

# Are Catholics Achieving an Economic Peace Dividend from the Good Friday Agreement?

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## Abstract

The paper takes a detailed look at earnings and employment differences between Northern Ireland's Catholics and Protestants. A before and after look is taken, where the 1998 Good Friday Agreement is taken as the dividing line. This period has been one of a generally buoyant labour market, so both Protestants and Catholics have gained. There is evidence that Catholics' labour market position improved more rapidly than Protestants', but Catholic disadvantage still remains. There has been a Peace dividend.

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## Introduction

Research in the area of religion has been increasing (see Innaccone, 1998) and dates back to the early work of Adam Smith (Anderson, 1988). Research includes analysis of religious attendance within a Becker-style time-allocation framework (Azzi and Ehrenberg, 1975) and analysis of earnings differences between religious groups (Chiswick, 1983). Despite the claim made by Weber (1905) about the Protestant work ethic, Innaccone in his survey of the Economics of Religion, citing Delacroix (1992), suggests that there is no evidence, when comparing levels of economic development across Protestant and Catholic countries in Europe, that one group outperformed the other. In contrast, Greenly (1976) argued that Catholics in the US earned more than similar Protestants. Tomes (1985) notes, though, that other researchers have not found significant differences.

In certain areas, however, the possibility arises that labour market differences may arise between religious groups when one group discriminates against another. Such claims have certainly been made in the case of Northern Ireland. This is one of the UK's under-performing regions, with relatively low levels of Gross Value Added, driven by relatively low employment and wage rates. Economic development has not been helped by the outbreak of violence in 1969, although relative GVA levels have improved since the IRA ceasefire in 1994.<sup>1,2</sup> This violence was partly driven by the view that Catholics were widely discriminated against in the labour market. Extensive political efforts over a long period to

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<sup>1</sup> Broken in 1996 but restored in 1997 before the signing of the Belfast Agreement in 1998.

<sup>2</sup> Abadie and Gardeazabal (2003) show that political instability can have a strong adverse effect on economic prosperity. They find that after the outbreak of terrorism in the Spanish Basque country in 1960, GDP fell by 10 percentage points relative to a "synthetic control region".

find a solution to what have been described as “The Troubles” resulted in the signing of the Good Friday Agreement in Belfast on Friday, April 10 1998. This agreement “sets out a plan for devolved government in Northern Ireland on a stable and inclusive basis and provided for the creation of Human Rights and Equality Commissions, the early release of terrorist prisoners, the decommissioning of paramilitary weapons and far reaching reforms of the criminal justice and policing” (Northern Ireland Office, 2005).

Northern Ireland remains a deeply-divided society as evident from the strife arising over the routes taken by political marches for example. However, on the 28 July 2005 the IRA announced that its war against Great Britain was over and Tony Blair has stated that "this may be the day when finally, after all the false dawns and dashed hopes, peace replaces war, politics replaces terror on the island of Ireland". The armed conflict may be drawing to a conclusion, but the struggle to overcome the economic barriers faced by the Catholic community within Northern Ireland, which have fanned the fires of resentment and mistrust across religious barriers, is still an issue. In this paper we investigate of labour market discrimination against Catholic men in Northern Ireland by undertaking detailed earnings and employment decomposition before and after the Good Friday Agreement to assess the size of the problem and whether the position of Catholic men has improved.

### **Labour market background**

It has been recognised (see for example McGarry and O’Leary, 1995) that feelings of perceived labour market discrimination, resulting in inequality, were a major factor in feeding distrust and the conflict between the communities. The violence, which began in 1969, had both a political (desire for a united Ireland and civil rights) and an economic origin. Fitzgerald (2004) notes, however, that analysis of inequality and discrimination in the

Northern Ireland labour market was limited by a lack of suitable data and it was not until the analysis of the 1971 Census by Aunger (1975) that systematic evidence of Catholic disadvantage was clearly identified.

Table 1 shows Catholic and Protestant unemployment rates in four successive Population Censuses and although differences have declined significantly, they are still sizable.<sup>3</sup> A passionate debate has arisen trying to interpret the cause of these differences, which is summarised by Heaton and Teague (1997). Compton (1991) finds a large role for characteristic differences, with industry and geography explaining more than three-quarters of the unemployment gap. While the results of Murphy and Armstrong (1994) support the earlier work of Smith and Cambers (1991), with half of the unemployment gap attributed to religion, the remainder was explained by characteristics such as age, education, fertility, marital status, housing tenure and location (which are correlated with religion).<sup>4</sup> Gudgin and Brean (1996), however, find that while half of the unemployment gap can be attributed to the characteristics outlined by Murphy and Armstrong, that which remained could be explained by differential labour force growth and job quit rates and the lower migration rates of Catholics. They, therefore, rule out a significant role for discrimination in explaining the unemployment gap.

In an attempt to eliminate labour market discrimination on the basis of religion, the Government introduced the *Fair Employment Act (Northern Ireland)* in 1976. This Act was seen to have had limitations and in 1989 the Government introduced a new and tougher *Fair Employment Act (Northern Ireland)*. Two new enforcement institutions accompanied the Act, *The Fair Employment Commission (FEC)* and *Fair Employment Tribunals (FET)*. The Act

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<sup>3</sup> Surprisingly, our search of the literature finds no evidence of research on Catholic/Protestant wage differentials in Northern Ireland, which will be an important focus of this paper.

<sup>4</sup> Bryson *et al.* (2005) updates this work for the period 1991-2001.

requires employers of more than ten employees to register with the FEC and keep records of employees and job applicants by religious affiliation. FET hears cases of alleged discrimination and decides the level of compensation when discrimination is proven. Pressure for the new Act came from the MacBride Principles campaign. This was a US-based group of mainly Irish-Americans which encouraged US multinationals with plants in Northern Ireland to increase their employment of Catholics (Osbourne and Shuttleworth, 2004). This was similar to the 1971 Sullivan Principles adopted by US multinationals operating in South Africa. It was also informed by the Canadian federal employment equity policy (Abella Report, 1984).

The introduction of compulsory religious monitoring and a range of affirmative action measures such as setting targets for improving Catholic employment rates so as to reflect their profile within given geographical areas went beyond what is required in race and sex discrimination legislation applicable to Great Britain. The legislation also makes indirect discrimination illegal, defined as “applying a requirement or condition which, even without intent, adversely affects considerably more of one religious or political group than another and which cannot be justified on non-religious grounds. An example of this might be where an employer, whose workforce is wholly or mainly drawn from one community, restricts promotions solely to internal candidates”. Victimisation is also made unlawful under the Act. Heaton and Teague (1997) argue that while there was room for improvement, the new institutions were making a difference. The most recent amendment to the law is the *Fair Employment and Treatment (Northern Ireland) Order 1998* (FETO). This includes extending the monitoring requirements to part-time workers and the provision of, and access to, training. The question is whether the legislation has made a significant impact on Catholic disadvantage.

Evidence from the Monitoring Report (2003) from the *Equality Commission* reveals that Catholics have made gains in employment relative to Protestants, increasing their share in monitored establishments in every year between 1990 and 2003 from 32.0% to 37.4%. Obviously, the implementation of the Fair Employment legislation has its greatest impact when total employment is rising. The employment rate has increased from 67.8% in 1995 to 76.9% in 2003 and the unemployment rate has fallen in every year since 1993, reaching 5.4% in 2003 (compared to 5.1% in the UK as a whole).

## **Methodology**

The method to measure differences in earnings and employment rates is a variant of the familiar decomposition framework of Oaxaca and Ransom (1994). Within such a framework, the difference in average earnings can be split into two parts. The first part is characteristic differences and the second part is the way in which characteristics are rewarded, known as the coefficient component. The characteristic component can be further divided into its individual constituents, but as pointed out by Jones (1983), a similar division of the coefficient component is inappropriate because such decompositions are arbitrarily influenced by transformations of the data and the use of dummy variables. As a result, a coefficient breakdown is not usually undertaken. Yun (2003), however, offers a way to circumvent this problem so both breakdowns are undertaken here.<sup>5</sup>

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<sup>5</sup> Yun's use of normalised regressions is equivalent to imposing a linear restriction of zero upon any set of dummy variable coefficients, and this restriction can be applied to all types of dummy variables.

This approach can also be used to decompose employment probits, as shown by Yun (2004). As such, differences in the incidence of employment can be ascribed to either a characteristic component or a coefficient component, and imposing a linear restriction upon each set of estimated dummy variable coefficients allows a detailed decomposition to be made of the coefficient component. The decomposition formulae are shown in Table 5 (employment) and Table 7 (earnings).

## **The Data**

The data used are taken from the Office for National Statistics *Northern Ireland Quarterly Labour Force Survey* (NILQFS). In this survey, over 2,000 households living at private addresses are interviewed each year. To analyse the effects of the Good Friday Agreement, data are pooled between 1995 and 2003 and the sample split into two sub-sections 1995-1997 (before the Good Friday Agreement) and 2001-2003 (after the Good Friday Agreement). This results in a usable sample of 3,032 working age males in the first period and 2,558 in the second period.<sup>6</sup> NIQLFS asks a question on religious affiliation in contrast to the UK. In the sample, 43.2% are Catholics and 56.8% are Protestants. These figures are close to those from the 2001 Census of Population, which showed that Catholics made up 42.7% and Protestants 57.3% of the economically active population of working age.

The sample means are shown Table 2. Before the Good Friday Agreement, a large gap in the employment status between Catholics and Protestants is evident at 11.3%. The employment rate in the latter period (2001-2003) increased for all, reflecting a relatively buoyant economy. The employment gap narrowed to 7.5%. Not only was the employment rate higher for Protestants before the Good Friday Agreement but so were earnings. In this period,

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<sup>6</sup> Analysis of the position of females in Northern Ireland is the subject of ongoing research.

Protestants earnings were 4% above those of Catholics. However, in the 2001-2003 period the position reversed. Catholics have a small 2% earnings advantage – but this advantage will be shown to be largely illusory.

The table shows a wide diversity in the characteristics of the two religious groups, all of which impact on labour market outcomes. For example, Catholics are generally younger irrespective of employment status. Protestants in work are 2 to 3 years older than Catholics, the same is the case for those not in work. Data by age categories reveal that Catholics are more likely to be under 24 and Protestants over 40. These differences in demographic structure across religious groups are also confirmed in the 2001 Population Census (Northern Ireland Statistics and Research Agency, 2002).

The skills profile reveals that for those in work, Catholics (21% in 1995-1997, 26% in 2001-2003) are more likely to have a degree than Protestants (19% in 1995-1997, 22% in 2001-2003). The widening differential partly reflects the younger age structure of the Catholic population. However, a number of studies have noted that a relatively high number of Protestants choose to study at universities and colleges in Britain and do not to return (Equality Commission for Northern Ireland, 2003); Osborne and Shuttleworth, 2004. In contrast, Catholics generally choose to study in Northern Ireland's universities and colleges and remain in the area after graduation (Miller, 2004; Osborne *et al.*, 1987).

In the case of other qualifications, the picture is mixed. For those in work in the early period, Catholics are more likely to have A levels (41% compared to 37% for Protestants), whereas Protestants are more likely to have O levels as their highest qualification. In the later period, the position with regard to A levels and O levels is very similar. It has been suggested that

the underprovision of grammar schools in the Catholic sector limited the ability of Catholic school children to obtain school leaving qualifications. Gallagher *et al.* (1994) suggest that with only 85% state support for capital programmes in Catholic schools, this may have curbed the development of more expensive science programmes. Following changes in governance arrangements in the early 1990s, 100% funding was available and formula funding was introduced based on the income background of students.

For those in work, the numbers having no qualifications is slightly higher for Protestants with the differential falling to 1% over the period 2001-2003. Overall, the data are consistent with the observation of Osborne (2004) that the biggest change in the last generation has been the achievement of similar qualification outcomes between the two communities. This contrasts to the early 1970s, when students from Catholic schools were more likely to leave school without any qualifications or.

In contrast to Northern Ireland, research in the US (Sander, 1997) and Australia (Vella, 2000) shows that Catholic schools have a positive effect on educational achievement and significantly increase the probability of completing high school. Schooling in Northern Ireland is clearly segregated. Heaton and Teague (1997) revealed that only 1% of children are taught in integrated schools. Segregated schooling obviously plays an important role in sustaining divisions between communities and also provides a signal to employers of religious affiliation, enabling a mechanism through which to undertake discrimination if they so choose. Given segregation, any differences in school quality could perpetuate cycles of disadvantage across generations. Relatively poor schooling reduces not only people's life chances but also the life chances of their children.

Some diversity is also revealed in the marital status data, Catholics with less likely to be married. This partially reflects the younger age profile of the Catholic sample. However, Catholics generally marry later than Protestants, as the religious sanctions against divorce are greater. Tomes (1985) suggests religious sanctions against divorce could increase the expected duration of a marriage and so foster greater specialization of labour within the household and increase the skills and earnings of one partner. In both communities, married men are more likely to be working with single and divorced/widowed individuals more likely to be out of work.

Differences in family formation are also found across religious groups. Catholics in work are less likely to be childless (42% in 1995-97, 45% in 2001-03) compared with Protestants (54% in 1995-97, 55% in 2001-03). Catholics are twice as likely to have three or more children and, whether in or out of work, are more likely to have a child under four in the household. Catholics have larger families, possibly reflecting different views on contraception or psychic costs of birth control. For both communities, those without children are more likely to be out of work.

Little religious diversity is revealed in types of housing tenure. Living in a mortgaged property is by far the most common form. For both religious groups, however, public sector housing is the most common form of housing tenure for those out of employment with over 40% of Protestants and Catholics falling in this category in the period 1995-97 for example. Protestants are more likely to report a long-term work limiting illness for those in employment. The differential rose from 1 percentage point in 1995-97 to 4 percentage points in 2001-03. Not surprisingly, those out of work are much more likely to report an illness, with the figure much higher for Protestants than Catholics.

Catholics are more likely to be employed in the public sector. The figure increased for Catholics between the two periods but fell for Protestants, possibly reflecting the impact of anti-discrimination legislation. In the period 2001-03, 36% of Catholics were employed in the public sector, compared with 28% of Protestants. Generally, numbers employed in the public sector are much higher in Northern Ireland than in the UK where only 21% of employees work in the public sector (see Labour Market Trends, 2001). The findings are consistent with those of the *Equality Commission for Northern Ireland* (2003) and Russell (2004), which show the numbers of Catholics are still under-represented at district council level whilst Protestants are under-represented in the health and education sectors.

Concerns about access to employment have been at the heart of the conflict. In the heyday of the Protestant ascendancy, large employers such as Shorts (aircraft) and Harland and Wolff (shipyards) restricted access to jobs for Catholics (Compton, 1991). Over time, the industrial composition changed radically following de-industrialization, which saw the decline of the Protestant-dominated shipbuilding and heavy engineering. Russell (2004) reveals that between 1990 and 2001 the numbers of Protestants employed in manufacturing fell by 11% whilst the numbers of Catholics increased by 10%. It has also been observed that Catholics have been under-represented in the police, prison service and the security sector, which are relatively well paid. Table 2 also reveals diversity in industry attachment. Protestants are more likely to be employed in manufacturing and Catholics in Construction and Education.

Possibly reflecting differences in industry of attachment, Catholics are more likely to work in plants employing less than 19 employees and Protestants to work in plants employing 20 or more in the period 2001-03. In the earlier period, the employment structure by plant size is

very similar. Differences in length of job tenure are also small. In the period 1995-97, Catholics had an average job tenure length of 9 years compared with 10 years for Protestants. This may reflect the younger age profile of the Catholic sample, but could also arise from discriminatory employment practices. Overall, the table of mean values reveals heterogeneity across religious groups in the characteristics that have been found to be important in predicting the likelihood of being in employment and the level of earnings.

### **Employment Probits**

Table 3 shows how personal characteristics affect the probability of being in employment. Qualifications in particular are found to be important in predicting employment status. For example, in the period 1995-97 the probability of being in employment increases by 24% for Catholics with a degree relative to those with no qualifications. For Protestants, the figure is smaller but still significant at 13%. In the later period, the employment enhancing effect of having a degree for both Catholics and Protestants falls by 4 percentage points but remains significant. In general, the probability of being in employment is not found to be significantly influenced by an individual's age. The exception is Catholics aged 50 and over who in 1995-97 are 13% more likely to be out of work than the under 24 age group. This figure rises to 19% in 2001.

Household composition is an important factor in predicting employment/unemployment probabilities. Unemployment has been found to be more prevalent amongst individuals who have never married or who have unstable or broken marriages. Table 3 confirms that being single or divorced/widowed significantly increases the probability of being out of work for both Catholics and Protestants, with the effects generally being stronger for Catholics. For

example, over the period 1995-97 single Catholics are 11% less likely to be in work than those married. Those who are divorced/widowed are 18% less likely to be in work. The figures for Protestants are 5% and 10% respectively.

Not surprisingly, a work-limiting illness significantly reduces the probability of working. For Catholics, such individuals are 48% less likely to be in work compared with someone who does not report this condition in the early period. This figure rises to 59% in 2001-03. For Protestants, the effects are smaller at 44% and 47% respectively in the two periods. Type of housing tenure has a significant effect. Owner-occupiers with mortgages are the most likely to be in work, whereas those in rented accommodation are the least likely to be in employment. In the period 1995-97, Protestants in public/council housing are 33% less likely to be in employment, whilst the figure for Catholics is 44%. The figures for 2001-03 are very similar to those for 1995-97. Earlier work by Nickell (1980) and Hughes and McCormick (1987) for the UK has emphasised the role of housing tenure in explaining unemployment in the UK. Council house tenants were seen as the least geographically mobile when faced with unemployment. This could arise from the fact that council house rents have usually been set below market rates and individuals who move are not guaranteed council housing in the destination regions but would have to join a waiting list. Alternatively, the finding may indicate an unobserved heterogeneity effect with those in local authority housing being the most disadvantaged and the least motivated. Following the 'right to buy' changes in local authority housing introduced in the 1980s at prices below the market rate, this sector has decreased in size, with many councils placing their most impoverished families in these homes.

Finally, family size is not found to be an important indicator of employment status apart from Protestants in the early period. A negative correlation between family size and employment probability is usually attributed to the work disincentive effect induced by the benefits system, where state benefits increase as number of children rise, and so subsequently increase an individual's reservation wage.

### **Earnings Equations**

Table 4 presents the earnings equations for the two religious groups.<sup>7</sup> Earnings increase with education, labour market experience and working in a large plant. These findings are consistent with much of the previous literature. Protestants, unlike Catholics, have a consistently significant marital premium and lower earnings if they have a work-limiting illness.

Qualifications are particularly important in increasing earnings. Returns to having a degree relative to those with no qualifications are slightly higher for Catholics with the returns falling over time. For example, in the period 1995-97 Catholic earnings for those with a degree are 97% higher than those with no qualifications. In the later period, the figure is 82%. For Protestants, the figures are 92% and 70% respectively.

The labour market experience variable, not shown, is entered as a set of dummy variables, each three years in length, rather than the conventional experience and experience squared terms. This specification is chosen so as not to overly constrain the slopes of the earnings

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<sup>7</sup> Selectively adjusted earnings equations were also estimated but the results lacked robustness. As concerns have been raised about the robustness of the Heckman (1979) correction to changes in specification (Manski, 1989), such results are not presented here.

equations.<sup>8</sup> As is conventional, the results indicate diminishing returns to potential labour market experience. In the case of tenure, the earnings premium from having a job for more than five years is found to be significant in the majority of cases.

### **Employment Decompositions**

Tables 2 shows a wide diversity in characteristics and these are generally significant in the probit equations reported in Table 3. To examine the importance of these differences, employment gap decompositions are undertaken and the results are shown in Table 5. In the period 1995-97, the analysis reveals that of the 11.3 percentage points difference in the employment rate in favour of Protestants, only 2.7 percentage points (or 23.9% of the total) is attributable to their more favourable characteristics. All of the characteristics except age tend to favour Protestants. Housing tenure is found to be the most important component explaining 1.2 percentage points of the gap. The effect of marital status, qualifications, illness and children, whilst favouring Protestants, account for under 2 percentage points of the gap. In the post Good Friday Agreement period (2001-03), the employment gap falls to 7.6 percentage points. Characteristics account (1.5 percentage points) for a relatively small part of the employment gap (1.5 per centage points) as before, and housing tenure is again the most important component explaining 0.9 percentage points of the gap. Similarly, marital status, qualifications, illness and children make a small but positive contribution to explaining the more favourable employment position of Protestants in the post Good Friday period. Again, the only characteristic favouring Catholics is their age structure. It suggests, other things being equal, that the employment rate would be a 0.6 percentage points higher than Protestants.

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<sup>8</sup> This is necessary for the Yun procedure when it comes to decomposing coefficient differences undertaken later.

Overall, in both periods the vast majority of the employment gap cannot be explained by the characteristics included in the model so the possibility of discrimination cannot be ruled out. The analysis does suggest, however, that over time the absolute level of discrimination has fallen. Before the Good Friday Agreement coefficients account for 8.6 percentage points of the lower Catholic employment rate. This falls to 6.1 percentage points in the post Good Friday Agreement period.

Discrimination could take the form of Catholics receiving a lower return to employment enhancing characteristics than Protestants. The decomposition of the components of the coefficient effect shown at the bottom of Table 5 suggests that Catholics receive a higher return to qualifications than Protestants and the effect of children on reducing the probability of being in work is lower for Catholics. However, the individual coefficient effects are dominated by the constant.

Obviously labelling the coefficient component as entirely the result of discrimination is problematic as it ignores pre-labour market discrimination that may affect the stock of an individual's human capital and, secondly, because of data limitations, a less than comprehensive number of personal characteristics are included in the probits. Unobserved characteristics will be picked up by the constant and emerges as part of the coefficient effect.

One important variable which is not available in the dataset (to protect an individual's anonymity) is area of residence. Its absence could mean that the characteristics component of the total employment gap could be underestimated. Evidence reveals that Protestants are concentrated in the relatively low unemployment areas in Northern Ireland. Compton (1991)

notes that Catholics are more likely to live in the west of the Bann region where unemployment levels tend to be above average, whilst Protestants are more likely to live in and around Belfast where unemployment rates are on average lower. Local differences in unemployment rates are particularly important in Northern Ireland as residential mobility and travel to work patterns are strongly influenced by local concentrations of religious groups. Just as residential patterns have become increasingly segregated along religious lines, travel to work patterns are strongly influenced by residential segregation (fear of crossing community boundaries) and the fact that certain firms or areas are perceived correctly or incorrectly to recruit from only one religious group. Murphy and Armstrong (1994) have shown that Catholics do not search as intensively for employment and living in a low demand region with limited travel to work opportunities may be a contributory cause. Osbourne (1991), reviewing the survey evidence, finds that Catholics believed they would be less likely to get a job than equally qualified Protestants.

The issue of localised regional effects is addressed by exploring another dataset. This is the Controlled Access Microdataset Sample (CAMS) from the 2001 Population Census. The 2001 Population Census asks a question on religious affiliation in Northern Ireland. The CAMS has 15,108 usable observations and 18 sub-regions in Northern Ireland. Table 6 shows the probit decomposition, with similar characteristics to those in Table 5, but includes the 18 Parliamentary constituency sub-regional dummies. Table 6 reveals a Protestant/Catholic employment differential of 8.6 percentage points, slightly higher than the 7.6 percentage points for the period 2001-2003 using the NIQLFS data (Table 5). It can be seen that 2.5 percentage points of the differential is explained by including regional dummies, which is a substantial contribution to the characteristics effect. The Census data suggest that coefficient differences explain 4 percentage points of the Protestant/Catholic employment gap

lower than the 6.1 percentage point difference revealed when using NIQLFS data which do not include sub-regional fixed effects.

A further advantage of the CAMS is that the same religious affiliation question is asked in Scotland, but not in England and Wales. Scotland has a substantial Catholic minority (15.09 % in the Scottish sample of males of working age). There is little evidence of systematic discrimination against Scottish Catholics (Blackaby *et al.*, 2006 and Battu, 2005), hence undertaking an identical employment decomposition for Protestant/Catholic employment differences in Scotland provides a useful benchmark against which to compare the Northern Ireland results.

These are shown in the second column of Table 6. The position facing Catholics in Scotland is substantially different to those in Northern Ireland. Whilst there is an employment difference of 6.9 percentage points, only 1 percentage point is attributable to the coefficient effect. This may be picking up unmeasured characteristics. The key message of the benchmarking exercise is that the Northern Ireland coefficient effect is far larger than Scotland.<sup>9</sup>

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<sup>9</sup> Unfortunately, data on earnings are not collected in the Population Census so a similar analysis of earnings cannot be undertaken. For further details see [www.ccsr.ac.uk/sars](http://www.ccsr.ac.uk/sars)

## **Earnings Decomposition**

The results of earnings decompositions are shown in Table 7 and analyse whether it is characteristic differences or returns to characteristics that account for the earnings differential between Catholics and Protestants. For the period 1995-97, the hourly wage differential is 4% in favour of Protestants. The decomposition reveals that the amount of the wage differential attributable to characteristics, as with the employment decomposition, is relatively small and at 1.5% favours Catholics. The more favourable qualification profile of Catholics, giving a 2.8% boost to their earnings is partly offset by having less potential labour market experience, shorter job tenure and working in a less favourable industrial structure. The possibility remains, however, that the shorter job tenure and less favourable industrial structure could arise from discriminatory labour market practices. The decomposition shows that the coefficient effect is reducing the earnings of Catholics by 5.4%.

Decomposing the coefficient effect as outlined by Yun (2003) shows that higher Protestant earnings are partly explained by Protestants gaining a more favourable pay-off for a given experience profile (8.4%), marital status profile (3.1%), job tenure profile (2.8%) and a smaller reduction in earnings arising from ill health than Catholics (4.8%). Only in the case of qualifications, plant size, industry attachment and public sector employment do Catholics appear to be more favourably rewarded. Obviously demand effects could account for the higher returns to given characteristics. As noted earlier, Protestants are concentrated in relatively low unemployment areas.

Moving to the post Good Friday Agreement period, the earnings differential now favours Catholics by 1.8%. The superior earnings enhancing characteristics of Catholics, however,

suggests their earnings should be 5.6% higher. As with the employment decomposition the component attributable to characteristics differences falls in post Good Friday Agreement period and suggests that discrimination is now depressing Catholic earnings by 3.8%.

## **Conclusion**

Conflict in Northern Ireland has had a detrimental effect on the economy for both communities. This study finds clear evidence of a Peace Dividend for Northern Ireland's Catholics and Protestants. Employment and earnings have risen significantly for both communities. However, this has also been true for the UK as a whole. One key message is that Catholics are doing relatively better, so the religious gaps are closing. The unexplained component of the employment and earnings gaps fell in the post Agreement period, which suggests that discrimination is falling and that the strong legal edifice supporting this is working. However, Hughes (2004) finds evidence of a Protestant backlash. Far more Protestants now claim to be discriminated against in the labour market than Catholics. However, the results of this paper suggest that whilst Catholic labour market disadvantage is falling it has not been eliminated. Protestant fears of reverse discrimination is not supported by the evidence presented in this paper.

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**Table 1**

**Unemployment rates 1971-2001 (Decennial Population Census)**

	Catholic	Protestant	Ratio
1971	17.2	6.6	2.6
1981	30.2	12.4	2.4
1991	28.4	12.7	2.2
2001	10.8	5.9	1.8

**Table 2**  
**Mean Values of Explanatory Variables for**  
**Different Religious Groups:**

	1995-1997				2001-2003			
	Catholic		Protestant		Catholic		Protestant	
	Em	Nw	Em	Nw	Em	Nw	Em	Nw
Employment status	67.7	32.3	79.0	21.0	73.5	26.5	81.0	19.0
Hourly earnings (2002 prices)	7.68		8.04		9.06		8.84	
Ln Hourly earnings	1.92		1.96		2.09		2.07	
Age	38	42	40	45	38	44	41	46
Age<24	14	14	13	10	15	13	11	12
Age ≥ 25 & ≤ 39	43	30	37	24	40	23	36	21
Age ≥ 40 & ≤ 49	25	20	25	18	25	25	26	19
Age ≥ 50	18	36	25	49	19	39	28	48
Degree	21	5	19	3	26	4	22	7
A-Level	41	34	37	32	36	29	37	28
O-Level	8	6	12	4	13	10	13	8
Other	7	5	7	5	5	5	7	4
No qualifications	22	50	24	55	19	52	20	53
Married	65	57	71	58	68	49	73	56
Single	32	34	26	31	28	35	23	31
Divorced/widowed	3	9	4	11	4	16	4	13
No children	42	53	54	76	45	64	55	74
One child	18	16	18	9	19	16	18	11
Two children	18	15	19	9	19	12	18	7
Three or more children	22	16	9	6	17	8	9	7
Child under 4	21	14	15	7	19	8	16	6
Mortgaged property	58	25	60	24	64	24	61	25
House owned outright	26	24	26	25	26	25	27	30
Public sector housing	10	43	9	47	6	39	7	34
Private rented	5	8	4	4	3	12	5	11
Job tenure	9		10		10		10	
Public Sector	34		33		36		28	
Illness	8	49	9	60	6	62	10	68
Plant Size								
1-10	13		13		16		16	
11-19	17		16		20		15	
20+	70		70		64		68	
Agriculture Fishing	1		2		1		2	
Mining, quarrying etc	1		1		2		2	
Manufacturing	23		26		21		30	
Electricity, Gas and Water	1		2		1		0	
Construction	13		9		18		13	
Wholesale, retail etc.	11		15		10		11	
Hotels and restaurants	2		2		2		1	
Transport etc.	12		6		6		9	
Financial intermediation	2		2		2		2	
Real estate etc., business activity	2		2		6		5	
Public Admin. And defence	17		22		17		16	
Education	9		5		8		5	
Health and Social Work	5		5		3		3	
Other community etc.	2		3		2		3	
Experience	18.95		21.23		20.55		22.19	
Sample size	854	408	1398	372	848	306	1137	267

Notes: Em – in employment    Nw – not working

Table 3

Catholic and Protestant Employment Probits

Variables	1995-1997		2001-2003	
	Catholic Coeff t-stat	Protestant Coeff t-stat	Catholic Coeff t-stat	Protestant Coeff t-stat
Age ≤ 24	(E)	(E)	(E)	(E)
Age ≥ 25 & ≤ 39	0.011 (0.23)	0.026 (0.81)	-0.038 (0.77)	0.054 (1.72)
Age ≥ 40 & ≤ 49	0.004 (0.07)	0.032 (0.91)	-0.092 (1.53)	0.064 (1.90)
Age ≥ 50	-0.129 (1.93)	-0.035 (0.89)	-0.190 (2.74)	0.025 (0.65)
Degree	0.241 (5.62)	0.127 (4.86)	0.200 (5.21)	0.087 (3.60)
A-level	0.096 (2.84)	0.065 (3.28)	0.102 (3.15)	0.061 (2.96)
O-level	0.116 (2.26)	0.103 (3.73)	0.066 (1.62)	0.060 (2.24)
Other	0.129 (2.33)	0.073 (2.42)	0.072 (1.29)	0.090 (3.19)
No qualifications	(E)	(E)	(E)	(E)
Ill health	-0.476 (12.22)	-0.442 (15.29)	-0.588 (14.27)	-0.474 (15.40)
Single	-0.110 (2.25)	-0.051 (1.74)	-0.158 (3.21)	-0.047 (1.52)
Divorced/widowed	-0.184 (2.43)	-0.095 (2.13)	-0.109 (1.63)	-0.115 (2.56)
Married	(E)	(E)	(E)	(E)
No children	-0.014 (0.32)	0.069 (2.58)	-0.025 (0.56)	0.006 (0.22)
One child	-0.021 (0.43)	0.031 (1.01)	-0.055 (1.14)	0.038 (1.23)
Two children	-0.044 (0.90)	-0.013 (0.33)	-0.029 (0.51)	0.019 (0.47)
Three or more children	(E)	(E)	(E)	(E)
Child under 4	-0.048 (0.97)	-0.029 (0.76)	0.048 (1.00)	0.007 (0.17)
House owned outright	-0.082 (2.13)	-0.036 (1.50)	-0.029 (0.80)	-0.064 (2.54)
Public sector housing	-0.441 (10.54)	-0.328 (10.10)	-0.449 (8.54)	-0.334 (8.01)
Private rented	-0.303 (4.50)	-0.144 (2.66)	-0.439 (6.00)	-0.177 (3.62)
Mortgaged property	(E)	(E)	(E)	(E)
<b>Pseudo R<sup>2</sup></b>	<b>0.307</b>	<b>0.376</b>	<b>0.465</b>	<b>0.401</b>

Notes: Equations also include year dummies but are not reported  
Coefficients show marginal effects.  
(E) denotes an excluded category

**Table 4**

**Catholic and Protestant Earning Equations**

	1995-97		2001-03	
	Catholic	Protestant	Catholic	Protestant
	Coeff	t-stat	Coeff	t-stat
Constant	0.727 (2.26)	0.769 (4.31)	0.896 (1.85)	1.513 (6.15)
Job tenure < 2 years	(E)	(E)	(E)	(E)
Job tenure 2-5 years	0.021 (0.34)	0.045 (0.98)	0.157 (2.55)	-0.041 (0.83)
Job tenure > 5 years	0.091 (1.60)	0.219 (5.17)	0.222 (3.61)	0.120 (2.49)
Degree	0.680 (9.96)	0.653 (13.55)	0.603 (8.61)	0.530 (9.92)
A-level	0.270 (4.68)	0.222 (5.55)	0.286 (4.31)	0.145 (3.13)
O-level	0.183 (2.32)	0.284 (5.43)	0.248 (2.93)	0.155 (2.80)
Other	0.214 (2.65)	0.156 (2.59)	0.215 (1.80)	0.075 (1.10)
No qualifications	(E)	(E)	(E)	(E)
Ill health	0.004 (0.05)	-0.107 (2.17)	-0.075 (0.75)	-0.154 (2.80)
Single	-0.079 (1.31)	-0.141 (3.30)	-0.147 (2.32)	-0.118 (2.59)
Divorced/widowed	-0.018 (0.12)	-0.102 (1.48)	0.027 (0.28)	-0.020 (0.30)
Married	(E)	(E)	(E)	(E)
Public sector	-0.108 (1.34)	0.113 (1.69)	0.094 (1.52)	0.001 (0.02)
Plant size 1-10	(E)	(E)	(E)	(E)
Plant size 11-19	0.125 (1.73)	0.110 (2.05)	-0.078 (1.14)	0.093 (1.70)
Plant size 20+	0.171 (2.80)	0.108 (2.33)	0.038 (0.64)	0.146 (3.26)
<b>R squared</b>	<b>0.53</b>	<b>0.49</b>	<b>0.36</b>	<b>0.42</b>
<b>Sample size</b>	<b>319</b>	<b>662</b>	<b>374</b>	<b>558</b>

Note: equations include 16 experience dummies, 13 industry dummies and year dummies not reported.  
(E) denotes an excluded category

**Table 5**  
**Employment Decompositions**

	<b>1995-1997</b>	<b>2001-2003</b>
	<b>Protestant/Catholic</b>	<b>Protestant/Catholic</b>
Differences in means $\hat{I}^p - \hat{I}^c$	0.113	0.076
Differences due to coefficients $[\bar{P}(x^p \hat{\alpha}^p) - \bar{P}(x^p \hat{\alpha}^*)] - [\bar{P}(x^e \hat{\alpha}^e) - \bar{P}(x^e \hat{\alpha}^*)]$	0.086	0.061
Differences due to characteristics $\bar{P}(x^p \hat{\alpha}^*) - \bar{P}(x^c \hat{\alpha}^*)$	0.027	0.015
<b>Components of characteristic effect</b>		
Age	-0.005	-0.006
Marital status	0.004	0.009
Qualifications	0.002	0.001
Housing tenure	0.012	0.009
Illness	0.006	0.000
Children	0.007	0.001
Year	0.000	0.001
<b>Components of coefficient effect</b>		
Age	0.002	0.013
Marital status	-0.008	0.004
Qualifications	-0.004	-0.018
Housing tenure	-0.011	0.029
Illness	0.009	-0.008
Children	-0.014	-0.003
Year	0.006	0.021
Constant	0.106	0.081

*Note:*  $\hat{I}$  is the predicted employment probability; superscripts  $p$  and  $c$  refer to Protestants and Catholics;  $\hat{\alpha}^*$  is an estimate of the employment structure in the absence of discrimination and  $\bar{P}(\hat{\alpha}^p Z^p)$ , for example, is the average predicted employment probabilities when using the Protestant group's characteristics on Protestant coefficients; sample size 7659.

**Table 6**  
**Probit Decompositions 2001 using the CAMS**

	<b>Northern Ireland</b>	<b>Scotland</b>
Differences in means $\hat{I}^p - \hat{I}^c$	0.086	0.069
Differences due to coefficients $\left[ \bar{P}(x^p \hat{\alpha}^p) - \bar{P}(x^p \hat{\alpha}^*) \right] - \left[ \bar{P}(x^e \hat{\alpha}^e) - \bar{P}(x^e \hat{\alpha}^*) \right]$	0.040	0.010
Differences due to characteristics $\bar{P}(x^p \hat{\alpha}^*) - \bar{P}(x^e \hat{\alpha}^*)$	0.046	0.059
<b>Components of characteristic effect</b>		
Sub-regional dummies	0.025	0.020
Other Characteristics	0.021	0.039
Sample Size	15,108	30,069

**Table 7**  
**Earnings Decompositions**

	<b>Protestant/Catholic 1995-1997</b>	<b>Protestant/Catholic 2001-2003</b>
Approximate geometric mean earnings differential $\overline{\ln E^p} - \overline{\ln E^c}$	0.040	-0.018
Differences due to coefficients $(\hat{\beta}^p - \hat{\beta}^*)\bar{X}^p - (\hat{\beta}^c - \hat{\beta}^*)\bar{X}^c$	0.054	0.038
Differences due to characteristics $(\bar{X}^p - \bar{X}^c)\hat{\beta}^*$	-0.015	-0.056
<b>Components of characteristics effect</b>		
Qualifications	-0.028	-0.046
Experience	0.011	0.002
Marital Status	0.001	-0.003
Job Tenure	0.003	0.005
Plant Size	-0.000	0.004
Industry	0.004	-0.010
Public sector	-0.000	0.003
Health	-0.002	-0.005
Year	-0.003	-0.002
<b>Components of coefficient effect</b>		
Qualifications	-0.010	-0.001
Experience	0.024	-0.009
Marital Status	0.031	0.010
Job Tenure	0.028	-0.012
Plant Size	-0.021	0.008
Industry	-0.049	-0.017
Public sector	-0.036	0.016
Health	0.048	0.034
Year	0.002	-0.025
Constant	0.036	0.034