maloney and Mendez (2004) point out that minimum wages distort labour markets differently in the presence of large shares of informal labour. Imposing a (binding) minimum wage in the formal sector might push workers into the informal segment of the labour market, where wages decrease, which results in some workers being worse off than before the introduction of the minimum wage. This mechanism does not seem to be operating in Latin America, however. The authors instead show that in virtually all countries, a *lighthouse effect* can be observed; in other words, the minimum wage in the formal sector acts as a signal of what constitutes a fair wage in the labour market. Thus, rather than decreasing, wages in the informal segment of the labour market actually increase. Lustig and McLeod (1996) explore a set of developing countries which have introduced minimum wages, and find that increases in the minimum wage has on average led to decreases in poverty rates. In a review of the literature, Betcherman (2015) states that the majority of the evidence from developing countries concludes on negative, but small employment effects from the introduction of minimum wages. Studies further suggest that relatively vulnerable individuals such as youth, women, less skilled, and more generally those on the lower end of the pay scale tend to be

the ones suffering the worst employment effects. Focusing on the school-to-work transition specifically, but outside a developing country context, Neumark and Wascher (1995) look at the impact of minimum wages on youth transitions in the United States. Their results suggest that, while on the aggregate the minimum wage might have low employment effects, transitions to and from enrolment and employment can be significant and 'should be of concern to policymakers'.

The shape of technical change also influences demand for labour, both aggregate labour and labour at various skill levels. Capital-augmenting productivity growth for example, will induce firms to substitute capital for labour, thereby creating downward pressure on wages and upward pressure on unemployment. Similarly, if technological change is labour-augmenting but skill-biased, such that the productivity increase is relatively stronger for skilled labour, firms are likely to substitute skilled labour for unskilled labour as labour inputs. In general, structural change, whether it be the result of terms of trade variations or productivity shocks, will via adjusting the overall capital intensity have repercussions on the demand for labour and thus the transition patterns of young workers. Berman and Machin (2000) show evidence of pervasive skill-biased technological change in developing countries (particularly middle-income countries), something that would worsen prospects for the relatively uneducated (Marouani & Nilsson, 2016; Schady & Sanchez-Paramo, 2003).

On the supply side, demographics play an important role in the supply of labour and thus in the labour market equilibrium, something that has been taken into account by scholars working on youth employment. At constant labour demand, the arrival of a relatively large cohort in the labour market is doomed to be accompanied by increasing unemployment (so called *cohort crowding*). Korenman and Neumark (1997) estimate the elasticity of youth unemployment to the share of youth in the population, and find this to be around 0.5 in a set of 11 European economies. Similar figures for developing countries are found by O'Higgins (2003). From this angle it makes sense to be optimistic about world demographic trends from a labour market perspective: Lam (2007) shows that although the number of youth in the world has never been bigger, the share of youth to adult population has already peaked and is declining in most developing countries, implying more opportunities in the future for the world's youth.

In Africa, Garcia and Fares (2008) show substantial heterogeneity in transition times of youth, ranging from one year of inactivity in Cote d'Ivoire to seven years in Mozambique. Using the same data, Fares et al. (2005) find no evidence of correlations between the time spent in transition and a number of macroeconomic factors such as GDP growth, the share of industry in the economy or openness to trade. This might suggest that unobserved institutional factors, at the country, regional, or local level, strongly affect transition patterns in individuals. For example, population density and infrastructures of one's locality play a role in the amount of viably accessible economic activities for individuals, as well as the potential size of their social networks and the possibility of extending the latter. Population density was linked to the probability of finding a job via one's social network in Egypt (Wahba & Zenou, 2005), and to the job search intensity in Turkey (Tasci, 2008).

5.2 Labour market policies

Facing difficulties of some groups in the labour market, industrialised countries have implemented various labour market policies in order to address market failure and improve outcomes of workers risking to lose touch with the labour market (so called Active Labour Market Policies, or ALMPs). International organisations such as the World Bank and the ILO have in recent years recognised the need to adequately evaluate active labour market programmes in developing countries, since initial evidence suggested some of the programmes (successfully) run in industrialised countries might not be suited for developing countries' labour markets (Kyloh, 2004). The World Bank's support in the area of youth employment was evaluated in 2012 (Independent Evaluation Group, 2012). Regarding the school-to-work transition, improving information on the labour market is a feature of 70 per cent of the Bank projects studied, although very little is known about its efficiency. The fact that the SWT is minimally covered whilst the education system is extensively covered is pointed out as a gap in the report. A meta-analysis conducted by Card, Kluve, and Weber (2010) showed that interventions targeted at youth less often showed significant impacts. More recent and extensive evidence on

ALMPs targeting youth comes from Kluve et al. (2016). Covering 113 reports, their aggregate analysis shows that employment services and subsidised employment perform worse than interventions in skills training or entrepreneurship promotion.

Blattman and Ralston (2015) survey labour market and entrepreneurship programmes in poor and fragile states. The evidence surveyed shows a small effect on employment and earnings of training in business skills, technical and vocational skills. Furthermore, the relatively high costs of these interventions casts doubt on the returns. These conclusions echo those of more systematic reviews: McKenzie and Woodruff (2014) evaluate 16 randomised experiments providing business training, concluding on modest impacts in the adoption of business practices and henceforth on sales or profitability. They however find stronger effects on business creation. Tripney and Hombrados (2013) review 26 studies on the provision of technical and vocational education (TVET) to youth in low- and middle-income countries. Their overall finding is that of a statistically significant impact of TVET provision on paid employment and earnings, but they suggest caution in drawing any firm conclusion due to the quantity of the evidence as well as the quality of some studies. Also interested in employment, Grimm and Paffhausen (2015) systematically review 53 studies of interventions targeting micro-entrepreneurs or small- or medium-sized firms. They find modest effects, especially when job creation in pre-existing firms is considered. Interestingly, they also find a difference according to the methodology used for the evaluation, randomised controlled trials finding smaller effects than quasi-experimental ones. They also point out the lack of focus on the cost-effectiveness of these interventions. A similar concern was raised by Blattman and Ralston (2015), who affirm that even a rather successful example of a an adolescent girls employment programme in Liberia (Adoho, Chakravarty, Korkoyah, Lundberg, & Tasneem, 2014) would necessitate steady benefits for three to four years for benefits to outweigh costs. Evidence on the medium- and long-term effects of interventions is scarce in the literature. Many evaluations lack a follow-up, focusing only on the immediate effects at programme closure. Exceptions showing positive medium-term impacts do however exist. McKenzie, Assaf, and Cusolito (2016) evaluate an interesting scheme in Yemen, where firms interested in hiring interns were matched randomly to candidates fulfilling a certain number of criteria, and were given subsidies covering 50 per cent of the internship cost. The authors find large and positive employment and earnings effects, still present five months after the programme, suggesting that internships can work as springboards for youth at the start of their transition to working life. In India, Maitra and Mani (2017) find sustained positive employment effects of vocational training for poor women, 18 months after the end of the intervention. In Latin America, a series of evaluations of the *Jovenes* programmes, providing job training in seven Latin American countries, suggests positive employment impacts of active labour market programmes in all seven countries, ranging from a 0 to 5 per cent increase in employment. The evaluation term ranges from three to 24 months depending on the study, and the target groups were youth, out of school, and unemployed or underemployed individuals. Training was given for a few weeks, followed by an internship with a firm of the same length (Ibarraran & Rosas Shady, 2009). Among the programmes evaluated, the PROCAJOVEN in Panama is of particular interest, since it distinguished first-time job seekers from merely unemployed youth, focusing on longer internships and less training for the former. Interestingly, the estimated impacts were lower for first-time job seekers (and negative for men), but since this group is different from the second one, not much can be inferred about the relative efficiency of job readiness training versus internships. In a larger evaluation of job training programmes, Urzua and Puentes (2010) cite 34 evaluations from Latin America of varying scope and quality. Their summary casts doubt on the generalisability of the positive results from the Jovenes programmes, since about half of the evaluations show no positive labour market impacts. No summary of studies detailing their evaluation terms is however presented, so it is difficult to assess whether the time period considered is correlated with the results obtained.

Other types of ALMPs have also been surveyed. Blattman and Ralston (2015) summarise the (scarce) evidence on workforce programmes, such as the NREG programme in India, which provided 3.3 person-days of public employment per rural individual for three years. The efficiency of the programme remains doubtful, but results from evaluations are inconclusive, partly due to the lack of an appropriate research design. The most researched type of intervention is most likely individual or household transfers, and it is also the one that has shown the most promising effects (Blattman & Ralston, 2015). More generally, the take-away message of the survey of Blattman and Ralston (2015) is that interventions equipping individuals with capital

(physical or cash) have the best record in the literature and provide long-lasting positive impacts. The success of these programmes suggests that there may be synergies between programme components, and that the provision of skills or cash alone is an imperfect way of putting the poorest on a path to stable employment. However, since local contexts vary, and the possibilities for promoting employment targeting disadvantaged youth are numerous, a solid body of evidence has yet to be constituted, in particular with regards to skills formation interventions and work-force programmes. In this regard, with more and more randomised control trials emerging, learning by doing in the policy community might (hopefully) imply improved transitions for vulnerable categories of youth in the future.

6. Concluding remarks

In this article, I have presented a picture of the current research on school-to-work transitions in developing countries, including theoretical foundations, methodological issues, and empirical evidence. Concerned with flows between states in the labour market, search and matching theory constitutes a natural starting block for inquiry into labour market transitions. This literature has in recent years been extended to take into account some of the most salient features of developing countries' labour markets, such as a formal-informal segmentation and social net-works. Producing theoretical hazard rates, search and matching theory also lays the ground for empirical analysis of transition that takes the shape of duration analysis. Among the estimators used in the literature, the proportional hazards model is by far the most commonly used tool. Despite it not being able to nest many structural models, its relative simplicity and incorporation into common statistical software makes it a good basis for extensive empirical study of the school-to-work transitions.

Empirical results suggest that many of the results found in static analyses concerning labour market status in developing countries are confirmed when transitions are the subject of investigation. Being a woman, for example, not only carries a penalty in terms of wages or unemployment, but also in terms of transition lengths. Education mostly shortens transition times, although this is not always the case. Queuing for good (public sector) jobs arises as a plausible explanation for the phenomenon. Social networks and family background are also tied to employment outcomes, but specific studies on transitions in developing countries are lacking. The same goes for cognitive skills, which have been shown to affect wages in developing countries (Hanushek & Woessmann, 2008), and non-cognitive skills, where a handful of studies such as Groh, McKenzie, and Vishwanath (2015) find evidence of links to employment status in Jordan. When evidence of transition differences does exist, as for gender and education, more research should delve into the origins and the mechanisms of such discrepancies. This also concerns ethnicity, which can be tied to features affecting the SWT such as discrimination, structural change, or social networks.

On the macro side, institutional settings and the nature of the local labour market appear to be stronger drivers of durations to first job than macroeconomic indicators such as GDP, trade openness, or income distribution. Interventions have proven successful, in particular those that focus on cash or capital injections. Furthermore, skills training and entrepreneurship promotion have proved more successful than programmes focusing on employment services or subsidies to employment. Some evidence also suggests that interventions targeting youth are less efficient than untargeted interventions. Concerning interventions, the evidence points to a lot of heterogeneity, plausibly due to differences in the local settings in which programmes were implemented. More than anything, the evidence surveyed reveals a need to increase the amount of research on the determinants of transition lengths, both at the individual and macro levels, and provides an argument for the systematic inclusion of work and education history modules in future labour market surveys. In the absence of short interval longitudinal studies in developing countries, such modules have numerous applications both in empirical studies and in the parameterisation of search models.

Acknowledgements

I extend my thanks to Claire Zanuso, to the editors, and to several anonymous referees sho provided me with insightful comments. Any remaining errors are my own.

Disclosure statement

No potential conflict of interest was reported by the author.

Notes

1. This review takes the form of an extended review revolving around the concept of school-to-work transitions. Although a meta-analysis on duration studies would be interesting, the variety of model specifications and definitions for the SWT used in the literature, together with an overall relatively small number of published studies, renders this exercise unfruitful.
2. The countries included are Argentina, Australia, Brazil, Canada, Chile, France, Germany, Indonesia, Italy, Mexico, South Africa, Spain, Turkey, United Kingdom, and United States.
3. The school-to-work transition in the United States more typically refers to learning experiences at an employer's work site (Ryan, 2001). This is not the definition adopted in this text.
4. The ILO's *Work4Youth* consider the transition to start upon graduation or from the individual's first economic activity.
5. A further important assumption is that working in the informal sector disallows for job search in the formal sector.
6. This can also be achieved in a repeated search-model.
7. Relying on the ILO concept of transited individuals, meaning those who are in stable employment, or satisfactory temporary or self-employment.
8. This also implies that focusing only on unemployment in these contexts is insufficient at best, and misleading at worst.
9. See for example: Matsumoto and Elder (2010), Mel, Elder, and Vansteenkiste (2013), Elder, Novkovska, and Krsteva (2013), Elder (2014), Mussa (2013), Toufique (2014), Barsoum, Ramadan, and Mostafa (2014), Barcucci and Mryyan (2014), Serriere (2014), and Libanova, Cymbal, Lisogor, Marchenko, and Iarosh (2014).
10. Comprised of six equally weighted dimensions: father's occupational status, father's and mother's educational attainment, number of books in the home, number of rooms per person in the home, and a checklist of other possessions.
11. Related to, among other things, scrutiny from international institutions.

References

Abdel-Mowla, S. (2011). Women's job search activity in a transforming labour market: Determinants of women's job search propensity in Egypt. *International Proceedings of Economics Development and Research*, *16*(6), 28–36.

Abebe, G., Caria, S., Fafchamps, M., Falco, P., Franklin, S., & Quinn, S. (2016). *Curse of anonymity or tyranny of distance? The impacts of job-search support in Urban Ethiopia* (NBER Research Working Paper 22409). Cambridge, MA: National Bureau of Economic Research.

Abebe, G. T., Caria, S., Fafchamps, M., Falco, P., Franklin, S., Quinn, S., & Shilpi, F. (2017). *Job fairs: Matching firms and workers in a field experiment in Ethiopia* (World Bank Policy Research Working Paper 8092). Washington, DC: The World Bank.

Adoho, F., Chakravarty, S., Korkoyah, D. T., Lundberg, M. K., & Tasneem, A. (2014). *The impact of an adolescent girls employment program: The EPAG project in Liberia* (World Bank Policy Research Working Paper 6832). Washington, DC: The World Bank.

Agüero, J. M., & Marks, M. S. (2011). Motherhood and female labor supply in the developing world evidence from infertility shocks. *Journal of Human Resources*, *46*, 800–826.

Albrecht, J., Gautier, P. A., & Vroman, S. (2006). Equilibrium directed search with multiple applications. *The Review of Economic Studies*, *73*, 869–891.

Albrecht, J., Navarro, L., & Vroman, S. (2009). The effects of labour market policies in an economy with an informal sector. *The Economic Journal*, *119*, 1105–1129.

Allen, J., & Van Der Velden, R. (2007). Transitions from higher education to work. In U. Teichler (Ed.), *Careers of university graduates* (pp. 55–78). Netherlands: Springer.

Arceo-Gomez, E. O., & Campos-Vazquez, R. M. (2014). Race and marriage in the labor market: A discrimination correspondence study in a developing country. *The American Economic Review*, *104*, 376–380.

Assaad, R., Binzel, C., & Gadallah, M. (2010). Transitions to employment and marriage among young men in Egypt. *Middle East Development Journal*, *2*, 39–88.

Bachman, J. G., Kahn, R. L., Davidson, T., & Johnston, L. (1970). *Youth in transition (Vol. 2)*. Ann Arbor, MI: Institute for Social Research.

Banerjee, A., Galiani, S., Levinsohn, J., McLaren, Z., & Woolard, I. (2008). Why has unemployment risen in the new South Africa? *Economics of Transition*, *16*, 715–740.

Barcucci, V., & Mryyan, N. (2014). *Labour market transitions of young women and men in Jordan* (Work4youth Publication Series No. 14). Geneva: ILO.

Barsoum, G., Ramadan, M., & Mostafa, M. (2014). Labour market transitions of young women and men in Egypt (Work4Youth Publication Series no. 16). Geneva: ILO.

Behrman, J. R., & Wolfe, B. L. (1984). Labor force participation and earnings determinants for women in the special conditions of developing countries. *Journal of Development Economics*, *15*, 259–288.

Bell, L. A. (1997). The impact of minimum wages in Mexico and Colombia. *Journal of Labor Economics*, *15*(S3), S102–S135.

Berman, E., & Machin, S. (2000). *Skill-Biased Technology Transfer: Evidence of Factor Biased Technological Change in Developing Countries* (Unpublished manuscript). Boston University. Retrieved from https://www.researchgate.net/publica tion/252103176_Skill-Biased_Technology_Transfer.

Betcherman, G. (2015). Labor market regulations: What do we know about their impacts in developing countries? *The World Bank Research Observer*, *30*, 124–153.

Bian, Y. (1997). Bringing strong ties back in: Indirect ties, network bridges, and job searches in China. *American Sociological Review*, *62*, 366–385.

Blattman, C., & Ralston, L. (2015). *Generating employment in poor and fragile states: Evidence from labor market and entrepreneurship programs* (Unpublished manuscript). Columbia University. Retrieved from https://www.povertyactionlab. org/sites/default/files/publications/Blattman_Employment%20Lit%20Review.pdf.

Bloom, D. E., Canning, D., Fink, G., & Finlay, J. E. (2009). Fertility, female labor force participation, and the demographic dividend. *Journal of Economic Growth*, *14*, 79–101.

Boutin, D. (2014). De l'ecole à l'emploi: La longue marche de la jeunesse urbaine malienne. *Formation Emploi*, *124*, 23–43.

Bowers, N. 1998. Getting started, settling in: The transition from education to the labour market. In OECD (Ed.). *1998 Employment outlook* (Chap. 3, pp. 81–122). Paris: Author.

Bradley, S., & Nguyen, A. N. (2004). The school-to-work transition. In G. Johnes & J. Johnes (Eds.), *International handbook on the economics of education* (Chap. 14, pp. 484–519). Cheltenham:: Edward Elgar.

Bramoulle, Y., & Saint-Paul, G. (2010). Social networks and labor market transitions. *Labour Economics*, *17*, 188–195.

Cáceres-Delpiano, J. (2012). Can we still learn something from the relationship between fertility and mother's employment? Evidence from developing countries. *Demography*, *49*, 151–174.

Calves, A. E., Kobiane, J. F., & N'Bouke, A. (2013). Privatization of education and labor force inequality in urban francophone Africa: The transition from school to work in ouagadougou. *World Development*, *47*, 136–148.

Calves, A. E., & Schoumaker, B. (2004). Deteriorating economic context and changing patterns of youth employment in Urban Burkina Faso: 1980-2000. *World Development*, *32*, 1341–1354.

Calvo-Armengol, A. (2004). Job contact networks. *Journal of Economic Theory*, *115*, 191–206.

Calvo-Armengol, A., & Jackson, M. O. (2004). The effects of social networks on employment and inequality. *The American Economic Review*, *94*, 426–454.

Calvo-Armengol, A., & Zenou, Y. (2005). Job matching, social network and word-of- mouth communication. *Journal of Urban Economics*, *57*, 500–522.

Campbell, D. (2013). The labour market in developing countries. In S. Cazes & S. Verick (Eds.), *Perspectives on labour economics for development*. Geneva: ILO.

Card, D., Kluve, J., & Weber, A. (2010). Active labour market policy evaluations: A meta-analysis. *The Economic Journal*, *120*, F452–F477.

Chuang, H. L. (1999). Estimating the determinants of the unemployment duration for college graduates in Taiwan. *Applied Economics Letters*, *6*, 677–681.

Cling, J. P., Gubert, F., Nordman, C., & Robilliard, A. S. (2007). *Youth and labour markets in Africa: A critical review of literature* (AFD Working Paper no. 49). Paris: Agence Française de Développement.

Coles, M. G., & Smith, E. (1998). Marketplaces and matching. *International Economic Review*, *39*, 239–254.

Contreras, D., Zapata, D., Ochoa, M., & Kruger, D. I. (2007). *The role of social networks in the economic opportunities of Bolivian women* (IADB Latin American Research Network Working Paper #R-540). Washington, DC: IADB.

Cox, D. R. (1972). Regression models and life-tables. *Journal of the Royal Statistical Society. Series B (Methodological)*, *34*, 187–220.

Cunningham, W., & Salvagno, J. B. (2011). *Youth employment transitions in Latin America* (World Bank Policy Research Working Paper 5521). Washington, DC: The World Bank.

Deguilhem, T., Berrou, J. P., & Combarnous, F. (2017). *Using your ties to get a worse job? The differential effects of social networks on quality of employment: Evidence from Colombia* (Unpublished manuscript). University of Bordeaux. Retrieved from https://mpra.ub.uni-muenchen.de/78628/1/MPRA_paper_78628.pdf.

Dickens, W. T., & Lang, K. (1995). An analysis of the nature of unemployment in Sri Lanka. *The Journal of Development Studies*, *31*, 620–636.

Elder, S. (2014). *Labour market transitions of young women and men in Asia and the Pacific*. (Work4Youth Publication Series No. 19). Geneva: ILO.

Elder, S., Novkovska, B., & Krsteva, V. (2013). *Labour market transitions of young women and men in the former Yugoslav Republic of Macedonia* (Work4Youth Publication Series No. 1). Geneva: ILO.

Fafchamps, M., & Minten, B. (2002). Returns to social network capital among traders. *Oxford Economic Papers*, *54*, 173–206.

Fallon, P. R. (1983). Education and the duration of job search and unemployment in urban India: An empirical analysis based on a survey of Delhi jobseekers. *Journal of Development Economics*, *12*, 327–340.

Fares, J., Guarcello, L., Manacorda, M., Rosati, F. C., Lyon, S., & Valdivia, C. A. (2005). *School-to-work transitions in sub-Saharan Africa: An overview* (UCW Project Working Paper Series 43933). Geneva: Understanding Children's Work.

Fergusson, L. (2013). The political economy of rural property rights and the persistence of the dual economy. *Journal of Development Economics*, *103*, 167–181.

Galiani, S., & Hopenhayn, H. A. (2003). Duration and risk of unemployment in Argentina. *Journal of Development Economics*, *71*, 199–212.

Garcia, M., & Fares, J. (Eds.). (2008). *Youth in Africa's labor market*. Washington, DC: World Bank Publications.

Gicheva, D. (2012). Worker mobility, employer-provided general training, and the choice of graduate education. *Labour Economics*, *19*, 232–240.

Goldin, C. (1994). *The U-shaped female labor force function in economic development and economic history* (NBER Working Paper No. W4707). Cambrdige, MA: National Bureau of Economic Research.

Grimm, M., & Paffhausen, A. L. (2015). Do interventions targeted at microentrepreneurs and small and medium-sized firms create jobs? A systematic review of the evidence for low and middle income countries. *Labour Economics*, *32*, 67–85.

Groh, M., McKenzie, D., Shammout, N., & Vishwanath, T. (2015). Testing the importance of search frictions and matching through a randomized experiment in Jordan. *IZA Journal of Labor Economics*, *4*(1), 1–20.

Groh, M., McKenzie, D., & Vishwanath, T. (2015). Reducing information asymmetries in the youth labor market of Jordan with psychometrics and skill based tests. *The World Bank Economic Review*, *29*(Supplement 1), S106–S117.

Günther, I., & Launov, A. (2012). Informal employment in developing countries: Opportunity or last resort? *Journal of Development Economics*, *97*, 88–98.

Hanushek, E. A., & Woessmann, L. (2008). The role of cognitive skills in economic development. *Journal of Economic Literature*, *46*, 607–668.

Heckman, J. J., & Hotz, V. J. (1986). An investigation of the labor market earnings of panamanian males evaluating the sources of inequality. *Journal of Human Resources*, *21*, 507–542.

Ibarraran, P., & Rosas Shady, D. (2009). Evaluating the impact of job training programmes in Latin America: Evidence from IDB funded operations. *Journal of Development Effectiveness*, *1*, 195–216.

Independent Evaluation Group. (2012). *Youth employment programs: An evaluation of World Bank and international finance corporation support*. Washington, DC: The World Bank.

Jackson, M. O. (2011). An overview of social networks and economic applications. In J. Benhabib, A. Bisin, & M. Jackson (Eds.), *The Handbook of social economics* (Chapter 12, Vol. 1, pp. 511–585). Amsterdam: North Holland.

Jaunky, V. C., & Khadaroo, A. J. (2007). The school-to-work transition for university graduates in Mauritius: A duration model approach. *The Empirical Economics Letters*, *7*, 25–36.

Jensen, P., & Westergard-Nielsen, N. C. (1987). A search model applied to the transition from education to work. *The Review of Economic Studies*, *54*, 461–472.

Jensen, R. (2012). Do labor market opportunities affect young women's work and family decisions? Experimental evidence from India. *The Quarterly Journal of Economics*, *127*, 753–792.

Kaplan, E. L., & Meier, P. (1958). Nonparametric estimation from incomplete observations. *Journal of the American, Statistical Association*, *53*, 457–481.

Kaufman, C. E., Wet, T., & Stadler, J. (2001). Adolescent pregnancy and parenthood in South Africa. *Studies in Family Planning*, *32*, 147–160.

Keith, K., & McWilliams, A. (1999). The returns to mobility and job search by gender. *ILR Review*, *52*, 460–477.

Khan, T., & Yousaf, F. (2013). Unemployment duration of first time job seekers: A case study of Bahawalpur. *Asian Journal of Economic Modelling*, *1*, 8–19.

Kingdon, G. G., & Knight, J. (2004). Unemployment in South Africa: The nature of the beast. *World Development*, *32*, 391–408.

Kluve, J., Puerto, S., Robalino, D. A., Romero, J. M., Rother, F., Stöterau, J., … Witte, M. (2016). *Do youth employment programs improve labor market outcomes? A systematic review* (IZA Discussion Paper No. 10263). Bonn: IZA.

Knight, J., & Yueh, L. (2008). The role of social capital in the labour market in China. *Economics of Transition*, *16*(3), 389–414.

Kondylis, F., & Manacorda, M. (2008). Youth in the labor market and the transition from school to work in Tanzania. In M. H. Garcia & J. Fares (Eds.), *Youth in Africa's labor market* (pp. 225). Washington, DC: The World Bank.

Kong, J., & Jiang, F. (2011). Factors affecting job opportunities for university graduates in China—The evidence from university graduates in Beijing. *Research in World Economy*, *2*(1), 24–37.

Korenman, S., & Neumark, D. (1997). *Cohort crowding and youth labor markets: A cross-national analysis* (NBER Research Working Paper No. 6031). Cambridge, MA: National Bureau of Economic Research.

Krishnan, P. (1996). Family background, education and employment in Urban Ethiopia. *Oxford Bulletin of Economics and Statistics*, *58*, 167–183.

Kuchibhotla, M. (2013). *Three essays in development economics* (Doctoral dissertation). Iowa State University, Ames (IA).

Kuzubas, T. U., & Szabo, A. (2015). *Job Search Through Weak and Strong Ties: Theory and Evidence from Indonesia* (Unpublished manuscript). Bogazici University. Retrieved from http://www.uh.edu/~aszabo2/paper_2017.pdf.

Kyloh, R. (2004). Tackling the dilemma of disadvantaged youth: Priorities and policies for international action. *Workers Education*, *136*, 1–21.

Lam, D. (2007). Economics of youth demography in developing countries. In G. Kochendorfer-Lucius & B. Pleskovic (Eds.), *Development and the next generation* (pp. 27–38). Washington, DC: World Bank Publications.

Lassassi, M., & Muller, C. (2013). *Reseaux sociaux et insertion sur le marché du travail en Algerie* (ERF Working Paper Series No. 756). Giza: Economic Research Forum.

Levinsohn, J., & Pugatch, T. (2010). *The role of reservation wages in youth unemployment in Cape Town, South Africa: A structural approach* (Unpublished manuscript). University of Michigan. Retrieved from http://conference.iza.org/confer ence_files/SPEAC2010/pugatch_t6008.pdf.

Libanova, E., Cymbal, A., Lisogor, L., Marchenko, I., & Iarosh, O. (2014). *Labour market transitions of young women and men in Ukraine* (Work4Youth Publication Series No. 11). Geneva: ILO.

Lustig, N., & McLeod, D. (1996). Minimum wages and poverty in developing countries: Some empirical evidence. In S. Edwards & N. Lustig (Eds.), *Labor markets in Latin America* (pp. 62–103). Washington, DC: Brookings Institution Press.

Maitra, P., & Mani, S. (2017). Learning and earning: Evidence from a randomized evaluation in India. *Labour Economics*, *45*, 116–130.

Maloney, W., & Mendez, J. (2004). Measuring the impact of minimum wages. Evidence from Latin America. In J. J. Heckman & C. Pagés (Eds.), *Law and employment: Lessons from Latin America and the Caribbean* (pp. 109–130). Chicago, IL: University of Chicago Press.

Mammen, K., & Paxson, C. (2000). Women's work and economic development. *Journal of Economic Perspectives*, *14*(4), 141–164.

Manacorda, M., Rosati, F. C., Ranzani, M., & Dachille, G. (2017). Pathways from school to work in the developing world. *IZA Journal of Labor & Development*, *6*(1), 1–40.

Mano, Y., Yamano, T., Suzuki, A., & Matsumoto, T. (2011). Local and personal networks in employment and the development of labor markets: Evidence from the cut flower industry in Ethiopia. *World Development*, *39*, 1760–1770.

Margolis, D. N. (2014). Introducing a statutory minimum wage in middle and low income countries. *IZA World of Labor*, *52*, 1–10.

Marouani, M. A., & Nilsson, B. (2016). The labor market effects of skill-biased technological change in Malaysia. *Economic Modelling*, *57*, 55–75.

Matsumoto, M., & Elder, S. (2010). *Characterizing the school-to-work transitions of young men and women: Evidence from the ILO school-to-work transition surveys* (Employment Working Paper No. 51). Geneva: ILO.

McCormick, B. (1990). A theory of signalling during job search, employment efficiency, and "stigmatised" jobs. *The Review of Economic Studies*, *57*, 299–313.

McKenzie, D., Assaf, N., & Cusolito, A. P. (2016). The demand for, and impact of, youth internships: Evidence from a randomized experiment in Yemen. *IZA Journal of Labor & Development*, *5*(1), 1–15.

McKenzie, D., & Woodruff, C. (2014). What are we learning from business training and entrepreneurship evaluations around the developing world? *The World Bank Research Observer*, *29*, 48–82.

Mel, S., Elder, S., & Vansteenkiste, M. (2013). *Labour market transitions of young women and men in Liberia* (Work4Youth Publication Series No. 3). Geneva: ILO.

Montgomery, J. D. (1991a). Equilibrium wage dispersion and interindustry wage differentials. *The Quarterly Journal of Economics*, *106*, 163–179.

Montgomery, J. D. (1991b). Social networks and labor-market outcomes: Toward an economic analysis. *The American Economic Review*, *81*, 1408–1418.

Mortensen, D. T., & Pissarides, C. A. (1999). New developments in models of search in the labor market. In O. Ashenfelter & D. Card (Eds.), *Handbook of labor economics* (Chap. 39, Vol. 3, pp. 2567–2627). Amsterdam: North Holland.

Mussa, R. (2013). *Labour market transitions of young women and men in Malawi* (Work4Youth Publication Series No. 4). Geneva: ILO.

Nattrass, N., & Walker, R. (2005). Unemployment and reservation wages in working-class Cape Town. *South African Journal of Economics*, *73*, 498–509.

Neumark, D., & Wascher, W. (1995). Minimum-wage effects on school and work transitions of teenagers. *The American Economic Review*, *85*, 244–249.

Newhouse, D., & Suryadarma, D. (2011). The value of vocational education: High school type and labor market outcomes in Indonesia. *The World Bank Economic Review*, *25*, 296–322.

Nordman, C. J., & Pasquier-Doumer, L. (2015). Transitions in a West African labour market: The role of family networks. *Journal of Behavioral and Experimental Economics*, *54*, 74–85.

Nyarko, C. O., Baah-Boateng, W., & Nketiah-Amponsah, E. (2014). Determinants of job search intensity in Ghana. *Margin: the Journal of Applied Economic Research*, *8*, 193–211.

O'Higgins, N. (2003). *Trends in the youth labour market in developing and transition countries* (World Bank Social Protection Discussion Paper Series 0321). Washington, DC: The World Bank.

O'Higgins, N. (2008). *Guide to the School-to-Work Transition* (Unpublished manuscript). Università di Salerno. Retrieved from http://www.aiel.it/Old/bacheca/BRESCIA/papers/ohiggins.pdf.

Pasquier-Doumer, L. (2013). Intergenerational transmission of self-employed status in the informal sector: A constrained choice or better income prospects? Evidence from seven West African countries. *Journal of African Economies*, *22*, 73–111.

Pugatch, T. (2014). Safety valve or sinkhole? Vocational schooling in South Africa. *IZA Journal of Labor & Development*, *3*(1), 1–31.

Pugatch, T. (2017). Bumpy Rides: School to Work Transitions in South Africa. *Labour*. Advance online publication. doi:10.1111/labr.12114

Quintini, G., & Martin, S. (2014). *Same same but different: School-to-work transitions in emerging and advanced economies* (OECD Social, Employment and Migration Working Papers No. 154). Paris: OECD.

Radchenko, N. (2017). Informal employment in developing economies: Multiple heterogeneity. *The Journal of Development Studies*, 53, 495–513.

Rankin, N. A., & Roberts, G. (2011). Youth unemployment, firm size and reservation wages in South Africa. *South African Journal of Economics*, 79, 128–145.

Ryan, P. (2001). The school-to-work transition: A cross-national perspective. *Journal of Economic Literature*, 39, 34–92.

Ryan, P. (2003). The school-to-work transition: Problems and indicators. In A. N. Perret-Clermont, C. Pontecorvo, L. Resnick, T. Zittoun, & B. Burge (Eds.), *Youth, learning and society*. Cambridge: Cambridge University Press.

Satchi, M., & Temple, J. (2009). Labor markets and productivity in developing countries. *Review of Economic Dynamics*, 12, 183–204.

Sayre, E., & Daoud, Y. (2010). *Labor market regulations and unemployment duration in Palestine* (ERF Working Paper Series No. 579). Giza: Economic Research Forum.

Schady, N., & Sanchez-Paramo, C. (2003). *Off and running? Technology, trade, and the rising demand for skilled workers in Latin America* (World Bank Policy Research Working Paper Series No. 3015). Washington, DC: The World Bank.

Serneels, P. (2007). The nature of unemployment among young men in Urban Ethiopia. *Review of Development Economics*, 11, 170–186.

Serriere, N. (2014). *Labour market transitions of young women and men in Nepal* (Work4Youth Publication Series No. 21). Geneva: ILO.

Singerman, D. (2007). *The economic imperatives of marriage: Emerging practices and identities among youth in the Middle East* (Middle East Youth Initiative Working Paper No. 6). Washington, DC: Brookings.

Tansel, A., & Taşçı, H. M. (2010). Hazard analysis of unemployment duration by gender in a developing country: The case of Turkey. *Labour*, 24, 501–530.

Tasci, H. M. (2008). Search and determinants of job search intensity in Turkey. *METU Studies in Development*, 35, 399–425.

Toufique, K. A. (2014). *Labour market transitions of young women and men in Bangladesh* (Work4Youth Publication Series No. 13). Geneva: ILO.

Tripney, J. S., & Hombrados, J. G. (2013). Technical and vocational education and training (TVET) for young people in low-and middle-income countries: A systematic review and meta-analysis. *Empirical Research in Vocational Education and Training*, 5(3), 1–14.

Tunali, I., & Assaad, R. (1992). Market structure and spells of employment and unemployment: Evidence from the construction sector in Egypt. *Journal of Applied Econometrics*, 7, 339–367.

Ulyssea, G. (2010). Regulation of entry, labor market institutions and the informal sector. *Journal of Development Economics*, 91, 87–99.

Urzua, S., & Puentes, E. (2010). *La evidencia del impacto de los programas de capacitacion en el desempeno en el mercado laboral* (Notas Tecnicas IDB-TN-268). Washington, DC: IADB.

Van den Berg, G. J. (1990). Nonstationarity in job search theory. *The Review of Economic Studies*, 57, 255–277.

Van den Berg, G. J. (2001). Duration models: Specification, identification and multiple durations. In J. J. Heckman & E. Leamer (Eds.), *Handbook of econometrics* (Chapter 55, Vol. 5, pp. 3381–3460). Amsterdam: North Holland.

Wahba, J., & Zenou, Y. (2005). Density, social networks and job search methods: Theory and application to Egypt. *Journal of Development Economics*, 78, 443–473.

Wolpin, K. I. (1987). Estimating a structural search model: The transition from school to work. *Econometrica*, 55, 801–817.

Zenou, Y. (2008). Job search and mobility in developing countries. Theory and policy implications. *Journal of Development Economics*, 86, 336–355.