Sectoral employment patterns and youth employment: An analysis of Issues, Theory, Policies and Evidence

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Atkinson (2008) "Government budgets are under stress, but citizens are going to expect that, if funds can be found to rescue banks, then governments can fund unemployment benefits and employment subsidies. ***If governments can take on the role of lender of last resort, then we should be willing to see government as the employer of last resort."***

1. Introduction

This paper is concerned with the developments in the youth labour market. In particular it seeks to find out the role of different sectors of the economy in explaining the behaviour of the youth labour market. Since the Global Crisis there has been a massive increase in youth unemployment in many of the OECD countries. Youth unemployment is a serious concern as it not only represents a loss of potential production for the economy, but it leads to young people suffering from a recurrence of future spells of unemployment (scarring) and to a loss of future earnings. Youth unemployment leads to social unrest and may even lead to civil conflict and revolutions, some authors have linked the so-called Arab Spring to the increasing youth unemployment in that region[2]. Finding employment for young people is not only important for the youths but also for society in general.

In an important paper Jahoda and Rush (1980) argue the importance of employment for an individual:

> "On the individual level the latent consequences of unemployment can be regarded as the absence of the latent consequences of employment. Five such consequences have been identified in the literature. Employment of whatever kind at whatever level makes the following categories of psychological experiences inevitable: it imposes a time structure on the waking day; it compels contacts and shared experiences with others outside the nuclear family; it

[1] This was a report produced for the International Labour Organisation. I am grateful to Sophie Yan and Taneem Muzaffar for help with the estimations carried out in STATA. I am grateful to an ILO Statistician, Francesca Bonomelli, who has very kindly tabulated some of the results from the School to Work Transition Surveys, SWTS, and provided me with the data.

[2] See Chapter 3, *World Development Report 2013* on "Jobs and Social Cohesion" where they discuss that in various countries riots and conflicts that are likely due to high youth unemployment.

> demonstrates that there are goals and purposes which are beyond the scope of an individual, but require a collectivity; it imposes status and social identity through the division of labour in modern employment and, last but not the least, it enforces activity."

The *World Development Report 2013* on Jobs stresses the importance of a job, not only in terms of an income for the worker, but also its importance in providing the worker with a sense of dignity and belonging in society. A job also provides social cohesion.

In any study of youth labour markets we have to consider the history and development of that country. In many countries that had been colonised by the Western powers their economies had been transformed into either single crop or single mineral resource economies. Most employees in these industries were simply unskilled workers. As these activities were often for exports to the colonial powers they would invest in infrastructure (roads, railways, ports etc.) which would hire unskilled workers. Some countries were "lucky" that were simply producing oil and they were able to earn large amounts of foreign exchange, however, oil production was mainly capital intensive and did not help to develop the labour market. After independence many countries that were short of foreign exchange, introduced import substituting policies to develop their industrial sector. In most Less Developed Countries (LDCs) youths work in the informal sector. Most young people are working in the agricultural sector that does not require high educational levels or high skills since most of the work is using old-fashioned technology. Most of the young in poor countries have limited education and there are very few employment possibilities for them. As the economy develops some of them escape from the informal sector and move into formal sector jobs.

In the process of development the economy transforms from a mainly agricultural economy to an industrial economy and then as it develops further the services sector becomes dominant. However, in the early stages of development when markets are not well developed much of the economic activity takes place in informal markets: wage labour is a very minor part of the economy. Much of the work that takes place is in family farms or family run micro enterprises (small businesses like selling cigarettes, tea etc. in little street stalls). Some of the former colonial countries have a significant resource industry that employs wage labour and is producing mainly for the export market.

The concepts of employment and unemployment are more easily defined for a developed capitalist economy that has a market for wage labour. Following the International Labour Organisation (ILO) definitions, employment is defined as working for at least one hour a week for some payment, either for a wage or for profit, or commission, or without pay in a family business. However, this definition usually excludes people (mainly women and young children) who provide unpaid household or farming services. Unemployment is defined in terms of not being employed for pay or profit for one hour or more in a week, being available to begin work, and actively searching for work. Most developed countries carry out regular labour force surveys that provide statisticians with the data on employment and unemployment. However, labour force surveys in developing countries are unusual and infrequent. Hence the data for LDCs is limited and should be treated with caution.

In most developed countries the government provides unemployment benefits subject to several conditions that the unemployed job seeker is actively searching for work. The more generous these unemployment benefits, and the longer the duration these benefits are available, the greater the likelihood that unemployed workers would access these benefits and continue searching for work. Of course, if a person has just been laid off and s/he expects to find work easily and quickly (say when the labour market is very tight) may not access unemployment benefits and may even take a short holiday and would therefore not be considered as unemployed.

In Less Developed Countries (LDCs), where wage labour is not a predominant form of employment, many people are employed in agriculture in family farms or work in the informal markets (e.g. selling cigarettes, newspapers, etc. on street corners). In the urban areas of poor countries where the formal labour market is limited to perhaps the manufacturing sector, there are many people who are eking out a living in a variety of activities, some legal (and some not), it is not clear who is employed or not. Many of the migrants who arrive from rural areas are often waiting for a job in the formal sector while they are carrying out activities in the informal sector. In most of the poor countries we find that many children are working for their family (in agriculture or in family owned activities like shops etc.) As such, the usual western definitions of the working age population as people of ages between (say) fifteen and sixty five is meaningless for LDCs. In much of the statistical data that are available, the employment data are usually measured or estimated for people between fifteen and sixty five, although the real employment data should include

children who are employed. There are, of course, estimates made for employment of children, but these data are likely to be unreliable.

The concept of unemployment in LDCs becomes 'fuzzy': the line between employment in the informal sector and unemployment is not clearly defined (Turnham, 1993). Some of the people who are working in the informal sector could be conceived as "wait unemployed"[3]. In developed economies people may not "look for work" when there are no obvious vacancies available and drop out of the labour force (the discouraged workers) and the participation rate may fall. Since the concept of unemployment may not be well defined labour economists sometimes use the concept of employment–population ratios or labour force participation rates (the sum of employed plus the unemployed as a proportion of the population of working age). Even employment is not a clearly defined concept in LDCs as many people are working on a family farm, or family micro enterprise without a formal agreement about wages or employment. Again, it should be noted that in LDCs many children are effectively in the workforce, but there are no regular surveys that provide information for this group.

It should be noted that social customs, culture, institutions, tax and welfare systems, and the legal framework play a large part in the participation rates of (especially) women and children. In LDCs where compulsory school education is either non-existent or not enforced children are part of the labour force. In many developed countries there has been an increase in people engaging in higher education and hence lowering the participation rate in the labour force. In certain cultures where religion plays an important role, women do not engage in paid work and hence are not part of the labour force. In many developed countries more and more women have increased their participation rate as there has been an increase in society's attitudes to women working in the paid work force. The women's liberation movement of the 1960s clearly played an important role in providing women a more important role in the world of work and in society in general. Hence, comparisons of employment, unemployment, participation rates across different countries should be made with some caution.

Employment, unemployment, and labour force participation rates depend on both the demand for labour, the supply of labour, and the functioning of the labour market. In standard neoclassical economics, wages play an important role in determining both the demand and supply of labour, although as discussed above they are conditioned by social, cultural, and

[3] ILO (2015) also argues that the concept of unemployment is not well defined for developing countries, "…the strict unemployment rate has less meaning in lower-income countries". (p. 31).

institutional features of societies. In traditional economics, minimum wage legislation influences labour demand and leads to unemployment, although there is now increasing evidence to reject this hypothesis.

This project investigates the role of different sectors of the economy in affecting these labour market variables. As discussed above, in many poorer societies agriculture has a dominant role and employment in that sector is often based on family labour or on hiring casual labour at peak seasons like sowing and harvesting. The industrial sector (often dominated by large multinational corporations), and the public sector employ workers in the formal sector. These jobs are often called decent jobs as they have good pay, holiday leave, unemployment and redundancy benefits, etc. However, many of the people working in the industrial sector could be employed as casual workers without access to fringe benefits (informal labour in the formal sector). In many developed countries, there has been a growth in outsourcing of many production activities to contractors, who are in effect, cheap labour, or informal workers in the formal sector. As societies have developed, production has moved away from agriculture towards the industrial sector. Typically, the agricultural sector is a low productivity sector that uses (especially in poor economies) labour intensive methods while the industrial sector is a high productivity sector that uses capital intensive production techniques. Hence, a move away from agriculture to industry may increase productivity and the level of Gross Domestic Product (GDP), but may not necessarily lead to an increase in employment overall, see Junankar (2013).

In this study, we shall carry out our analysis by comparing changes in employment and unemployment in different sets of countries depending on their income levels (using the World Bank criteria) and in different regions. In our econometric analysis we shall control for these different sets of countries by estimating separate equations for different groups of countries (subject to data availability). Our explanatory variables shall include the share of Agriculture in GDP, the share of Industry in GDP, the share of investment in GDP, the per capita level of GDP, and the growth rate of GDP. Our concern in this report is to study the importance of different sectors of the economy in explaining the levels of employment and unemployment. Unfortunately, we do not have reasonable data for sub-sectors like health and education services, manufacturing, resources, etc. and have to rely on broad economic aggregates as listed above. Ideally we would like data on the value of output of the “informal sector” and the “formal” sector, but these data are not available. As we shall note, the data on

employment and unemployment are not easily available for a large number of the poorer countries, and hence our econometric analysis will be severely limited by data availability.

As we shall show, in developing countries youths are often employed in the informal labour market under poor conditions of work and pay. Most of them are working as casual, temporary, unpaid family workers, or in own-account work. The main problem facing youths in developing countries is not unemployment but vulnerable employment in the informal labour market. Since the global crisis there has been an increasing problem of youth unemployment especially in the OECD and the Middle East and North Africa. *The main aim of policy has to be to provide decent jobs for young people.*

2. Literature Review

There is a large research literature on youth labour markets in the OECD in general, and youth unemployment in particular. Many of the European OECD countries have faced a massive increase in youth unemployment and long term unemployment (Junankar, 2011). A common feature of this literature is the social impact of youth unemployment. When young people are unemployed they may face various problems including heightened levels of social alienation and depression, and an increase in the use of non-prescribed drugs, petty crime, and suicide rates (Eurofound, 2014). In addition, a spell of unemployment has a "scarring effect": it has a negative impact on the possibilities of finding another job as well as leading to lower future earnings. High youth unemployment is often linked to social and political unrest, for example in the so-called "Arab Spring" revolts in the Middle East.

In the formal economics literature, youth employment (unemployment) is determined by the demand for, and supply of youth labour. *Ceteris paribus*, an increase in the supply of labour leads to an increase in youth unemployment. In many developing countries there has been a demographic bulge in youths which has led to an increasing problem of finding employment for this growing youth population. The supply of youth labour is clearly determined by the size of youth population, but also by the social, cultural and economic *mores* that determine whether young people remain in education (secondary or tertiary), whether females enter the labour market (for religious or cultural reasons many females in Arab and muslim countries may not enter the labour market). Youth labour supply (in formal economic theory) also depends on the available wage rate, the higher the wage rate the higher the youth labour supply. Labour demand depends on the level of demand for the products, the technology

being used in the production process, and the wage that has to be paid. In general, the technology used in larger firms is a capital intensive technology and hence the demand for labour is relatively low.

Employment depends on the sectors that are expanding: if the economies depend on resource sectors (oil, mining, etc.) that are very capital intensive sectors then employment does not expand significantly. In the agricultural sector, employment depends to some extent on the distribution of land between owners and cultivators. If there are many tenant farmers they are less likely to invest in hiring labour for land improvement. If farm sizes are small then they are unable to benefit from economies of scale and hence employment may be lower. Much of employment in agriculture is on family farms or based on casual employment in peak periods. In LDCs the industrial sector is usually limited and often dominated by large multinational firms that use capital intensive technology. Much of industry in LDCs depends on small family run enterprises (so-called micro enterprises) that belong to the informal sector.

In the economics literature there has been a continuing debate about the impact of minimum wages on (youth) unemployment, with the traditional view assuming competitive labour markets where it is argued that minimum wages lead to unemployment. However, in recent years a growing number of economists have argued that in imperfect markets, minimum wages do not lead to increased unemployment (Card and Kreuger, 1995; Manning, 2003, 2010; Booth, 2014). They argue that the labour market is not perfectly competitive but that employers have market power in wage setting (monopsony). There is asymmetric information in the labour market, workers have heterogeneous preferences, and so on, all of which make the labour market behave differently from a competitive market. Manning (2003, 2010) has shown that in such markets employment can increase with an increase in wage rates.

The controversy on the impact of minimum wages on unemployment was kindled by the work of Card and Kreuger (1994, 1995) which was followed by several critiques by (amongst others) Neumark and Wascher (2007). The international evidence is mixed with recent studies by Dube et al. (2010) for the USA showing that there is no evidence for the 'disemployment' (*sic*) effects of minimum wages. Dube (2011) in a book review of Neumark and Wascher (2008) argues that the evidence provided for such effects is selective and that "[D]ynamic specifications show that the measured disemployment (*sic*) in the state panel models tend to occur before (and sometimes many years before) the minimum wage

increases'(p. 763). A recent report by the OECD (2015) also argues that a minimum wage does not necessarily lead to a fall in employment and is necessary to lower inequality of incomes. In a report out just now (see Amlinger *et al*. 2016) there is evidence that an increase in the minimum wage in Germany did not lead to a decrease in employment but did lead to increased wages,

In 1999, Britain introduced a national minimum wage (NMW). The impact of this national minimum wage has been studied by several economists. David Metcalf (2008) for example shows that the NMW did increase wages but there is no evidence to show that it led to a fall in employment. He argues that a minimum wage rise could increase labour supply and the increased wages (via efficiency wages) could increase productivity.

There is now much evidence that minimum wages do not lead to increased unemployment. In an open letter on 14 January 2014, 600 US Economists wrote to the US Congress:

> In recent years there have been important developments in the academic literature on the effect of increases in the minimum wage on employment, with the weight of evidence now showing that increases in the minimum wage have had little or no negative effect on the employment of minimum-wage workers, even during times of weakness in the labor market. Research suggests that a minimum-wage increase could have a small stimulative effect on the economy as low-wage workers spend their additional earnings, raising demand and job growth, and providing some help on the jobs front. (Economic Policy Institute, 2014)

Another branch of traditional economics argues that generous unemployment benefits lead to increased unemployment. The underlying economic theory is based on a model of unemployed workers searching for a job with imperfect information (Mortensen and Pissarides, 1999). The unemployed searching for employment receive various job offers, but depending on the wage offered they may accept or reject that offer. If they have substantial unemployment benefits they have a higher 'reservation wage' and reject low wage offers, and remain unemployed. Layard and Nickell (1999) have argued that unemployment benefits are one of the reasons for high unemployment. They also argue that various labour market institutions like unions, centralised wage bargaining, etc. also lead to higher unemployment. These results have been criticised by various people including Howell et al. (2005, 2007). Heckman (2007) also argues that the orthodox results are 'fragile' and unable to support the conclusions that labour market institutions are the main cause of high unemployment. OECD (2011) in Chapter 2, "The Labour Market Effects of Social Protection Systems in Emerging

Economies" shows that cash transfers help the unemployed to find a better matched job and increases the job search efficiency.

Much of this literature discussed above for OECD countries is based on high income countries where there is a well-developed labour market, unemployment benefits are available, and although there has been an increase in vulnerable employment, most of the workers are part of a formal labour market.

Human capital plays an important role in the labour market. In general, the better educated youths are more likely to find employment as they are more productive workers. In the OECD the probability of finding employment is significantly affected by the level of education: better educated people are more likely to find a job and get higher wages. However, in LDCs the more educated youths typically come from better off families and are less likely to work in the informal sector: they would rather wait to find employment in the formal sector while being supported by their parents.

However, there is a limited literature on youth labour markets in LDCs. As discussed above, there is a large informal labour market and a large proportion of workers are in "vulnerable employment". In this kind of labour market, the concept of unemployment is not clearly defined. In poor countries, unemployment is more likely for people in urban areas and even young people with higher education find it difficult to find employment. There is a literature that argues that in poor countries you have to come from a well-off family to be unemployed as the family would support the unemployed youth. Unemployment, it is argued, is a luxury that the poor cannot afford. The less well-off do not have a choice: if they cannot find a formal sector job they enter the informal labour market.

In a paper (written as a background paper for the *World Development Report 2013*) Arias-Vazquez et al. (2013) provide an interesting account of "The Role of Sectoral Growth Patterns in Labor Market Development". They point out that in developing countries there are large and persistent wage differentials between different sectors of the economy and a large proportion of workers are "employed" in low productivity agricultural activities. In order for these countries to develop, the structure of the economy has to be transformed from the low productivity agricultural sector to a high productive (and technologically advanced and dynamic) manufacturing sector. They present a graph of the employment-population ratio against GDP per capita (using smoothed data) which appears as a U-shaped curve such that

as GDP per capita rises, first the employment-population ratio falls and then after a point rises. An analogous graph for the unemployment rate has an upside down U-shaped curve. In the next section, we show that in general there appears a negative relation between the employment-population ratio and GDP per capita, when we look at groups of countries by income level.

In general, they argue that the growth of labour intensive sectors like agriculture and manufacturing are more likely to lead to a growth of employment. However, the results differ depending on the levels of income of the groups of countries under study. They also find that when they study longer runs of data, there is little evidence for differential employment effects of growth across sectors.

Arias-Vazquez et al. (2013) estimate panel regressions (for 184 surveys on a set of 81 countries) for annualised changes in employment on weighted growth rates of output of different sectors, where the weights are the share of that sector in GDP. They compare the effects of high labour productivity sectors (manufacturing, transport and communications, finance, electricity and utilities, and mining) with low labour productivity sectors (other services, agriculture, retail and wholesale trade, government and public administration[4], and construction) on employment growth. They also carried out panel regressions on individual (unit record) data for Brazil, Indonesia and Mexico. They tests for differences between high labour productivity and low labour productivity sectors on their impact on annual growth of employment. They also test for export led growth on annualised changes in employment.

In the cross-country regressions for employment growth (see their Table 2) they find a negative and significant coefficient for high productivity sectors and a positive but insignificant coefficient for low productivity sectors. For changes in unemployment (presumably the change in unemployment numbers, not changes in unemployment rates) they find a negative and significant coefficient for low productivity growth sectors and an insignificant coefficient for high productivity sectors. Their estimated coefficients (they argue) show that low productivity growth sectors lead to faster employment growth and reductions in unemployment. However, unless there are typographical errors, the coefficient on high productivity sectors is *negative* and significant while that on low productivity sectors is positive and insignificant (with a large standard error). *In other words, their results show*

[4] I am not sure how government and public administration are estimated to be low productivity sectors, since it is difficult to measure the output of this sector. It is certainly labour intensive.

that growth of high productivity sectors in inimical to employment growth, but low productivity sectors have no influence on employment growth.

For changes in unemployment, the coefficient on high productivity growth is positive and insignificant while the coefficient on low productivity sectors is negative and significant. In other works, the faster the growth of low productivity sectors the smaller the changes in unemployment. Low productivity sector growth is good for lowering unemployment. Although the authors then test for a statistical difference between the coefficients for the employment equation and find that at the ten percent level there is a statistical difference and then argue that this implies that "low productivity growth leads to faster employment growth than does high productivity growth" (p. 9). However, all the test shows is that a statistically significant negative coefficient is statistically different from a coefficient that is (essentially) zero! For the unemployment equation, they find a statistically significant difference between the two coefficients, which is not surprising since the coefficient on high productivity sectors is essentially zero! They also compare differences in the not-in-the-labour-force and differences of wages and productivity, where most parameters are insignificant[5]. It should also be noted that the sample of 184 surveys for 81 countries means that they have just over two observations for each country, but Table 2 shows they have 193 observations. If they use annual changes on employment and unemployment, at most they would have 81 annual changes[6]. Given such a small sample, these results need to be treated with extreme caution.

The case studies carried out by Arias-Vazquez et al. (2013) find results that are sometimes contradictory to the panel estimates and depend on the institutional and structural features of the economies. For Brazil there are no significant differences between the high and low productivity sectors. For Indonesia it appears that the high productivity sector growth is more effective in reducing employment than growth in low productivity sectors. Mexico has similar results. In some further detailed cross country analyses they find negative effects of growth in mining and utilities on employment growth.

Some work by Junankar (2013) found that there was a trade-off between productivity growth and employment growth: countries whose productivity was growing faster had slower growth of employment. For many less developed countries, agriculture is a dominant sector in terms

[5] They do acknowledge for the wages and productivity equations that "the coefficients are imprecisely estimated and the differences between coefficients are not statistically significant".
[6] This is very puzzling and needs to be investigated further.

of the share of GDP produced and in terms of the share of employment. Research on poverty reduction by Loayza and Raddatz (2010) suggests that growth in agriculture, construction, and manufacturing sectors are more likely to reduce poverty by increasing employment. McMillan and Rodrik (2012) found that many Low and Middle income economies suffered from a "resource curse" such that although the economy is growing employment does not grow. That is countries that discovered (for example) oil fields in Brazil had disappointing employment growth.

Matsumoto et al. (2012) provide a macroeconomic analysis of the youth employment crisis. As they point out the major limitation for employment of youth is the lack of aggregate demand. In particular they argue that the big increase in youth unemployment (in high income countries) since the Global Crisis was exacerbated by the "austerity" policies introduced by various governments. They show that youth unemployment is not due to a lack of skills or educational levels since youths in low and middle income countries cannot afford to be unemployed. In fact, those with higher levels of education, who come from privileged socio-economic groups are more likely to be unemployed as they can afford to be unemployed. Similarly, they argue that during a recession youths with fewer skills are likely to be laid off and then during a recovery they are the last to be hired. In reviewing studies of the impact of labour market flexibility on youth unemployment they state that "the evidence of the impact of employment protection legislation on employment is rather weak and mixed". (p. 10) In an econometric study (using Seemingly Unrelated Regression Estimation on a pooled data set) they find that the main explanatory variables are demand related factors like the adult unemployment rate (proxy for aggregate demand) and investment as a share of GDP. Interestingly, these results are similar for high income and low and middle income countries. They argue that access to finance is a key factor in doing business in high, middle, and low income countries.

3. Some Descriptive Statistics

In this section we present some aggregative statistics to provide a global view of developments in the youth labour market. As discussed in the introduction, we should expect to see significant differences between groups of countries with different levels of income and countries from different regions. In this section we look at the Employment-Population ratios (Emp-Pop), Labour Force Participation Rates (LFPRs), and Youth Unemployment Rates (YURs) of different groups of countries[7]. Remembering that for poor countries the concept of employment and unemployment is problematic, we note that these broad aggregate data only provide some indications of the developments in these countries. The data on employment, labour force participation, and unemployment in LDCs that are produced by the International Labour Office (ILO) include informal employment. This is worth noting in the following discussions.

Figures 1, 2, and 3 present changes in labour markets for High, Medium, and Low Income countries. Figure 1 shows that since educational opportunities are limited (and people have to work to survive) for young people living in poor countries, their Employment-Population ratios are significantly higher than for Middle or High Income countries. Further, as there has been an increasing participation in education levels over time (both at the upper secondary levels and higher education levels) we see that there was a continuing decline in Employment-Population ratios throughout the period from 1990[8]. What is interesting to see is that the Global Crisis of 2007-8 led to a significant fall in this ratio for the High Income countries, but a very gentle decrease for the other groups of countries.

Figure 2 shows similar trends for the Labour Force Participation Rates with a significant fall after the Global Crisis for the High Income countries, and a gentle fall for the Middle Income and Low Income countries. Figure 3 is interesting in that it shows the marked changes in Youth Unemployment Rates (YUR) with the business cycle for High Income countries. In particular, there is a big jump in YUR with the onset of the Global Crisis, while there is a less

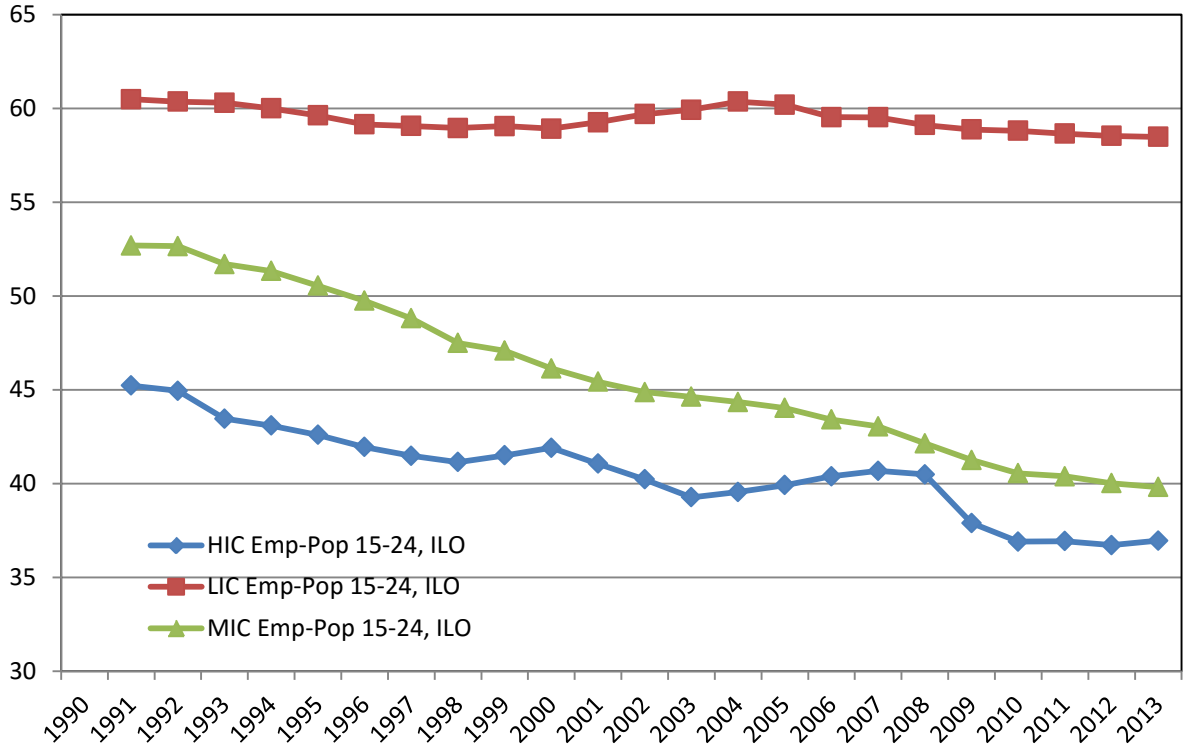
[7] Ideally, we should look at data on those young people who are "not in employment, education, or training" (NEET) as being a better measure of those people who are really unemployed. But if the employed include, as it would in terms of the ILO definition, those who are working for pay of profit in the informal sector then the NEET estimates would be underestimates. Many of those people working in the informal sector are either underutilised or disguised unemployed. In any case, it is difficult to find data on NEETs for most developing countries.

[8] See ILO (2015) Global Employment for Youths 2015 which states that the "[E]ducational attainment continues to increase … and is a principal factor behind the long term declining trend in youth labour force participation." (p. 3). It also stresses that educational attainment is not a sufficient condition to get paid employment, only tertiary education helps.

marked increase for Middle Income countries, and an almost negligible increase for Low Income countries. It is also clear that youth unemployment rates in Low Income countries are significantly lower than in Middle or High Income countries. As discussed earlier, unemployment is a luxury that poor people cannot afford[9]. There are also differences by gender for most labour force variables.

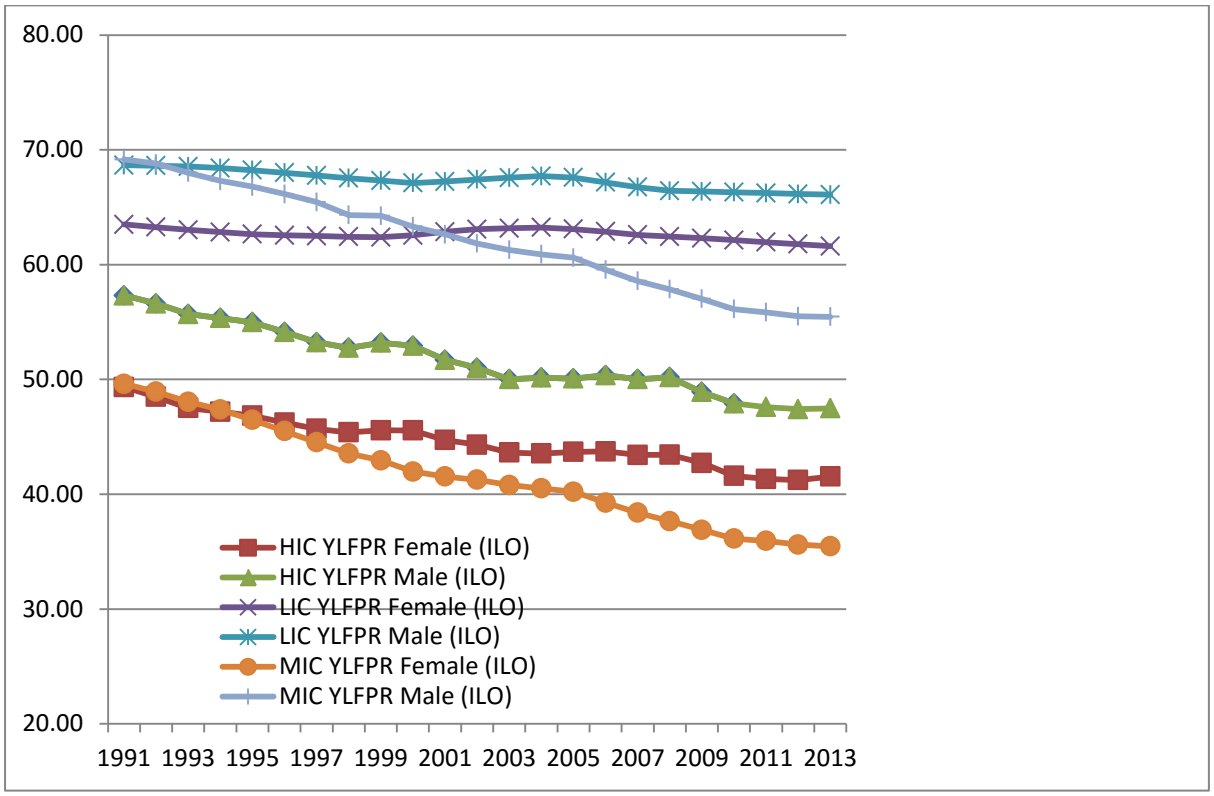
[9] Although, not shown in these Figures, Youth Unemployment Rates are always at least double the Adult Unemployment Rates. See Appendix 1.

Figure 1: Youth Employment Population Ratios, Total (Income Groups)



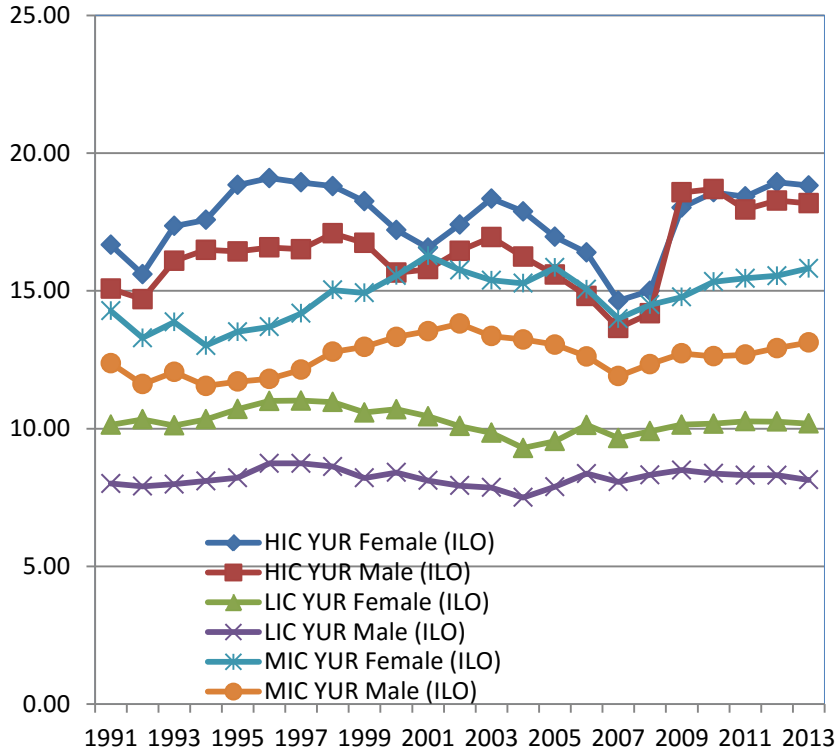
Source: World Bank World Development Indicators, ILO Modelled Estimates

Figure 2: Youth Labour Force Participation Rates, M & F (Income Groups)



Source: World Bank World Development Indicators, ILO Modelled Estimates

Figure 3: Youth Unemployment Rates, M & F (Income Groups)



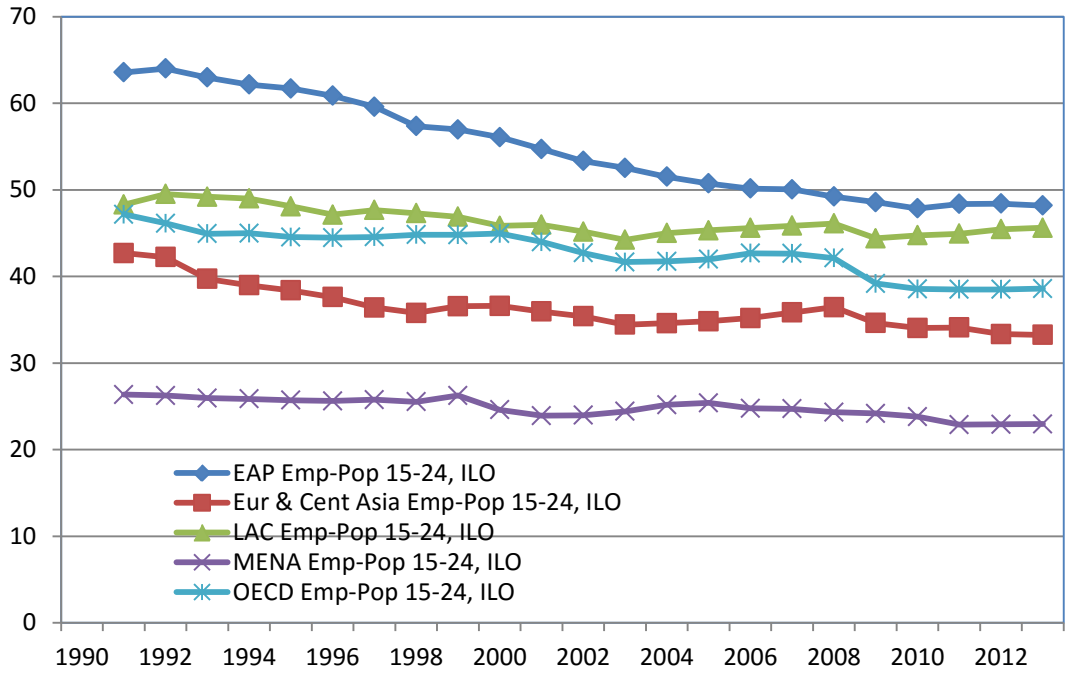
Source: World Bank World Development Indicators, ILO Modelled Estimates

As discussed in the Introduction, there are significant differences between different regions, partly because of their differences in sectoral composition of GDP, but also due to their different historical origins and their differences in culture and institutions. Figures 4 through 9 show the behaviour of these labour market variables for different regions. Figures 4, 5, and 6 for different regions for all countries, while Figures 7, 8, and 9 all for different regions for developing countries only.

Figure 4 shows that there was a significant downward trend in the Employment-Population ratio for East Asia and the Pacific (EAP) since the 1990s, while for Latin America and the Caribbean (LAC) there was a gentle decline until about 2003 and then a small increases until the Global Crisis. Europe and Central Asia (ECA) and the OECD show gentle increases from the beginning of the millennium and then a sudden fall since the crisis. It is interesting to note that East Asia and the Pacific have the highest Employment Population ratios as this region includes countries like Australia, New Zealand, Singapore and China that have a good employment record. The Middle East and North Africa (MENA) have the lowest Employment-Population Ratios perhaps reflecting cultural differences in female employment. As most countries have had increasing proportions of the young staying on in educational

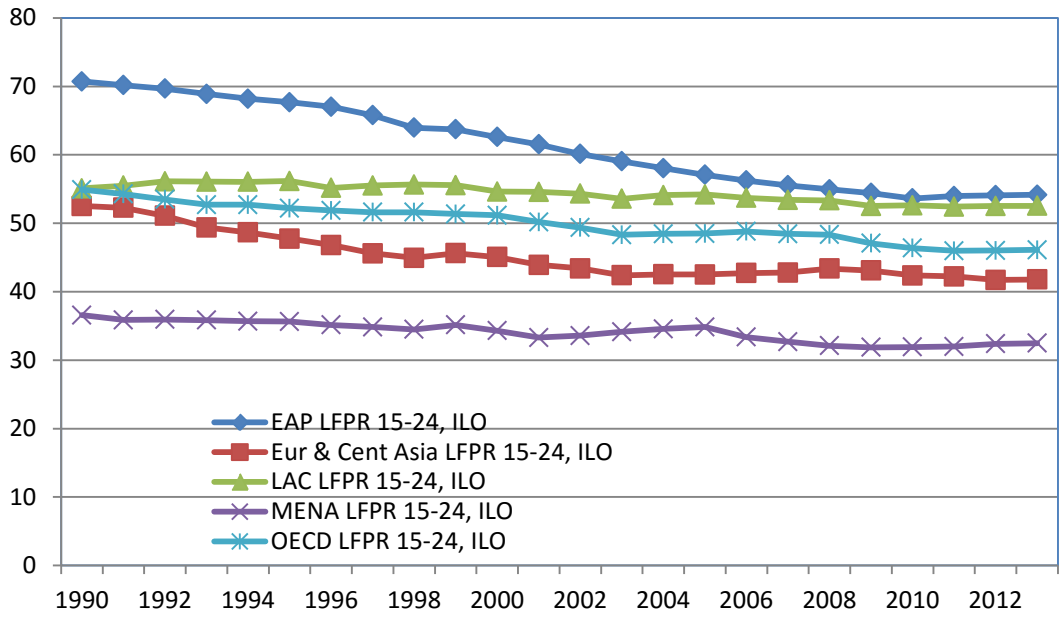
facilities, the employment population ratios have been declining. Figure 5 shows a general decline in Youth LFPRs for most regions since the 1990s. Figure 6 shows youth unemployment rates which demonstrate the cyclical nature of these series which is most marked for the OECD and the MENA. In particular, it is noticeable that after the global crisis that youth unemployment rates went up in most regions, except perhaps, the East Asia and Pacific region.

Figure 4: Youth Employment-Population Ratios, Regions



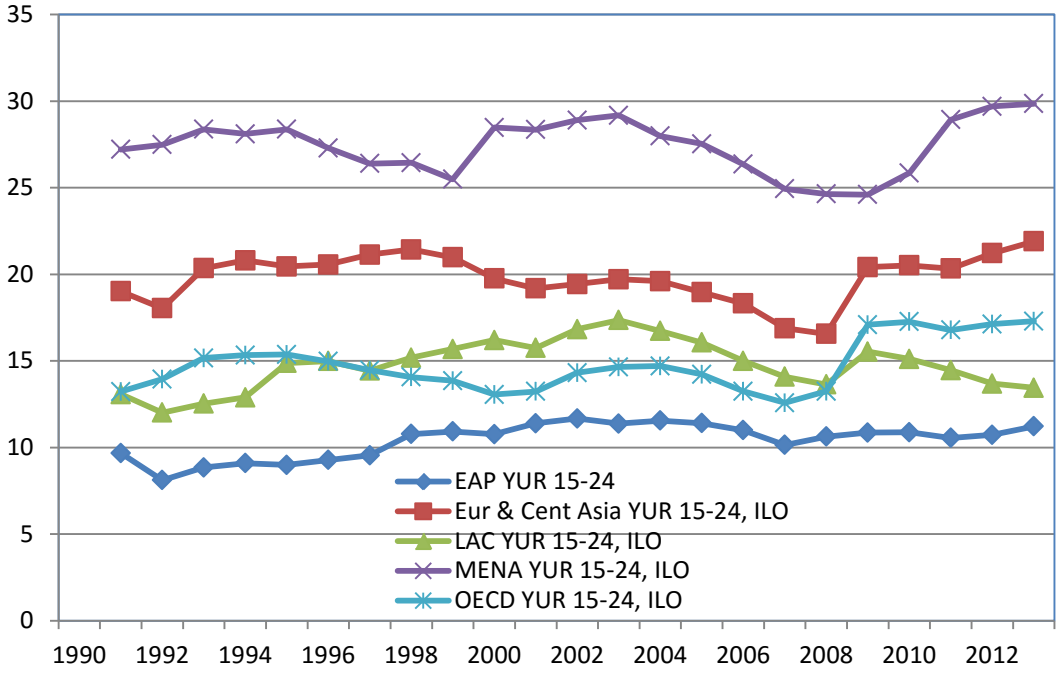
Source: World Bank World Development Indicators, ILO Modelled Estimates

Figure 5: Youth Labour Force Participation Rates, Regions



Source: World Bank World Development Indicators, ILO Modelled Estimates

Figure 6: Youth Unemployment Rates, Regions

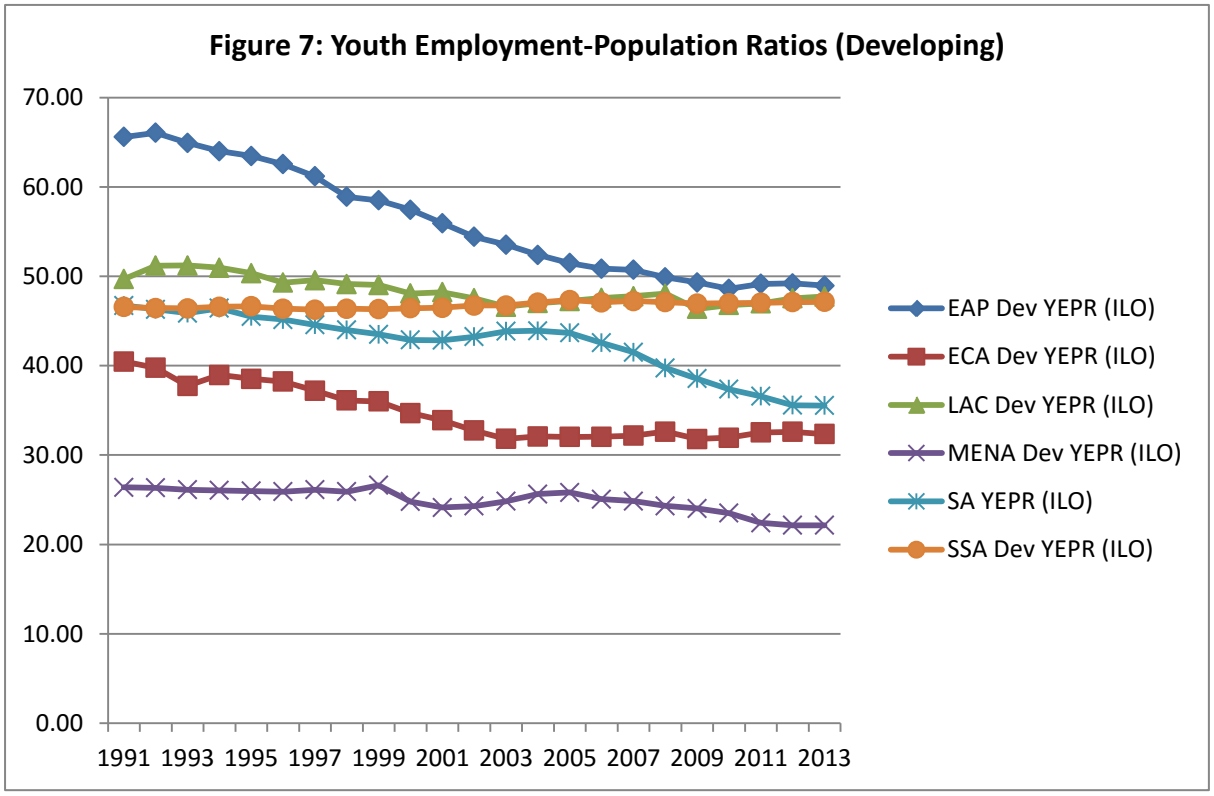


Source: World Bank World Development Indicators, ILO Modelled Estimates

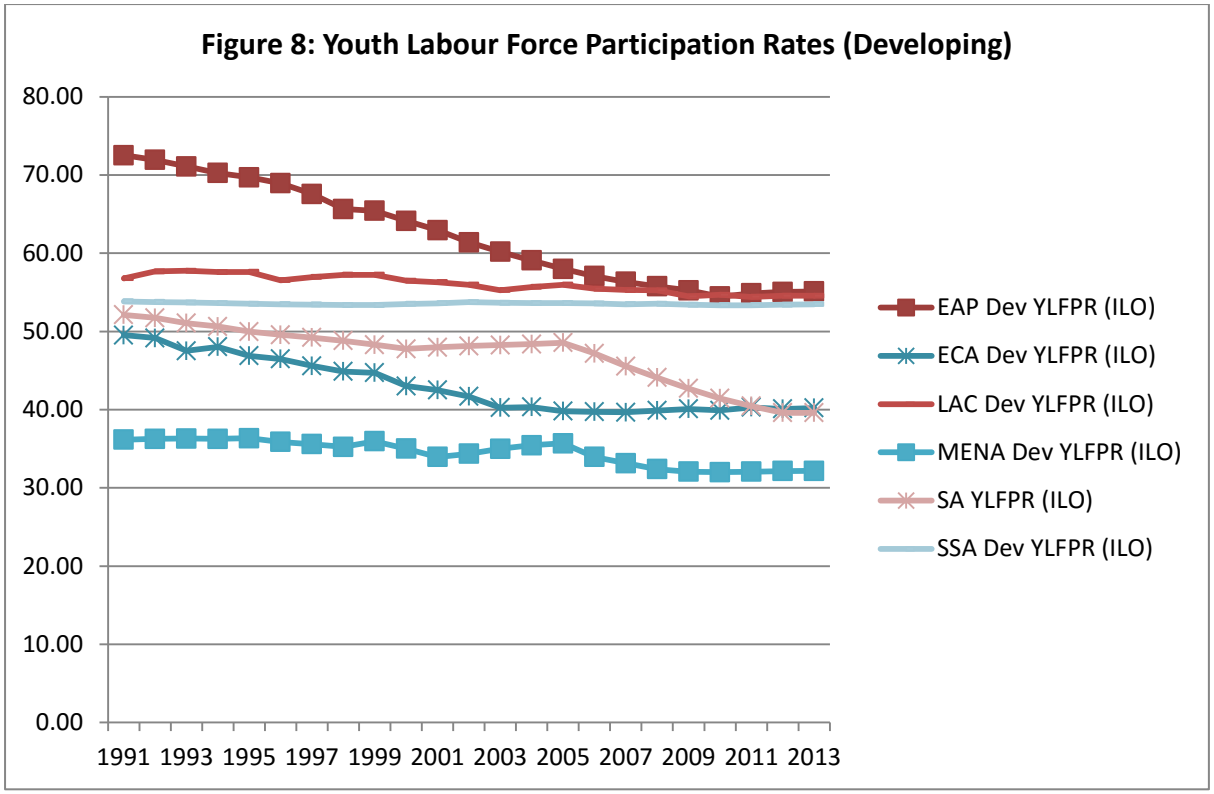
Figure 7 shows that for most *developing countries* regions that the Employment-Population ratio for EAP declines significantly, while for the rest of the groups there is a declining trend except for a slight increasing trend for Sub-Saharan Africa (SSA). Again for these groups of countries, EAP has the highest Employment-Population ratio, and MENA has the lowest. Note that the East Asia Pacific region has been growing very rapidly in the last decade which probably explains these trends.

Figure 8 (again for developing countries regions) shows that the trends for LFPR are similar to the trends for the Employment Population ratios, with EAP with a significantly higher EAP at the beginning of the series but then coming down to the levels of the LAC and SSA.

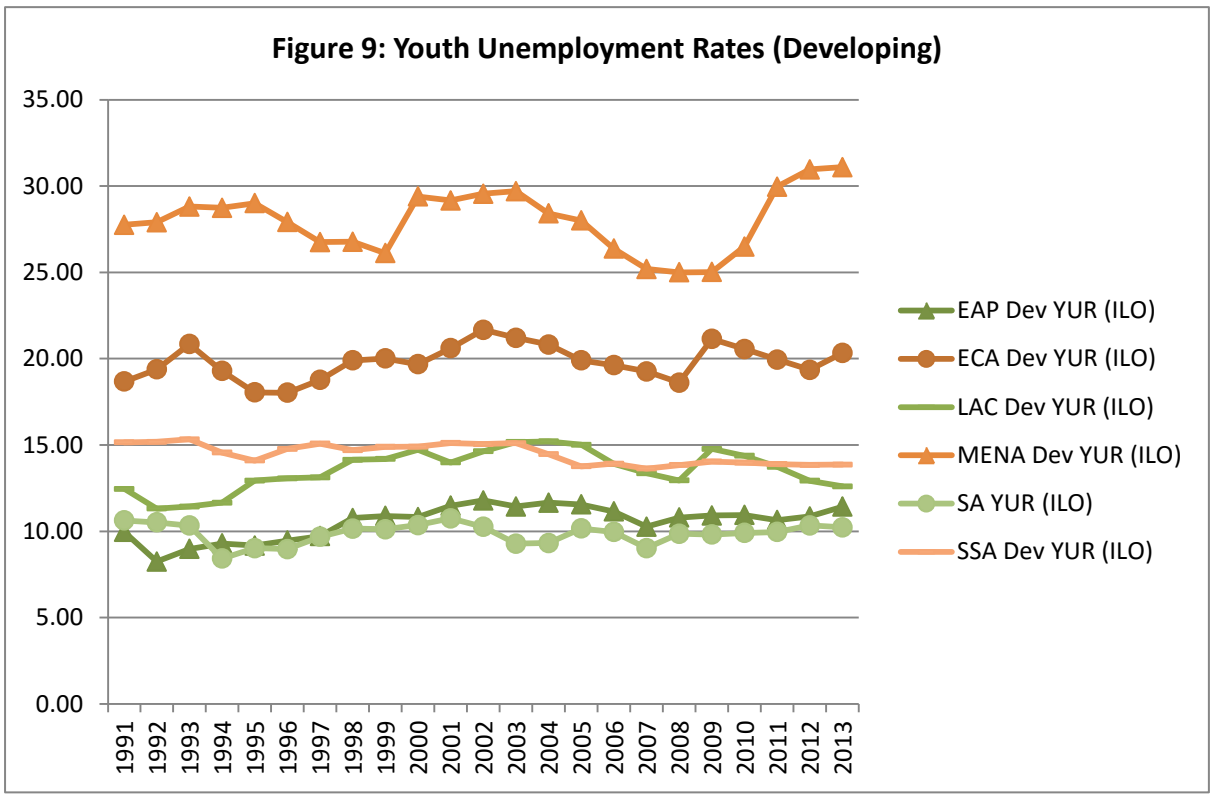
Figure 9 shows the youth unemployment rates for developing countries by regions. As for all countries, MENA has the highest youth unemployment rates and EAP has the lowest. The Global Crisis appears to have hit the MENA countries and the ECA countries significantly. As we will discuss this is probably due to the sectoral composition of GDP in these countries.



Source: World Bank World Development Indicators, ILO Modelled Estimates



Source: World Bank World Development Indicators, ILO Modelled Estimates



Source: World Bank World Development Indicators, ILO Modelled Estimates

So far we have shown the patterns of labour force behaviour of males and females taken together. In fact, there are significant gender differences between males and females, especially in some of the developing countries, see Table1 and Figures 10 to 13.

As Figure 10 shows that the Female Labour Force Participation Rates are always lower than Male Labour Force Participation Rates for youths, presumably partly explained by the fact that females of this age group are in the child bearing age. However, there is a massive gap for the Middle Income countries between the female and males: females have almost 20 percentage point less LFPR than males! For Low Income countries the gap is about five percentage points. Since educational attendance in these countries is lower for females this must be because they have a lower employment rate due to cultural or religious reasons, or due to the absence of work for females.

Figure 11 shows that youth unemployment rates for all income groups, females do worse than males although the differences for High Income countries are not as great as it is for Middle Income and Low Income countries. Although there is no obvious explanation for these differences, part of the explanation is likely to be the lower levels of education of females compared to males. It is also more likely that there is discrimination in the labour market against females in Middle and Low Income countries. In High Income countries education levels of females have been increasing rapidly and there have been concerted efforts by policy makers to combat discrimination.

Table 1 shows the significant differences between male and female labour force behaviour across different regions of developing countries. In general, female labour force participation rates are lower than for males, and female youth unemployment rates are usually higher than for males (except in the East Asia Pacific). For some regions there are massive differences: for South Asia, Latin America and the Caribbean, and for the Middle East and North Africa females do significantly worse than males. Labour Force Participation Rates for females are significantly lower than for males, mainly due to social, cultural, and religious reasons. To illustrate the magnitude of differences between males and females, Figure 12, shows that in the Middle East and North Africa females doing significantly worse than males in terms of the labour force participation rates and unemployment rates. Figure 13, shows that for Latin America and the Caribbean there are large differences for labour force participation rates and relatively smaller differences in unemployment rates. Much of these differences are probably due to the differences in educational levels as well as cultural differences.

Table 1: Gender Differences for different Regions (Developing Countries)

	1991	1995	2000	2005	2010	2013
EAP Dev YLFPR Female (ILO)	71.07	67.72	61.33	54.95	50.52	50.99
EAP Dev YLFPR Male (ILO)	73.88	71.63	66.84	60.95	58.05	58.90
EAP Dev YUR Female (ILO)	9.15	8.40	9.91	11.34	10.33	10.45
EAP Dev YUR Male (ILO)	10.91	9.99	11.77	12.00	11.57	12.25
ECA Dev YLFPR Female (ILO)	42.13	39.11	34.70	31.15	31.48	31.69
ECA Dev YLFPR Male (ILO)	56.81	54.54	51.16	48.23	48.06	48.52
ECA Dev YUR Female (ILO)	18.10	18.06	19.29	20.47	21.35	21.60
ECA Dev YUR Male (ILO)	18.98	17.92	19.94	19.61	20.27	19.68
LAC Dev YLFPR Female (ILO)	40.57	42.96	43.68	44.97	44.32	44.56
LAC Dev YLFPR Male (ILO)	72.99	72.30	69.20	66.89	64.91	64.33
LAC Dev YUR Female (ILO)	16.04	16.52	18.43	18.83	17.92	15.82
LAC Dev YUR Male (ILO)	10.41	10.92	12.37	12.40	11.91	10.38
MENA Dev YLFPR Female (ILO)	17.25	16.97	16.73	17.51	15.05	15.36
MENA Dev YLFPR Male (ILO)	54.41	55.02	52.58	53.38	48.44	48.47
MENA Dev YUR Female (ILO)	42.49	45.23	44.72	44.33	44.16	50.80
MENA Dev YUR Male (ILO)	23.15	24.40	25.09	22.97	21.11	25.00
SA Dev YLFPR Female (ILO)	32.47	30.64	28.15	29.71	23.83	22.59
SA Dev YLFPR Male (ILO)	70.35	67.88	66.06	66.17	57.79	55.26
SA Dev YUR Female (ILO)	12.70	10.03	12.23	11.31	11.28	11.40
SA Dev YUR Male (ILO)	10.03	8.94	10.03	9.78	9.45	9.92
SSA Dev YLFPR Female (ILO)	49.09	49.63	50.45	51.13	50.88	50.97
SSA Dev YLFPR Male (ILO)	58.59	57.44	56.53	56.08	55.80	55.93
SSA Dev YUR Female (ILO)	16.54	15.28	15.93	14.88	14.96	15.00
SSA Dev YUR Male (ILO)	14.00	13.10	14.03	12.86	13.16	12.88

Source: World Development Indicators.

Figure 10: Youth Labour Participation Rates by Gender and Income Groups

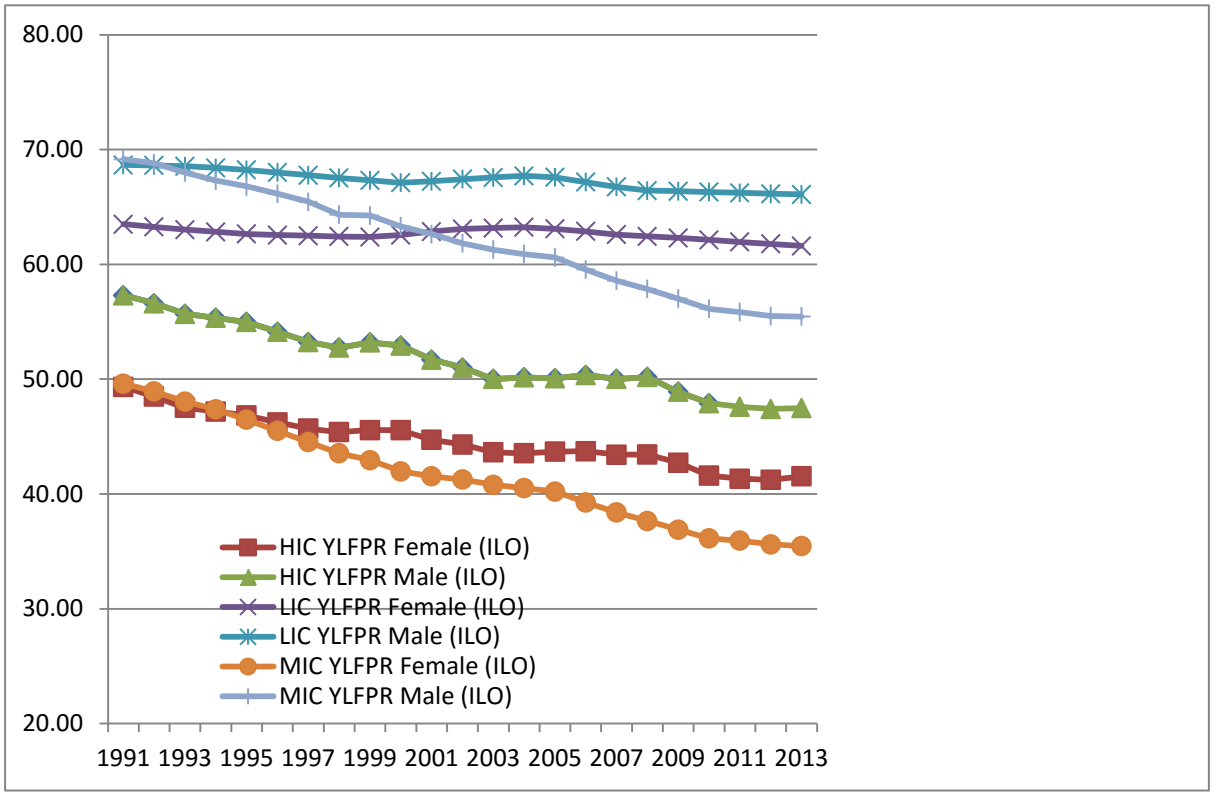


Figure 11: Youth Unemployment Rates by Gender and Income Groups

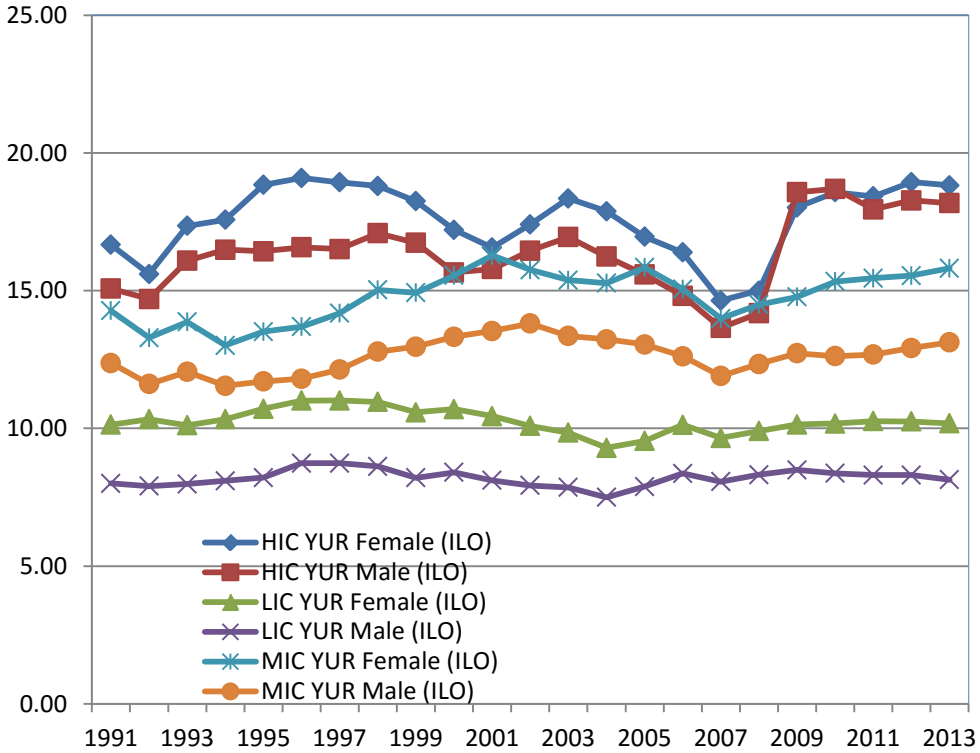


Figure 12: Youth LFPR & UR by Gender, MENA Developing Countries

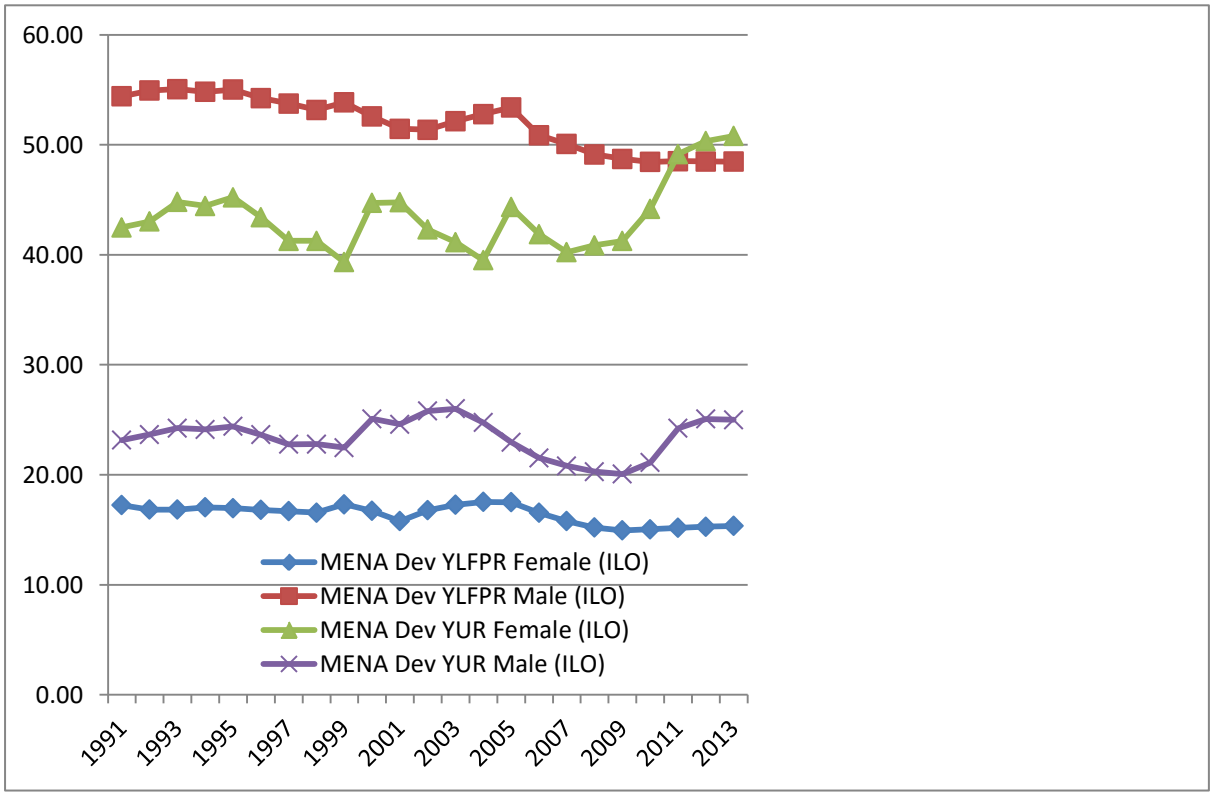
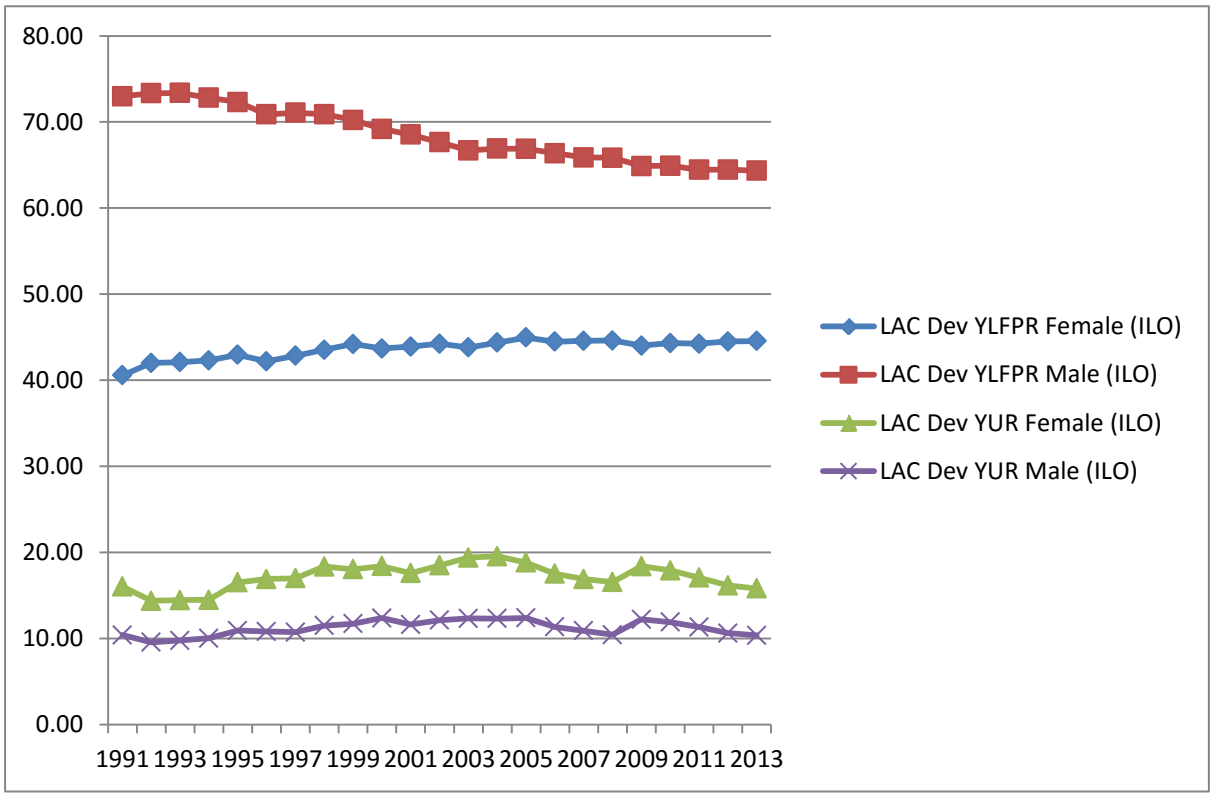


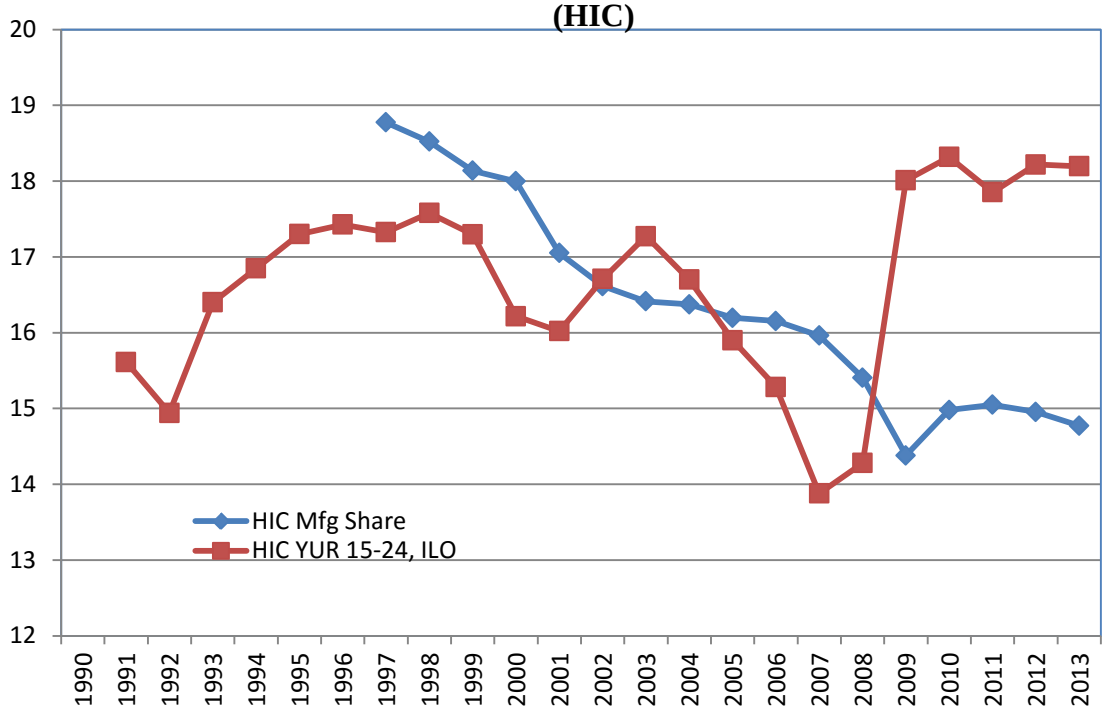
Figure 13: Youth LFPR & UR by Gender, LAC Developing Countries



It is interesting to note that the Middle East and North African (MENA) countries have the highest unemployment rates, followed by Europe and Central Asia (ECA). Countries from Sub-Saharan Africa (SSA), Latin America and the Caribbean (LAC), and East Asia and the Pacific (EAP) have much lower rates of unemployment. These countries may have lower rates of unemployment but much higher rates of informal employment or vulnerable employment. We now turn to studying if there are any links between the sectoral composition of GDP and youth unemployment rates for countries in different income groups. These are shown in Figures 13 through 16.

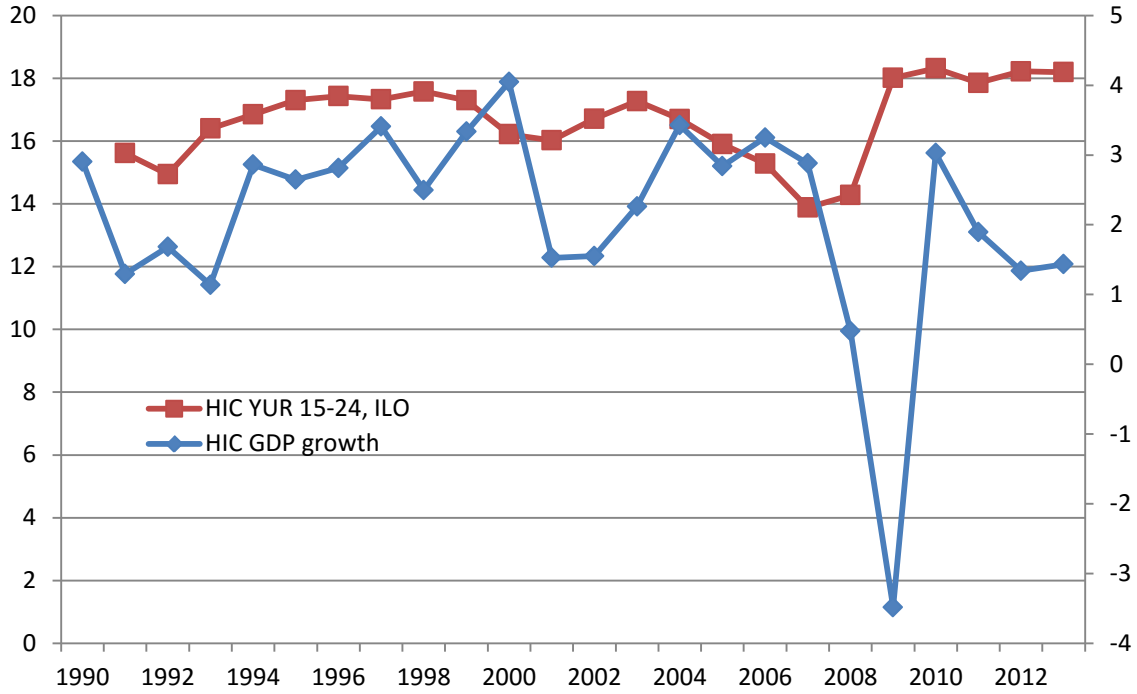
As seen earlier, youth unemployment rates in the High Income countries (HIC) were marked by significant cyclical patterns. As in most OECD countries the share of manufacturing had been declining over the past few decades, there are few fluctuations in that trend (but a decided fall after the Great Recession) and sudden increases in the unemployment rate after falls in the manufacturing share after the recession of the 1990s and the 2007-08 Great Recession, see Figure 14 below. However, fluctuations in the growth rate of GDP for High Income countries are reflected more obviously in changes in youth unemployment rates, Figure 15.

Figure 14: Youth Unemployment Rates and Manufacturing Share (HIC)



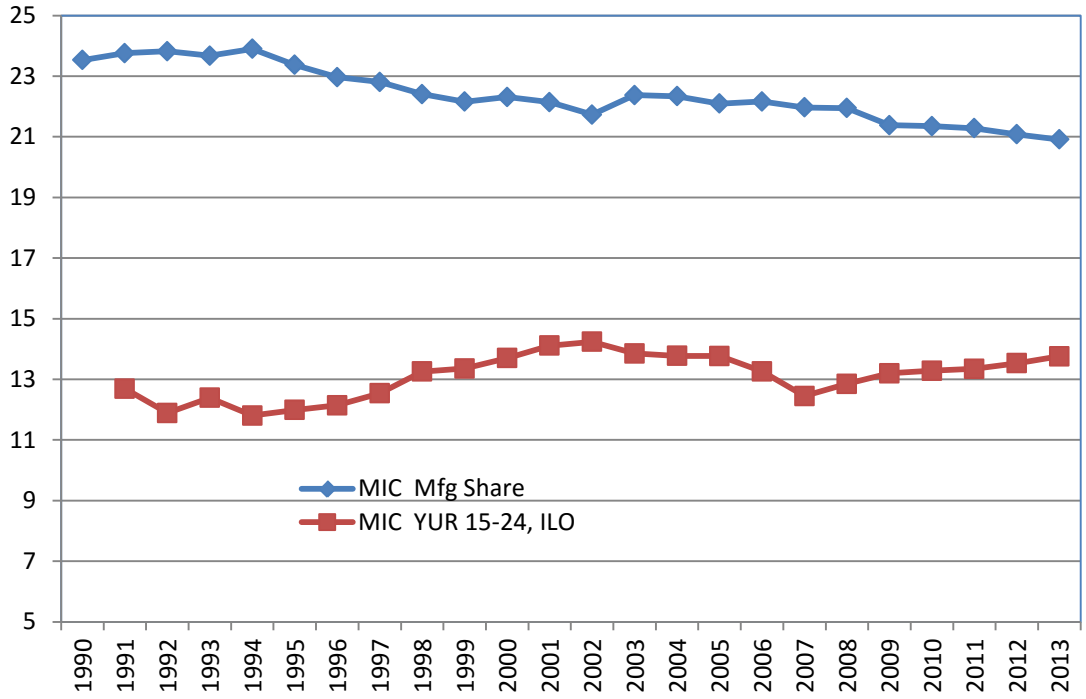
Source: World Bank World Development Indicators, ILO Modelled Estimates

Figure 15: Youth Unemployment and GDP Growth (HIC)



Source: World Bank World Development Indicators, ILO Modelled Estimates

Figure 16: Youth Unemployment and Manufacturing Share (MIC)

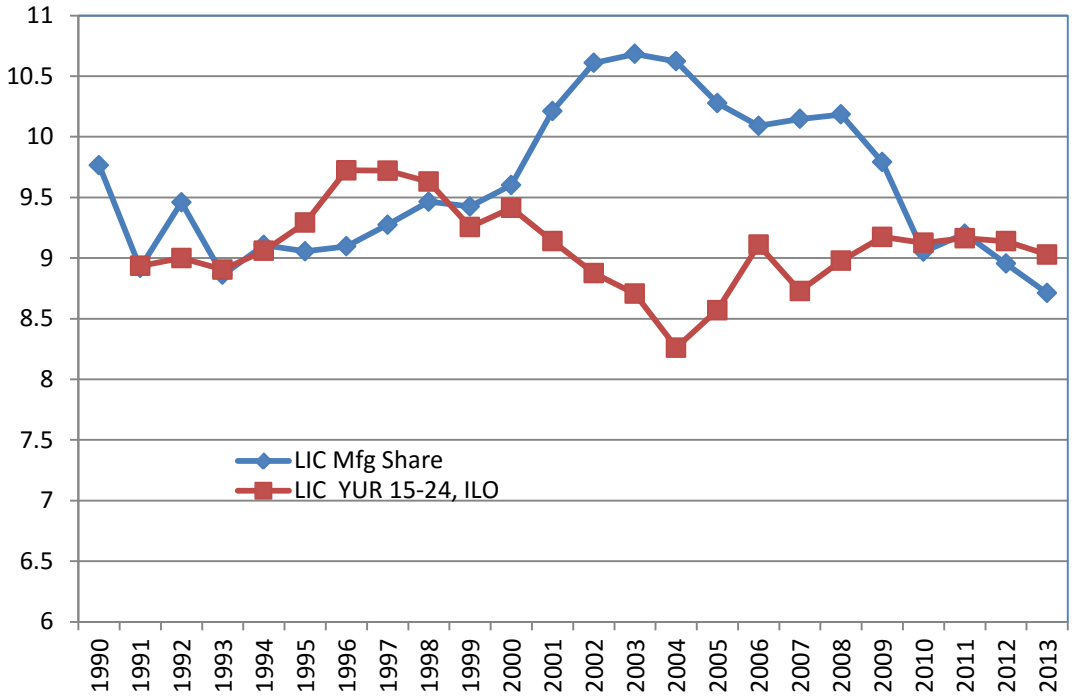


Source: World Bank World Development Indicators, ILO Modelled Estimates

Figure 16 illustrates the inverse relationship between the shares of manufacturing in GDP with the Youth Unemployment Rate for the MICs. As the share of manufacturing in GDP declines youth unemployment rises. This is purely illustrative and we will carry out a systematic econometric investigation later.

Figure 17 shows that in Low Income Countries (LIC) that youth unemployment rates appear to be inversely related to the share of manufacturing in GDP. As most people in poorer countries are employed in the informal sector and are not officially unemployed. Some of the people in the urban sector are employed in the formal (manufacturing) sector so that when that sector declines workers are made redundant and they would become unemployed. These people who are relatively well paid (by poor country standards) are unlikely to enter the informal labour market.

Figure 17: Youth Unemployment and Manufacturing Share (LIC)



Source: World Bank World Development Indicators, ILO Modelled Estimates

4. Econometric Analyses: Panel Regressions

In this section we estimated models for Youth Labour Force Participation Rates (YLFPR), Youth Employment Population Rates (YEPR), and Youth Unemployment Rates (YUR) for all countries for which we had data from the World Development Indicators. These models were estimated on panel data using Fixed Effects methods. The estimates given below are provided with standard errors that are corrected for heteroscedasticity (robust standard errors).

As discussed earlier, the data on many variables is not complete, especially for many labour market variables. The ILO produces modelling estimates for these labour market variables to fill in the gaps in the time series data for many countries. In our results given below we show estimates when we have used the actual data and then the ILO estimated data. In the former case, when we estimate models in Stata it automatically excludes missing values and hence the sample sizes are much smaller.

In Table 2 we present results for the full sample of countries from the World Bank's World Development Indicators. In an attempt to capture the impact of different sectors on different aspects of the youth labour force, we estimated the models with the share of agriculture in GDP and the share of Industry in GDP[10]. As discussed earlier we mentioned that for many of the poorer economies, agriculture played a very important role. As we see this variable is consistently significant for most of the dependent variables: the higher the share of agriculture in GDP, the higher the participation rates and the employment-population rates, and the lower the unemployment rates. The share of industry in GDP also plays a similar role. The share of investment in GDP (an aggregate demand factor) is also always statistically significant and does as expected: it increases YLFPR and YEPR, and decreases YUR. The log of GDP per capita is negatively associated with YLPR, YEPR, and YUR. As GDP per capita rises, educational levels increase and lead to a fall in the LFPR and EPR. It also leads to a fall in the unemployment rates. The growth rate of GDP leads to a fall in the unemployment rate (an aggregate demand effect), and has a negligible impact on YLFPR and YEPR. Although there are differences between the estimates using the ILO modelled data and the other sample, it is pleasing to see that the signs and significance of the coefficients are usually consistent with each other.

[10] In some earlier estimates we had used both the share of manufacturing in GDP and the share of industry in GDP. Our results suggested that we had to drop one variable. The sample was much smaller when we used Manufacturing share in our estimations and hence we opted to keep the industrial share.

Table 2: Estimates for Full Sample of Countries

	YLFPR	YLFPR (ILO)	YEPR	YEPR (ILO)	YUR	YUR (ILO)
Agr Share	0.248	0.185***	0.863***	0.183***	-0.492***	-0.098***
	(0.163)	(0.066)	(0.193)	(0.052)	(0.132)	(0.038)
Inds Share	0.251***	0.173***	0.296***	0.164***	-0.221**	-0.081**
	(0.084)	(0.055)	(0.109)	(0.047)	(0.092)	(0.031)
GFCF/GDP	0.217***	0.069*	0.640***	0.103***	-0.432***	-0.108***
	(0.073)	(0.037)	(0.100)	(0.030)	(0.086)	(0.035)
lgdp_percap	-7.867***	-7.335***	-2.724	-4.890***	-6.581***	-2.258***
	(2.270)	(1.310)	(2.624)	(1.241)	(1.524)	(0.833)
gdpgrowth	-0.024	-0.033	-0.081*	-0.01	-0.124**	-0.043**
	(0.048)	(0.023)	(0.042)	(0.022)	(0.051)	(0.021)
cons	108.022***	104.931***	37.545	74.609***	103.381***	44.387***
	(22.469)	(12.594)	(27.013)	(11.887)	(16.968)	(8.016)
N	1639	3535	1036	3300	1713	3300
R-sq	0.182	0.259	0.349	0.18	0.192	0.052

Robust Standard errors in parentheses

* p<0.10 ** p<0.05 *** p<0.01

Notes:

YLFPR Youth Labour Force Participation Rate (15-24)
YLFPR (ILO) Youth Labour Force Participation Rate (15-24), ILO Modelling Estimates
YEPR Youth Employment-Population Ratios (15-24)
YEPR (ILO) Youth Employment-Population Ratios (15-24), ILO Modelling Estimates
YUR Youth Unemployment Rates (15-24)
YUR (ILO) Youth Unemployment Rates (15-24), ILO Modelling Estimates
Agr Share Share of Agriculture in GDP
Inds Share Share of Industry in GDP
GFCF/GDP Share of Gross Fixed Capital Formation in GDP
lgdp_percap Natural Log of GDP per capita
gdpgrowth Growth Rate of GDP
cons Constant

If we look at the parameter estimates (Table 2), we see that a one percentage point increase in the share of Agriculture has a bigger impact than the share of Industry on labour force participation and employment-population ratios. The unemployment rate falls more with a one percentage point increase in the Agricultural share compared to the Industry share. Hence, these results suggest that for helping youths in the labour market, expanding agriculture is more important than industry.

We estimated these models for different income groups and different regional groups. Unfortunately, the sample sizes were too small in many cases to obtain estimated parameters

for the Low Income Countries. For High Income countries, we obtained some interesting results, see Table 3 below. In general, the results are similar to the full sample of all countries with signs of the coefficients being similar, except the statistical significance has fallen for some variables. In particular, the Agricultural share in GDP is no longer significant for YLFPR and YEPR, but is negative and significant for the unemployment rate. Log GDP per capita loses significance for the dependent variable, employment-population rate. Note however, that the sample sizes fell significantly where we used the actual data, not the modelled data. Again, the unemployment rate falls by a larger amount when the Agricultural share increases by one percentage point compared to a similar increase in the Industry share. It is clear that investment (share of Gross Fixed Capital in GDP) is a very significant variable that shows that if we wish to influence the labour market we need to increase investment.

Table 3: High Income Countries

	YLFPR	YLFPR (ILO)	YEPR	YEPR (ILO)	YUR	YUR (ILO)
Agr Share	0.779	0.506	0.965*	0.675	-1.575***	-0.882*
	(0.639)	(0.376)	(0.517)	(0.407)	(0.488)	(0.450)
Inds Share	0.176	0.207**	0.323**	0.315***	-0.388***	-0.291**
	(0.109)	(0.081)	(0.120)	(0.105)	(0.128)	(0.134)
GFCF/GDP	0.394***	0.327***	0.935***	0.517***	-0.764***	-0.571***
	(0.105)	(0.073)	(0.110)	(0.105)	(0.139)	(0.135)
lgdp_percap	-4.256	-6.042**	0.049	-0.905	-12.884***	-8.887***
	(3.611)	(2.642)	(2.550)	(2.558)	(2.822)	(2.673)
gdpgrowth	-0.133**	-0.062	-0.126***	0.034	-0.150***	-0.213***
	(0.055)	(0.053)	(0.047)	(0.045)	(0.046)	(0.051)
cons	75.666*	94.516***	6.507	25.023	184.292***	134.772***
	(37.753)	(27.304)	(27.060)	(27.330)	(32.620)	(31.652)
N	881	1047	748	1018	918	1018
R-sq	0.222	0.281	0.464	0.325	0.45	0.339

Robust Standard errors in parentheses

* p<0.10 ** p<0.05 *** p<0.01

We estimated the model for Middle Income Countries, Table 4 below, and the Agricultural share was positive and significant only for the employment-population rate. The industry share was positive and significant for YLFPR and YEPR (ILO) but not significant for the unemployment rate. Interestingly, the log of per capita GDP was negative and significant for YLFPR and YEPR but was not significant for the unemployment rate (except at ten percent levels of significance for the ILO modelled estimates). The growth rate was also usually

insignificant, except at the ten percent level for YLFPR (ILO) and five percent for YEPR (ILO). However, it was positive and not statistically significant for the unemployment rate. (Note the sample sizes were very small except for the ILO modelled variables, and for the unemployment rate). It should also be noted that the explanatory power of the unemployment equation was very low and hardly any variable was statistically significant. Clearly, we need another model to explain the unemployment rate of Middle Income Countries. As discussed earlier, many young people cannot afford to be unemployed but have to find some kind of work, whether in the formal sector, or if not in the informal sector. Investment is a significant variable (at least at the ten percent significance level) for the employment-population rate and for the unemployment rate.

Table 4: Middle Income Countries

	YLFPR	YLFPR (ILO)	YEPR	YEPR (ILO)	YUR	YUR (ILO)
Agr Share	0.292	0.219**	0.388**	0.190**	-0.165	-0.059
	(0.191)	(0.098)	(0.147)	(0.077)	(0.111)	(0.045)
Inds Share	0.313**	0.183***	0.223	0.133**	-0.078	-0.012
	(0.119)	(0.067)	(0.135)	(0.054)	(0.101)	(0.029)
GFCF/GDP	0.06	0.045	0.235**	0.058*	-0.233**	-0.055
	(0.119)	(0.052)	(0.112)	(0.033)	(0.089)	(0.038)
lgdp_percap	-8.583**	-7.326***	-11.579***	-5.000***	-3.758	-2.087*
	(3.600)	(1.751)	(4.060)	(1.555)	(2.317)	(1.081)
gdpgrowth	0.026	-0.050*	-0.028	-0.048**	0.021	0.008
	(0.058)	(0.028)	(0.068)	(0.024)	(0.055)	(0.025)
cons	105.672***	99.193***	121.176***	71.374***	65.447***	41.534***
	(33.959)	(16.685)	(37.946)	(14.723)	(21.258)	(9.847)
N	703	1921	271	1737	747	1737
R-sq	0.236	0.352	0.445	0.286	0.067	0.02

Robust Standard errors in parentheses

* p<0.10 ** p<0.05 *** p<0.01

We then attempted to estimate the models for different regions, and again in most cases the sample sizes were too small to obtain parameter estimates.

However, we obtain reasonable results for Europe and Central Asia, see Table 5 below. The results were similar to the full sample estimates with Agricultural share (and the Industry share) helping YEPR, but lowering unemployment rates. Again it appears that increasing the Agricultural share by one percentage point lowers unemployment by a larger amount than a similar increase in the Industry share. The share of investment was very significant and

increased YLFPR and YEPR, and lowered the unemployment rate. The log of GDP per capita decreased YLFPR and the unemployment rate significantly. Growth rate was not statistically significantly related to the unemployment rate.[11]

Table 5: Europe and Central Asia

	YLFPR	YLFPR (ILO)	YEPR	YEPR (ILO)	YUR	YUR (ILO)
Agr Share	0.458	0.285*	1.143***	0.298***	-0.834***	-0.249***
	(0.333)	(0.142)	(0.211)	(0.110)	(0.152)	(0.085)
Inds Share	0.415***	0.295***	0.441***	0.269***	-0.369***	-0.136**
	(0.106)	(0.091)	(0.128)	(0.086)	(0.126)	(0.066)
GFCF/GDP	0.363***	0.088	0.814***	0.239***	-0.948***	-0.383***
	(0.119)	(0.067)	(0.105)	(0.083)	(0.125)	(0.127)
lgdp_percap	-7.885**	-7.026***	0.139	-4.698**	-9.738***	-2.064
	(3.010)	(2.115)	(3.021)	(1.776)	(2.514)	(1.655)
gdpgrowth	-0.193***	-0.070*	-0.185***	-0.062*	-0.042	-0.024
	(0.053)	(0.039)	(0.036)	(0.035)	(0.048)	(0.043)
cons	102.624***	99.429***	0.244	65.221***	155.069***	56.363***
	(30.597)	(21.529)	(30.519)	(17.873)	(28.406)	(16.841)
N	753	1023	697	1001	764	1001
R-sq	0.368	0.392	0.468	0.303	0.442	0.137

Robust Standard errors in parentheses
* p<0.10 ** p<0.05 *** p<0.01

To summarise these results: we find that the sectoral composition of GDP (share of Agriculture, and share of Industry in GDP) play an important role in affecting the labour force participation rates, employment-population rates, and the unemployment rates of youths. In particular, the share of agriculture helps to lower the youth unemployment rate as youths are often employed in the agricultural sector. In many cases we saw that a one percentage point increase in the Agricultural sector led to a bigger decrease in the unemployment rate compared to a similar increase in the Industry share. Clearly, the level of GDP and the growth rate of GDP appear to lower the youth unemployment rate. However, this may be simply because the richer the society the more youths stay on in education and hence there is a smaller percentage of youths in the labour market. Investment (share of Gross Fixed Capital Formation in GDP) was almost always very significant, especially in lowering

[11] Similar results were obtained when we estimated the model for Europe and Central Asia combined with North America.

the unemployment rate and the employment population rate suggesting that we need to consider ways of increasing investment.

We then estimated these models on European Union data. These results, Table 6, are similar to the earlier results: the agricultural share increases YLFPR and YEPR and decrease YUR. Again, as seen earlier the Agricultural sector is more important in alleviating the youth unemployment rate. The share of industry helps to increase YLFPR and YEPR and leads to lower unemployment rates. As earlier, we find that investment is always very significant and leads to higher labour force participation rates and employment-population rates and lower unemployment rates. Curiously, the log of GDP per capita has no significant impact on YLFPR and YEPR, but lowers the unemployment rate. Growth rate lowers the LFPR and LYEPR but has no significant impact on the unemployment rate.

Table 6: European Union Estimates

	YLFPR 15-24	**YEPR 15-24**	**YUR 15-24**
Agr Share	1.0765***	1.6289***	-1.9863***
	(0.3810)	(0.4120)	(0.5096)
Inds Share	0.2852**	0.4504***	-0.5134**
	(0.1047)	(0.0977)	(0.1997)
GFCF/GDP	0.4792***	0.8460***	-1.1765***
	(0.1026)	(0.0925)	(0.1641)
lgdp_percap	-4.9265	1.9857	-14.8581***
	(4.1231)	(2.7973)	(5.0602)
gdpgrowth	-0.2244***	-0.1948***	0.0272
	(0.0546)	(0.0561)	(0.0856)
cons	73.4225*	-20.6680	220.5674***
	(43.0593)	(29.8525)	(55.0683)
N	517	517	517
R-sq	0.3666	0.5624	0.5624

Robust Standard errors in parentheses

* p<0.10 ** p<0.05 *** p<0.01

5. Policies

The main aim of policies to expand youth employment has to be to increase the demand for labour in general for poor and rich countries. If there is an increase in the aggregate demand for goods and services; from the domestic private sector, or from the export market, or by

government fiscal policy; this would encourage firms to employ more people and hence lead to increased employment of youths. If we have greater information about which sectors are the main employers of youths then we need policies to stimulate those sectors. The policies to encourage youth employment need to take account of the specific historical, cultural, and economic circumstances of each country. There is no "one policy fits all countries" other than the one to increase aggregate demand. Other policies have to be tailored to each country or group of countries depending on their circumstances. For example, resource rich economies face a very different set of problems compared to mainly agrarian societies. It is worth repeating that youth unemployment in many poorer countries is not the main problem: most poor youths cannot afford to be unemployed.

This research has demonstrated I believe, that *the main problem facing youths (especially in developing areas) is not unemployment but vulnerable employment in the informal sector. Hence, the main focus of policy should be to encourage the creation of decent jobs.* Especially in developing countries youths are not "employed" in the formal sense and are "not looking for work" and hence not "unemployed" in the formal sense. This is illustrated in Figure 25 below.

Figure 25: Unemployment is not a problem faced by Youths

Source: *World Development Report 2013*, p. 6

It is easier to increase youth employment when overall demand is increasing, otherwise there may be a trade-off between adult and youth employment. It is not obvious that increasing youth employment at the expense of adult employment would lead to an increase is social welfare. However, as scarring is important youth unemployment has long term effects on the economy.

Even in the developed world where youth unemployment has reached catastrophic proportions in some countries, most of the young are employed in casual work or are working on temporary contracts in the service industries, hotel and accommodation, restaurants, and in construction. Manufacturing that used to employ many youths has been declining in many of the OECD countries and no longer hire relatively unskilled youths. Hence, the main objective of policy should be to increase employment in the formal sector in "decent" work.

Since the end of the Second World War there has been an increasing trend of globalisation with foreign direct investment by the richer OECD countries taking place in LDCs. Immediately after the war ended, the United States introduced land reforms in Japan and invested in setting up the manufacturing base. As Japan became industrialised and wages started rising, foreign direct investment (FDI) by multinational corporations shifted to countries like Singapore, Hong Kong, South Korea and Taiwan. In more recent years, as wages were rising in these Asian countries, FDI has shifted to other Asian countries like China, Indonesia, Bangladesh and Vietnam. To some extent this has led to a fall in demand for unskilled labour in the USA (and some European countries) but helped to develop the Asian economies.

For developing countries it means that the economy must move from informal production in the agricultural rural sector or the urban sector to formal production in either sector. Ideally, it means a move of production from low productivity sectors to high productivity sectors. However, if this means that the high productivity sectors (e.g. oil and some other resource industries) are low employment intensity producers this may not help youth employment. An issue that has led to slow growth of employment in some of the resource rich developing countries has been the problem of the so-called "resource curse". The existence of large amounts of resources leads to a high exchange rate that makes other commodities produced in that country uncompetitive in the international market.

In simple macroeconomics language increasing youth employment can be influenced by increasing youth labour demand, improving the quality of labour supply, and improving the matching of labour demand and labour supply. For many developed countries it is argued that there is a skills mismatch: the employers demand skilled workers and the unemployed are essentially unskilled workers. For developing countries, the more educated youths are more likely to be unemployed. More educated young people are more likely to come from well-off

middle class families who can afford to support their young while they look for a well-paid job in the formal sector.

Policies to tackle youth unemployment depend to some extent on what are perceived to be the main causes of youth unemployment. In the formal economics literature it is often argued that the main cause of youth unemployment (at least in developed economies) is the high wages for youths which are often supported by minimum wage legislation. As discussed earlier, this is a controversial theory and recently has been disputed. Something that is often ignored is that minimum wages lead to higher incomes overall and hence increased aggregate demand. In developing countries minimum wages lead to better nutrition and hence higher productivity. Thus, the impact on the economy of minimum wages may be beneficial. Another explanation of youth unemployment is the existence of labour market regulations that limit the ability of firms to hire and fire workers without notice. Again, this is a controversial area and some recent research, see Junankar and Jayanthakumaran (2014), suggests that this is not relevant for unemployment. The *World Development Report 2013* argues that "most studies find the impacts [of labour market regulations] are modest …" (p. 26). Another cause of youth unemployment is alleged to be the impact of unions on the labour market. Again, evidence does not support this explanation of youth unemployment. A possible reason for youth unemployment could be the lack of education and skills of young people. As many of the employers are seeking skilled and experienced workers, youths tend to be at the end of a hiring queue. In normal economic times (that is not during a continuing recession, but in an economy with average growth rates) it is true that unskilled and less educated youths are more likely to be unemployed. In these conditions it is important to help the young to increase their skills and experience. Another reason for high youth unemployment may be the increased supply of youths in the labour market. It is true that in some LDCs there has been a growth in the young population (demographic bulge) and that requires increasing demand for youths. Another cause of youth unemployment is a lack of aggregate demand in the economy. For many of the developed economies that have been hit by the Great Recession, this is a major cause of high adult and youth unemployment. Finally, there are structural factors that may explain the high youth unemployment. These are to do with the development of particular sectors of the economy that employ youths, or the decline of sectors that used to employ youths. For many LDCs this is an important problem. In our discussion below, we will keep in mind the issues discussed above.

As mentioned earlier, policies for youth employment have to take account of the different historical, social, economic, and cultural circumstances that face youths. One could try to differentiate policies depending on the level of development of the countries and their dependence on different sectors. In the discussion that follows we will differentiate the countries by their level of income (as a proxy for the level of development). Our discussion will first look at policies for High Income Countries (HIC), then Middle Income Countries (MIC), and finally Low Income Countries (LIC).

Policies for High Income countries

Since the onset of the Great Recession of 2007-08 many of the richer OECD economies have been in a deep recession with increasing youth unemployment. Immediately after the recession hit, some of the countries (e.g. USA, UK, Germany, and Australia) introduced a fiscal stimulus package that helped to get the countries to get back to growing slowly. However, youth unemployment has continued to be at very high levels. Some of the European countries facing high levels of debt were forced to get debt relief from the powerful German economy and the European Central Bank. They were then required to introduce Austerity measures that have led to continuing high unemployment while the debt has continued to increase.

Policies to tackle youth unemployment in these high income countries have included a job guarantee scheme for youths and increases in vocational and technical education. As the manufacturing sectors in these countries had been declining for decades employment for unskilled workers (especially youths) had been declining. It is often argued that there is a skills mismatch with employers looking for skilled workers and most of the unemployed being unskilled. Under these circumstances policies to increase human capital seems to be worth encouraging. In particular, policies that encourage youths to get more vocational training and apprenticeships would help to relieve youth unemployment. Some of the European countries have introduced policies for youths to get training both in educational establishments and with on the job training with firms. However, as mentioned earlier the main problem facing these countries is the lack of aggregate demand. Policies need to be introduced to support the services sector, health, education, social services (which employ a large number of youths) and the tourism sector (hotels, restaurants, etc.). Active labour market policies would help to encourage youth employment via job guarantees or subsidised wages for youths.

Based on our econometric estimations for High Income Countries (and for the European Union) we found that youth unemployment falls by a greater amount if the agricultural share in GDP increases by one percentage point compared to a similar increase in the industrial sector. Our results for Europe and Central Asia (that include many HICs), based on our econometric estimations, youth unemployment falls by a greater amount if the agricultural share in GDP increases by one percentage point compared to a similar increase in the industrial sector. Our results also suggest that the industrial sector needs to be expanded and investment has an important role in increasing youth employment and lowering unemployment. Unfortunately, the data did not allow us to analyse the impact of investment in different sectors of the economy.

Oil rich countries in the Middle East have a problem of very high youth unemployment. In these countries the existence of oil has led to high exchange rates that have led to problems for the industrial sector (the "resource curse"). In these countries youth unemployment of graduates is very high as there are very few jobs in the resource sector, and the children of the rich are not willing to work in the informal low income sector: they prefer to wait for a job in the formal sector. In these countries increasing human capital does not seem to be advisable. Instead policies need to encourage the development and expansion of industries like tourism to diversify the industrial base. Foreign investment in these countries has been mainly in the resources sector that is a capital intensive sector that does not employ many workers.

Policies for Middle Income countries

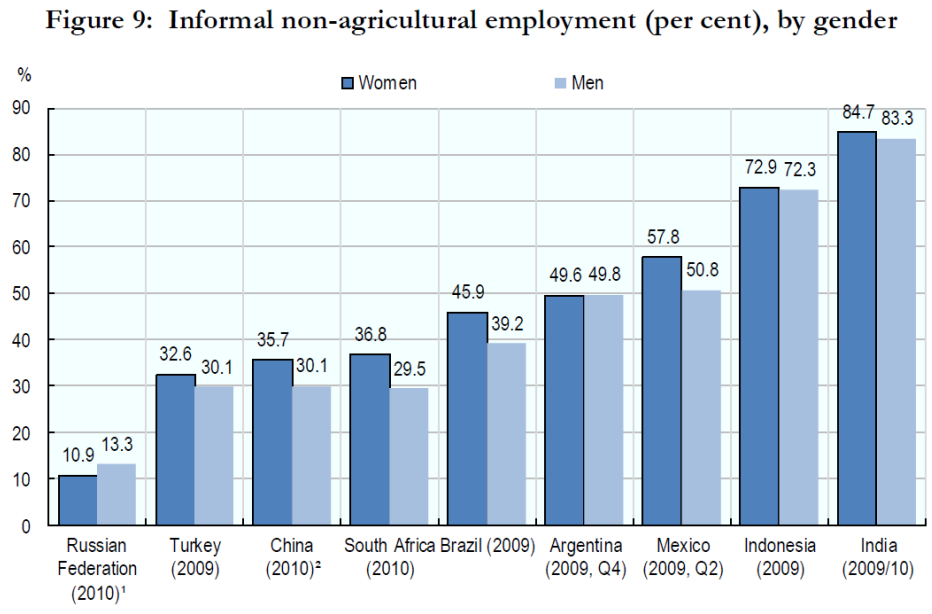
This group of countries are distributed over Asia, Latin America and the Caribbean, Africa, and Europe. Our econometric results suggest that expanding the agricultural sector and the industrial sector would increase the labour force participation rate and employment population rate. Increasing investment would also help to increase the employment population rate. Policies need to be introduced to increase investment in infrastructure in the rural sector to help increase productivity and hence employment. Improving secondary school education and tertiary education (especially with a technical and vocational bent) would help to improve the productivity of the young and hence increase their employability. Regulation of the microenterprises (nonfarm Household Enterprises/informal enterprises) may help to set up formal enterprises with some financial support by the government. Government policies could help to provide land for these microenterprises.

Government policies are required to support the development of human capital (especially vocational and technical education) to enhance the productivity of exporters would increase employment. Infrastructure investment in transport and electricity provision would help the firms to become more productive. Some countries have experimented with Special Economic Zones where foreign direct investment is encouraged by providing tax concession. Unfortunately, it has had little success in Africa or India.

The agricultural sector needs to be helped by providing security of tenure to tenant farmers and provision of agricultural extension courses to help farmers with advice on increasing productivity by using appropriate technology and timing of inputs. Besides exporting raw agricultural products, policies need to be introduced to value add by processing the fruit and vegetables for exports.

It is important to note that informal employment is dominant in the non-agricultural sector of most of the Middle Income Countries. As shown in Figure 26, informal employment is dominant in many countries with women being more likely to be informally employed.

Figure 26: Informal Employment in non-agricultural employment



[1] Corresponds only to persons employed in the informal sector.
[2] Six cities only.

Source: ILO, *Women and Men in the Informal Economy: A Statistical Picture*, Geneva, 2013.

Source: OECD G20 labour markets: outlook, key challenges and policy responses, ILO, OECD, World Bank Group, 2014.

Policies for Low Income Countries

The agricultural sector is a major economic sector in Low Income Countries and hence the improvement of this sector is critical to the development of the economy and for increased employment. These countries need a suite of policies to increase the growth and development of the agricultural sector. This requires some countries to introduce land reforms: Japan in the 1950s introduced land reforms that helped to increase agricultural production and productivity. More recently, Vietnam introduced land reforms that redistributed land and agricultural commercialisation was liberalised. That has stimulated agricultural production and exports of agricultural goods and led to Vietnam becoming a major exporter of rice, coffee and cashew nuts. It also led to a significant decrease in poverty (*World Development Report 2013*). One of the main methods for increasing productivity of (young) people in low income countries is to provide them with good nutrition and clean drinking water and public sanitation. Thus increasing agricultural productivity can lead to a virtuous circle: increasing productivity, increased food consumed, leads to increased productivity. In other words, infrastructure investment in public sanitation and clean drinking water is essential to increasing youth employment. A more equitable distribution of land and better farming practices would lead to higher productivity and hence better nutrition.

Encouraging foreign direct investment in the manufacturing sector by providing incentives like Special Economic Zones could be tried, but essentially multinational corporations are likely to move from their existing bases when wages and conditions of work become more favourable to the workers. As mentioned earlier, some of the "footloose" capitalists have already started moving from China to Vietnam, Bangladesh, and Indonesia as wages in China are beginning to increase.

Policies to provide financial loans to small scale enterprises, like the Grameen Bank in Bangladesh, would help to improve the productivity of the informal sector. There has been much discussion about the role of micro finance and critical reviews of the success or otherwise of these institutions. In recent years, some private entrepreneurs have entered the microfinance business and this commercialisation has impeded the success of microfinance.

Some General Comments on Policies

For policies to encourage employment in general, and youth employment in particular, an economy needs to have macroeconomic stability, an exchange rate that encourages exports,

and a business environment that stimulates private investment. Labour markets that provide minimum wages help to create demand for goods as well as increasing productivity via efficiency wages.

Most economists and policy makers would argue that the main plank to increase youth employment in decent work must rest on governments maintaining and increasing aggregate demand in the economy. Public investment in infrastructure in green technology industries would not only help increase aggregate demand, but also help the economy to lower carbon emissions. For millions of the poor in developing areas who have no (or limited) access to electricity, the development of solar energy would provide this basic necessity at virtually zero marginal cost. An example is provided by the "Women Barefoot Solar Engineers of Africa" where rural women in Africa were trained in solar technology to provide household lighting systems, see Elder *et al*. (2015). A major sector that needs to be developed by government policies is the agricultural sector. There is evidence that stimulating the agricultural sector is a powerful means of lowering poverty, see Loayza and Raddatz (2010) and World Bank (2008). In particular, policies need to develop the processing of agricultural products for the industrial sector. As shown earlier, the agricultural sector is a key determinant of youth employment. In India the National Rural Employment Guarantee Act (NREGA) provides rural workers a guaranteed number of days of work to help improve the rural infrastructure. This is an interesting scheme that could be employed in urban areas to improve the urban infrastructure. In some European countries they have introduced a job guarantee scheme for youths that provide them with a job or further education.

Although, there is little written about this topic, I believe that extending the use of mobile phones in the delivery of education about better agricultural practices, better health and medical conditions, and financial advice would help the rural sector in developing countries. This requires governments to use this relatively new technology for education and health services.

Although foreign direct investment helps in the development of an economy, much of the investment is using labour saving technology and hence does not necessarily generate many jobs. Tregenna (2015) suggests that we should estimate employment multipliers that take account of the economy wide effects of an expansion in a particular industry. If we expand a labour intensive industry we could work out the increase in employment in that particular industry, but we need to estimate the impact this may have on other industries that employ

youths. This requires detailed knowledge of input-output coefficients for that economy. However, the problem with the use of such input-output coefficients is that in a changing technological world these coefficients are likely to get out-of-date very quickly. In any case, such social accounting matrices are not available for many (most?) countries.

Stimulating aggregate demand and public investment in infrastructure is a necessary, but not sufficient condition to help young people. This must be accompanied by several complementary policies that are listed below, not necessarily in order of importance.

Education and training policies are important to help the young into decent jobs. Of course, increasing compulsory secondary education (and enforcing it) would immediately lead to a fall in the employment population ratio and youth labour force participation rate. Even if the unemployment rate is high it would affect smaller numbers of youths, noting that the denominator of the unemployment rate is the sum of the employed and unemployed. There is clear evidence from the developed countries that the probability of finding a job increases with educational achievement. More educated young people can always go “down-market” to get a job by accepting jobs that require less education, hence bumping off the less educated. There is much evidence in the developed countries of “over-education” in the many jobs. However, in developing countries tertiary education may lead to a higher unemployment rate as those with tertiary education come from the wealthier classes of society and hence may be choosy in the kind of jobs that they are willing to accept. Education is neither a necessary nor sufficient condition to find employment. Simply increasing education is not sufficient to increase youth employment: we need an increase in aggregate demand and targeted intervention, including subsidised wages for youths, and government job creation.

An important method to help youth employment that has been suggested is apprenticeships in existing firms where the government should subsidise the firms. Wage subsidies for youths and some kind of affirmative action for public sector jobs may also be tested.

Another method that has been canvassed is the provision of finance to set up small entrepreneurships. Here the experience of the Grameen Bank in Bangladesh could be used to help women in other developing countries to set up small businesses.

To reiterate, the policies required to help young people to increase employment in decent jobs requires a concerted effort by governments to stimulate production and actively promote employment.

6. Some Tentative Conclusions

Our study so far has shown that we should distinguish between different countries not only according to their income levels (level of development) but also on their individual cultural and historical backgrounds. We noted that the richer countries (e.g. the OECD) had greater volatility in the labour force and that the unemployment rate increased significantly after the Global Crisis. We argued that for most of the poorer economies, the role of agriculture was very important in providing employment for young people. Our descriptive analysis and our econometric analysis support the importance of the agricultural sector for these countries. We also found that the level of aggregate demand was important in increasing labour force participation rates and employment rates, and lowering unemployment.

We cautioned about using a fall in the Employment-Population rate or the labour force participation rate as indicating a worsening of the labour market in developed economies as it simply reflected the increased participation of young people in education. We also cautioned against comparing the relatively low rates of unemployment in poor countries as reflecting a strong labour market, as many young people were forced (by economic circumstances) to find work in the informal or vulnerable economy.

As discussed in the Introduction, the concepts of employment and unemployment are more difficult to define and measure for many of the developing economies. Hence, all the estimations that are carried out are to be treated with some caution.

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Appendix 1: Youth-Adult Unemployment Ratios (Males and Females)

	1995	2000	2005	2008	2013
World	2.7	2.8	2.9	2.9	2.9
Developed Economies & European Union	2.4	2.4	2.5	2.6	2.4
Central & South-Eastern Europe (non-EU) & CIS	2.4	2.3	2.5	2.6	2.7
East Asia	2.8	2.7	2.8	2.8	2.8
South-East Asia & the Pacific	5.1	5.2	5.3	4.6	5.9
South Asia	3.8	4.0	3.3	3.6	4.1
Latin America & the Caribbean	2.5	2.5	2.9	3.0	2.9
Middle East	3.8	3.7	3.6	3.8	3.7
North Africa	3.1	2.9	3.5	3.4	3.7
Sub-Saharan Africa	2.1	1.9	1.9	2.0	1.9

Source: ILO KILM