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Transitional Labour Market Point of View**

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ABSTRACT

Youth Unemployment in India: From a European and Transitional Labour Market Point of View¹

This essay first sketches some descriptive material, setting the stage and demonstrating the highly differentiated statistical landscape of various measures for youth unemployment in Europe compared to India and in particular to Germany. Second, it provides a simple but powerful model for the main causes of youth unemployment from which general policy strategies can be derived and illustrated by good practice examples from Europe, in particular Germany. Third, because a large part of the problem is structural, requiring long-term solutions, possible immediate measures to mitigate the severe long-term scar effects for the unemployed youth are briefly reviewed. Large differences of unemployment performance among European countries reveal, for instance, the importance of automatic stabilisers like unemployment insurance in order to counteract the tendency of market economies to put most of the burden of adjustment in times of recession on youth. The fourth and main part, however, is devoted to possible lessons for India from Europe, in particular from countries with low youth unemployment like Austria, Denmark, Germany and the Netherlands. The theoretical framework for these lessons is taken from the concept of Transitional Labour Markets (TLM) which emphasises dual learning systems as an institutional device both for fair intergenerational risk sharing as well as for smooth transitions from school to work.

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Keywords: youth unemployment, education, vocational training, labour market policy, transitional labour markets, risk sharing

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Youth Unemployment in India: From a European and Transitional Labour Market Point of View

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Introduction

Youth unemployment seems to be quite moderate in many Asian countries by conventional statistics, particularly in South Korea, but also in India. Germany, with a current youth unemployment rate of 7.7 percent, is one of the very few European countries outperforming India. Certainly, these figures are hardly comparable, not least due to the large informal sector in India, and agriculture plays only a minor role in most European countries. Nevertheless, the Indian case is in at least three other respects different from Europe, in particular from Germany. From the perspective of intergenerational risk sharing, India's youth unemployment rate is three to four times higher than the unemployment rate of adults in their core age; in Germany, this figure is below two. In addition, educated youth in India face a higher risk of unemployment than the low educated, whereas in Europe it is the other way round. A further peculiarity can be seen when unemployment is measured by the number of youth not in employment, education or training (NEET) as a percent of the total youth population. India's NEET rate, approximately 28 percent, is at the top of the G20 countries, whereas the German NEET rate corresponds to its unemployment rate.

This essay intends to shed some light on this conundrum: It first sketches some descriptive material, setting the stage and demonstrating the highly differentiated statistical landscape of various measures for youth unemployment in Europe compared to India and in particular to Germany. Second, it provides a simple but powerful model for the main causes of youth unemployment and for related general policy strategies illustrated by good practice examples from Europe, in particular Germany. Third, because a large part of the problem is structural, requiring long-term solutions, possible immediate measures to mitigate the severe long-term scar effects for unemployed youth are also briefly reviewed.

Large differences of unemployment performance among European countries, for instance, reveal the importance of automatic stabilisers like unemployment insurance in order to counteract the tendency of market economies to put most of the burden of adjustment in times of recession on youth.

The main part of this essay, however, is devoted to possible lessons for India from Europe, in particular from countries with low youth unemployment like Austria, Denmark, Germany and the Netherlands. The theoretical framework for these lessons is taken from the concept of Transitional Labour Markets (TLM) which emphasises dual education and vocational training systems as an institutional device both for fairer intergenerational risk sharing as well as for a smoother transition from school to work.

1. Setting the stage: Youth unemployment in Europe, Germany and India

Youth unemployment seems to be quite moderate in India: Conventionally measured as a percentage of the corresponding ‘active’ labour force, youth unemployment was only about 11 percent in 2011/12 compared to about 23 percent on average in the European Member States (EU-28) at the time of writing (October 2014). Germany, with a current youth unemployment rate below 8 percent, is one of the very few European countries outperforming India in this respect (Table 1, line 1).²

The Netherlands, Austria and Switzerland are the other European countries with moderate youth unemployment rates. On the other hand, there are EU member states with incredibly high levels of youth unemployment, lifting the overall average level in Europe: In November 2013, the Mediterranean countries Greece and Spain had levels of around 55 percent, and Portugal, Italy and Croatia had levels between 35 and 50 percent. The German case, however, has not always been so exceptional particularly if we look back prior to the recession. Its current ‘comfortable’ level of youth unemployment reflects to some extent the recent ‘German job miracle’ (Biavaschi et al. 2012, Eichhorst 2012, Rinne and Zimmermann 2013), and to some extent various flexibility buffers that helped

² For more detailed information see Table 1A and Figures 1A-6A in Appendix.

overcome the last recession with only a minor impact on overall unemployment and to which we shall come back later in this paper. Nevertheless, compared to most other European countries, Germany seems to have youth unemployment largely under control.

Table 1: Youth unemployment indicators: India compared to Europe (EU-27/28) and Germany, in percent

	INDIA	EUROPE	GERMANY
Youth Unemployment Rate (Unemployed youth 15–24 as percent of active youth labour force)	≈ 11	23.2	7.7
Youth NEET Rate (Youth 15–24 not in employment, education or training as percent of youth population)	≈ 28	13.2	7.7
Youth U Rate Women/Men (for India: urban areas)	≈ 1.8	< 1.0	< 0.9
Youth U Rate/Adult U Rate (Youth U Rate 15–24 divided by Adult U Rate 25-74)	≈ 3.3	2.5	1.6
Youth U Rate High Educated (for India: Men Urban) (for India: Female Urban)	≈ 16 ≈ 23	18.8	3.9
Youth U Rate Low Educated (for India: Men Urban) (for India: Female Urban)	≈ 3 ≈ 2	31.0	11.4
Youth Unemployment Ratio (Unemployed Youth 15–24 as percent of youth population aged 15–24)	n.a.	9.8	4.0

Source: NSSO (2014:192), OECD/ILO (2014:6), OECD (2014), own calculations. Data for India refer to the years 2011/12, except NEET (2009/10); data for Europe and Germany represent most recent available figures (2013/14) or 2012 (NEET).

However, the Indian case is in at least four respects different from Europe and Germany. First, the conventional measure of youth unemployment has serious flaws which lead to a lot of confusion. First of all, it does not consider that an increasing number of young people enter and stay in education (secondary or full-time vocational schools or universities); in other words, they are not available to the labour market and do not belong to the “active labour force”. Moreover, the conventional measure of youth unemployment does not consider that many young people become discouraged and withdraw from the

‘active’ labour force.³ Youth unemployment measured in *NEET* and related to the total youth population takes a broader spectrum of jobless people into account, relating it to the total youth population: *Youth neither in employment nor in education or training* as a percentage of the *total youth population* is much higher in India by an approximate measure delivered by OECD/ILO (2014); it is in the range of 28 percent compared to 13.2 percent in Europe and only 7.7 percent in Germany (Table 1, line 2).

Second, *young women* in India face a higher risk of unemployment than men, in particular in urban areas, whereas in most European countries young women have – in contrast to former times – lower unemployment rates than men, particularly in Germany (Table 1, line 3).

Third, from the perspective of *intergenerational risk sharing* India’s youth unemployment rate is about three to four times higher than the unemployment rate of adults; in Europe, this figure is on average 2.5, and in Germany only 1.6 (Table 1, line 4).

The fourth spectacular difference is the fact that *educated youth* in India face a much higher risk of unemployment than the low educated, whereas in Europe, and in particular in Germany it is the other way round. The unemployment rate of high-educated (“graduated & above”) young Indian women in urban areas is 23 percent in contrast to only 2 percent of low-educated (“literate and up to primary level”) young women (Table 1, lines 5 and 6). In Europe, the unemployment risk of highly educated youth is on average only about half of the unemployment risk of low-skilled, and in Germany it is even less than a third (3.9 percent vs. 11.4 percent). This educational gap still holds true if we look at the whole youth cohort aged 15 to 29 in terms of NEET rates in OECD countries: The only countries where high-educated youth face a considerable higher NEET rate than low-educated youth are Iceland, Japan, Korea and Greece (see Figure 3A, Appendix).

³ The European media, for instance, often mistakenly report that more than half of the Greek or Spanish youth (over 50% or one of two) are unemployed. This is correct related to the baseline of the “active youth labour force” (the employed and unemployed youth); but it is wrong measured in relation to the whole youth population. In 2013, the youth unemployment ratio (unemployed youth as a percentage of the population aged 15–24) was “only” 16.6% in Greece (i.e. one of six), and “only” 9.8% in EU-28 or 4% in Germany (Table 1, line 7).

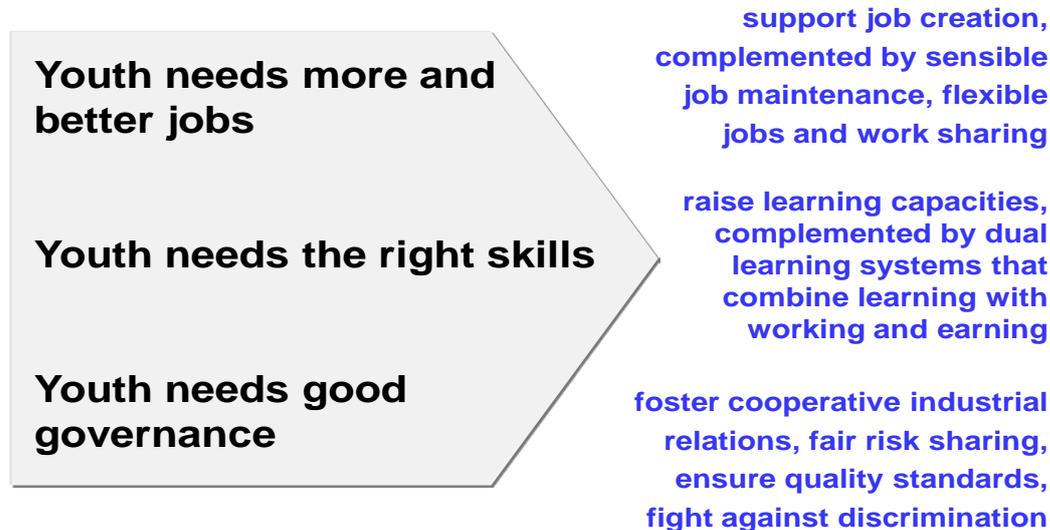
To sum up: Despite a relatively moderate level of youth unemployment by conventional measures, like most European countries, India has a serious youth unemployment problem and this problem seems to be particularly related to those youth with an academic education, whereas Germany, too, obviously has a youth unemployment problem which, however, is mainly related to a low-educational status. Furthermore, like many other European countries, India faces a paradoxical situation where, on the one hand, youth are looking for jobs and on the other hand industry is suffering from the lack of skilled workers, a skill mismatch that makes youth unemployable (Sanghi and Srija 2014).

In the following, I will shed some light on these questions: What are the main causes of youth unemployment and which policy strategies in general could contribute to solving this problem? What kind of policy measures could immediately be taken to avoid long-term scar effects for unemployed youth? What lessons (and which not) might India learn from Europe, in particular from Germany? In the outlook I come back to the puzzle of highly and academically inflated youth unemployment which seems to be quite common in Asia, in particular in South Korea, but also to some extent in India, by referring to a possible hidden cause: A strong insurance motive might explain the low status of middle-level vocational training and the overall striving for an academic degree.

2. Main causes of youth unemployment and possible policy strategies

The issue of youth unemployment is certainly complex, but – as Nobel Prize winner Robert Solow once said – “fine distinctions make bad policy”. So, a simple but powerful causal framework with corresponding policy strategies might look like the following Figure (Figure 1).

Figure 1: *Youth Unemployment: A Simple Causal Framework and Possible Policy Strategies*



Youth unemployment has three main causes, and all three may be interconnected:

- First, it is the lack of jobs due to economic slumps, low public or private investment or low international competitiveness. So, first of all, youth needs more and better jobs. The main strategies related to this challenge are the public support of job creation at various levels, of sensible job maintenance, flexible jobs and work sharing.
- The second cause might be the mismatch between skills demanded by existing jobs and skills provided by the educational system. So, youth need better skills. The main strategies related to this challenge are two: Because one never knows exactly what specific skills are needed in the future, the first strategy is to raise learning capacities, in particular through general and higher education. But (young) people also have to earn a living; so to some extent these skills have to be related to the labour market, for instance, through dual education systems that combine learning with working and earning.

- The third cause might be labour market rigidities that prevent or slow down the necessary adjustment to changing technologies, to changing needs or preferences related to goods and services, or to changing terms of trade due to internationalisation or globalisation. So, youth need good governance. The main strategies related to this challenge are cooperative industrial relations that allow flexible wages and moderate employment protection, fair risk sharing through reasonable social protection, and non-discriminated access to all jobs, and the assurance of high-quality standards of working conditions.

In the following I can only briefly sketch the main points related to these strategies based on a quite selective review of the literature; the discussion of corresponding policy interventions also touches only superficially on the main strategic lines without going into a deeper debate.

2.1 Youth need more and better jobs

What are the reasons for the lack of jobs for young people? These reasons may be cyclical or structural. First, markets are strong in innovation and competitiveness, but they also tend to speculative investment instead of real investments. The last recession in Europe provides a good example: Those countries that experienced the largest increase in youth unemployment⁴ had sharp declines in house prices during the Great Recession, suggesting a direct link to the youth labour market because a disproportionate number of the young men working in construction who particularly suffered from the effects of *property price bubbles* (Bell and Blanchflower 2011). Second, recessions clearly disadvantage youth through the “last in first out” rule; youth are therefore the most vulnerable group in economic slumps when demand collapses: They are the first to be dismissed and companies close their doors to recruitments first for the young without work experience (e.g. Kawaguchi and Murao 2012). Third, markets tend towards excessive wage volatilities and inequalities leading to in-work poverty; fourth, they also tend towards investments in the most profitable sectors neglecting public goods and infrastructure.

⁴ For example: Estonia (+20.7 percentage points), Ireland (+18.4), Latvia (+23.2), Lithuania (+26.1) and Spain (+21.6) from the beginning of 2008 to the third quarter of 2010.

These four main reasons for the lack of jobs may also be taken to structure the following brief sketch of promising policy strategies.

(1) The first strategy relates to the cyclical lack of jobs, which was aggravated during the last recession through the fiscal and financial crisis. A recent study by the IMF (2014) found that cyclical factors explain around 50 percent of the changes in European youth unemployment rates and even 70 percent of the increase in unemployment rates in stressed Euro area countries. The sensitivity of unemployment rates to the business cycle (*Okun's coefficient*), however, varies across countries. Estimates range from not significantly different to zero (e.g. Austria) to -1.9 in Spain, i.e. a 1 percent decline in growth increases youth unemployment rates by almost 2 percentage points. Countries with the biggest increases in youth unemployment rates since the crisis tend to be those that are most affected by the business cycle (i.e., they have the highest Okun's coefficients); and in every country the estimated *Okun's coefficient is higher for youth than for adults*, on average almost three times as large.

What follows from this observation should be quite clear: Governments can help mitigate the detrimental impact of recessions on youth (*Okun's coefficient*) through deficit spending in the slump and savings in the boom. However, although such Keynesian instruments certainly have some value, they are limited due to well-known state failure: Politicians like to spend but not to save; short-term investments are often misplaced (recall, e.g., some spectacular building of bridges without connections in Japan), and good investments take time to develop their bite on unemployment.

A more sustainable policy strategy for governments is to bind themselves to the mast of the ship like Ulysses against the Sirens in Greek mythology, which means to resist tempting but dangerous policies and to build instead *automatic stabilisers* into the system: For instance, *unemployment insurance* which maintains effective demand during the crisis; *short-time work allowance* which prevents unemployment through risk sharing among workers, employers and the state during a crisis; *health insurance for all* independent of having or not having a job; *reliable basic pensions* independent from the individual work-life career which is often determined by pure luck. All these automatic

stabilisers maintain not only consumer demand in times of crisis but also their trust in the economic recovery. European research shows that countries with such automatic stabilisers perform best and have kept youth unemployment within reasonable limits (Dolls et al. 2011).

However, such automatic stabilisers cannot be established overnight; they need long-term investments. A more short-term possibility is to allocate resources for *special youth measures* in the framework of active labour market policy (ALMP) *in an anticyclical way*. The essential instruments of ALMP are matching services, training and (carefully targeted) subsidised employment. European research shows that – on average – increasing ALMP expenditure per unemployed worker by 1 percentage point of GDP per member of the labour force lowers the overall youth NEET risk by 0.15 percentage points (European Foundation 2012). Switzerland (with relatively low youth unemployment) is one of the few countries to have established an anticyclical expenditure rule for active labour market policy (Duell et al. 2010).

(2) Second, regarding structural reasons for the lack of jobs, the first thing governments should do is get the financial market under control. Sustainable growth is only possible if productivity gains are continuously channelled into innovation and investments instead of risky speculation.⁵ The respective proper policy strategy is to support sustainable competitiveness by setting the right *institutional framework conditions* for innovative private investment, e.g. through regulating the banking sector and through the deregulation of product market monopolies. Furthermore, targeted *industrial policy* helps to create new jobs, e.g. by fostering green technologies or information and communication technologies. If unemployment is regionally quite different – as is the case both in Europe and India – such incentives might be combined with a regional component. Since industrial investments are globally interdependent, some regional and international coordination of growth strategies is necessary.⁶

⁵ This complex issue would require more attention but goes beyond my expertise and the range of this paper; see among many others Hellwig and Admati (2013).

⁶ This holds especially true for the still nationally fragmented Eurozone; see for the need of creating an “adequate fiscal capacity” in the Eurozone, e.g. Alberto Majocchi (2013).

Examples of what happens if governments are not investing enough in competitive technologies can be observed in some European countries like Spain and Greece, where youth unemployment now exceeds (conventionally measured) 50 percent. France with a youth unemployment rate of 25 percent is another illustrative case. Its lack of competitiveness is, for instance, reflected in the drastic decline of jobs in industrial manufacturing. In 2000 France still had 20 percent of jobs in manufacturing which fell to only 12.5 percent in 2011; in Germany, the share of manufacturing jobs even increased to 26.2 percent during this time.

Other framework conditions are a broadly skilled, middle-level workforce of craftsmen and engineers maintained through an extensive apprenticeship system (see 2.2 below). The European case may also suggest that the focus of industrial policy should be directed towards small- and medium-sized companies, in Germany called the “Mittelstand”. This device already seems to have been acknowledged in India. In its annual budget report, the Indian Finance Ministry says that “too many small firms stay small and unproductive and are not allowed to die gracefully”. According to the World Bank, insolvency processes take on average 7.9 years and cost 8.6 percent of the estate value. The real challenge, however, is to be able to not just start up, but to continue to grow, thereby becoming a source of sustainable jobs and value creation. Moreover, too many large profitable firms prefer to rely on temporary contract labour than on training workers for longer-term jobs (Ministry of Finance 2013: 36–8).

Certainly, the German model cannot be copied by India, and it should not be copied, not least due to its own flaws (see below). It is therefore hard for a European outsider to give specific advice in this respect. Only an emphasis on general principles might make sense. One of these principles, the European case seems to teach, is that a healthy economy needs a hard core of competitive industrial manufacturing.⁷ Of course, the decline of employment in industrial manufacturing due to its productivity dynamics can be compensated to some extent by intelligent services. But these service jobs should not be restricted to luxury articles like the French brand names Louis Vuitton, Hermès and Yves

⁷ In sharp contrast to China in the last 20 years, growth in India was not driven by manufacturing but by services, however mainly by services with low job intensity (Drèze and Sen 2013: 31).

Saint-Laurent. A competitive service industry must be related to mass markets like financial or insurance services, information and communication technologies, and education or health services. An increasing part of those services provide essential inputs for a modern industrial manufacturing. Another general principle is the slow transformation of the (huge) Indian informal sector into a formal sector through intelligent institutional devices.⁸ One step in this direction would be to establish basic income guarantees for workers hit by insolvencies, a device that would allow unproductive firms to die ‘gracefully’ without causing high social costs.

(3) A third important framework condition for job creation is *wage moderation*. Some European countries with high and rising youth unemployment (in particular France, Italy, Greece and Ireland) had previously endured unit wage costs exceeding productivity growth or high minimum wages that made employers reluctant to hire youth. Of course, wages should not fall below a decent minimum standard, which might be a reason for policy intervention in favour of a minimum income guarantee. And despite moderate wages it might still be difficult for some SME to shoulder the wage costs so that carefully targeted wage subsidies, in particular for young people, might make sense (see 3.5 below). Germany can only partly serve as a model here: First, related to young people the German case is particular due to its apprenticeship system which ensures low-entry wages; second, Germany’s moderate wage policy goes back to its tried and tested cooperative relationship between trade unions and employers’ associations, a social partnership protected and supported by the government; both structural features cannot easily be copied (see 2.3 below).

(4) The fourth policy strategy is public job creation particularly in areas where the market usually does not invest due to lack of profitability which goes back to the non-rival or non-exclusive character of some goods and services.⁹ Although a clear-cut distinction

⁸ The budget report of the Ministry of Finance (2013: 47) acknowledges this principle: “India’s high rate of informality is a drag on its economic development and a source of considerable inequity. Productivity differences between workers in the formal and informal sectors are large [...], suggesting that moving a worker from an informal to a formal firm would bring about sizeable gains from improved allocation of resources.”

⁹ For a good theoretical discussion of public vs. private goods see Adams and McCormick (1993).

between public and private goods or services is not possible, chronic underinvestment in public goods like traffic infrastructure, education, health and care services has been proven by many studies to be chronic. Furthermore, as jobs in agriculture and industrial manufacturing are in secular decline, service jobs are the most likely future entry into the life or work for young people, independent of whether they are created by the market or the state. For India, Drèze and Sen (2013: 33) deplore in particular the lack of progress in public services as a huge barrier to improving the quality of life.

So, there is a wide range of possible productive policy interventions, not least – and that sounds like a paradox – by strengthening market principles, for instance, opening access to markets for small- and medium-sized enterprises by fighting all kinds of monopolies or by ensuring that young people are allocated to jobs by their competence and not by their formal educational status (credentialism). This leads to the next policy strategy against youth unemployment.

2.2 *Youth need the right skills*

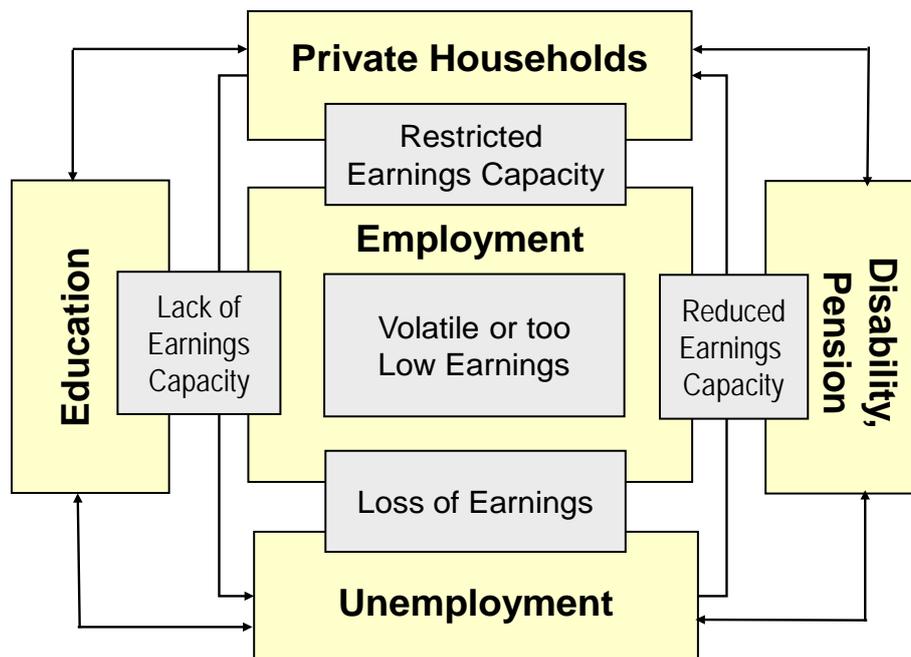
The main reasons for the lack of skill or for misguided skills are simple: Too low investment in ‘human capital’; asymmetric investment leading, for example, to ‘academic inflation’ and credentialism; job-specific investments in human capital that might be optimal in the short term but sub-optimal in the long term because they involve a high risk of unemployment due to the low transferability of skills; last but not least, even if investments in ‘human capital’ are sufficient, there might still be skill mismatch due to information asymmetries and lack of trust. The basic policy strategies are evident and are briefly recapitulated in the following.

(1) First, investments into ‘human *and* social capital’, especially into general skills, must be sufficient *and* inclusive, which means *all* young people, *independent* of social and economic background, must have access to schools that ensure a decent level of general education corresponding to the level of overall prosperity. In this respect, many countries even in Europe have deficits in human capital investment, in particular related to the inclusive aspect. Germany, for instance, is still a country in which the level of skills and

competencies depends much on the social and economic background (see PISA results). In other words, ‘*inherited educational poverty*’ with a corresponding higher risk of youth unemployment is still widespread, but it seems to be even more common in India than in Europe: Drèze and Sen (2013: 107–142) basically attribute India’s gap in social development to huge deficits in its education system.¹⁰

(2) The other three enumerated reasons for skill deficits are very much interrelated so that policy strategies have to deal with them correspondingly. My proposition is to enhance dual education systems according to the theory of transitional labour markets (TLM). The main gist of the TLM concept – Figure 2 – is to manage social risks over the life course through a system of employment insurance (Schmid 2013a).

Figure 2: *The Concept of Transitional Labour Markets (TLM): Managing Social Risks over the Life Course through a System of Employment Insurance*



¹⁰ India’s literacy rate for female youth in the age group of 15–24 years in 2010, for instance, was 74 percent compared to 99 percent in China (Drèze and Sen 2013: 113).

Managing the basic risk in the transition phase from school to work, i.e. the *lack of earnings capacities* or the risk of *un-employability*, means – first of all and as already mentioned – sufficient *inclusive* investments into general ‘human *and* social capital’, especially in general competences like reading and mathematical skills, communication skills, learning abilities and secondary virtues like endurance and ambiguity tolerance. The emphasis on human *and* social capital means to develop learning capacities not only to make young people fit for the market but also to enable young people to raise their voice and to shape the market. A high level of learning capacities is the best insurance against all other social risks that occur during the life course.

Second, managing the risk of un-employability over the life course cannot only consist of providing high levels of formal education. Education has to be related to market needs, i.e. to the skills required to produce the goods or to deliver the services consumers demand. The TLM concept suggests the following four elements to ensure employability: (1) the combination of learning, working, earning *and* identity building; (2) the combination of job-specific *and* general skills; (3) the reduction of information asymmetries by voice *and* trust, and (4) finally a fair risk sharing of costs and benefits related to the investment. This argument shall now be explained in more detail.

New jobs often require new skills.¹¹ But it would be a mistake to think that all these new skills require high tertiary education at universities: Time served in formal education is not enough; *what counts*, at the end of the day, *is what you can do with what you know* (Wagner 2012). This becomes all the more true with the internet revolution which within seconds allows everybody full access to all the passive knowledge that one may need through intelligent search machines like Google or Yahoo. Furthermore, it is a mistake that skills required in the formal education system are sufficient over the whole life course. With lifelong learning there is more at stake than a further extension of formal schooling, in particularly in view of the complementarities of the learning processes (Heckman 2008). And, finally, it is a mistake to believe that all young people enjoy working with abstract symbols possibly combined with a lot of red tape and endless

¹¹ For an overview regarding the European research landscape see Schmid (2012).

meetings. Many prefer practical work and work with which they can connect some meaning and which gives them a personal identity.

These are the main reasons why it makes sense to establish *dual learning systems* in particular – but not necessarily only – in the transition phase from school to work. Dual learning systems are the paradigm for the ideas of TLM,¹² which generally intend to build *institutional bridges* between labour market work and work or life outside the labour market to ensure a ‘*work-life balance*’. Part of the underlying theory is the insight that human *and* social capital are not only built in schools but also on the job. The flipside of this insight is that the longer people remain jobless the more their acquired human *and* social capital deteriorates. So, everything has to be done to avoid or to reduce unemployment not only for youth but also for adults, including mature-aged workers.

Another essential element of this theory is *fair risk sharing* of the costs and benefits of investing in human capital. Employers will be reluctant to invest in training or education if people run away after the costly investment, or if these skilled people are then poached by employers that have not contributed to the investment. Employees will not invest in firm-specific skills if their investment is not acknowledged by fair wages, good working conditions and some job security. The state or the social partners (trade unions and employer associations) can play a crucial role in solving these conflicts that are typical for the production of public goods, for instance, by co-financing (in particular education infrastructure), by defining and controlling marketable quality standards, by wage coordination, and by reasonable employment protection. Through the standardisation of training contents, social partners and governments can ensure high-quality standards through control and certification. Participation in the definition of quality standards by employers and employees (usually via their sectoral or occupational interest representations) and their effective control guarantee, on the one hand, that workers can trust that their skills are valued on the market, and on the other hand, that employers can rely on the competences of graduates entering the labour market. Certificated (i.e. legally acknowledged) skills are also ‘marketable’ and thereby enhance the mobility of workers.

¹² To the concept of TLM see – among others – Schmid and Gazier (2002), Schmid (2008), Schmid (2011), Muffels (2008), Rogowski (2008), and Brzinsky-Fay (2011).

European economies confirm the value of such dual learning systems. Youth unemployment is lowest in European countries with dual learning systems that connect their education system closer to the labour market. These countries are Austria, Denmark, Germany, Netherlands and Switzerland (Ebner 2012; Figure 1A, Appendix); these countries also score at the top regarding low NEET rates (Figure 2A, Appendix). On average, increasing the share of upper secondary students that attend dual learning systems by one percentage point decreases NEET rates by about 0.04–0.09 percentage points (Eurofound 2012).

The labour market as such will not establish the respective institutions that ensure not only good transitions from school to work but also good transitions between work, education and family over the lifecourse. This leads to the next policy strategy to fight youth unemployment.

2.3 *Youth need the right governance*

The main reasons for bad governance are again quite clear: Markets are strong in competitive governance but they also tend to monopolies, for instance, in the form of excessive employment protection of ‘insiders’ (people who have a job). Hostile industrial relations that neglect the advantages of cooperation (and eventually of compromises), and no or unfair risk sharing of investments (here in particular in ‘human capital’) are other forms of bad governance. The corresponding promising policy strategies are quite evident and shall briefly be enumerated and illustrated by some examples.

(1) Good governance, first of all, means to fight against all kinds of monopolies, for instance, against unconditional *employment protection* for labour market insiders. But one has to be careful because not all employment protection reflects ‘bad governance’; there are good reasons for providing some protection to workers, in particular with regard to the mutual investments of employers and employees in ‘human capital’. If there is no protection at all, as already mentioned, both parties will not invest in vocational education and training because they are not assured of the returns of investment. The TLM principle of fair risk sharing requires some security in this respect, which prudent employment

protection conditional on internal flexibility tends to provide. Meanwhile, differentiated empirical studies provide persuasive evidence of this proposition: *Employment protection is not detrimental in terms of youth unemployment if it is connected with mutual human capital investments of employers and employees in form of dual learning systems.*

Brzinsky-Fay and Ebner (2013) studied the relationship of employment protection and youth unemployment in OECD countries over a longer period of time (1990–2012). By grouping the OECD countries into three categories—first, countries with no dual systems at all, second, countries with partly dual systems, and third, countries with dual learning systems—they show clear evidence that countries with dual systems do better in terms of various indicators of youth unemployment (Figure 4A, Appendix). A simple correlation between employment protection and youth unemployment for all OECD countries seems to confirm the mainstream economists' expectation that countries ranking high according to the OECD employment protection index have higher youth unemployment rates (Figure 5A, Appendix). However, at a second glance, using the grouping of OECD countries by the degree of dual systems, this positive correlation holds only for OECD countries with no dual systems at all. OECD countries with partly, and in particular OECD countries with fully-developed dual systems have lower relative youth unemployment rates (Figure 6A, Appendix).

(2) A second promising policy strategy is to support cooperative industrial relations. Well-functioning corporate systems intermediate between the free market and central state. *Market* means the autonomous determination of wages or working conditions by individual employers and individual workers. Collective organisations of both parties give the respective individuals a stronger voice, workers in particular. However, the *state* thereby plays a strong role, too, for instance, by acknowledging *and* protecting the resulting collective agreements or by setting minimum standards below which the market is not allowed to work – for instance, minimum wages. Corporate governance plays an important role in taming youth unemployment. European research shows that employment systems with cooperative industrial relations systems have lower unemployment and in particular lower youth unemployment. Austria, Denmark, Germany and the Netherlands

(all with low or moderate youth unemployment) are examples of *cooperative industrial relations*; whereas France, Greece, Italy and Spain (all with high youth unemployment) have *hostile industrial relations*. Good cooperation between unions, employers and the state also reduces NEET rates. Specifically, increasing the level of wage coordination by 1 point on the scale reduces NEET rates by about 0.75–0.96 percentage points (Eurofound 2012). Apart from wages and working conditions, collective agreements can also deal with education and training and can thereby directly contribute to fighting youth unemployment. In Germany, for instance, *training pact agreements* between employers' and workers' organisations (the 'social partners') at regional or sectoral levels are quite effective in providing more apprenticeship places.

(3) Encouraging cooperation between firms and schools, colleges or universities can also improve the link between the labour market and the education system, for example, through establishing cooperative universities. Of crucial importance is the coordination of educational measures, labour market and social policies. For example, even in Sweden, which is in many respects a model country for employment and social policy (high welfare and high productivity), youth unemployment is high (24 percent in 2013!). Swedish experts explain this conundrum mainly by the divided responsibilities between school, labour exchange and social services. In Sweden there are strict demarcations between standard education and youth measures, and there is an overdue emphasis on academically oriented upper secondary school education (Olofsson and Wadensjö 2012). In Austria, Denmark, Switzerland and (partly) in Germany or the Netherlands (with low youth unemployment) schools and firms cooperate more closely.

(4) Finally, dual education systems are also effective devices for a fair divide of the investment risks between employers, workers and the state, as has already been demonstrated related to the issue of employment protection. We shall return to this issue in more detail, in particular related to financing, when we come to drawing lessons from Europe for India.

3. Immediate Measures against Youth Unemployment

Most of the suggestions developed above need time for implementation because they refer to structural reforms. They do not provide immediate solutions for many youth currently without a decent job or in further education. But something must be done quickly and with an immediate impact. Research on youth unemployment for both Europe and the United States consistently show significant scarring effects of early unemployment in later life: *Even after 30 years* wages and happiness are lower for formerly unemployed youth than for young people who had a smooth transition from school to work (Bell and Blanchflower 2011). For Germany, Schmillen and Umkehrer (2014) found that the accumulated unemployment risk for youth with long spells of unemployment later during their life course is on average 32 months compared to only four months for youth without unemployment; interestingly, the scarring impact on the frequency of unemployment is more pronounced than the scarring effect on duration.

The Council of the European Union adopted in April 2013 a *Youth Guarantee* as a 'Recommendation' to its member states (Council 2013). Member States should ensure that, within four months of leaving school or losing a job, young people under 25 can either find a good-quality job suited to their education, skills and experience or acquire the education, skills and experience required to find a job in the future through an apprenticeship, a traineeship or further education. Under the Youth Employment Initiative (YEI), €6 billion was allocated and frontloaded so that all this money is committed in 2014 and 2015 for respective investments of Member States rather than over the seven-year period of the EU-Multiannual Financial Framework. 20 Member States are eligible for funding, as they have regions where youth unemployment is over 25 percent.¹³

Of course, such a guarantee is more easily suggested than implemented; in October 2014 only a small part of the fund had been used.¹⁴ There is also no one-size-fits-all concept.

¹³ Spain can count on the highest amount with 29% of the total budget, followed by Italy 18% and France 10%. The UK will receive 6% of the funding, Greece and Portugal about 5% each, whilst Germany does not qualify for receiving funding from the programme (Berlingieri et al. 2014: 48).

¹⁴ The European Commission (2014) acknowledges Austria and Finland as model countries for its Youth Guarantee programme.

However, from previous European experiences, five promising strategies can be suggested: (1) ensure school attendance of all children and prevent early school leaving; (2) reintegrate early school leavers; (3) facilitate the transition from school to work; (4) foster employability; (5) remove barriers and provide incentives to employers. For each strategy, I proffer one European example to provide a gist of what can be done and I also reflect the relevance for India as far as possible.¹⁵

(1) *Dropping out early from school* is the most dangerous pathway for the young and one of the most important drivers for poverty, ‘inactivity’ (out of the labour market), repeated unemployment or long-term unemployment. Therefore, the EU2020-Strategy set a goal to reduce school-dropout rates to 10 percent in 2020 from 14.1 (2010).¹⁶

The reasons for leaving school early are manifold. Important causes in Europe are lack of motivation, cognitive troubles, and language difficulties especially for migrants. *Inclusion* as a principle of non-selective education in general, and as a method to prevent early school leaving in particular, however, is still hotly debated all over Europe. The United Nations convention on the rights of persons with disabilities adopted in 2008 (www.un.org/disabilities/) has given this debate an additional drive. Some countries in Europe (e.g. Luxembourg, Germany) experiment with *alternative learning environments* for six to 12 weeks, called “mosaic classes” in which young scholars at risk of dropping out are given various personalised help to return successfully to their class.¹⁷

In India, the main problem is obviously quite different: Poor families often rely on a financial contribution from their children’s work, so that a minimum income guarantee might be the first step to ensure that young people get at least a basic decent education at primary and secondary schools. As already mentioned, compared to China, Japan or South Korea, the reading skills of 15-year-old students in India seem to be quite weak (see also

¹⁵ For an extensive review of measures taken up and recommended see Eurofound (2012, 2014); and for the most recent overview of the Commission see European Commission (2014).

¹⁶ Share of the population aged 18–24 not in education or training with only lower-secondary education (ISCED 0, 1, 2 or 3c).

¹⁷ Related in particular to non-cognitive skills (like motivation, endurance, self-control, curiosity), even earlier interventions directed at disadvantaged children are required (Heckman 2008).

OECD/ILO 2014: Figure 4, page 8). The *National Rural Employment Guarantee Programme* (NREGP) certainly goes in the right direction to ensure school attendance.¹⁸

(2) For young people who have already dropped out early, *second-chance opportunities* may help, for instance, special preparatory schools (e.g. Belgium, Germany) that provide skills outside the conventional schedule yet validate these skills so that they are recognised by potential employers.

Again, for the Indian case, first a minimum income guarantee might be the most promising solution to bring young people back to school. Second, targeted educational assistance especially for children in the early phases of education have proven to be quite efficient and might serve both aims: preventing dropping out and bringing children back to school. The recent Indian budget report has already taken up this lesson: “Evidence that ‘business-as-usual’ pedagogy can be improved is found in several randomised evaluations finding large positive impacts of supplemental remedial instruction in early grades that are targeted to the child’s current level of learning (as opposed to simply following the textbook)” (Ministry of Finance (2013: 52).

(3) One quick way to facilitate school-to-work-transitions is to *identify already existing skill deficits on the market and to subsidise youth jobs in these areas*. For example, in the Netherlands, the *XXL Jobs Initiative* offers young people dual training jobs in sectors where the retirement of older workers will lead to a shortage of skills and knowledge. It is intended that the older employees will transfer their skills to the young people and that the young people will receive strong guidance in their transition to the labour market (Eurofound 2012: 124).

Some subsidised dual training can be arranged relatively quickly even when a substantive infrastructure for apprenticeship-systems is not available. Maitra and Mani (2014) report on a subsidised vocational training program in stitching and tailoring, targeted at women

¹⁸ In the year of announcement (2006), 150 billion rupees (\$3.4 billion) were allocated, guaranteeing 100 days per year employment to one member of every rural household if they were prepared to do unskilled manual labour at a minimum wage of about 60 rupees.

aged between 18 and 39, with at least five or more grades of schooling residing in low socio-economic areas or slums of New Delhi. Applicants to this training programme were randomly assigned to one of the following two groups: treatment group (received access to a six-month-training) and the control group (did not receive access to training). The six-month effects of the programme indicate that women who were offered the training programme are 6 percentage points more likely to be employed, 4 percentage points more likely to be self-employed, work 2.5 additional hours per week, and earn 150 percent more per month than women in the control group. A second round of follow-up data collected 18 months after the intervention found that the six-month treatment effects were all sustained over this period.

The authors conclude that even in India investing in vocational training programmes can result in substantial economic gains for women in low-income households. However, overcoming constraints related to accessibility (for instance, spatial distance of the training sites), credit resources (in this case, e.g. for buying sewing machines), and availability of child care support in the household is crucial to ensure that young women can participate and complete training programmes of any kind, not just vocational training in stitching and tailoring. An additional advantage of such programmes is that it results in ‘human capital’ accumulation that is specific to the person undertaking the training and cannot be confiscated by their spouse as often happens in pure micro-credit programmes.

(4) Often, formal and sufficient skills are available but work experience is missing. One way to fill this gap is to establish accredited *training companies* that provide such experiences. In Austria, young people who cannot find suitable apprenticeship places in a company after leaving compulsory school can get a ‘supra-company apprenticeship training’, which offers practical training in apprenticeship workshops in specialised facilities – for example, in hotels, restaurants, and private or public canteens (Eurofound 2012: 129).¹⁹

¹⁹ I can report here from an own experience in Vienna (Austria), where I was invited to a hotel and restaurant that provided traineeships exclusively for youth with disabilities. It was touching to see how these young people proudly serve the meals and explain their own cooking.

Related to India, I see no principle objection against or barrier not to establish such accredited training companies, which seem to be promising in particular in poor conglomerated areas (e.g. slums).

(5) One of the most important barriers for employers when hiring young people is the lack of work experience which leaves a gap between wages and expected productivity. Apart from apprenticeships that already reduce youth entry wages, one way to remove this barrier is to bridge this gap through *temporary wage-cost subsidies* or *temporary exemption from social contributions* for employers recruiting additional (young) jobless workers. In addition, many young jobless people could become entrepreneurs if *business start-ups* were made easier by reducing red-tape, offering counselling and capitalising unemployment benefits or providing temporary tax credits. Both, recruitment subsidies as well as start-up subsidies have proven quite successful in German evaluation studies.²⁰

However, if a lack of jobs (especially – as in India – in rural areas) is the predominant problem, the impact of wage subsidies is limited, albeit not to be neglected. A recent study on wage subsidies in developing countries found that if the main goal of government is to create short-term jobs, wage subsidies might not be the most effective instrument. In general the effects of wage subsidies on employment rates are modest and there can be important substitution and windfall effects. If, however, the goal is to create jobs rapidly, public works and services where subsidised jobs are created directly by the government are probably a more effective alternative (Almeida et al. 2014).

Nevertheless, a more promising function of wage subsidies in developing countries or threshold countries like India would be to allow workers to acquire skills that improve their employability and labour market opportunities through work experience and on-the-job-training. Some of the available empirical evidence suggests that, at least in the case of certain groups such as youth, these effects of wage subsidies persist after they expire. In this case, wage subsidies would need to be targeted to first-time job seekers or to workers

²⁰ For an overview of German evaluation studies see Heyer et al. (2012); specifically for start-up subsidies see Caliendo and Künn (2010).

who have experienced long periods of unemployment or inactivity (Card et al. 2010; Kluve et al. 2006).

4. Lessons to be learned from Europe

It is always hard to draw lessons, in particular from societies with quite different historical, cultural and economic background like Europe and India. So, the following concluding “lessons” can only be tentative and restricted to general principles. This chapter therefore tries to summarise the European experiences in five slogans not meant as “teaching” but as “reminders” for further reflections and discussion.

4.1 Mind the high economic and social costs of youth unemployment: Invest More!

Generally, in current times policy learning might be out of sight due to the difficulties of mobilising sufficient resources. However, the current global fiscal and economic crisis is not a crisis of resources but a crisis of inequality (Piketty 2013; Wilkinson and Pickett 2009) and the result of the speculative use of (our always) scarce resources through some irresponsible banks plus the lack of efficient political control of global financial markets (Hellwig and Admati 2013). The real problem is that too few of these resources are channelled into real investments. We have an investment crisis, including a lack of expenditure in the education of our young generation, and an underdeveloped (or even non-existent) system of unemployment insurance or active labour market policies which – if properly implemented – are investments and not costly consumption expenditure.

One also has to be aware of the tremendous costs of youth unemployment. In Europe, these costs of Youth NEET were estimated to be €162 billion in 2012, corresponding to about 1.3 percent of GDP.²¹ Of course, these costs vary a great deal between Member States (from less than 0.6 percent in Denmark, Germany and Sweden to 4.3 percent in

²¹ These costs include ‘public finance costs’ that arise from the extra welfare payments (unemployment benefits, sickness benefits, disability benefits, and education-related allowances) and ‘total resource costs’ that include the loss to the economy and welfare measured as lost earnings (such as employee and self-employment income, non-cash employee benefits, goods produced for own consumption, and pensions from private plans (Eurofound 2014: 6); for comparative figures in 2011 see Figure 7A, Appendix.

Greece), and Europe will not be able to save the entire cost of €162 billion. However, using the unit total cost of each person in NEET (€10,937), the analysis shows that if enough vacancies were created in Europe to reintegrate 10 percent of NEETs into the labour market, this would provide a saving of more than €15 billion per year. If 20 percent of NEETs could be reintegrated, the saving would rise to €30 billion (Eurofound 2012, 2014).

What is needed, therefore, is first of all *political leadership* that tells people this truth and acts accordingly. And it is not only the economic costs of youth unemployment that belongs to this truth. The social costs, both for individuals and the society, are also tremendous: long-term scarring effects in terms of wages and employment status, higher criminal records, deterioration of health, lower political engagement, decreasing social participation and – last but not least, as the American sociologist Robert Putnam expressed it – an erosion of ‘*thick trust*’ (friendships and neighbourhoods) and above all an erosion of ‘*thin trust*’, which means generalised social trust emphasising empathy, shared interests, a sense of the common good, mutual respect and obligation among people (Putnam 2000: 142).

So, the slogan “invest more” should be evident enough in face of the high costs of youth unemployment, which certainly also applies in principle to the Indian economy. The future will look bleak if governments fail in not inducing higher investments in more and better jobs. Youth is the future of every society. But to invest more is not enough; it is – as the following paragraph will show – also a matter of investing right.

4.2 *Mind over-education as a waste of investment and source of injustice: Invest right!*

The correlation of higher education and higher risk of unemployment indicates that India’s education system is not well adapted to the labour market.²² India even seems to have a problem of ‘academic inflation’ or partial over-education. As we have already seen (Table

²² See above and in particular the extensive discussion of the Indian education system by Drèze and Sen (2013: 107–142).

1), the unemployment rates of all youth aged 15 to 29 for *all* male and female youth in urban areas was 8.1 and 13.1 percent in 2011/12; the respective unemployment rates for ‘graduates & above youth’ were 16.3 and 23.4 percent. However, there are indications that the real problem is less over-education in general but partly misguided higher education. According to the ILO Global Employment Report, the occupational choices of many youth seem to be problematic: “Indians with a diploma suffer particularly, with unemployment rates reaching 34.5 per cent for women and 18.9 per cent for men during 2009–10. However, occupational choices bear a strong impact on the risk of joblessness as workers with technical education face lower unemployment rates than other graduates (only for men). At the same time, Indian employers have trouble hiring staff: according to the 2011 Manpower Talent Shortage Survey, 67 per cent of employers stated that they had difficulties filling positions” (ILO 2013: 81).

Some part of this unemployment gap between high- and low-educated youth might be explained by the fact that educated young adults are more eager to search for jobs and are thus more likely to count as unemployed than low-skilled youth who have less to win with a regular job or might get more quickly discouraged. Moreover, as we know from European countries like Greece, Italy and Spain with high youth unemployment among the high-skilled, formally high-educated youth tends to displace low-educated youth in the competition for jobs.²³ Academic inflation is particularly pronounced in Korea (OECD 2012: 73–4, Schmid 2013b). Such a system creates a lot of waste not only in terms of sunk-investment costs but also in terms of inequality *and* injustice. Getting a good job mainly by formal credentials and not by competences creates wrong economic incentives and discriminates against young people from low-income households.

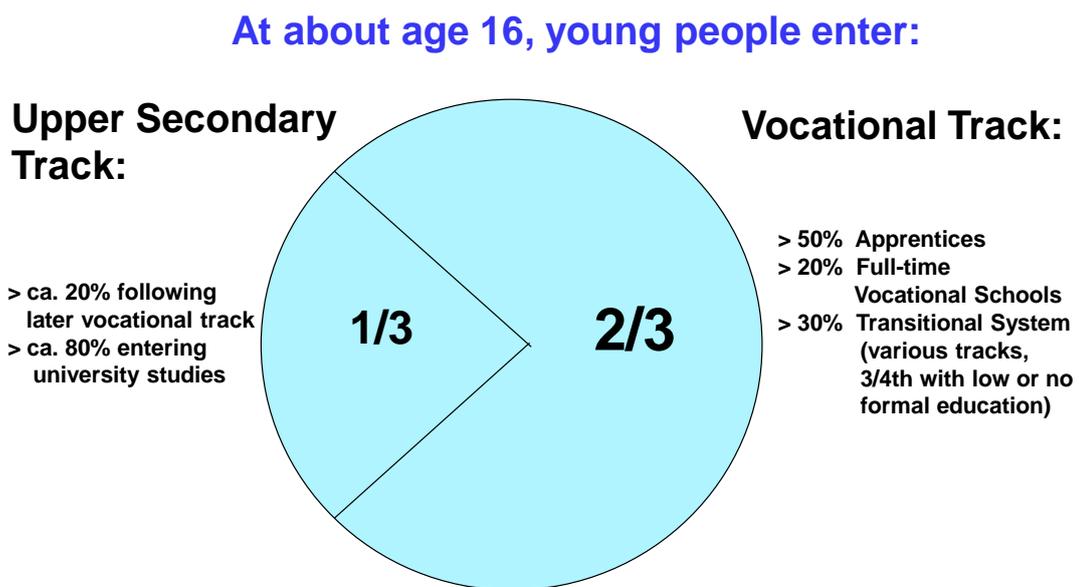
But how can we ensure that investments in education get it “right”? The previous sections hinted already to a solution: The establishment of dual learning systems through transitional labour markets (TLM) which will be explained in more detail in the following section.

²³ A deeper analysis goes beyond the range of this paper. For the topic of over-education, in particular its impact on displacing low-educated on the labour market, see the illuminating studies by Quintini (2011) and Salverda (2014).

4.3 *Mind the potential of dual learning systems (TLM): Combine education with work and earning*

As already suggested above (see 2.2 (2)), the concept of transitional labour market (TLM) might ‘teach’ something here. It builds, among other things, on the concept of learning by monitoring and on the theory of fair risk sharing.²⁴ Related to youth unemployment, the TLM concept focusses on the idea of building institutional bridges between the formal education system and the labour market. The German vocational training system is a paradigmatic example of this approach (Figure 3).

Figure 3: The German Vocational Training System



At roughly age 16, about one-third of young Germans enter the upper secondary track. Later on (after graduation), about 20 percent of them enter a vocational track; about 80 percent enter university studies. About two-thirds of young Germans at about age 16 enter the vocational track. Roughly 50 percent of them conclude a two- to three-and-a-half-year

²⁴ See in particular Schmid and Gazier (2002: 1–22), Schmid (2008: 213–241); Schmid (2013a).

contract with an employer, learning one of about 350 licensed occupations on the job. At the same time, they attend a vocational school where they acquire general knowledge. So, in the ideal case, this system provides both: market-oriented skills with a realistic job perspective and general skills needed to adapt to structural changes in the economy or to unexpected changes during one's personal life course. Another 20 percent in the vocational track, in particular women, enter a full-time vocational school in Germany. However, around 30 percent (of the two-thirds in the vocational track) remain in the so-called transitional system preparing for a better education or employment; three-quarters of them having lower or even no accredited education.

The latter observation clearly hints to serious flaws in the German system, in particular the danger of over-specialisation and the exclusion of disadvantaged and vulnerable youth.²⁵ But overall, the *advantages* prevail: On the one hand, such institutional bridges *reduce information deficits or information asymmetries* through standardised and accredited occupations or trades; and they provide, on the other hand, *work experience* that also helps to build up confidence among young people, especially those with more practical than theoretical talents. In Austria and Germany, the proportion of the youth population combining work and training is 39 percent and 36 percent respectively, in Denmark and the Netherlands, this proportion may even reach as high as 60 percent, albeit with a lower share of work than in Austria and Germany (Eurofound 2014: 32). In contrast, countries like France, Spain, Portugal, Italy or Greece with low proportions of youth combining work and training face high youth unemployment even in boom periods because their educational system concentrates on high formal or academic qualifications (Berlingieri et al. 2014). These countries clearly lack skills and competences at the middle level that are more market-oriented and allow a smooth transition from school to work. Furthermore, “apprenticeship” as a paradigm for dual learning systems aimed at smoothing the transition from school to work is no longer restricted to continental European countries but

²⁵ For a much deeper and rich analysis of dual education and learning systems in Germany and in international comparison see – among others – Biavaschi et al. (2012), Brzinsky-Fay (2011), Ebner (2012), Eichhorst et al. (2012), and Solga (2008); with an emphasis on the transferability of the German system of vocational training to other countries in general see Euler (2013); and in particular to India see Bertelsmann Stiftung (2014).

is increasingly being adopted (or at least positively re-considered) in the UK and USA, however, under a rather different institutional context.²⁶

Once again, I am not recommending that India copy the European apprenticeship systems due to their specific histories and different institutional backgrounds. In fact, as demonstrated, even the European systems differ considerably. Yet, these differences might serve as a stimulus to *concentrate on the principles of dual learning systems* and to adjust them to the Indian context. Moreover, it seems that this message has already been embraced.²⁷ The budget report of the Indian Ministry of Finance (2013: 50) sees “the time has come” for establishing formal apprenticeships, in particular for the reason “to place employers at the heart of education”, playing a more powerful role in imparting job-relevant skills and also repairing, preparing and upgrading the labour force. The report also correctly reports that *formal apprenticeships can aid five important transitions* that the labour force is currently undergoing: from agriculture to non-agriculture agriculture, from rural to urban, from the unorganised sector to the organised, from school to work, and from subsistence self-employment to wage employment.

To this insight I can only add – from the European perspective – that the general and theoretical elements of vocational training and education should not be neglected in order to avoid the myopic skill demands of the market and to care for sustainable and transferable skills. This also leads to the question of the actors and institutions that ensure a proper balance between practical and theoretical knowledge, to which I turn in the next section.

4.4 *Mind the potential of SME and middle-level skills: Reward entrepreneurship and vocational training*

Markets are necessary but are not sufficient for solving the problem of youth unemployment. The concept of TLM tries to combine both social coordination

²⁶ For the UK see Speckesser and Montalt (2014); for the USA see Olinsky and Ayres (2013). Both studies emphasise that the benefits exceed the costs of respective investments by employers.

²⁷ Again, I draw the reader’s attention to the excellent study by Maitra and Mani (2014).

mechanisms: the market and the state. It brings a market orientation into the formal education system for the young by learning on the job and earning at market wages, and it brings the state into the market by ensuring decent minimum wages, quality standards and the public financing of schools and teachers. A recent study concentrating on the European countries Portugal, Spain and Italy with high unemployment in particular among high-educated students emphasises the role of the state in developing a legal framework for the content and quality of the training provided by firms for each occupation. Existing subsidies to employers for youth employment should be made conditional on participation in such a certified apprenticeship scheme. This would give firms an incentive to contribute to increasing the quality of vocational training (Berlingieri et al. 2014).

A flourishing ‘Mittelstand’, as it is called in Germany, with thriving small- and medium-sized enterprises (SME), is an essential condition for utilising as well as for establishing a healthy middle-level skill reservoir. Such an entrepreneurial infrastructure, however, cannot be established from one day to the next. The three most important strategies would be: an *industrial policy* supporting SME; a *regulatory policy* restricting casual and informal jobs with wages and work conditions below decent standards; an *education policy* providing skilled workers at the middle level, e.g. craft workers, engineers, professional care and health workers, and – last but not least – good teachers.

Wages, however, also play a crucial intermediary role in bringing education, work and earnings together. I am not familiar with wages or salaries according to age in India, which might to some extent explain the much higher risk of unemployment for youth compared to adults (see Table 1). Mainstream and neoclassical-oriented economists often argue that getting rid of minimum wages for youth would solve the problem. At lower wages, employers would be willing to hire more young people. But European experiences show that minimum wages play, if at all, a minor role (Eurofound 2012: 45). One also has to consider the discouraging effects of very low wages for young people, especially for young adults who want to establish a family. Decent wages also ensure that employers do not only attract skilled young people but that these people remain loyal, work hard and do not opportunistically switch to the next job that pays a little more. Labour turnover may be

efficient, but too high a fluctuation is a waste of resources and kills mutual investments and respective trust between employers and workers.

Some, not all, European experiences show that there are better functional equivalents for just lowering wages. First, high formal education raises the reservation wages of young people that might not correspond to the market realities. The TLM system of *learning and earning*, however, mitigates this problem by paying only for the productive part of work and not for learning on the job. So, there is *risk sharing* between employers and workers. Furthermore, at work young people become acquainted with the market pay structure and do not develop unrealistic high reservation wages. Second, and after the apprenticeship, systems of wage coordination take into account the lower productivity of young people by establishing relatively low entry levels of wages for the youth but providing at the same time some security of a career perspective with respective increases of wages after considerable work experience.

Finally, the principle of dual learning, which means systematically combining work and education, is not restricted to the secondary or middle level. It can also be applied to the academic or tertiary level which will be the subject of the last section.

4.5 *Mind the dual learning principles also in higher education: Bring business and academies together*

In the low youth unemployment countries Austria, Germany and Switzerland business colleges, vocational academies and industrial or applied universities play an increasing role, and the graduates of these schools often have much better labour market chances than graduates from pure academic institutions. As already noted, Austria and Switzerland, and to some extent Denmark and the Netherlands,²⁸ might even be better models for India because they do not specialise too much, as Germany is currently doing. In Austria, already 26 percent of youth aged around 16 attend full-time vocational colleges with integrated practical experiences in firms ('Berufliche Höhere Schulen') providing both: a licence for exercising a broadly defined occupation as well as the right to enter university

²⁸ With the lowest NEET rates, see Figure 2A in Appendix.

(‘Matura’). In Switzerland, one-third of youth attend business colleges or universities of applied sciences (‘Fachhochschulen’) that also require practical experiences from both the teachers and the students. Both countries have better records than Germany in integrating youth into the labour market at their acquired skill levels, and both countries also do better for disadvantaged youth by ensuring some kind of accredited education that is marketable.²⁹

India should not give up its well-established academic education system which, in international comparison, is clearly an asset. But this system might be improved by stronger market orientation through establishing principles of dual education and learning. Apart from the already mentioned dual business high schools or universities of applied sciences in the German speaking countries, a possible model might also be the *Baden-Wuerttemberg Cooperative State University* (founded in 2009) with its main seat in Stuttgart, eight other locations in the region and four branch campuses. This university integrates academic studies and work experience. Students regularly switch from their academic studies at the university to practical training at their workplace training provider, the so-called corporate partner; they are not only taught theoretical knowledge but they also learn to apply this knowledge in practice. With around 34,000 enrolled students, 9,000 partner companies and more than 125,000 graduates, this university counts as one of the largest higher education institutions in the Federal State of Baden-Wuerttemberg. The official seat of the university is in Stuttgart. The students have an employment contract and through the entire period they receive a monthly salary and have the insurance of being an employee. Small classes of at most 30 students guarantee close supervision. The university cooperates with numerous universities and enterprises worldwide. That makes it possible for most of the degree programmes (business, engineering, and social work) to include a training and education period abroad thereby responding to the increasing demand for internationalisation. The students’ future prospects are excellent: roughly 90

²⁹ Furthermore, as Olinsky and Ayres (2013: 23) emphasise, the model of dual learning systems is already more widespread than most people are aware. In the US (but also in Europe, GüS) nearly all medical doctors, for instance, participate in an apprenticeship of sorts (though it is not registered as such) during their internships and residencies where doctors receive on-the-job and classroom-based training while receiving a salary. The same principle can be applied to many other high-skilled occupations, not least in the growing areas of social service occupations.

percent of the students sign regular employment contracts with the companies after graduation (www.dhbw.de).³⁰

To sum up: prudent policy might tame the market and utilise thereby the dynamic forces of markets for creating more and better jobs for youth. Establishing and extending TLMs, which means *dual systems of earning and learning*, might thereby help. One step could be to *extend the conditional public support* for private employers: The conditions can be related to market as well as to social performance indicators, to workplace training, and to including employers or community representatives on the boards of colleges and industrial universities. Sweden, for instance, has even written into its constitution the obligation of colleges and universities to make a contribution to regional economic development. Furthermore, vocational academies, industrial colleges or applied universities could provide to an increasing extent education and training for foreign students. Education might even develop into a job-creation-machinery for teachers and trainers, something that might be an objective for India's education (and industrial) policy because the internationalisation of the Indian university system does not yet seem to be well-developed. For Europeans, at least, India has such a fascinating culture which could be attractive to many young people hoping to gain experience and establish social relations. Closer cooperation, for example, between German and Indian vocational academies seems to be a worthwhile and rewarding policy ambition.

Outlook

What are the future prospects for youth unemployment? The Danish Nobel prize winner Nils Bohr once said: "*It is hard to predict, especially the future.*" Too much depends on too many single decisions. However, at least one thing seems to be sure, because the respective 'decisions' have already been made: Demography or birth rates. Progressively shrinking cohorts in Europe, in particular in Germany, will have dramatic effects on the

³⁰ The Republic of Korea seems to have followed this model: *Youth Employment Academies* have been set up to promote youth employment through training courses reflecting demand at industrial sites. Business or employers' organisations can set up a youth employment academy in cooperation with colleges, while the operating costs of the academy are supported by the Ministry of Employment and Labour (OECD/ILO 2014: 12).

number of entrants to the future labour market over the next 15 to 30 years. In this respect, India is unique in enjoying a *demographic dividend* (Ministry of Finance 2013) where more than 50 per cent of its population is in the working age group of 15 to 59 and 28 per cent in the age group 15–29. It is expected that by the year 2020 more than 65 per cent of the Indian population will be in the working age group with a majority of young adults (Sanghi and Srija 2014). In Europe, the relative share of the working age population (20–64) will fall from about 61 percent (2010) to about 57 percent (2030), whereas the relative share of young people aged 20 to 29 in this group will drop considerably according to population projections.³¹ So, youth unemployment in Europe might be less of a problem in 10 years than the lack of skilled people, due to demographic reasons; India, on the other hand, might face an even worse situation of youth unemployment if it does not succeed in investing more in its education and training system, however, in particular by strengthening the link between the education and the labour market system.

Certainly, *job creation* – above all in rural areas – will be the main challenge for India as far as I can guess from the European perspective. However, much depends also on *creating the right skills*. And here I come back to the ‘academic inflation’ of skills, which can be observed more or less in all countries, unfortunately not least in the poorer developing countries. What is the explanation for this inflation? I believe that one important reason is the parents’ aspiration to get their children the best education they can have. This is understandable but obviously cannot work for all: Individually, this aspiration is rational; but collectively it is non-rational – creating congestion, disappointment or even desperation.

What is the reason behind this aspiration? I believe that these preferences are – among other obvious motives like cultural thrive – strongly driven by an *insurance motive*. A high standard of formal education is still the best insurance device to end up in a high-paid job with a high social security. So, and this may sound like a provocation for many Indians, one solution for this problem of ‘academic inflation’ and respective high youth

³¹ I apologise for the incongruence of the data. It is surprisingly hard to get comparable figures for demographic projections. The first figure for Europe (EU-27) concerning working age population is taken from Beblavý et al. (2014: calculated from Table 3.1, p. 31); the second figure concerning youth is derived from population projections by the European Commission (2009, Table A 9, p. 12).

unemployment would be to moderate these aspirations by *establishing a better social security system for all*, especially for the many of those who are still not at all or not sufficiently covered by health, disability, unemployment and pension insurance (Drèze and Sen 2013: 182–212). If such a safety net existed, many more young people would probably be happy to aspire and to take the risk of jobs at the lower or middle end of the labour market – provided that wages and work conditions are decent and that the doors remain open for them when they plan to receive higher education and better jobs later during their life course.

From this point of view – and considering the developing countries, in particular Africa and Asia – the global problem of youth unemployment will probably be more dramatic for the next 10 to 20 years than today.³² Confronted with this challenge, the wise words of the French writer Antoine de Saint-Exupéry should be remembered: “*As for the future, your task is not to foresee it, but to enable it.*”

Selected Literature

- Adams, R. M. and K. McCormick (1993), The Traditional Distinction between Public and Private Goods needs to be Expanded, not Abandoned, in: *Journal of Theoretical Politics*, 5 (1), 109-116
- Almeida, T. and L. Orr, D. Robalino (2014), Wage Subsidies in Developing Countries as a Tool to Build Human Capital: Design and Implementation Issues, in: *IZA Journal of Labor Policy*, 3 (12), 1-24
- Beblavý, M. and I. Maselli, M. Veselková (eds.)(2014), *Let's Get to Work! The Future of Labour in Europe*, Vol. 1, Brussels, Centre For European Policy Studies (CEPS)
- Bell, D. N. F. and D. G. Blanchflower (2011), *Youth Unemployment in Europe and the United States*, Bonn, IZA DP No. 5673 (forthcoming in: *Nordic Economic Policy Review*, 2011)
- Berlingieri, F. and H. Bonin, M. Sprietsma (2014), *Youth Unemployment in Europe – Appraisal and Policy Options*, Mannheim, Centre for European Economic Research (ZEW)
- Bertelsmann Stiftung (2014), *Vocational Skills Development and Vocational Training – The Dual System of Vocational Training: A Model for India?*, Gütersloh
- Biavaschi, Costanza et al. (2012), *Youth Unemployment and Vocational Training*, Bonn, IZA Discussion Paper No. 6890
- Brzinsky-Fay, C. (2011), *School-to-Work Transitions in International Comparison*, Tampere: Acta Universitatis Tamperensis 1663

³² ILO (2013, 12): “By 2018 the global youth unemployment rate is projected to rise to 12.8 percent, with growing regional disparities, as expected improvements in advanced economies will be offset by increases in youth unemployment in other regions, mainly in Asia.”

- Brzinsky-Fay, C. and C. Ebner (2013), Youth Labour Markets under on-going Pressure? A Review of Indicators 1990 – 2012, Presentation to the Youth Transition Workshop at the Social Science Research Centre Berlin, 12th September
- Caliendo, M. and S. Künn (2010), Start-Up Subsidies for the Unemployed: Long-term Evidence and Effect Heterogeneity, Bonn, IZA DP No. 4790
- Card, D., J. Kluge and A. Weber (2010) “Active Labour Market Policy Evaluations: A Meta-Analysis”, *Economic Journal* 120(548), pp. 452 – 477
- Council (Council of the European Union)(2013), Youth Guarantee, COUNCIL RECOMMENDATION of 22 April 2013 on establishing a Youth Guarantee, (2013/C 120/01)
- Dolls, M. and C. Fuest, A. Peichl (2011), Automatic Stabilizers, Economic Crisis and Income Distribution in Europe, in: *Research in Labor Economics* 32, 227-256
- Drèze, J. & A. Sen (2013), *An Uncertain Glory: India and its Contradictions*, London, Allen Lane (Penguin)
- Duell, N. et al. (2010), Activation Policies in Switzerland, OECD Social, Employment and Migration Working Papers, No. 112, OECD Publishing, <http://dx.doi.org/10.1787/5km4hd7r28f6-en>
- Ebner, C. (2012), *Erfolgreich in den Arbeitsmarkt? Die duale Berufsausbildung im internationalen Vergleich*, Frankfurt a.M./New York, Campus
- Eichhorst, W. (2012), The Unexpected Appearance of a New German Model, Bonn, IZA Discussion Paper 6625
- Eichhorst, W. and N. Rodríguez-Planas, R. Schmidl, K. F. Zimmermann (2012), A Roadmap to Vocational Education and Training Systems Around the World, Bonn, IZA Discussion Paper No. 7110
- Euler, D. (2013), Germany's Dual Vocational Training System: A Model for Other Countries?, Gütersloh, Bertelsmann Stiftung
- European Commission (2009), 2009 Ageing Report, Economic and Budgetary Projections for the EU-27 Member States (2008-2060), Statistical Annex
- European Commission (2014), Memo: The European Youth Guarantee, http://europa.eu/rapid/press-release_MEMO-14-571_en.htm, Download: October 9, 2014.
- Eurofound (European Foundation for the Improvement of Living and Working Conditions)(2012), NEETs: Young People not in Employment, Education or Training: Characteristics, Costs and Policy Responses in Europe, Luxembourg: Publications Office of the European Union
- Eurofound (European Foundation for the Improvement of Living and Working Conditions) (2014), Mapping Youth Transitions in Europe, Luxembourg: Publications Office of the European Union
- Heckman, J. J. (2008), Schools, Skills, and Synapses, in: *Economic Inquiry* 46 (3), 289-324 (see also IZA DP No. 3515, 2008)
- Hellwig, M. and A. Admati (2013), *The Bankers' New Clothes*, Princeton, Princeton University Press
- Heyer, G. and S. Koch, G. Stephan, J. Wolff (2012), Evaluation der aktiven Arbeitsmarktpolitik: Ein Sachstandsbericht für die Instrumentenreform 2011, in: *Journal for Labour Market Research*, Vol. 45, No. 1, S. 41-62
- ILO (International Labour Organization) (2013), *Global Employment Trends for Youth – A Generation at Risk*, Geneva, International Labour Office
- IMF (2014), Youth Unemployment in Europe: Okun's Law and Beyond, in: IMF Country Report No. 14/199, pp. 4-23
- Kawaguchi, D. and T. Murao (2012), Who Bears the Cost of the Business Cycle? Labor-Market Institutions and Volatility of the Youth Unemployment Rate, in: *IZA Journal of Labor Policy*, 1 (10), 1-22

- Kluve, J. and D. Card, M. Fertig, M. Gora, L. Jacobi, P. Jensen, R. Leetmaa, L. Nima, E. Patacchini, S. Schaffner, C.M. Schmidt, B. van der Klaauw, A. Weber (2006), *Active Labour Market Policy in Europe: Performance and Perspectives*, Springer Verlag
- Maitra, P. and S. Mani (2014), *Learning and Earning: Evidence from a Randomized Evaluation in India*, Bonn, IZA Discussion Paper No. 8552
- Majocchi, A. (2013), *A European Fund for Growth and Employment*, Montcallieri: Centre for Studies on Federalism, www.csfederalismo.it; download 17.05.2013
- Ministry of Finance (Government of India)(2013), *India's Economic Survey 2012-13*, Chapter 2: Seizing the Demographic Dividend, <http://indiabudget.nic.in>
- Muffels, R.J.A. (ed.) (2008), *Flexibility and Employment Security in Europe – Labour Markets in Transition*, Cheltenham, UK and Northampton, MA, USA, Edward Elgar
- NSSO (2014), *Employment and Unemployment Situation in India*, NSS Report No. 554 (68/10/1), New Delhi, National Sample Survey Office
- OECD (2012), *OECD Economic Surveys: Korea 2012*, Paris, OECD Publishing
- OECD (2014), *Education at a Glance 2014*, Paris, OECD Publishing
- OECD/ILO (2014), *Promoting Better Labour Market Outcome for Youth, Report on Youth Employment and Apprenticeships Prepared for the G20 Labour and Employment Ministerial Meeting Melbourne, Australia, 10-11 September 2014 Paper for G20 Meeting*
- Olinsky, B. and S. Ayres (2013), *Training for Success – A Policy to Expand Apprenticeships in the United States*, Center for American Progress
- Olofsson, J. and E. Wadensjö (2012), *Youth Unemployment – Conditions for Young People in the Nordic Countries*, in: *Social Europe*, www.social-europe.eu/2012/09/youth-unemployment-conditions-for-young-people-in-the-nordic-countries; download 01.03.1013
- Piketty, T. (2013), *Le Capital au XXI^e siècle*, Paris, Édition du Seuil
- Putnam, R. (2000), *Bowling Alone – The Collapse and Revival of American Community*, New York, Simon & Schusters
- Quintini, G. (2011), *Right for the Job, Over-qualified or Underskilled?*, Paris, OECD: ELSA Working Paper 120, retrieved from <http://www.oecd.org/els/48650012.pdf>
- Rinne, U. and K.F. Zimmermann (2013), *Is Germany the North Star of Labor Market Policy?*, Bonn, IZA-Discussion Paper 7260
- Rogowski, R. (ed.) (2008), *The European Social Model and Transitional Labour Markets – Law and Policy*, Farnham, England and Burlington, VT, USA, Ashgate
- Salverda, W. (2014), *Skills Strategies for an Inclusive Society – What Can we Learn From the European Experiences?*, in: J. Sung and C. R. Ramos (eds.), *Skills Strategies for an Inclusive Society: The Role of the State, the Enterprise and the Worker*, Singapore, Institute for Adult Learning, pp. 54-84, www.ial.edu.sg
- Sanghi, S. and A. Srija (2014), *Youth Unemployment in India*, in: *Economy Matters*, Confederation of Indian Industry (CII), February, 33-38
- Schmid, G. (2008), *Full Employment in Europe – Managing Labour Market Transitions and Risks*, Cheltenham, UK und Northampton, MA, USA, Edward Elgar
- Schmid, G. (2011), *Übergänge am Arbeitsmarkt – Arbeit, nicht nur Arbeitslosigkeit versichern*, Berlin, edition sigma
- Schmid, G. (2012), *New Skills and Jobs in Europe – Pathways towards Full Employment*, Report for the European Commission (Directorate General for Research and Innovation), http://ec.europa.eu/research/social-sciences/pdf/new-skils-and-jobs-in-europe_en.pdf

- Schmid, G. (2013a), Sharing Risks of Labour Market Transitions: Towards a System of Employment Insurance, in: British Journal of Industrial Relations, early view 2013, http://www.guenterschmid.eu/pdf/Sharing_Risks_BJIR-2013.pdf
- Schmid, G. (2013b), Youth Unemployment in Korea: From a German and Transitional Labour Market Point of View, Bonn, IZA Policy Paper No. 63 (also published in Korean translation: The HRD Review, 2013, 7 (7), 126-151), <http://ftp.iza.org/pp63.pdf>
- Schmid, G. and B. Gazier (eds.)(2002), The Dynamics of Full Employment. Social Integration Through Transitional Labour Markets, Cheltenham, UK und Northampton, MA, USA 2002, Edward Elgar
- Schmillen, A. und M. Umkehrer (2014), Verfestigung von früher Arbeitslosigkeit: Einmal arbeitslos, immer arbeitslos?, Nürnberg, IAB-Kurzbericht 14/2016
- Solga, H. (2008), Lack of Training – The Employment Opportunities of Low-Skilled Persons from a Sociological and Micro-economic Perspective, in: K.U. Meyer and H. Solga (eds.), Skill Formation – Interdisciplinary and Cross-National Perspectives, New York: Cambridge University Press
- Speckesser, S. and J. Vila-Belda Montalt (2014), Encouraging Employers to Take on Apprentices, in: The Employment Studies Newsletter No. 19, 1-3; www.employment-studies.co.uk
- Wagner, T. (2012), Creating Innovators: The Making of Young People Who Will Change the World, Scribner/Simon & Schuster
- Wilkinson, R. and K. Pickett (2009), The Spirit Level – Why More Equal Societies Almost Always Do Better, Harlow

Appendix

Table 1A: Indicators of Youth Unemployment in Europe

Abbr.	Country	1	2	3	4	5
IS	Iceland	9.4	7.0*	3.2	2.9	7.8*
NO	Norway	8.7	7.0*	2.5	3.5	8.4*
SE	Sweden	24.1	7.8	5.6	4.3	8.4
FI	Finland	19.6	8.6	6.6	3.0	10.4
IE	Ireland	25.4	18.7	10.8	2.4	21.3
UK	Great Britain	20.0	14.0	5.1	3.9	15.4
DK	Denmark	13.0	6.6	5.8	1.9	8.2
EE	Estonia	22.7	12.5	7.8	2.9	22.6
LV	Latvia	23.5	14.1	10.3	2.3	13.9
LT	Lithuania	20.4	11.1	10.1	2.2	17.1
NL	Netherlands	11.4	4.3	6.1	1.9	6.2
BE	Belgium	23.8	12.3	7.1	3.4	14.4
FR	France	25.5	12.2	9.2	2.8	15.0
DE	Germany	7.7	7.7	4.8	1.6	9.6
PL	Poland	27.4	11.8	8.5	3.2	15.7
CZ	Czech Republic	19.2	8.9	5.3	3.6	12.9
SK	Slovakia	32.9	13.8	12.4	2.6	18.8
HU	Hungary	25.1	14.7	8.1	3.1	18.8
AT	Austria	9.7	6.5	4.3	2.3	7.8
SW	Switzerland	8.5	8.0*	2.9	1.2	9.6*
SL	Slovenia	23.3	9.3	8.8	2.5	11.8
HR	Croatia	49.8	16.7	15.6	3.2	18.8
BG	Bulgaria	28.9	21.5	11.8	2.5	17.3
RO	Romania	23.6	16.1	5.9	4.0	19.1
EL	Greece	58.9	20.3	25.7	2.3	27.1
IT	Italy	41.7	21.1	10.7	3.9	23.9
ES	Spain	55.3	18.8	23.9	2.3	22.6
PO	Portugal	34.8	14.1	13.9	2.5	15.9
CY	Cyprus	40.3	16.0	14.7	2.7	17.3
TU	Turkey	16.2	25.0*	9.0	1.8	29.2*
EU	EU-28/27	23.4	13.2	9.4	1.8	15.9

(1) Unemployed youth in age15-24 as percent of youth labour force (employed + unemployed) in age 15-24; November 2013; source for EU-Member States: Eurofound (2014); for the other countries OECD-Statistics.

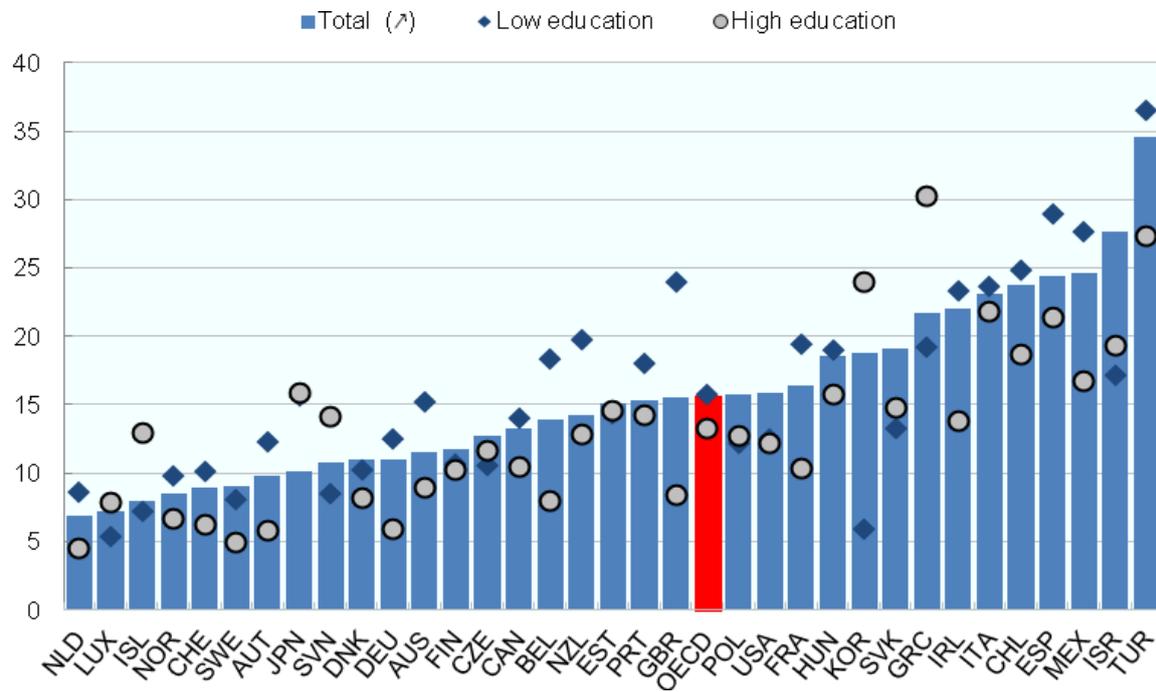
(2) NEET = Youth 15-24 neither in employment nor in education or training as percent of youth population aged 15-24; year 2012; source for EU-MS see (1); * OECD, Education at a Glance 2014.

(3) Unemployment rates of adults aged 25-74, source see (1).

(4) = (1)/(3), i.e. proportion of youth unemployment in relation to adult unemployment.

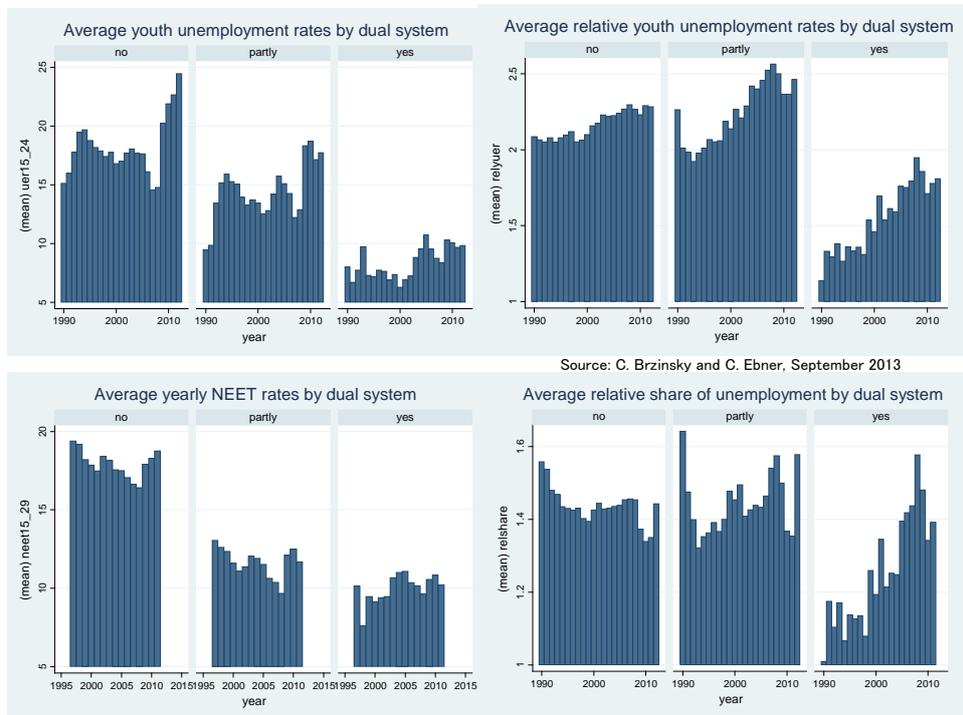
(5) NEET = Youth 15-29 neither in employment nor in education or training as percent of youth population aged 15-29; year 2012; source for EU-MS see (1); * OECD, Education at a Glance 2014.

Figure 3A: Youth-NEET-Rates (15-29) in OECD Countries According to Educational Attainment



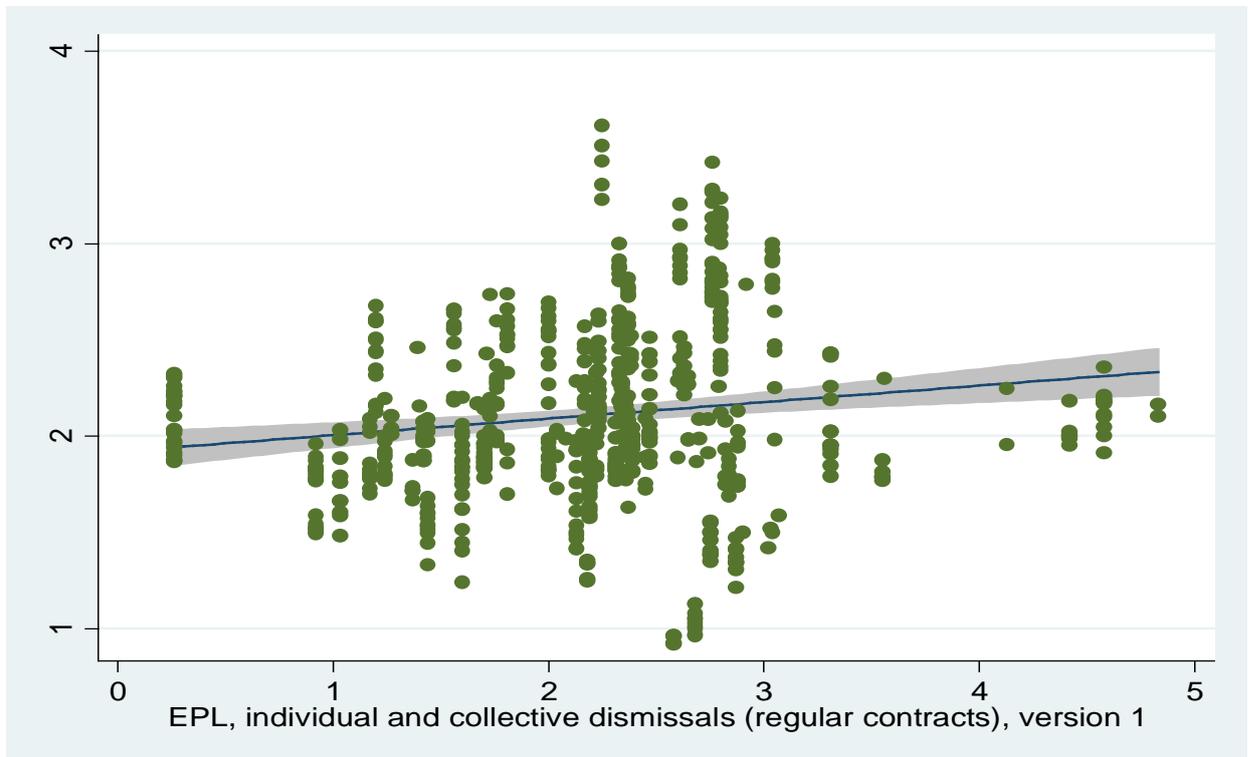
Source: OECD 2014: Education at a Glance

Figure 4A: Average Youth Unemployment Rates, NEET-rates, Average Relative Youth Unemployment Rates, and Average Relative Shares of Unemployment by Dual Systems of Learning in OECD-Countries 1990-2012



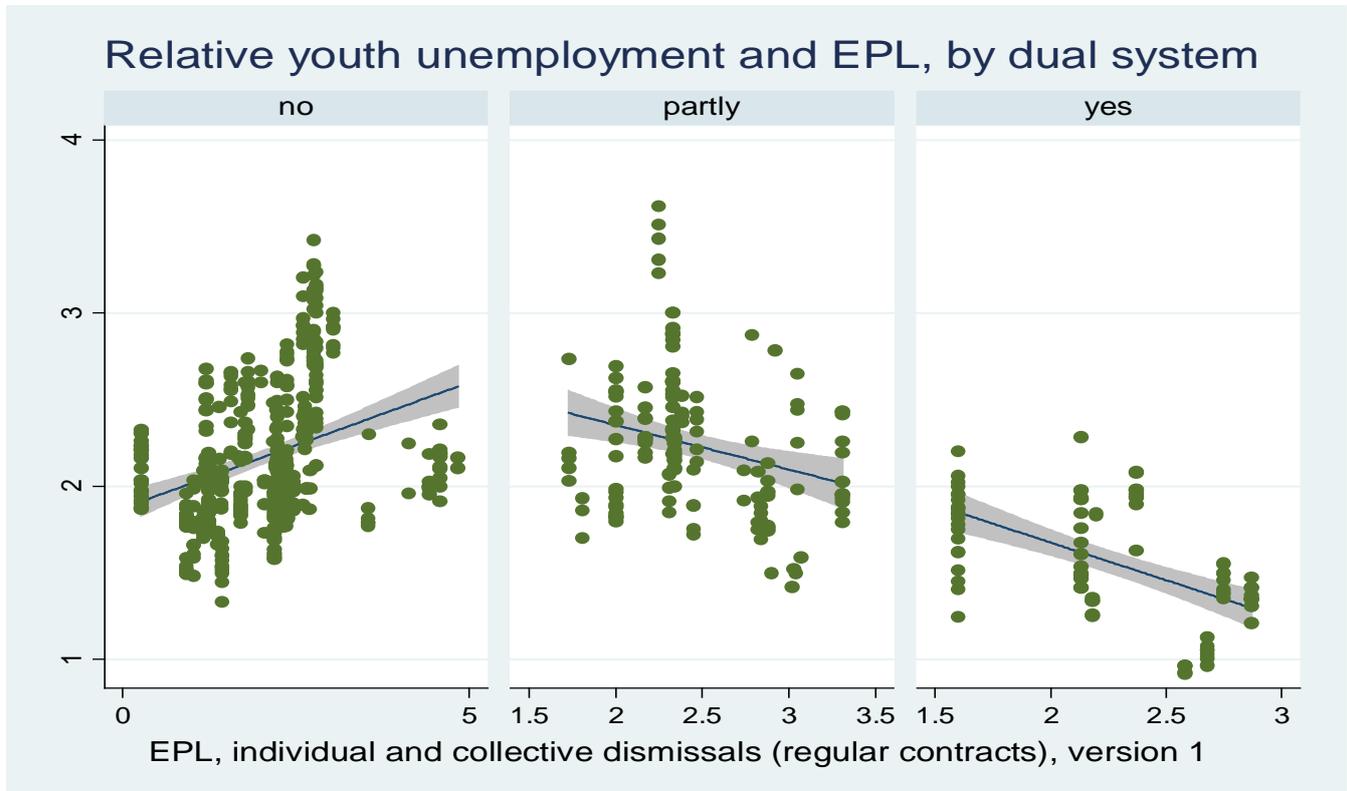
Source: Brzinsky-Fay and Ebner (2013).

Figure 5A: Employment Protection and Relative Youth Unemployment: A First Glance



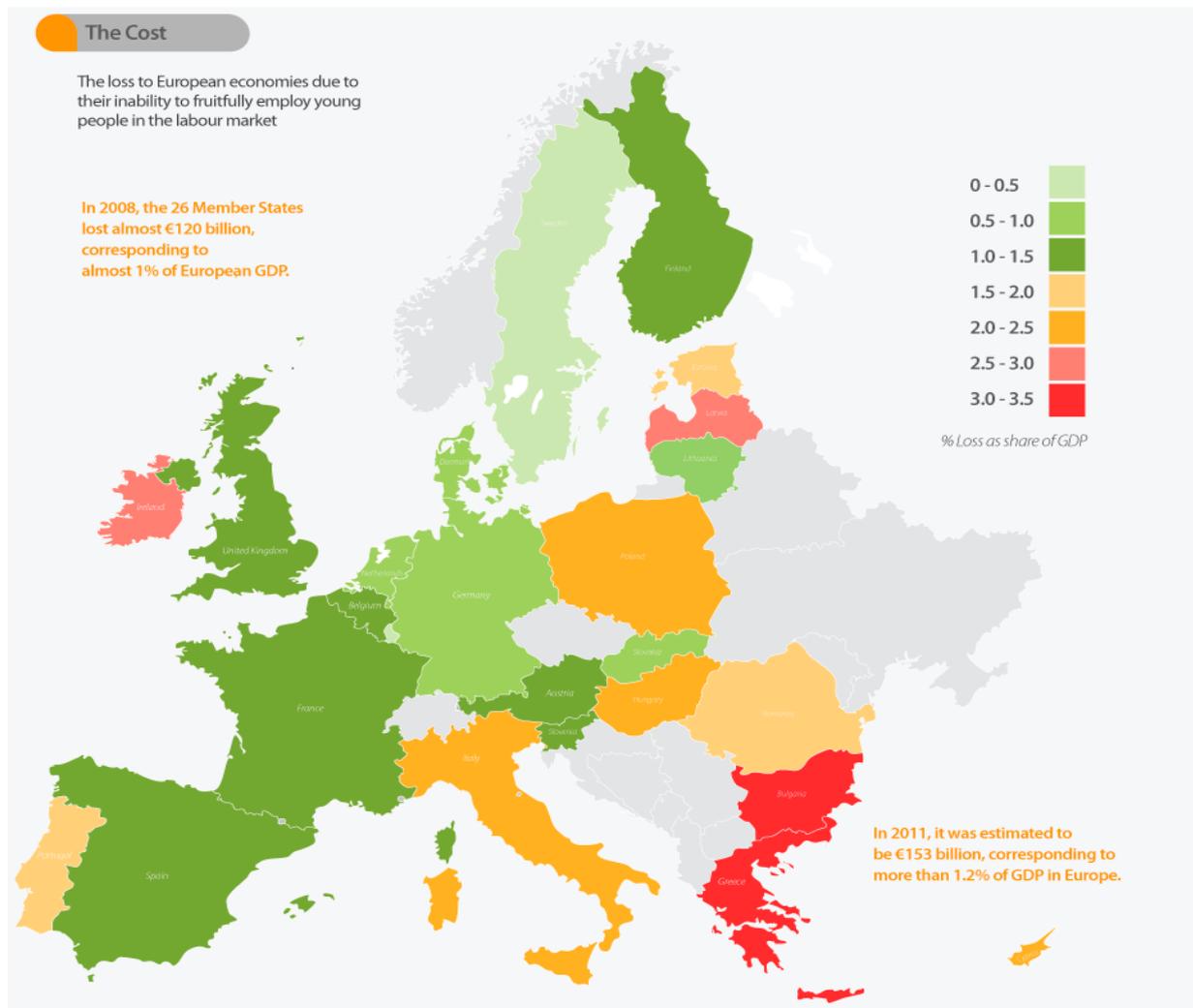
Source: Brzinsky-Fay and Ebner (2013).

Figure 6A: Employment Protection and Relative Youth Unemployment – A Second Glance



Source: Brzinsky-Fay and Ebner (2013).

Figure 7A: Economic Costs of NEETs in Europe as share of GDP, 2011



Source: Eurofound 2012: 80 (Note: Figures in the text relate to the most recent calculations by Eurofound 2014; the country structure remains the same).