Understanding Immigration and Labour Market Shifts in Post-Boom Ireland

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Abstract

This paper examines population and labour market shifts in Ireland in the transition period to recession, beginning with the mid-2000 EU Accessions in the last part of the Celtic Tiger boom period and ending in 2010. What jobs do immigrants get in a booming economy – and who loses jobs first when the recession hits? This research adds to discussions in economics, sociology, and geography on the competition between immigrant and native workers under conditions of economic change, although Ireland is a relative newcomer to these debates. A history of emigration and the dramatic increase in university enrollment in recent decades complicates the assessment of job competition, as does the fact that immigrant workers in Ireland are more similar to the native population than immigrant workers elsewhere.

Introduction

At the close of the first decade of the new millennium, Ireland is infamously atop the list of the failed Western economies (barring only, and only perhaps, Greece and Iceland). The celerity of Ireland's boom and bust fronted the business pages of *the New York Times* (Thomas, 2009), Ireland reappeared on the cover of *the Economist* not as roaring tiger but again as Europe's hobbled poor man, and Paul Krugman simultaneously reassured and cautioned Americans that things were far worse in Ireland (2010). Perhaps the greatest similarity between coverage of the American crisis and the Irish one was the related shock that 'the immigrants were going home'. The shock that Mexicans were no longer coming to the US, or were receiving remittances from their families in Mexico while they remained unemployed in the honeyed North, was new. But the linking of immigrants to economic boom and bust – only revisited in the US[1] – was novel in Ireland.

In 1996, in the first flush of economic boom, Ireland became a country with more immigrants than emigrants for the first time. The cyclical return of emigrants to a booming economy was unprecedented only until the 2004 and 2007 Eastern and Central European accessions sent immigrant labour to the newest member of the elite European economies. Although a 2007 European Commission report found that the Accession migrants only furthered Ireland's formidable economic expansion (Ruhs and Quinn, 2009), the prevailing public discourse had a very different tone. Suggestions that immigrants had taken jobs from natives were appended to ongoing critiques of work-shy immigrants who had come to take advantage of a generous Irish social welfare system, as well as to European-wide reports of immigrants replacing native workers from the 1990s (Bauer, Lofstrom, and Zimmerman, 2000).

[1] See, for example, Orrenius and Navodny 2009.

Whilst the immigrant-native job competition debate originated in the US decades ago, it was applied with ferocity to Ireland, especially as the recession took hold. The concomitance, scope, and rapidity of the Eastern European accessions with economic decline ensured this. However, much of this debate took place in the unexamined ground of public opinion, fostered by media interviews with angry desperate unemployed Irish workers sure the Accession migrants had driven unemployment and cheap wages, and proffering hostile words and actions in response *(RTE 2009).* Not surprisingly, these public debates continued even as the evidence mounted that immigrants were losing jobs first and furiously (O'Connell and McGinnity 2008). But it warrants further empirical observation, if only to challenge the idea that immigrants were responsible for the decline or intensified its effects for native Irish workers. What did the concomitant phenomena of EU accession and economic decline mean for the Irish labour market? And how did the structural characteristics of Ireland's labour market and population determine how job losses played out as the recession gained momentum? What will these shifts mean for immigrants and other workers? The celerity of these changes makes Ireland an alembic for understanding immigrant labour market dynamics that usually evolve over decades, conditioned by even longer time periods of immigrant-native interactions. Analysis of Ireland's experience may suggest new dimensions to understanding immigrant labour markets under the recession.

In order to answer these questions, I begin by looking to a literature largely framed elsewhere. This is necessary in order to gain analytical and theoretical traction in a country where immigrants were newcomers to a booming and then crashing economy. I will also highlight some of the contributions the burgeoning Irish literature is making to these enquiries, and examine demographic shifts

underlying labour market dynamics in Ireland in the period immediately before the boom and in the early days of the recession. Throughout, I will use labour economics theories on immigrants and the labour market to analyse Irish labour market and immigration shifts. I will also look to Ireland's particular demographic and economic short durée to enquire more broadly about the limits of understanding such generalised theoretical approaches provide in latter-day arrivals to a globalized order.

Theoretical Background

Immigration and labour market competition

The effects of immigration on labour market dynamics are widely contested, and generally focus on questions of 1) whether immigrants displace native workers from jobs and 2) the effects of immigration on wages. A critical first step in answering these questions is to establish the similarities and differences between immigrant and native-born workers, under the assumption that immigrants may substitute for or replace native-born workers with similar characteristics. The reason this happens is that similarly-skilled, substitutable immigrant workers produce opportunities for the same job to be done at a lower price or with more flexible terms of employment that reduce the costs of firing or dismissal (Angrist and Kugler 2003). This relationship is so strong that immigrants are often in jobs well below what their educational background would predict, creating what Barrett and Duffy (2006, 2007) terms the occupational gap. This is especially the case where high-skilled immigrants come from source countries with more equal income distributions where their reasonably high skills are not rewarded to host countries with more unequal income distributions - such that even an inadequately remunerated job elsewhere pays more than at home (Roy, 1951, Borjas, 1985, Card, 2001).

The dynamics between immigrants and natives with very different labour market characteristics (non-substitutes) is more complicated to assess, but is often assumed to be complementary. In this instance, immigrant workers with *higher* levels of skills than the native-born population are seen to fill critical labour market gaps, and often ones which are necessary for further innovation or economic development of the host society. Immigrant workers with considerably *lower* levels of skills than the native-born population (either substantively or simply in terms of lacking language skills or knowledge of the local labour market) can "bump up" the salaries or status of the native-born workers who had previously been in those jobs. Indirectly, they can benefit low-waged native-born workers by reducing the price of goods and services through the reduced cost of their labour to employers (Holzer, 2009). It has also been suggested that it is more difficult to assess the substitutability of immigrants for native-born workers in Europe than in North America, because European educational levels are more equalized than those between North America and its major sending countries (Altonji and Card 1991).

The relationship between high-skilled and low-skilled workers underlies whether immigration will have a net positive effect on the labour market, especially because high-skilled and low-skilled labour are complements. An influx of highly-skilled workers (either through immigration or up-skilling of the native population) can create additional jobs for complementary low-skilled jobs. The classical articulation of this is in the polarization thesis of the world cities theme of Sassen and others, wherein knowledge economy workers generate demand for additional baristas, taxi drivers, and child care providers[2]. Arguably, this complementary relationship is even stronger under conditions of sudden economic boom where low-skilled service

[2] See, for example, Sassen, S, 1991; Hamnett, C, 1994; Light, I, 2006)

sector jobs were recently less common compared with low-skilled manufacturing or agricultural jobs, and where there are new incentives for underrepresented native groups like women or younger workers to enter the labour force. Additionally, if high-skilled workers are not adequately rewarded – a condition that can inhere for highly-skilled newcomers to the labour market like immigrants or women – their ability to support low-skilled complements is threatened (Barrett, Bergin, and Duffy 2007). While Borjas (1997) argues that influxes of low-skilled immigrants into the US have decreased the already-low wages of the lowest-skilled workers and thereby driven inequality higher, Barrett, Bergin and Duffy find that the immigration of highly-skilled workers to Ireland has reduced earnings inequality between low-skilled and high-skilled workers (2007). This is presumably because these highly-skilled migrants had lower earnings than comparable native-born workers, but at any rate because they were more likely to be on limited contracts, restricted by visa arrangements in the case of non-EU workers, and less likely to be union members. This is especially important in Ireland, where a strong history of unionization has made much employment effectively permanent, a condition that would be less tenacious and less costly to terminate than for foreign-born workers on work permits.[3]

This previous work points to critical lines of enquiry for understanding how immigrants entered into the labour market in Ireland and the effects of this as the boom turned to bust. And yet, Ireland's differences from the countries from whence this literature first emerged (notably the US) are important to note in order to understand the limited applications of these theories of immigrants and the labour market. These differences might be critical for further theoretical development, especially as Ireland's experience of the recession is both unique enough to allow

[3] Angrist and Kugler (2001) note the restrictively high costs associated with the institutional employment regulation of European workers.

some analysis of these issues in isolation from the longer-term dynamics of immigration in the US and other settlement societies. And of course, as the anxious *New York Times* editorials point out, Ireland's recession is not entirely atypical.

Ireland is different from previous cases in that 1) it has witnessed recent rapid uptake in university education, such that it now has the highest level of university education in Europe and much of the world and 2) it has a continuous history of high levels of emigration. In that this creates challenges for the employment of young college-educated workers, especially as the recession proceeds, Ireland's situation could be indicative for the rest of the world. The example for the remainder of the EU is critical, as it is questionable whether models of national-level labour market segmentation make sense in a European setting where workers have free movement. Similarly, the emigration of Irish workers to other labour markets certainly has parallels for understanding the internal migration dynamics of workers in the US, as workers are moving in response to differing supplies of labour and jobs. But first, it is critical to explore the ways in which Irish and immigrant workers can be considered as substitutes or complements for each other in Ireland. In what follows, I will analyse the changing educational qualifications and labour force characteristics of young Irish and Accession workers as the most obvious labour market substitutes, and then look at rates of immigration and emigration of all nationality groups as Ireland turns from Celtic Tiger to crash. Following this, I will explicitly address the question of whether Irish jobs were threatened by Accession and other immigration as the recession gained pace by means of an occupational shift-share analysis. All data come from the Central Statistics Office (cso.ie) – specifically from the Quarterly National Household Survey and related International Labour Organisation data, for relevant pre- and post-boom periods as noted throughout.

Data and Analysis

I. Irish education and labour force participation from pre-boom to bust

Ireland's immigrant population has significantly high levels of education (at least at post-secondary level), compared with its native-born population (Barrett and Duffy 2006). In part, this is because of the recruitment of highly-skilled workers, especially from the UK and North America, in the early days of the Celtic Tiger. The Accession migrants also have very high levels of tertiary education, although their employment does not reflect this (Barrett, Bergin, and Duffy 2007). Additionally, this is due to the fact that Ireland's oldest age groups have very low levels of university education compared with the younger generation whether Irish or foreign-born (and foreign-born migrants are overwhelmingly in the young working-age categories).

The upward trend in university enrolment in Ireland has been nothing short of dramatic. More than 70% of Irish youth of university-age attended university in 2005/6, making this the most university-educated population in Europe () and arguably worldwide, and marking a rapid increase from 11% 40 years previously, 28% in 1985, and 50% only a decade ago as the boom gained momentum (Central Statistics Office, 2010). Gender ratios in university attendance have also now evened out, whereas university attendance had previously been much rarer for women than for men. This follows a general modernization and urbanization of Irish society and working relations. As more young people attend university the labour force participation rates of the youngest workers declines, and labour force expectations of post-university labour markets entrants rise. That this shift has happened alongside Ireland's manic economic growth marks a phenomenal shift in the educational and working lives of young Irish adults, and presumably one with knock-on effects for the

rest of the economy. The relevant period to examine here is the period from just before through to the early-middle phase of the boom, as illustrated in Figure 1. In the decade from 1988-1997 labour force participation rates (1a) for 15-19 year-olds dropped from 30% to 21%, and unemployment (1b) from 33-22% (both by about 1/3). Obviously rates for slightly older young people (some of whom have already completed their education) are much different, but labour force participation rates also dropped considerably for 20-24 year-olds (from 79% to 72%) while unemployment also dropped from 20%-14%. Older workers experienced greater labour force participation and lower unemployment as the economy picked up speed. But the critical point is that it is becoming significantly more likely over this recent period for young people to be gaining secondary and especially post-secondary educational qualifications and significantly less likely for them to be at work. Women's labour force participation rates rose significantly during this period, and then again by nearly 1/5 in the decade between 1999 and 2008 (CSO). Young people and women were increasingly becoming middle and high-skilled workers.

As boom is replaced by bust, International Labour Organisation statistics provide for a more finely-grained analysis of 18-24 year-olds' shifting labour force participation and unemployment experiences. In figure 2, I report these by second quarter in order to control for seasonal variation. For early school leavers (2a), employment rates hovered in the mid-high 50s, unemployment in the mid-high teens, and inactivity just under 30%, before changing dramatically for the worse by 2008/10, when unemployment was as likely as employment and inactivity more likely than both (indicating dropping out from the labour force). Although the numbers look

slightly better for those who do not leave school early[4] (2b), the general patterns are the same. Unemployment rates more than double between 2007 and 2009. These dramatic patterns also no doubt evidence the exodus of immigrants (younger, and with higher levels of youth labour force attachment than natives) from a relatively small labour force, changing its constitution.

II. Accession migrants in the Irish Labour Market

It should come as no surprise, then, that despite the rhetorical emphasis placed on highly-skilled workers of the Celtic Tiger, the nearly seven-fold increase in work permits from 6,000 to 40,000 between 1999 and 2002 was overwhelmingly for low-skilled jobs (Ruhs and Quinn 2009). Although these jobs were not the audacious high-tech jobs commonly associated with the boom, they helped to fuel it through its dying days – again providing goods and services that drove the economy for those perceived to be its drivers. It should also come as no surprise that the Accession migrants entering after 2004 and 2007, with even greater rates of university completion than the Irish-born population, faced occupational gaps as they entered low-skilled, low-paid jobs in construction, manufacturing, shops, hotels, and restaurants (O'Connell and McGinnity, 2008). The most astonishing fact was not the (typical) youth or (atypical) educational profiles of these labour force migrants, especially since Ireland had joined only the UK and Sweden in allowing unfettered and immediate labour market access to the Accession migrants. Many of the young immigrant workers cited improving their English as a key reason for their migration, and Ireland's 'friendly' culture and strong worker protections made it a logical choice

[4] The comparable rates are mid-60s for employment, 5-6% for unemployment, and in the 30s for inactivity (which would include those in school) through 2008. By 2010 employment rates drop by 1/3, unemployment more than doubles, and inactivity increases by 1/4.

for a place to work a service job even with a university education. High unemployment rates in Eastern Europe throughout the 1990s and early 2000s also made labour migration attractive, and the burgeoning 'immigrant city' service economy of Dublin became a top destination for young migrants wanting a place to live and work for a few years.

The most astonishing fact of the Central Statistics Office's report on non-national immigrant workers was the fact that large proportions of these often university-educated young adults (overwhelmingly in possession of social science or engineering undergraduate degrees) reported that their education was not yet completed (CSO 2008). Perhaps, then, these migrants were contentedly underemployed with the objective of earning money and amassing English skills to further their education back home or elsewhere, over a reasonably short time horizon.[5] If this is the case, they mirror the Irish youth who, especially with a university degree, have emigrated from Ireland for decades. Although this emigration slowed during the boom years, it did not halt entirely. As boom turns to bust, emigration begins to resume previous levels.

Brief age, education, and employment profiles of 3 major Accession migrant groups are provided in Table 1. These demonstrate the overwhelming youth, high levels of employment, and levels of education of these migrants – as well as the suggestion that many of them count their education still unfinished although they are not at school. The vast majority of these migrants had completed at least upper secondary qualifications if not further tertiary education, with degrees most commonly in social sciences, law, and engineering. Yet, construction and

[5] Labour market economists often refer to the 'compensating wage differentials' that drive migrants and others to accept lower-status or lower-waged jobs than their skills portend, and these can include language or cultural experience acquisitions ().

manufacturing jobs accounted for more than half of all male employment for each nationality group, and hotels, shops and restaurants accounted for more than half of all female employment for each nationality group. 10% of Latvians, 5% of Lithuanians, and 2.5% of Poles were engaged in agricultural work. They were substitutes, in terms of being comparably young and comparably educated, for *potential* Irish workers. But perhaps comparably educated young Irish, coming of age in an ostensibly burgeoning economy, expected more than the low-skilled jobs in manufacturing, construction, and hotel and restaurant services offered. If so, this would be Ireland's first significant encounter with what the literature terms 'immigrant jobs' – the jobs reserved for immigrants because similarly-skilled native workers do not wish to take them. These are, especially, the flip-side jobs of the globalized city that would not exist so productively or in such numbers without the ready supply of an international labour force - whether Mexican gardeners or garment-cutters in Los Angeles, or Polish baristas or construction workers in Dublin.

Table 1 Accession migrants: brief age, employment, and educational profiles, 2007[6]

Nationality	Age 20-39	at work	2nd - 3rd+[7]	unfinished /at school[8]
Polish (n= 63,276)	>80%	84%	83%	15%/2%
Lithuanians (n=24,628)	~70%	82%	97%	38%/3%
Latvians (n=13,319)	~70%	80%	70%	29%/3%

Source: Profiles of nationalities, Central Statistics Office 2008

[6] These numbers will have diminished sizeably since this report was published.
[7] This includes those who have at least completed an upper secondary degree.
[8] This indicates the percentage at least 15 years of age in the labour force who indicate their education is not yet completed, followed by the percentage who are actually currently in school.

III. Immigration and Emigration

One of the critical arguments in the debate over whether immigrants replace or complement native-born employment came from Borjas' suggestion that negative effects of immigrants on natives in the US were impossible to assess because of internal migration (Borjas. 1985; 2003; 2006; Borjas et al 1996). In short, Borjas argued, those workers who leave or choose not to come to locations where they would face downward wage pressure due to competition with large immigrant inflows cannot actually be observed in those labour markets where they do not end up. Although this idea remains contested by others who introduce selectivity controls or claim that this effect is minimal (see, for example, Card 2001and Holzer 2009), it bears at least theoretical consideration in the Irish case. Leaving internal migration aside for the moment given the reasonably small internal flows in Ireland, the native-born workers most like immigrants (in this case, young university-educated workers) have a history of leaving Ireland, at least temporarily. In fact the boom brought many of these overseas Irish nationals of a previous cohort back home (Barrett and Duffy 2006).

This effect could only intensify as a Celtic Tiger generation came of age knowing only a booming modernised economy and having high expectations of their labour force experience with a university degree – expectations which might have fallen short at home. This is especially the case since the jobs driving the Celtic Tiger were more likely to be the construction and service sector jobs that multiplicatively complemented the high-level knowledge economy employment. Even highly-skilled immigrants have many reasons for accepting a job beneath their skills (and this may be either a lack of suitable jobs at home, an opportunity to practice English, or simply the 'escalator' effect of taking employment in a more global centre than if one stayed

home)[9]. But none of these are enough for *local* workers to accept an occupational gap, especially one that may not end, especially when they have come of age with higher expectations of their education, and especially when a culture of emigration has long provided an outlet. In many ways, both emigration for the Irish and intra-EU migration for accession migrants, can be seen as international versions of the escalator effect, allowing the 'escalator' to be attained through both internal or international migration so long as it involves a step up the 'globalization' hierarchy. Arguably Ireland, and most significantly, Dublin, filled this niche as the millennium began.

At any rate, annual immigration and emigration figures changed dramatically for immigrant workers with the 2004 and 2007 Accessions, and as the economy transitioned from boom to bust. These flows, however, only added to the patterns of emigration and return among Irish nationals. Figure 3 displays estimated annual immigration flows from 2003-10 (a) and emigration flows from 2006-10 (b) by nationality group. From 2006, the number of Irish immigrating is only slightly higher than the number emigrating. This changes in 2010 when emigration exceeds immigration once more, after starting to increase again the previous year. Immigration also declines. By 2005 (one year after the EU 15-25 accessions) as many as ¼ who have arrived are going home although more are still arriving. By 2009 *twice* as many are returning home as are coming to Ireland. EU-13, UK and other nationality emigrants are mostly stable over the period although there is some slight increase by 2009. Immigration from these nationalities begins to decline slightly from 2007, and it decreases by almost ¾ for other nationalities[10] between 2007-10. In order to separate individual group shares and losses from the grander

[9] Fielding (1992) identified this effect for young postgraduates coming from elsewhere in the UK to live and work for a few years in high-cost London. See also Findlay et al 2009.

effects of economic boom and bust, and also to separate out the effects of labour market segmentation on who loses and gains from these shifts, I turn to a shift-share analysis of occupational change by nationality group from 2007-2010.

IV. Shift-share analysis of labour market change

In what follows, the data come from the Ireland's Central Statistics Office's Quarterly National Household Survey for the second quarters of 2007-10 – from the last period of the boom to the bust. Although the Labour Force Survey provides many labour force details, it is necessary to look to the QNHS in order to get detailed occupational sectors by nationality grouping. Additionally, the quarterly data allow examination of critically precise moments: the 2007 accession labour migrants' entry into the Irish economy, the last quarter when employment was increasing, the first quarter of significant job losses for certain sectors and certain (mostly recent immigrant) workers, and the ways in which the recession has played out quarterly over the past few years. The broad nationality categories available are certainly limited, but in these as in much else the publicly-available data are limited by Ireland's still relatively small population, especially when the labour force is subdivided into detailed occupational and nationality groups. For the sake of this analysis, the categories do allow investigation of the major groups of concern. I will examine the major job gains and losses for 1) Irish, 2) UK, 3) other EU-15, 4) EU 2004-07 Accession, and 5) other nationality workers.[11]

Overall gains and losses in the Irish labour market for the 2nd quarter of each year from 2007-2010 are shown in Figure 4. The immediate declines by 2008 are all

[11] These latter include North Americans and Antipodeans, as well as some immigrants from Asia and Africa.

too clear. Whilst there were still minor employment gains in 2007, especially for new accession and other nationality workers, the size of the labour force was largely static. Irish national employment had already started its decline, and presaged the large declines that would follow for all groups. Figure 4(a) shows the absolute labour force numbers, making it apparent that the immigrant gains in 2007-08 were about the size of the Irish decline, and demonstrating which groups comprised the decline of subsequent years. This presentation can be misleading, however, as the Irish nationals are by far the most numerous group. As such, Figure 4(b) shows the annual employment change as a proportion of each nativity group, in order to ascertain the significance of job loss for natives and immigrants. In 2008, only EU-13 nationals are losing any significant employment, with a decline of nearly 10%, while UK, Accession, and Other immigrants increase their participation by 3, 7 and 13% respectively, and Irish employment remains stable. The incoming migration of the end of the Celtic Tiger is evident here. By 2009, the EU-13 have regained their lost share (this may be due to circular migration or simply reclassification of some EU workers), and all other groups are losing employment, most notably Accession and Other immigrants, who lose ¼ and 1/5 of their employment in a single year (the comparable figures for UK and Irish workers are 7 and 5%). One year later, Accession and Other immigrants have lost another 10-13% of their employment, UK workers lose 25% of their jobs, and EU-13 nearly 1/3 of theirs, while Irish jobs only evidence a slight decline. Although all groups have experienced employment losses by the end of the period, the job losses as a proportion of labour force size are less than 10% for Irish workers, double that for Other immigrant workers, and nearly triple that for UK, EU-13, and Accession workers (for whom they are highest of all).

Overall job loss for the three-year period was 12%, with Irish losses falling under this average at 9%.

Figure 5 shows that these job losses were not so much in the vaunted high-tech and professional managerial jobs of the vaunted Celtic Tiger, but in the more realistic building and manufacturing boom that undergirded it. 60% of the job losses are in construction, 25% in industrial jobs, and just under that in trade and motor vehicles. 10% of job losses are in the agricultural sector that had been declining over the previous decades. There are some job gains in health, education, and social services jobs (about 10%), and it is possible that these are generated in part by a need to respond to the demands of new immigrants. That said, it is interesting to look at which groups lost (and in some instances, gained) jobs across sectors. Here, I follow Wright and Ellis's (1996, 1997) use of a shift-share analysis to decompose employment shifts in the Irish labour market from 2007-10. The decomposition of occupational change by nationality also allows answers to three questions of theoretical and policy interest, and the sum total of these is reported in Figure 6, with breakdowns in Figure 7 as the size of the Irish population and overall growth effect make analysis of smaller groups and effects difficult in Figure 6.

First, the National Growth Effect (7a) describes the proportion of employment change by nationality groups that was accounted for by simple overall increases or decreases in employment. Although this is often employed at a Metropolitan level – to see the effects of, for example, Los Angeles' or New York's boom or bust on overall employment shares[12], it can be usefully employed here to see the ways in which the Irish economy produces simple shifts in available jobs for all workers as it proceeds from boom to bust. Second, the Industrial Mix Effect (7b) captures the job

[12] For details, see Wright and Ellis 1996, 1997.

gains or losses of specific nationality groups that are due to their representation in certain occupational sectors that are either gaining or losing jobs during the period in question – thus answering to questions of how occupational segmentation affects various nationality groups. Finally, a Group Shift component (7c) captures the residual gains or losses of each nationality group vis-à-vis each other, answering questions of which groups gain and lose labour market share relative to each other. Normally, this is used to see which groups gain productive niches in the labour force vis-à-vis each other, but in Ireland's case high levels of annual in and out-migration by nationality group explain most of this effect. Figure 7 shows the shift-share analysis grouped by effect in order to maintain usefully-scaled axes, but I will summarise the effects by nationality group, below. These decompositions allow for a more sophisticated and nuanced understanding of group occupational shift dynamics under conditions of economic change. Coupled with the previous sections examining education, labour force, and migration profiles of young Irish and Accession workers, the analysis suggests a much more complicated conclusion than the replacement hypotheses of public opinion.

The profile for *Irish workers* looks rather like the overall 2007-10 average shift in employment, although they lose construction jobs much more slowly and less dramatically, and gain a larger share of new healthcare jobs. This is not surprising, as unionization probably prevented harsher job loss for these workers. The vast majority of Irish job losses was simply a slower and more mild version of the economic decline that was reflected in the overall negative National Growth Effect, and that affected all groups negatively. The industrial mix effect for Irish workers is mostly positive throughout as they are not overrepresented in declining industries (it starts to be very slightly negative in the final year, although only as a small proportion of the

significantly positive industrial mix Irish workers had enjoyed in the previous two years). Irish workers' Group Shift declines in 2007-08, but only because they lose representation (not jobs) to a proportional increase in entering Accession and Other Immigrants. However, as the recession proceeds, Irish workers gain Group Shifts vis-à-vis other workers in 2008-09 and 2009-10. In short, Irish workers look to have weathered the boom and bust without detriment accounted to their occupational profile – and their losses appear to have been mitigated substantially in comparison with foreign-born workers.

UK workers had massive job losses in construction, but also in information and communications (probably due to the exit of companies like Dell and Google from Ireland), but some significant gains in administrative jobs. EU-13 workers faced enormous losses in professional jobs, and lost almost all of their employment in construction and transportation – with no employment gains in any sector. Both of these groups of workers lost from the negative National Growth Effect, but their Industrial Mix Effect remained mostly positive, demonstrating their relative lack of representation in the worst declining industries compared with other groups (EU-13 workers' representation in construction and transportation is demonstrated in their negative IME for the first year). In terms of Group Shift, both groups began losing this in 2009-10, probably as they began to leave the declining Irish labour market along with other (non-Irish) workers.

Similarly, *Non-European (Other) immigrants* had a quite positive Industrial Mix Effect, even in 2009-10 as that for Irish workers turned negative. This is probably the result of their representation in professional occupations and especially education and health jobs, although they lost some construction jobs as well. It is also possible that the only members of this group remaining in the labour force – as they

are subject to work permit requirements – are those whose employment is considered selectively critical to the Irish economy. Their Group Shift increases in 2007-08 (again, as immigration tails off), but is considerably negative in the subsequent 2 years as they leave the Irish economy. Along with the UK and other non-Accession professional and highly-skilled migrants, some of these were the new mandarins who left Ireland as their foreign companies reduced their presence in Ireland.

Not surprisingly, *Accession migrants* had massive losses across all sectors (nearly 70% of their workers were in construction, and nearly all of these jobs were lost), although they made minor gains in transport, and maintained their representation in healthcare jobs.[13] They lost through the National Growth Effect with everyone else when the recession hit, but they lost more dramatically and faster because of their overrepresentation in declining industries, namely the crashing construction industry. It is interesting to note that their extremely negative Industrial Mix can be viewed graphically as the inverse of the sum of all other groups' positive IMEs. Their Group Shift (again, slightly positive as they begin to enter Ireland in the first year), is already strongly negative by 2008-09 and this continues in 2009-10. It is probably not that they are replaced by Irish workers, but that they simply lose jobs first and exit the Irish labour force. Access to the Irish labour force meant much less by 2008-09 than in the previous year.

[13] Tabulations and graphs for the first summary statement for each group are available from the author but have not been reprinted here due to space considerations.

Discussion

It seems fairly apparent that Ireland's accelerated experience with a globalizing economy, large-scale immigration, and recession has meant that theories developed to explain longer-term system dynamics of immigration and labour force shifts under changing economic circumstances (notably in the US) have imperfect application. As has been previously noted, the nearer educational levels of young EU workers (when compared with similar young workers in North America) may mean that the theoretical debates over substitutability need further development. The significance of emigration for native-born workers and more open international labour markets in the EU also limit the applicability of labour economics theories developed elsewhere. That said, there are still more similarities here than differences, even as Ireland's labour market experiences seem to have occurred in a bubble.

Just as in the US, much concern is voiced over the substitutability of workers at the bottom of the labour market rather than at the top, with the assumption that these workers are driving unemployment and downward wage pressure. However, these workers are imperfect substitutes for comparably-educated and aged workers in both national contexts for institutional reasons that relate legal protections differently to natives and immigrants (Ottaviano and Pero, 2006). In the US, many workers at the bottom of the labour market are undocumented or have poor English skills and thus accept jobs and working conditions conditions native workers would not accept. In Ireland, a highly-unionised work force presents high costs of firing, especially compared with a young more temporary workforce willing to take employment beneath their educational qualifications. In either case, whether immigrant-occupied or not, such jobs offer little to native workforces who expect more – and yet these low-skilled jobs can fuel professionalization and lower costs across the board, at least

in the short-term. This is clearest in analysis of Ireland's occupational shifts by nationality from boom to bust, where Accession migrants fueled low-skilled service and construction jobs, and went home with the recession when these jobs were surplus labour – presenting little competition to similar native-born workers. Interestingly, there is considerably less debate over the highly-skilled workers who might be more direct competitors with the native labour force (although in Ireland's case many of these went home as well as the first decade of the 2000s ended).

At any rate, both demographic shifts and cultural changes are critical in explaining these dynamics. The Accession migrants were only *potential* labour market substitutes for comparably young Irish workers, who might have been in greater competition two decades ago.[14] But the Celtic Tiger and enormous uptakes in university enrollment had changed all of that before (if just before) the accessions took place. By the time Irish workers start to experience many of the worst effects of the recession, the immigrants had already lost jobs first. Just as with Mexican workers in the US, immigrants can help fuel the jobs undergirding economic boom, and are more easily let go when it slows (Holzer, 2011). The more unanswered question is whether and where unemployed native workers will re-enter contracting labour markets, even when they expand again. The importance of internal migration in the US, and of the relationship between emigration and return migration for Irish and other EU nationals, needs much further analysis. Additionally, the brief immigrant labour market experiences of many workers have been inadequately studied. In-depth longitudinal analysis of their subsequent work and life histories would greatly inform understanding of how individuals respond to cross-national

[14] Goldin and Katz argue that immigrants similarly filled a demand for low-skilled labour as US educational levels rose, although over a longer time horizon (2006).

economic differentials, and further theories of immigration and the labour market. While the question of whether immigrants take jobs from native workers is always critically in the public debate, it is far from the only question of how workers will respond to global economic shifts.

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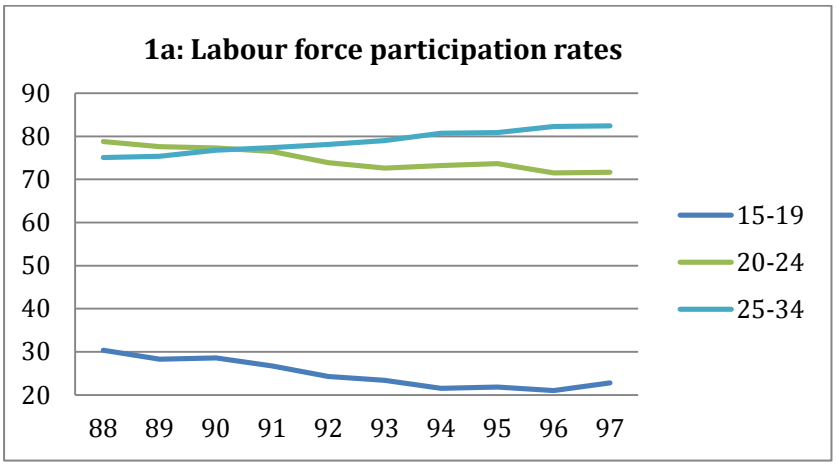
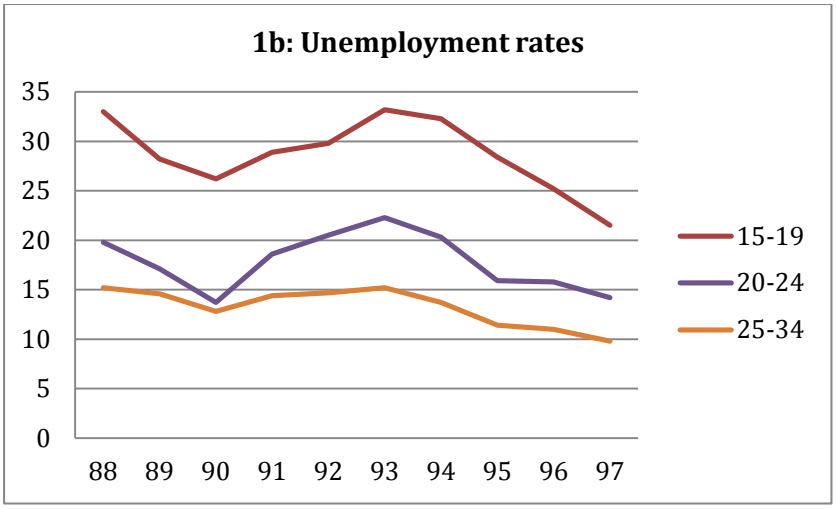
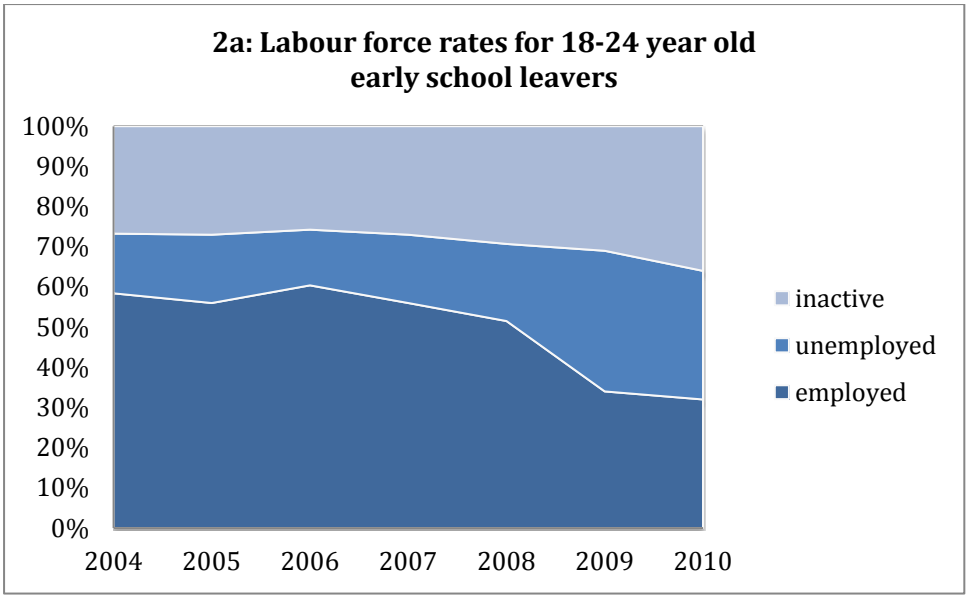
Figure 1: Pre-boom (1988-1997) labour force participation, 15-34 year-olds

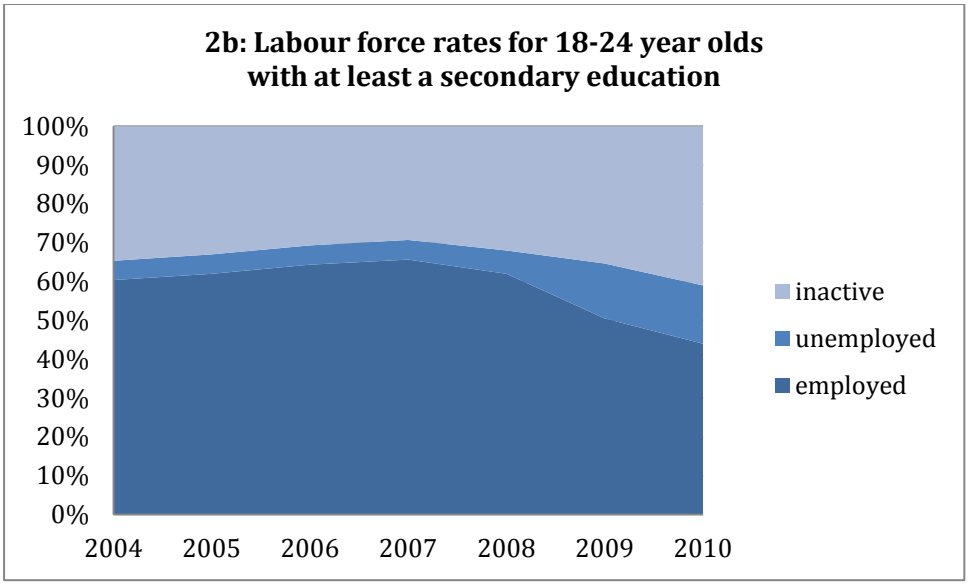




Source: Quarterly National Household Survey 1988-97 (2nd quarter), CSO

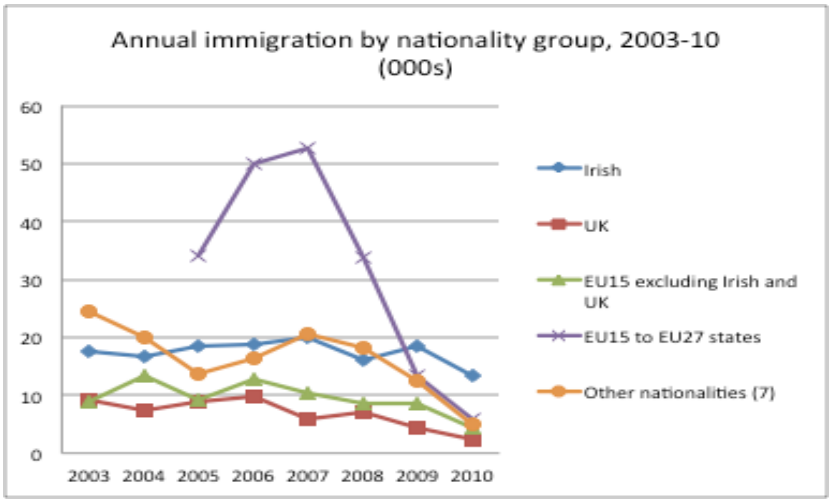
Figure 2: Labour force participation rates for young workers, 2004-2010

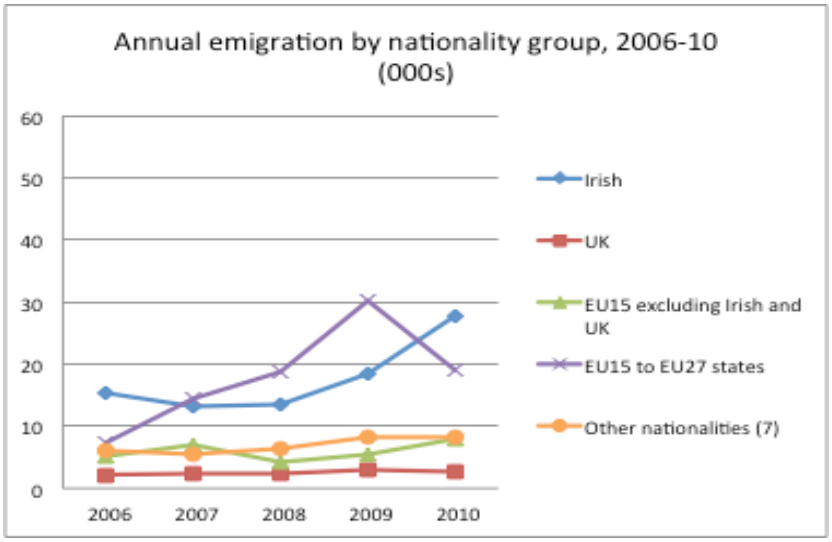




Source: ILO, 2004-2010 (2nd Quarter)

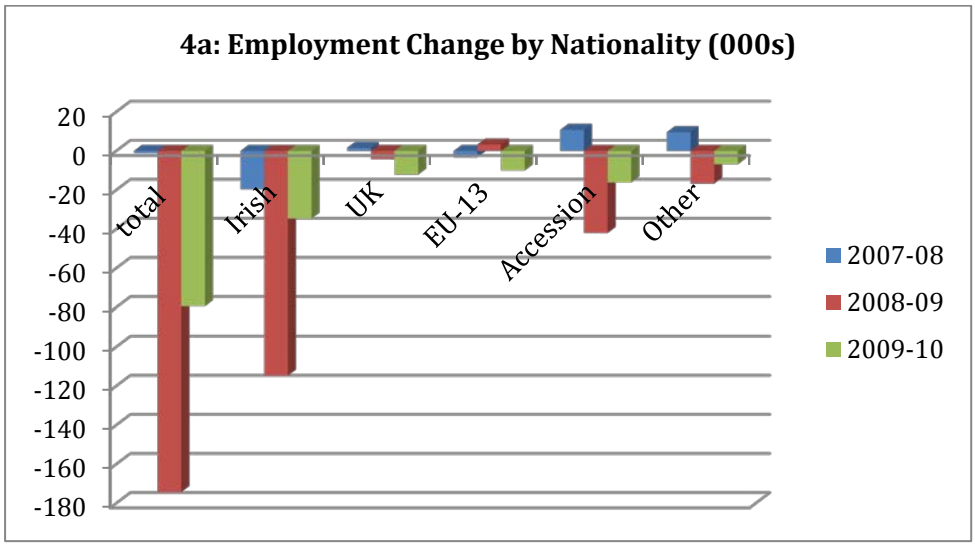
Figure 3: Annual immigration and emigration by nationality group, 000s

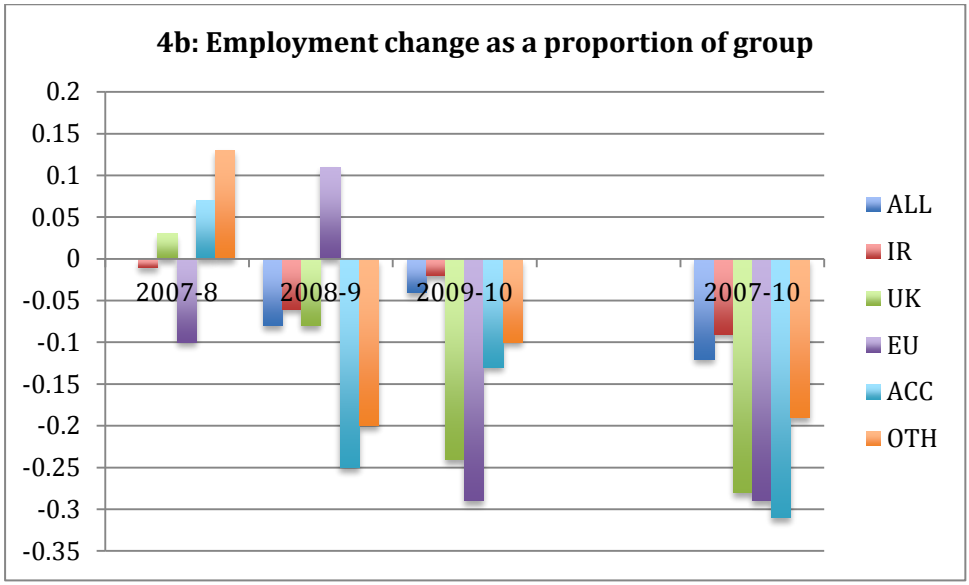




Source: CSO, 2006-10

Figure 4: Employment Change by Nationality, 2007-10





Source: Quarterly National Household Survey, 2007-2010 (Q2)

Figure 5: Employment Change by Occupational Sector, 2007-10

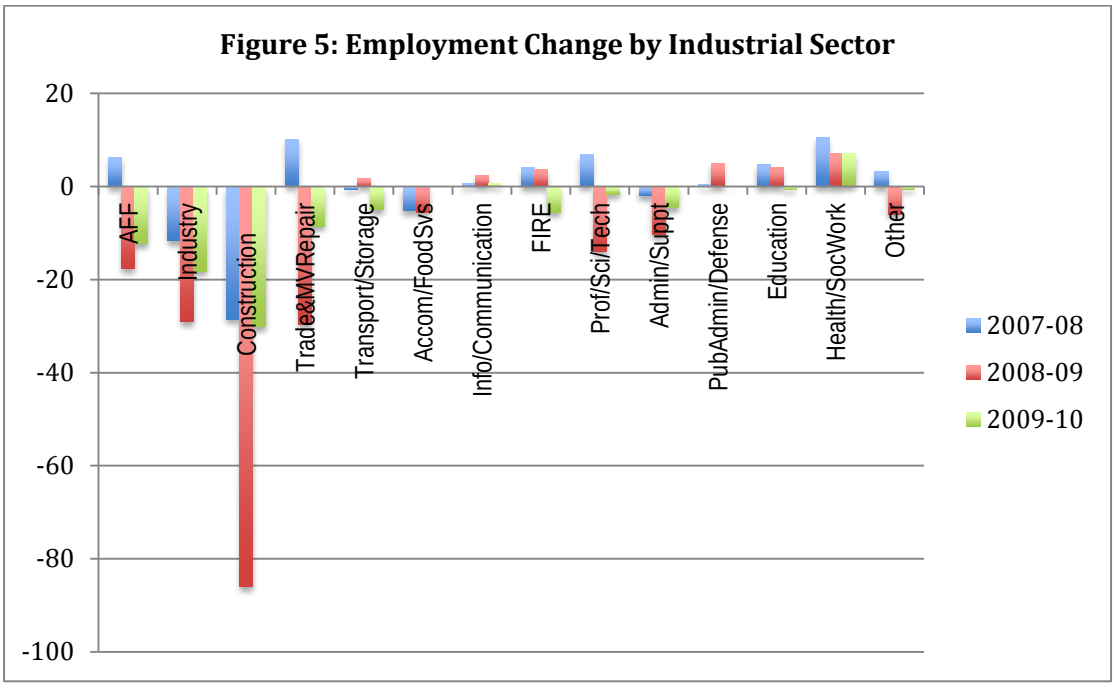
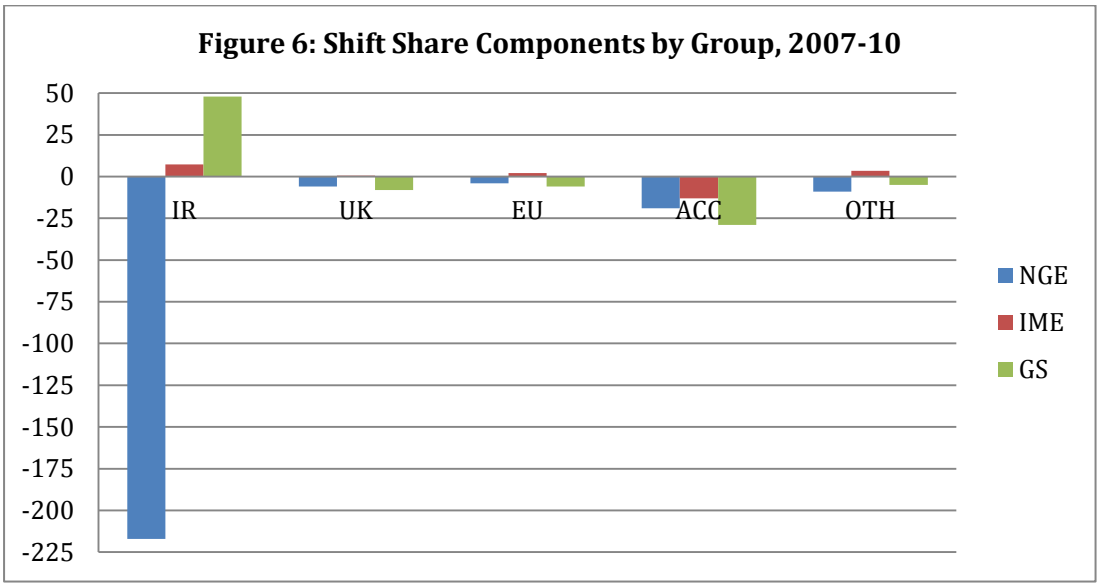
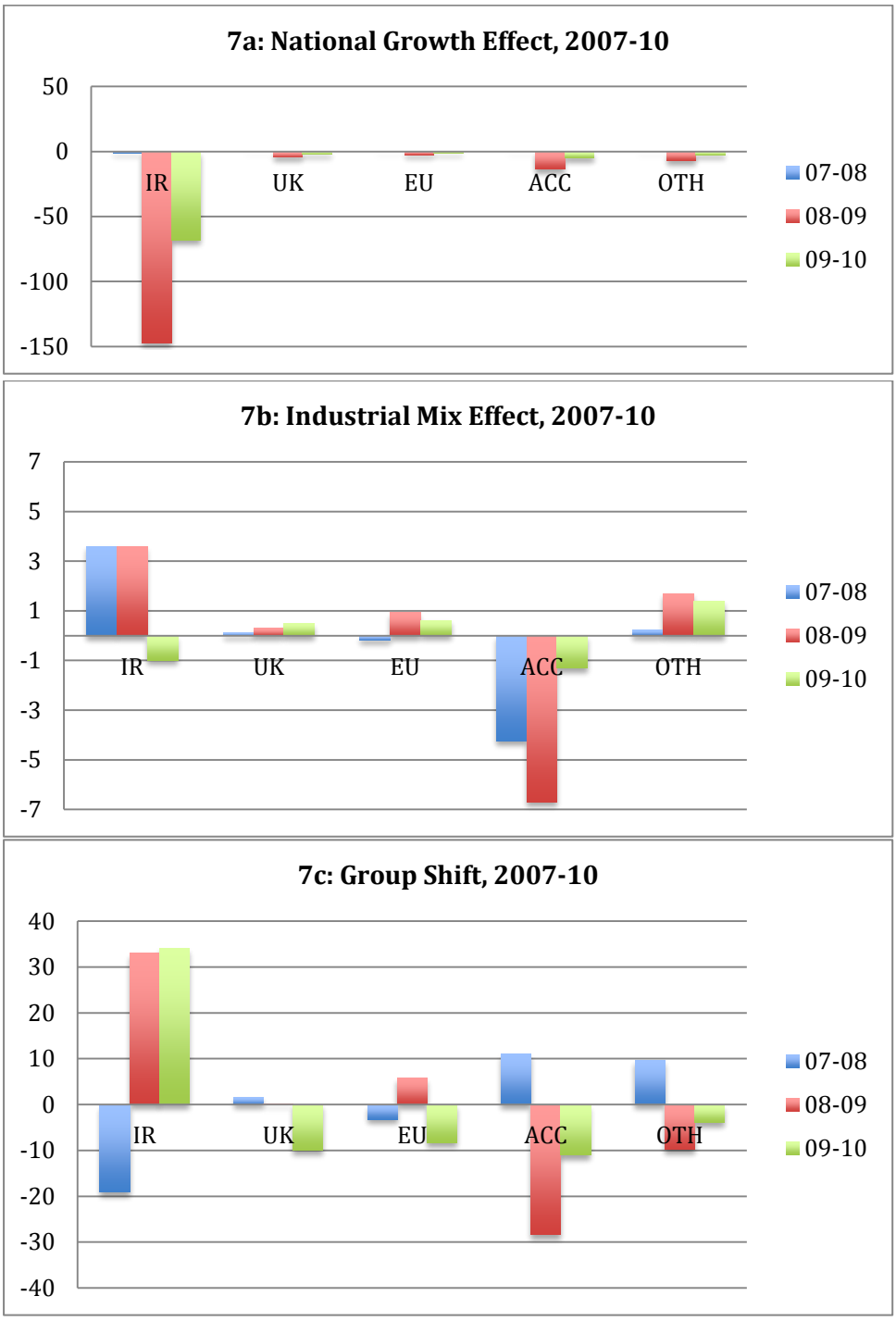


Figure 6: Shift-share decomposition by nationality, 2007-10



Source: Quarterly National Household Survey, 2007-2010 (Q2)

Figure 7: Subcomponents of employment change by group and year



Source: Quarterly National Household Surveys, 2007-10 (Q2), CSO