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“More For Less” in the Irish Construction Industry? An exploration into the benefits and feasibility of implementing Reduced Working Hours Strategies on Construction Sites in Ireland

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The purpose of this study was to review the effectiveness of Reduced Working Hours Strategies (RWHS) such as The Four Day Week and explore Irish construction industry perception of how implementing such strategies might impact employee health, safety, well-being, recruitment, retention, and productivity. A mixed-methods research approach was used to uncover any perceptions of benefits, drawbacks and feasibility of RWHSs. The employer’s perspective was based on semi-structured interview data from market leading international construction companies. This was triangulated with survey data from the employee’s perspective to generate richer insights. Results suggested RWHSs could significantly improve working and personal lives of on-site employees. Employees were working on average above 50 hours per week and are aware of the potential benefits of RWHSs particularly with regard to health, accidents, retention and work-life balance. The research indicates that from employer perspective, the study concluded that management personnel were wary of widespread implementation of RWHSs but regarded their implementation feasible in specific aspects of the construction process such as pre-fabrication. Furthermore, they felt increased use of BIM and innovative procurement might facilitate such strategies. Exploring the use of RWHSs was generally perceived as necessary and potentially beneficial, particularly given the industry’s recruitment, retention and productivity issues.

Keywords: Four day week, construction, Ireland, benefits

Introduction

Promoters of Reduced Working Hours Strategies (RWHS) insist that they are significantly, and sometimes dramatically, beneficial for both employers and employees. Benefits to employees are asserted to include improved physical and mental health as well as a better work-life balance. Benefits to employers are stated to include less disruption and financial loss due to absenteeism, accident, illness and turnover issues.

Companies that implement RWHSs are also reported to experience greater ease in recruitment and retention as well as, in many cases, improved productivity through an improvement in KPIs such as health and safety metrics, work quality and employee satisfaction. RWHSs have become a reality at the forefront of innovative work practices in many industries both on an Irish and Global scale. Forsa (2022) reported that the recent trial of a Four Day Week (4DW) in Irish companies left 100% of employees hoping to continue with their reduced work week. Out of 12 companies, 9 will definitely continue with their reduced schedule while 3 companies are continuing to trial the 4DW but have not yet made a final decision on commitment. In an even more recent trial in the UK by Lewis et al (2023), reporting that 56 of the 61 companies participating are continuing with the 4DW, while 18 of these have made it permanent policy.

The purpose of this study is to discover how Reduced Working Hours Strategies could impact the productivity rate on Irish construction sites and investigate the barriers to implementing these initiatives.

The Origins

Historically, Frederick W. Taylor conducted scientific management experiments on pig iron handlers and ball bearing inspectors (Locke, 1982). He decided to reduce time-wasting and fatigue and found a way to cut employee hours without reducing pay and make a profit. De Vyver (1930) describes how in 1909 the Curtis Publishing Company reduced mechanical labour hours from 54 hours to 48 while maintaining existing total weekly pay. The strategy was successful and was permanently adopted by the company. The English economist John Maynard Keynes (1932) predicted in 1930 that a 15-hour working week would be the norm in two generations. Clearly, this has not been the case.

The Organisation of Working Time Act (1997) states that the maximum average hours Irish employees can work per week is 48 hours. They state the standard week is 40 hours with 12 hours of overtime per week for the first ten weeks of your seventeen-week reference period. The Workplace Relations Commission (2022) states that the normal working week for construction workers is 39 hours worked over five days.

Health Safety & Wellbeing

Irish construction sites remain dangerous working environments and pose high risks to workers. The HSA (2022) reported 7 construction sector fatalities in 2022 – nearly 27% of all work-related fatalities that year, while the Construction Industry Federation (CIF) (2020) have been reporting high rates of suicide and poor mental health in the industry. The most common reasons for work-related illness in Ireland in 2021 were bone, muscle, joint, depression, stress and anxiety issues (HSA, 2022).

Schor et al's (2022) Global 4DW study found that the average physical health rating for employees trialing their RWHSs improved, with the average rating rising from 63.4% to 67% and weekly exercise increasing by an average of 23.7 minutes

Poor mental health is a huge issue for construction industry employees. A study by CIRP found that 83% of workers in the sector reported 'moderate to severe' mental health issues that featured depression, anxiety and PTSD (BC Building Trades, 2020). The CIF (2020) studied the reasons for mental health issues among Irish construction workers. Of 1,266 companies studied, 22% reported long working hours as the work-related stressor for these problems, while 49% of employers reported mental health related issues causing absence from work. Lewis et al (2023) presented even more dramatic results in the UK 4DW trial. At the end of the trial, 43% of employees had an increase in mental health with 16% reporting a decline. Stress was similar with 39% of workers reporting less stress by the end of the trial with 13% experiencing more

Work Life Balance

The Oxford English Dictionary (2023) defines work-life balance as 'the division of one's time and focus between working and family or leisure activities'. Many companies appear to have concentrated on the 'focus' element, through in-work wellness initiatives, rather than granting employees 'time' to decide their own priorities.

The average rating employees gave for their work-life balance increased by 15.6% in a Global 4DW trial (Schor et al, 2022). They had more time for household jobs, and many had sufficient time for childcare. The number of workers wanting more time for childcare dropped by 20%. In the UK 4DW trial, 45% of employees surveyed reported an increase of satisfaction with relationships (Lewis et al, 2023)

Recruitment & Retention

Roche (2022) reported that 63% of Irish construction companies were struggling to recruit the talent they needed. The primary reasons given were construction being less attractive than other jobs, construction being a last-choice and the emigration of young people. Many have blamed the construction sector's history of longer hours for this negative image. In 2022, Irish engineering contractor Mercury sent out advertisements for work and received only two applications (Power, 2022). Their apprentice development manager attributed this to early starts.

Schor et al's (2022) study found an average employee growth of 12.16% for companies participating. Henley Business School's (2019) paper reported that 63% of UK businesses operating a four-day working week surveyed claimed it helps them to attract and retain the right employees. This figure rose to 70% for attracting and retaining older employees and 71% for employees with children or caring responsibilities. Lewis et al's (2023) study yielded a 57% decrease in staff turnover and a 37% decrease of people wanting to change jobs. The Hays Ireland survey has harsh finding for employers who do not favour RWHSs. Almost three quarters (73%) of Irish professionals surveyed by the recruiter said they would consider moving to a different organisation to avail of a shorter working week. This was a rise of almost 10% on last year's figure of 64%.

Productivity

Productivity does not appear to be improving in the construction industry despite the many technological advances that have been adopted. 'Global labour-productivity growth in construction has averaged only 1 percent a year over the past two decades... contrasted with growth of 2.8 percent in the world economy and 3.6 percent in manufacturing' (Barbosa et al, 2017). Construction site workers are

working extensive hours yet the industry’s productivity rate is 1.8 percent lower than the global industry average.

Ireland is no exception to this global trend. Based on gross value added (GVA) per hour worked, the CSO (2022) reported the Irish construction sectors labour productivity to be less than a third of the national sectorial average.

An analysis of productivity in the Irish construction sector by KPMG, Future Analytics & TU Dublin (2020) stated ‘Safe and fair working conditions are baseline requirements for labour productivity which if absent place a limit on the quality and timely delivery of work, health and safety, employee well-being, benefits of employment... and innovation’

While the Irish Department of Enterprise, Trade and Employment (2022) states that the maximum average working week is 48 hours, in actuality, this is often not the case for employees in the construction sector, where contracts include clauses for the possibility of overtime work to ‘fulfil responsibilities’.

Study Design

The aim of this study was to begin to bridge the gap between existing reduced working hours research and the construction industry. A deductive research approach was utilised in this study. Min Kim (2021) explains deductive research as narrowing information from a general to a more specific level. This study explores the previous success of RWHSs and hypothesises whether the same outcome would result if implemented on Irish construction sites.

Table 1 Deductive Research Approach

	Theory	Hypothesis	Test	Outcome
The study	RWHSs are perceived as significantly benefitting to employers and employees in many industries Globally.	RWHSs will be perceived as significantly benefitting Irish construction employers and employees.	Collect quantitative data on the benefits and drawbacks of implementing RWHSs on Irish construction sites from employee perspective. Collect qualitative data on the feasibility of implementing RWHSs on Irish construction sites from employer perspective.	<p>RWHSs are perceived as significantly benefitting to Irish construction employers /The RWHSs are not perceived as significantly benefitting to Irish construction employers.</p> <p>RWHSs are perceived as significantly benefitting to Irish construction employees / RWHSs are not perceived as significantly benefitting to Irish construction employees.</p>

Creswell and Tashakkori (2007) describe the aim of mixed methods research – ‘Mixed methods research is simply more than reporting two distinct ‘strands’ of quantitative and qualitative research; these studies must also integrate, link, or connect these ‘strands’ in some way. The expectation is that by the end of the manuscript, conclusions gleaned from the two strands are integrated to provide a fuller understanding of the phenomenon under study’.

This study used quantitative methods to explore employee perspective on how working hours affected their performance and well-being. This information was then compared against qualitative data in relation to employer's perspectives on these issues and how they impact on retention, recruitment, productivity, and other matters. The weaving method was utilised to integrate qualitative and quantitative research and merge this with knowledge gained from the critical review of existing studies.

Site based Employee Perspective

Quantitative research focused on the experience of 105 site-based Irish construction employees and surveyed their attitude and expectations regarding the implementation of a 4DW or other RWHSs. It reflected employee perspectives on key aspects of how hours worked affects productivity as well as health, safety and well-being. The participants were requested to complete a questionnaire (issued by QR code) about several factors, noted in Table 2 below. The final sample in this research was based on 105 completed and valid questionnaires. The survey data was tabulated into numerical form using Microsoft Excel and transferred to the Statistical Packages for Social Sciences (SPSS, version 24.0) software for statistical analysis.

Table 2

Quantitative data questionnaire question categories
1. Occupation
2. Gender
3. Average hours worked per week
4. Longer hours in construction
5. Work hours effects on illness
6. Tiredness causing accidents
7. Working hours and work-life balance
8. Working hours and mental health
9. Working hours and alcohol/substance abuse
10. Working hours and productivity
11. Working hours and retention
12. Working hours and retirement age
13. Reduced work hours and retirement age
14. Use of extra time

Management Perspective

Qualitative research was carried out in the form of semi-structured interviews with senior Construction Management operating sites in Ireland. Participants were drawn from a sample of successful, market leading international construction companies with their head offices in Ireland. The interviews were carried out to investigate and explore the barriers to the implementation of a 4DW. Karin Hammarberg et al (2016) outlines qualitative research as answering questions about the experience, meaning and perspective from the participants point of view. Participants were asked their opinion on a variety of variables in relation to 4DW as listed Table 3 below.

Table 3

<i>Qualitative data variables</i>	
1. Benefits to industry and company	7. Compensation claims and disruption
2. Trialling	8. Productivity
3. Recruitment issues	9. Barriers
4. Recruitment of young people	10. Suitability
5. Recruitment of woman	11. Support
6. Retention	12. Industry Exploration

The initial data analysis of the 8 semi-structured interviews included an assessment of the interview responses to identify any specific patterns within the collected data. The participants' interview transcripts were analysed systematically to assess the gathered data and to observe similarities and differences between individual responses.

Findings and Analysis

The research findings reveal that RWHSs could significantly improve the working and personal lives of on-site employees. However, from employer perspective, the study concluded that management personnel were wary of widespread implementation of RWHSs but regarded their implementation feasible in specific aspects of the construction process.

Health, Safety and Well Being

Management and employees appeared to be in general agreement regarding long working hours accelerating the accident and illness rate on construction sites. Only 21% of site-based workers surveyed in this study felt that current working hours on a construction site are compatible with satisfactory mental health, while just over 73% felt the working hours were not compatible. Existing research shows that many construction professionals believe that the substance and alcohol consumption rate is high in the Irish construction sector (Business Bliss Consultants FZE, 2021). For site-based construction employees, the potential benefits of implementing RWHSs in terms of improving safety, health and general wellness are clear. They enable employees to be happier and more fulfilled in many aspects of their lives. This would then positively impact on work performance.

The findings also show that most construction management professionals also agreed RWHSs could produce great benefits, from an employer perspective as well as an employee perspective. RWHSs have been shown to offer an immediate improvement to the disruption caused by labour-related issues such as absenteeism, illness, accidents and poor attitude. There is no reason to think that introduction of RWHSs would not have the same effects on the Irish construction industry.

Recruitment and Retention

The research found that most Irish site-based construction workers surveyed felt long hours are a key factor in creating the workplace environment that contributes to the negative perception of the industry - causing accidents, mental and physical illness, substance and alcohol abuse as well as poor productivity. RWHSs, a potential solution, appear to be becoming more popular on a global scale. Recent trials have shown huge benefits, with most companies continuing with their RWHS. Previous

studies have also demonstrated the benefits of a four-day week in attracting and retaining employees (Schor et al, 2022; Henley Business School, 2019).

"Every company should try and keep up with the changing world because to attract employees now, you have to keep up with the new trends. And this is obviously one of the new trends."
(Gillian Murphy, Exyte)

Managers mostly agreed that adopting RWHSs could attract the younger generation of workers, but many did not feel the attraction of these strategies were related to gender.

SIG (2023) cited 'a lack of female role models and mentors' as one of the main reasons for the shortage of women construction workers in Ireland. Other organisations (CIF, 2018) have also suggested this as a key issue in the recruitment of women. 75% of site-based female employees surveyed in this study had seriously considered moving to another industry. When looking at Table 4 below it the question could be is RWHS the mechanism to ensure females will not only stay in the industry but also attract the next generation.

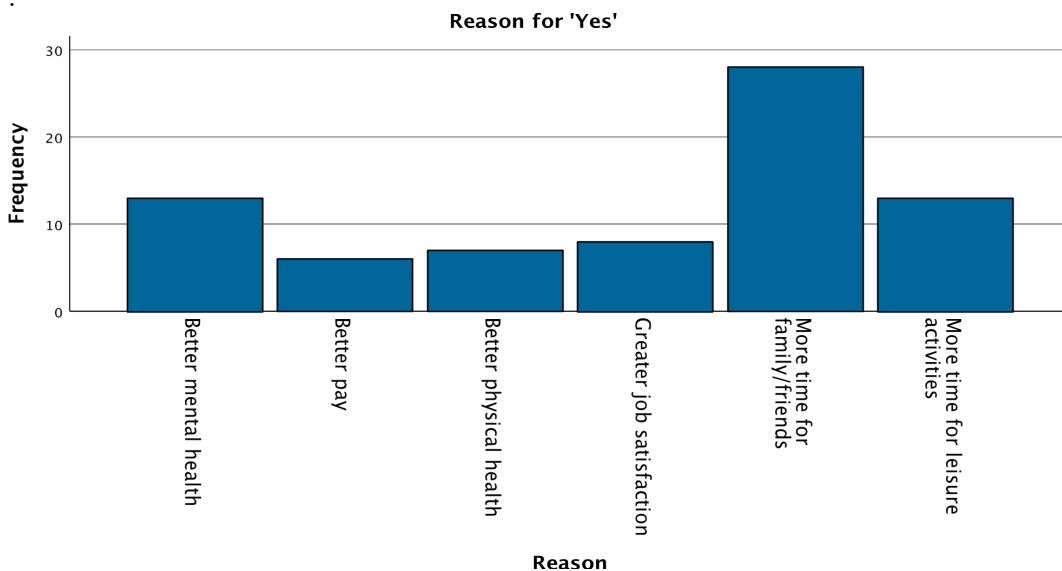


Table 4 – Reasons for working in another industry

Previous research has shown there is a belief among workers in all industries that RWHSs such as the 4DW will become normal over the next decade. It is difficult to see how the Irish construction industry, already suffering from worker shortages, can avoid adopting some forms of RWHSs

Productivity

Existing research seeking to improve poor productivity in the construction industry have not really looked to RWHSs as providing potential solutions. Over three quarters of site-based construction employees felt that regularly working longer hours did not increase productivity. Overall, 77% of site-based employees surveyed in the WHCS survey felt that regularly working longer hours did not increase productivity. Approximately 67% of Irish site-based employees surveyed felt this was due to a less positive attitude to work.

Existing literature has shown that RWHSs can improve work attitude and other KPIs. The crucial question of whether the implementation of RWHSs would deliver significant productivity improvements, some construction professionals thought it would work but only for some construction roles, while one felt it would be difficult to prove. Even though they admit such strategies have improved productivity in other industries, senior Irish construction managers and executives are ambivalent as to whether RWHSs might have similar effects on their particular sector, given its complexities.

Feasibility

Construction management professionals felt the complexity of the construction industry is a significant barrier to RWHSs and it seems very difficult to imagine 'a one size fits all' approach to such strategies working across the entire sector. For example, many workers such as those on short term contracts, self-employed tradespeople and operatives, often work intensively on a project-by-project basis and nearly two-thirds of site-based construction employees were found to be working at least 50 hours on average per week. The pressures imposed by chasing commercial margins also appears to cast doubts on the feasibility of implementing RWHSs from an employer perspective.

Most construction professionals interviewed in the study felt that client perception would be one of the main barriers to the implementation of RWHSs.

"The client will always try and squeeze the smallest amount of time scale to get their product out to the market to maximize their profit potential. The perception is they're losing a day. It's not like they've got a better workforce, that are happier." (Robert Paton, Exyte)

However, in contrast there were findings that private forward-thinking clients could favour tenders including RWHS implementation.

"The likes of Facebook, Google and LinkedIn, who are more progressive in their thinking, may actually welcome that particular (RWHS) contract." (Ed McIntyre, National Paediatric Hospital)

Existing research by Hays Ireland found that the majority of Irish professionals feel a four-day work week will be widely adopted in the next five years (Four Day Week Global 2022). There is concern from many that other industries will advance while the construction sector carries on without change. The type of RWHSs suitable for particular activities within the industry might then become important. Construction management personnel suggested that trends within the industry such as the increased use of off-site construction and Building Information Modelling (BIM) may also provide the opportunity to at least explore their potential.

Reflection and Recommendations

For employees in all industries the potential benefits of implementing Reduced Working Hours Strategies (RWHSs) seem substantial. International studies have reported positive outcomes for employees participating in the many trials and implementations of RWHSs currently taking place. For employers, the attractions of RWHSs can be less obvious. However, a substantial number of employers have retained reduced hours strategies after trialling them and they have then become their normal working conditions.

The construction industry does pose problems for the introduction of RWHSs, particularly in terms of on-site working. However, issues such as poor worker well-being, recruitment, retention and productivity levels may force employers to engage with RWHSs and overcome barriers to their implementation. The construction sector is viewed as a vital part of the Irish economy and the Irish Government recognises the need to substantially increase current levels of recruitment and retention. With existing literature reporting negatively on Ireland's housing forecasts, and one construction director pointing out the feasibility of RWHSs particularly for housing units, the Government may need to urgently explore ways to encourage the industry to adopt RWHSs.

References

- Barbosa, F. *et al.* (2017) "Reinventing Construction: A Route to Higher Productivity," *McKinsey Global Institute*, p. 8. Available at: <https://www.mckinsey.com/capabilities/operations/ourinsights/reinventing-construction-through-a-productivity-revolution> (Accessed: November 05, 2022)
- BC Building Trades (2020) *83% of construction workers have experienced a mental health issue, BC Building Trades*. Available at: <https://bcbuildingtrades.org/83-of-construction-workers-have-experienced-a-mental-health-issue/> (Accessed: March 20, 2023).
- CIF (2018) *Women in the Construction Industry*, CIF. Construction Industry Federation. Available at: <https://cif.ie/wp-content/uploads/2018/03/CIF-Membership-Diversity-SURVEY-REPORT.pdf> (Accessed: March 7, 2023).
- CIF (2020) *Mental Health Construction Sector*. Construction Industry Federation. Available at: <https://cif.ie/2020/08/20/mental-health-in-the-construction-sector/> (Accessed: November 18, 2022).
- Creswell, J.W. and Tashakkori, A. (2007) "Differing perspectives on mixed methods research," *Journal of Mixed Methods Research*, 1(4), pp. 303–308. Available at: <https://doi.org/10.1177/1558689807306132>.
- CSO (2022) *LFS Employment Series Q3 2022*, Central Statistics Office. Available at: <https://www.cso.ie/en/releasesandpublications/ep/p-lfses/lfsemploymentseriesq32022/> (Accessed: February 24, 2023).
- CSO (2022) *Productivity in Ireland 2020*, Central Statistics Office. Available at: <https://www.cso.ie/en/releasesandpublications/ep/ppii/productivityinireland2020/chapter2labour-productivity-sectoralcontributions/> (Accessed: February 4, 2023).
- De Vyver, F.T. (1930) "The Five-Day Week," *Current History*, 33(2), pp. 223–227. Available at: <https://doi.org/10.1525/curh.1930.33.2.223>.
- Department of Enterprise, Trade and Employment (2022) *Working Hours, A guide to working in Ireland*. Government of Ireland. Available at: <https://www.gov.ie/en/service/dbd16-a-guide-to-working-in-ireland/> (Accessed: January 03, 2023).
- Forsa (2022) *Four-day Working Week a resounding success*, Forsa. Available at: <https://www.forsa.ie/four-day-working-week-a-resounding-success/> (Accessed: January 23, 2023).
- Four Day Week Global (2022) "Assessing global trials of reduced work time with no reduction in pay," Full Report [Preprint].
- Hammarberg, K., Kirkman, M. and de Lacey, S. (2016) "Qualitative research methods: When to use them and how to judge them," *Human Reproduction*, 31(3), pp. 498–501. Available at: <https://doi.org/10.1093/humrep/dev334>.
- HSA (2022) *Health and Safety Authority confirms 26 work-related fatalities in 2022* Health and Safety Authority Available at: https://www.hsa.ie/eng/news_events_media/news/press_releases_2022/hsa_confirms_26_workre

lated_fatalities_in_2022.html#:~:text=In%20relation%20to%20the%20construction,one%20of%20the%20most%20dangerous. (Accessed: January 23, 2023).

HSA (2022) HSA Annual Review of workplace injuries, illnesses and fatalities 2022, Health and Safety Authority. Available at:

https://www.hsa.ie/eng/news_events_media/news/press_releases_2022/hsa_annual_review_of_workplace_injuries_illnesses_and_fatalities.html (Accessed: January 23, 2023).

Kim, S.M. (2021) "Inductive or deductive? research by maxillofacial surgeons," *Journal of the Korean Association of Oral and Maxillofacial Surgeons*, 47(3), pp. 151–152. Available at: <https://doi.org/10.5125/jkaoms.2021.47.3.151>.

KPMG Ireland, Future Analytics Consulting, Murphy, R., & Behan, A. (2020). *Economic analysis of productivity in the Irish Construction sector*. Technological University Dublin. DOI: 10.21427/WG66-QR57

Lewis, K. et al. (2023) "The results are in: the UK's four-day week pilot." Available at: <https://autonomy.work/portfolio/uk4dwpilotresults/> (Accessed: March 2, 2023).

Locke, E.A. (1982) "The ideas of Frederick W. Taylor: An evaluation," *Academy of Management Review*, 7(1), pp. 14–24. Available at: <https://doi.org/10.5465/amr.1982.4285427>.

Oxford English Dictionary (2023) Work-life Balance, Google. Available at: <https://www.oed.com> (Accessed: March 15, 2023).

Power, J. (2022) Construction jobs gap worsened by 'reluctance to get out of bed for 7am',

Roche, B. (2022) "Construction in Ireland 2022 - Building a workforce for the future," Autodesk [Preprint]. Available at: <https://constructionblog.autodesk.com/ireland-construction-skillssurvey/> (Accessed: January 02, 2023).

Schor, Juliet B., Wen Fan, Orla Kelly, Guolin Gu, Tatiana Bezdenezhnykh, Niamh Bridson-SIG (2023) *Women in the Irish Construction Industry: Statistics and facts*, SIG. Available at: <https://www.sig.ie/women-in-the-irish-construction-industry-statistics-and-facts/> (Accessed: March 7, 2023).

Workplace Relations Commission (2022) *Construction sector*. Available at:

https://www.workplacerelations.ie/en/what_you_should_know/hours-andwages/sectoral%20employment%20orders/construction-sector/ (Accessed: February 12, 2023).