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Skills Strategies for an Inclusive Society | JOHNNY SUNG & CATHERINE R RAMOS

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The role of the state, the enterprise and the worker

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Skills Strategies
for an Inclusive Society:

The roles of the state, the enterprise and the worker

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Centre for Skills, Performance and Productivity

ABOUT THE CENTRE FOR SKILLS, PERFORMANCE AND PRODUCTIVITY, IAL

The Centre for Skills, Performance and Productivity focuses on the impact of skills at work and the implications of this for policy and practice in Continuing Education and Training (CET). In particular, research will be directed to examining the role of skills in enterprises and the relationships between skills and a wide range of desirable workplace outcomes.

Skills utilisation is an important element within this research cluster, as skills utilisation provides a crucial link between skills and many workplace performance outcomes. Another focus of research is to examine the impact of CET's skills provision on the Singaporean workforce.

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Funded by the Singapore Workforce Development Agency, IAL works closely with adult educators, business leaders, human resource developers and policy makers to transform the CET sector.

IAL thus contributes to ensure that CET is an effective strategy to sustain the competitiveness of Singapore and the employability of the workforce.

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INTRODUCTION

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Skills Strategies for an Inclusive Society compiles new ideas and fresh perspectives on how the skills policy in Singapore can be strengthened in order to advance and promote an inclusive society. Inclusiveness, a multidimensional concept as Amartya Sen conceived it, goes beyond poverty reduction and income distribution. It includes the social outcomes of social cohesion, well-being, equal opportunities, equitable sharing of economic growth and creating more 'better' jobs. The worldwide clamour for inclusive societies came from increasing absolute poverty and the growing trend of income inequality in many countries. In OECD countries, for example, the average income of the top 10 percent is nine times that of the poorest 10 percent (OECD, 2011). In Singapore, the income ratio of the top 20 percent to the bottom 20 percent was 12 to one in 2012 (Bhaskaran et al, 2012) and its Gini coefficient[1] was 0.478 in 2012 (Singapore Department of Statistics, 2013) compared to the average 0.316 in OECD countries. Also, when it comes to wealth concentration, the top one percent in most countries holds a much larger percentage of wealth in the economy than the lowest 50 percent holds (United Nations Conference on Trade and Development [UNCTAD], 2012). Other forms of inequality were observed in terms of high unemployment in developed economies, underemployment in developing countries, lack of social mobility, increased disadvantaged groups, and the growing incidence of low quality jobs.

[1] Gini coefficient is a measure of income inequality ranging from zero to one, where zero means everyone has the same income while one means all income goes to one person

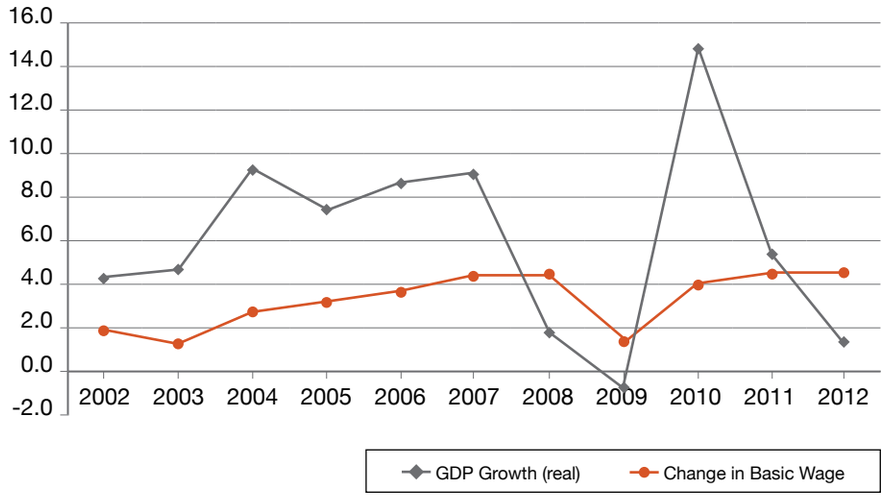
Increasing or high inequality is a serious concern as it poses not only economic challenges for those who are at the bottom, but also threatens social cohesion and political stability as people become more dissatisfied with their economic situation. Indeed, some may argue that the recent global financial crisis was attributed to inequality in a sense that top earners received perverse incentives that led to the indebtedness of other income groups. High inequality may also dampen social behaviour like trust and commitment in the government and society, and may cause the proliferation of prejudice and resentment when inequality is seen as creating winners and losers. Rising inequality may also form barriers - such as social capital and other class or wealth advantages, as argued by the authors in this book - causing equal opportunities to be harder to achieve, and suppressing social mobility, as those who have 'more' also have greater resources and better positional goods. The World Bank's 2006 World Development Report cites that a 10 percent difference in economic status between two families in one generation tends to produce an average of four to seven percent difference in the next generation, which implies that one's social situation, family background and group identity influence opportunities.

Another contentious issue facing Singapore is the observation that the fruits of economic prosperity are not shared properly between capital and labour, as large parts of the profits go to capital, resulting in stagnant wages for some groups in society. Looking at Figure 1 below, it is obvious that while the country prospered, changes in wages practically remained the same. Worse is falling wages as noted by Bhaskaran et al (2012) when the wages of unskilled labour like cleaners and construction workers fell from $800 in 1995 to around $650 in 2005. In extreme cases, changes in prices without changes in real wages could cause deprivation if people can no longer afford basic goods and healthcare.

Figure 1: *GDP growth and basic wage change*

The UNCTAD Trade and Development Report 2012 states that:

> A market economy cannot function by relying exclusively on the presumed efficient allocation of resources through flexible markets and flexible prices in all markets including the labour market but to make institutional arrangements that will allow the employers and investors to engage in innovative activities to drive the economy towards higher levels of activity and structural change. Such arrangements include, in particular, measures for the proper functioning of the labour market, of which the most important are: first, linking the growth rate of average wages and, where applicable, the minimum wage to the overall performance of the economy as measured by economic growth; second, adjusting this growth to a target of inflation; and third, ensuring as far as possible, and according to the specific circumstances of each country, that the wage level for similar qualifications is similar throughout the economy and is not left to the discretion of individual firms". (p. 166)



Source: Singapore Yearbook of Manpower Statistics 2013, Singapore Department of Statistics.

The above argument seems to suggest that, in tackling inequality, the roles of different institutions are important. In this book, Chapter Six by Gog, Sim, Ramos, Sung, and Freebody highlights the importance of different social partners working together in advancing the role of Continuing Education and Training (CET) in order to improve low-wage jobs through job quality and skills utilisation. At the heart of this chapter is a proposal of the future shape of the CET sector which aims to tackle the inertia of 'low skilled equilibrium' (LSE) (Finegold & Soskice, 1988). LSE depicts an economic and industry structural environment in which there is little incentive to invest in high skills. The argument in this chapter is to propose a sectoral approach to skills development in which stakeholders (e.g. employers, trade/professional bodies, regulators, trade unions and training and qualifications providers) form a sector skills plan which also defines roles for the respective partners. Whilst the existing CET approach to skills development is via the individual firms, Gog et al argues that a high-skilled ecosystem can only be possible via involvement of the sector. The reinforcing roles of the various institutions and stakeholders are to change the behaviour of the sector and the cost-benefits of investing in high skills. The reader may notice that in building a 'local' model, there are elements of 'lessons' from other countries in Gog et al's model, e.g. the concepts of vulnerable groups,

employment and income risks, skills building for both individuals and firms, and sectoral stakeholders' joint efforts to recognise skills and the rewards for skills. The other thing to note is that while the notion of a sectoral approach is not new in Singapore, to build skills and higher rewards for skills as the central linchpins in constructing a sector skills strategy is new. This will potentially give the CET sector a greater influence on the inclusion agenda.

A number of studies have identified the forces behind the growth of inequality as well as its consequences. For example, the World Bank released its 2006 World Development Report on Inequality and Development, and OECD took a detailed look at the inequality data when it released a publication in 2008, Growing Unequal? Income Distribution and Poverty in OECD Countries. This was followed by Divided We Stand: Why Inequality Keeps Rising in 2011. In OECD's recent publication (OECD, 2013), data shows that poorer households have suffered more and gained less in recent times - the average income of the top 10 percent households in OECD countries in 2010 was similar to that in 2007 while the income of the bottom 10 percent in 2010 was lower than that in 2007 by two percent per year. Also the top 10 percent has done better in terms of changes in incomes than the poorest 10 percent in 21 countries. The 2011 OECD study has identified that the trends in technology, policies (regulatory reform) and education were the key drivers of change in wage inequality and employment in OECD countries. The 2011 OECD findings are important for the purpose of the current book and the focus of debate that we want to create. If we can trace the sources of inequality to the impact of technology, policies and education, this may suggest that any improvement in equality can only come from some fundamental structural change. Education alone

may not be enough. This is highly consistent with the sectoral approach to future CET proposed by Gog et al.

There is so much talk about the Nordic model. Thus, we start with a discussion on the Swedish model in Chapter Two. Dominique Anxo examines the interlinkages of the institutions in Sweden, covering the political context, flexicurity, generous family policies, education and financial aid system, and how these societal elements help in limiting social inequality in terms of educational attainment, wages and the gender gap. For example, the Swedish educational system is characterised by a lack of 'dead-end' routes, with opportunities for individuals to finish an education qualification through adult education with free tuition and study allowances. In particular, as Anxo shares, the generous education aid for students amounts to €1030 per month while the calculated out-of-pocket cost of higher education is estimated at €410 per year.

Another interesting feature of the Swedish system is the right to training leave (Individual Training Act) with a full employment guarantee and financial aid and stipends. This law aims at improving social and occupational mobility and access to education for employees with the lowest level of compulsory education. The principle of adult education, as Anxo points out, is that more resources go to those who need it most - those who do not yet have eligibility to higher education and those who need to strengthen their position in the labour market. Another aspect that has helped in limiting social inequality is the flexicurity system. It is a unique system in Sweden where social partners (e.g. unions and employers) are heavily involved in developments of vocational training, labour market adjustments

and wage setting. The Swedish education and training system is part of a much wider social welfare system that is different from Singapore's social support system. However, the notions of individual mobility, tripartite efforts for lifelong learning, reduction in employment and income risks are all worthy considerations for the future CET system in Singapore.

In Singapore, the inclusive growth strategy is built around the notion of work, especially higher value and more productive work. Thus, Mr Tharman Shanmugaratnam, Singapore's Deputy Prime Minister and Minister for Finance, emphasised that "the government's inclusive growth policy is about training, not social transfers (Cai, 2012)". The adoption of various workfare schemes aims to help people to find meaningful jobs and earn adequate wages to support themselves. Training is a key element in these schemes. Under the workfare banner, initiatives such as the Workfare Bonus Scheme and the Income Supplement cost the government about S$840 million between 2006 and 2008, while the Work Support Programme to help low-wage workers/ job seekers to upgrade skills and better employment cost the government about S$33.4 million in the same period[2]. Financial assistance was also provided to help needy students through a range of schemes including kindergarten assistance and school fee waivers. To assist in upgrading the skills of the adult population, the Singapore Workforce Skills Qualifications (WSQ) system was developed to keep workers competitive and employable by providing the skills training frameworks and generous training funds for workers to tap into.

In 2010, another scheme called the Workfare Training Support Scheme was implemented to encourage and help older, low-

wage workers (defined as 35 years and above and earning not more than S$1700 per month[3]) participate in training by providing a course fee subsidy of up to 95 percent and cash award of maximum $400 per year to employees, and providing absentee payroll[4] to employers of these workers. Whilst these are positive developments, we could learn from other countries that monetary incentives might not last as the 2011 OECD study shows that cash transfers became less effective in reducing income inequality in half of the OECD countries during the late 1990s and early 2000s. Thus, the challenge is to find a holistic and sustainable policy that is effective in promoting inclusivity – helping low-wage workers get out of low-wage work, protect vulnerable workers, and make skills strategies truly contribute to an inclusive society.

Institutions reflect differences in societal preferences in organising economic and social activities. Chapter Three of this book by Margarita Estévez-Abe adopts a case studies approach to contrast the possible reasons for less inequality in some countries as a result of their institutional arrangements. She chose Finland, Germany, Japan and the USA. Though this is strictly not a comparative analysis in the sense that the countries are not examined along the same dimensions, the case studies identify the different internal reasons for the different levels of inequality in the different countries. For example, in the case of Finland, the two

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2 Progress Report of Ministerial Committee on Low Wage Workers 7 June 2009, http://www.moe.gov.sg/media/press/files/2009/06/progress-report-ministerialcommittee-low-wage-workers.pdf

3 In July 2013, eligible monthly salary was changed to ≤ $1,900

4 Absentee Payroll is a grant given to employers when they send their employees for certifiable skills training. Normal funding rates during and after office hours is 80 percent of hourly basic salary capped at $4.50 per hour or $7.50 for small-medium enterprises.

most significant factors in reducing inequality are the institutional mechanism that creates the conditions for 'wage compression' in society, and big investments in early childhood education.

Finland provides an interesting example of the approach prevalent in the Nordic countries. Estévez-Abe argues that: "When the overall educational levels are high as in Nordic countries, setting wage floors for the most unskilled jobs—a small percentage of jobs in such an economy—might be an acceptable and viable form of building an inclusive society. […] It is worth noting that the Nordic countries possess a kind of implicit pact between the citizens and the government. The government invests in its people, takes a big share of its citizens' earnings, then reinvests and redistributes." (p. 62)

Germany comes close to providing a good example of a high wage economy which relies on its ability to create high value-added jobs in the manufacturing sector. However, Germany is increasingly experiencing a core-peripheral distinction amongst its workforce. Inequality is on the rise. Both Japan and the USA are used as examples to illustrate rising inequality. The basic message of this chapter is that the market on its own is unlikely to provide any automatic mechanism to stop wages from diverging. Wage compression would require a much more consensual socio-economic system that is willing to adopt wage policy, sectoral agreements and employment protection. This would require a huge amount of cultural-political prerequisites. Half-hearted measures are unlikely to succeed, as the various institutional mechanisms need to be reinforced by each other before they become effective.

Wiemer Salverda continues with the discussion in Chapter Four but focusing on the European Union's (EU) work on developing skills strategies and inclusive societies with particular attention to the vulnerable groups who have lower levels of education and occupations. He points out that in the different EU countries, one of the most important community efforts is to clarify the role of education in social inclusion. Those countries that are doing better in improving social inclusion are also the ones that have a clear set of policies targeting specific inclusion issues and vulnerable groups. An interesting or rather a worrying finding is that the low-educated have been threatened by more competition from the medium-educated for elementary jobs. This happens because tertiary and medium-educated individuals are increasingly not able to get jobs at their own level. As such, they look for jobs at lower levels thus increasing the competition in the low skill labour market.

Salverda also points to the need to strengthen the articulation and targeting for skills and inclusion in EU policies, keeping in mind the significant changes in the structure of labour markets and agents' behaviour. In this respect, Salverda also looks at the need for social partners (e.g. educators, trade unions, voluntary groups etc.) to build an effective institutional base for effective delivery. Interestingly, he also recognises that building institutions alone may not work. There is also the need to change individuals' behaviour.

Chapter Five by Vincent Chua forms a 'local' perspective on inequality in Singapore in the light of the different ideas coming from abroad. He highlights what he thinks has been missing in

the discussion from the previous chapters which predominantly focus on the macro conditions driving inequality. He argued that micro conditions also affect inequality in the society, e.g. network (or social capital) has a part to play in driving inequalities in Singapore society. Upon discussion of how certain mechanisms such as exploitation, opportunity hoarding, emulation, and adaptation which are anchored in organisational settings such as workplaces and schools may result in driving and reinforcing inequalities, he proceeded to cite local surveys and his own research showing evidence of social segregation in education and patterns of network and ethnic segregation. Though networks may have resulted in increased social inequality, he argued that reconfiguring it may also result in reducing inequality by bridging disparate groups because intergroup mixing is especially helpful for subordinate groups. He argued for the need to reduce social polarisation created by overly exclusive networks in reducing economic polarisation.

The need to go beyond macro policy is elegantly put forward in the conclusion: " … a subterranean level of routine interactions between bosses and workers and between job seekers and their contacts constitutes an important arena for the amplification and attenuation of income inequalities. It is here that current skills policy is weakest and most ad-hoc (e.g. mentoring, workplace harmony). The hard side (e.g. building skills and competencies) is catered to conscientiously, while the soft side (e.g. social integration, mixing of groups) is left to chance." (p. 104)

Chapter Seven by Irene Ng examines how the education system has effects on intergenerational mobility. She pointed out that studies show school differentiation, streaming and different

pathways lead to lower mobility; and that mobility is positively related to publicly-run rather than privately-run education systems, and to progressive spending such as more spending on low-income students (see page p. 148). Ng also highlights that mobility research suggests that increasing differentiation reduces mobility and that streaming increases inequity in student achievement without clear effects on raising average performance (see page p. 150). She offered three plausible explanations for this education effect on mobility by drawing from social theories, namely differential resources, differential labels and differential networks.

Ng contrasts the education system and situation in Singapore with the Finnish system. Both Singaporean and Finnish students have done very well in OECD's Programme for International Students Assessment. While Singapore's education system emphasises differentiation and streaming in developing talent, Finland emphasises equity and postponed streaming. Ng argues that differentiation causes segregation, labelling, and unequal resource allocation. To some extent, Ng's thesis is similar to Chua's argument, though the angle here is mobility and not networking. However, it is not difficult to see how the two concepts overlap, and that social systems have a tendency to reproduce themselves. To achieve a different social outcome, Ng calls for less differentiation and more collaboration instead of competition among schools to avoid undermining the educational role of developing enlightened citizenry. Ng argues that after spending 16 to 18 of one's formative years in a competitive and segregated environment, it is hard for the students to start being collaborative and integrative in approach later in life. Her chapter has reminded us that CET has a role to play in levelling up by moving from

skills-specific to person-centred, to take into consideration the different and many barriers to training and employment.

The last chapter in this book provides a practitioner perspective on the role of CET and inequality. Ong, as former Chief Executive of the Singapore Workforce Development Agency, and later the Deputy Secretary-general of Singapore's National Trades Union Congress, offers his own view of the role of the CET sector and its future direction.

Ong believes that to improve equity, redistribution through taxation and welfare is not the way forward. Instead, empowering individuals is the most important task for public policy makers. In addition, while training for adults is important, training has to go beyond basic skills, and begin to value craftsmanship - what he calls 'individual mastery'. The role of the CET system is to support the development of mastery through subsidised training. He also argues that mastery means codifying knowledge and skills, as well as forming guilds and associations to support the codification of skills. This will strengthen the position and continuation of skills in industry. The end result, as he argues, is to enable a greater return to skills. Notice that while Ong asks the various industries to re-value skills, especially through greater mastery that workers can offer, his main advocacy is to change the emphasis of skills development.

CONCLUDING REMARKS

A recent OECD report makes the following statement (OECD, 2012, p. 3):

> Skills have become the global currency of the 21st century. […] But this "currency" depreciates as the requirements of labour markets evolve and individuals lose the skills they do not use. Skills do not automatically convert into jobs and growth.

'Skills do not automatically convert into jobs and growth' is a clear admission that we need to re-think our conventional understanding of the relationship between skills and economic outcomes. Gone are the days where such a relationship tended to be more linear and unproblematic. In the process of improving the impact of skills on issues such as low wage, job quality and inequality, we would have to assess how skills may make a difference in a more complex environment.

Another challenge for the readers of this book is that conventional thinking on the relationship between skills and economic outcomes tends to be constructed around the individual and the firm. The chapters in this book try to address the same issue at the 'system' level. Thus, it is important to think about how skills can secure a higher value within the economic pie. How can we strengthen the impact of qualification and job design in the workplace via a sector skills strategy? How can we overcome the consequences of unevenly distributed social capital? What are the roles of the different stakeholders in a 'high-skilled' ecosystem?

Are the policy challenges for improving inter-generational mobility different from the policy needs for an inclusive society? All these questions reflect the complexity that the future CET system needs to grapple with. What is clear is that for any improvement to take place, the skills sector cannot act alone. The use of a sector skills strategy is one way of tackling the problem from the system perspective. However, that is not the only way. Through reading

the various contributions by scholars in and outside Singapore, we hope the readers may come up with other ideas. Failing that, if the readers can gain a better insight of the problem, then we are halfway to fulfilling the purpose of this book.

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FLEXICURITY AND LIFE LONG LEARNING: THE SWEDISH EXPERIENCE

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INTRODUCTION

Often presented as the ideal Nordic social democratic regime, the Swedish welfare state emphasises the principles of universalism, egalitarianism and individual rights. Sweden is in effect renowned for providing a societal system that incorporates a number of factors: high employment rates for both men and women, and for older workers; strong welfare support systems, including extensive and generous policies to support families; and high job quality, incorporating egalitarian wage structures and a low gender pay gap. To a considerable extent, this situation and the good employment record experienced in the Swedish economy during the last two decades can be ascribed to the specificity of the institutional set up in the Swedish industrial relations system. Traditionally, and in line with the core elements of the Swedish model, economic downturns and structural changes have seldom been accompanied by measures to protect jobs. Therefore during the current recession, employment adjustments in Sweden essentially have taken the form of external numerical flexibility combined with active labour market and training policies, and relatively generous income support, illustrating

well the specificity of the Swedish flexicurity system (negotiated flexibility). The specific features of the Swedish industrial relations system, which is characterised by a relative balance of power between the two sides of industry, has also meant that, unlike in other European Union (EU) member states, the costs of the 1990s and current recession have been more evenly distributed between socio-economic groups, thereby preserving social cohesion and limiting social exclusion.

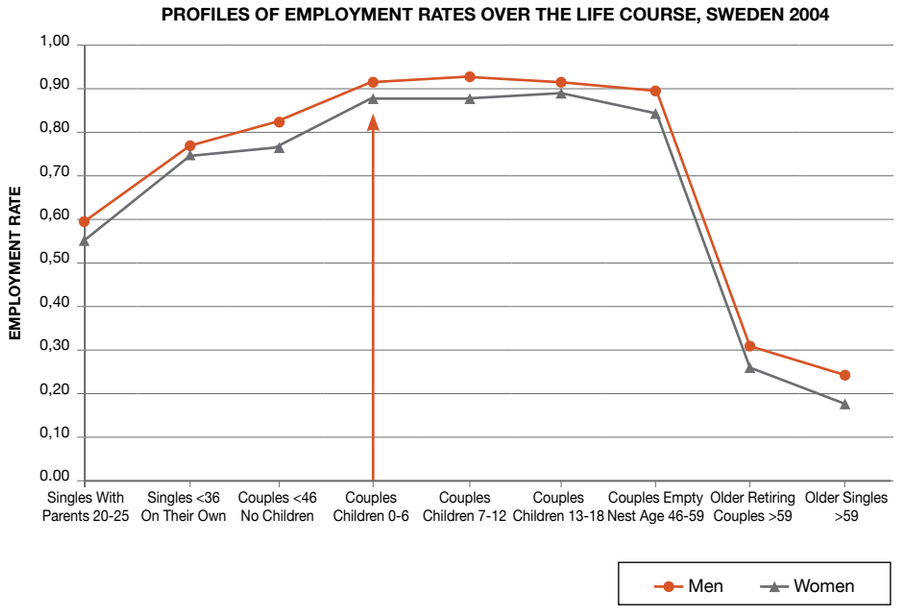
This article is structured as follows. After a short presentation of the main characteristics of the Swedish model and flexicurity system, the first section focuses on the main features of the Swedish skills and educational system, in particular the extensive life-long learning possibilities to adapt skills to changing labour market conditions. Section two describes recent policy reforms initiated to enhance the transition from school to work by a reform of the vocational training system and the gradual introduction of a dual apprenticeship system. Special attention is also paid to the relation between the distribution of skills and educational attainment on one hand, and wage structure and income distribution on the other (section three). Finally, the last section provides some concluding remarks.

THE SWEDISH MODEL AND THE SWEDISH FLEXICURITY SYSTEM

Main Features and Key Facts

The Swedish model is founded on a strong political commitment to the goals of full employment and price stability, and to egalitarian ideals (Anxo & Niklasson, 2006). Sweden stands out as providing a societal system based on high employment rates with only a small gender gap[1], a high incidence of dual-earner households, extensive and generous family policies, strong welfare support systems both for childcare and parental leave, and egalitarian wage structures, including low gender wage inequality.

Figure 1: *Employment profiles across the life course, Swedish men and women*



Source: Anxo (2010)

To a considerable extent the good employment records experienced by the Swedish economy during the last three decades are clearly related to the creation of a modern welfare state, a strong public involvement in the financing and provision

[1] In 2011 the Swedish population amounted to 9,532,000, the labour force (20-64 years old) was in the same year 4,730,000 and the male and female employment rates were respectively 82.8 and 77.2 percent (Statistics Sweden 2012).

of healthcare, social care and education, and the related expansion of public employment. Individualised taxation systems in a context of high average and marginal tax rates reinforce the dual breadwinner model. As far as working time is concerned, some gender differences persist with a relative high share of women working part-time, but in contrast to other member states with high part-time rates like the United Kingdom (UK) or the Netherlands, many mothers in Sweden work long part-time hours (25-34 hours). Part-time work in Sweden must be considered more as an historical transition from married women's inactivity towards a strategy, largely initiated by labour market and political institutions, to strengthen women's labour market commitments. A generous and flexible parental leave system[2] allows for income-compensated temporary reduction of working time, thereby reinforcing women's bargaining power and their status as significant breadwinners even when they are temporarily not participating on a full-time basis in the labour market. The overall political context characterised by gender mainstreaming, high female involvement in the political process and institutions (government bodies, parliament and labour market organisations) creates also a favourable institutional set-up conducive to a more balanced gender division of labour and responsibilities over the life course.

[2] The Swedish parental leave programme, introduced in 1974, has obviously sustained the growth of female labour participation and contributed to the changes in women's behaviour in the labour market. Since then women have ceased to withdraw from the labour market and the employment rates of mothers with children less than seven years old are among the highest among OECD countries. The parent leave system is associated with a full employment guarantee and the employment contract is not suspended during the work absence. Parental leave is paid for 480 days, shared between mother and father, with 60 days reserved for each parent. Fathers are also entitled to 10 extra paid days of leave when the child is born. The income compensation is 80 percent of previous earnings for the first 390 days and SEK 180 per day for the remaining 90 days. The law also enables parents to take paid care leave for sick children (60 days per year and per child, up to the child's 12th birthday compensated at the same replacement rate as sickness benefit, i.e., 80 percent of previous earnings).

The Constitutive Elements of the Swedish Flexicurity System

The concept of flexicurity is a broad concept covering areas such as labour legislation, labour market policy, social protection system and skills development. The flexicurity approach can be considered as a policy strategy aiming at "enhancing the flexibility of labour markets, work organisation and labour relations on the one hand, and to enhance security – employment security and social security – notably for weaker groups in and outside the labour market, on the other" (Wilthagen & Rogowski, 2002, p. 250). According to this definition, it appears that flexicurity and negotiated flexibility are two central components of the Swedish model.

The crucial role of social partners and social dialogue

One of the basic fundamentals of the Swedish Model is a strong contractual tradition based on the existence of powerful social partners enjoying considerable autonomy from the public authorities. Social dialogue is institutionalised and well developed; regular consultations are held with the social partners and are considered as key elements in the government's actions on issues relating to education, training and employment. In particular the social partners have been, and are, heavily involved in developments regarding vocational training. The Swedish Model is also characterised by the crucial role played by the social partners in mechanisms for regulating the labour market and wage formation. Swedish labour law is limited in comparison with labour legislation in other EU member states and it is for the most part 'optional', that is to say most provisions of labour market legislation may be, wholly or partly, amended by collective agreements. This distinctive feature, coupled with high union

density[3], gives rise to considerable leeway for the emergence of negotiated flexibility at the local or company level, and makes it possible to better adapt the regulatory framework (statutory law) to firms' productive constraints and workers' preferences with regards to working conditions.

As an illustration of flexicurity arrangements, the Swedish social partners have negotiated a "security/adjustment" agreement in order to help workers who have been given notice to rapidly find new jobs by way of adjustment measures[4] and financial support. By supplementing the role of public employment agencies, these agreements, covering about half of the labour force, contribute to improving the security of employees and to enhancing efficiency and geographical and occupational mobility in the labour market. These agreements reinforce also the social legitimacy and the positive attitude of trade unions towards structural changes.

Active labour market policy

The second central component of the Swedish flexicurity system is active labour market policy (ALMP). Since the early 1950s, labour market policy has been an integral part of the Swedish stabilisation policy and has played a crucial role in maintaining a high level of employment and economic growth, by easing the redeployment of workers from low to high productive sectors. Swedish labour market policy is comprised of a fairly generous unemployment

[3] Around 75 percent of the labour force is unionised. The coverage rate of collective agreement amounts to 90 percent in the private sector and 100 percent in the public sector (State and local authorities)

[4] It can be anything from simple advice, such as how to improve a CV, to more far-reaching measures, such as changing occupations through re-training or starting a business.

insurance system that supports the individual whilst unemployed, plus a large range of active labour market programmes. One of the salient features of the Swedish Model has been the emphasis on active labour market policy (activation). The preference for the principle of employment promotion programmes has always dominated over benefit options for the unemployed. The early 1990s were notable for a sharp deterioration in the employment situation with unemployment rising to its highest level since the 1930s (almost 10 percent in 1994). The early 1990s saw also a re-orientation of the ALMP emphasising measures designed to improve efficiency and develop occupational and geographical mobility[5]. The number of participants on vocational training programmes and/or practical insertion courses rose quickly, while traditional measures focusing on labour demand remained at a much lower level than during previous recessions (Anxo & Niklasson, 2006). During the period 1997-2002, the Swedish Government also implemented a new major adult education programme called the "Adult Education Initiative" or "Knowledge Lift" (KL) with the explicit objective of raising the skill levels of low-skilled workers to a level of a three-year upper secondary school qualification. Participants were eligible for the same grants and loans as for ordinary adult education, and special education support was given to participants receiving unemployment insurance benefits. The size of the programme

[5] The network of local employment agencies provides support for job search in the form of job-broking, counselling, coaching and intensified job search programmes. It should also be noted that the unemployed job seekers have the right to be enrolled in ALMP schemes after an unemployment period of six months (three months for young people 20-24 years old), limiting the extent of long-term unemployment. By international standards the share of long-term unemployed remains low in Sweden. In 2011 the unemployment rate in Sweden (20-64 years old) was 6.6 percent and the share of long term unemployed (more than one year) was, at the same date, 20.8 percent.

was unprecedented: in the period 1997-2002 more than 10 percent of the labour force was enrolled in KL[6]. An evaluation of the outcomes by Albrecht, van der Berg, and Vroman (2004), shows that the impact of KL on the probability to obtain an employment was on average significantly positive.

During the current recession (2008-2011), the volume of participants in the various ALMP programmes was also gradually increased and supply-oriented and matching measures were emphasised, in particular a better monitoring of search activities. In the aftermath of the global economic crisis the Swedish Government also increased the number of places in post-secondary vocational training, in upper secondary education for adults, as well as the number of places in universities and university colleges. The Government also extended possibilities for early school leavers to complete educational attainment by participating in training programmes.

The growing role of matching measures and vocational training in ALMP during the last two decades is therefore evidence of the importance that successive governments and the social partners have given to occupational mobility and to the development of skills over the life course. The re-orientation of ALMP towards traditional labour market training and adult education can be, therefore, considered as an attempt to upgrade the skills of the labour force in light of the extensive re-structuring that the Swedish economy has experienced during the 1990s.

[6] To illustrate, in 1999 a maximum of 228,000 persons were enrolled in the KL programme. As a comparison the number of pupils in regular upper secondary schools was 300,000 in the same year.

THE SWEDISH EDUCATIONAL AND LIFE-LONG LEARNING SYSTEM

General Features

The Swedish educational system comprises four major components: compulsory primary school (7–16 years old), voluntary secondary school (16–19 years), university or university colleges, and adult education. Since the mid-1960s, Sweden has provided nine years of free compulsory education starting from age seven. All children basically follow the same curriculum. Upper secondary school is voluntary and offers several programmes ranging from vocational training to general theoretical programme which prepare pupils for further studies at the tertiary level[7]. The Swedish vocational training system is school-based and fully integrated into the general educational system (upper secondary schools). The Swedish educational system is also characterised by a relative lack of educational dead-end[8]. Another feature of the Swedish skills regime is that the Swedish educational system has up to now maintained a weak differentiation between vocational and general education. Swedish youth may apply for tertiary education after having completed three years of high school. Swedish universities and university colleges are primarily public, tuition-fee free and administrated by a central government agency. In order to reduce credit constraints and enhance equal opportunities, all students admitted to a university or adult educational programme are eligible for a state-subsidised student

[7] During the school year 2010/2011, the share of pupils in high school following a vocational training programme was 38 percent.

[8] All pupils in vocational programmes in secondary schools have, according to the Educational Act, the opportunity to meet basic eligibility for higher education.

financial aid programme. The financial aid system comprises two parts: a grant system and a public subsidised loan. The Swedish grant system is universal with low interest rates (2.1 percent in 2010) and favourable conditions for reimbursement (annuity of four percent of previous earnings). It is open to all students (20–54 years old) attending a college, university or adult primary or secondary educational programme. The duration of the financial aid is limited to 240 weeks (12 semesters) for college and university, up to 120 weeks for adult upper secondary schools and up to 100 weeks for adults who need to complete compulsory education. In 2011, the state financial aid amounted to around €1030 per month (grants - 35 percent and loans - 65 percent). The free tuition and the widespread availability and use of Sweden's generous system of student loans mean that Swedish students face by far the lowest out-of-pocket costs for higher education – about €410 per year. Effectively, this means that the short-term financial constraint for Swedish students is, by international standards, low.

Over the past ten years there has been little change in school enrolment rates in compulsory school while those for upper secondary school have increased significantly. In 2011, 98 percent of each cohort was enrolled in upper secondary schools. During the late 1980s the university enrolment rate started to increase after having fallen continuously during the previous decade. When the youth labour market deteriorated in the early 1990s, the university enrolment rate also increased as a consequence of significant expansion in the volume of slots at the public universities. Also worth noting is the fact that in Sweden a large share of young people do not enter university or university college directly after completing their secondary school but work first or take a period of leave before enrolling in higher education. In 2011, the median

entry age into tertiary education was 22.7 years, and the median age of graduation 27 years old, a figure clearly higher that the The Organisation for Economic Co-operation and Development (OECD) average. One of the major features of the development of the youth labour market during the last two decades has therefore been the gradual postponement of entry into the labour market and a longer transitional phase from the educational system into the labour market[9].

Another characteristic of the Swedish educational system is the considerable opportunity to complete educational attainment through adult education. Students aged 20 years and above who fail their upper secondary school have the opportunity to go back to school within the extensive adult educational system[10]. Participation in those programmes is tuition free and students receive study allowances.

In order to better meet labour market and skill needs and improve the quality of the educational and training system, several *educational reforms* have been undertaken since the mid-2000s giving more emphasis to vocational training and apprenticeship programmes. In particular, the reform of the pre-school educational system[11], aimed at creating a closer integration of pre-schools into the overall educational system, appears to be an important step for enhancing the coherence and quality of the Swedish

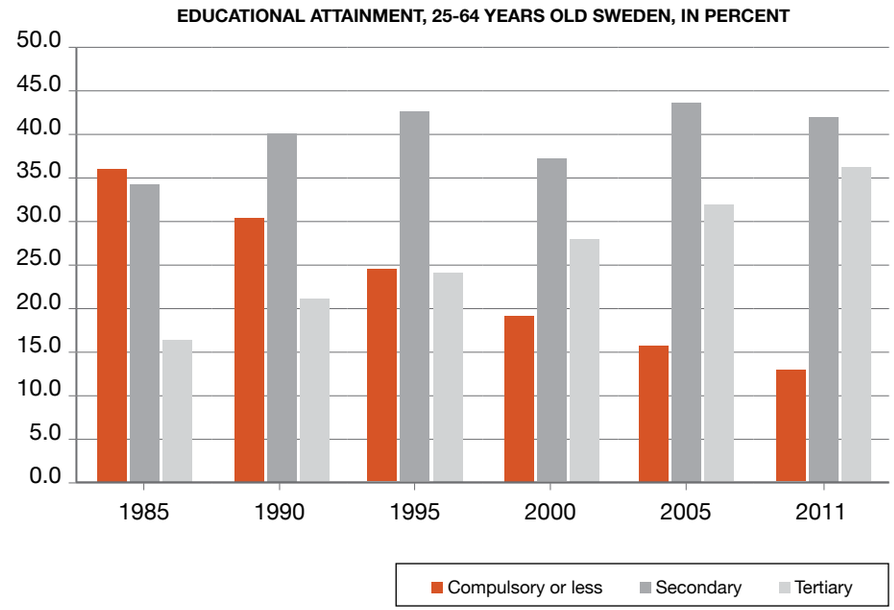
9 The average entry age into the labour market was 20 years in 1990 and it is almost 28 years today.

10 While Sweden's high youth unemployment rate is above the EU average, the share of young people not in employment, education or training (NEET) is significantly below the EU average (in 2008 8.4 percent for 16-24 years old).

11 Since 1995, Swedish local authorities have been obliged to offer pre-school activities and childcare. In 2011, the enrolment rate for children aged 1-5 years was 83 percent, and 94 percent for children aged 3-5 years.

educational system. The second strand of measures has been the introduction of earlier national tests for young pupils, combined with the introduction of individual study plans, in order to identify at an early stage, deficiency in basic knowledge and to prevent early drop out from the educational system. A major upper secondary reform started also in autumn 2011 with an increased emphasis on vocationally oriented subjects in high school. The Swedish Government intends also to enhance the quality of vocational training through closer cooperation, at the local level, between high school authorities and social partners (employers, unions and so on). In order to better prepare students for working life, a permanent apprenticeship programme was introduced in 2011 as a standard course of vocational studies in upper secondary school, indicating the intention of the current Government to move from mainly school-based occupational training regimes towards a vocational training system with a stronger component of workplace-based training. Based on evidence from countries with developed apprenticeship systems, like Austria and Germany, the introduction of a permanent upper secondary school apprenticeship programme in Sweden is expected also to significantly ease the transition from the educational system into the labour market and to contribute to lower youth unemployment. The educational attainment of the Swedish population is significantly higher than in most EU member states and OECD countries. In 2011, more than 45 percent of the adult population (25-64 years old) had upper secondary education and almost 40 percent had tertiary education (See Figure 2). During the school year 2010 to 2011 almost 45 percent of young persons aged 19-26 years were enrolled in tertiary education in Sweden or abroad (Swedish Agency for Higher Education, 2012).

Figure 2: *Educational attainment, 25-64 years old, in percent*



Source: Statistics Sweden (2012)

Looking at the distribution of educational attainment by gender, women nowadays have a higher educational level than their male counterparts (See Figure A1 in the appendix upper panel). While younger generations are better educated than older generations (see Figure A1 lower panel) it should be noted that Swedish elderly workers (55-64 years old) have, by international standards, a high level of educational attainment, explaining their good record in the labour market with the highest senior employment rate and the highest average age of exit in EU-27 (respectively 73 percent and 64 years old).

The results from the International Adult Literacy Study show that Swedish adults performed well in terms of literacy and numeracy skills. In a cross-national perspective, not only did Swedes perform well on average, but particularly in the lower tail of the distribution. As stressed by Björklund, Edin, Fredriksson, and Krueger (2004), the fact that the mean level is comparatively high, combined with the fact that the dispersion in achievement test scores for adults is comparatively low in Sweden, suggests that the Swedish educational policy has been successful at raising achievement levels for low skilled workers.

Life-long Learning and Skills Development

Life-long learning has a long tradition in Sweden and has expanded markedly since the end of the 1960s. Life-long learning (LLL) is an integrated part of the Swedish educational and employment system. One feature of the Swedish LLL system is the extensive opportunity to complete or enhance educational attainment after leaving initial education, either through adult education or through various training courses within the framework of labour market policy. At the workplace level, access to on-the-job training or the opportunity for an employee to further develop their skills is an important component of the Swedish LLL system. By international standards, Sweden ranks in a comparatively high position for on-the-job skills development. Development in this area is also largely a matter for the social partners. During the recent decades, successive Swedish governments have also launched initiatives regarding LLL. The National Agency for Education has been commissioned to determine in conjunction with the two sides of industry the syllabuses for general vocationally oriented education as well as advanced programmes.

The basic policy orientation regarding public initiatives in terms of adult education is that resources should be directed to those who have the greatest need for education, e.g. those who have not had the opportunity of obtaining basic eligibility to higher education or those who need education in order to strengthen their position in the labour market.

Since 1974, employees have the right to take career breaks to pursue training or further studies. The legislation on training leave is particularly flexible and gives individuals considerable leeway in their choice of studies. The Individual Training Leave Act has two aims: to encourage social and occupational mobility and to facilitate access to education for employees with the lowest levels of compulsory education. The right to training leave is backed by a full employment guarantee. Access to training leave is also promoted by the above-described Swedish system of public loans and stipends.

Swedish Adult Education (AE) takes different educational forms and is organised by different actors, from national and municipal AE, to labour market training for unemployed persons as well as in-service training and skills enhancement at the workplace. In 2005/2006, Statistics Sweden conducted a comprehensive household survey on the participation of adults in education and learning (Statistics Sweden, 2007).

Table 1: *Participation of adults (25-64 years old) in various forms of lifelong learning (%), by age, gender educational attainment and labour market status, 2005-2006.*

	Formal Learning/ Training	Non Formal Learning/Training	In-service Training
Gender			
Men	76	68	50
Women	76	71	49
Age			
25-34	81	72	47
35-49	77	73	55
50-64	65	64	46
Educational Attainment			
Compulsory Education or lower	51	48	27
Secondary Education	70	67	47
Higher Education	90	84	66
All	**73**	**69**	**50**

Source: Statistics Sweden (2007)

As shown by Table 1, more than 70 percent of the Swedish population aged 25-64 years participated in formal and non-formal adult education over a 12-month period. If formal education is excluded, the participation rate amounted to almost 70 percent. The participation in training is also positively related to the level of educational attainment.

As far as gender distribution is concerned, a larger share of women participated in adult education due to a higher incidence of women in formal education (see Table 1). The gender differences were almost insignificant as regards to non-formal education particularly regarding on-the-job (OJT) training. Around

85 percent of men in non-formal adult education participated in training activities that were closely related to their occupation and professional competences. For around 80 percent of men, these training activities were compensated and took place during their normal working days. The corresponding figures for women were respectively 80 and 70 percent. Regarding formal education, a majority of participants had on average 300 hours training during the last 12 months. Around 20 percent of adults participating in formal training had more than 1,000 hours of training (Statistics Sweden, 2007).

Many Swedish workplaces also provide comprehensive in-service training for personnel at all levels of the organisation. This type of training can involve everything from practical vocational skills to extensive theoretical study. The training can be carried out in cooperation with universities and institutions of higher education, commissioned municipal education, or training companies. On-the-job training at the company level was given to 50 percent of the same underlying population.

WAGE STRUCTURE AND EARNING INEQUALITIES

Since the second half of the 1990s, Sweden has witnessed a clear tendency towards individualisation, differentiation and the decentralisation of wage setting. Although real wages have steadily increased during the past decade, Sweden has also experienced an increase in wage dispersion. The wage dispersion (P90/P10) in Sweden has been increasing from around 1,80 in 1992 to around 2,00 in 2010. As shown by Figure 3 below, there are strong reasons to believe that the tendency toward a more decentralised and individualised wage setting has increased

wage dispersion particularly for high-skilled white collar workers *within* both the public (e.g. state administration, county councils in charge of the health sector) and private sectors. As also shown by Figure 3, wage dispersion at the municipality level, responsible for the provision of education and social care (e.g. elderly care, support to disabled and disadvantaged groups) has during the last decade been almost unchanged. Part of this stability in wage dispersion might be ascribed to the more limited individualisation in wage formation between manual and low skilled/educated workers. The global but limited increase of wage dispersion in Sweden during the last two decades might also be ascribed to the change in the skills composition of the labour force. The long-term decline in low-skilled jobs and the concomitant increase in high-skilled jobs witnessed during the last two decades largely explains this increase in wage inequalities, since wage formation among high-skilled occupations is more individualised and differentiated[12].

[12] Between 1993 and 2003, around 600,000 unskilled and low-paid jobs have been destroyed in Sweden.

Figure 3: *Development of wage dispersion (P90/P10) in the private and public sector (state, municipalities and county councils), 1992-2010.*

Source: Mediation Office (2012)

It should also be stressed that in contrast with other countries with highly decentralised and individualised bargaining systems such as the UK and the US, strong and powerful trade union organisations and high union density at the company or organisation level in Sweden have led to the implementation of negotiated forms of individualisation and differentiation. It should also be noted that in spite of the increase of wage dispersion, wage and income inequalities are far less than, for example, in the US and the UK. Besides a more balanced power between the two sides of industry, the more compressed wage structure in Sweden can also be ascribed to the high level of educational attainment among the population, smaller disparities or polarisation in educational achievement, lower returns to education and the seniority premium (relative flat age-wage profiles, see Figure A2 in the appendix).

CONCLUSION

The distinct feature of Sweden's industrial relations system and the contractual nature of labour market regulation create a favourable institutional environment for the emergence of negotiated compromises aimed at balancing flexibility and security in the labour market. Sweden constitutes, therefore, a good illustration of a regime of *flexicurity and negotiated flexibility* where the social partners are extensively involved in issues regarding education, vocational training and employment, and the regulation of working conditions and wage formation at the industry and local level. Life long learning (LLL) has a long tradition in Sweden and has expanded markedly since the end of the 1960s. LLL is an integral part of the Swedish educational, skills and employment regime. One feature of the Swedish LLL system is the large opportunity to complete or enhance educational attainment after leaving initial education *(second chance)* either through adult education or through various training courses within the framework of labour market policy. Extended LLL opportunities across one's life course and continuous vocational training have always been preferred to passive measures such as unemployment benefits *(activation)*.

Reconciling employment with changing family commitments and other considerations such as life-long learning and health aspects are also constitutive elements of the Swedish model and the Swedish flexicurity approach, requiring policies that support a more flexible adaptation of time and income over the life course. For example, reversible time options which secure individual entitlements to make labour supply adjustments over the life course appear to be a good policy instrument for promoting social inclusion and reconciling employment with other social responsibilities, events and risks over the life course. The Swedish experience shows that statutory and/or collectively negotiated options for employment protection and individual working-time adjustments over the life course related to family events or investment in human capital have to be combined with income transfer mechanisms. These mechanisms prevent pronounced income reductions during particular life phases and limit negative impacts on subsequent earnings development later in life (such as pension claims). The Swedish model highlights both the role of contractual arrangements, legal provisions and empowerment (civil rights), and also the importance of the conditions in which they are implemented: employment guarantee, income compensation and maintenance of social protection. In this sense the Swedish flexicurity model illustrates the linkages and interrelated effects of various institutions such as the educational and care system, labour market, and social protection systems, in shaping individual life trajectories limiting social exclusion and promoting social cohesion.

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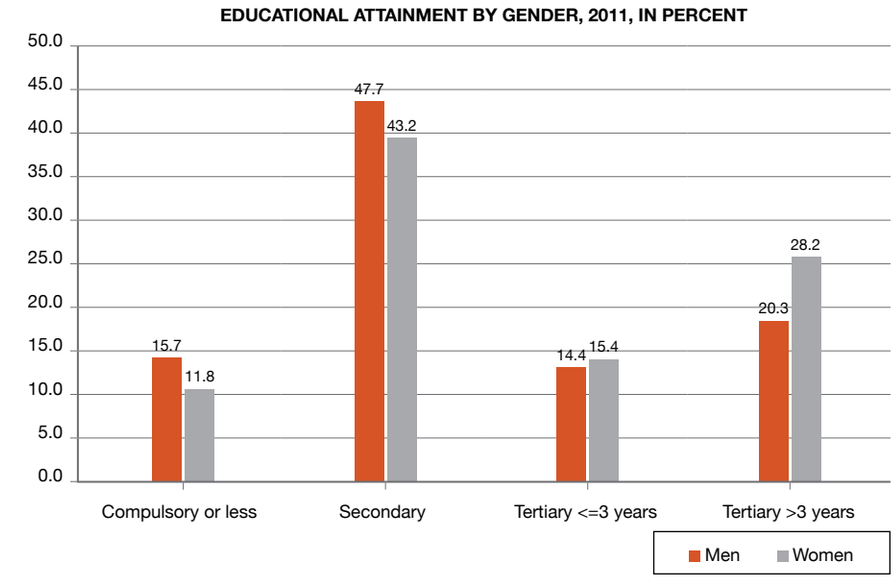
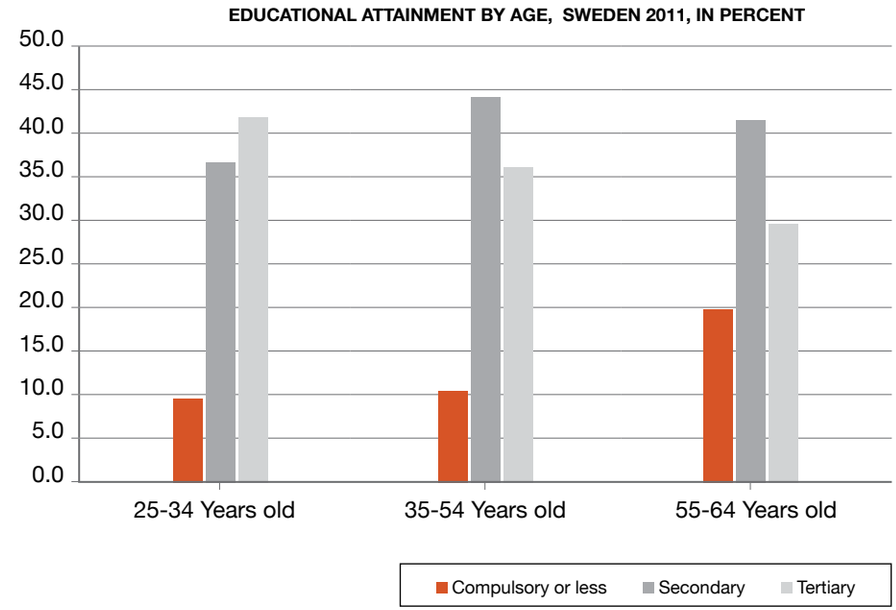
APPENDIX

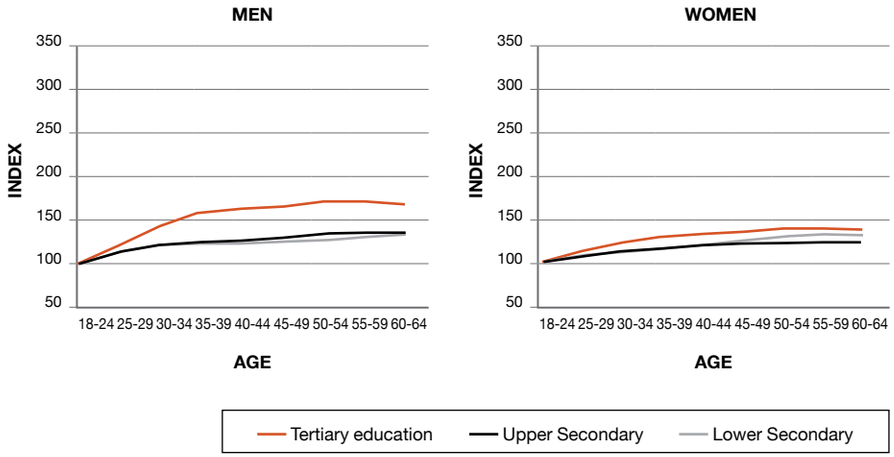
Figure A1: *Educational attainment by gender (25-64 years old, upper panel) and by age-brackets (lower panel) , 2011*





Source: Statistics Sweden (2012)

Figure A2: *Wage profile by age and gender in Sweden*



Source: Blöndal, Filed, and Girouard (2002, pp. 11-12)

SKILL FORMATION AND THE CHALLENGE OF GLOBALISATION: IS THERE A SKILLS SYSTEM THAT MAKES EVERYONE BETTER-OFF?

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INTRODUCTION

Singapore is not the only country that is experiencing growing inequality. In recent years, all advanced industrial societies have experienced a rise in inequality. Inequality can widen in multiple ways. It can grow when the earnings of the low-income and low middle-income groups stagnate or fall relative to other groups. Inequality can also increase when the earnings of the top income group rise more rapidly than that of other income groups. Almost all countries have experienced both types of inequality growth—lower income stagnation; and highest income rising—but some have experienced this at a more exaggerated pace than others. The common trends and cross-national variations in the scope of inequality suggest that different institutional environments might play an important role in mitigating economic pressures facing mature economies. This paper starts with a brief presentation of the possible causes of the growing inequality in advanced industrial countries. It then follows with a discussion of the role of national institutions in containing the rise of inequality—with specific attention to skill formation programmes. The paper then discusses the experience of Finland, Germany, Japan, and

the United States of America to draw lessons for Singapore. Ultimately, this paper tries to answer the following question: Can the experiences of these other countries provide Singapore with useful lessons in its efforts to build a more inclusive society?

Globalisation, Technological Change and Growing Inequality

Economists generally consider three factors when explaining growing inequality in recent years: (i) trade; (ii) technological change; and (iii) the relative decline of labour's share. Scholars of trade typically maintain that wealthy countries need to specialise in product markets that use factors that are relatively abundant in their countries—i.e. skilled workers. The more globalised the market becomes, the better off the skilled workers in wealthy countries become. However, unskilled workers in wealthy countries will become worse off as they have to compete against unskilled workers who are in abundance in less developed countries. Unskilled work will be outsourced and wages will fall. Others have argued that technological changes have been "skill-biased"–meaning that they increase the return on education thereby widening income inequality between the educated and the less educated (Goldin & Katz, 2008). Both theories explain the same phenomenon: wage inequality in wealthy advanced countries grows because the market position of unskilled workers worsens—their jobs disappear and their wages fall.

Yet some other scholars have focused on the declining share of labour income as the explanation for rising inequality. They point out that the income growth of those who have capital gains has been much more favourable compared to income growth of those who solely rely on labour income. As capital gains are distributed more unevenly compared to the labour income, the overall decline

in the latter's share contributes to growing inequality (Jacobson & Occhino, 2012).

Still, others attribute the declining share of labour income to the result of labour market dualism. Many advanced industrial countries have deregulated labour markets while protecting an ever smaller share of the core workforce. As a result, the wage levels of new job entrants with precarious employment contracts have fallen relative to the wage levels of protected core workers who continue to enjoy permanent employment contracts.

Although most wealthy countries have experienced growing levels of inequality, the magnitude of change has differed across countries (Figures 1, 2 & 3). Why have some countries remained more equal than others? Based on the theories reviewed in this section, four sets of factors seem important. The first factor is the ratio of skilled workers in the national skill/education profile. Countries whose share of high skill/high education groups is larger relative to other advanced industrial countries can be expected to place favourably in the new global competitive environment. This advantage, in turn, would lead to more job opportunities for their population. Furthermore, the abundance of skilled workers would reduce wage pressures, thereby avoiding a rapid rise in the wages of the skilled vis-à-vis the less skilled. The second factor is the nature of wage setting mechanisms. Whether or not social partners—unions and employers—collectively negotiate over wages, affects the scope of earning disparities between skilled and less skilled workers. The third factor is the type of labour regulation—especially whether it creates incentives for dualism in the labour market or not. Employers in countries that rely on occupational social insurance systems and strong employment

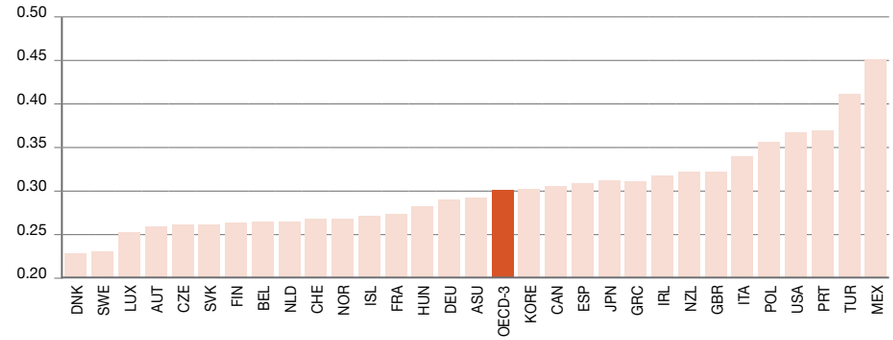
protection—such as Germany, Italy and Japan—have pushed for partial deregulation to create a new category of workers to whom high social security costs and rigid employment protection do not apply. Such deregulation led to the creation of a highly dualistic labour market (insiders versus outsiders). The fourth factor concerns the tax and regulatory framework that determines the relative advantage of income from capital gains when compared to labour income. When income from labour is taxed more heavily than capital gains tax, after-tax inequality will rise as the tax code benefits the better-off.

All these aforementioned factors are conditioned by the specific institutional and political configurations present in each country—such as the education and vocational training system, labour law and social policy, for instance. This is why we now turn to the discussion of institutions.

Institutions and Cross-national Variations in Inequality

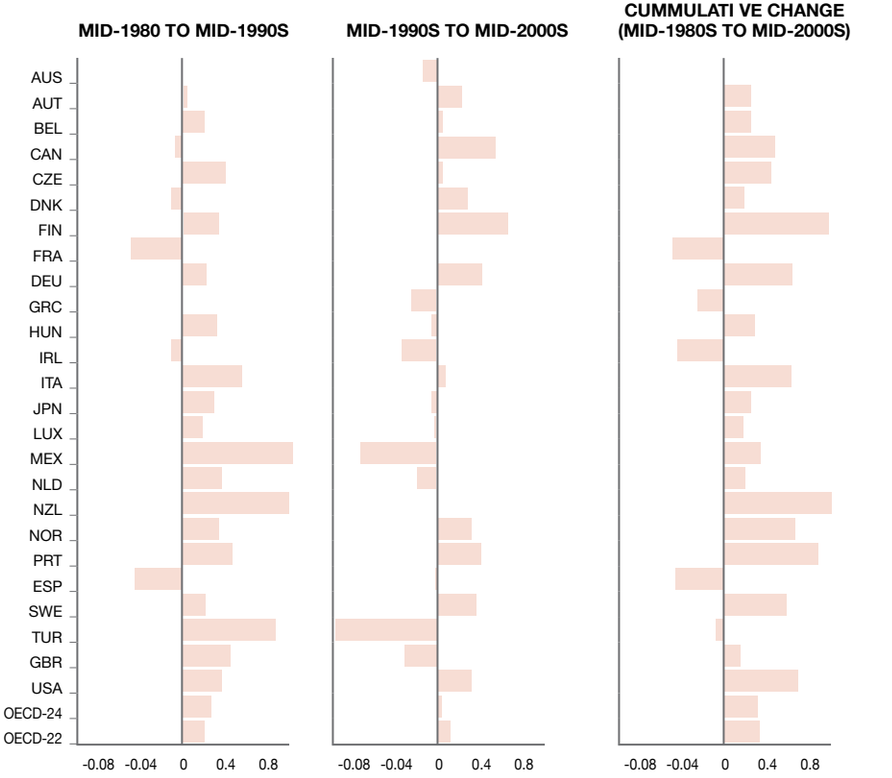
As Figure 1 indicates, the levels of income inequality vary significantly across countries. It is worth noting that even egalitarian countries have witnessed their Gini coefficients of income inequality rise in recent years (Figure 2). We can find two groups of countries among the more egalitarian advanced industrial countries that are located to the left of the OECD average in Figure 1.

Figure 1: *Gini coefficients of income inequality in OECD countries in mid-2000s*



Source: OECD. (2008). Growing Unequal?: Income Distribution and Poverty in OECD Countries p. 25.

Figure 2: *Point changes in Gini coefficients (mid-80s to mid-2000s)*



Source: OECD. (2008). Growing Unequal?: Income Distribution and Poverty in OECD Countries p. 27.

One group consists of Nordic countries. This group of countries has multiple institutions that reduce overall wage inequality. This is not surprising as unions and social democratic parties have been the major political players in Nordic countries. Three characteristics are particularly important: (i) collective wage bargaining institutions; (ii) generous welfare programmes; and (iii) equal access to high quality education from early childhood education to tertiary education. Nordic countries possess highly compressed—thus egalitarian—wage structures as a result of employer-union wage negotiations. Their unskilled workers are thus "priced" expensively relative to skilled workers. Generous social welfare programmes also increase reservation wages pushing up the price of unskilled workers. In order to remain competitive, the governments invest heavily in education, and also offer various benefits and services to incentivise work (especially women's work). Nordic governments spend more than the OECD average on each level of education—pre-primary, primary, secondary, post-secondary non-tertiary and tertiary (OECD, 2011, p. 231). They guarantee access to education regardless of one's socio-economic background. They also allow a relatively large cohort of high school graduates to proceed to publicly funded tertiary education. Although there are some differences among Nordic countries, they offer subsidies (or subsidised loans) to cover university students' living expenses. Given that Nordic countries are also highly open economies, they appear to have successfully balanced globalisation and equality by raising the overall level of their human capital. It should be noted, however, that the compressed wage structure also means that their skilled workers are relatively cheap compared to unskilled domestic workers.

The second set of relatively egalitarian countries consists of Western European countries, such as Austria, Germany, the Netherlands and Switzerland, who are known for their well-orchestrated public and/or semi-public vocational training systems. By well-orchestrated, I refer to a well-planned training system that produces authoritatively "certified" skills that match employers' needs. This group of countries possesses a type of training system known as "the dual system." The dual system not only combines school-based vocational training with apprenticeships, but the content of training programmes and the certification process are strictly quality-controlled by relevant trade associations and unions. Certified skill types and level are also important in the "pricing of skills." Social partners—employers and unions—negotiate wages for each category of skills in their respective industries. The collective nature of skill formation and wage negotiations reduces wage dispersion within the industry. This link is explained in greater detail in Estévez-Abe, Iversen, and Soskice (2001). Social security benefits are typically linked to industry and skill types to ensure that skill investments are rewarded by the welfare state as well (Estévez-Abe et al., 2001). As dual systems involve apprenticeships, young people acquire work-relevant skills early and enjoy smoother school-to-work transitions than the youth in other systems.

One important characteristic of countries that adopt dual systems is that the governments ration access to different types of educational tracks. Unlike Nordic countries, which moved away from "tracking", countries that rely on dual systems continue to track students. Students are tested at an early age and sorted

into different tracks—vocational and academic. The overall number of students who are allowed to proceed to academic tertiary programmes is more strictly controlled than it is the case in Nordic countries. As a result, the percentage of the population with tertiary degrees tends to be smaller. This does not in any way signal a lack of emphasis on public investment in human capital. It just means that the emphasis on the type of human capital is different.

The strength of the dual system lies in producing labour market-ready human capital. Rather than allocating young people's time to academic pursuits, the governments of these countries allocate their time to employment-relevant education and training. By limiting the number of young people enrolled in time-consuming academic tertiary degrees, this group of countries train most young people for specific lines of work. In this process, those whose intellectual abilities are limited are trained for elementary occupations and technical assistant occupations. Those with stronger abilities are trained for technical occupations such as engineers. Instead of creating a big gap in wages between those with and without tertiary degrees, countries with dual systems also reward people with non-tertiary degrees relatively well. As a result, the overall wage inequality is reduced.

Yet the relevance of the dual system to other countries may be limited. It is a system that emerged in a specific historical context in countries with strong craft traditions (Thelen, 2004). As Estévez- Abe et al. (2001) argued, it is also a system that requires a very specific institutional context. Furthermore, the dual system may be a system ideal for high value added manufacturing sectors such as precision machineries, where employers rely on highly skilled craftsmen. The value of the dual system in new service sectors is less certain.

Let us now turn to "less equal" countries in order to identify their common characteristics. The countries located to the right of the OECD average on Figure 1—hence "less equal"—all lack systematic public investments in education and vocational training. Moreover, unequal countries tend to under-invest in education although there are important differences between each of these countries. Canada, Japan and the Southern European countries invest in primary, secondary and non-tertiary postsecondary education less than the OECD average (OECD, 2011, p. 231). The United Kingdom (UK) and the United States of America (US) invest above the average. All of them, however, lack well-designed vocational programmes, relative to other Germanic countries in Europe. Academically oriented or not, all students study in the same general education schools. There is no system that guides and trains less capable students so that they find good jobs that match their abilities and aptitudes to find stable jobs. As a result, students with lower intellectual skills are left to fend for themselves—they either drop out without finishing high school or finish high school with no marketable skills. Community colleges in the United States offer some vocational programmes, but the level of quality control is significantly lower compared to the vocational training provided in the dual system.

Public investment in tertiary education is below the OECD average for most of the "less-equal" countries. While some countries compensate for their meagre public investments with private funds, those countries that have no private funds end up under-investing in tertiary education. The United Kingdom

and Southern European countries are examples of such under-investment. Governments in Japan and South Korea spend as little on tertiary education as Southern European countries do, but the Japanese and South Koreans divert more private funds (out of pocket tuition payments, for instance) which allow Japan and South Korea, respectively, to reach and exceed the OECD average. There is a real question whether increasing numbers of graduates has anything to do with the inequality issue.

Within this group, Japan and the US offer distinctive patterns. Although income inequality in Japan is above the OECD average, Japan's education system is one of the most intriguing, and nothing like that of the US. While most countries that under-invest in education typically have poor human capital, Japan appears to be an exception. Southern European countries, which under-invest in education, all perform poorly in internationally comparable academic achievement tests such as the PISA study. Despite its relatively meagre educational investments, Japanese high school students perform very well in the PISA study. In other words, Japan must be doing something which similarly "under-investing" Southern European countries are not doing. The Japanese school-to-work transition system and university entry requirements can, I believe, explain Japan's anomaly. I will come back to this issue in the following section.

The US stands out for its large investments in tertiary education. Although its public investments as a percentage of GDP are not as big as the Nordic countries, the size of private funds invested makes them the leader in tertiary education. The large share of private educational investments signifies that a lot of the

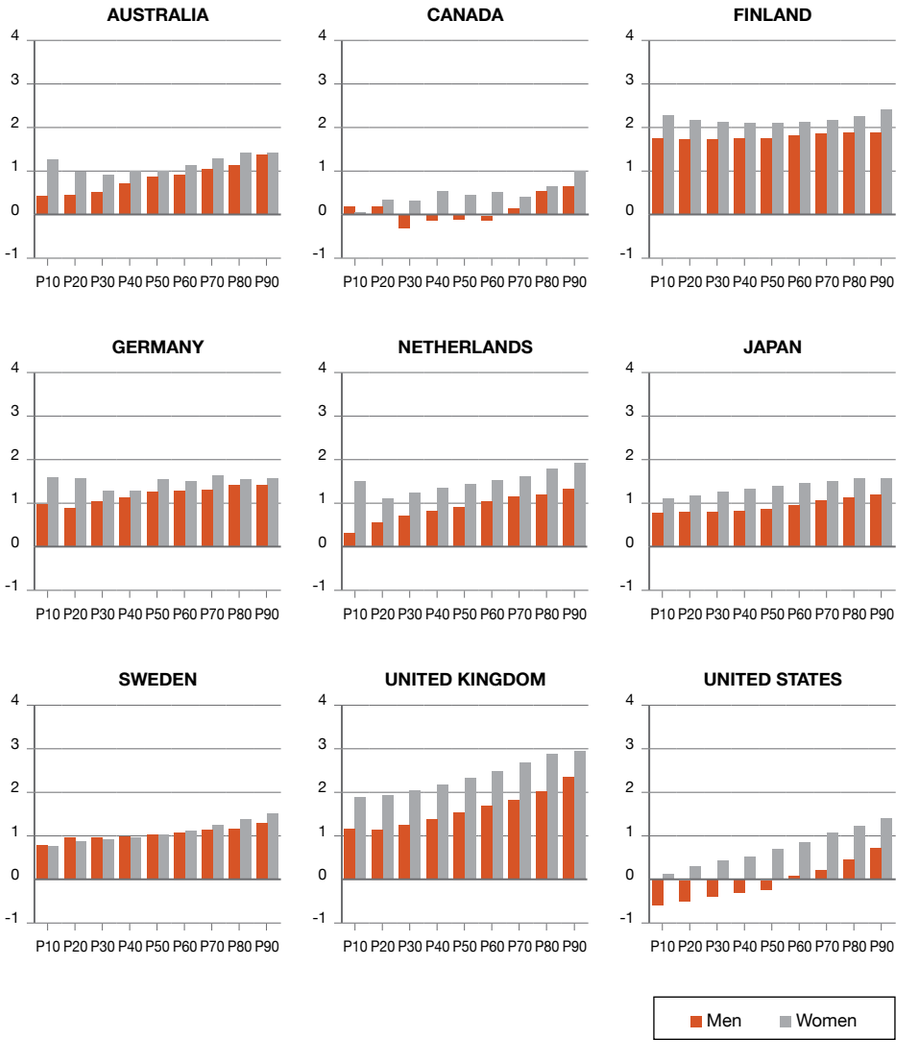
educational cost is borne by the students themselves or by their families. The high cost of university education, in particular, has become a major political concern in recent years. Some students find it difficult to complete their degree programmes for financial reasons. While the enrollment rates in tertiary degree programmes are high, the graduation rates are much lower in the US. A similar pattern is observed for Southern European countries, where, while tuition is low, there is very little assistance to cover the living expenses of university students.

In-depth Country Cases—Finland, Germany, Japan and the United States of America

The preceding section discussed different institutional arrangements for skill formation and human capital investments; and how different institutional configurations match cross-national patterns of income inequality. This section delves into four countries— Finland, Germany, Japan and the US—as a way of contrasting their institutional strengths and weaknesses. These four countries all possess different types of skill training and educational institutions. Finland is one of the Nordic countries, and makes generous public investments in education at all levels. Germany is the classic example of a "dual system" of vocational training. Japan represents a unique case as in spite of its meagre public investment in education, students perform well in international comparisons. The US, as explained in the previous section, is a country where the government does very little to help non-academically oriented children transition to employment.

Figure 3 compares the real earnings growth of men and women working full time in Finland, Germany, Japan and the US between 1980 and 2005 by decile. The patterns are consistent with the observations presented in the preceding section.

Figure 3: *Annual growth rates of real earnings 1980-2005 (full time male and female workers by Decile)*



FINLAND

Finland shows the most egalitarian earnings growth patterns for both men and women. The growth rates between men and women do not vary widely and there is very little variation by decile. This is a country where everyone's earnings grew more or less at the same pace between 1980 and 2005. Like other Nordic countries, the Finnish government invests heavily in its human capital. Even among the Nordic countries, Finland stands out for the remarkable PISA performance of its students. Finland is the only Western country whose children score as high as (or higher) than East Asian children in mathematics. When compared to other advanced countries, Finland possesses a much larger share of "high academic achievers" and the smallest share of "low achievers." Furthermore, Finland achieves high PISA scores without the competitive atmosphere of East Asian educational systems. Children do not start primary school until they turn seven, and do not take any standardised test until they are sixteen. In Germany, for example, children are tested much earlier and their progress is "tracked". In Finland, there is a lot of educational investment in pre-school children in the form of heavily subsidised high quality childcare. The early-childhood programmes help children from disadvantaged background to be "school-ready." Finland also boasts very large shares of high school graduating cohorts who continue to tertiary education. The share of workers with tertiary degrees is among the highest in OECD countries. The overall high quality of Finnish human capital has aided the country's shift to an Information, Communication and Technology (ICT)-based economy. A report prepared for the EU highlights that Finland and Nordic countries are European leaders in ICT sector development (Brinkley & Lee, 2007).

Finland offers a good example of Nordic skill strategy. Wage equality in a competitive global environment is only viable when the overall human capital profile of the nation is skilled or highly skilled. Simply broadening access to universities will not work unless the country invests in the earlier phases of education to produce larger shares of age cohorts to be "university-ready." High quality early childhood and primary education also helps produce cohorts of workers who will be more adaptable to changes and further learning. In ensuring that most of the citizens will be adaptable, public investment in education is a highly strategic long-term economic investment. Although there are vocationally oriented high schools, there is no strict rationing as in dual systems. Students who pursue vocational upper secondary education also have an option of going on to a regular university.

There are, however, some weaknesses in the Finnish system. Finnish scholars point out that generously subsidised tertiary education leads to: (a) a mismatch of students' selection of majors and labour market needs; and (b) young people spending too many years in universities.

The system in Finland also raises an important question that is relevant when setting national skill and education strategies. Economically speaking, the combination of highly subsidised high quality education, high tax rates and compressed wage structure sounds like a perfect condition to cause massive brain drain. Does Finland suffer from brain drain? As yet, not much. While the net inflow of skilled workers in Finland is slightly negative—unlike the other Nordic countries that enjoy net surpluses—a brain drain is not a serious problem. Some Finnish scholars even contest OECD figures to state that there is more skilled immigration into

Finland than OECD calculates (Johansson, 2008). A full-fledged analysis of why high skilled Finns do not emigrate to countries where they can receive higher salaries is beyond the scope of this paper. That said, there is no doubt that Finland's low levels of outflow of their high skilled native population are necessary if the Finnish skill and education strategy is to remain viable.

GERMANY

Interestingly, the German pattern differs from Finland's (Figure 4). The earnings of women in the bottom two deciles have grown rapidly. This is a kind of earnings growth that helps reduce overall inequality as women generally earn less than men. The picture for the men in the same deciles, however, looks very different. Men in the bottom two deciles experienced the slowest earnings growth. That said, overall, the difference in the earnings growth across deciles is not very pronounced. Unlike Finland, which has moved to a more ICT-based economy, Germany still retains a strong position in the world market as a manufacturer of high value added products. Germany's dual system has been the cornerstone of its highly competitive manufacturing sector. The highly trained workforce has permitted German producers to retain competitive positions in the more highly priced product markets.

The German skill formation system may be considered as the best practice when it comes to high value added manufacturing. Instead of letting young people spend time in purely academic pursuits, Germany trains them (and very well) in technical knowledge and skills required by the industry. Because the dual system is based on apprenticeships, the industry players are deeply involved in the skill formation process. Apprenticeships also help smooth school-to-work transitions. It is thus a very efficient system.

The strengths of the German dual training system, however, might become less important as Germany becomes less manufacturing dependent. Service sector employers are likely to find the old training system less relevant to their needs for different reasons. At the high end of the service sector—such as IT occupations—employers might place more value in good university education rather than technical education. University level education might be better equipped to produce more technologically adaptable human capital. At the low-end of service sector jobs, the German dual vocational training system might impose overly high training costs on employers who do not really need skilled workers. In fact, compared to the manufacturing sector, where 44 percent of employers participated in apprenticeship training programmes—a crucial component of the dual system—in 2007, only 28 percent of service sector employers participated (Frei & Janik, 2008).

The institutionalised incentive structure that sustained the German training system (such as generous unemployment, pension benefits and strong employment protection) has created a mismatch with the needs of service sector employers. The high labour cost stunted the growth of low skill service jobs. While one might argue that the absence of the low skill service sector helps maintain wage equality levels, it can also increase inactivity. During the 1990s, high unemployment rates prompted the German government to implement a series of major labour market reforms—the so-called Hartz Reforms—between 2003 and 2005. Since then, not only have labour costs come down but the nature of the German labour market has been transformed.

To put it simply, the Hartz Reforms reduced employers' labour costs and increased their hiring flexibility for a specific type of workers—such as unemployed job seekers (Jacobi & Kluve, 2006; Thelen, 2007). As a result, a highly dualistic labour market emerged and inequality grew.

In short, Germany's dual system is a great training model for manufacturing-based economies. Nonetheless, given the fact that this training model is facing difficulties even within Germany means that it may not be a good model for countries that depend heavily on the service sector.

JAPAN

Japan presents yet another pattern. In Japan, there is a clear difference in earnings growth rates from one decile to another. We can see how inequality rose in Japan during the period of 1980 to 2005 unlike in Finland and Germany: The earnings of the better-off grew faster than the earnings of the worse-off thereby worsening the overall inequality. Just like Germany, Japan too, has increased its labour market flexibility while the privileges of the core workers have been maintained. As a result, the dualisation of the labour market—something that always existed in Japan—has become much worse in the last decade. The rise of precarious irregular employment—particularly among younger workers—has eroded the Japanese traditional skill formation system (Estévez-Abe, 2008).

Since the 1950s through to the 1980s, while the government played a small role as a provider of vocational training for young people, large Japanese firms played an important role. Large firms used to hire young high school and university graduates and provided

on-the-job training. Firms also worked closely with schools to orchestrate an efficient job-matching process. High school students who did not excel academically could nonetheless hope to get recommendations from their school and find employment in good local firms. This, in turn, functioned as motivation for hard work even for those who were not great students. As a result, Japan used to boast a very smooth school-to-work transition. The outsourcing of manufacturing jobs that began in the 1990s and continued, however, dramatically reduced good jobs available to high school graduates. Given the disappearance of good jobs for high school graduates, a greater share of high school cohorts choose to go on to universities.

Japanese universities—like the universities in the US—are hierarchically ranked. Some universities have good reputations and are thus more selective than others. This is very different from most European countries whose universities are state universities of more or less the same quality. In Japan, entry into a good university hinges on the result of the entrance exam that takes place in late winter. (Therefore, it is very different from the US college admission process.) Families thus spend a lot of out-of-pocket education expenses to send their children to cram schools ('private tuition' in the Singapore context) in addition to regular schools. South Korea is very similar. The good PISA performance of Japanese and South Korean students thus might be a reflection of a high amount of educational investments made by families.

The increase in the size of population with tertiary degrees has not done much to reduce inequality in Japan. Overall returns on a tertiary degree in Japan are not high. In Japan, it is the size

of the employer that matters for earnings. There is a significant earnings gap among workers on the basis of the size of the firm they work for. Large Japanese firms have been reducing the number of workers they hire on regular contracts. When firms hire new workers to form part of their permanent core workforce, they tend to pick them from the top few universities. An ever growing number of young workers have had to accept more precarious non-regular employment.

It is clear that a lot of the educational spending by Japanese families is not socially optimal. Families divert a lot of resources with the sole objective of ensuring their offspring's success in getting into a prestigious university—so that they can get good jobs upon graduation. Students in top universities are increasingly from socio-economically advantaged families, which can afford to pay for extra tutoring and preparation classes for university entrance exams. The government offers little financial help for the education of students beyond the age of 15 (when compulsory education ends). In addition, the prolonged recession has made it difficult for economically struggling families to invest in their offspring's education. Even for families who can afford to invest substantial additional funds for their children's university education, there is little control over how much they study, the quality of education or its career relevance. For instance, most students from top-tier universities study very little during their final year and a half as they devote most of their time to visiting companies and preparing for "company entrance exams" and job interviews. This is socially accepted as a necessary evil to get a good job. The way Japan's labour market works makes its best and the brightest students develop a very short-term view to their education. As a result, despite Japan's excellent PISA

performance, the tertiary sector adds little to the human capital of its youth.

In short, the Japanese model, despite its great PISA performance, suffers from growing inequality and under-investment in globally competitive human capital. Japan has lost its once successful school-to-work transition mechanism for less academically oriented students. Except for a minority of students graduating from the top universities who managed to find work in large companies that offer secure jobs, the rest of young workers are left to fend for themselves.

THE UNITED STATES OF AMERICA

The US offers the most unequal pattern of all countries. As the US mainly offers a negative example of inequality, the description of the American model here will remain short. While women in every decile experience some kind of earnings growth, men in the bottom five deciles experienced decreases in earnings. In contrast, the earnings for the top four deciles experienced increases in their earnings. The return on university degrees has become very large in the US. Moreover, those with strong academic abilities can attain post-graduate degrees in order to earn much higher salaries. At the same time, inequality of earnings among the college-educated has grown significantly in the US. In a country such as the US, where most students take up student loans to pay for their university education, the rapid rise in the tuition costs in recent years and the reduction in public subsidies has created a serious bottleneck in building a highly educated workforce.

Students with lower academic abilities or those without economic means to pursue tertiary degrees, however, are left to fend for themselves. There are very few mechanisms in place to divert resources to support their skill acquisition. This group of citizens thus gets unfavourably exposed to global competition whereby their wages continue to fall. It is quite telling that some of the US manufacturers who are trying to increase their production capacity in the US—thanks to the weakened dollar—cannot find workers with the skills they are looking for.

Lessons: Is There a Model that Singapore can Emulate to Build a More Inclusive Market Economy in Singapore?

A Nordic model such as the Finnish model might offer a useful lesson for Singapore. Like Singapore, Nordic countries are highly open economies with small populations. Although Finland is also a generous welfare state, it is important to note that not all government spending on welfare is about consumption. Educational spending—early-childhood or university education—must be interpreted as an investment. In this sense, part of the Nordic social policy has a very strong industrial policy dimension. Increasing the floor of human capital leads to a more versatile workforce—a necessity in a rapidly changing global economy. In Nordic countries, governmental investment in education also justifies a higher tax rate and a redistributive policy aimed at the worse-off. Even with the best school system, a certain percentage of the population will never go to university or graduate from upper-secondary schools with valuable skill sets. When the overall educational levels are high as in Nordic countries, setting wage floors for the most unskilled jobs—a small percentage of jobs in such an economy—might be an acceptable and viable form of building an inclusive society.

Can Singapore commit resources to invest early and equitably in its citizens' education? Singapore already boasts high-achieving students—Singapore too, like Finland, is one of the top performers in the PISA study. Where Singapore diverges from Finland might be the treatment of the less capable students. It is worth noting that the Nordic countries possess a kind of implicit pact between the citizens and the government. The government invests in its people, takes a big share of its citizens' earnings, then reinvests and redistributes. This may be only feasible in a society where its markets are well integrated into the global market but its society does not rely on migrant foreign workers.

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SKILLS STRATEGIES FOR AN INCLUSIVE SOCIETY – WHAT CAN WE LEARN FROM EUROPEAN EXPERIENCES?

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INTRODUCTION

With a concise explanation and evaluation of the ensemble of European[1] policy making, regarding the field of education and training (read: skills) in relation to the field of social inclusion, this paper aims to inform Singapore's debate on the same subject. This is a highly relevant issue, given the decline in the inequality in the educational attainment of the population resulting from the very rapid expansion of education, which contrasts with the simultaneous growth in inequalities in employment and pay or income along the very dimension of educational attainment in many countries, European and Asian alike[2]. This creates a tension which makes skill strategies for an inclusive society not only worthwhile investigating, but also signifies that these strategies can only be part of the answer – society and the economy providing the other part.

1 'European' refers to 'European Union' (EU), which even with 27 member countries is still a subset of all European countries and leaves out various Balkan countries such as Iceland, Norway, and Switzerland, though in many fields these are bound by cooperation treaties.

2 *E.g., Mason and Salverda (2010) show the growing incidence of low pay in several* EU countries (not all). From another perspective the Work and Life Quality in New and Growing Jobs research project (www.walqing.eu) has shown that about half of new jobs in Europe between 2000 and 2007 were in low-skill, low-wage sectors that offered few opportunities for labour-market advancement (EU Policy Research Alert No 5. October 2012).

The emphasis here is on the contents of the policy making – that is, on its nature of identifying and solving the societal issues involved in a forward-looking perspective. This means that I will leave out the inter-country process of European decision making[3] as Singapore, though clearly occupying a special position in the international division of labour, is a stand-alone country. Nevertheless, there may be aspects of that process that can be of importance for Singapore, such as the instrument of the international peer reviewing of national policies - e.g., frequent experts' policy roundtable discussions in different government ministries, in my view, as a step into that direction. In addition, the role of the social partners will be considered at the end of the paper.

As to the policy contents, it seems relevant to focus on measures that are aimed at individuals, and leave out the measures that concern the building of a European institutional space of education and inclusion, e.g., by stimulating the inter-country mobility of student and young job-seekers or by unifying the diverging national systems of education[4], as well as the measures that are

3 This refers to the roles of the European Commission, the Council of (national) ministers, the European Parliament, the many special Committees, and the 'Open Method of Coordination' between member states which are used to realise the Union's policy goals. In delivering the EU2020 strategy and under strong pressure of the economic crisis, much attention is paid to renewed economic governance for proposing, deciding and monitoring policies by the European Commission and the Council, and, on the basis of country-specific reform recommendations, by the member states in their policies and budgets.

4 These have long been important parts of EU policy making, witness, e.g., the Erasmus Programme of 1987 for student exchange, or the four- to six-year Framework Programmes for Research and Technological Development established in 1984 for research cooperation and creation of the European Research Area, or the 'Bologna Process' (which goes far beyond the EU) that since 1999 has been aimed at creating the European Higher Education Area by introducing the same bachelor-master structure in university education. Thus I will disregard, for example, the current Youth on the Move programme.

taken by the European Union (EU) for cooperation in these areas with the rest of the world[5].

Following the above, the evaluation intended here will focus on the actual outcomes for individuals. There are good reasons not to take the policies in these two fields at face value but consider their tangible effects. Firstly, we are particularly interested in the linkages between policy making in these two different fields, education and inclusion. These are not obvious beforehand and one aim of this contribution is precisely to clarify these linkages. Policies for education are the starting point and social inclusion is considered here from that vantage point; it implies that the policies that target inclusion will not be scrutinised in their own right. Secondly, the policies under scrutiny will naturally be subject to trade-offs with other policies that concern other fields (say, financial markets – not an innocent example, by the way) and they may be diminished or distorted as a result. Thirdly, and directly related to the previous issue, policies are not the only force influencing outcomes. Educational policies may have a strong effect on the (public) institutions of education, but individuals' access to and attainment in these institutions will depend on other factors as well. This holds even more strongly for social inclusion, which is subject to the state of the economy and therewith of the labour market, at least regarding jobs, careers and incomes. Fourthly, policies may be misconceived in relation to what they aim to accomplish in their field, and, last but not least, they may simply be ineffective, especially vis-à-vis the individual countries of the EU.

[5] Mundus and Tempus programmes.

In this evaluation, particular attention will be paid to the most vulnerable groups, found at the lower end of the skill distribution and the labour market, which is where the problems of social inclusion are concentrated. Essentially, I will be looking at the use of skill strategies in the face of labour-market inequalities. For the sake of a transparent discussion, my illustrations will be chosen from the same three European countries which are covered by the contributions of Margarita Estévez-Abe (Finland, Germany), Dominique Anxo (Sweden), and my own country (Netherlands), as far as possible and useful.

Before turning to the two-step discussion, the explanation of European policies in Section 1 and their evaluation in Section 2 respectively, a quick summary of the EU and of some concepts used in this contribution seems suitable.

Building on post-war idealism ("Never again"), a six-country international economic cooperation quickly developed into the European Union (EU) in 1957; the EU's membership has expanded from those six in several steps, including one in the mid-1990s towards 15 countries ('EU15', all in Western Europe), followed by another step towards the current 27-country union, after enlargement towards Central, Eastern and Southern Europe between 2004 and 2007. The economically more integrated Eurozone, which was effectively established by 11 countries with the introduction of the Euro in 2001, currently comprises a subset of 17 EU countries (12 from EU15 and five from the remaining 12). It is important to realise that the EU differs from the USA in several crucial respects. The central budget of the European Commission is tiny by comparison, about one percent of EU GDP only, which contrasts strongly with about 25 percent for the US

Federal Government and also with the commonly much larger public budget shares in individual EU countries. Consequently, European policy making is mostly a mechanism of seeking inter-country agreement on measures that are to be taken without any supporting funding at the European level[6]. Usually, the measures are prescriptions that have to be politically and legally endorsed and funded by the individual member states in their own countries In addition, formal EU decision making occurs primarily between the countries, at the level of ministers in the Council, and it is subject to different rules of majority or veto depending on the precise subject of decision making. The US, by contrast, has a democratically elected parliament and an executive with clear powers of decision making. Thirdly, the nature of the composing parts is very different between the two blocs. The European countries have strong own histories including languages, and own institutions and traditions of policy making, and on average they have a three times larger population than US states. This is reinforced by a highly skewed size distribution of EU member states compared to the American states[7].

European policies, certainly those discussed here, usually identify targets across the population at the EU level but they consider

[6] Apart from the long-time agricultural policy, research and educational programmes at the European level are the exception. European institutions such as the European Social Fund may provide targeted ad-hoc support.

[7] The four biggest EU countries – Germany, the United Kingdom, France and Italy – taken together have a population of 264 million, or 53 percent of the 500 million total, while the four biggest US states – California, Florida, New York and Texas – have only one third (100 million) of the 300 million total. The EU's big-four's economic (GDP) weight is 63 percent, and their share in Council votes less than 34 percent. Within the Eurozone the big four (including Spain, the UK is not a member) comprise more than 75 percent of the population and the economy, and in the corresponding Eurogroup of 17 finance ministers they have 53 percent of all votes (inferred from EU voting rights).

countries as their unit of application, not individuals among the EU population. This is understandable but risks leading astray, if the smaller countries would take the lead in endorsing the policies while the big ones trail behind. In addition, the identification of targets at the union level may go together with a variation in those goals between the countries. This can mean that certain countries may have targets to endorse that are close to their actual position. This has two important implications: firstly, the policy efforts that are needed for attaining a goal may be less demanding than in other countries or even none, and, secondly, EU policy making in that case boils down to putting these particular countries as best-practice examples to be followed by the other countries. Finally, one official inclusion goal that is present in the educational policies is to secure 'inclusivity', which means securing maximum access to education itself[8]; I will have to leave that out for the purpose of a proper focus to this paper and for lack of space, will pay attention primarily to the significance of the policies for employment and the labour market.

EUROPEAN POLICIES OF EDUCATION / TRAINING AND INCLUSION

As a sequel to the so-called Lisbon Agenda (2000–2010), and building on its experiences, the EU currently upholds a ten-year strategy, EU2020, for the decade 2010–2020. This strategy is a package that comprises a broad array of policies aimed at 'smart, sustainable and inclusive growth' – "smart, through more effective investments in education, research and innovation; sustainable, thanks to a decisive move towards a low-carbon

[8] Evidently, this put issues of educational quality on the table.

economy; and inclusive, with a strong emphasis on job creation and poverty reduction". These three aspects fan out over five areas: employment, innovation, education, poverty reduction, and climate/energy. The targets that are to be attained in the year 2020 in the three areas which are most relevant here, are the following[9]:

- *Employment:* 75 percent of 20-64 year-olds are employed (up from 68.6 percent in 2010),
- *Education:* school drop-out rates are below 10 percent (down from 14.1 percent), and at least 40 percent of 30-34 year-olds complete third-level education (up from 33.5 percent),
- *Poverty/social exclusion:* at least 20 million fewer people are in or at-risk-of poverty and social exclusion (down from 115.7 million). We will focus particularly on the element that corresponds with job chances ('low work intensity').

Table 1.1 *Specifies the starting levels of 2010 and the target levels that are to be reached in the year 2020, also for the four countries mentioned above.*

	2010	Target 2020	2011
A. Employed, % of population aged 20–64			
EU27	68.6	75	68.6
DE	74.9	77	76.3
FI	73.0	78	73.8
NL	76.8	80	76.8
SE	78.7	75	80.0
B. Drop-outs, % of population aged 18–24			
EU27	14.1	10.0	13.5
DE	11.9	9.9	11.5
FI	10.3	8.0	9.8
NL	10.0	7.9	9.1
SE*	9.7	9.9	6.6
C. Tertiary educated, % of population aged 30–34			
EU27	33.5	40	34.6
DE	29.8	42	30.7
FI	45.7	42	46.0
NL	41.4	40	41.1
SE*	45.8	40	47.5
D. Poor, million persons**			
EU27	115.7	95.7	n.a.
DE	16.0	13.2	16.1
FI	0.9	0.7	0.9
NL	2.5	2.1	2.6
SE	1.4	1.2	1.5

	2010	Target 2020	2011	
D-1 People in household with very low work intensity, million persons				
			% All Poor	Concentration
EU27	37.9	31.3	33	100
DE	6.7	5.5	42	128
FI	0.4	0.3	41	125
NL	1.1	0.9	43	131
SE	0.4	0.3	29	90

** For poverty definition, see text. The 2020 target is taken as 20 million less, and then divided pro rata by the author over the countries – this has no political significance, see end of Section 2. D-1 is a subcategory, where again the targets are pro rata divided by the author.

Source: http://epp.eurostat.ec.europa.eu/portal/page/portal/europe_2020_indicators/headline_indicators

[9] Other targets are for Innovation: three percent of the EU's GDP invested in R&D, and for climate change/energy: greenhouse gas emissions 20–30 percent lower than in 1990, 20 percent of energy from renewables, and 20 percent increase in energy efficiency.

Ultimately, these five areas fan out into seven more detailed instruments ('flagships initiatives') where both the EU and the national authorities have to coordinate their efforts so they are mutually reinforcing. Among these seven only two are mentioned for 'inclusive growth' and seem relevant here[10]: the Agenda for New Skills and Jobs, and the Platform against Poverty.

Agenda for New Skills and Jobs

The Agenda is as much about the jobs, i.e. employment growth, as about the skills. It harks back to and expands beyond the educational and training policies that have been developed over the 2000s and that exist next to the EU2020 package: New Skills for New Jobs of 2008, and Education and Training 2020 (ET2020)[11] of 2009. New Skills for New Jobs concerns better upgrading, anticipation, and matching of skills; its primary motivation is the economy and not inclusion. The new Skills Agenda as a result of this covers a broad spectre of measures, ranging from stronger labour market reforms ('flexicurity'), improving the quality of jobs and ensuring better working conditions, and improving the conditions for job creation, to equipping people with the right skills for the jobs of today and tomorrow, which may be the most relevant part for the purpose of this contribution. One (large) part of that Skills Agenda is very general and difficult to pin down with precision. This regards 'key competences for lifelong learning' (see box) in particular. These are defined as "a combination of knowledge, skills and attitudes appropriate to the context", and which are considered "particularly necessary for personal fulfilment and development, social inclusion, active citizenship and employment" and are thought to fit in with the principles of equality and access for all. Work on key competences shall apply in particular to disadvantaged groups whose educational potential requires support, such as people with low basic skills, early school leavers, the long-term unemployed, people with disabilities, migrants, et cetera. One can certainly sympathise with these competences as providing important ingredients for satisfactory citizenship, but it seems pretty idealistic that these would be feasible for everyone. In addition, one may doubt their direct significance for a person's labour-market position, which is what we focus on here after all. In the end that is what people may be expecting from educational policy making and they may become disappointed by idealistic measures with little direct significance. The contributions that are effectively made at the European level are limited to providing information about occupations to individuals who are interested in international labour mobility (e.g., EU Skills Panorama, under construction).

[10] Education is also found under smart growth in the flagship initiative Youth on the Move, aimed at stimulating the international mobility of young persons in education and employment – one issue disregarded here as explained above. The other four flagships regard resource efficiency, R&D, digital technologies, and industrial policy.

[11] ET2020 offers other targets for 2020, beyond the above drop-out rates and tertiary attainment: 95 percent of four year-olds in early childhood education, less than 15 percent low achievers in reading, maths and science at age 15, more than 15 percent of working-age population in adult education.

KEY COMPETENCES:

1. Communication in the mother tongue
2. Communication in foreign language
3. Mathematical competence and basic competences in science and technology
4. Digital competence
5. Learning to learn
6. Social and civic competences
7. Sense of initiative and entrepreneurship
8. Cultural awareness and expression

These key competences are all interdependent, and the emphasis in each case is on critical thinking, creativity, initiative, problem solving, risk assessment, decision taking and constructive management of feelings. They provide a reference framework to support national and European efforts to achieve the objectives they define, and are mainly intended for policy makers, education and training providers, employers and learners.

The competences should be acquired by: young people at the end of their compulsory education and training, equipping them for adult life, particularly for working life, whilst forming a basis for further learning; adults throughout their lives, through a process of developing and updating skills.

http://europa.eu/legislation_summaries/education_training_youth/lifelong_learning/c11090_en.htm

European education and training policies address the whole range, from early childhood (pre-school and school education) to adult education. Much is done for higher education, where the dimension of European mobility is most relevant (and some European funding is indeed available) but that is outside the scope of this paper. Regarding vocational education and training, countries are legally responsible for the contents and organisation of this, while the European focus is on cross-country transparency and recognition and the quality of the training. Well-developed vocational programmes are deemed to make educational systems more socially inclusive in their impact and to help reach the Europe 2020 goal of reducing early leavers from education and training.

European Platform against Poverty

The other relevant flagship initiative aims to address poverty. By definition, poverty and social exclusion are obstacles to the achievement of inclusive growth. EU2020 has shifted away from its predecessor's (Lisbon Agenda) definition of poverty as the income poverty of persons in a household with an income of less than 60 percent of a country's median household income[12]. The new poverty concept is no longer composed solely of income poverty but includes also severe material deprivation[13] as well as

[12] Net after-tax income equivalised for household size and composition, using the so-called modified OECD equivalence scale: 1 for first adult (making a single-adult households the basis of normalisation), 0.5 for other persons aged 14 and over, and 0.3 for children below the age. It is a relative poverty concept, which contrasts with the US approach to poverty that is absolute: based on a package corrected for price increases.

[13] Severely materially deprived persons have living conditions severely constrained by a lack of resources, they experience at least four out of nine following deprivations items: cannot afford i) to pay rent or utility bills, ii) to keep home adequately warm, iii) to face unexpected expenses, iv) to eat meat, fish or a protein equivalent every second day, v) a week holiday away from home, vi) a car, vii) a washing machine, viii) a colour TV, or ix) a telephone.

social inclusion. The latter relates to people in households with very low 'work intensity', who have no significant jobs but work less than 20 percent of their total annual work potential in terms of hours. This change was made to do justice to the accession to the Union of the poorer countries in Eastern Europe where the material situation of households is a much more important aspect of life. As a result the new measure incorporates an element of absolute poverty.

Persons are counted only once if they are present in more than one of these three categories. On this measure almost 116 million people or 23 percent of the EU's population are found to be at risk in 2010 – 94 million of them below the age of 60 and another 22 million above (Table 1.2). However, low work intensity is observed for those below 60 only. In that age group the overlap between two or all three categories is 30 percent. The low work intensity category, which is closest to the purpose of this paper, amounts to 10 percent of that population; this is slightly more than deprivation (nine percent) and much less than income poverty (17 percent). Taken together the inclusion of deprivation and work intensity in the measure adds eight percentage-points, or almost half, to the old measure of income poverty alone.

The broadening of the concept implies also a broadening of policies to combat the phenomenon, which risks making the strategy more dispersed and harder to pin down[14]. For income

[14] The platform identifies as key challenges: eradicating child poverty, promoting active inclusion in society and the labour market of the most vulnerable groups, providing decent housing for everyone, overcoming discrimination and increasing integration of people with disabilities, ethnic minorities, immigrants and other vulnerable groups, tackling financial exclusion and over-indebtedness, and promoting the integration of Roma. http://ec.europa.eu/social/main.jsp?catId=751&langId=en

poverty, which is measured after tax and social transfers, it seems straightforward: welfare systems reduce the risk of poverty by 38 percent on average in the EU, though this impact varies from less than 10 percent to nearly 60 percent across EU countries. Other key actions now encompass improving the access to work, to essential services (healthcare, housing, etc.) and to education, and the fight against discrimination. This does bring in education, but with a wide array of options, such as early-childhood education etc., which have already been mentioned, and thus without a clear focus.

The weakness of the poverty and social inclusion policies is clearly demonstrated by the fact that none of the four countries treated here have given themselves either a clear or a sufficient quantitative target in terms of the headline indicator. Sweden has not set itself a numerical target at all; Finland's first instrument seems to be the improvement of the welfare state; Germany has a quantitative target but along a different measure: a reduction in long-term employment by 20 percent between 2008 and 2020, which amounts to some 300,000 and falls far short of a pro-rata application of the EU-level target which amounts to a decline by 2.8 million (Table 1.1); only the Netherlands aims to reduce the numbers in poverty and social exclusion (aged below 64), by 100,000 – also a number that falls well short of the pro-rata target of 400,000 (Table 1.1).

Recent Effects at EU Level

We conclude this introduction of EU policies with three observations about its effects at the level of the Union as a whole.

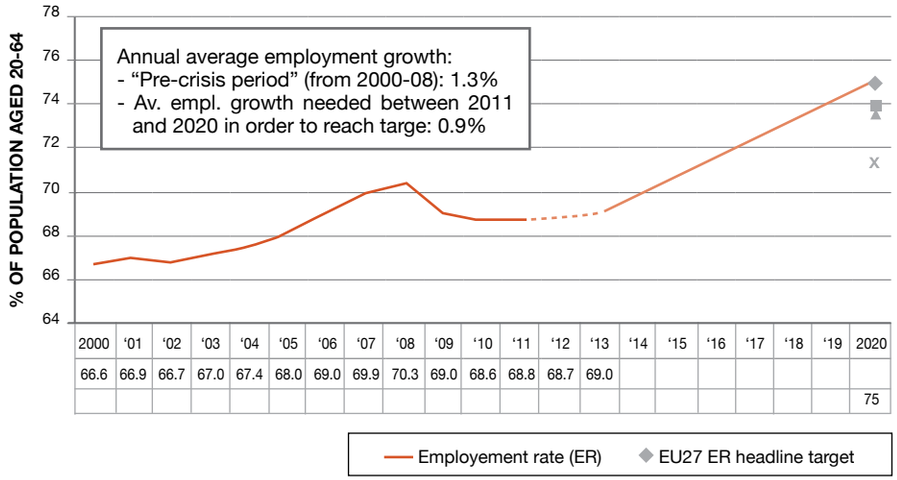
The ink of the Lisbon Agenda established in 2000 was hardly dry when the dotcom crisis started to drag the economy down. This quickly undermined the Agenda's ambition that the Union (still 15 members at the time) in 2010 be "the most competitive and dynamic knowledge-based economy in the world". The EU2020 strategy was established in 2010 in the midst of the financial crisis. As a result most of the attention in the broad policy package went to the economy at the disadvantage of other issues including education and inclusion. Graph 1.1 illustrates this. The employment rate was meant to attain 75 percent in 2020 but has declined in recent years[15]. This spills over into policy making as can be illustrated by the European Commission's 2012 Annual Growth Survey[16], which is the Union's most important official evaluation of performance. It specifies that efforts at the national and at EU levels shall concentrate on five priorities:

- Pursuing differentiated growth-friendly fiscal consolidation
- Restoring normal lending to the economy
- Promoting growth and competitiveness for today and tomorrow
- Tackling unemployment and the social consequences of the crisis
- Modernising public administration.

Education and inclusion are not part of the key priorities.

[15] In terms of employment volume it is even more serious than these head-count figures indicate, because of a gradual shift towards part-time jobs.
[16] http://ec.europa.eu/europe2020/pdf/nd/eccomm2012_en.pdf, p. 10.

Graph 1.1 *EU 20-64 years employment rate target, 2000-2020*



Source: http://ec.europa.eu/europe2020/pdf/themes/15 employment _target.pdf

Secondly, often – and certainly for the EU2020 Strategy – the targets of EU policy making are set for the Union as a whole and they differ between the member countries as they find themselves at widely different levels (compare, e.g., minimum and maximum in Table 1.2), depending on the issue. Member states "consider, on the basis of national priorities and whilst taking account of changing economic circumstances, how and to what extent they can contribute to the collective achievement of the European benchmarks through national actions"[17]. At the EU level, policy making is fundamentally idealistic while its material contents need to be provided by the individual countries. The Union as such commonly has little legal room for action and also very little financial means. One important implication of the diversity of the country situations and targets is that some countries have a

[17] Council 12/5/2009 on ET2020, Annex I.

harder time than others to fulfil their targets and that EU policy making effectively imposes the example of some on the others. The diverse situation motivates thinking that it is unlikely that all targets will be reached across the EU, but this will still help to guide progress. To consider the result of policy making one has to look at national outcomes. The EU can provide overarching information, exchange of best practices, and support for international mobility, but it is now also monitoring and evaluating the national policies and their results steadily more closely. The indicators are meant to serve as an instrument for this. In terms of enforcement, the monitoring depends on the so-called Open Method of Coordination, which means that countries comply voluntarily and under the pressure of their peers but not on legally enforceable grounds.

Table 1.2 *Composing parts of poverty and social exclusion, numbers and percentage of population, EU 2010*

	Headline Indicator		Income Poverty		Material Deprivation		Low Work Intensity	
	('000)	%	('000)	%	('000)	%	('000)	%
Total	115,732	23.4	80,751	16.3	40,105	8.1	37,861	7.7
Minimum		14.2		9.0		0.2		4.6
Maximum		48.7		31.3		37.4		22.9
<60	93,764	24.7	63,231	16.7	32,767	8.6	37,861	10.0
60+	21,968	19.1	17,520	15.2	7,338	6.4	0	0.0

Source: Author's calculation on Eurostat data

Finally, the emphasis on problems of inclusion may be due partly to the more pregnant presence of such problems at the EU level than within certain (richer) countries. At the same time, and perhaps for the very same reason, the targets are not spelled out at the national level, contrary to the other indicators. Countries can choose at will between the three composing parts of the poverty definition: income level, material situation, and work intensity, and a precise target has been fixed for neither of these. In addition, we need to realise that demands on inclusion and education policies may be increasing because of social change, for example – and pretty obviously – because of increased immigration or of globalisation and restructuring, but potentially also – as we will see – because of the plight of the low-educated in society.

EDUCATIONAL ATTAINMENT AND LABOUR-MARKET OUTCOMES IN EUROPEAN COUNTRIES

Though policies may be important, actual outcomes are decisive. These are found at the national level – here we look primarily at the four EU countries already mentioned. Looking back on the last ten years to see how education and employment chances have developed, I aim to contribute to evaluating the possible future effects of the EU2020 policies. A comprehensive evaluation is beyond the possibilities of this contribution. Firstly, though educational attainment affects pay and incomes very significantly, this issue is left out for lack of accessible and comparative recent data. Instead the focus is on employment, but also here I consider only what may be dubbed circumstantial evidence: developments in different respects, such as educational attainment, gender, occupation and working time, and I have to leave some loose ends with regard to their mutual interactions. Nevertheless, this quick-and-dirty evaluation raises a number of questions regarding the desirability of current educational policies from the point of view of inclusion in the labour market.

I start with the outcomes of the educational process itself. This is followed by the job chances of people at different levels of educational attainment. Here I pay separate attention to the increasingly important aspect of working time (full-time versus part-time). Next, I consider the match between educational attainment and occupational level, as the better educated in principle have the options of a match between the two, or accepting work in lower-level occupations which the less educated have not. Finally, I turn to the wider context of labour supply and consider two 'combination scenarios' – paid labour with household activity or with educational participation respectively – that influence both the match between educational attainment and the occupational level, and the role of working time.

Educational participation and attainment

A natural first step is to consider the outcomes of the educational system; these are one of the targets of educational policy and they also serve as a background to the evolution of employment rates. The aggregate participation in education has been trending upwards in the EU as a whole. Among our selected countries, it increases also in Sweden and the Netherlands but stays unchanged in Germany and Finland. German and Swedish participation levels (70-71 percent) are slightly above the EU average (67 percent), while Finnish (75 percent) and Dutch levels (79 percent) are well above. Both the growth and the levels obtained are higher for women compared to men.

For the educational attainment of the population, I focus first on the group aged 30–34, who are the subject of this Union's headline indicator (see Table 2.1). First, we can conclude that the EU2020 educational target is of little significance to these four countries, with the exception of Germany. Finland, the Netherlands and Sweden are already well above the target of 40–42 percent tertiary attainment. A clear increase in the population share of the tertiary educated has occurred in the EU and in all four countries since 2001: 15 percentage-point growth in the Netherlands and Sweden, and five in Finland and Germany, with substantially larger effects again on women compared to men. In itself, the speed of Dutch and Swedish growth suggests the feasibility of the EU2020 target.

Table 2.1 *Population aged 30-34 by level of education, changes 2001 to 2011*

		Percentage Points			Percent of 2001		
		All	Males	Females	All	Males	Females
% Low Educated	EU27	-7.9	-6.0	-9.8	-29	-22	-35
	DEU	-1.6	-0.7	-2.6	-11	-5	-16
	FIN	-5.6	-5.8	-5.4	-40	-33	-50
	NLD	-7.5	-6.0	-8.9	-29	-22	-36
	SWE	0.6	1.8	-0.8	5	15	-6
% Medium-educated	EU27	-4.4	-2.7	-6.1	-9	-5	-12
	DEU	-3.4	-0.4	-6.4	-6	-1	-10
	FIN	0.3	1.4	-0.8	1	3	-2
	NLD	-7.1	-4.2	-10.0	-15	-9	-20
	SWE	-16.3	-12.0	-20.7	-29	-21	-38
% High Educated	EU27	12.3	8.8	15.9	55	40	70
	DEU	5.0	1.1	9.0	19	4	40
	FIN	5.3	4.3	6.2	13	13	13
	NLD	14.6	10.2	18.9	55	38	73
	SWE	15.7	10.2	21.5	49	33	65

Source: Author's calculations on Eurostat, ELFS website tabulated database

When tertiary shares in the total increase, other levels of attainment must face declining shares by definition. Indeed, the low-education share has fallen rapidly, with the notable exception of Swedish men. The medium-education share has also declined, with equally sizeable effects (percentage-points) as for the low educated because of the sheer size of the medium-educated category; here Finnish men are the exception. It is uncertain though whether these shifts in participation and attainment can actually be considered as effects of policy making, not only

because over the years tertiary growth is subject to fluctuations (Table 2.2), which is something that one would not expect as a result of a steady and strong policy. Quite likely there is a large role here for autonomous developments, induced by a combination of cultural change – witness the significant advance during this period of women over men – and, plausibly, the nature of labour-market competition. This is at the core of the argument below. However, at issue is ultimately not whether the upward tertiary trend is effectively the result of policies or not, but what its societal effects are. A future prolongation of this trend is the very purpose of EU2020 policy and therefore it lends itself to scrutinising that policy: what effects may a further strong increase in the share of tertiary educated have?

Table 2.2 *Annual changes in tertiary-educated share in population aged 30-34, 1999–2011*

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Males													
DEU		3	1	-8	3	6	-4	-3	0	4	5	1	0
FIN	10	0	-5	7	1	6	-1	5	6	-11	4	3	-2
NLD	7	1	2	-2	14	5	7	0	1	9	0	0	-3
SWE	1	6		9	5	7	16	3	3	4	4	5	2
Females													
DEU	0	8	-3	-2	5	8	-1	1	5	5	8	2	6
FIN	6	7	5	-3	1	2	2	6	0	2	-2	-3	2
NLD	19	9	3	10	12	0	5	5	2	12	2	4	1
SWE	6	-5		4	11	12	8	6	5	1	5	4	5

Source: Author's calculations on Eurostat, ELFS website tabulated database

Job Chances by Educational Level

The job chances for different levels of educational attainment are crucial. The employment-rate changes of the same 30–34 population group (Table 2.3) indicate that aggregate outcomes are not convincingly positive. Surprisingly, mixed outcomes are found even for the tertiary educated. Employment-rate declines, sometimes considerable, have occurred for the tertiary educated in various countries, particularly for men but sometimes also for women (Sweden). A large part of this may be due to the current crisis – which in itself demonstrates the importance of accounting for the economy when considering the outcomes in relation to policies. However, the significance of negative outcomes increases considerably when we look down the educational ladder. Among the medium-educated, the Finns are the only ones with positive results for both men and women, while in Germany and the Netherlands only women at this level see their employment rates grow. The most worrying, however, is that the employment chances of the low educated have deteriorated strongly across the board, with the tiny exception of Dutch women. If we account for working time on the job (reasoning in terms of employment volumes) this divergence appears to be even stronger. Part-time employment is growing rapidly: of the cumulative EU27 job growth between 2001 and 2011, 70 percent is in part-time jobs[18]. In our four countries part-time growth equals or exceeds total job growth, implying declines in full-time employment. Importantly, the incidence of part-time employment is higher at lower levels of education. In some countries, employed low-educated women have a 20 percentage-points higher incidence of part-time jobs than high-educated women (Table 2.4), and this divergence is often growing[19]. Though there are important cyclical effects in the employment rates of the low-educated, there can be no doubt that the general trend is downward. This category - both men and women - is hit particularly hard in Sweden, and so are the low-educated women in Finland. As a result, one possible conclusion to contemplate is that relatively favourable aggregate employment outcomes rest on a composition shift towards higher levels of education, where people enjoy relatively higher levels of employment, while at the same time labour supply at each individual level of education may be facing increasing problems of employment. Policy makers may be content with the aggregate outcome but not for long if people's employment returns fall short of their educational investments at the individual level – including for those who have been stimulated to stay in education and not leave early.

[18] Unfortunately, the definition of part-time differs between countries, varying from a measurement in weekly working hours (30 or 35), to self-declared, or based on the employment contract.

[19] Part-time jobs also explain the slight increase for Dutch low-educated women.

Table 2.3 *Percentage-point changes in employment/population ratios (EPOP), 30-34 years, 2001 to 2011*

Levels *(Negative is a declining performance)*				EPOP Gaps *(Positive is an increasing gap)*			
	M+F	M	F		M+F	M	F
Total							
EU27	-0.6	-3.5	2.4				
DEU	1.5	-0.7	3.6				
FIN	1.2	0.6	1.8				
NLD	0.6	-4.0	5.5				
SWE	-0.3	-2.4	1.4				
Low				**Medium-Low Educated**			
EU27	-6.4	-11.0	-4.2	EU27	4.7	8.4	2.5
DEU	-6.1	-6.0	-7.9	DEU	8.3	5.8	11.9
FIN	-8.2	-5.4	-12.5	FIN	11.6	6.4	17.7
NLD	-3.6	-9.4	1.5	NLD	2.8	5.6	0.2
SWE	-12.6	-10.4	-19.8	SWE	8.1	5.8	15.3
Medium				**High-Medium Educated**			
EU27	-1.7	-2.6	-1.7	EU27	-0.1	-0.1	1.4
DEU	2.2	-0.2	4.0	DEU	-2.0	-0.1	-1.4
FIN	3.4	1.0	5.2	FIN	-2.7	1.7	-5.8
NLD	-0.8	-3.8	1.7	NLD	1.1	1.5	1.7
SWE	-4.5	-4.6	-4.5	SWE	2.6	3.1	2.9
High				**High-Low Educated**			
EU27	-1.8	-2.7	-0.3	EU27	4.6	8.3	3.9
DEU	0.2	-0.3	2.6	DEU	6.3	5.7	10.5
FIN	0.7	2.7	-0.6	FIN	8.9	8.1	11.9
NLD	0.3	-2.3	3.4	NLD	3.9	7.1	1.9
SWE	-1.9	-1.5	-1.6	SWE	10.7	8.9	18.2

Source: Author's calculations on Eurostat, ELFS website tabulated database

Table 2.4 *Part-time shares in employment by level of education, 15–64 years, 2001 and 2011*

	All		Males		Females	
	2001	2011	2001	2011	2001	2011
Low-Educated						
EU27	18	23	7	11	34	40
DE	24	32	7	14	42	51
FI	18	24	12	17	27	34
NL	47	54	23	30	79	85
SE	28	33	15	17	46	52
Medium-Educated						
EU27	15	19	6	7	28	33
DE	21	27	4	9	41	48
FI	12	15	6	9	18	22
NL	41	50	17	23	71	80
SE	19	24	7	11	34	41
High-Educated						
EU27	13	16	5	7	22	24
DE	14	19	4	7	31	35
FI	7	10	4	6	10	13
NL	36	43	17	22	62	66
SE	16	23	8	11	22	31

Source: Author's calculations on Eurostat, ELFS website tabulated database

Pressures On The Lower End of The Labour Market

How do we explain this divergence of employment chances? First, one may attribute the decline at the lower end to negative sorting. As the category of low educated in the population shrinks (not in Sweden as we just saw! Would these be immigrants?),

it seems likely that its average capability is under pressure as the least talented persons remain while the more talented move on to higher attainment[20]. This is a predictable outcome which policies tend to overlook but will need to take into account. Obviously, society's marginal efforts of keeping the low educated in employment will rise and more attention must be paid to this group to realise inclusion via employment.

Secondly, an educational policy which strongly favours increasing the level of educational attainment, especially tertiary, may itself actually be contributing to the negative effect. The job chances above are irrespective of the quality of the match between the person's level of education and the occupational level of his or her job. There is reason to worry that the tertiary and medium-educated, when they are unable to match adequately with jobs at their own level of education, will look for jobs at lower occupational levels – thus stimulating the competition of over educated labour supply at those lower levels (compare, e.g., Quintini, 2011a, 2011b). To consider this issue we need to broaden our demographic scope as, unfortunately, no occupational data is readily available for those aged 30–34. One strong illustration is that, particularly for the EU as a whole, between 2001 and 2011 the employment in elementary jobs, which are at the bottom of the occupational hierarchy, grew strongly for people with a medium education while it declined for those with a low education (Table 2.5) in spite of their sufficient numbers. Another strong illustration is the fact that women in employment are considerably, and increasingly, better educated than men in employment (Tables 2.6 and 2.7) while at the same time their work is tilted more towards lower levels of occupation than men's. If we combine the two illustrations: the shift in elementary jobs towards occupants with a medium education is much stronger for women, 17 percent of their cumulative job growth from 2001 to 2011 was in elementary jobs. To this, it can be added added that also the incidence of part-time employment seems to be higher when occupational levels are lower, the part-time incidence among elementary jobs being twice the average (Table 2.8). In other words, it seems plausible that these developments come together at the lower end of the labour market: low-educated labour supply finds itself under considerable and increasing pressure of both better-educated labour supply and the part-time-isation of these jobs. The former diminishes their employment chances, the latter shrinks the annual income they can derive from work.

[20] It may hold less for recent immigrant offspring who are in a phase of educational development that native youths have already passed.

Table 2.5 *Elementary occupations by level of education, 15–64 years, ('000), changes 2001 to 2011*

	All	Low	Medium	High
Total				
EU27	1,232	-892	2,173	413
DEU	467	158	379	20
FIN	-31	-32	-1	2
NLD	6	-6	14	17
SWE	-39	-17	-21	10
Men				
EU27	-393	-753	509	127
DEU	145	114	81	-9
FIN	-26	-16	-10	1
NLD	12	6	9	8
SWE	-16	-5	-10	4

	All	Low	Medium	High
Women				
EU27	1,625	-138	1,665	287
DEU	321	44	298	29
FIN	-6	-16	9	1
NLD	-7	-12	5	9
SWE	-23	-12	-11	6

Source: Author's calculations on Eurostat, ELFS website tabulated database

Table 2.6 *Population by gender and level of education, 15–64 years, percentage, 2011*

		Males			Females			Difference		
		Low	Med	High	Low	Med	High	Low	Med	High
EU27		22.4	50.3	27.3	18.9	47.9	33.2	-3.5	-2.4	5.9
DEU		12.7	57.4	29.9	13.4	59.8	26.7	0.7	2.5	-3.2
FIN		16.0	50.4	33.6	11.2	42.6	46.2	-4.9	-7.7	12.6
NLD		26.6	41.5	31.8	23.8	43.3	32.9	-2.8	1.7	1.0
SWE		16.1	55.3	28.5	14.0	44.6	41.3	-2.1	-10.7	12.8

Source: Author's calculations on Eurostat, ELFS website tabulated database

Table 2.7 *Employment by occupational level, 15–64 years, percentage, 2011*

		1	2	3	4	5	6	7	8	9
		Manag	Prof	Techn	Clerks	Sales	Sk Agric	Crafts	Machine	Elem
EU27	Males	7.5	16.2	14.6	6.0	11.2	4.9	20.4	11.5	7.8
	Females	4.5	20.0	16.6	14.7	24.2	3.3	2.8	2.8	11.2
	Difference	-3.1	3.9	2.0	8.7	13.0	-1.7	-17.6	-8.7	3.4
DEU	Males	6.5	18.5	17.2	7.5	9.8	2.2	21.4	10.1	6.7
	Females	3.3	16.5	24.4	17.8	21.8	0.7	2.5	2.1	10.9
	Difference	-3.2	-1.9	7.2	10.3	12.0	-1.5	-19.0	-8.0	4.2
FIN	Males	6.9	21.9	13.8	3.1	10.3	5.0	21.0	13.4	4.7
	Females	3.4	21.1	20.1	10.9	29.4	2.5	1.9	2.7	7.9
	Difference	-3.5	-0.8	6.3	7.8	19.1	-2.5	-19.0	-10.7	3.2

		1	2	3	4	5	6	7	8	9
		Manag	Prof	Techn	Clerks	Sales	Sk Agric	Crafts	Machine	Elem
NLD	Males	9.8	23.1	15.6	6.4	10.4	3.8	16.0	7.1	8.0
	Females	4.7	22.6	17.6	14.4	28.9	1.3	1.1	1.0	8.3
	Difference	-5.1	-0.5	2.0	8.0	18.5	-2.5	-14.8	-6.0	0.4
SWE	Males	6.9	20.5	17.8	3.4	12.0	2.7	19.3	13.2	4.2
	Females	4.0	30.7	15.2	8.8	30.6	0.8	1.4	2.5	5.8
	Difference	-2.9	10.2	-2.5	5.4	18.6	-1.8	-17.9	-10.8	1.6

Source: Author's calculations on Eurostat, ELFS website tabulated database

Table 2.8 *Part-time shares in employment by occupational level, 15–64 years, percentage, 2011*

	Total	1	2	3	4	5	6	7	8	9	9
	%										concentration
Males											
EU27	8	3	8	6	9	15	13	4	5	20	246
EU15	9	3	9	6	10	17	11	4	6	21	233
DE	9	3	9	6	9	18	9	3	7	26	292
FI	9	3	8	8	15	19	17	5	6	27	291
NL	24	10	23	20	28	41	23	12	19	59	243
SE	12	4	12	8	18	29	17	5	8	35	292
Females											
EU27	32	14	23	28	32	39	26	17	14	52	165
EU15	37	17	28	32	36	45	30	24	21	58	158
DE	45	17	35	38	43	56	34	30	32	73	162
FI	19	0	12	14	16	28	17	13	11	32	169
NL	76	52	67	73	78	87	72	66	66	91	119
SE	39	11	31	27	36	56	35	24	16	57	148

Source: Author's calculations on Eurostat, ELFS website tabulated database

The concentration of low-skill jobs in particular (consumer-oriented) services may contribute to the part-time shift in the demand for labour from employers as this can help adapting the timing of production to that of product demand. However,

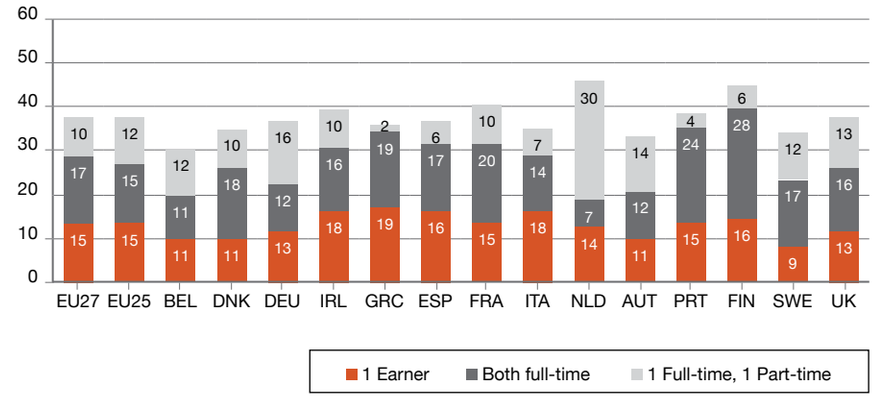
there is good reason to also look at the supply side. Here two 'combination scenarios' seem to be establishing themselves, which both generate a keen interest in part-time employment, and also potential effects of over-education relative to the occupations. The first scenario is aimed at combining household activities with paid labour (with a focus on adults), the second at combining educational participation with paid labour (with a focus on youths).

Effects of Two 'Combination Scenarios'

In many EU countries the predominance of the single-breadwinner household has come to an end and is increasingly being replaced by the two-earner model (naturally, as far as couples, not singles, are involved) (Graph 2.1). Single-earner couples have certainly not disappeared but nowadays two-earner couples are the dominant category, making up about two-thirds of all couples in employment; high levels are found in our selection of four countries, especially Sweden, and lower levels in Southern Europe: Greece, Italy and Spain, but even there they still are the majority. Since 2005 the two-earner share has been growing further (except for Portugal and the UK), particularly in Germany. Though, part-time employment is an important component of the two-earner model in many cases, its role is not universal. The contrasting examples of Finland and the Netherlands illustrate this: both have the largest role for couples in employment but in Finland this goes together with the maximum importance of full-time work, and in the Netherlands with the maximum for part-time work. Especially when second earners work part-time they may make a different trade-off in their supply of labour with regards to the matching of education and occupation. The ease of combining a job with household activities may limit the choice

of jobs, as the combination lends more weight to travel times, specific working hours, and the ease of the job. In addition, this may be supported by systems of progressive taxation, which concerns only annual incomes and not hourly earnings, and imply lower taxation on small jobs[21].

Graph 2.1 *One and two-earner couples by working time, percentage of all households 15–65 years except students, 2011*



Source: Author's calculations on Eurostat, ELFS website tabulated database

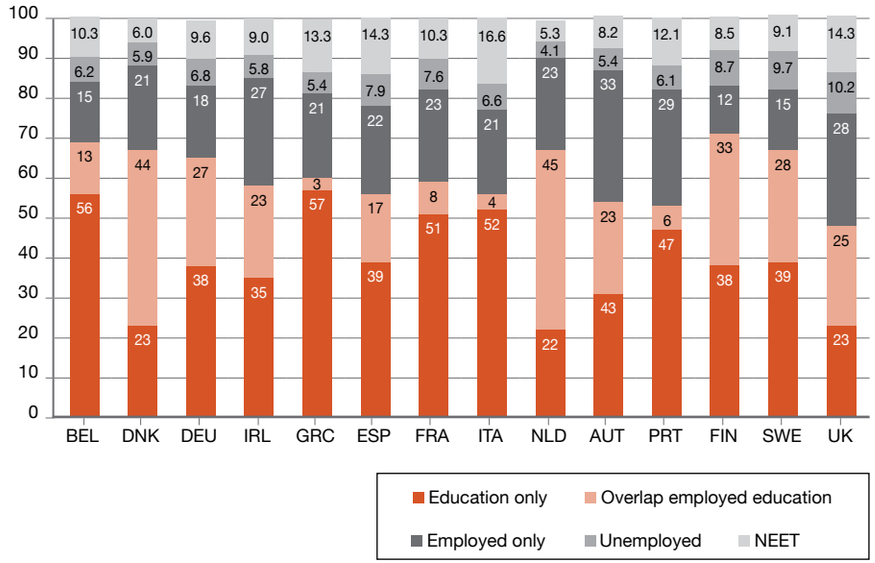
The second combination scenario involves people who combine their participation in education with a paid job, especially in low-skill services (e.g., super markets, cafés) and usually for a few weekly hours only[22]. Potentially, this is an important corollary of the growing educational participation necessary for higher attainment. However, it is no automatism as this combination scenario differs very strongly between countries (Graph 2.2), perhaps because of labour-market workings and institutions, and

[21] Salverda (2008) points to the strong concentration of annual incomes of Dutch female employees below the level of the statutory minimum wage, which is where marginal tax rates rise considerably.

[22] It should be distinguished from vocational education (esp. Germany, Austria, Denmark) that partly takes place in enterprise with the implication of some employment – this remains included here as, unfortunately, that information is not readily available.

is not a universal phenomenon at all. Notably, the Netherlands (and also Denmark) has a very strong overlap with 45-50 percent of the young population being in education and having a job at the same time, followed at a considerable distance by Germany (and also Austria) at 25–30 percent, and with Finland and Sweden at or below 20 percent. Still this percentage is much lower in Belgium, Greece, Italy, and Spain (one to five percent) or France (10 percent)[23]. It is important to relay that this second combination adds strong competition to the low-skill labour market from the side of people who have a strong interest in jobs with a few hours of work and who take little interest in the precise education-occupation match or the level of gross pay as net pay will be relatively favourable.

Graph 2.2 *Youth (15–24) population by activities, 2007*



Source: Author's calculations on Eurostat, ELFS website tabulated database

[23] As an aside, we add that the presence/absence of many small youth jobs directly affects the unemployment rate of youth and of the country as a whole when endorsing the international ILO definition which starts counting jobs, used for the unemployment denominator, at one hour per week.

These four trends: expanding educational attainment, diminishing matching to the job, growing two-earner households, and overlapping education and employment, all imply significant changes in the structure of the labour market and the behaviour of its agents. A fifth, no less important trend concerns the rapidly growing role of immigrants, and their offspring[24]. Between 2001 and 2011, non-nationals account for more than half of all employment growth in EU27 as a whole, and also in Finland, but much less in the other three countries. Immigrant labour includes (and has shifted towards) labour mobility between EU countries, which has received a boost from EU Enlargement in 2004, especially for people from Poland. Resident immigrants of non-western origin and their off-spring usually have lower chances of accessing education and employment. Table 2.9 demonstrates this with the employment rates of non-nationals from outside the EU27 for the entire labour force age bracket (15-64) as well as those aged 30-34 only. Rates in the four countries are below the EU average, possibly because of the immigrants' educational attainment levels. They are particularly low for immigrant women and thus show a larger gender gap than the EU average.

[24] Nationality is insufficient to gauge the significance of immigrants as their offspring may be put in the same category in the labour market but at the same time may have the nationality of the country, though that varies between countries.

Table 2.9 *Relative employment/populations ratios by nationals from outside EU27, 30-34 and 15–64 years, percentage, 2011*

	All	Males	Females	Ratio Females/ Males
30-34				
EU27	0.77	0.88	0.66	0.75
EU15	0.76	0.88	0.65	0.73
DEU	0.71	0.86	0.55	0.64
FIN	0.69	0.91		
NLD	0.59	0.74	0.46	0.62
SWE	0.56	0.71	0.44	0.61
15-64				
EU27	0.85	0.92	0.77	0.83
EU15	0.83	0.90	0.74	0.82
DEU	0.74	0.84	0.63	0.75
FIN	0.68	0.81	0.56	0.68
NLD	0.67	0.77	0.58	0.74
SWE	0.58	0.71	0.46	0.65

Source: Author's calculations on Eurostat, ELFS website tabulated database

CONCLUDING REMARKS

In the European Union, an intricate mechanism of policymaking has been built for skills for inclusive society. Its actual contents and significance are found at the level of individual countries, not of the Union. At the same time there is increased coordination and peer pressure on national policies which reduces the national room for policy manoeuvre and specificity. Therefore a comprehensive evaluation for the Union as a whole would demand extensive research both on a country-by-country basis and in a changing international setting. However, the starting point for that seems precarious in the fields that we focus on here: the two elements, skills and inclusion, are not well articulated and the focus on

targeting poverty seems especially weak. Also, though European policy making acknowledges that the two "have a critical role to play in helping to ensure access to the labour market", they hardly ever figure in recommendations made by the Council to the member states, which largely focus on the harder (economic and financial) targets.

The social partners are involved, as a few among many stakeholders (esp. NGO's), in the actions that are undertaken against poverty. Their role is very limited and so is their actual involvement in both the Poverty Platform and the European Year 2010 for Combating Poverty and Social Exclusion[25]. Encouraged by the European Commission, the European representations of the social partners have maintained a social dialogue for quite some time (Benedictus et al., 2003). While initially they asked the Union to lend legal force ('directives') vis-à-vis the member states to the agreements which they managed to conclude with each other, they are now content with inviting their own following, the national social partners, to adopt their recommendations. This includes the Framework Agreement on Inclusive Labour Markets, which they concluded in March 2010, though the Commission has stated "that it will work to support the effective implementation of the agreement". The social partners' role seems to be deemed more important for introducing 'flexicurity' in the labour market and keeping older workers at work longer.

[25] No role at first stakeholders meeting of early 2011, six among 400 representatives at the second meeting of September; no response to the evaluation of the Social Exclusion Year.

It is important to realise that the European Social Dialogue plays out largely at the level of separate sectors of the economy and industries. In addition, the role of the social partners at the national level differs significantly between countries, and if that level offers them better chances to influence outcomes they will tend to pay less attention to the EU level. Among our four countries, involvement by the government in policy preparations and implementation varies and seems somewhat stronger in the Netherlands and Sweden, followed by Finland and, finally, Germany.

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THE NETWORK IMPERATIVE

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INTRODUCTION

Other writers featured in this book have contributed papers deliberating issues of social inequality. They have sought answers to questions such as: a) "What are the sources and consequences of inequality?" b) "How do diverse countries such as Finland, Germany, Japan, and the Netherlands deal with inequality?" c) "To what extent does inequality reproduce from one generation to the next?" and d) "What personal attitudes and practices should one adopt in tackling inequality?"

The answers were varied, but they converged on several distinctive themes: inequality (specifically income inequality) is ever-present, growing (even in the Nordic countries), durable (lasting from one generation to the next), and has roots in large (macro-level) processes. The other chapters in this book cited trade and globalisation, volatility in markets, technological advancement, domestic policy, school regimes, and intergenerational mobility, as important sources of inequality. One chapter identified skills upgrading, particularly among low-skilled workers, as important for closing the gap in earnings. Another chapter underscored the importance of developing a "craftsmanship" culture, taking pride in one's work, and staying ahead of the competition.

I learned much from their contributions but was surprised to find practically no mention of micro conditions – that is, of inequalities arising from routine, day-to-day interactions between individuals. In this commentary, I underscore that inequalities are not due to macro conditions alone; rather, a subterranean level of routine interactions between bosses and workers, between job seekers and their contacts, constitutes another important arena for the amplification and attenuation of inequalities. In the quest to better understand the main drivers of inequality, micro-interactions, network practices at the people-to-people level remain a neglected and underexplored topic.

Inequalities reflect a gap in skills and wealth, to be sure, but they also reflect a gap in the social fabric, specifically in social relations. Unless this social segregation as distinct from wealth creation is addressed, social tensions and conflict may arise. Thus, in dealing with the inequality crisis, I propose a need to examine the "network imperative", in addition to the "skills imperative".

INEQUALITIES AND NETWORK MECHANISMS

A starting point in thinking about inequalities at the level of personal relations is Charles Tilly's *Durable Inequality*, where he identifies four mechanisms by which inequalities are reproduced: a) exploitation, b) opportunity hoarding, c) emulation, and d) adaptation. In that these mechanisms are anchored in workplaces, schools, and so forth, they are useful for thinking about the workings of inequality in organisational settings. I have always found Tilly's ideas fascinating, as they urge scholars to be clear about how inequalities are created and reproduced, not just noting that they are present, growing or slowing.

There is much that takes place in the "process" that needs to be identified and systematically accounted for.

Exploitation: Exploitation "reproduces itself by supplying resource controlling elites with surpluses, part of which they use to reward crucial collaborators" (Tilly, 1998, p. 191). Exploitation is not just the experience of manual workers in South Africa's gold and diamond mines (Kermeliotis, 2013). When white-collar workers are given BlackBerry smart phones which they must keep switched on after office hours, a dignified "exploitation" occurs as well. Each exploitative relation and project multiplied over many organisations engenders a growing gulf of inequality for workers – both manual and professional.

The point is not simply to enhance the skills of workers so that each will become more "productive" - this is the human capital-centric view that treats people as assets to be trained for productive capacity. Rather, a skills regime should incorporate emphases on workplace harmony, building a collaborative culture so that skills can be shared within and across ranks, and creating a collective productivity. The conventional human capital perspective of developing individual competences needs to consider the desirability of developing a collective intelligence. This cannot take place in a workplace environment of excessive exploitation and/or competition.

Opportunity hoarding: This mechanism "feeds rewards selectively into segregated networks… and emphatically includes the deliberate transmission of wealth and other advantages to children and their recognised heirs" (Tilly, 1998, p. 191). In Singapore, nowhere is this more clearly seen than in the matching of privileged

children to elite schools on the basis of parental links as 'alumni'. Even if such legacy admissions were eliminated, several elite primary schools are located in the wealthiest neighbourhoods, thus drawing from a catchment area of wealthy families, based on the two-kilometre rule. Of course, inequalities would be much reduced if every school were equally well-resourced, but physical infrastructure aside, can alternative capitals, such as social networks, cultural capital, and school reputation, be equalised? This cannot be an easy thing to do.

Current efforts to level the playing field by increasing state expenditure and investment among less wealthy children in the pre-school sector are commendable and should be sustained. However, Tilly's thesis might suggest that there can be unintended consequences. The field will be levelled to a greater extent as early quality education is now made available to more families, but the competition and stress will intensify. Democratising education by allowing uniform access to quality resources may result in many upper and middle class parents pumping even more resources into their children's education to beat the fiercer competition now arising on a levelled playing surface (Schubert, 2012). Opportunity hoarding will accelerate within the upper and middle classes, as they seek to defend their privileges against the lower classes. The bottom will be pushed up, but the top will by no means be held down. Inequality will persist, despite significant rises in absolute mobility.

Inequalities that start from the family continue into the school, where certain practices, such as streaming, potentially create, spread, and standardise inequalities. To be clear, streaming is not just a process that sorts for talent. Arguably, it sorts for class as

well. Parents who can afford it will help their children get ahead, or at least prevent them from falling behind. The bottom will rise, but it rises against the tide of inherited wealth and the "concerted cultivation" (the single-minded cultivation of children's talents and abilities based on repeated exposure to multiple enrichments, capitals and other private strategies) practiced by wealthy families (Coleman, 1988; Lareau, 2003).

More perniciously, segregating children by talent induces 'homophily', whereby birds of a feather flock together (McPherson, Smith-Lovin & Cook, 2001). Talent segregation produces social segregation, making a stark distinction between the elite and the masses. The Singapore system is defined by what Ralph Turner (1960) calls 'sponsored mobility' where students are identified early for their academic talent, tracked into quality educational experiences, and subject to further testing. The alternative is 'contest mobility' where streaming is conducted much later to maximise the chances of all children. The earlier the streaming, the more influential family background factors are – and the greater the odds for maintaining class divisions (Hanushek & Woessmann, 2006).

A major expression of streaming in Singapore is the Integrated Programme (IP), which admits students after the Primary School Leaving Examination (PSLE) and then more or less insulates them from competition in the next six years, culminating in the A-level examinations. Is the IP is an unwitting engine of inequality reproduction, since it draws good performers from the PSLE, and puts them on a track for an extended period? If so, the IP *amplifies* the "high-stakes" nature of the PSLE.

A poll conducted by the local English-language daily newspaper, The Straits Times, highlights social segregation in education: the poll asked students from the top five secondary schools how many of their closest friends were from the Normal (versus Express) stream. About 61 percent indicated no close friends in the Normal stream. Over 50 percent had no close friends in three-room or smaller flats, and 45 percent had no close friends of a different race (Yong & Zaccheus, 2012). These results reflect a form of social closure.

Beyond education, patterns of network segregation are borne out in carefully collected data for a wider sample of Singaporeans. The results in Table 1 show substantial amounts of social segregation by education among a general sample of Singaporeans. The table indicates that Singaporeans tend to know others of the same educational level: of the 5,430 ties elicited from 1,143 respondents, 3,347 (i.e. 62 percent) are ties of equivalent education. The percentages on the left to right diagonal indicate robust patterns of educational similarity between respondents and their network members. Such homophilous patterns are worrying, as they imply social segregation along educational lines.

Table 1: *Number of ties between respondents and network members of different educational levels, Singapore (2005)*

	Education Level of Respondent		
	Low	**Middle**	**High**
Education level of network member			
Low	875 (54%)	583 (21%)	41 (4%)
Middle	646 (40%)	1841 (65%)	319 (32%)
High	96 (6%)	398 (14%)	631 (64%)

The chi-square value is 1988, $p < .0001$

Opportunity hoarding occurs in workplaces as well. As McDonald (2011, p. 317) explains: "network processes have long been implicated in the reproduction of labour market inequality". Herein lies an aspect to inequality that is difficult to pin down precisely because of the embedded nature of network mechanisms. As long as people continue to find work through their personal networks, legislating against discrimination in the labour market would not, by itself, eliminate inequality. In Singapore, this happens prevalently in the small business sector, where Chinese recommend other Chinese (Chua, 2011). While the intent may not be to discriminate, the outcome is discriminatory against potential entrants from other ethnic groups. Often, facility with the Chinese language is a prerequisite for entry into a firm, and this means the systematic exclusion of minority groups.

Emulation: Emulation refers to "the copying of established categorically based organisational models and/or the transplanting of existing social relations from one setting to another" (Tilly, 1998, p. 174). Emulation is based on tradition,

thus leaving unquestioned the wholesale 'copy-and-paste' of established chunks of social structures from one setting to another. While this may be efficient from an organisational standpoint (why reinvent the wheel?), it multiplies unequal practices across the organisations that adopt them. One example is the use of estimated potential scores in large organizations. Do these scores constitute a form of labelling, advantageous for certain groups of workers? Anecdotally, the first one or two years are critical for determining a person's estimated potential. If someone receives a low score in initial appraisals, it may be hard to get a higher one later. Is the playing field tilted towards early bloomers, thus disadvantaging late bloomers in work, as in school?

Labels are sticky: once a person is labelled, a reproducing dynamic ensues. The latest research shows that "early adversity has enduring effects on life evaluations, offsetting the influence of buoyant expectations" (Schafer, Ferraro & Mustillo, 2011, p. 1053). In other words, adversities at a young age compound disadvantages later in life. In addition, recent polls show Singaporeans to be somewhat emotionless and unhappy (Hoe, 2012). However, it has been shown that an optimistic interpretation or reframing of life events can fuel success, fighting the odds and improving work performance and satisfaction (Luthans, Avolio, Avey & Norman, 2007). The Singapore Workforce Skills Qualification (WSQ) is a national credentialing system, which provides workers a "second chance" to acquire skills relevant for the current market. It could extend its reach to include participation from more sectors of the workforce. It could also include a curriculum structured around building 'psychological capital' (Luthans, Avolio, Avey & Norman, 2007) to increase optimism among workers and to help them remove sticky labels.

Adaptation: Adaptation "articulates unequal organisational arrangements with valued adjacent and overlapping social routines so that the costs of moving to theoretically available alternatives rise prohibitively" (Tilly, 1998, p. 191). While emulation transplants a pre-existing template into a new setting, adaptation locks it in place and imbues it with a taken-for-granted status. Adaptation reflects an entrenched system, one that when left alone, ceases to question its own assumptions. Many myths and 'invented traditions' (Hobsbawm, 1992) make up a society.

Beyond the scope of values, over time, the 'culture' of groups and societies become routinised 'habits, skills and styles' (Swidler, 1986). When these routines are not questioned, either at the scale of the community or the society, the reproduction of inequalities flies under the radar.

FORTUNATELY, NETWORKS MAY ALSO REDUCE INEQUALITIES

While networks are complicit in much social inequality, reconfiguring network patterns may go a long way to reducing it. For many people, networks are a source of novel information leading to jobs (Granovetter, 1995); for others, networks are pathways to better health (Song, Son, & Lin, 2011). For a network to narrow inequality, it must be able to bridge otherwise disparate groups. This is the 'bridging social capital' discussed by Robert Putnam (2000) in his book Bowling Alone.

When a lawyer forges a friendship with an electrician, two distinct layers of social structures connect. If resources are shared, both stand to be enriched. This is not simple, idealistic thinking. Research shows that people with diverse networks

(i.e. they know people from different occupations) tend to have rich cultural knowledge (Erickson, 1996). Gone are the days where cultural interests of the elite are confined to art, museums and the theatre. Elites these days are cultural omnivores engaging a wide range of cultural genres originating in different social strata (Erickson, 2008).

Research shows inter-group mixing to be especially helpful for subordinate groups. These groups gain access to high-status resources when they break out of their existing social circles (Ibarra, 1995; Day & McDonald, 2010). In comparison, dominant groups are less likely to experience quantum leaps in access since, as dominant group members, they face ceiling effects. Unfortunately, inter-group relations tend not to be prevalent, thus making homogeneous networks durable sources of inequality.

Contextualising these ideas to Singapore, perhaps the best way to illustrate the importance of bridging social capital is to showcase an instance of my own research into contact use patterns in the labour market. Although Singaporeans tend not to use job contacts when looking for work (most prefer to apply to newspaper advertisements), some do and it is to this group that I draw your attention.

Table 2 shows the number of ties connecting Chinese/non-Chinese job seekers and job contacts. A very strong pattern of ethnic similarity in the choice of job contacts emerges: Chinese job seekers rely on Chinese job contacts (99 percent); non-Chinese job seekers rely on non-Chinese job contacts (80 percent).

Table 2: *Number of Chinese/non-Chinese job seeker, job contact ties*

	Non-Chinese Job Seeker	Chinese Job Seeker
Non-Chinese Job Contact	73 (80%)	3 (1%)
Chinese Job Contact	18 (20%)	237 (99%)

Why such strong patterns of ethnic segregation? It may seem that ethnic preferences have a part to play; after all, ethnic similarity generates ease of communication and is based on a prior shared understanding of cultural norms. But there can also be structural reasons: a) schools that focus on the Chinese language bring Chinese co-ethnics together, excluding minorities in the process; b) the allocation of minorities to certain sectors of national service highlights ethnic solidarity; c) the streaming of students beginning early in the educational race amplifies Chinese advantages in the world of education; and d) the highlighting of 'race' in official discourse potentially strengthens racial boundaries, creating a notion (and nation) of 'us-versus-them' (Goldberg, 2002).

Interestingly, on the rare occasion that a non-Chinese job seeker uses a Chinese job contact (there are only 18 such ties), he/she experiences a substantial boost in accessing a PMET (professionals, managers, executives and technicians) job: Table 3 shows that when a non-Chinese job seeker uses a Chinese job contact, his/her representation in PMET work rises to 56 percent (from 26 percent), with post-hoc tests showing that the difference in percentages is statistically significant (p = .02).

Clearly, minority members benefit when they rely on job contacts from the dominant group.

Table 3: *Combinations of Chinese/non-Chinese job seeker-job contact ties and access to PMET jobs*

Tie Combinations	n	Proportion in PMET Jobs
(1) Chinese Job Seeker – Chinese Job Contact	237	.35
(2) Chinese Job Seeker – Non-Chinese Job Contact	3	.33
(3) Non-Chinese Job Seeker – Chinese Job Contact	18	.56
(4) Non-Chinese Job Seeker – Non-Chinese Job Contact	72	.26

Difference in proportions between (3) and (4) is statistically significant (p = .02)

The usefulness of a cross-race tie is further substantiated by the following regression models (Table 4), which show that when the effect of using a Chinese job contact on access to PMET job is held constant, the effect of being a minority on access to a PMET job becomes stronger, jumping from .29 to .99†. This, in statistical parlance, is a 'suppression effect' which means that minorities' chances of accessing PMET jobs are diminished by the fact that they hardly rely on job contacts from the majority group. Thus, the paradox: cross-race ties are extremely useful for the status attainment of minorities, yet such cross-race linkages rarely occur. State institutions should create large policy levers, to encourage greater integration between ethnic groups and between class groups.

This may require rethinking, among other things, about the early sorting of students in the education system, so as to reduce social (ethnic and class) segregation. Co-curricular activities such as sports, community service and uniformed groups are a potential source of inter-ethnic and inter-class mixing in the school. While efforts at inter-ethnic mixing have focused on the neighbourhood, this may be an outdated solution; neighbouring as a whole (encompassing all sorts, whether inter-ethnic or not) has declined significantly in contemporary societies (Rainie & Wellman, 2012).

Table 4: *Factors predicting access to a PMET job among contact users*

Predictors	Model 1	Model 2
Female	- 1.02***	- .99***
Education (low)	- 4.75***	- 4.79***
Education (middle)	- 2.44***	- 2.51***
Minority (Malays and Indians)	.29	.99†
Use of a Chinese job contact		.93†
Intercept	2.54	1.67
Likelihood ratio	125***	128***
N	331	331

†P<.10,*P<.05, **P<.01, ***P<.001

Reference categories: male, education (high), Chinese, use of a non-Chinese job contact.

Inter-group mixing should extend to the class level. When Acting Minister for the Ministry of Manpower Tan Chuan Jin urged "wealthier folks to help the less off" as a long term strategy to narrowing the inequality gap (Yahya, 2011), he was alluding to an important network principle. When people from different strata/groups interact, they build critical channels for the flow of resources from the powerful to the less powerful and vice versa.

This sharing narrows the inequality gap and is a positive step towards equalising life chances, as my data (see Tables 3 and 4) show to be the case for ethnic groups.

CONCLUSION

Perhaps it is the nature of meritocracies and other formal systems to think about income inequality in overtly human capital terms, including the assumption that individual disadvantages in labour markets must be due to personal shortfalls in skills and/or other forms of human capital like experience and resilience. I have taken a different tack in this commentary. For one thing, inequalities are not always due to macro conditions as suggested by most of the chapters. Rather, a subterranean level of routine interactions between bosses and workers and between job seekers and their contacts constitutes an important arena for the amplification and attenuation of income inequalities. It is here that the current skills policy is weakest and most ad-hoc (e.g., mentoring, workplace harmony). The hard side (e.g., building skills and competencies) is catered to conscientiously, while the soft side (e.g., social integration, mixing of groups) seems left to chance.

While the ambition to equalise skills is necessary, equalising access to social capital is just as important, as networks do matter for status attainment (Lin, 2001). When confronted with a problem, our natural instinct is to seek the most direct solution – for instance, if the problem is the inequality of incomes, let's target skills to raise productivity so that real wages can go up.

But I invite the reader to consider how oblique solutions can complement direct ones (Kay, 2010). Networks are ties connecting individuals and groups, and, as such, can be extremely helpful for network members' economic success, especially subordinate group members (Table 4). Of importance beyond skills, are the

networks people are "embedded" in, from which they sometimes experience "unanticipated" gains (Small, 2009). Lin (2001) designates the latter as the "invisible hand of social capital".

I started this essay by highlighting economic polarisation and the proposed "skills imperative". Let me end by reiterating my argument that an important key to reducing economic polarisation is reducing the social polarisation created by overly exclusive networks. The "network imperative" cannot be ignored.

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ENHANCING THE SINGAPOREAN CONTINUING EDUCATION AND TRAINING (CET) SYSTEM AND JOB QUALITY FOR AN INCLUSIVE SOCIETY

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INTRODUCTION

Despite the accolades Singapore has received for its ability to couple education and training strategies with economic development strategies (Ashton, Green, Sung, & James, 2002; Schwab, 2013) resulting in high GDP per capita, a high employment rate and a highly competitive workforce, the country is still very much concerned with its workforce competitiveness and employability rates. This is no surprise because when compared to other developed nations, the Singapore workforce is lagging behind in terms of wage-share of GDP[1] and productivity[2].

Employment and income risks are also intensifying due to a number of reasons. As an open economy, Singapore is susceptible to economic volatility brought on by exogenous forces[3]. For example, the growing phenomenon of a "global auction of skills" (Brown, Lauder, & Ashton, 2011) suggests that enterprises are able to produce goods and services through their distributed skills network – complemented by the constant sourcing for high-skilled-low-cost production. Others attribute the cause to de-skilling brought on by automation (Autor, Levy, & Murnane, 2003). Analysts also point to the growth of incidence of low-wage jobs in the services sectors, predominantly those in non-tradable sectors (Appelbaum, 2010). In Singapore, of the 79 percent working Singaporeans in the services sectors, 30 percent are employed in low-skill sectors such as retail trade, transportation, accommodation & food services (Manpower Research and Statistics Department [MRSD], 2013). These low-skill sectors are characterised by the relatively high incidence of low-wage workers: 60 percent in retail, 70 percent in transport, 85 percent in accommodation & food services[4]. The low-skill-low-wage scenario in the service sectors is further evidenced by the 2011 Ministry of Trade and Industry report. The report stated that though the long term trend in real wage growth was positive and roughly in line with gains in productivity, these gains were not shared equally by all industries - the hospitality, transport and storage, and retail trade sectors all experienced negative productivity and negative wage growth between 2006 and 2010. Worse, the general manufacturing sector though experiencing positive productivity growth, experienced negative wage growth.

1 Data on share of wages in GDP 2010: Singapore (41.8 percent), Korea (50.6 percent), Japan (55 percent), US (59 percent), France (61.4 percent), UK (62.6 percent), from various sources: Singapore data was from Manpower Statistics, 2011; all other country data were as cited in United Nations Conference on Trade and Development [UNCTAD] (2012, p. 48).

2 Data on comparative labour productivity (average) 2001-2011: Singapore (0.6), Japan (1.6), Korea (4.7). Various sources: Yearbook of Statistics Singapore 2012, and OECD Stat Extracts (n.d).

3 Singapore's episodes of economic volatility since the 90s: 1985/86, 1997, 2001, 2003, 2008/09

4 Inferred from Wage Report 2011 published by the Ministry of Manpower Singapore.

The intensification of employment and income risk is not limited to low-skilled workers, but also affects middle-skilled workers. For instance, according to the Singapore Occupational Wage Survey 2011 (MRSD, 2012), the average wage among Managers (the highest paid occupation group) grew by nine percent after adjusting for inflation over the 10 years from 2000 to 2010. This compares to only two percent for both professionals and associate professionals (the second and third highest paid occupational categories[5]). Worsening this situation has been a trend in consumer price inflation that unequally burdens low income earners. Statistics show that the bottom 20 percent of households by income faced average consumer inflation of 3.6 percent from 2006 to 2010. This compares to only 2.9 percent for the top 20 percent of households by income[6].

The threat of the hollowing out of middle-skilled jobs has not abated. Over the period from 2001 to 2011 the number of residents employed in the occupation categories of Managers and Professionals grew in total by approximately 50 percent. This compares to only a total of 29 percent for Associate Professionals, Clerical Support Workers and Service and Sales Workers[7]. This data suggests that the middle-skill level occupations are lagging behind high-skill occupations in terms of both employment and income growth.

[5] Report on wages, various years 2001-2010 published by the Ministry of Manpower Singapore.
[6] Press release on consumer price index for households in different income groups, various years 2008 – 2011 published by the Singapore Department of Statistics.
[7] Labour force survey, various years 2001-2011 published by the Ministry of Manpower Singapore.

On the other hand, a worker's ability to take on a higher level skill job not only depends on if he has the skills, but also whether he has the opportunity to use them. The 2011 Skills Utilisation in Singapore study (Sung, Loke, Ramos, & Ng, 2011) shows that the level of skills utilisation among sectors differs widely. While it is not surprising that some sectors, like pharmaceutical & biologics, chemical/petrochemicals, and electronics & electrical engineering, showed higher skills requirements than the sample average, there are also sectors that are not usually associated with low skills which showed lower skills requirements than the sample average. The latter includes sectors such as hotels & tourism, security & estate management, food & beverage, logistics & transportation, and retail. The same study also confirmed that low-skilled jobs are closely linked to low-wage jobs.

With the above as the backdrop, the most important question is whether Singapore's current continuing education and training (CET) system can rise to the challenge of sustaining the employability and employment of its people[8].

A CASE FOR CHANGE

The current continuing education and training (CET) system operates on a skills-supply model where being skilled and good performing workers means that good wages with ensuing related benefits. We contest the simplistic notion of treating 'training = skills' and ignoring the potential of making skills strategies matter in the current phase of economic restructuring.

[8] Adopting a sectoral approach in driving the necessary change, the National Productivity and Continuing Education Council (NPCEC) oversees the sectoral effort in productivity and skills upgrading. Till date, 17 sectors led by the respective economic agencies are participating in the 'skills-innovation-productivity' efforts.

That said, we are not dismissing the value of skills acquisition as a social mobiliser and input to greater productivity, but to highlight the fact that skills strategies sit within a complex and dynamic socio-economic environment.

For skills strategies to be effective in supporting organisational performance or productivity, CET cannot stop at the skills-supply role of training delivery and funding of training programmes. This is because how skills are deployed at work directly impacts performance, and it should therefore be a major consideration in CET. Other advanced economies such as Germany, Finland, Australia and Scotland have shifted their skills policy from one of skills supply to skills utilisation by employers. Skills utilisation entails the alignment of stakeholders, structures, policies, responsibilities, resources and expertise, to encourage innovative practices in skills deployment.

A comparative study conducted by the Scottish Government Social Research (2008) on nine advanced economies found that the highly de-regulated and market-driven workplace innovation approach led by enterprises has a lower chance of success in productivity and skill-based transformation as compared to state driven and holistic approaches led by national agencies where there is buy-in from all stakeholders at the sectoral level (e.g., Finland and Australia). The argument is based on the fact that as each sector is different, the stakeholders within the sector should have shared responsibilities in achieving shared outcomes: enhancing the productivity and job quality of the sector. Therefore, it seems that the collective efforts of state, industries and workers are essential to move sectors towards the high-skills equilibrium

(HSE) where skills become a real competitive differentiator for companies[9].

This then seems to be the missing link in the lifelong learning movement in Singapore – for CET to yield better job and enhance employability, we need a shared understanding of how companies are deploying skills and what constitutes a good job. Good jobs are deemed as jobs that can provide career progression, opportunity for continual development, and fair wage that contributes to a desired household income[10]. The accessibility to a good job cannot be left to market forces, because of the nature of enterprises' product-market strategies that have a frequent emphasis on costs and the existence of multiple barriers affecting mobility. Workers should be given the right level of support and resources to mitigate employment and income risks. This is especially so for those who are most vulnerable, such as low-skilled matured workers in their 40s. Having ***clarity in the conception of a good job*** is therefore an important first step towards strengthening the link between better skills and better jobs, and where to invest CET resources.

[9] High-skills equilibrium (HSE) is a term coined by David Finegold and his coworkers. Finegold advocates that countries pursue high-value clusters to achieve sustainable growth. HSE is achieved through local and foreign investment in high value sectors supported by a purpose-trained workforce. However, the HSE strategy alone is inadequate in creating quality jobs for the increasingly educated workforce that aspires for jobs that provide growth and development. Thus, countries such as Finland, Belgium, Australia and New Zealand have implemented various initiatives to assist enterprises in implementing innovative forms of work organisation and skills utilisation, with the aim of improving organisation performance and workers' well-being.

[10] Irene Ng, in this publication, advocates for household income that facilitates upward social mobility.

In the current phase of economic restructuring in Singapore, we argue that the tripartite partners have to realise the urgent need to move from skills-supply focus to ***skills utilisation at the sectoral level***, in order to move sectors toward the high-skill equilibrium. In parallel, individual workers should be given ***greater support to develop their personal skills strategies*** throughout their life course, in order to achieve sustainable well-being. The former should lead to more good jobs, while the latter to empower the individuals mitigating employment and income risks in a rapidly changing world.

The strategies to counter employment and income risks require attention on the creation of quality jobs which will in turn contribute to the well-being of the workers and harness appropriate skills strategies that the quality jobs command. The sustainability of a worker's skills strategy means that institutional structures must support the multiple employment changes that match the life-stage needs of the worker. The national productivity movement gives CET a great opportunity to review its role in establishing strong linkages between skills and organisational performance (e.g., productivity).

Facilitating Skills Utilisation at the Sectoral Level

In this section, we argue for an alternative approach to leverage skills strategies for an inclusive society by facilitating skills utilisation at the sectoral level. This approach is designed based on the following set of principles:

- Singapore's unique tripartite partnership, if appropriately engaged, can have a major influence in shifting sectors towards high-skills equilibrium and improving the well-being of the workforce.
- A holistic, centrally coordinated approach aiming at "sectoral transformation" is critical to the success in raising job quality, improving job design, and enhancing business outcomes.
- Every worker should be given continuous opportunities to participate in skills upgrading, with special attention given to the vulnerable groups to attain 'mobility' in household income.
- The building of an inclusive society through multi-level skills strategies begins with a set of comprehensive outcomes catering to individual workers, firms, and national interests.

From the analysis of international practices and available literature, we offer the following as a definition of skills utilisation for Singapore:

> Skills utilisation is about ensuring the most effective application of skills at the workplace as part of ongoing business performance enhancement, through the collaboration of key stakeholders: the state[11], unions, industry associations, employers, employees, and workforce development intermediaries[12], who work collectively at the sectoral level to strategically shape the industry structure and adjust the institutional conditions, so as to provide a conducive environment for the sector to move towards high-skills equilibrium. Effective skills utilisation seeks to achieve high job quality, high productivity, and national competitiveness.

[11] The state includes lead economic agencies and regulators.
[12] Workforce development intermediaries include training providers and employment facilitation services.

Studies have shown that it is not instinctive for firms to embrace skills strategies as their first choice in maintaining a competitive advantage. Studying firm behaviour, Keep, Mayhew and Payne (2006) conclude that in terms of competitive priority, skills strategies rank lower than product market strategies, organisation structure to support delivery, and work organisation and resource allocation. The Institute for Adult Learning's (IAL) sectoral productivity studies show that in some sectors, cost-based practices, such as cheap sourcing have kept the sector entrenched in the low-skills route. This is coupled by the continuous supply of low-skilled workers who are placed in low quality employment.

In order for skills utilisation to be impactful, it is critical to integrate skills strategies with the higher order business strategies to forge a competitive whole. These provide the basis for establishing the appropriate kind of industry structure and institutional conditions for firms to move to HSE. On their own, firms have little power and incentive to do so. The Skills Utilisation Literature Review (Scottish Government Social Research, 2008) confirmed that in countries where the skills utilisation agenda was left to individual firms (e.g., the US and UK), the implementation is usually limited, with some cases of implementation in large-size firms and manufacturing sector, and in the UK in foreign-owned companies. Warhurst and Findlay (2012, p. 19) suggested that in order for skills utilisation to be facilitated,

> …It is time, therefore, for policy to acknowledge that what happens inside firms matters and appreciate that whilst direct intervention by government inside this 'black box' may be neither feasible nor desirable, there is a role for government in establishing the infrastructure necessary for a broad-based approach to innovation…Once established this system allows the building up of expertise in effective skills utilisation…, the exchange of experience and thereby benchmarking within and between industries…, and within and between countries…This alignment of interests will not happen spontaneously but requires deliberate encouragement. What is needed is an approach that envelops actors, structures, protocols, responsibilities, resources and expertise– what we call ASPiRRE– or more prosaically, who does what, when, how and why. (pp. 19-20)

Warhurst and Findlay reinforced the point when they suggested the need to identify the workplace conditions that can affect better skills utilisation, and thus, require "management and organizational practices, processes and approaches that support, inspire, and enable employees to use their skills that best effect improvement in business outcomes" (p. 11).

The sectoral approach in managing the productivity-skills-wage issues currently undertaken by the National Productivity and Continuing Education Council (NPCEC) is therefore heading in the right direction. The presence of tripartite partners in each sectoral workgroup is a critical foundation of success. In this section, we would like to put forth a proposal to enhance the current sectoral approach.

(a) *A thorough understanding of the industry structure and the identification of institutional conditions are necessary first steps of the holistic approach*. Industry structure relates to the market in which the firms are operating. For example, the type of product market strategies, the tiers of market, the buyers' (or consumers') behaviour, or the roles

of regulator (where applicable). Institutional conditions refer to the larger economic and employment policies, programmes and initiatives that may facilitate or impede the firms' willingness to embrace HSE. For example, the easy access to low-skilled workers, or the unrestricted creation of mini-jobs without the appropriate level of employment protection, would attract firms to remain in low-skills equilibrium (LSE). The thorough understanding of the industry structure and the institutional conditions would elucidate the potential levers of change within the influence of major stakeholders. IAL's sectoral studies in hotel, security services, ICT, and food manufacturing industries have identified the need to do so. In the case of the security services sector, the need to move from headcount-based procurement towards outcome-based procurement was identified as the major driver in changing the ways in which jobs are designed, how qualifications would be used and the value-add of jobs and therefore the chances of improving wages in the sector through up-skilling.

(b) *Supporting the sector in the re-organisation of work by integrating sector skills strategies with process/product innovation*. We argue that securing the shared vision of the firms at sectoral level, collectively with the unions, and supported by the lead economic agency is the only way towards helping a sector re-organise their resources and re-design jobs. The establishment of shared mid- to long-term sector strategies in terms of its product/market is the critical first step before work processes and job re-design can take place. Skills strategies would follow suit once these higher-level strategies are in place. Our argument stems from the belief that a firm is confronted with the challenges of delicately coordinating its relationship with multiple-stakeholders (customers, employees, and regulators). Collectively, firms can better negotiate with their stakeholders to strive for a win-win situation. A case in point is the furniture manufacturing sector in Singapore, where the sector has collectively adopted a high-skills route by moving into high-end product design, and has transformed Singapore into a vibrant international furniture hub[13]. The outcomes are: high value-added workforce, design-led manufacturing and business models, and a collaborative and internationally competitive furniture industry network. This approach is specifically relevant for sectors that comprise mainly small and medium enterprises. The success of this approach is the alignment of skills strategies in supporting the collective long-term vision of the sector.

(c) *Pilot sectoral strategies with demonstrating cases.* Upon the establishment of sectoral strategies, we see the need to pilot the strategies with demonstrating cases. Instead of leaving the adoption to individual firms, the demonstrating cases allow the early adopters to move forward, and test out the probable implementation plan. The lessons

[13] Singapore Furniture Industries Council's sector transformation plan; also see speech by Dr Yaacob Ibrahim during the Singapore Furniture Awards 2013 mentioning the state of the furniture industry - http://www.designsingapore.org/who_we_are/media_centre/media_releases/13-11-01/SPEECH_Singapore_Furniture_Industry_Awards_2013.asp

learnt would be shared with the key stakeholders within the sector. This is to make sure that potential hindrance could be removed and/or resources can be reallocated where they matter most. The intermediaries such as business-training consultants could play a key role in assisting firms during the demonstrating cases. Such learning would allow the intermediaries to render similar services to other firms within the sector.

(d) *Enhancing job quality as a necessary condition for the high-skills route*. Job quality includes both the employment quality and work quality of a job. Employment quality refers to the employment relationship that has a potential impact on the well-being of the workers (e.g., employment contract, remuneration, working hours, and career development). Work quality refers to the activity of work itself and the conditions under which it takes place that can affect the discretionary effort of workers (e.g., autonomy, intensity, social and physical environment). Business performance and job quality are therefore mutually reinforcing. This outcome, we argue, should be the fundamental basis for sectoral transformation. The workforce well-being should be of equal importance to business well-being because research has shown that any compromise to job quality is likely to impede the goal towards HSE[14]. Hence, the measure of skills, productivity and innovation of the sector should not narrowly focus on productivity gain and wage improvements. We would argue that setting job quality outcome is a necessary step towards eliminating bad jobs (e.g., jobs which pay low wages, require low skills, and have a lack of progression), which is a result of LSE.

[14] There is a vast amount of literature on 'high performance working' which is based upon the principles of mutual gains and discretionary effort.

The sectoral skills utilisation approach that we advocate calls for a systematic approach towards linking skills to business performance. It is a pro-active approach of engaging skills at a coordinated sector level. It also involves a comprehensive identification of levers of change within the sector's environment, engaging the stakeholders to envision the longer term sustainable business models and case testing the new models with trail blazers. Most importantly, the stakeholders must establish shared outcomes at the onset of the transformation. The outcomes must ensure equal emphasis on business and workers' well-being.

Vulnerable Workers and Worker-centric CET

In addition to facilitating skills at the sectoral level, the existence of disincentives for vulnerable workers to participate in CET should be dealt with. Here, we define vulnerable workers as those who are more susceptible to the displacement effects of technological change, skills change and industry restructuring. We need effective measures to bring them out of the vicious cycle where they continue to be stuck in low-wage jobs, and where some even experience downward mobility. Studies (Pocock, Skinner, McMahon, & Pritchard, 2011; Prince, 2008) have shown that these individuals are trapped in their immediate circumstances and unable to access training without extra help. The meritocratic resource allocation practices, which put the onus on 'personable responsibility' to access CET programmes do not help remove the multiple barriers to CET. The second critical reason for more

active and involved intervention is illuminated in our earlier argument that firms in LSE forsake the opportunity to utilise skills as it ranks low in terms of competitive priority, - after product market strategies, organisation structure to support delivery, and work organisation and resource allocation.

The 2012 workforce training participation rate of the top four occupation categories (Professionals, Managers & Administrators, Associate Professionals & Technicians) has an average of around 40 percent, with the Professionals achieving the highest at 46.7 percent (MRSD, 2013). The stark contrast is shown in the bottom four occupation categories registering participation rates ranging from 10.6 percent to 20.1 percent. In fact, the workers in the 'Cleaners, Labourers & Related Workers' industry saw a dip in participation by 3.1 percent as compared to 2011. This runs contrary to the vision of an inclusive society where no one should be systematically excluded from the opportunities to pursue their life plans.

We therefore see the need for a model of worker-centric CET that will focus on the needs of the workforce by clearly identifying the potential risks and challenges confronting the various segments of the workforce. This model promises a clear set of outcomes that is based on workers' well-being. Last but not least, the model will truly empower workers to mitigate the employment and income risks throughout their life course of work. Our model will include the following agenda:

(a) *Timely and comprehensive labour market intelligence.* We argue for making available comprehensive and timely labour market intelligence to workers and workforce development intermediaries. What matters from the perspective of an inclusive society, is having a chance that is a real opportunity, not a chance as a statistical probability. The lack of information today impedes the work of public employment services and individuals who are making decisions on their employment and learning. Swift (2003) warns that the role of choices and preferences in generating immobility has been underestimated. In some cities in the US, workforce solution agencies have begun to publish relevant information on quality employment (e.g., vacancies for jobs that pay living wages and with progression opportunities). Other information to be disclosed includes the recruitment trends of various types of jobs, e.g., requirements for direct job experience versus generic industry experience. This information is useful to employers who compete for workers, workers who seek new employment, and training providers who are designing CET programmes for displaced workers who seek to enter into new employment.

(b) *Developmental education for the vulnerable*. Here, we identified vulnerable workers as 45 years and below who have no tertiary qualifications (diploma and above) in the combined broad occupational groups of Clerical, Sales & Services Workers, and Production & Transport Operations, Cleaners & Labourers. There are estimated to be around 340,000 individuals in these groups. These vulnerable workers are at risk of hollowing out of skills, most susceptible to downward mobility, and at the life-stage where they have the heaviest responsibility of caring for the young and aged in the family while struggling to save for their future retirement. A targeted

> approach should be taken to ensure that they are able to attain vocational diploma (from Polytechnics, Private Education Institutions, or Workforce Skills Qualifications (WSQ) that in turn can lead to a good job. Recent WSQ outcome studies have shown that for vulnerable groups, attaining full qualifications yield the greatest positive outcome in terms of jobs and wages. One major objective of getting them back to school is to strengthen the essential skills (learning skills, literacy skills, job search skills, the mindset to survive in ambiguous situations) besides the vocation-specific training. We named this approach 'developmental education for the vulnerable'. Comprehensive assistance, such as counselling services and financial aid, should be made readily available.

CONCLUDING REMARKS

The sole economic-driven purpose of Singapore CET, which is to equip workers with skills desired by employers, has served its function. However, in today's complex environment, CET faces new challenges. Skills utilisation is the key factor for skills to make a difference in workplace performance. It is also critical to implement a parallel worker-centric CET that begins with a commitment to improve workforce well-being through establishing a clear set of outcomes measures to track the well-being, job quality, and the provision of essential labour market intelligence to all key stakeholders for decision-making, and a developmental education for the vulnerable.

In addition, the implementation of interventionist CET calls upon a 'rejuvenated tripartism' (Soh, 2012). As Soh posits,

> The adaptive capacity and resilience and the institutional strength of Singapore's tripartite model could prevail, allowing the essence of trust, mutual understanding and consensus to be retained while engaging with more diverse and complex worker demands. Should the process of negotiations and consensus building then become messier and more complex, the Government would have to play a greater role in balancing the interests between business and workers. (p. 16)

The mutual trust must be built upon the consensus that workers' wellbeing and business success are interwoven and inclusive. Workers' wellbeing can be achieved without compromising business performance. The adaptive capacity of the institutional strength is key to implementing appropriate sector skills strategies which will in turn lead to greater skills utilisation. None of these fundamental changes will be possible with the effort of just one stakeholder. The state, unions, employers and the workers all have a part to play. A sector-based approach, in our view, is the best way forward to build a new socio-economic compact where skills, business performance and pay form a mutual synergy.

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THE POLITICAL ECONOMY OF INTERGENERATIONAL MOBILITY: IMPLICATIONS FOR SINGAPORE'S SKILLS STRATEGY

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INTRODUCTION

Broadly, mobility is the extent to which one achieves a different economic status from where one started off. Intergenerational mobility then is the extent to which one's economic status depends on one's parents' status. It is important to distinguish between absolute and relative mobility. With the "miracle" development experienced by Singapore, the younger generation is achieving higher levels of education, occupational class, and earnings than their parents. This is absolute mobility.

The more important indicator of mobility might be relative mobility, which measures the extent that offspring who are socially and economically at the bottom of their generation, also have parents who were at the bottom of theirs; and offspring who are among the top of their generation, also have parents who were at the top of theirs. Relative mobility shows the extent of change in relative positions in the whole distribution. One can cite numbers and examples of resilient individuals who performed well despite coming from families of lower socio-economic status (SES).

However, without also showing comparable numbers of those from higher SES, the picture of mobility is incomplete.

MEASURING MOBILITY

Economists measure intergenerational income mobility through the following equation:

$$Y_i^{child} = \alpha + \beta\, Y_i^{parent} + \varepsilon_i^{child}$$

A higher value of β means that the offspring's income is highly dependent on their parents' income, and therefore gives a lower mobility. To illustrate, in the extreme case where β is zero, there is perfect mobility because the offsprings' income has zero association with the parents' income. At the other extreme, when β is 1, there is perfect immobility, because all of the offspring's income depends on the parents'.

Table 1. *Measures of β around the world*

Country	Estimated β
Canada	.19
Finland	.18
Sweden	.27
France	.41
Singapore	.44
United States	.47
United Kingdom	.50

Sources:
Singapore - author
Other countries – (Corak, 2006)

Table 1 gives the estimated β found in different countries, including mine for Singapore. The table reflects the general conclusions made by the international research, which is that among western developed countries, intergenerational mobility is highest in Scandinavian countries and lowest in the United States of America (US). The other European countries and Canada are somewhere between Scandinavia and the US.

I measured β for Singapore using the National Youth Surveys (NYS) in 2002 and 2010. The data is limited in many ways, including small sample size, availability of only cross-sectional data, income reported in categories and youths reporting parents' income. In addition, data for youths was collected at the start of their career, while for their parents it was collected at the end of their career, and therefore not a good reflection of permanent income. I took two main approaches to overcome the limitations in my data. In one approach, I made a set of US data comparable to my Singapore data by imposing the limitations faced by the NYS on the US data. I found that mobility was similar in Singapore and the US. In a second approach, I scaled my estimate to a value that reflects the life stage that is more comparable to other studies. The value .44 in Table 1 is this scaled value, pooled for NYS 2002 and 2010. This value is closer to the US than the other advanced economies.

In 2011, the Ministry of Finance released a report using the Census, survey and administrative data. While its data is superior, yielding a main sample size of 39,500, it did not correct for two key limitations, namely that only five years of income data was used and the relatively old age of parents in the study. Therefore, its β of .28 to .30 is underestimated (Yip, 2012).

Combining the results from both sets of studies lead to a conclusion that compared internationally, Singapore's intergenerational mobility is at most moderate for the cohort who is currently in their 30s. This conclusion is consistent with the economic and policy environments in Singapore, which share closer similarities to the US and the United Kingdom (UK) than other Western economies for which estimates of β are available. Moving forward, these factors in Singapore's political economy will put an increasing pressure on intergenerational mobility, as will be explained in the next section.

EXPLAINING MOBILITY

Inequality

That Singapore's level of mobility is closer to the US than the more mobile European countries is not surprising given that Singapore shares much similarity with the US in terms of three political-economic factors. First, income inequality in Singapore has been high. It is also widening. Our Gini coefficient rose from about 0.4 in the early 1980s (Ng, 2010) to almost 0.5 (Ng, 2011) now. The Human Development Report 2009 shows that among very high human development economies, the Gini coefficient for the period 2000 to 2010 was highest for Hong Kong (43.4), followed by Singapore (42.5), Qatar (41.1), and the United States (40.8) (United Nations Development Programme, 2009).

Theory (Solon, 2004; Ho, 2010) and empirical comparisons (Andrews & Leigh, 2009; Ng, 2010) have evidenced the high correlation between inequality and (im)mobility. Intuitively, inequality leads to immobility because bigger income gaps require future generations to cover greater distances to cross to a different income class.

Welfare Regime

Second, Singapore, as well as the US, has a residual welfare system, where social assistance is given in small amounts based on means testing. Self-reliance is emphasised in Singapore and individual responsibility emphasised in the US. In contrast, the Scandinavian countries provide universal social protection, emphasising residents' rights to a minimum standard of living. In studies of trends in mobility, the rise in mobility in Scandinavia has been attributed to the establishment of strong welfare states, while the decrease in mobility in the US is linked to weakening systems such as labour unions (Black & Devereux, 2010). In a study of 14 European OECD countries (Causa, Dantan & Johansson, 2009), more progressive tax systems and stronger unions were related to higher income mobility. In parallel, labour union power in Singapore has taken a conciliatory approach through a tripartite wage negotiation system involving the government, the employers' federation, and labour unions. Singapore's tax system is considerably flatter than those in OECD countries.

The reasoning for why residual welfare results in reduced mobility follows from the intuition for why inequality leads to immobility. Given that more generous welfare uplifts bottom earners and narrows inequality, it should also lead to greater mobility. However, there is a second layer to the connection between welfare and mobility. Mobility requires more resources than overcoming poverty does. Imagine a family of two adults and two children. Yeoh (2012) estimated that such a family requires a monthly income of S$1,870 in order to meet basic consumption needs.

This amount is about the income level of the 10th percentile (Department of Statistics, 2012). Suppose we take this S$1,870 as the poverty line. If government assistance is able to help this family earn S$1,870 every month, then this family is helped out of poverty. However, with an amount that enables the family to just barely survive, the family will not have any left over for investment goods such as computers, training and enrichment, which will help both the parents and children to increase their human capital and therefore their earnings potential for increased mobility. Yeoh (2012) estimates that this family of four will need S$3,270 per month to cover basic consumption and investment expenses. Therefore, taking mobility into consideration increases the severity of the effects of a residual welfare system because of the intergenerational effects that welfare regimes can contribute to. By this argument, means-tested aid given in minimum amounts only serves to keep poor people in their place without hope for upward mobility.

That said, Singapore's welfare system takes a child-centric approach where programmes targeted to help low-income parents invest in their children have been introduced. Examples include childcare subsidies, kindergarten fees assistance, and schemes such as the Home Ownership Plus Education (HOPE) to help families with young children keep families small, and invest in building their home and human capital. These child-centric approaches likely boost mobility, but evidence for their effects can only be established by research on the cohorts that have undergone these programmes. Furthermore, by comparison, many countries with stronger welfare systems also have generous support for children.

Education

The third political-economic factor where accumulated research has evidenced effects on intergenerational mobility is the country's education system. Two characteristics of education systems have been highlighted, one related to privatisation and another related to university expansion. On the former, studies have found that mobility is positively related to publicly rather than privately-run education systems, more homogeneous rather than heterogeneous educational curriculum, and more progressive spending on education (i.e. more spending on low-income students) (Davies, Zhang & Zeng, 2004; Ho, 2010; Ichino, Karabarbounis & Moretti, 2009; Solon, 2004).

Particularly interesting is a natural experiment from a comprehensive school reform in Finland from 1972 to 1975 (Pekkarinen, Uusitalo & Kerr, 2009). The reform shifted the streaming to academic and vocational tracks from age 11 to age 16, thus replacing a mainly two-track system with a uniform nine-year system. The reform was found to decrease intergenerational income correlation by 23 percent. In an earlier paper on a similar reform in Sweden that postponed streaming from seven to nine years of education, three factors were identified as the reasons for the improved mobility: compulsory education, age of educational choice, and assortative mating, where the chance to meet different friends from different socioeconomic backgrounds led to more marriages between spouses whose parents were differentially educated (Holmlund, 2008).

In contrast to the comprehensive public school systems introduced in Sweden in the 1950s and in Finland in the 1970s,

the education systems in Singapore and the US are considerably more differentiated. The education system in the US comprises a wide variety of public and private schools whose curricula and resources differ vastly, and depends on the state for governance and financing structure. While Singapore has not freed up the education system to allow for private schools, Singapore has progressively decentralised schools and curriculum since 1979, when streaming was first introduced. Today, Singapore's education system differentiates students by three main streams (express, normal academic, and normal technical), school types (independent schools, autonomous schools and specialised schools such as NUS High School of Mathematics and Sciences, and the School of the Arts), and programmes (Tan, 2010). The Integrated Programme (IP) was introduced in 2008 for express stream students, which allows them to bypass national exams and gain entry into local universities by a different set of criteria. A through track for the best students in the normal stream has also been created to enable entry into the Institute of Technical Education (ITE), and later the polytechnics without having to sit for the 'O' Level examination (Ministry of Education, 2010). Most of the methods of differentiation occur at the young age of 12.

The increasing differentiation in a student's educational journey by stream, school type and programme is further segmented by the fact that the streams and programmes are offered by different types of schools (as opposed to different streams and programmes within a school). Many of the top independent schools offer only IP, whereas specialised schools for technical education would be set up in 2013 (Ministry of Education, 2010).

The rationale for the "multiple pathways" is to have a tailored approach because different students have different abilities. However, mobility research suggests that the increasing differentiation reduces mobility. Further, research on streaming has found that streaming increases inequity in student achievement without clear effects on raising average performance (Brewer & Kramer, 1985; Hanushek, 2005; Hindriks, Verschelde, Rayp & Schoors, 2010; Meighan & Harber, 2007).

A comparison between the performance of Singaporean and Finnish students suggests a possible trade-off between performance and equity. The two education systems have moved in opposite directions. While Singapore introduced streaming and emphasises developing talent, Finland postponed streaming and emphasises levelling up of the weakest. In the Program for International Students Assessment (PISA), both Singaporean and Finnish students were top-ranked in 2009. Table 2 shows that while Singaporean students outperformed Finnish students in mathematics, Finnish students outperformed Singaporean students in reading and science. The trade-off between performance and equity apparently plays out in the results of the top and bottom students in each country. The spread in scores between the 90th and 10th percentile was considerably more equitable in Finland, and in fact, the spread in Singapore was wider than the average spread among OECD countries. Moreover, the score of highest performing students in the 90th percentile was higher in Singapore than Finland while the score of the lowest performing students in the 10th percentile was lower in Singapore than Finland. Perhaps Singapore's higher score of the top decile reflects the success of our investments in talent, but disparity between the highest and lowest performing students in

Singapore was wider. Comparatively, Finland's top scorers were not far off and still among the best in the world (OECD, 2010). The trade-off between performance and equity is apparent but weak.

Table 2. *Program for international students assessment performance of Singaporean and Finnish students, 2009*

	Mathematics	Science	Reading			
	Mean	Mean	Mean	90th-10th Percentile	90th Percentile	10th Percentile
Singapore	562	542	526	254	648	394
Finland	536	554	536	223	642	419
OECD Average	493	501	496	241	610	369

Why does a differentiated education system lead to lower mobility? While my proposed reasons will require further research, I would like to offer three plausible explanations based on social science theories: differential resources, differential labels, and differential networks. First, in terms of differential resources, when different types of schools and programmes are created, wealthier parents can pay more to place their children in schools which are perceived to be better schools, and further pump donations into the schools to better resource them, and in turn these schools can charge higher fees as demand for them outstrips supply. This leads to a virtuous cycle of good schools becoming better and over-represented by rich students. By the same argument, schools perceived as bad decrease in popularity and attract lower levels of resources, leading to a vicious cycle. More pertinently, the different amount of resources results in different quantity and quality of human capital investment, and thus to greater differences in outcomes between richer and poorer kids.

In reality, the different types of schools probably start out with unequal amounts of dollar investments, whether private or public, that drive initial differences in outcomes. However, it is noteworthy that the virtuous and vicious cycles of differentiated schools do not have to start from schools being actually good or bad, but simply perceived as good or bad.

The second explanation, differential labels, provides insight into why categorisation results in perceptions of superiority or inferiority. Labelling theory by Becker (1973) has been most famously applied in criminology, but has also been used to show that teachers teach students differently because of preconceived expectations of students, leading to a self-fulfilling prophecy of students behaving the way that teachers expected of them (Meighan & Harber, 2007). The labelling theory as applied in the school setting starts with the premise that schools are "middle class" institutions where the teachers' view of the "ideal" student is characterised by a student from a middle class background, and therefore working class students are viewed as less able or more deviant. Teachers then teach the students differently, according to their expectations of the students. This can eventually lead to working class students conforming to the expectations, and therefore becoming more deviant and thus tend to underperform. Similarly then, if streaming or programming leads to students being labelled to be of a certain quality, they will be treated as such, and eventually students conform and perform according to that label.

Social identity theory from the field of psychology offers a complementary explanation to the sociological labelling theory. In a review of psychological studies on intergroup attitudes and

behaviours, Brewer & Kramer (1985) asserts that expectations of certain behaviours from a certain group (for example compliance by women) "elicit stereotype-confirming behaviours, thus contributing to a self-perpetuating cycle" (p. 221). Further, it explains that:

> The tenets of social identity theory presume a basic feedback loop in the social categorization process. The presence of a salient basis for categorization in a given social setting induces individuals to incorporate their respective category memberships as part of their social identity in that setting. This identification in turn leads them to adopt interpersonal strategies that enhance the distinctiveness between the social categories in ways that favour their own group, a process which produces social competition between groups and further accentuation of category salience. Evidence for this postulated reciprocal relationship between category identification and category differentiation has been established in both laboratory and naturalistic research settings. Discrimination in favour of members of one's own category relative to members of another category has been demonstrated consistently even when the basis for categorization is minimal or arbitrary, and this effect does not seem to be accounted for by experimental 'demand characteristics'. (p. 225)

Thus, both sociological and psychological theories point to differentiated education resulting in labels that cause people in different groups to differentiate themselves and create insider and outsider groups, as well as expectations of the different groups resulting in people behaving according to those expectations. These theories therefore suggest that one reason for the diverging

performance of students, when categories are introduced, is the self-fulfilling effects of the labels.

Finally, differentiated schools lead to differential networks. If as explained above, prestigious schools are over-represented by students from wealthier families and stigmatised schools are over-represented by students from poorer families, the school becomes a source of social segregation that connects rich students to rich networks and poor students to poor networks. These networks come in different forms and range from connections to resources that improve students' current outcomes. For example, Horvat, Weininger & Lareau (2003) found that in dealing with school problems, middle-class parents acted collectively and drew on information and assistance from their professional contacts, whereas working class and poor parents did not. These networks could lead to connections that influence future access to networks and resources, which include jobs, insider knowledge, or simply dollars and cents. The findings from the Swedish study (Holmlund, 2008) on delayed tracking presents a particular type of differential network effect where marrying a spouse from the same SES keeps the wealth (and the poverty) among insiders. Noteworthy from this finding is that the postponement of tracking from 14 to 16 years old affected students who were not of marriageable age yet. That tracking during the teenage years can lead to differential marriage partners speaks of the enduring effects of peers formed at that age. A similar peer effect was found by Cherng, Calarco & Kao (2013), where having a best friend with a college-educated mother significantly increased the chances of college completion.

A second educational source of immobility is the expansion of university education. With an increasing demand for skilled

and educated manpower in Singapore, university education is expanding while tuition fees are increasing. This mirrors the expansion that took place in the United Kingdom, China and Hong Kong, which unfortunately was found to have resulted in more high-income than low-income students being able to enter university, thus widening the university education gap between rich and poor students (The Hong Kong Institute of Education, 2013; Machin, 2007; Yeung, 2012). Given the wage premium of a university education, this disparity in university education has important implications on intergenerational mobility.

Juxtaposing the above trends in streaming, decentralisation, and tertiary education expansion against the findings from the international research, the claim that Singapore's education system equalises opportunities can no longer be accepted as a given. My study found that about 40 percent of parents' income advantage is passed on to their children through their investments in their education. This is derived from a 40 percent decrease in the value of β when the youths' education is added to the model. If Singapore's education system continues its differentiated approach, the cumulative advantage at each stage of education (primary, secondary and post-secondary) will lead to increasingly divergent outcomes between students.

GENERAL IMPLICATIONS

The assertions in this article require rigorous policy and programme evaluations to ascertain. For example, although Singapore's tax structure is one of the less progressive among developed countries and its welfare spending lower, its social safety net includes programmes targeted towards children. These children-focused programmes can be expected to facilitate mobility. The

effects of the education system on mobility also require rigorous evaluations. While the findings in the international research provide strong suggestions that our education system results in lower mobility, other features of our system might promote mobility. The government invests heavily not only in the top schools, but also in the ITEs and alternative schools such as Northlight and Assumption Pathway where less academically-inclined students can go. In addition, there are many subsidies available for low-income students.

However, such evaluations, as illustrated from the national scale studies out of Scandinavia require the collection of national micro-data over generations, investments which are worthwhile to embark on now. However, social challenges of national concern require more urgent attention than two decades, the minimum amount of time for intergenerational longitudinal research. In fact, the decision of whether to embark on such research in the first place requires some soul-searching on national priorities. The questions are hard questions to contend with because of the possible trade-offs with other goals of existing policies, including promoting hard work and a robust system that generates a workforce that is globally competitive.

Overall, the international research in comparison with the economic trends and policy environment in Singapore suggest the importance of addressing intergenerational mobility and investing resources to reconsider the fundamentals of our policy directions. Our education system places students into tracks early, and that results in clearly-defined job outcomes between university, polytechnic, and ITE graduates. The wage gap between these three types of graduates is wide and continues

to widen. Also, if low-income families fall into financial hardship, the current government policy emphasises dependence on their own individual resilience, with minimum help provided from government assistance schemes. Policy plays a role in shaping the stratification in society.

IMPLICATIONS FOR SINGAPORE'S SKILLS STRATEGY

In terms of skills strategy for Singapore then, a starting question is what the priority role of education is. Singapore's education system is designed to identify talent and develop them from young. This educational goal is in line with the sponsored mobility thesis that Turner (1960) characterised of the secondary school system in England, where "the goal of sponsored mobility is to make the best use of the talents in society by sorting persons into their proper niches" (p. 857). Thus, sponsored mobility "involves controlled selection in which the elite or their agents choose recruits early and carefully induct them into elite status" (p. 855).

In turn, the reluctance to forgo the increasing differentiation in schools and programmes might be driven by a fear that doing so will reduce the calibre of our top students. Concern for the lagging behind of bottom students is instead addressed through remedial programmes such as HOPE and bursaries or peripheral interventions such as not publishing scores of schools. I am not sure that such remedial and peripheral interventions can go far in levelling up poor and weak students if the main system keeps pulling them apart. Remedial programmes also uplift only the bottom of the pile, but do not address the aspirations of the sandwich class.

We should ask ourselves: at the margins, how much are the returns to the Singapore economy, to the Singapore society, of every additional dollar invested in grooming that talent in a specific track? Just as we do not have empirical evidence to demonstrate convincingly that Singapore's differentiated approach to education leads to immobility, I am not sure that there is clear evidence demonstrating that the differentiated approach is what leads to the excellent results of our top students. Further, I am also not convinced that the marginal benefits of pumping resources to develop our talent pool into the most competitive in the world outweighs the marginal costs of the invested dollars: social inequity, social segregation and an overly stressful education experience, going by the recent media frenzy over the Primary School Leaving Examination (PSLE).

Based on our meritocratic ideals of equalising opportunities, Singapore as a society values redistribution as an important function of education. However, it has been increasingly recognised that the practice of meritocracy in Singapore is not equalising opportunities. From the unequal access to and quality of preschool education to strategising to enter primary schools, to a high stakes primary school leaving examination that secures students' places into different tracks that set them towards particular post-secondary paths early, such a system is prone to reproduce advantage or disadvantage. Low (2013) has also presented an additional cost of meritocracy based on relative performance which he calls wastage because of the need to signal one-upmanship against others in an arms race where the stakes are high. Tan (2012) called this strategising by parents in a Straits Times interview (Phua, 2012). Gee (2012) further simulated a model of the social costs of such an "arms race".

The economic principle of diminishing marginal returns and increasing marginal costs brings to light interesting challenges faced by the Singapore and Finnish models of education. Both have achieved high international accolades, but have taken very divergent paths, with Singapore's emphasising differentiation to develop talent and Finland's emphasising equity. With the very high level of differentiation in Singapore's system, the marginal benefits of increasing differentiation (choice and talent development) are bound to diminish while the marginal costs will accelerate. The reverse is true for Finland. Currently, some in Finland are worried that "the most equitable education system in the world" needs to do more to develop its top students (Sahlberg, 2010, p. 138). Yet, even though top Finnish students do not do as well as top Singapore students in PISA, the Finnish economy is a contender with Singapore among the most competitive in the world (World Economic Forum 2012).

Therefore, it is time for redistribution to become a priority in Singapore's education policies, for four reasons. First, with the high inequality in Singapore, all policies have to become more redistributive. Second, the main features of Singapore's education system have immobility-inducing tendencies, and therefore systemic reform is required to recalibrate and refocus. Third, the education system is the main shaper of the values of our future generation. If students spend 16 to 18 of their formative years in a system that puts them through individual competition with high stakes in highly segregated environments, it is unrealistic to expect them to start integrating and reaching out across classes after experiencing otherwise. Fourth, with a system that has become highly differentiated, the marginal benefits of further differentiation are diminished while the marginal costs are heightened. With

equality an ideal in Singapore's pledge, Singapore's education system—a key pillar of social development—cannot be, or be viewed as one that produces inequality.

What then are some recommendations for Singapore's skills strategy? On the basis that differentiation segregates, labels, and creates unequal resource allocation, and given that Singapore's current system is highly differentiated and targeted, an inclusive approach to skills strategy must start from attempts to reduce the different categories and introduce more uniformity. Collaboration between schools could be promoted in place of competition, so that schools are not pit against one another, and not labelled as more superior than or different from another. Lee and Gopinathan (2005, p. 274) warned that "over-dependence on market forces and mechanisms to reform education", based on competition and efficiency towards economic goals, "would eventually undermine its role and function to enlighten citizens and to promote democratic and humanistic values in society". In contrast, Wohlstetter, Malloy, Chau and Polhemus (2003) reported the benefits of an experiment in school reform in Los Angeles that was based on establishing networks of collaborating schools. The school networks helped schools with lower capacity reform by decentralising power and distributing resources. Sahlberg (2011, p. 134) also opined that "the Finnish experience shows that a consistent focus on equity and shared responsibility—not choice and competition—can lead to an education system in which all children learn better than they did before".

At both primary and secondary levels, efforts to help weaker students level up could be more greatly emphasised. This move will also lead to greater inclusivity towards students with learning

disabilities. Mixed activities between stronger and weaker students could be organised where stronger students help the weaker students or through co-operative learning activities. The review by Brewer and Kramer (1985) found repeated support for co-operative learning activities in fostering "cross-ethnic interactions and sociometric friendship choices" (p. 237). However, Brewer and Kramer also added a caveat that streaming dampens the effects of co-operative learning programmes because unequal status among members prevents intergroup acceptance. This could be because existing social groupings are being subsumed "within a common superordinate category rather than creating alternative category alignments". One interpretation of this reasoning is that if the co-operative learning activity continues to rely on the original basis for status differential as the metric for the activity rather than create new goals and orientations, then the co-operative activity fails in generating inter-group acceptance.

In secondary education, the current direction towards increasing specialisation in the types of schools and programmes could be changed. In this respect, the current encouragement of schools to develop their own niches might derail into another aggressive competition leading to elitism of certain niche areas and stigmatisation of others. Instead, the number of specialised schools and programmes could be decreased, and tailored education provided within a combined school setting. Schools could be required to offer different streams, and ensure certain learning activities be conducted with students from different streams together.

Similar principles apply to post-secondary and adult education. Drawing lessons from the inequality generated from university

expansion in the UK, China, and Hong Kong, tertiary education expansion in Singapore should be embarked on carefully to ensure inclusive tertiary education expansion. Beyond extending bursaries and scholarships, Singapore must guard against creating too diverse a range of post-secondary institutions and programmes that result in elitist and stigmatised types of qualifications as well as elitist and stigmatised classes of the same qualifications. Singapore's small size limits the number and types of post-secondary institutions. However, with the corporatisation of the public universities and expansion of private institutions, decentralisation and marketisation is resulting in competition that is creating more programmes promoted as niche and more desirable, such that even within an institution such as the National University of Singapore (NUS), there are tracks such as the University Scholars Programme and the Yale-NUS College that entail higher fees and are therefore in danger of breeding elitism and exclusivity. The public universities have, first and foremost, a responsibility of meeting the general manpower needs and educational aspirations of the nation, and should therefore prioritise resources towards educating the general population with an overall high standard and quality. While public universities fulfil their ambitions of climbing international rankings, they cannot become inaccessible to the general population, and leave private universities such as the Singapore Institute of Management (SIM) to fill the gap of educating the masses.

State investments can be expanded to equip the post-secondary institutions in increasing its training of qualified professionals for essential services such as nursing and social work, and technically proficient workers in hollowed-out skilled crafts such as plumbing and carpentry. Complementing the efforts towards ensuring

acceptable quality and standards of the full continuum of post-secondary qualifications are: (a) wage restructuring to offset the current wage imbalances between skilled and unskilled jobs, and between certain industries such as financial and social services; and (b) public education and marketing efforts to improve the status and recognition of the above essential and hollowed-out jobs.

Singapore has established a solid continuing education and training (CET) framework. The expansion of CET can be ramped up so that pathways to different and further qualifications are made increasingly possible even after an individual has completed formal schooling and started on their work life. The alternative pathways to tertiary qualifications should be strengthened through CET so that opportunities for "late bloomers" to obtain degrees will ignite the hope of advancing one's education even if one did not secure a spot in an academic track early in one's school life.

The role of CET and adult training in levelling up is also key as part of expanding the social safety net. The way that retraining and upgrading is conducted to increase skills of bottom earners needs to be reformed in order that the psycho-social constraints of bottom earners in further education and training are holistically considered. This point is informed by evidence from poverty research that low-wage earners often face multiple psychological and social barriers to employment and advancement. Hence, upgrading their skills is not a simple matter of identifying a relevant training programme and mandating or inducing training completion through monetary incentives. Besides psychological barriers that disable training competence such as lack of

confidence or a low sense of self-mastery, low-wage earners often experience a compounding of other constraints such as family problems, and health and mental health problems (Danziger et al., 2000; Ng, 2013). Hence, retraining programmes need to move from being skills-specific to person-centred, and need to be integrated with the other forms of assistance for low-wage earners.

CONCLUSION

Intergenerational mobility has not yet evidenced worrying levels in Singapore. However, given our political economy, it will be an increasing challenge, especially as there are already signs of strain in the system. We must start planning before the situation becomes acute. Unlike inequality, which is static, mobility takes cross-generations to fix. When the society becomes one that is immobile, the upper class will fiercely protect its turf, and it will have resources to do so. It will be isolated from the rest of society. The middle class will aggressively guard its status from the working class on one hand, and aggressively strive towards upper class status on the other hand. The isolation of the working class will cause it to lose hope or even rebel against the rest of society. Steps should be taken now to avoid such an immobile society.

With the current high income inequality, residual form of social welfare, and highly differentiated education system, national policies need to give much higher priority to inclusivity and redistribution in order to achieve a system of hope. The reasoning behind the current education system is that many pathways leads to multiple opportunities. My thesis is that the increased differentiation leads instead to insecurity and strategising, stoked

by fears that if one does not grab at a single chance, the chance is gone once not taken, leading to an undesirable path that drives a wider and wider chasm between the haves and have-nots. A system of hope that this essay has proposed is one that starts children in more collaborative and uniform schools with more common and shared experiences. This uniform experience then gives way to high quality academic and technical post-secondary education leading to lifelong careers as well as lifelong opportunities for alternative qualifications. Should someone need a lending hand to level up, the safety net in a system of hope is sufficiently strong to overcome intergenerational reproduction of disadvantage.

* This article is a product of several different initiatives that I have had the privilege to be a part of. A significant portion of this article appeared in the proceedings of a youth conference organised by Youth Works on "The Economic and Social Life of Young People in a Rapidly Growing Economy Transiting to Slower Growth" on 19 November 2011. Many of the ideas in this article were also germinated directly or indirectly through the Social Infrastructure Development Study Group convened by the Institute for Policy Studies for the Population of Singapore 2050 project. I am grateful to my colleagues and friends involved in the above and other initiatives, whose thoughts would have inadvertently shaped the ideas in this article. However, the opinions expressed here are my own personal views and do not represent those of my organisation or collaborators.

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SINGAPORE'S SKILLS STRATEGIES: A TRANSFORMATION TO BUILD AN INCLUSIVE FUTURE

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Today's central global challenge is income inequality - a recurring challenge in human history. What we are experiencing is not something very new. Technological advances, and the world consequently becoming more closely related – it happens all the time. You can talk about the 16th century rise of colonial powers, the invention of ships, the industrial revolution, and the gilded age in the United States of America (US). Each episode is driven by waves of technological advancement and geopolitical shifts, and when that happens, opportunities open up. However, money doesn't drop from the sky evenly across the whole population. It drops in bundles and some people can make use of it, while others can't. That's when income inequality gets widened and social problems are created. Now, I believe, we are again facing the same kind of challenge.

As technology advances, income inequality widens. This is not a uniquely Singaporean problem. Our Gini coefficient has generally been quite high – in 1980 it was 0.42, which is not low even by 1980s standards. Today it is 0.47 - it has gone up 12 percent. It has worsened. However, when looking at other countries that also showed increases in their Gini coefficients, the problem is even more pronounced. In the same period, China, the US and

Germany all went up by about 30 percent - it used to be 0.3, now it is about 0.4. Even in Sweden, the bastion of welfarism and egalitarianism, the Gini coefficient went up by about 20 percent, albeit from a lower base of 0.2. Now it is 0.25. So it is a problem that we all face. In today's largely democratic world, when you have a problem like that, inequality will always prompt governments to do one thing, the obvious thing, which is to tax and to redistribute.

This is the central theme of the recent US presidential election, whether you go for tax and spend or whether you don't tax but still spend. Recently, when former Chinese President Hu Jin Tao gave his 18th congress party speech, he too mentioned and admitted that there was 'uncoordinated' growth in China. So inequality is a worldwide problem. However, beyond the redistribution of wealth, I think an equally important policy objective to pursue is inclusive growth - so that opportunities arise more equally amongst the population and money does not drop in bundles for the select few. What does this entail? For me, it would involve empowering the individuals and empowering the societies (e.g., of companies to do better). First, I think at the industry level, we need growth that is driven by industry restructuring - physical investments that create good paying jobs for people. Second, at the workforce level, we need education and training that give workers confidence and competency to take up these jobs.

Third, active labour market intervention is needed so that even individuals who are unable to take up these opportunities will not fall through the cracks. They can still be helped such that they do not become totally redundant. They can still be useful members of society and the economy. So in this context I think the mission of

the Singapore Workforce Development Agency (WDA) in today's world is even more critical. It's not about chalking up the target number of Workforce Skills Qualification (WSQ) certifications, or the partial qualifications - the Statement of Attainments (SOAs). But fundamentally, WDA's mission is to ensure skill relevance throughout a worker's lifetime. Very importantly, in a globalised world, if you have basic skills, it is just a commodity. Someone else has the same skills. You have to be excellent at work in order to create value, which may mean promoting personal mastery and promoting craftsmanship. So we need to go beyond basic skills – this is reflected in WDA's slogan – 'Learning for Life, Advancing with Skills'.

That is the big difference between cheaper labour and craftsmen. We can see such craftsmen in our midst when we travel. For example, Japanese landscape artists are not landscape technicians, nor are they gardeners. They are landscape artists or horticulture artists. Look at how they beautify a Japanese garden, every rake of sand is carefully measured, every pebble is strategically placed, and their eye for detail is amazing. Somehow within their society, people are prepared to pay for such services, and the craftsmen can earn a good living. Another example would be Swiss watchmakers - they take so much pride in making watches, and this is a craft. Also, Hollywood filmmakers - they may make movies that may not have very much cultural value, but have high entertainment value. Also, look at the other people behind them who make the film happen - I think there are a lot of skills involved there. My favourite example is that of a European chef. They have a long tradition of master and apprenticeship. You learn from a master, with a very set curriculum, then knowledge and skills get transferred from master to disciple, then you become

a commis chef, then a sous chef, chef-de-partie, and then head chef and so on. So the career path is set up and there is a whole societal system to support that.

In today's world and in Singapore particularly, we face many forces that are undermining personal mastery and craftsmanship. The first challenge is poor procurement practices. Many companies, the government included, pressured by cost competition, have a tendency to go for the cheapest option, and not contracts that will encourage skills development. By doing so, I do not think we are promoting skills advancement. I do not think we are promoting the value of craftsmanship either.

The second force that I think is undermining mastery and craftsmanship is that as a society perhaps, there is a strong emphasis on achieving academic qualifications. We want a degree, and even within WDA, we want people to get WSQ qualifications. So we all want qualifications, but ultimately what matters is what the industry recognises. I believe the more you recognise craftsmanship, the better it is for the industry. Thirdly, I think in general we do lack the support system for promoting skill mastery. Although WSQ is set up to support this, WSQ may become a bureaucratic set of rules that people follow as a means to achieving funding.

Set against this backdrop, we have to recognise that the ticket out of becoming cheap labour is for every worker to find a profession that they have passion in, and then learn, get trained and excel. This necessitates a new way of looking at skills training. Beyond supporting company level training, we must have a system that empowers individuals who want to excel in a profession.

So it's not very different from the education system - the pre-employment system, where every child, upon finishing their high school or 'A' levels, they choose what course they want to do. They try their best to get into the course, and if they cannot get their first choice, they try for their second choice. So there is a lot of empowerment given in our education system. Likewise it has to be so for the adult training system. So I would say the most significant strategic change that the WDA has implemented in the last few years is to shift training support from 80 percent going via the employers to 80 percent going to individuals to empower them to pick the training they want.

There are two ways to empower the individual. One is to give everybody a voucher, or give individuals accounts with money for training, and they can choose what courses they want to go for. However, that may not be ideal, as the voucher holder may do all kinds of things – he or she may learn ballroom dancing, or flower arrangement. Nothing wrong with that, but I think WDA, as a national agency, also needs to set certain market signals, such as what skills workers require to remain relevant. Thus, the alternative method was chosen, which was to set up continuing education and training (CET) centres, where funding goes directly to the centres, and workers are empowered to walk into a CET centre to get training at subsidised rates. Today, CET centres are all over Singapore, though some are more successful than the others. So I encourage WDA to continue to lead the charge, to constantly reinvigorate our national skills strategy, to keep pushing for national empowerment, individual empowerment, and the development of depth, excellence, and mastery amongst the workforce. I have a few suggestions, which I hope you will consider. I am no longer in government service, I am soon not

going to be in National Trades Union Congress (NTUC), and so these are really going to be coming from a private individual.

First, we need to put resources into the codification of knowledge and skills that are built up through experience. I think the western economies have done a much better job at that. Just look at how they train chefs. Everything is codified - how to chop onions, how to chop carrots, down to the smallest details. However in our culture, codification has not been established. When we were much younger, we saw a lot more interesting hawker food. Today you do not see that anymore. Part of the reason, I believe, is that street culture and street food did not get codified over time. So, our best bak chor mee, one of our local favourite noodle dishes has just disappeared. Of course I am not just talking about hawkers. Throughout the various industries, various trades and various professions, there has to be an effort to codify how things are done in the expert way.

Landscape professionals feel the same way. Recently, I met up with a group of them. It was a very interesting group which included people that run landscape companies, landscape supervisors, landscape architects, landscape professionals working within property development companies that procure landscape services, and even a landscape procurement officer from a government agency. All of them shared the same views, even though they all come from different parts of the landscape industry and different parts of the value chain, – we are a garden city. However, they all worry that the standards of horticulture and the standard of landscaping have been dropping and dropping. One big problem is procurement standards, which are deemed to be poor. Also, all of them share the same view which is they

have to come together as a community of professionals to codify what they know. They know that there is a whole generation of experienced landscape professionals. Although they were not necessarily formally educated in this field, they learned through their work as Singapore developed as a garden city, and they know a lot about plants and taking care of them in a tropical environment. However, nobody has taken steps to speak to all these old uncles and aunties to capture what they know. So this is something that I think is worthwhile, that an agency like WDA can do, though I do not know which department can handle that. You have to figure it out.

My second suggestion is support for forming guilds and professional associations. I think guilds and professional associations are very important in promoting craftsmanship and mastery. As a guild, you safeguard the standard of the profession. You regulate and control the instructional system and the passing down of skills and knowledge for that profession. Naturally, a guild has a lot of professional pride, and they will naturally want to do this. In terms of advancing the interest of the workers, I think the guild has a far longer history than unions. So it has a much longer history in protecting the interest of workers, advancing their skills and making sure they take part in the growth of the economy. So encourage the set-up of such associations, give them the resources and maybe even let them be the guardians of WSQ. Let them drive the Industry Skills and Training Councils (ISTCs), let them validate the skills standards, let them validate and develop the curriculum, let them chart out the career progression paths and the delivery of the programmes for that sector. You can do it for a range of sectors, I mentioned landscape and horticulture, you can do that for digital animation, for journalists, for engineers involved

in special industries like marine or aerospace. WSQ frameworks will have to be appropriately scaled in the right size to cater to the associations. And over time, maybe even consider devolving quality assurance and assessment of training effectiveness to these guilds and to these associations.

My third suggestion is to build CET centres within world-class companies. In the past, we always gave out awards for service excellence. One company that often won, beside Wing Tai, was Giordano. One year, Giordano's sales staff won many of the awards. They were all model sales staff. But the moment they received the award and walked down the stage, they were poached by another company. So it was seen as a bad thing to win awards. However, you have to give it to Giordano at that time — they were prepared to put in resources to train up their staff, making them excellent, and if another company poached them, so be it. Giordano believed in the value of investing in training their staff.

I believe that WDA has done the right thing in setting up CET centres, but it is very hard for standalone CET centres to raise skills to a sufficiently high level that will be well regarded in the industry as mastery and craftsmanship. You can always achieve a certain level of skills for a person to enter an industry, but to achieve mastery it must happen on the job and within companies. Going back to the chef example, you get your Michelin star by running restaurants, not attending courses, and so likewise for other industries. In Singapore, you learn how to build an oil rig by joining our world-class organisations in the marine industry. You learn how to do maintenance, repair and overhaul (MRO) for an aeroplane by joining one of our top aerospace companies. The problem is that very few companies will be prepared to open up

their training facilities for all workers. As such, this necessitates greater support of the 'place and train'[1] programmes. I think the 'place and train' programmes are the future to complement the existing CET centres. As such, when companies hire apprentices, companies will train them, and they will be future masters of the profession.

My last suggestion concerns the employability skills system. Pursuing personal mastery is well and good. But there will always be workers who cannot even get into the system because they lack basic qualifications and skills. So there must always be a set of training programmes designed to help workers overcome initial obstacles. My view has always been that the employability skills system must cater to the lowest skilled and help them overcome that initial obstacle. There will always be different opinions, such as that the employability skills system should also be applicable to other groups such as the Professionals, Managers and Executives (PME). However, I much prefer to keep the objective pure and simple. You have to help the vulnerable, who are often not PMEs. In the computer world, I recently learnt something new – it's called the International Computer Driving Licence (ICDL). So if you are someone who does not know anything about computers, and you want to tell people that now you know something about computers, get the ICDL, which is a licence for using the computer.

So likewise we need an equivalent of an ICDL for getting into the workforce - the employability skills system. If we ask employers what they are looking for when employing somebody, one key

[1] Place and Train is a component in the Singapore Workforce Development Agency's Job Placement and Training Programmes aiming to help jobseekers to re-skill themselves and to obtain the necessary knowledge and competencies to take on new jobs.

thing that all employers would say is attitude and work ethos. That is critical. However, we have to admit that it is very hard to teach work attitude and ethos through any training course. This can take months or even years of counselling, coaching support group interactions and role modelling; and we need to recognise the limitation of training here. While the employability skills system today has many courses that cater to building a person's attitude and work ethos, we have to recognise that there are limitations.

For other skills, I think they can be developed through training. I think the important ones are literacy, numeracy, confidence in handling a computer, confidence in handling machines and devices, developing good service attitudes, and in my view, a driving licence will help too. I always feel that if a person applies for a job, if he or she speaks well, is able to use the computer, is able to handle machines and drive, chances are that this person will be offered the job. So perhaps we can review and build the employability skills system around this basic concept for future improvement.

When income widens, inequality sharpens, workers and people will start to question the fairness of the existing system. The Government can tax and redistribute, to ameliorate the situation, and restore some sense of social justice. On the flip side, it can also build up the support systems that empower individuals to do well in such an environment. I encourage WDA to take bold steps into unchartered paths and help shape the future of the economy and the workforce.

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CONCLUDING REMARKS

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This book covers a lot of ground in providing important insights and research findings that could be useful in developing Singapore's skills policy for inclusive growth. We summarise some of them that might be of particular relevance for Singapore.

First, setting a quantitative target that is measurable for closing the inequality gap, which as Salverda observed, was also lacking in many of the OECD countries. Singapore currently uses the number of people who participated in training and the number of qualification frameworks developed and rolled out as training outcomes, but if we want inclusivity, we need to establish other indicators. For example, the number of low-skilled workers embarking on higher education or continuing education and training, and the number of low-skilled workers moving into high-skilled jobs can be used as training outcomes. In addition, we also need to know whether higher skills are being rewarded by higher pay.

Second, one of the learning (if not relearning) points from this book is the need to revive, if not advocate for, the principle of equal

access to further learning, training opportunities and resources. From this, we can argue for the provision of strong incentives for individuals to participate in training as an important skills policy agenda. As Keep and James (2012, p. 244) argue:

> …in some cases the problem of low pay was portrayed as resting with individuals' defeatism and workers' failures of aspirations and self-betterment, rather than with the structure of the economy and firms' product market strategies and the resultant job hierarchies, work organization, and job design. Thus, insofar as workers and employers were failing to react to these perceived incentives in the ways intended or anticipated by policymakers, the problem was usually deemed to lie either with negative cultural attitudes or with 'market failure' rather than leading to any questioning about the strength of the incentives themselves.

Keep and James further point out that "workers or prospective workers at the bottom end of the labour market are the ones who face the weakest, patchiest, most complex, and uncertain (and hence risky) incentives to invest in learning and skills, and who normally have limited resources to invest" (p. 249). Further learning or training should not be dependent on one's employer or the individual's available resources at hand. A good example to support this is the Swedish system where there is no educational 'dead-end', and students have access to universal and generous financial aid, which is open to all students from 20 to 54 years old attending college or the adult primary and secondary educational programme. Another policy from Sweden, that is worth noting, is the Individual Training Leave Act where workers are entitled to take career breaks to pursue training or further studies with a guarantee of employment (with the same conditions and pay) after their breaks. As Anxo points out, this specific policy aims for social and occupational mobility. The incorporation of the full employment guarantee and the generous financial allowance can counteract the issues of low-skilled workers not pursuing further studies due to fear of loss of income and unemployment during and after their studies.

Sweden has more compressed wages relative to other OECD countries, and this has happened because of strong collaboration and cooperation between the unions and industries in setting wages and job designs despite the lack of minimum wage law. This is something that Singapore can look into given its long-standing tripartite partnerships of government, businesses and unions.

We can learn from the Germanic countries' system of producing 'authoritatively' certified skills. The 'certified' skills types and levels were importantly influential in the pricing of skills in the manufacturing sector in Germany, as described by Estévez-Abe. This coincides with Ong's argument for 'mastery' skills. In both cases, the argument is that deep skills create greater values for employers and therefore will raise wages. Perhaps for Singapore, it is now time to move away from collection of Statements of Attainment (SOA), and move towards trade-based certification where industry bodies have a direct say, or more stake in, the skills certification process, rather than just mere participation in curriculum development. This is a form of strengthened engagement between the industry and the employers in skills strategies.

The issue with Germany is its relatively small collective bargaining coverage[1] compared to other European countries like France, Netherlands or Denmark, for example (Bosch, Mayhew, & Gautie, 2010). This study on low-wage work in wealthy countries found that the most important difference in countries with low-wage work is the 'inclusiveness' of the pay-setting institutions. The finding was that the more inclusive the pay-setting institutions are, the lower the prevalence of low-wage work. Inclusiveness means that systems have formal and sometimes informal mechanisms to extend the wages, benefits, and working conditions negotiated by workers in industries and occupations with strong bargaining power to workers in industries and occupations with less bargaining power. As Bosch et al. (2010) noted in Germany, the linkages between the well-organised industries and regions and the less-organised industries and regions have been broken. This is such a contrast to the past practice as organisations are now generally refusing to agree to the extension of agreements. "As a result, there is no mechanism to extend coverage to industries with weak unions. Collective agreements on minimum pay levels are declared generally binding in only a few industries, so that decreasing employer-organisation density has directly reduced collective bargaining coverage"(p. 99). Though there are many forms of inclusive institutions such as collective bargaining, minimum wages, employment protection legislation, enforcement of national labour laws, and the benefit systems for the jobless and low-income households, it appears that the coverage (rate of workers' benefits) by collective bargaining is the most important

[1] Percentage of collective bargaining coverage of Germany, France, Netherlands and Denmark in 2007 were 63, 95, 82, 82, respectively (see p. 95 of Bosch, Mayhew, and Gautie, 2010).

of all these institutions. With this finding from other countries, perhaps a strong sectoral collaboration and strengthened role for trade unions – as advocated by Gog, Sim, Ramos, Sung, and Freebody's chapter - might be the ones needed in Singapore to advance the cause of the workers in the low-wage sectors such as in services industry.

If Singapore follows the Swedish system, older and low-wage workers with no tertiary education could be motivated to still go for further training or education and aim for better employment and career prospects without the fear of substantial wage loss or the threat of being unemployed upon leaving their jobs for training or education. Ideally, those less educated should be the ones undertaking lifelong learning or continuing education to avoid the inequality in human capital in terms of educational attainment. However research (Biagetti & Scicchitano, 2009) reveals that the more educated the people are, the higher the tendency is for them to engage in lifelong learning activities—thus, learning leads to more learning. However, it is not all bad news, as there are exceptions to this trend. In Finland and Denmark, having less education is a good predictor for participating in lifelong learning activities (Biagetti & Scicchitano, 2009). Other research (Jenkins, Vignoles, Wolf, & Galindo-Rueda, 2002) also showed that for those with no qualifications, undertaking lifelong learning led to faster earnings growth than those with no qualifications and did not undertake lifelong learning activities. The point here is that 'individualising' or making training to tailor-made to individual needs' may encourage greater lifelong learning which will have subsequent impact on earnings.

Given the above discussion, what perhaps is imperative for Singapore is to revisit the objectives of and the philosophy behind skills policy. Perhaps we should redefine our training outcomes. Our training and funding policies, for example, have been focused on outcomes such as employability and higher wages for everyone who undergo WSQ training. However, outcomes will never be equal even with the perfect equality of opportunities due to differences in motivations, talent, preferences, effort, and even luck of individuals. What is more important is to focus on the provision and facilitation of equal opportunities and to avert the barriers faced by vulnerable workers in seeking further education and training. Drawing from respected thinkers namely John Rawls, Amartya Sen, Ronald Dworkin, and John Roemer, the World Bank's World Development Report 2006 acknowledged the individual responsibility and effort in determining outcomes, and thus focused instead on eliminating the disadvantages caused by circumstances that the individuals have no control of, but that could strongly shape both outcomes and the pursuit of those outcomes.

Also, let's learn from the limitations of the United Kingdom's National Vocational Qualifications (UK NVQ) on which Singapore's WSQ system was heavily patterned, and see how we can improve the WSQ system. Keep and James's (2012) recent research suggests that this form of competence-based qualification (i.e., referring to UK NVQ) is limited in its economic benefits. They conclude that

> ...while this model of vocational qualification design may meet the immediate needs of some employers, it creates qualifications that offer little economic empowerment because a) the skills being imparted are narrow and often low level, b) fails to provide broad, coherent packages of learning that support re-entry into learning or career progression, and c) it offers almost no foundation for the individual in developing their roles as citizens and members of the wider community, again in contrast to practice elsewhere in Europe. (Keep & James, 2012, p. 246)

To conclude, there are a couple of simple messages for contemporary skills policy vis-à-vis an inclusive society. The first is that whilst skills policy needs to pay greater attention to incentivising individual learning, skills policy also needs to be able to influence the productive systems for greater skills utilisation. Second, we need to strengthen the connection between skills and pay. In this respect, skills development needs to be connected with the needs of business – a sectoral approach to skills development may well be a much more effective environment to make high skills pay.

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From 1 April 2011 till end May 2013, Soo Kheng spearheaded IAL's Marketing and Communications Division. Prior to this, she held various communications and information management related roles within the public sector, including the Ministry of Education, Ministry of Communications, Information and the Arts, as well as the Ministry of Trade and Industry.

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Prior to joining IAL, Johnny was Chair of Skills and Performance at the Centre for Labour Market Studies, University of Leicester in the UK. His research at Leicester provided input into recent skills policy of the British Government.

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