

Welsh Index of Multiple Deprivation 2014 Community Safety Domain

Change to Violent Crime, Theft and Criminal Damage indicators, November 2014

Introduction

As part of the response to the consultation: 'Proposed indicators for the Welsh Index of Multiple Deprivation (WIMD) 2014', it was noted that the WIMD team was in the process of reviewing the denominators for the Police Recorded Violent Crime, Theft and Criminal Damage Indicators within the Community Safety domain.

As a result of further work, and after further consultation with the Community Safety expert domain group, the WIMD Steering Group decided to amend the denominator used to calculate the Police Recorded Violent Crime, Theft and Criminal Damage Indicators for WIMD 2014. This paper summarises the change and reasons for the change.

Background

For WIMD 2011, the Violent Crime, Theft and Criminal Damage indicator denominator was calculated as the sum of the Lower Super Output Area (LSOA) resident population, the LSOA non-resident working population (i.e. those regularly commuting into the LSOA for work), minus the prison population. When reviewing this for WIMD 2014, we identified several drawbacks for including the non-resident working population element of the denominator:

- This approach means that there is a substantial amount of double counting of individuals since many do not live and work in the same LSOA. (The sum of the LSOA denominators across Wales is around 4 million).
- LSOAs with a high number of workers will see their population inflated, and the crime rate deflated
- The data is based on the 2011 census and is therefore not updated frequently.

The Community Safety domain group and WIMD Steering Group agreed that conceptually this didn't align with the definition and purpose of the domain, and agreed to amend the denominator for WIMD 2014.

Analysis of the impact

In order to consider the impact of changing the denominator for the crime indicators, analysis was carried out using WIMD: Annual Indicator Data for 2012. The indicators on Violent Crime, Theft and Criminal Damage were recalculated based on an alternative denominator of total resident population minus the prison population. These results were then compared with the indicators based on the original denominator. The change in denominator had a relatively small effect in the vast majority of LSOAs. In order to consider the impact, the indicator values for each LSOA were ranked and split into ten equal groups called deciles. The first decile contained the 10 per cent of LSOAs, with the highest indicator values. The next decile contained the 10 per cent of LSOAs with the next highest values, and so on. The table below presents the results of the analysis, following the change to the population denominator. The table notes where LSOAs have moved up decile groupings (i.e. the indicator value has increased relative to the other LSOAs), or moved down decile groupings (i.e. the indicator has decreased relative to the other LSOAs).

	WIMD Indicator		
	Violent Crime	Theft	Criminal Damage
No change	1092	1104	965
Down			
1 decile	186	193	193
2 deciles	68	60	77
3 deciles	27	33	41
4 deciles	10	6	10
5 deciles	7	7	11
6 deciles	4	2	5
7 deciles	0	1	0
8 deciles	0	0	0
9 deciles	0	0	0
10 deciles	0	0	0
Up			
1 decile	502	490	593
2 deciles	0	0	1
3 deciles	0	0	0
4 deciles	0	0	0
5 deciles	0	0	0
6 deciles	0	0	0
7 deciles	0	0	0
8 deciles	0	0	0
9 deciles	0	0	0
10 deciles	0	0	0
Total	1896	1896	1896

Source: WIMD: Annual Indicator Data, 2012

Key results

- As a result of the change to the denominator the majority of the LSOAs did not change across all three indicators (58% for both violent crime and theft, and 51% for criminal damage).
- 36% of LSOAs moved one decile for each of violent crime and theft, and 41% for criminal damage. The majority of these LSOAs moved up one decile (26% for violent crime and theft, and 31% for criminal damage). 10% of LSOAs moved down one decile for each of the three indicators.
- 94% of LSOAs either had no change or moved one decile for each of violent crime and theft. This was similar to criminal damage (92%).

Conclusion

Following consultation with the community safety expert domain group, the WIMD Steering Group concluded that the denominator should be changed (i.e. remove the non-resident working population). It was felt that the total resident population minus the prison population was a more appropriate denominator for these indicators (and would avoid the situation where the population of some LSOAs was inflated considerably).

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