Different Generations' Perceptions of Freedom-Related Work Values: A Case Study of Hong Kong's Implementation of a "No-Saturday-Site-Work" Policy in Construction

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Abstract

The world's construction industry is facing an acute labor shortage. As a mature economy in Asia, Hong Kong is experiencing the same grim situation. This paper identifies different generations' perceptions of freedom-related work values in the construction sector in Hong Kong. Opinion surveys were conducted to identify how construction workers, trainees, and high school students would view a "No-Saturday-Site-Work" policy. This initiative was proposed to address the acute labor shortage and aging problems. Logistic regression was employed. It was found that the younger generation places more emphasis on having Saturday off than on money. Although older construction workers tend to have more concerns over income, younger construction trainees would want to see the initiative implemented. For high school students, age has an indirect but strong effect on their perception of the initiative through the variable of whether they plan to join the industry. The case of Hong Kong illustrates the need to know what the younger generations want before effective recruitment strategies and policies can be devised. Our results would provide the industry worldwide with some insights into

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addressing the aging-labor problem.

***Keywords**:* Managing human resources; Labor shortage; Labor aging; Generation Y; Engineering and construction; Hong Kong.

Introduction

The labor shortage and labor aging have become urgent problems for the global construction trades. For example, in the USA, from 1985 to 2010, the average age of construction workers increased from 26.0 to 41.5 years old (Choi, 2015). In the UK, skilled-labor shortages continue to delay the development process, according to the Royal Institution of Chartered Surveyors (RICS) (2016). The aging labor force affects not only developed countries but also less-developed and developing countries, for example, Nigeria (Oseghale et al., 2015), which has a "very low" entrance of young people between 18 and 25 years of age into the trades.

In Hong Kong, the projected supply of construction labor will fall short of the increase in demand. It has been estimated that the total manpower requirements, including site workers, will increase at an average annual rate of 1.9%, from 271,100 in 2010 to 315,200 in 2018, following the rolling out of several major infrastructure projects (Government of Hong Kong SAR, 2012). The labor shortage has been cited as the main reason for both increased wages and the delayed completion of multibillion-dollar infrastructure projects.

The labor shortage is further exacerbated by aging labor. According to the Construction Workers Registration Board, on September 30, 2016, there were 413,615 registered construction workers in

37 Hong Kong. Although not all of them were active, approximately 66~69% of the registered workers
38 were more than 40 years of age during the period of 2009-2016 (Fig. 1). To make the situation worse,
39 the younger generation is less willing to work on construction sites than the older generation is.
40 **Fig. 1.** Age distribution of registered workers (2009-2016)
41 Strategies have been proposed to address these issues. Since the last century, labor migration has
42 been one solution to the problem of the construction-labor shortages (Wells, 1996). However, both
43 resistance from the local workforce and other negative impacts can be expected (Abdul-Rahman,
44 2012). Conversely, a compressed workweek has been found to have improved the work-life balance
45 among shift workers (Bambra et al., 2008). A compressed workweek is positively related to job
46 satisfaction and satisfaction with the work schedule (Baltes et al., 1999). Many employees indicate
47 that it would benefit productivity, their loyalty to the organization, and employee retention (Lingard et
48 al., 2007; Brown et al., 2010).
49 Therefore, in Hong Kong, the construction industry is considering a "No-Saturday-Site-Work"
50 initiative, which was initially proposed by the Hong Kong Construction Association to attract more
51 young people to the industry and to improve the work-life balance of construction workers. Past
52 research has examined the generational differences in the perceptions of work value and turnover
53 (Chih et al., 2016). Cogin (2011) finds that Generation Y (born after 1980) has the strongest
54 preference for leisure (or work-life balance), followed by Generation X (1962-1979) and Baby
55 Boomers (1945-1961). Similar findings have been reported in many other studies (Zemke et al. 2000;
56 Smola & Sutton, 2002; Cennamo & Gardner, 2008). However, differences in the perception of

57 freedom-related values with age in the local construction industry have received little empirical
58 examination, as verified by an unfruitful literature search of 16 databases.

59 As suggested by Kupperschimidt (2000), understanding these differences would provide
60 managers with a good tool for boosting their employees' morale and increasing their productivity.
61 Doing so can also ensure the efficiency of a policy once implemented, thus helping maintain and
62 stimulate the construction industry's long-term development. This study's purpose is to explore how
63 various age groups perceive the "No-Saturday-Site-Work" initiative and, in particular, to explore the
64 relationship (if any) between age and the perceptions of freedom-related work values among these
65 groups. We propose the hypothesis that the younger generation accords more importance to
66 freedom-related values and is thus more likely to support the "No-Saturday-Site-Work" initiative in
67 the construction industry.

68 **Methodology**

69 Three groups of respondents, i.e., construction workers, construction trainees, and high school
70 students, were established. Initially, thirteen in-depth interviews were conducted from August to
71 September 2014. The aim was to solicit stakeholders' opinions on this industry and the workers and to
72 evaluate the desirability and feasibility of implementing the "No-Saturday-Site-Work" initiative. The
73 interviewees included representatives from the government, statutory bodies, property developers,
74 professional institutions, trade associations, contractors, subcontractors, and the younger generation.
75 Four focus groups were subsequently held to verify the findings from the in-depth interviews and to

76 explore different trades' specific concerns in regard to implementing this initiative.

77 Content analysis was employed to examine previous research and the findings from the
78 preliminary survey (i.e., interviews and focus groups). With items generated from the content analysis,
79 three sets of questionnaires were designed, one for each group, to examine the groups' attitudes,
80 concerns and suggestions related to the "No-Saturday-Site-Work" initiative. Relevant stakeholders
81 and experts were invited to assess the validity of the draft questionnaire. Accordingly, minor revisions
82 were made to form the final version. In this manner, all three sets of questionnaires showed adequate
83 internal consistency (Cronbach's α = .78, .89, and .98 for questionnaires completed by workers,
84 trainees and students respectively) and validity (through content analysis, expert assessment and
85 consultation forum). Pleasure see Fig. 2 for details.

86 **Fig. 2.** Reliability and validity of the questionnaire

87 The questionnaire survey was conducted from January to February 2015. A self-completion
88 questionnaire was adopted to allow the collection of a large amount of standardized information, thus
89 increasing internal validity (Robson, 1993) and reducing bias (Coolican, 1999). One thousand
90 questionnaires were distributed to the target population: 300 to employed construction workers, 400 to
91 Construction Industry Council (CIC) trainees and 300 to high school students. Overall, 785
92 questionnaires were returned, for a response rate of 78.5%. Of these 785 questionnaires, 167, 363 and
93 255 were returned from workers, trainees and students, respectively. Missing values were represented
94 by mean substitution to produce internal consistency (Dodeen, 2003).

Logistic regression was used to analyze the data. The logistic regression model predicts the probability that an event will occur under a given circumstance or a combination of conditions (Field, 2009). Because there are only two categories (i.e., “hope” versus “not hope”) in the dependent variable, binary logistic regression was employed. Finally, an open consultation forum involving various industry stakeholders was convened to verify the above findings.

Results

Group I: Construction Workers

Among the 167 construction worker respondents, 115 hoped that the “No-Saturday-Site-Work” initiative would be implemented. The majority of the construction worker respondents, 88.4%, were male. Their average age was 40. Among the respondents, 52.7% were salaried workers, 91.6% were working on construction sites, and 9.6% were simultaneously working for two or more employers. On average, they had been working in the construction industry for approximately 12 years (see Table 1).

Table 1. Profile of the construction worker respondents

Binary logistic regression analysis was performed to explore the relationship between age and freedom-related work values in construction workers. Gender, workers’ payment type (salaried or casual), work environment (site or office), working on Saturdays, and length of stay in the industry were also included as independent variables. The length of stay in the industry can be viewed as a proxy for the seniority of construction workers. There was no multicollinearity problem in the model (Tolerance values > 0.1; Variance Inflation Factor (VIF) values < 10).

All of the independent variables were incorporated into the analysis using the backward stepwise

115 (Likelihood Ratio, LR) method. Age was removed from the final model. The workers' payment
116 method was significant at the 99% confidence level (see Table 2). It is less likely that casual workers
117 would hope for the implementation of the initiative because they are paid on a daily or piecemeal
118 basis.

119 **Table 2.** Logistic regression of the three groups of respondents

120 *Group II: Construction Trainees*

121 Among the 363 construction trainee respondents, 281 hoped to have the
122 "No-Saturday-Site-Work" initiative implemented. The majority of the construction trainee
123 respondents were male. On average, they were 27 years old. The majority (73%) of them were
124 full-time students, whereas 20% were working in the construction industry and 7% in other industries.
125 On average, the respondents who were working in the construction industry had been in the industry
126 for 4.3 years (see Table 3).

127 **Table 3.** Profile of the construction trainee respondents

128 Binary logistic regression was performed. In addition to age, the variables of gender, whether the
129 respondent worked on Saturdays, and whether the respondent planned to stay in the industry were
130 included in the analysis. There was no multicollinearity problem in the model (Tolerance values > 0.1;
131 VIF values < 10). The backward stepwise (LR) method was employed. It was found that only age was
132 significant at the 95% confidence level (see Table 2). Younger respondents were more likely to hope
133 to have the initiative implemented.

134 *Group III: High School Students*

135 This survey covered students from five high schools in five districts. Among the 255 student
136 respondents, 136 hoped that the "No-Saturday-Site-Work" initiative would be implemented. The
137 majority (74%) of the respondents were male. On average, they were only 15 years old (see Table 4),
138 the youngest group of the three.

139 **Table 4.** Profile of the high school student respondents

140 Binary logistic regression was performed. In addition to age, the variables of gender and whether
141 the respondent planned to join the industry were included in the analysis. The backward stepwise (LR)
142 method was employed. No multicollinearity problem was found (Tolerance values > 0.1; VIF values <
143 10). It was found that age did not appear in the final model, whereas the variable of "whether the
144 respondent planned to join the construction industry" was significant at the 99% confidence level (see
145 Table 2).

146 Given the insignificance of age, a one-way Analysis of Variance (ANOVA) was conducted to
147 explore if age had any significant effect on whether high school students planned to join the
148 construction industry. According to Levene's test, the assumption of homogeneity of variances
149 between the three groups of high school students was not violated ($p = .64$). There was indeed a
150 significant difference in age between the three groups, as determined by one-way ANOVA ($F(2,252) =$
151 8.88, $p = .00$). The Tukey post hoc test revealed that the high school students who planned to join the
152 industry (15.6 ± 2.1, $p = .00$) were significantly older than those who had no such plans (14.4 ± 2.1, p

153 = .00). Hence, the analysis suggests that age has an indirect but strong effect on high school students'
154 perception of the "No-Saturday-Site-Work" initiative through the variable of whether they plan to join
155 the industry. Furthermore, approximately 53% of the student respondents indicated that they would be
156 more willing to join the construction industry if the initiative were to be implemented.

157 **Discussion and Conclusion**

158 We hypothesize that the younger generation would accord more importance to freedom-related
159 values and would thus be more likely to support the "No-Saturday-Site-Work" initiative than the older
160 generation. The findings of this study support this hypothesis. Among construction trainees and
161 students who are potential industry recruits, the younger respondents are more inclined to hope for the
162 implementation of the initiative. Age is an instrumental variable of how the initiative would be
163 perceived. These results are consistent with the findings of earlier research (Cennamo & Gardner,
164 2008; Smola & Sutton, 2002; Zemke et al., 2000).

165 In contrast, in the case of employed construction workers, age is not a significant predictor of the
166 respondents' support of the initiative. However, it can be observed that these workers were older than
167 the other groups, and many were breadwinners. Compared to the other two groups, the construction
168 worker respondents show more concern over their income, which could decrease if the initiative were
169 to be implemented because most construction workers are paid on a daily basis. Some of the
170 construction workers are married and have the responsibility of supporting their families. They
171 understand that the labor demand is closely contingent on the external environment, which has been

cyclical.

No short-term consensus to implement the shortened workweek has been reached because of the many and varied challenges in doing so, including laborers' and the industry's concerns over "income reduction", "less working flexibility", "productivity reduction", "higher construction costs", "the need to work on weekends", "project cycle issues and project delays", "prolonged disturbances to the community", "the exacerbation of labor shortages", "less housing supply", and "the physical stress of workers in compressed weeks".

Nevertheless, given the long-term potential benefits of the "No-Saturday-Site-Work" initiative, it could be initially implemented on a voluntary, trial basis. Complementary measures can be further implemented to enhance the effectiveness of these pilot projects, including projects to promote cooperation among various stakeholders and more direct labor employment. Further adjustments can also be made to make the initiative more workable by adjusting project schedules and working hours and by adopting alternate Saturday-off or half-days off on Saturdays.

In the medium term, the "No-Saturday-Site-Work" initiative could be implemented only during the off-season and as a reward for well performing employees. Alternative project delivery arrangements that emphasize the collaborative nature of project alliances should be encouraged. Moreover, alternative remuneration mechanisms should be explored to eliminate the concerns of casual workers over maintaining their "take-home pay". When measuring remuneration, production and productivity, not only the time spent on site should be measured.

In the long term, if the benefits of the "No-Saturday-Site-Work" initiative can be realized during the trial periods, it could be advanced through collective agreements or even legislation. However, several prerequisites must be met before taking this step, including the alleviation of the industry's severe labor shortage problem, consensus among project stakeholders regarding compressed workweeks, and the implications for workers' wages and project duration. Furthermore, the working conditions, job security, career path and overall welfare of construction workers should be improved. Innovative technologies (e.g., prefabrication and mechanization) should be employed to improve the productivity of this industry and to reduce dependence on labor-intensive methods.

The results of this study provide important evidence supporting the "No-Saturday-Site-Work" policy to address the problems of labor shortages and aging labor. The case of Hong Kong can set an example for solving the labor shortage and aging-labor problems in the global construction sector.

Acknowledgments

This publication was made possible by research funding from the Construction Industry Council, Hong Kong, and the Research Grants Council, Hong Kong (Project Number PolyU 152176/15E). Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Construction Industry Council or the Research Grants Council.