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RESEARCH ARTICLE

Framework of Socialisation, Authentic Leadership and Affective Commitment for Construction Professionals

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Abstract

This paper highlights the human resources (HR) or behaviour-related success factors in construction projects, and these are training, understanding, co-worker support, future prospects, authentic leadership, and affective commitment. There exists discrepancies in existing literature regarding the factor structure of organisational socialisation and authentic leadership. Therefore, this study aims to explore the factor structure of socialisation, authentic leadership and affective commitment. Data was gathered from 301 newly joined construction professionals and Confirmatory Factor Analysis (CFA) was conducted to examine the factor structure for organisational socialisation, authentic leadership and affective commitment. A measurement model was further developed using the domains of organisational socialisation, authentic leadership and affective commitment. The results of CFA revealed that there exists four zero-order factor structure for organisational socialisation, and one zero-order factor structure for authentic leadership. The study contributes to both the researcher and practitioner communities by integrating the three constructs and validating the factor structure in the new context (i.e. construction). Further, the study contributes towards improving HR processes, namely, training, reward system, and induction process. It also helps in augmenting the authenticity among the project participants.

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Keywords:

Socialisation, Authentic leadership, Affective commitment, Confirmatory factor analysis, Construction, Measurement model.

Introduction

Though opportunities for growth is abundant in the external environment for the construction industry, it is still plagued with some of the critical issues like time and cost overrun (Iyer and Jha, 2005), low productivity and lack of professional practices (Doloi et al., 2012). These issues are related to the factors associated with internal environment and act as the roadblock for tapping the opportunities in the external landscape. Organisations need to identify their core competencies and should formulate organisational processes for harnessing the true potential of their human capital. The internal environmental scanning helps the decision-makers to determine the capability of existing resources (Snell, Bohlander and Vohra, 2012). The real economic potential of the firm depends more on intangible assets (human capital) than on tangible assets (land, plant, and equipment) (Quinn, 1992). There exists a surfeit of studies highlighting human resource as the most critical resource for achieving organisational objectives. Researchers have identified various behavioural or human factors responsible for the success of a project, as shown in Table 1. The critical human factors identified from Table 1 are competence, support, commitment, and leadership.

Table 1 Behavioural/ Human Factors responsible for project success

Behavioural/ Human Factors responsible for Project Success	References
Team effort	Assaf, Al-Khalil and Al Hazmi, 1995
The commitment of all the stakeholders	Leung, Chong, Ng and Cheung, 2004
Different actors (mainly contractors, client and consultant) involved in construction projects are blaming each other for the cause of delay	Abd El-Razek, Bassioni and Mobarak, 2008
Lack of commitment	Doloi, Sawhney, Iyer and Rentala, 2012
Project manager competency	Ogulana, Siddiqui, Yisa and Olomolaiye, 2002; Chua, Kog and Loh, 1999; Kog, Chua, Loh and Jaselskis 1999, Sayles and Chandler 1971
Project manager commitment	Chua, Kog and Loh 1999; Kog, Chua, Loh and Jaselskis 1999
Commitment of project participants	Iyer and Jha, 2006; Chan, Ho and Tam, 2001; Baker, Murphy and Fisher, 1983
Owner's competence	Iyer and Jha, 2006
Top management support	Jha, 2004; Cleland and King, 1975; Martin, 1976
Project manager's leadership skill	Jha, 2004;Ogulana, Siddiqui, Yisa and Olomolaiye, 2002

The availability of competence, support, commitment, and leadership may result in effective deliveries and success of construction projects. Competence and support are linked with the domains of organisational socialisation, which are training and co-worker support, respectively (Taormina, 2004). While commitment is considered as the most desirable employee characteristics (Bauer, Morrison and Callister, 1998), and Ofori (2008) proposed the importance of authentic leadership in the context of construction projects.

A plethora of research shows the relationship among socialisation domain, authentic leadership, and affective commitment. However, previous studies have shown discrepancy in the factor structure of organisational socialisation and authentic leadership. For example, Taormina (1994) initially demonstrated the three-factor structure of organisational socialisation, but later Taormina (2004) indicated the four-factor structure of organisational socialisation. Similarly, Walumbwa, Avolio, Gardner, Wernsing and Peterson (2008) discovered a second order factor for authentic leadership that comprises four factors while Xiong, Lin, Li and Wang (2016) used the zero-order factor structure for authentic leadership. Hence, the interpretation of the constructs is difficult because of the existing discrepancies of the factor structure. Hence, this study examined the factor structure of the constructs.

In the remaining sections of the paper, first the literature review section unfolds the conceptual understanding of the constructs in the study, followed by the research method, results and discussion. Finally, the paper is concluded by highlighting the implications and limitations of the study and future research agenda.

Literature Review

With increased importance for success factors in construction projects, organisations are now preferring construction professionals with better people management and leadership skills rather than technical skills (Dulaimi, 2005). This argument is valid for construction professionals as work dynamics in a construction project are highly complex because of the involvement of multiple parties, such as the client, contractor and consultants working together for a single project. Hence, the project leaders or decision-makers are facing challenges in implementing the project goals in the real world. Liu (1999) supported the importance of the commitment of construction professionals for accomplishing the project goals. Other researchers have also highlighted the same postulate (Leung and Chan, 2007; Doloi, Sawhney, Iyer and Rentala 2012; Gunduz and Yahaya, 2018). Mohyin (2011) suggested that both the attitudinal and behavioural components will shape the overall commitment of construction professionals. In the following subsections, researcher has explained the concept of commitment, socialisation and authentic leadership and have further demonstrated the interrelationships among the three constructs. Lastly, a conceptual framework is developed.

ORGANISATIONAL COMMITMENT (OC)

Over the years, the construct of organisational commitment has become very popular among management researchers. It refers to the psychological attachment of employees with the organisation that describes how well the behaviour and thoughts of employees are influenced by the key characteristics of the organisation (O'Reilly and Chatman, 1986), which in turn binds the employees with the organisation (Meyer and Allen, 1991; Pathardikar and Sahu, 2011). Organisational commitment is one of the most commonly studied work attitudes, which is linked with various organisational outcomes such as intra-role performance, extra-role performance, lateness, turnover and absenteeism (Harrison, Newman and Roth, 2006).

The three-component model of organisational commitment conceptualised by Allen and Meyer (1990, 1996) has been the most widely accepted model among the management researchers (Presbitero, Newman, Le, Jiang and Zheng, 2018). The three components were Affective, Normative, and Continuance, which reflect the three categories of the rationale behind employees' desire to stay in the organisation. Affective commitment refers to the "employee's emotional attachment to, identification with, and involvement in the organisation" (Meyer and Allen, 1991, p. 67). Normative commitment is the "feeling of obligation to continue employment" (Meyer and Allen, 1991, p. 67). For example, if an organisation is investing in the training and development of the employees, then according to the social exchange theory, the employee may be obliged to reciprocate this by staying with the organisation. Continuance commitment is described as "awareness of the costs associated with leaving the organisation" (Meyer and Allen, 1991, p. 67), which means that the employee will evaluate the opportunity cost of leaving the organisation. Opportunity cost is measured in terms of both monetary (salary, incentives, etc.) and non-monetary (power, respect and other privileges) benefits. For example, if the continuance commitment is high and opportunities outside the organisation are low, then the employee have to stay with the existing organisation.

Although the three-component model or other similar models of organisational commitment are widely accepted, there exists another group of management researchers who have followed a uni-dimensional approach to understand the core essence of commitment instead of multidimensional approach (Mercurio, 2015; Solinger, Van Olffen and Roe, 2008). Solinger, Van Olffen and Roe (2008) established that affective commitment is correlated with the maximum number of outcome variables such as working extra hours, information sharing and supervisor's performance evaluation compared to other components of organisational commitment, namely, continuance and normative commitment. Further, affective commitment is found to be strongly correlated with various behavioural variables such as turnover, absenteeism, work performance and citizenship behaviours (Cooper-Hakim and Viswesvaran, 2005). Mercurio (2015) and Meyer and Herscovitch (2001) demonstrated that affective commitment is considered as a core essence of organisational commitment. A core essence is defined as essential, fundamental and stable characteristics of organisational commitment. Therefore, in this study, the author has considered affective commitment as a construct to measure the commitment of employees working in the construction sector.

ORGANISATIONAL SOCIALISATION (OS)

Organisational socialisation reflects the dynamic interaction between an employee and the organisation (Reichers, 1987; Jones, 1983). It is the process by which a new employee effectively integrates and adapts to the new organisational setting. De Vos, Buyens and Schalk (2003) highlighted that socialisation includes the development of new knowledge, skills, abilities and relationships. Organisational socialisation is an essential construct for individuals as well as for organisations as unsuccessful socialisations result in the development of unmet expectations, which in turn is associated with negative behaviours and attitudes (Wanous, 1992). With such withdrawal behaviours and attitudes in place, it is difficult for the newly joined employees to effectively contribute to organisational effectiveness (Van Maanen and Schein, 1979).

Despite such valid arguments favouring the importance of organisational socialisation, previous research has under-explored the success factors of socialisation (Martin, 2005). The author synthesised the literature on organisational socialisation and concluded the presence of two areas of research. One area of research deals with the process of socialisation and the other deals with the content of socialisation. In the latter approach, Chao, O'Leary-Kelly,

Wolf, Klein, and Gardner (1994) conceptualised and developed the six content dimensions of socialisation: (i) performance proficiency; (ii) people; (iii) politics; (iv) language; (v) organisational goals and values; and (vi) history. Similarly, Taormina (1994, 1997) highlighted the four content areas of organisational socialisation, i.e., (i) training; (ii) understanding; (iii) co-worker support; and (iv) future prospects; these four areas are also the indicators of successful socialisation. Cooper-Thomas and Anderson (2006) proposed a model of socialisation success, which consists of five domains that are, namely: (i) task, role, and performance; (ii) co-worker, social and group; (iii) history, goals, values and organisation; (iv) politics; and (v) future prospects.

All the three models, i.e., Chao, O’Leary-Kelly, Wolf, Klein, and Gardner (1994), Taormina (1994), and Cooper-Thomas and Anderson (2006), represent that the contents of organisational socialisation are inter-related with each other as shown in Table 2 (Taormina, 2004; 2008). The four domains are *Training*, i.e. “transfer of some type of skill, knowledge, or ability in order to perform a particular job” (Taormina, 1994, p.134); *Understanding*, i.e., “perceptions which the employee has of his or her role in the organisation, how things operate in the organisation, and the goals of the organisation” (Taormina, 1994, p.134); *Co-worker support*, i.e., “actions or behaviours of ‘significant others’ who are already ‘insiders’ as regards the context into which one is being socialised” (Taormina, 1994, p.135); and *Future Prospects*, i.e., “individual perceptions of his or her prospects for a rewarding future within the new social context” (Taormina, 1994, p.135).

Table 2 Linkages between content domains of socialisation

Chao, O’Leary-Kelly, Wolf, Klein, and Gardner (1994)	Taormina (1994)	Cooper-Thomas and Anderson (2006)
Performance proficiency	Training	Task, role and performance
Politics, language, organisational goals and values, history	Understanding	Co-worker, social and group
People	Co-worker support	History, goals, values and organisation and politics
	Future prospects	Future prospects

AUTHENTIC LEADERSHIP (AL)

Authentic leadership is derived from the root word ‘authentic’, which is described in the Merriam Webster dictionary (2019) as “true to one’s own personality, spirit or character”, and combining it with leadership means that the exhibited behaviour of the leaders is in resonance with their values and belief system. The authentic behaviour of a leader creates a positive work environment, which in turn develops trust and credibility in their team. Various definitions of authentic leadership can be found in the literature. Begley (2001) defined authentic leadership as a symbolic meaning for ethical and conscious work behaviours. Authentic leaders are aware of their strengths and weaknesses and so work towards improving their shortcomings (George, 2003). Walumbwa, Avolio, Gardner, Wernsing, and Peterson (2008) argued that

authentic leaders promote positive psychological climate at the workplace. Other researchers have indicated that authentic leadership reinforces positive attitudes and behaviours such as affective commitment, job satisfaction and performance (Ribeiro, Gomes and Kurian, 2018; Semedo, Coelho and Ribeiro, 2016).

FACTOR STRUCTURE OF THE CONSTRUCTS

Taormina (1994) originally conceptualised four independent domains, i.e. training, understanding, co-worker support and future prospects, of organisational socialisation. Conducting a principal component analysis, it was observed that training and understanding items have same factor loading. Hence, this resulted in three-factor structure, that constituted Training and Understanding as one factor, and Co-worker Support and Future Prospects are considered as the other two factors. Furthermore, based on the results, researcher argued that training and understanding might have different perspectives about the same construct, i.e., orientation. In another research, Taormina (2004) suggested a four-factor model that yielded a good fit for the confirmatory factor analysis (CFA). Based on the above discussion, the following hypothesis 1 is formulated:

Hypothesis 1 (H1): Organisational Socialisation in the construction sector is composed of four independent domains: (a) training (TR); (b) understanding; (c) co-worker support; and (d) future prospects

Walumbwa, Avolio, Gardner, Wernsing, and Peterson (2008) developed a four-factor model to measure authentic leadership, which comprised of self-awareness, relational transparency, balanced processing, and internalised moral perspective. They further studied the US and Chinese samples to examine the factor structure of authentic leadership and discovered that the second-order factor is the best fit model, thereby suggesting that the four factors are not entirely distinct constructs. Xiong, Lin, Li, and Wang (2016) conducted a study on Chinese samples and used a zero-order factor structure of authentic leadership using the base model developed by Walumbwa, Avolio, Gardner, Wernsing, and Peterson (2008). Furthermore, Xiong, Lin, Li, and Wang (2016) discovered that the overall measurement model in their study had acceptable fit indices. Moreover, the affective commitment is a zero-order construct, which is a sub-scale developed by Allen and Meyer (1990). Based on the above discussion, the following hypothesis 2 is formulated:

Hypothesis 2 (H2): The proposed view of Authentic Leadership (AL) in the construction sector is composed of four related and distinct factors, which are relational transparency, internalised moral perspective, balanced processing and self-awareness.

Research Method

The purposive convenience sampling method was employed in this study. Data was gathered from the newly joined Indian construction professionals working across different organisations, and they represent clients, contractors, and consultants in a construction project. Saks and Ashforth (1997) suggested that the adjustment process of the new hires has been rapid initially. Further, it is evident from the work of previous researchers, such as Morrison (1993); Loi, Mao and Ngo (2009); and Chen and Eldridge (2011) that supervisors or leaders play a significant role in the social integration process of newcomers. Therefore, in this study, the perception of newcomers towards socialization, authentic leadership and affective commitment was measured. An online survey was employed for data collection. The survey consisted of five parts: (1) cover letter- explaining the

aim of the study and assuring confidentiality of the data and anonymity of the participants; (2) background information; (3) items to measure content dimensions of organisational socialisation; (4) items to measure affective commitment; and (5) items to measure authentic leadership. The following sections explain the measurement items used for data collection.

(a) Organisational Socialisation – To measure the content areas of socialisation, three scales were used by previous researchers, namely Chao, O’Leary-Kelly, Wolf, Klein, and Gardner (1994), Taormina (1994) and Cooper-Thomas and Anderson (2006). The description of the three scales are shown in Table 2. The model of Cooper-Thomas and Anderson (2006) corroborates with the model of Taormina (1994). Furthermore, Taormina (2004) established through CFA that Taormina’s model is better than that of the model conceptualised by Chao and colleagues, as it contains an additional dimension, i.e., future prospects, which is considered as an essential dimension for measuring the success of socialisation process. Hence, this study considered the Organisational Socialisation Inventory (OSI) developed by Taormina (1994) for data collection. OSI consists of four content dimensions of socialisation namely, Training (TR), Understanding (UN), Co-worker Support (CS), and Future Prospects (FP); and each dimension consists of five items; hence, it consists of a total of 20 items. The respondents were asked to rate the items on a five-point Likert scale of agreeableness (1= Strongly Disagree, to 5= Strongly Agree). A sample item is “This organisation has provided excellent job training for me.”

(b) Affective Commitment – The construct was measured with the help of affective commitment scale, which is a sub-construct of the organisational commitment scale initially developed by Allen and Meyer (1990). The scale consists of a total eight items in which four items are reverse coded. The respondents were asked to rate the items on a five-point Likert scale of agreeableness, where, 1= Strongly Disagree, and 5= Strongly Agree. A sample item is “I really feel as if this organisation’s problems are my own.” The reverse coded items were appropriately re-coded, and the newly coded items were considered for further analysis. There exists substantial evidence about the reliability and validity of the instrument in previous studies (Jena, 2016; Cheng and Stockdale, 2003).

(c) Authentic Leadership – The construct was measured with the help of Authentic Leadership Questionnaire developed by Walumbwa, Avolio, Gardner, Wernsing, and Peterson (2008). It consists of four sub-dimensions, which are Transparency (consists of five items), Moral/Ethical (consists of four items), Balanced Processing (consists of three items), and Self Awareness (consists of four items). Hence, it consists of a total of 16 items. The respondents were asked to rate the items on a five-point scale of frequency, where 0= Not at all and 4= Frequently, if not always). A sample item is “My leader says exactly what he or she means”.

A total of 997 construction professionals were contacted, and their participation in the survey was solicited. The survey was circulated to those participants who showed interest in participating; out of 997 persons, 301 respondents completed the survey (response rate of 30.19 per cent), from which 266 (N= 266) were found valid for analysis. The sample consisted of 245 (92.1 per cent) male participants and 21 (7.9 per cent) female participants, which is in coherence with the fact that in the construction industry, female participants are very less (i.e. 9 per cent) (Zitzman, 2019). The mean age of the participants was 25.33 years (SD= 1.921), and the average length of tenure in the current organisation was 8.98 months (SD = 3.294). The respondents belonged to three broad categories of organisations i.e., client (N= 46 -17.3 per cent), contractor (N= 167- 62.8 per cent) and consultant (N= 53 - 19.9 per cent). A total of 75.2 per cent of the respondents transited from college to work (N= 200), i.e., these respondents joined the company immediately after completing their college education while 24.8 percent transited from work to work (N= 66), i.e., these respondents transited from another organisation.

Data Analysis and Results

Confirmatory factor analysis (CFA) was used to confirm the factor structure of the constructs considered in this study. The objective of CFA was to examine the fitness of data for the hypothesized measurement model. Therefore, in CFA researchers usually reported validity issues and model fit indices. The objective of this study was to examine the factor structure of the constructs; therefore, CFA can be deemed as a suitable technique for achieving the objective.

TESTING THE MEASUREMENT MODEL FOR *ORGANISATIONAL SOCIALISATION (OS)*

Hair, Black, Babin, Anderson and Tatham (2006) suggested checking the overall model fit and construct validity. The initial CFA revealed the following results: $\chi^2/df= 3.293$, CFI= 0.884, RMSEA= 0.093; hence, the measurement model did not fit the data well. The result indicated that not all factor loadings were significantly high. Hair, Black, Babin, Anderson and Tatham (2006) recommended the specification of the model for improving model fit by dropping the items of factor loading less than 0.5. Therefore, seven items that fell below the standard were removed from the model: one item linked to training, three items to understanding, one item to co-worker support, and two items to future prospects. After this re-specification, the factor UN was left with only two items; hence, the researcher believed that this destroys the theoretical structure of the UN. Therefore, following the recommendations of Little, Cunningham, Shahar, and Widaman (2002), and Little, Rhemtulla, Gibson, and Schoemann (2013), the researcher adopted the item parcelling approach and combined two items (UN1 and UN2). Thus, the CFA revealed a good fit to the data: $\chi^2/df= 2.709$, CFI= 0.949, RMSEA= 0.080 (see Hu and Bentler, 1999; Nye and Drasgow, 2011).

Construct Validity

To evaluate the discriminant validity of the dimensions of organisational socialisation, the researcher used the bootstrap approach recommended by Linhart and Zucchini (1986). In this approach, the mean value of maximum likelihood (ML) discrepancy (implied vs population) was calculated for over 5000 bootstrap samples used in all the competing models i.e., single factor (considering organisational socialisation as a single factor), three-factor (see Taormina, 1994), and four-factor (see Taormina, 2004). The results are presented in Table 3.

Table 3 Maximum Likelihood discrepancy for OS

Model	Mean Value	SE
One factor	565.575	0.240
Three-factor	284.805	0.243
Four-factor	256.199	0.259

The results discovered that the mean value of the ML discrepancy of the four-factor model is smaller than other competing models. According to Linhart and Zucchini (1986), smaller the ML discrepancy, better the model. Hence the four-factor model is better amongst the three competing models.

To evaluate the convergent validity, the criteria suggested by Fornell and Larcker (1981) was adopted, which established that the average variance extracted (AVE) must be greater than 0.5, composite reliability (CR) must be greater than 0.7, and CR must be greater than

AVE. AVE for each construct was evaluated by considering its correlation with the other constructs. AVE and CR were calculated using the following formula given by Hair, Black, Babin, Anderson and Tatham (2006)-

$$AVE = \frac{[\text{sum of (standardized loadings)}^2]}{[\text{sum of (standardized loadings)}^2 + (\text{sum of indicator measurement error})]}$$

$$CR = \frac{(\text{sum of standardized loadings})^2}{[(\text{sum of standardized loadings})^2 + (\text{sum of indicator measurement error})]}$$

Table 4 AVE and CR

Constructs	AVE	CR
TR	0.75	0.92
UN	0.50	0.75
CS	0.58	0.85
FP	0.58	0.81
AL	0.61	0.95
AC	0.57	0.87

So, as per Fornell and Larcker (1981), $AVE > 0.5$; $CR > 0.7$ and $CR > AVE$. Hence, convergent validity holds true for TR, UN, CS and FP.

TESTING THE MEASUREMENT MODEL FOR AUTHENTIC LEADERSHIP AND AFFECTIVE COMMITMENT

Measurement model was tested, adopting the methodology as in the above section, and the results are presented in table 5.

Table 5 Results of the Measurement Model

Constructs/Criteria	χ^2/df	CFI	RMSEA
OS	2.709	0.949	0.080
AL	3.056	0.951	0.088
AC	3.294	0.981	0.093

Construct Validity

Construct validity was established, adopting the methodology as in the above section. The results of discriminant validity are presented in table 6 and that of convergent validity are presented in table 4.

Table 6 Maximum Likelihood discrepancy for AL

Model	Mean Value	SE
One factor	244.924	0.246
Four-factor	266.608	0.269

The results discovered that the mean value of the ML discrepancy of the one-factor model is smaller than that of the four-factor model. According to Linhart and Zucchini (1986), smaller the ML discrepancy, better the model. Hence, the one-factor model is better than four-factor model.

The overall measurement model and its psychometric properties

The researcher tested the discriminant validity of the hypothesised six-factor measurement model in several ways, as suggested by Wang, Gan and Wu (2016). The model fit indices for the six-factor measurement model (TR, UN, CS, FP, AC and AL) revealed a moderately good fit, i.e., $\chi^2/df= 2.07$, CFI= 0.92, RMSEA= 0.06 (see Hu and Bentler,1999; Nye and Drasgow, 2011) compared to other measurement models (Table 7). One-factor measurement model fit the data very poorly ($\chi^2/df= 5.41$, CFI= 0.66, RMSEA= 0.13). The $\Delta\chi^2$ with respect to Model 1 was significant ($\Delta\chi^2= 1573.76$, $p<0.01$), thus indicating six distinctly different factors.

Table 7 Measurement model comparisons

Measurement Model	χ^2	χ^2/df	$\Delta\chi^2$	CFI	GFI	RMSEA
1. Six-factor measurement model	923.42	2.07	-	0.92	0.82	0.06
2. Five-factor measurement model	958.58	2.12	35.16	0.92	0.81	0.07
3. Four-factor measurement model	996.83	2.19	73.41	0.91	0.81	0.07
4. Four-factor measurement model	1181.79	2.60	258.37	0.88	0.77	0.08
5. Four-factor measurement model	1233.42	2.71	310	0.87	0.76	0.08
6. Three-factor measurement model	1278.71	2.79	355.29	0.86	0.75	0.08
7. Two-factor measurement model	1571.06	3.41	647.64	0.82	0.69	0.095
8. Two-factor measurement model	1725.16	3.74	801.74	0.79	0.66	0.10
9. Two-factor measurement model	2166.17	4.69	1242.75	0.72	0.52	0.12
10. One-factor measurement model	2497.18	5.41	1573.76	0.66	0.48	0.13

Notes: n= 266. Model 1- Six-factor (TR, UN, CS, FP, AL, AC); Model 2 (Five-factor) merges TR and UN; Model 3 (Four-factor) merges TR, UN and FP; Model 4 (Four-factor) merges TR and UN, FP and CS; Model 5 (Four-factor) merges TR, UN and CS; Model 6(Three-factor) merges TR, UN, CS and FP; Model 7 (Two-factor) merges OS and AC; Model8 (Two-factor) merges AC and AL; Model 9 (Two-factor)merges OS and AL; Model 10 (One-factor) merges all constructs (TR, UN, CS, FP, AL, AC). The $\Delta\chi^2$'s with reference to Model 1.

Reliability Check

Organisational Socialisation- The reliabilities of the scale was reported to be 0.86 (TR and UN), 0.81 (CS), 0.76 (FP) and the overall reliability for OSI was 0.90 (see Taormina, 1994), and

those for the present study were 0.92 (TR), 0.69 (UN), 0.85 (CS), 0.806 (FP), and the overall reliability was 0.925.

Authentic Leadership- The reliabilities of the scale was reported to be 0.96 (Ribeiro, Gomes and Kurian, 2018), and those for the present study was 0.953.

Affective Commitment- The reliability of the scale was reported to be 0.87 (see Allen and Meyer, 1990), and those for the present study was also 0.869.

Hence, all the six constructs had internal consistency reliabilities between 0.69 and 0.96, which, according to Mallery and George (2003) is not a big problem.

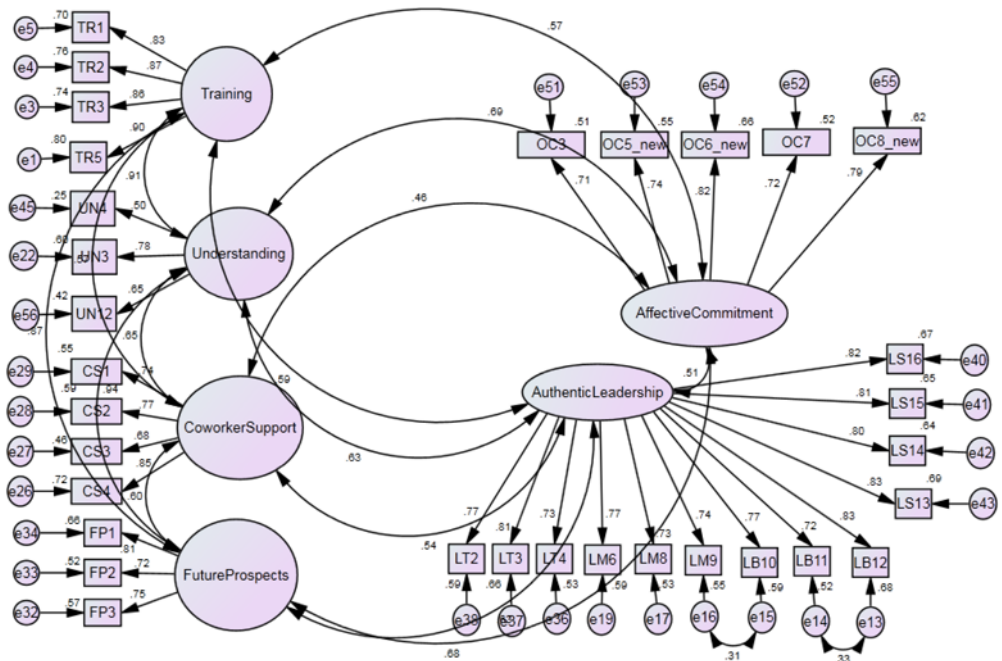


Figure 1 Measurement Model

Discussion and Conclusion

The result of this study indicates a variety of theoretical contributions as well as research implications. This paper calls attention to the need for considering behavioural and human factors associated with the construction management challenges or outcomes. The critical factors identified from the literature relevant for construction project participants are: Affective Commitment, which is a highly recommended employee characteristic that is responsible for project success (Iyer and Jha, 2006; Leung, Chong, Ng and Cheung, 2004); Organisational Socialisation, which is an essential organisational characteristic having positive influence on employees' commitment; and Authentic Leadership, which is a relevant form of leadership for the complex and dynamic environment like construction project (Lloyd-Walker and Walker, 2011).

Hypothesis 1. The proposed view of organisational socialisation in the construction industry is composed of four independent domains. Hence, *Hypothesis 1 is supported.* The CFA revealed that socialisation comprises four zero-order constructs, which means that construction professionals have interpreted socialisation to be constituting of four distinct factors instead of a single factor (see Figure 1). This outcome may be attributed to the dual identity of the

construction professionals (see Table 9); one identity is associated with the parent organisation, and the other is associated with the short-lived project organisation, which makes the interpretation of convergence of domains distinct. Although hypothesis 1 is supported, the proposed view of organisational socialisation is based on a 20-item scale from which seven items have been removed due to low factor loading scores. This may be attributed to the contextual influences in the socialisation research.

Hypothesis 2. The CFA results revealed that the proposed view of Authentic Leadership (AL) in the construction sector is composed of one zero-order construct, which means that the four-factors namely transparency, moral/ethical, balanced processing and self-awareness of authentic leadership is perceived to be similar to the construction professionals. Hence, *Hypothesis 2 is not supported.* The authentic leaders attempt to create a positive work environment and thereby develop high level of trust among the employees. This attribute is essential in the dynamic environment of a construction project.

A unique framework is presented (see Figure 1), which may be considered for studying the commitment of construction professionals and its interrelationship with the domains of organisational socialisation. These domains are Training (TR), Understanding (UN), Co-worker Support (CS) and Future Prospects (FP) (Taormina, 1994). Since construction management professionals work in a project-based environment, which is a temporary work system, the employees' sense of attachment with their organisation erodes gradually (Rousseau, 1998). In this research, we tried to fill the gap by proposing a model to measure attachment (affective commitment) of construction project participants by considering organisational socialisation, which is rapid in the initial few months (Saks and Ashforth, 1997), such that the true essence of the attachment may be captured.

Table 8 Summary of findings

Hypothesis	Hypothetical Variables	Analysis	Findings
H 1	Organisational Socialisation (Training, Understanding, Co-worker Support and Future Prospects)	Confirmatory Factor Analysis	Four zero-order factor structure
H 2	Authentic Leadership (transparency, moral/ethical, balanced processing and self-awareness)	Confirmatory Factor Analysis	One zero-order factor structure

Table 9 The dual identity of construction professionals and relevant constructs

Constructs relevant for Parent Organisation	Training	The new employee induction programme is implemented in a structured way
	Future Prospects	Employee anticipates a rewarding career within the organisation

Table 9 continued

Constructs relevant for Project Organisation	Training	On-the-job training is encouraged
	Understanding	In tandem with on-the-job training, the new employee will gradually understand the processes and systems
	Co-worker Support	Peer learning is enforced, and cooperation with the peer group leads to project success.

RESEARCH IMPLICATIONS

Organisational Socialisation is an essential construct for individuals as well as for organisations because unsuccessful socialisation results in the development of unmet expectations, which in turn is associated with negative behaviours and attitudes (Wanous, 1992). Hence, it has attracted various research scholars to explore the critical success factors of the socialisation process. Despite this, Bauer, Bodner, Erdogan, Truxillo and Tucker (2007) pointed out the gap in the literature and suggested that the research in socialisation area is theoretically and conceptually fragmented. Cooper-Thomas and Anderson (2006) also highlighted the “*relative lack of theory*” in socialisation research. In response to the view of “*relative lack of theory*”, this study proposes a four zero-order factor structure of organisational socialisation. The researcher also examined the factor structure of authentic leadership and found that it consists of one zero-order factor. The leadership scholars may further examine authentic leadership in a different context and define its factor structure. The three constructs have never been studied together in the context of construction industry. Therefore, the theoretical contribution of this study is that it integrates the three constructs and validates the factor structure in the new context (i.e. construction).

MANAGERIAL IMPLICATIONS

The findings of this study are useful for practitioners, especially HR managers, in the construction sector. The managers in the construction industry benefit by employing the scale measuring the content of organisational socialisation to identify the improvements required in training. The sub-scale of co-worker support helps in indicating the general interaction among the employees, which in turn helps the organisation in taking some corrective measures if required to improve the interaction among co-workers and social support in the organisation. Another significant HRM concern addressed in this study is to diagnose the effectiveness of corporate policy which can be done with the help of future prospects sub-scale. This will indicate the degree of satisfaction of the employees with the reward system and career advancement opportunities in the organisation.

The study also reinforces the concept of authentic leadership, which is relatively a new concept in the construction sector. Generally, the perception of top management in construction is that of a manager and not a leader. This is a reason behind calling the top authorities as Project Manager rather than Project Leader. This study will help in augmenting the authenticity among the project participants, thereby, helping to enhance trust for the leader.

LIMITATIONS OF THE STUDY AND FUTURE RESEARCH AGENDA

Despite the essential findings, there are reasons to interpret the results with caution. Primarily, the data is gathered using the same self-reported survey methodology, which may raise a common method bias. The researcher tried to alleviate this quandary by using standardized scales for the constructs. Another limitation of the study is that the study is based on the Indian sample; hence, for the generalization of the results, the cultural differences need to be considered.

The measurement model presented in this study may provide a foundation to further examine the interrelationship among socialisation, commitment and authentic leadership in the construction industry. The measurement model proposed using the quantitative analysis should be justified by using the qualitative methods. Cooper, Schindler and Sun (2006) suggested the use of a qualitative approach to answer how and why such a relation exists. Saks and Ashforth (2000), the renowned socialisation scholars, supported that newcomers react differently to similar environments. The scholars further theoretically supported that such interactions depended on the individual and organisational factors responsible for newcomers' attitude and behaviours towards work. Therefore, future research studies may examine the effect of boundary conditions, such as the possibility of the interaction effect of authentic leadership.

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