# Demography and the Decline of the Roman Empire.

In his book on the enemies of Rome, Philip Matyszak wrote:

> 'Historians blamed the fall of Rome on depopulation, pointing to references in the ancient texts to plagues and *agri deserrti* (abandoned fields). Certainly, by the end of the Empire, a few thousand men counted as a substantial army whereas in the glory days of the Republic a single legion contained 6,000 men.' [1]

There is evidence that the "urban penalty" in mortality may have been responsible for the depopulation referred to by Matyezak. This penalty can be illustrated with data from a study of British Quakers in the period between the middle of the seventeenth and the nineteenth centuries.

**Table 1: Estimated Infant Mortality (Per 1000) Amongst Quakers 1650-1849**[2]

| Period | London | Bristol & Norwich | Provincial England | Dublin | Cork. Wexford. Waterford & Limerick | Rural Ireland |
|---|---|---|---|---|---|---|
| 1650-99 | 342 | 219 | 177 | 299 | 166 | 82 |
| 1700-49 | 269 | 216 | 200 | 196 | 160 | 118 |
| 1750-99 | 166 | 158 | 124 | 164 | 151 | 82 |
| 1800-49 | 132 | 107 | 69 | 107 | 62 | 41 |

Infant mortality in rural Ireland was between a quarter and a third less than that in London. This can be further illustrated by the Irish 1841 Census which compared the mortality rates of urban and rural districts:

**Table 2: Age Specific Death Rates According to the 1841 Irish Census**[3]

| *Age Group (Years)* | *Number Living in Urban Areas* | *Deaths Per 1000* | *Number Living in Rural Districts* | *Deaths Per1000* |
|---|---|---|---|---|
| Under 1 | 50,369 | 138.02 | 311,055 | 81.35 |
| 2-5 | 105,676 | 45.49 | 779,313 | 17.22 |
| 6-15 | 243,551 | 9.78 | 1,813,605 | 4.51 |
| 16-25 | 242,237 | 9.90 | 1,403,660 | 6.56 |
| 26-35 | 181,208 | 13.34 | 973,169 | 8.34 |
| 36-45 | 132,481 | 18.42 | 696,961 | 11.43 |

Mortality in urban areas was up to twice as high as in the rural districts, with 1,135,465 people living in urban areas and 7,039,659 in the rural districts. The great majority of Irish rural

inhabitants lived in isolated cabins, and Freeman has estimated that in 1841 only about 20 per cent of the Irish population lived in villages and towns, the rest in isolated cabins.[4]

The above evidence illustrates the "urban penalty" in mortality, with mortality rates in urban areas twice as high and above than that in rural districts. This was also the case in the Roman Empire and surroundings regions. This can be illustrated by an analysis of population growth in different regions of Europe.

**Table 3: An Estimate of the Empire's Population in A.D 164**[5]

| *Region* | *Population (millions)* | *Density (per km$^{2)}$* | *Increase from A.D. 14 (per cent)* |
|---|---|---|---|
| Italy | 7.6 | 30.4 | 8.6 |
| Maghreb | 6.5 | 16.3 | 85.7 |
| Iberia | 7.5 | 12.7 | 50.0 |
| Gaul/Germany | 9.0 | 14.2 | 55.2 |
| Danube Region | 4.0 | 9.3 | 48.4 |

Italy's population suffered from high population density and had a markedly lower rate of population growth in the period 14-164 A.D. than surrounding European countries. This was probably the result of a high concentration of urban cities and towns in Italy during this period.

As Frier has written, 'The Roman empire was a network of cities, as many as a sixth of its inhabitants resided in several thousand cities, a degree of urbanization that is unusually high by pre-modern standards. By AD 14, Rome, the imperial capital, had at least 710,000 inhabitants, more than a tenth of Italy's population, and in the following century it may have reached 1 million. … All the great cities of antiquity, with their fetid conditions and high mortality rates, were heavy net consumers of population.'

Frier posed the question as to 'What happened to the Roman empire's population after A.D. 14.? Clearly there was room for growth, above all in the thinly settled West, and although the population of Italy apparently remained stagnant, elsewhere archaeology had provided conclusive evidence for growth, especially in Africa, Spain and Gaul.'[6]

He has elaborated on the reasons for such high urban mortality: 'High mortality rates and pre-modern sanitary conditions made urban regions net population sinks, with more deaths than births. They could only be sustained by constant migration … Scourges are certain … numerous 'fevers', including typhus, typhoid fever, Malta and malaria, second, pulmonary illnesses, especially the forms of pneumonia … In normal circumstances, these causes were probably responsible for around 60 per cent of all deaths. 'Gangrene, scurvy (especially in times of want); and, less frequently, rabies, tetanus and anthrax … Also undoubtedly significant were dysentery and diarrhoea (especially for infants) cholera… sanitary standards were poor … disposal of human waste and garbage; large cities in particular remained fetid … Rome alone probably produced about a million cubic metres of human waste each year, a fact worth remembering when we read of Romans bathing in the Tiber. Indeed, the medical writer Galen specifically warns against eating fish from the Tiber … Roman urbanism implied large and

compact settlements linked by swift communications, and thus provided a ready network for infectious diseases to take hold and spread …'[7]

The invading Huns, Visigoths and other barbarian tribes lived in rural environments and therefore would not have been prone to high levels of infection found in urban districts. The Huns had traditionally been described as pastoral nomads, living off herding and moving from pasture to graze their animals, with a report that there was an absence of buildings.[8]

According to Taticus, 'It is well known that none of the German tribes are urbanised, homes among them not being allowed in close proximity. They live apart, scattered, as fountain, field and grove appeal to them. Their villages are not built after our fashion with buildings near together and connected, rather each man surrounds his house with a clear space, either as a precaution in case of fire, or through lack of expertise in construction.'[9]

This geographical isolation is similar to the historical conditions in rural Ireland, resulting in lower levels of disease infection.

Likewise, 'the Visigoths emerged from the Gothic tribes … a people believed to have their origins in Scandinavia and migrated south-eastwards into eastern Europe.'[10] It is likely that the rural environment in Scandinavia was much less prone to infection, allowing the Visigoths, as well as the Huns, to increase their numbers and therefore pose an increasing threat to the Roman Empire.

Reliable demographic evidence is usually lacking in this historical era, but the data in Table 3 shows that population growth was significantly higher in regions outside of Italy with low population densities, resulting in a greater capacity to launch effective attacks on the empire and eventually resulting in its decline.

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1 Philip Matyszak. *The Enemies of Rome: From Hannibal to Attila the Hun,* 2023, p. 283.
2 Peter Razzell, The Population History in Britain, 1538-1850, *Online Razzell Academia*, p. 5.
3 Kenneth Connell, *The Population of Ireland, 1750-1845* (1950)*,* p. 193.
4 Thomas W. Freeman, *Pre-Famine Ireland: A Study in Historical Geography* (Manchester: Manchester University Press, 1957): p. 27.
5 Bruce W. Frier, "Demography*",* in Alan Boumcw et.al. (eds), *The Cambridge History XI: The High Empire, AD 70-192* (C.U.P., 2000), p. 814.
[6] Ibid, p. 814,
[7] Ibid, p. 813.
[8] J. Otto Maenchen-Herfen in Max Knight (ed), *The World of the Huns,* 1973, pp. 169-179.
[9] Frier, "Demography", p. 7
[10] Publius Cornelius Tacitus, *Germania* (Poetry in Translation, Online); Herwig Wolfrom, *The Roman Empire and its German People,* 1997, pp. 39-40.