

## **Motivational factors in construction projects : a review of empirical motivation studies from the US construction industry**

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The Authors' review of the findings of earlier studies makes sobering reading and, if reflected in the UK, must be cause for concern. It is reported that waiting for decisions or materials is the most serious demotivating factor on large sites; yet such sites are likely to have a large supervisory organization, with the implication that senior engineering staff are readily available to give advice and direction. What then is the position on relatively small projects where there may be only a part-time agent or contract manager? Is there any evidence to suggest that similar delays which must occur periodically demotivate to the same or greater extent, since it must be accepted by the workers that some loss of productive time is inevitable in such circumstances?

34. In my experience in the UK, site operatives are frequently working to bonus targets which are set for separate operations such as erecting formwork for a concrete pour or fixing steel reinforcement in a retaining wall base. Site supervisory staff are under considerable pressure not only from senior management but also from the operatives to ensure that there is sufficient information and materials to enable the men to progress the work expeditiously. Any disruption to the operation which has a direct effect on their ability to better the set target is likely to precipitate a strong reaction from the labour squad.

35. Until a few years ago in the UK, the amount of income tax deducted from the individual's weekly wage appeared to be a major factor in determining his motivation. It was not uncommon for craftsmen to fail to work a full day on a Friday on the grounds that they had generated sufficient income by the Thursday evening. The additional tax liability on the income for Friday was perceived to be disproportionately large in relation to the net increases in wages. Factors such as these may not have been highlighted in a survey of construction sites in the USA where the tax levels are understood to be lower than in the UK. Therefore, the extent to which study findings from the USA can be applied directly to the UK construction industry may be limited.

36. I would endorse the views expressed in the Paper that more investigation into motivation in the UK should be carried out. The Authors highlight some of the problems associated with motivating operatives on construction sites.

**R. Bidgood**, *Fellow*

Paragraph 26 hits the nail on the head. Few managers and team leaders seem to understand, practise or even acknowledge the art of man-management, something

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## DISCUSSION

dealt with very thoroughly in the Services. People can be led, not driven. A desire to be regarded as a good manager is frequently confused with thinking one should be tough, autocratic, and all too ready to issue threats and impose arbitrary penalties.

38. It is understandable that, in striving to meet a completion date, a site manager will at times become choleric. However, this should be reserved for emergencies and not become the norm, or respect will be lost and negative motivation result.

### **Mr Mansfield and Mr Odeh**

To a large extent it is true that management of large projects is treated in a more professional manner by devoting senior engineering staff to organize a smooth flow of work and to minimize delays. Yet the success of management in performing such tasks seems to lag behind what has been observed in small projects. This may be attributed to the complexity of co-ordinating the activities of a large project and to other associated waiting problems, such as on-site travel time, which do not exist in small jobs.

40. Having a part-time agent, contract manager, or even an experienced foreman to manage small projects does not seem to be critical; the critical factor is the degree of control over a less complex project. In fact, the role of a foreman in smaller projects appears to be quite influential in making decisions and enhancing performance, much to the advantage of his morale which reflects on the workmen and their motivation. However, this is not to say that small projects are free from demotivating delays by being less complicated, indeed things can go wrong when poor decisions are made. However, it can be concluded that small projects are less vulnerable to waiting problems and their effect on morale and motivation.

41. Waiting for materials has not been uncommon on some of the UK's larger projects: for instance, on one of the early North Sea oil projects which suffered delays through the need for vital materials at a critical stage.<sup>18</sup> In such situations, large organizations can fall over themselves and flood a project with too many resources, which gives rise to inevitable delays.

42. When the workforce are working to a price, it can be obvious to even the casual observer or passer-by that there is a committed level of activity. On the other hand, the subcontract system on small building works often passes on the cost of delays to subcontractors. While the self-employed workforce may resent this, they usually have to accept it as part and parcel of the job. Even on large projects the price of inefficiency can be reflected in the difference between the all-in hourly rate which a subcontractor is paid and that which he chooses to pass on to his employees. These net rates may not be large, yet casual workers will have agreed to work for these figures. What they may not realize is that by being more efficient and by taking more control of a construction waiting situation, they could increase their own rate of pay.

43. With regard to tax, there has been a reduction in UK income tax (as a chargeable proportion of income) in the 1980s, and this has tended to bring the situation more in line with the USA. However, tax is only one factor in a complicated motivational mix. Even now, large UK projects such as the Channel Tunnel and Trident construction works are affected by the chosen type of contract. In the former, the costs have escalated to such an extent that the target has been affected; this can be demotivating in itself, even apart from replacement of top management,

with its consequent repercussions on staff reappointments down the line. In the latter there appears to be a preoccupation with work orders for each item of work and a heavy load of paperwork attached to this system of working, itself a function of defence standards and quality assurance. The Authors would therefore add type of contract and internal bureaucratic procedures to the list of factors affecting motivation indirectly and directly.<sup>19</sup>

44. What makes for motivation and what creates the opposite effect has not always been that obvious or immediately apparent to managers in the construction industry. Mr Bidgood suggests that the Services have a better understanding here. However, to the outside civil observer, the armed forces appear to have very rigorous formal procedures on which they seem to lean far too heavily to establish authority. What is less well known is the extent to which they actually use informal systems to cajole and motivate their labour and staff, making great use of the charismatic qualities of leader individuals who have been carefully selected for these very qualities. On this point, the 'civil' side of civil engineering, in its first derived sense, could learn much about man management from its military counterparts. In fact, opportunities for cross-pollination of ideas in this context seem to occur very infrequently, if at all, even in a professional context.

45. The very demanding responsibility, which lies upon the Services, to fulfil the national expectation and defend the country against any threat means that the morale and performance of members of the armed forces must be addressed very seriously indeed.

46. Given the tough tasks to be performed and the authoritarian style of the military bureaucratic system, obedience and tolerance are usually the more common types of response in terms of behaviour. This may be attributable to the special motivating nature of the army, which offers opportunities for national and personal ambitions, thereby satisfying participants' needs for self-esteem and pride in the most traditional manner.

47. In recent years, an interesting example of bringing workers and supervisory staff from military backgrounds to civilian construction projects has been seen, when some Far Eastern contractors have operated with high levels of discipline and success in a number of developing countries.

48. Finally, the Paper was pitched at the level of the site workforce and supervisory staff. The intention was to draw attention, in a brief Paper, to a wide selection of useful US literature and other sources. The Authors share the views of Mr Rowdon that the USA study findings (in spite of their usefulness in stimulating what is a deficient area in the UK's construction management) are, in fact, limited in their direct application; this should be an incentive for further investigation of motivation in a particular UK context.

## References

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19. MANSFIELD N. R. and ODEH N. S. *Issues affecting motivation on construction projects* (to be published 1990).