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Predictors of protean career and the moderating role of career strategies among professionals in Malaysian Electrical and Electronics (E&E) Industry

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Abstract

Purpose – The purpose of this paper is to examine the effects of individually related variables and the moderating role of career strategies on protean career among professionals in Malaysian Electrical & Electronics (E&E) industry.

Design/methodology/approach – Research data were gathered from a sample of 306 of professional employees in 18 E&E multinational corporations in Malaysia. Partial least squares structural equation modelling was employed to examine the influences of individually related factors and the moderating role of career strategies on protean career.

Findings – The results demonstrate that individually related variables, namely, self-efficacy, outcome expectation, goal orientation and *locus* of control are viewed as potential predictors of protean career. There are significant moderating effects of career strategies on the relationship between goal orientation and protean career among professional employees.

Research limitations/implications – This paper provide an empirical framework to explain protean career based on the review of career-related literatures.

Practical implications – The findings provide implications to both individuals and human resource development (HRD) practitioners on new career trends of protean career. Practical interventions are suggested to assist individuals and organizations towards protean career development.

Social implications – This paper supports individual protean career development.

Originality/value – This paper offers new insight into the predicting factors of protean career and its moderating role on career strategies.

Keywords Locus of control, Self-efficacy, Goal orientation, Career strategies, Outcome expectation, Protean career

Paper type Research paper

Introduction

The new trends of protean career are increasingly popular in the twenty-first century (Cappellen and Janssens, 2008). Hall's (1976) notion of a protean career explains that individuals manage their careers proactively according to their value systems. The central focus of the protean career development is with the individual, not the organization. In recent decades, rapid changes in the business environment have caused a profound impact on individual career development and management (Greenhaus *et al.*, 2010). Individuals

manage their careers in response to the dramatically changing landscape of a competitive workplace. Briscoe and Hall (2006) explain that the protean career reflects the extent to which individuals adopt freedom, self-direction and making decisions based on one's self values in managing their careers.

Nowadays, changes in economic, social, technological and market aspects had impacted the organizational structures. Many organizations are reducing managerial layers, outsourcing secondary business functions and initiating collaborative work groups in their organizational design to enable them to adapt, respond and compete in a turbulent business environment (Reitman and Schneer, 2008). The restructuring and downsizing activities are considered as part of the critical organizational business strategic planning. Consequently, these have led to greater demands on employees' flexibility and competencies in achieving organizational goals, and caused the diminishing of the career ladder in the organization (Reitman and Schneer, 2008). Employees embark in developing the career path themselves instead of relying on organizational career development programmes. They navigate their own career, as this is expected in a protean career (Reitman and Schneer, 2008). Thus, appropriate career strategies are used to enhance their involvement in protean career (King, 2004).

In the case of the Electrical & Electronics (E&E) industry, it had been hit hard by the last global financial crisis as seen in the decline in global demand for its exports, the inclination of pricing pressures and inventory pile-up. Many multinational corporations (MNCs) in the E&E industry have implemented cost reduction strategies to improve their competitiveness, especially in the workforce reduction and elimination of organizational career development programmes (Yamamoto, 2006).

According to the statistical data from the Malaysian Department of Labour (2009), there were 90,438 workers laid off by employers from 1st October 2008 to 18th February 2009 including permanent retrenchment, voluntary separation scheme (VSS), lay off and salary cut. The drop in the export of E&E components continued to worsen due to weaker demands from China as well as European Union in 2012 (Opalyn, 2012). Some MNCs were not working at full capacity due to the gloomy global economic outlook, while many MNCs are also holding back on investments and adopting the wait-and-see method. There was a reduction of investment from RM12.2 billion in the year 2010 to RM9.1 billion in 2011. The poor investment performance recorded not more than RM1.7 billion in the year 2012 (First half of 2012) (Opalyn, 2012).

Many MNCs implemented VSS carefully to its employees to protect the corporate's reputation. Usually, the VSS number was not in huge numbers in particular organizations, but the small numbers spreads through months as not to raise any alarm to the industry (Opalyn, 2012). The industry veterans also pointed out that many MNCs tend to cut down the production output and working hours. There had been several months that the workers were scheduled to work four days per week to reduce the operational cost.

The data indicate that the semi-conductor and electronics industry experienced the biggest decline in employment and career opportunities as compared with other industries. In view of the job insecurity and drastic working environment, this instigated prominent changes in the employment relationship and psychological contract between employers and employees. Self-concepts, career self-agent and proactive career self-management orientation become a holistic approach in pursuing career development (King, 2004; Yamamoto, 2006; Baruch, 2006; Enache et al., 2011). In

this sense, employees must be able to be their own career managers and keep themselves constantly equipped with new knowledge and skills that make them attractive to employers (i.e. career strategies) (Hall and Chandler, 2005). Thus, it is crucial to investigate the professional's protean career in the E&E context in Malaysia, carrying the specific aim to investigate the potential individual-related predictors of the protean career.

Notably, there have been previous conceptual and empirical studies conducted to explore the potential factors influencing protean careers. Mixed results were found, as the research studies were conducted in different environmental contexts and sample populations (Enache *et al.*, 2011). Moreover, there is a lack of empirical studies based on specific individual-related variables (e.g. self-efficacy, outcome expectation, goal orientation and *locus* of control [LOC]) to predict protean career. Similarly, the studies examining the moderating role of career strategies on the relationship between individual-related variables and protean career are still limited. Hence, this study aims to examine the influences of individual-related factors towards protean career, and the moderating role of career strategies on the relationships between the individual predictors and protean career of professionals in the E&E industry. The findings on the moderation effect of career strategies will enable the human resources (HR) practitioner to design an effective human resource development (HRD) intervention to suit the needs of employees. Special attentions and customized HRD facilities can be implemented to assist employees to achieve career success.

The paper is organized as follows: we begin by reviewing the definition of protean career, followed by presenting the empirical studies on the relationship between individual-related factors and protean career. The next section describes the methodological aspect of this research, followed by the research findings and discussion. We conclude the paper by outlining the implications of the study for research and management practices as well as the limitations and directions for future studies.

Review of literature
Protean career defined
Protean career is defined as a career where the individual is experiencing greater responsibility for their career choices and career opportunities (Hall, 1976). The protean individuals value career success in terms of psychological-related factors, such as the degree of job satisfaction, self-actualization, personal accomplishment and sense of self-fulfilment (Hall and Chandler, 2005). In a similar vein, Briscoe and Hall (2006) explained that protean career emphasizes the dimensions of value-driven attitude and self-directedness. Value-driven attitude refers to "a person's internal values that provide the guidance and measurement of success for individual career" (Briscoe and Hall, 2006, p. 8). Self-directedness refers to "one who is adaptive in terms of performance and learning demands" (Briscoe and Hall, 2006, p. 8). The notion of the protean career emphasizes individuals taking charge to manage their career, and using intrinsic values as an internal motivator for career development (Briscoe and Hall, 2006). Subjective success is very important to a protean career individual in terms of personal accomplishment, feelings of pride and the balance between work and life (Hall, 1976). Briscoe and Hall (2006) identified subjective career success as a movement along the "path with a heart". In view that the individual is the personal master to manage his or

her own career, thus, individual-related factors are considered as important influencing variables to a protean career. The underpinning career theories for protean career are discussed in the following section.

Social cognitive career theory

From the review of related literature and theoretical consideration, we reveal that individual-related factors contribute significantly to an individual's protean career. We deduce the individual-related variables from the social cognitive career theory (SCCT) (Lent *et al.*, 1994). SCCT considers the importance of personal agency in career decision-making process and the influence of both internal (dynamic aspects of self-behaviour) and external factors (situation) on personal agency to achieve career goals. The theoretical model highlights that self-efficacy, outcome expectations and goal orientation are three individual-related socio-cognitive mechanisms in influencing the individual's vocational interests, choices and performance (Lent *et al.*, 1994).

Given the growing empirical evidence supporting SCCT in explaining career development (Roziah *et al.*, 2009), SCCT elements should be considered when identifying predictors of protean career. As suggested in SCCT, this study recognizes the importance of individual differences such as personal predispositions in shaping and transforming career interests into action. Such career action can be conceptualized as the proactive behaviour in managing one's career or known as protean career (Lent *et al.*, 1994). As a result, individual-related variables such as self-efficacy, outcome expectation, goal orientations and internal LOC have been employed as independent variables in this study.

In addition, the SCCT model asserts that proximal contextual factors moderate individual's career action. In the present study, career strategies are identified as a contextual factor proximally moderating the relationship between individual-related factors and protean career. Generally, individual-related variables would have different levels of influences on protean career with different levels of career strategies usage (Yamamoto, 2006). The moderation effect of career strategies is explained in the following section.

Self-efficacy

The SCCT identifies self-efficacy as the judgement of an individual ability to perform a task at certain level. It is the perceived level of confidence in one's ability to perform various activities related to career planning and development (Lent *et al.*, 1994). This kind of cognitive structure is accumulated through experience learning, which in turn affects one's ability and expectation to perform tasks successfully (Betz and Voyten, 1997).

Previous meta-analyses studies have provided empirical evidence supporting the relationship between self-efficacy and career development (Nesdale and Pinter, 2000; Stucliffe and Vogus, 2003) Self-efficacy affects individuals' commitment to attain their career goal, whereby individuals who are committed to their career goals, are more likely to develop strategies in their career endeavour. They believe that abilities, skills and competencies are crucial in managing one's own career development. Nasta (2007) also found a significant positive relationship between self-efficacy and career development among 259 college students ($r = 0.56$; $p < 0.05$). Based on this empirical evidence, we propose:

H1. Self-efficacy has a positive and significant relationship towards professionals'
protean career.

Outcome expectation

Lent *et al.* (1994) pointed out that the outcome expectation is an estimation of a certain
behaviour that will result in certain outcomes (i.e. if I do this, what will happen).
According to Adachi (2004), individuals' career choices and behaviours are affected by
their outcome expectation towards career development. It directly impacts an
individual's development of interest, goals, actions and indirectly impacting job
performance.

Previous studies by Betz and Voyten (1997) revealed that outcome expectation has a
positive relationship with protean career ($\beta = 0.50$ for women; $\beta = 0.54$ for men;
$p < 0.05$). The finding is consistent with Lent *et al.*'s (1994) study which supported that
outcome expectation exerts a positive effect on career choice goal and action of
self-managed career. The higher value of perceived outcome, the more likely that an
individual will adopt particular career goals and actions, leading to proactive career
behaviour. De Vos *et al.* (2009) further supported that outcome expectation positively
correlates with career development ($\beta = 0.30$; $p < 0.01$) among 809 Belgium employees.
Thus, we propose:

H2. Outcome expectation has a positive and significant relationship towards
professionals' protean career.

Goal orientation

SCCT (Lent *et al.*, 1994) manifests that having goals play a vital role in self-control and
self-regulation of behaviour. Goal orientation refers to goals pursued by individuals to
achieve the desired outcome (Dwek, 1986). Individual are always affected by his or her
goal orientations in the absence of external influences (Lent *et al.*, 1994). Bandura (1986)
found that the attainment of challenging goals (in relation to self-set standard) creates
self-satisfaction and most likely encourages career interest development. The career
goal setting should be compatible with personal values, talents, interests and preferred
lifestyle which are most likely to satisfy present and future career (Greenhaus *et al.*,
2010).

Fernandez *et al.* (2006) revealed the impact of vocational goal orientation on career
development in Spain. Similarly, Segal *et al.* (2002) study concluded that there was a
significant positive correlation between goal orientation and protean career
development ($r = 0.506$; $p < 0.01$) among 115 undergraduates from business school. In
addition, Van Hooft and Noordzij (2009) found that the relationship between goal
orientation and career development (e.g. re-employment in the career management
process) is positive and significant. Based on this evidence, we conclude that there is a
positive relationship between goal orientation and protean career. Hence, we propose:

H3. Goal orientation has a positive and significant relationship towards
professionals' protean career.

Locus *of control*

LOC is the perceived location of reinforcement sources for a person that is, who or what
is responsible for the things that happen to a person. Individuals strong in internal LOC
believe that they control what happens to them and they are the master of their own

destiny. In turn, individuals with external LOC believe that what happens to them is controlled by outside forces such as luck, chance, fate and under the control of a powerful source (Rotter, 1966).

Previous studies showed that internal LOC is more closely associated with career development as compared to external LOC (Brusoski *et al.*, 1993; Blustein, 1998). Luzzo and Ward (1995) revealed that individuals with Internal locus of control (ILOC) are more likely to exhibit skills related to own career development ($\beta = 0.32$, $p < 0.05$). Also, Sturges *et al.* (2005) found that individuals with strong internal LOC are positively contributing to their career development ($\beta = 0.13$; $p < 0.05$). It was considered that employees with high internal LOC will be more likely to engage in protean career activities such as searching for career information actively, involving in individual counselling sessions and making career decisions (Millar and Shevlin, 2007). These discussions conclude that internal LOC has a positive impact on individual's protean career.

Thus, we put forth the following hypothesis:

H4. Internal *Locus* of control has a positive and significant relationship with professional employees' protean career.

Career strategies
Generally, an individual pursues a particular career strategy based on the expectation that it will provide them with the greatest opportunity of attaining personal and professional career success (Greenhaus *et al.*, 2010). Career strategies includes attaining competence in the current job, putting in extended work hours, developing new skills, developing new opportunities in current work, attaining a mentor, building one's image and reputation and engaging in organizational politics. Substantial studies have been conducted to examine the relationship between career strategies and career development over the past few decades (Gould and Penley, 1984; Noe, 1996; King, 2004; Lee, 2002; Greenhaus *et al.*, 2010). Different types of career strategies are utilized over time based on an individual's career planning, goal setting and self-managed career activities (Kraimer *et al.*, 2011).

In the present study, career strategies are considered a proximal contextual factor moderating individual's career choices and actions. Specifically, career strategies moderate the relationships between the individual-related factors (self-efficacy, outcome expectation, goal orientation and internal LOC) and protean career among professional employees in the E&E industry. Chen (1997) contended that the interaction between an individual and proximal contextual factors provides great opportunities for the former to manage self-career development. Kraimer *et al.*'s (2011) study explained that perceived career opportunities exploration (i.e. career strategies) moderated the relationship between employees' perceptual-related variables and career-related performance among 512 employees from different departments of a manufacturing company.

Later, Creed and Hudges (2013) found that there was a moderating effect of career strategies on the relationship between self-compromise (i.e. individual-related factors) and career development-related issues (i.e. career distress). Their study suggested that career strategies buffer the negative effect of compromise on well-being in self-managed career development process. Similarly, we believe that the same degree of the individual-related variables (i.e. self-efficacy, outcome expectation, goal orientation and

internal LOC) will have different effects on protean career, depending on whether the level of usage of career strategies is high or low (Creed and Hudges, 2013). Hence, the above discussion leads to the following hypotheses:

H5a. Career strategies moderate the relationship between self-efficacy and protean career. Specifically, this positive relationship will be stronger when the level of usage of career strategies is high than when the level of usage of career strategies is low.

H5b. Career strategies moderate the relationship between outcome orientation and protean career. Specifically, this positive relationship will be stronger when the level of usage of career strategies is high than when the level of usage of career strategies is low.

H5c. Career strategies moderate the relationship between goal orientation and protean career. Specifically, this positive relationship will be stronger when the level of usage of career strategies is high than when the level of usage of career strategies is low.

H5d. Career strategies moderate the relationship between internal LOC and protean career. Specifically, this positive relationship will be stronger when the level of usage of career strategies is high than when the level of usage of career strategies is low.

Research framework
Based on reviews of related literature, we propose a research framework of professional employees' protean career in the Malaysian E&E industry. Figure 1 depicts the research framework and the hypothesized relationships in the study.

Data collection
The sampling frame comprised MNCs in the E&E industry. The research sample included professional employees from different managerial levels and departments. This included executives, engineers, section heads, managers, senior managers and directors. In this study, the correlational research design was employed to predict significant variables to influence protean career among professional employees in the E&E industry. The cluster random sampling method was conducted to determine the MNCs in selected states in Malaysia. Then, this was followed by a random selection of the respondents from each selected MNC. The data were collected through a survey method by using the structured self-administered questionnaires. This study
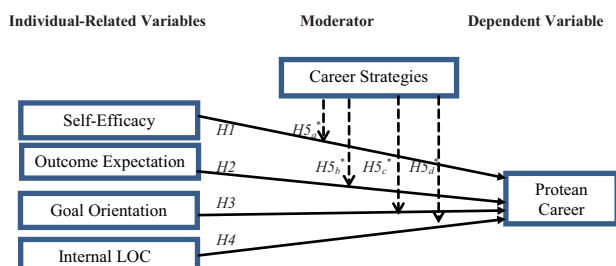
Figure 1.
A research framework for predicting professional's protean career methodology

distributed 350 questionnaires to professionals and 306 were returned, resulting in the response rate of 87.4 per cent. This study involved 46.7 per cent male and 53.3 per cent female professional employees. According to the Oxford dictionary, professional employees are white colour workers, well trained in their job scopes and extremely skilled in performing tasks. Based on categorization, 2.6 per cent of the respondents are in the top managerial level, 28.8 per cent of respondents are in the middle level and 63.1 per cent of respondents are non-managerial employees including assistant executives/ engineers, executives/engineers, supervisors/superintendents, senior executives/ engineers. The next section presents the assessment of the goodness of measure of the constructs in terms of their validity and reliability.

Instrumentation
All instruments were adopted from previous studies and were modified to measure the study's variables. A questionnaire using a five-point Likert scale was applied to all constructs.

Protean career
The eight-item scale was adapted based on the work of Briscoe and Hall (2006). All items were measured using a five-point Likert-like scale with values 1 = "to little or no extent" to 5 = "to a great extent". The sample item was "I am responsible for my success or failure in my career". The composite reliability (CR) in this study was 0.89.

Self-efficacy
This eight-item occupational self-efficacy scale (OCCSEFF) was adapted based on the work of Schyns and Collani (2002). All items were measured using a five-point Likert scale with values ranging from 1 = "strongly disagree" to 5 = "strongly agree". The sample item is "If I am in trouble at work, I can usually think of something to do". The CR in this study was 0.90.

Outcome expectation
A five-item scale of outcome expectation was adapted from the work of Betz and Voyten (1997). All items were measured using a five-point Likert scale with values ranging from 1 = "strongly disagree" to 5 = "strongly agree". The sample item was "If I know my interests and abilities, then I will be able to choose a good career". The CR in this study was 0.94.

Goal orientation
A seven-item scale measured on a five-point Likert scale was employed to measure employees' goal orientation (VandeWalle, 1997) The sample item was "I often look for opportunities to develop new skills and knowledge". The CR for this construct was 0.88.

Internal locus of control
A three-item scale measured on a five-point Likert scale designed by Pearlin and Schooler (1978) was adapted to measure employees' internal LOC. The sample item was "What happens to me in the future mostly depends on me". In this study, the CR was 0.78.

Career strategies
Career strategies are measured using a six-item scale adapted from Gould and Penley's (1984) career strategies inventory. The items were measured on a five-point scale with 1 = "to little or no extent" to 5 = "to a great extent". The sample item is "Developing skills which may be needed in future career position". The CR found in this study was 0.88.

Several control variables were also included in the study such as the tenure of working, gender and marital status. The control variables are used to account for the additional variation in the dependent variable.

Measurement model: confirmatory factor analysis
The individual confirmatory factor analysis was employed to confirm the underlying construct of each variable used in this study. Factor loadings, CR, convergent validity and discriminant validity of the variables were examined in this study.

Based on Hair *et al.* (2010), factor loadings, CR and average variance extracted (AVE) (i.e. the sum of the squared loadings divided by the number of indicators) were used to examine the convergent validity. The CR was used to measure the internal consistency reliability. This type of reliability takes into account the different outer loadings of the indicator variables. Meanwhile, the AVE is the degree to which a set of indicators (items) that presume to measure a construct fit the theories (Hair *et al.*, 2010). It represents the strength of the relationships between items that are predicted to represent a single latent construct. Indicators with outer loadings between 0.40 and 0.70 should be considered for removal only if the deletion leads to an increase in CR and AVE values. The threshold values for the AVE and CR are higher than 0.50 and higher than 0.71, respectively (Hair *et al.*, 2011).

Convergent validity
As shown in Table I, the loadings for all items were greater than the recommended value of 0.5 (Hair *et al.*, 2014). The CR indicates that the latent constructs ranged from 0.776 to 0.902, which exceeded the recommended value of 0.7 (Hair *et al.*, 2014). Subsequently, the AVE (to measure the variance captured by the indicators relative to the measurement error) for respective constructs were above the recommended value of 0.5 (Hair *et al.*, 2014). Thus, the convergent validity requirement was fulfilled in this study.

Discriminant validity
Discriminant validity explains the extent to which a construct is truly distinct from other constructs. As shown in Table II, the correlations for each construct were less than the square root of AVE for the indicators measuring that particular construct, indicating adequate discriminant validity. In total, the measurement model demonstrates adequate convergent and discriminant validity in this study.

Structural model
According to Hair *et al.* (2014), the structural model indicates the causal relationships among the constructs in the model. In this study, individual-related variables were hypothesized to predict the protean career. The proposed structural model with latent variables, and hypotheses are shown in Figure 2. Partial least squares structural equation modelling (PLS-SEM) was used to test the hypotheses. The Smart PLS M2 Version 2 and two-step analysis approach were adopted to analyse the data. Following

| Construct	Item	Loading	AVE	CR
Protean career	PC1	0.751	0.541	0.894
	PC2	0.780		
	PC3	0.802		
	PC4	0.808		
	PC5	0.711		
	PC6	0.584		
	PC7	0.645		
	PC8	0.632		
Self-efficacy	SE1	0.699	0.535	0.902
	SE2	0.671		
	SE3	0.709		
	SE4	0.749		
	SE5	0.771		
	SE6	0.782		
	SE7	0.736		
	SE8	0.725		
Outcome expectation	OE1	0.727	0.565	0.866
	OE2	0.789		
	OE3	0.729		
	OE4	0.751		
	OE5	0.759		
Goal orientation	GO1	0.762	0.506	0.876
	GO2	0.776		
	GO3	0.765		
	GO4	0.739		
	GO5	0.785		
	GO6	0.571		
	GO7	0.537		
Internal locus of control	ILOC1	0.705	0.538	0.776
	ILOC2	0.813		
	ILOC3	0.675		

Notes: PC = Protean career; SE = Self-efficacy; OE = Outcome expectation; GO = Goal orientation; ILOC = Internal locus of control

Table I.
Result of measurement model

Independent variables	Goal orientation	Internal LOC	Outcome expectation	Self-efficacy
Goal orientation	**0.712**			
Internal LOC	0.347	**0.733**		
Outcome expectation	0.399	0.241	**0.751**	
Self-efficacy	0.537	0.321	0.346	**0.731**

Note: Diagonals represent the square root of the AVE, while the off-diagonals represent the correlations

Table II.
Discriminant validity
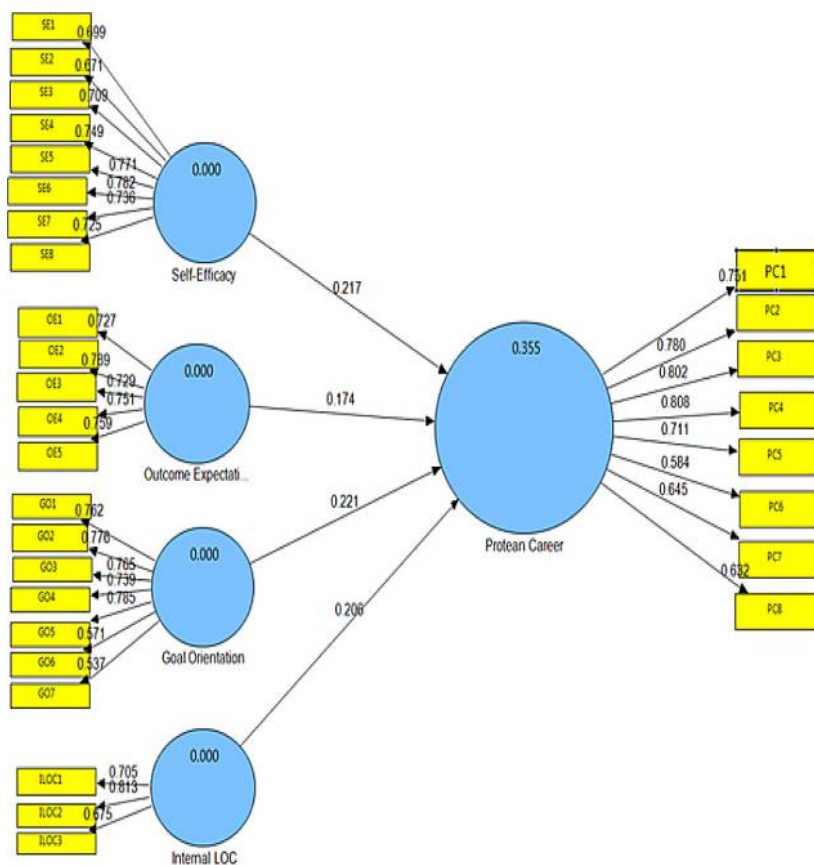
Figure 2.
Results of path
analysis

the suggestions of Hair *et al.* (2014), the bootstrapping method was also carried out to
determine the significance levels for path coefficients, as outlined in Figure 2. The
current study is an incremental study, which was initially based on an SCCT model, but
new measures and structural paths were then introduced into the model, thereof,
PLS-SEM was suitable for data analysis purposes (Hair *et al.*, 2014).

Analysis and results

This section provides the research results for each hypothesis. All independent
variables had significant correlations with the protean career ranging from $r = 0.39$ to
$r = 0.49$ ($p < 0.01$), as shown in Table III.

To test the hypotheses, Table IV presents the results of the four postulated
hypotheses. The R^2 value suggests that 36.5 per cent of the variance in the protean
career is explained by self-efficacy, outcome expectation, goal orientation, also the
internal LOC. Further analysis shows that self-efficacy ($\beta = 0.14$; $p < 0.01$), outcome
expectation ($\beta = 0.15$; $p < 0.01$), goal orientation ($\beta = 0.13$; $p < 0.05$) and internal LOC
($\beta = 0.12$; $p < 0.05$) were positively related to protean career. Thus, *H1*, *H2*, *H3* and *H4*

were supported. Based on the findings, outcome expectation ($\beta = 0.15$; $p < 0.01$) was the key predictor of protean career, followed by self-efficacy ($\beta = 0.14$; $p < 0.01$).

Moderation effect
The two-stage PLS (Henseler and Chin, 2010) was used to investigate the moderation effect of career strategies on the relationship between individual-related variables and protean career (all constructs were measured by reflective indicators). Latent variable scores (LVS) of individual-related constructs (i.e. self-efficacy, outcome expectation, goal orientation, internal LOC) and the moderating variable (i.e. career strategies) were used as independent variables. The LVS of protean career was treated as the dependent variable within the PLS path modelling. The path model was modified to become a single indicator in the measurement model (Henseler and Chin, 2010), as shown in Figure 3.

The results shown in Table V indicate that all the path coefficients of the hypothesized interaction relationship were not significant except *H5c*. *H5c* states that career strategies would moderate the relationship between goal orientation and protean career. There was a significant interaction between goal orientation and career strategies for the protean career ($\beta = 0.08$; $p < 0.05$) which explains that the variance in the path model can be contributed by career strategies. Thus, *H5c* was supported.

The interaction term of Goal Orientation × Career Strategies has a positive effect on protean career. The effect size of the moderating effect is 0.116, which is regarded as small effect size. Chin *et al.* (2003) stated that a small effect size (f^2) does not imply that the underlying moderator effect is negligible. Chin *et al.* (2003, p. 211) noted that "even a small interaction effect can be meaningful under extreme moderating conditions, if the resulting beta changes are meaningful, then it is important to take these conditions into account".

The plot of the interaction effects is shown in Figure 4. A simple slope analysis (Aiken and West, 1991) was performed by taking into consideration the high (one

Relationship	Path coefficient	SE	*t*-value	Decision
Self-efficacy → Protean career	0.14	0.06	2.58**	Supported
Outcome expectation → Protean career	0.15	0.05	3.14**	Supported
Goal orientation → Protean career	0.13	0.06	2.00*	Supported
Internal LOC → Protean career	0.12	0.05	2.19*	Supported

Table III.
Summary of the structural model

Notes: ** $p < 0.01$; * $p < 0.05$

Relationship	Path coefficient	SE	*t*-value	Decision
Self-efficacy → Protean career	0.14	0.06	2.58**	Supported
Outcome expectation → Protean career	0.15	0.05	3.14**	Supported
Goal orientation → Protean career	0.13	0.06	2.00*	Supported
Internal LOC → Protean career	0.12	0.05	2.19*	Supported

Table IV.
Summary of the structural model

Notes: ** $p < 0.01$; * $p < 0.05$

Figure 3.
Moderation path
model between goal
orientation and
career strategies on
protean career

standard deviation above the mean) and low (one standard deviation below the mean) levels of the moderator (i.e. career strategies). Employees with higher level of goal orientation are more likely to engage in the protean career. The tendency is more significant in the group with high usage of career strategies level than low usage of career strategies level. The relationship between goal orientation and protean career is stronger (steeper slope) when career strategies are high than when they are low (flatter slope). Thus, hypothesis *H5c* was supported.

Discussion and implication

The purpose of the study is to examine the effects of individually related variables and the moderating role of career strategies on protean career among professionals in the Malaysian E&E industry. The relationship between self-efficacy and protean career was found to be positively significant, and this finding is consistent with Stucliffe and Vogus' (2003) and Nasta's (2007) studies. Professional employees with high self-efficacy were most likely to demonstrate protean career to achieve personal performance accomplishment. Hence, professional employees who had high self-efficacy would be more confident and proactive in managing individual career development during the massive restructuring operation in the E&E industry.
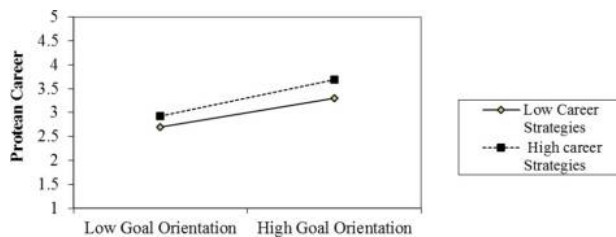
The significant positive association between outcome expectation and protean career was in agreement with previous studies by Betz and Voyten (1997) and De Vos *et al.* (2009). It is worth noting that the rise of the unemployment rate and job insecurity as well as the diminishing career advancement opportunities of the E&E industry have affected employees' career outcome expectation in the long term. Employees tend to reassess the degree of match between what they value (e.g. skills enhancement, learning opportunities and employability) and what they expect as career outcomes (e.g. career

Relationship	Path coefficient	SE	*t*-value	Decision
Self-efficacy * Career strategies → Protean career	0.06	0.06	0.90	Not Supported
Outcome expectation * Career strategies → Protean career	0.03	0.07	0.42	Not Supported
Goal orientation * Career strategies → Protean career	0.08	0.05	1.71*	Supported
Internal LOC * Career strategies → Protean career	0.01	0.06	0.24	Not Supported

Note: *$p < 0.05$

Table V.
Summary of the interaction effect on protean career

Figure 4.
Relationship between goal orientation and protean career and at a high and low levels of career strategies

success) during the self-managed career process. The result confirmed previous study's explanation on the value-driven dimension in the protean career.

Also, the significant positive relationship between goal orientation and protean career has been contended by previous researchers (Fernandez *et al.*, 2006; Van Hooft and Noordzij, 2009). The practices of key performance indicators (KPIs) in most of the E&E organizations are more likely to influence individuals' goal orientation. KPIs allow employees to identify the most important metrics and provide a standardized way to achieve targeted goals. The attainment of the KPI requirement shows a sense of achievement, self-fulfilment and motivation, which is related to the value-driven dimension of the protean career development (Van Hooft and Noordzij, 2009; Greenhaus *et al.*, 2010).

The study has further found that there is a significant relationship between the internal LOC and protean career among professionals. The finding is consistent with Shevlin and Millar's (2010) study. Employees who possess an internal LOC tend to show maturity and self-directedness in their career attitude. They have a positive view of their future career development whilst organizational career development programmes are diminishing. Professional employees who believe that they are the master of their own destiny are more likely to take ownership of the protean career.

In the present study, about 61 per cent of the respondents are categorized as generation Y. They are technologically savvy, impatient, self-centred, achievement-oriented and ambitious (Robbins and Judge, 2011). They actively take new challenges and ownership for their career development. Generally, long-term employment in a company is unlikely to happen among this generation because they want to shift and explore more career options. They prefer to change and grow with the changes in drastic working climates such as in the E&E industry. They expect opportunities to learn skills that align to their intrinsic interests for career development. Therefore, self-agency (i.e. individual-related factors) is the core factor that influences their career growth. This study provides empirical evidence that individual-related factors, namely, self-efficacy, outcome expectation, goal orientation and LOC are important predictors of protean career among professionals in the E&E industry (Sturges *et al.*, 2005; Millar and Shevlin, 2007).

With regard to the moderation effect, career strategies moderate the relationship between goal orientation and protean career. The findings have confirmed Lent *et al.*'s (1994) SCCT theory that career strategies act as a proximal contextual factor influencing the relationship between individual-related factors and career actions. It significantly increases the relationship between goal orientation and protean career, specifically when the level of career strategies usage is high than when the level of career strategies usage is low.

Professional employees believe that the utilization of appropriate career strategies may influence the KPIs attainment (i.e. goal orientation) and career development in the long term. When the level of usage of career strategies is high, individuals are more likely to manage their career confidently and proactively (i.e. self-directness), which offers more opportunities for KPIs accomplishment and career development. On the other hand, when there is low level usage of career strategies, individual may lack the flexibility and adaptability in pursuing their own goal attainment, which leads to less engagement in the protean career. Thus, career strategies have been viewed as a facilitator and "booster" in individual's protean career development (Greenhaus *et al.*,

2010). Professional employees with high level of career strategies perform better when the goal orientation is high. In contrast, employees with low level of career strategies perform relatively poorly with low goal attainment. When goal orientation is considered normative in the protean career development, professional employees with a lack of appropriate career strategies might face more challenges and problems to manage the encountered setbacks.

The findings reveal that there is no significant moderation effect of career strategies on the relationship between self-efficacy, outcome expectation, internal LOC and protean career. The insignificant findings are probably due to the fact that some of the professional employees who have long tenure with the current E&E organizations always find a "home" for their career that matches their strong values. They continue working for the organizations which enable them to satisfy their needs and expectations. In this situation, employees with strong self-efficacy and positive outcome expectation are more likely to engage in the protean career development with insignificant influence of career strategies interventions. In addition, employees with LOC perceive and respond to the dynamic and fast-changing business environmental situation positively. They see environmental situations as being less important and believe that they have the ability to counteract environmental threats (e.g. retrenchment). Moreover, they demonstrate high self-confidence and strong self-efficacy in handling career-related activities and achieve the desired career outcomes (Nasta, 2007). Hence, career intervention strategies would not be instrumental to their career development.

As individuals constitute the master agency in managing protean career, professional employees should improve their competencies and expertise in managing their own career growth. Employees are encouraged to acquire or enhance work-related skills and abilities through education, training and job experiences. Employees can also develop skills by involving themselves in the challenging task-force, or by participating in continuing professional education via organizational support programmes. In essence, the commitment to engage in skill development and lifelong learning helps to ensure that a person's work abilities and knowledge are kept relevant with the present work demands and his or her own career development.

In addition, the findings of the study establish that the outcome expectation is a major contributor to protean career. Positive outcome expectation is related to career goals. Therefore, it is in the employees' best interest to review career goals periodically, set new goals whenever necessary, and communicate these aspirations to the organization. Similarly, Bandura (1986) suggests that the outcome expectation is influenced by self-efficacy in situations where outcomes are closely linked to quality of one's performance.

The findings also indicate that career strategies play a moderating role to influence the relationship between individual-related factors and protean career development. HRD practitioners should facilitate and support employees to take relevant career strategies in managing their career. Appropriate HR policies are designed to develop "protean career architects" as performance coaching guidelines to all employees (Segers et al., 2008). For instance, HRD support programmes are designed to encourage employees to work actively to develop the social network of relationships as a way to gain valuable information about an organization or a job opening that otherwise might not be readily available. Building and then tapping into such interpersonal relationships

can achieve positive career outcome and subsequently, the fulfilment of career goals (Greenhaus *et al.*, 2010).

Study limitations and future research
This study has some limitations and suggestions for future research. Firstly, the sample of this study is professional employees from the MNCs in Malaysia's E&E industry. The generalization of the study findings may be limited. Further studies can be done by including different industries (e.g. tourism, education and public sector) for the purpose of improving generalizability. Secondly, future studies could be done qualitatively to explore the protean career in more detail from different cohorts (e.g. generation X and generation Y) to discover whether or not there is an undefined protean career development phenomenon in the Malaysian multi-racial context. Thirdly, this study did not examine demographic variables as independent variables. It is recommended to consider some demographics variables such as age, educational level and working experience to obtain more comprehensive results on the predictors of protean career.

Conclusion
This study concludes that the four individual-related factors, namely, self-efficacy, outcome expectation, goal orientations and ILOC have the predictive potential on professional employees' protean career. Career counsellors or HRD practitioners may consider adopting training interventions that employees could engage in to increase their sense of control over their career paths and be more responsible for their career planning and choice. Subsequently, individuals will gain more confidence in managing their career, given the developmental increment in work competencies, skills and knowledge.

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