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Prison Building 'Does Size matter? A Re-Assessment

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Background

This paper synthesises existing work and extends empirical knowledge about the possibilities attendant on building bigger prisons in England and Wales. This follows on from an announcement in 2013 that a 2,100 inmate prison (HMP Berwyn) would be built in North Wales. Moreover a statement by the Justice Secretary, Michael Gove, that 'ageing and ineffective' Victorian jails would be sold off to fund larger replacement prisons.[1] To that end it is salutary to note that in 1980 44,000 people were held in prisons and young offender institutions in England and Wales and that this number was described by the sitting Home Secretary as dangerously high.[2] This is because by October 2015 a neo-liberal inspired popular penalty had gone on to inflate the prison population to 86,727.[3] The social and economic costs attendant on imprisoning large numbers (and proportions) of people hardly needs further exploration. They have been amply poured over and debated in this and other journals as well as in media and political circles. Comparatively speaking, however, the practical management implications of the policy of mass incarceration has received less attention. As increasing numbers of people have been imprisoned, the prison estate has aged and contestability between the public and private sector has become the norm, the question of how the prison estate should be structured and managed to ensure prisoners 'are treated humanely, decently and lawfully' has become more salient.

As Johnsen and Granheim note[4] policy and academic literature has tended to ignore the issue of 'prison size'. After 2007, however, the question of whether prisoners should be accommodated in larger or smaller establishments became the subject of more intense debate. This was following recommendations made in the Carter report to build three new 'Titan' prisons to hold 2,500 inmates each.[5] The proposal met with considerable opposition not only from the usual campaign groups, like the Howard League[6] and the Prison Reform Trust,[7] but politicians like David Cameron, then leader of the opposition Conservative Party. He reportedly said at the time 'The idea that big is beautiful with prisons is wrong… experience suggests to us these large prisons are dangerous and inefficient'.[8] The Conservative Party[9] went further, responding to the Titan prison proposal with a green paper calling for 'smaller, local prisons which provide better rehabilitation outcomes'. The Prison Reform Trust[10] asserted there existed 'substantial research evidence and learned experience from England and Wales and worldwide that smaller prisons are more effective than larger prisons'. However the evidence base they referenced owed more

1. Gove, M (2015) Speech given at the prisoner learning alliance 17.7.2015. Available to view at https://www.gov.uk/government/speeches/the-treasure-in-the-heart-of-man-making-prisons-work (last accessed 24/11/15).
2. Dobson, G. (2010) 'New Labour's prison legacy', *Probation Journal,* Vol, 57 (3) pp. 322–328, London: Sage.
3. Ministry of Justice (2015) Population and capacity briefing for October 2015, London: Ministry of Justice.
4. Johnsen B and Granheim PK (2012) Prison size and the quality of life in Norwegian closed prisons in late modernity. In: Ugelvik T and Dullum J (eds) Penal Exceptionalism? Nordic Prison Policy and Practice. London: Routledge.
5. Carter, P (2007) Securing the future Proposals for the efficient and sustainable use of custody in England and Wales. London: Cabinet Office.
6. Howard League (2008) Submission to the Ministry of Justice on Titan Prisons: Consultation Paper CP10/08. Available to view at http://www.howardleague.org/fileadmin/howard_league/user/pdf/Consultations/Titan_prisons_July_08.pdf (last accessed 24/11/15).
7. Prison Reform Trust (2008) Titan prisons- A gigantic mistake; a Prison Reform Trust briefing. Available to view at http://www.prisonreformtrust.org.uk/Portals/0/Documents/Titan%20prisons%20-%20a%20gigantic%20mistake.pdf (last accessed 24/11/15).
8. Guardian (2009) David Cameron calls for league tables to improve UK prisons. Tuesday 6th January 2009. Available to view at http://www.theguardian.com/politics/2009/jan/06/cameron-conservatives-business-economy (last accessed 24/11/15).
9. Conservative Party (2009) Prisons with a Purpose: our sentencing and rehabilitation revolution to break the cycle of crime. London. Conservative Party. p. 96.
10. Ibid 7.

to 'learned experience' than empirical research. As authority the PRT cited the oppositional stance taken towards large prisons by the Prison Governor's Association, Prison Officer's Association, HMI Chief Inspector of Probation, HMI Chief Inspector of Prisons, Independent Monitoring Boards and a cross Party representative of MPs. Two empirical sources were cited: a thematic report on the effects of prison size on inspectorial judgements by Her Majesty's Inspectorate of Prisons[11] and a paper exploring the effects of prison size on prison life in Norway.[12]

In 2009, HMIP explored which factors predicted prisons being assessed as performing 'well' by HMIP Inspectors against its four tests of a healthy prison — safety, respect, purposeful activity, and resettlement. By statistical analysis, it was concluded that size, rather than age, management (public or private) functional type, and the distance prisons were held from home were the most influential factors in how prisons performed against tests for safety and respect. Johnsen et al[13] compared staff and prisoner evaluations of the quality of prison life in Norway. Using the 'Measuring the Quality of Prison Life' (MQPL) for prisoners and 'Staff Measuring the Quality of Prison Life' (SQL) for staff, the authors found prisoners and staff in smaller prisons were more positive about relationships with each other.

Such findings contradicted some existent academic research about the impact of prison size on aspects of prison performance. Reviewing the literature Farrington and Nuttall[14] had found no empirical evidence that prison size influenced behaviour inside or after leaving prison. Summing up the state of literature about the impact of prison size on violence Homel and Thompson[15] concluded 'Prison size alone is also not a reliable indicator of violence within the institution'. Conversely, a number of authors had argued that overcrowding was more important than numbers of inmates in terms of the stability of a prison.[16] Other research had suggested living unit size, as opposed to institutional size, was the most crucial variable impacting on prison performance.[17]

In any case, in April 2009 the announcement was made that the Titan prison building programme would be halted. The stated reasons were that the complexity and costs of such builds rendered them uneconomical and, on review, it was believed they were unlikely to provide the correct environment in which to rehabilitate offenders.[18] The 'does size matter' debate might have concluded at this point had not David Cameron performed a volte-face in 2013 by announcing that his government would proceed to build Europe's second biggest prison, holding 2,106 inmates, in Wrexham, North Wales. Unsurprisingly perhaps, the announcement attracted a level of hostility redolent of that expressed in 2007 towards Titan prisons.

In the ensuing years, commentators and politicians critical of the new prison have returned to the HMI Prisons research to make their case.[19,20] However, a problem they have faced is that much has changed in the years since the report was published, not least of all that larger prisons have, by stealth, become more the norm. In 2009 the largest single prison in the UK was HMP Wandsworth, holding, on average 1,461 prisoners. By 2015 the prison with the largest population was HMP Oakwood with 1,557 inmates and several prisons, most notably HMP Parc are set to overtake that number. Back in 2009, 25 prisons held over 800 prisoners but presently 36 share that distinction. In addition to these changes, since 2009 the Prison Service has been experimenting with a 'cluster prison' design whereby two or three prisons have been grouped and managed together with some central services being shared. Moreover, over the last five years, English and Welsh prisons had been benchmarked against each other with a view to standardising aspects of how prisons are resourced and regimes operate. Such developments, arguably, lend credibility to claims that, seven years on from the 'Titan proposal' greater experience in managing larger prison populations exists and could provide a foundation for successfully building and operating larger establishments.[21]

11. HM Inspectorate of Prisons. (2009) The prison characteristics that predict prisons being assessed as performing 'well': A thematic review by HM Chief Inspector of Prisons. London.
12. Johnsen, B., Granheim, P. K. and Helgesen, J. (2011) 'Exceptional Prison Conditions and the Quality of Prison Life: Prison Size and Prison Culture in Norwegian Closed Prisons'. *European Journal of criminology.* Vol 8 (6) pp.515-529.
13. Ibid 12.
14. Farrington, D. P., and Nuttal,C. (1980). 'Prison Size, Overcrowding, Prison Violence, and Recidivism.' Journal of Criminal Justice 8: 221–231.
15. Homel, R. & Thomson, C. (2005). Causes and prevention of violence in prisons. In Sean O'Toole & Simon Eyland (Eds.), Corrections criminology (pp. 101-108). Sydney: Hawkins Press p.106.
16. Megargee, E. I. (1976) Population density and disruptive behavior in a prison setting. In A. Cohen, G. Cole, & R. Bailey (Eds.), *Prison violence* Lexington, Massachusetts. D. C. Heath pp.135–146.
17. Roush,D.W (2008) The Relationship between Group Size and outcomes in Juvenile Corrctions: a partial review of the literature. Journal for Juvenile Justice and Detention Services Volume 17, Number 1, Spring 2002.
18. Ministry of Justice (2009) New Prisons Consultation Response, 27 April 2009. London: Ministry of Justice.
19. Jones,R (2013) Spinning in favour of a north wales Jail. Institute of Welsh affairs http://www.clickonwales.org/2013/12/spinning-in-favour-of-north-wales-titan-jail/ last accessed 24/11/15.
20. Howard League (2013) Building Britain's biggest prison will be a titanic waste of money, 10 January 2013.
21. Lockyear,K (2013) Future Prisons: A radical plan to reform the prison estate. London: Policy Exchange.

Methodology

Our intention in this paper is to explore afresh the effects of prison size on prison performance. As the 2009 HMIP study[22] has been widely quoted in recent debates about the effects of size on prison performance, its methodology is replicated here. Accordingly it should not be imagined that what we are doing is methodologically novel. HMIP published their report in 2009 drawing on inspection data that in some cases was five years old. Our contribution refreshes the literature and adds value through an analysis of the impact of additional factors such as overcrowding. Like HMI Prisons we explore the issue of whether size matters by examining the characteristics that predict a prison being assessed as performing well or poorly by HMI Prisons' Inspectors.

HMIP reports on the conditions and treatment of prisoners by inspecting outcomes for prisoners against four tests of a healthy prison. Inspections occur in accordance with a cycle (about every five years) and inspectors are on-site for around a week at a time. Key sources of information for the judgments inspectors make are quantitative data for example on use of force, time out of cell, or prisoner surveys, and qualitative data gathered by interview, focus group, observation or case file readings. Inspections involve not only staff from HMIP but seconded staff for agencies such as Ofstead (education) Care Quality Commission (health) HMI Probation (rehabilitation).

Inspection reports are published and include judgements about outcomes for prisoners associated with Safety, Respect, Purposeful Activity and Resettlement. Outcomes for prisoners in these areas might be assessed as good (a score of 4), reasonably good (a score of 3) not sufficiently good (a score of 2) or poor (a score of 1). Inspectorial reports include data about the functional type of prison, year it opened, the gender of the population and the type of management (private or public). Data on three additional variables that might bear on performance are also published: actual occupancy at the time of the inspection, the certified normal occupancy of the prison and the occupational capacity of the prison. Access to this data allows the per cent of operational capacity, or overcrowding rate, to be determined. The publications of this data allows for the impact of these variables (henceforth predictor variables) on outcome variables (healthy prisons cores) to be interrogated.

In 2009 HMIP undertook such an exercise and here we replicate aspects of it. Working from September 2015 backwards we accessed the inspection reports for each prison in England and Wales. In relation to assembling the data set, split sites were included separately where inspections had culminated in two sets of data being produced. Unique and untypical prisons were excluded for example foreign national and therapeutic prisons, and because our interest is with adult prisons, 17 YOIs. Available for inclusion in the final data set was descriptive and performance statistics from 124 reports, 16 concerned open prisons, 8 High Security prisons, 58 Cat C trainers and 42 were Cat B local prisons.

Subsequent to this the available predictor variables were categorised as follows:

Predictor variables	Coding of data
Functional type	1=Open 2=High security (HSE) 3=Trainer (cat C) 4= Local prison
Gender	1=Male 2=Female
Role	1=Young adults 2=Female 3=Adult males
Type of management	1=Private 2=State
Year prison opened	1= Before 1938 2=1939-1977 3=1978+
Size variable 1: Actual population at time of inspection	1= Under 400 2=400-800 3=801+ Also subject to median split
Size variable 2: Certified normal occupancy (i.e the normal and uncrowded) occupancy number	Continuous variable subject to median split
Size variable 3: Capacity (Maximum number of prisoners that can be safely held)	Continuous variable subject to median split
Overcrowding rate	1= Overcrowded 2= Not overcrowded

For data analysis purposes the outcome variables-inspectorial judgements, were collapsed so that score of 1 (good) and 2 (reasonably good), and 3 (not well enough) and 4 (poor), were combined to create two new categorical outcome variables indicating a prison was performing 'well' or 'poorly'. Additionally, the scores across the four healthy prison tests were aggregated to provide an overall healthy prison assessment ranging from four to 16. Thereafter that data was subject to a median split to create two categories of prisons performing well (score 11+) and those performing poorly (score <11) according to inspectorial judgements.

The above categorisation permitted logistical regression to create fitted models that identified which variables predicted inspectorial judgements and

22. Ibid 11.

odds ratio (Exp ß) which indicate the likelihood of the differing categorisations achieving a score of 4 (good). The odds ratios were established so that a score below 1.0 indicated a decreased likelihood of achieving a 'good', a score of exactly 1.0 indicated that the categorical variable had no impact on the likelihood of achieving a 'good', and a score of 1.01 or above indicated an increased likelihood of achieving a 'good'.

Findings

Our presentation of the data focusses primarily on those odds ratios that achieved statistical significance (where probability was set at the 95 per cent level, or p<.05). Size variables, category of prison, overcrowding rate and the year a prison opened had predictive power at the level of statistical significance on inspectorial judgements of prisons against the four tests of a healthy prison and overall

Size

As the following tables show, in relation to actual population at time of inspection, smaller prisons were significantly more likely to achieve 'good' scores on safety, respect, and purposeful activity. Those prisons under 400 were seven times more likely to score 'good' on safety, almost five times more likely to score 'good' on respect, and they were over five times more likely to score 'good' on purposeful activity. As discussed, the scores across the four healthy prison tests were aggregated to provide an overall healthy prison assessment ranging from four to 16. A median split of this data was then effected. This demonstrated that those prisons with a population of under 400 were nearly 3 times more likely to be within the top category of 'good' with overall scores.

Size	ß	SE	Exp(ß)	P<
Safety				
Under 400	2.02	.63	7.5	.001
401-800	.36	.65	1.44	NS
801+ *reference*	-	-	-	-
Respect				
Under 400	1.60	.71	4.94	.05
401-800	.01	.77	1.01	NS
801+ *reference*	-	-	-	-
Purposeful Activity				
Under 400	1.73	.70	5.64	.05
401-800	.81	.70	2.25	NS
801+ *reference*	-	-	-	-
Overall				
Under 400	1.04	.50	2.83	.05
401-800	-.02	.43	1.00	NS
801+ *reference*	-	-	-	-

When the predictor variable 'prison size' was subject to a median split, prisons where the actual size of the population was below the median (500) were about four times more likely to achieve a score of 'good' on all four aspects of rating.

	ß	SE	Exp(ß)	P<
Safety				
Under median	1.32	.42	3.76	.01
Over median				
Respect				
Under median	1.34	.51	3.81	.01
Over median				
Purposeful Activity				
Under median	1.33	.45	3.78	.01
Over median				
Resettlement Scores				
Under median	1.49	.45	4.46	.001
Over median				

A median split of the data in relation to a prison's Certified Normal Occupancy indicated that for all four elements of inspection, having a certified normal occupancy below the median increases scores on safety, respect, purposeful activity and resettlement. Smaller prisons were around three times more likely to achieve a good score on each indicator

	ß	SE	Exp(ß)	P<
Safety				
Below median	1.14	.42	3.14	.01
Above median	-			
Respect				
Below median	1.03	.15	2.80	.05
Above median	-			
Purposeful Activity				
Below median	1.08	.45	2.96	.05
Above median				
Resettlement Scores				
Below median	1.36	.46	3.92	.03
Above median	-			

In relation to capacity a median split of that data demonstrated that being in a prison with a capacity of less than the median (500) was predictive of a 'good' rating on all for aspects of measurement. Prisons with smaller capacities were almost five times more likely to achieve a good score on each indicator.

	ß	SE	Exp(ß)	P<
Safety				
Under median	1.52	.42	4.55	.001
Over median				
Respect				
Under median	1.50	.50	4.49	.01
Over median				
Purposeful Activity				
Under median	1.59	046	4.91	.001
Over median				
Resettlement Scores				
Under median	1.68	.46	5.34	.001
Over median				

Category of Prison

The category of prison had some predicative power, however, this reached the level of statistical significance only in relation to 'safety' judgements. As the following table shows open prisons were nine times

more likely achieve 'good' scores in safety. The remainder of the categories did not reach statistical significance, however, open prisons were also more likely to score 'good' on respect and purposeful activity, whereas HSE prisons are more likely to score 'good' on resettlement scores.

	ß	SE	Exp(ß)	P<
Safety				
Open	2.25	.69	9.51	.001
HSE	-19.20	14210.36	0.000	NS
Trainer	1.04	.56	2.82	NS
Local *reference*	-	-	-	-
Respect				
Open	.69	.73	2.00	NS
HSE	-.15	1.16	0.86	NS
Trainer	-.04	.58	0.96	NS
Local *reference*	-	-	-	-
Purposeful Activity				
Open	1.10	.66	3.00	NS
HSE	-.34	1.15	0.71	NS
Trainer	.16	.53	1.17	NS
Local *reference*	-	-	-	-
Resettlement Scores				
Open	-.50	.85	0.61	NS
HSE	.35	.10	1.42	NS
Trainer	-.39	.55	.68	NS
Local *reference*	-	-	-	-
Overall score				
Open	1.11	.81	3.03	NS
HSE	-1.59	1.17	4.90	NS
Trainer	0.11	.56	1.14	NS
Local *reference*	-	-	-	-

Overcrowding

Overcrowding had some predicative power, however, this reached the level of statistical significance only in relation to 'resettlement' scores' where prisons which were not overcrowded were more than three times more likely to be assessed as performing well in terms of resettlement activity then overcrowded prisons:

Resettlement Scores				
Under crowded	1.17	.55	3.25	.05
Overcrowded	-	-	-	-

Year Prison Opened

The year a prison opened had some predictive power, however, this reached the level of statistical significance only in relation to the overall score for a prison. Prisons opened pre-1938 were statistically significantly more likely to be rated as performing below the median overall score.

	ß	SE	Exp(ß)	P<
Pre 1938	-1.13	.45	0.32	.05
1939-1977	.05	.48	1.05	NS
1978+ *reference*	-	-	-	-

Whilst not having predictive power, other findings in relation to the year the prison opened are of some interest. As the following table shows, prisons opened before 1938 were less likely to score 'good' on safety whereas those opened 1939–1977 were twice as likely to score 'good'. Prisons opened prior to 1978 were more likely to score 'good' on respect. With reference to purposeful activity and resettlement scores, prisons opened prior to 1938 were less likely to score 'good' in these two categories whereas those opened 1939–1977 are more likely to score 'good'. In sum, the overall tendency was for older and much newer prisons to be outperformed by 'middle-aged' prisons on the 4 individual tests of a healthy prison.

Management

	ß	SE	Exp(ß)	P<
Safety				
Pre 1938	-.43	.59	0.65	NS
1939-1977	.75	.53	2.12	NS
1978+ *reference*	-	-	-	-
Respect				
Pre 1938	.24	.67	1.27	NS
1939-1977	.48	.66	1.61	NS
1978+ *reference*	-	-	-	-
Purposeful Activity				
Pre 1938	-.61	.61	.54	NS
1939-1977	.33	.54	1.39	NS
1978+ *reference*	-	-	-	-
Resettlement Scores				
Pre 1938	-.62	.65	.54	NS
1939-1977	.15	.59	1.16	NS
1978+ *reference*	-	-	-	-

The data in relation to management did not reach the level of statistical significance. That being said, publically managed prisons were over 1.5 times more likely to receive a 'good' rating in safety and three times more likely to score 'good' on purposeful activity. Prisons with a public management were less likely to score 'good' on resettlement scores and respect.

	ß	SE	Exp(ß)	P<
Safety				
Public	.51	.81	1.67	NS
Private *reference*	-	-	-	-
Respect				
Public	-.11	.82	0.90	NS
Private *reference*	-	-	-	-
Purposeful Activity				
Public	1.10	1.07	3.00	NS
Private *reference*	-	-	-	-
Resettlement Scores				
Public	-.62	.72	0.54	NS
Private *reference*	-	-	-	-
Overall				
Public	-.81	.68	0.45	NS
Private *reference*	-	-	-	-

Findings: Cat C Training Prisons

Because the category of prison had some predictive power, a Category C (training) prison is being

built in north Wales, and such an analysis might deliver a more complete picture, the impact of the predictor variables on assessments of performance of Category C (training) prisons was analysed separately.

Size

Such an analysis, perhaps unsurprisingly, yields findings of a similar nature to those for all prisons. In relation to training prisons, only size had any statistically significant power in relation to the assessments made by inspectors against HMI Prisons tests of a heathy prison. Statistical differences were demonstrated in terms of safety, respect and purposeful activity in prisons with under 400 inmates. With regards to safety, smaller prisons were 7 times as likely to record a good, in terms of respect smaller prisons were 5 times more likely to record a 'good', and in terms of purposeful activity smaller prisons were 6 times more likely to score a 'good' when compared with larger prisons.

	ß	SE	Exp(ß)	P<
Safety				
Under 400	1.98	.67	7.25	.01
401-800	-.05	.72	0.95	NS
801+ *reference*	-	-	-	-
Respect				
Under 400	1.61	.75	5.00	.05
401-800	-.29	.85	0.75	NS
801+ *reference*	-	-	-	-
Purposeful Activity				
Under 400	1.79	.74	6.00	.05
401-800	.48	.75	1.62	NS
801+ *reference*	-	-	-	-

Whilst other variables were not a statistically significant predictors of assessments of performance, here too the findings in relation to the year the prison opened are of interest. As the table below shows. Middle-aged prisons, that is those prison that were opened between 1939 and 1977 were more likely to receive a 'good' on the indicators of safety, respect, purposeful activity, and resettlement.

	ß	SE	Exp(ß)	P<
Safety				
Pre 1938	-.45	.64	0.63	NS
1939-1977	.41	.61	1.50	NS
1978+ *reference*	-	-	-	-
Respect				
Pre 1938	-.18	.72	0.83	NS
1939-1977	.14	.73	1.15	NS
1978+ *reference*	-	-	-	-
Purposeful Activity				
Pre 1938	-.68	.66	0.51	NS
1939-1977	.07	.63	1.07	NS
1978+ *reference*	-	-	-	-
Resettlement Scores				
Pre 1938	-.18	.72	0.83	NS
1939-1977	.56	.69	1.75	NS
1978+ *reference*	-	-	-	-

In addition, as the following data shows while none of these relationships demonstrate statistical significance, those prison that are run as public prisons were more likely to achieve 'good' in terms of safety, and are twice as likely to achieve 'good' in terms of purposeful activity.

	ß	SE	Exp(ß)	P<
Safety				
Public	.20	.82	1.22	NS
Private *reference*	-	-	-	-
Respect Public	-.36	.84	0.70	NS
Private *reference*	-	-	-	-
Purposeful Activity				
Public	.86	1.08	2.36	NS
Private *reference*	-	-	-	-
Resettlement Scores				
Public	-.79	.74	0.46	NS
Private *reference*	-	-	-	-

Conclusion

Our concern with this paper has been with refreshing and extending existent empirical data and to that end we have re-examined what predicts prisons being assessed by HMIP Inspectors as performing well against its tests of a healthy prison.

We found that size, more than any other factor, still predicted prison performance and that larger prisons were assessed by HMI Prison inspectors as being less safe, less respectful and less able to engage prisoners in purposeful activity. Apart for this, open prisons were more likely to be assessed as performing well against safety measures. Prisons built between1939 and 1977, were more likely to be performing well that is to receive a 'good' rating by HMIP Inspectors on indicators of safety, respect, purposeful activity, and resettlement. An analysis of the data only as it related to Cat C prisons showed size alone predicted performance being assessed as good by HMIP Inspectors on indicators of safety, respect and purposeful activity.

The precise mechanisms through which size might matter in terms of how inspectors assess prison performance is not amenable to specification by analysis of the findings of this research. However, the issue of whether size matters and, if so, how is not unique to prisons. It has been explored in relation to the optimum size for nation states,[23] local authorities,[24] hospitals[25]

23. Alesina, A and Enrico, S (2003) The Size of Nations (MIT Press: Cambridge).
24. Newton,K (1982) Is Small Really So Beautiful? Is Big Really Ugly? Size, Effectiveness and Democracy in Local Government. Political Studies 30 (2) pp.190–206.
25. osnett, J. (2002) 'Are bigger hospitals better?' in McKee, M. and Healy, J. (eds.) Hospitals in a Changing Europe, Buckingham: Open University Press.

schools,[26] shops[27,28] and even families.[29] In these contexts, economies of scale have been associated with size. However such economies often attended per capita reductions in staff and/or exerting greater control over how staff use their time. As a result, increased size has also been associated with reduced contact and more formal relationships between service providers and service recipients. For example, Lavallee and Boyer,[30] suggest that in retail contexts, the move from small shop to supermarket based trade has meant that 'the people who know your name when you enter the store to shop' have been replaced by 'faceless, corporate providers of consumer goods'. In health contexts Van Teijlingen and Pitchforth[31] suggest that the move from local to district hospital provision has supported the development of highly impersonalised forms of care wherein patients have become passive objects of medicalised interventions as opposed to individual care. As Goffman[32] identifies, when an activity is directed towards human beings, some technically unnecessary standards of handling may always be done away with to save money. Thus a search for economies of scale may be associated with less frequent but more bureaucratic, uniform and formal relationships between service providers and service users. The development of such relationships could have particular negative outcomes in prisons. This is because where exchanges are more restricted, or they are structured primarily around administrative functions, a destructive oppositional relationship may develop between staff and prisoners. Moreover opportunities to motivate and influence prisoners towards compliance will be reduced.

There is no necessary relationship between prison size and prison performance. Some larger prisons for example HMP Parc, perform well in HMIP Inspections and some smaller prisons perform poorly (e.g HMP Wolds). Most of Goffman's pains of imprisonment do not rest on the size of the prison and it is important not to promote an idyllic picture of smaller prisons. However, a growing number of authors place staff-prisoner relationships at the heart of their analysis of how prisons perform.[33,34;35,36;37,38] Indeed the quality of this relationship is the subject of specific commentary within HMIP Inspection reports. Larger prisons are assessed less positively by HMI Prison Inspectors. One of the reasons for this could be that infrequent, bureaucratic and administrative involvement in the lives of troubled individuals is less likely to be associated with perceptions of safety and respect and prisoners being motivated to engage in purposeful activities and activities which promote rehabilitation.

26. Pittman, R.B and Haughwout, P (1987) Educational Evaluation and policy Analysis vol. 9 (4) pp. 337–34.
27. Lavallee, T.M., Boyer, M.A. 2006. Globalization and local governance: Implications from Wal-Mart's expansion, International Studies Perspectives 7, 254–266.
28. Van Teijlingen, E.R. and Pitchforth,E. (2009) Rural Maternity Care: Can we learn from Wal-Mart? Health Place Vol 16(20 pp. 359–364.
29. Lawson DW & Mace R.(2011) Parental investment and the optimization of human family size. Philosophical Transactions of the Royal Society B: Biological Sciences 366: 333–343.
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31. Ibid 28.
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