The power of LinkedIn: How LinkedIn enables professionals to leave their

organizations for professional advancement

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Abstract

Title: The power of LinkedIn: How LinkedIn enables professionals to leave their organizations for professional advancement

Purpose - This study applies self-determination theory to investigate how motivations to participate in LinkedIn would influence a professional's intention to leave an organization for professional advancement (ILPA).

Design / methodology approach – The authors randomly sampled 5810 professionals who are actively participating in LinkedIn for at least six months and collected 379 completed questionnaires.

Findings - This study examines the effect of motivation to participate in LinkedIn on ILPA. Perceived autonomy support, perceived competence support, and perceived relatedness support have positive influences on intrinsic motivation. Introjected regulation is positively influenced by perceived autonomy and competence support but unaffected by perceived relatedness support. External regulation is positively influenced by perceived autonomy and competence support but has no relationship with

perceived relatedness support. ILPA from using LinkedIn is positively influenced by intrinsic motivation, introjected and external regulations.

Research limitations/implications – Future research should consider other professional network sites as well as longitudinal research designs to address external validity and causality issues.

Practical implications - Organizations should understand that professional network sites play an important role for professional advancement. The motivations to participate in professional network sites are supports on autonomy and competence. For platform designers, it is vital to enhance supports on autonomy and competence to sustain users' participation in professional network sites.

Originality/value – This study extends the scope of self-determination theory to understand the motivations to participate in professional network sites, which will have impacts on professionals' ILPA.

Keywords: self-determination theory, time perspective concept, turnover intention, professional advancement, LinkedIn.

Introduction

LinkedIn was founded in 2002 with its website launched in May 2003. It is a social networking platform for professionals and allows members to create profiles for making connections. Professionals are encouraged to participate in different discussion groups to share their knowledge and experience. There are influencers from different industries posting their viewpoint and many LinkedIn followers are learning from them. With so many professionals gather together, this attracts multinational corporates posting their vacancies on LinkedIn. In this regard, professionals can access extensive pool of job postings and explore career opportunities in LinkedIn. This gradually alters traditional job search process and LinkedIn somehow facilitates professionals for advancement in their career.

Participation in LinkedIn to achieve career advancement seems fruitful and rewarding, more and more professionals have now signed up for LinkedIn to take advantage of the platform not only to build professional networks and acquire the latest industry information, but also to look for job opportunities. This proves the network effect and positive reinforcement on the number of participants and the related services in LinkedIn. The more participants in LinkedIn, the more corporates use LinkedIn to look for suitable candidates for filling a job post and vice versa. According to a survey on 2,175 US human resource managers from various industries in 2015, which was conducted by Harris Poll on behalf of CareerBuilder, about one third of employers said they would not consider interviewing a candidate if there was no online information about them (Perkins, 2015). Professionals realize that their digital footprint in LinkedIn has become crucial. According to the Pressroom of LinkedIn as of August 2020, LinkedIn has over 706 million registered members in 200 countries (http://news.linkedin.com/about-us, accessed on 18 August 2020).

Although LinkedIn is one of the most popular professional network sites for job seekers and recruiters, not all LinkedIn participants feel the urge to change jobs immediately. Some professionals may only aim at opening up opportunities for finding a new job in the long run or to create a profile for professional network expansion that might inadvertently lead to job change at some point in the future. Although professionals' motivations to participate in LinkedIn may vary from one person to another, an overwhelming 90 percent of professionals said they are open to hearing about new job opportunities in the Global Talent Trends as surveyed by LinkedIn (Schnidman et al. 2016). It is significant that LinkedIn has empowered and changed the career advancement across professionals.

According to the unfolding model (Lee and Mitchell, 1994), a person who is inclined towards professional advancement in a market where alternatives exist is likely to have an Intention to Leave an organization for Professional Advancement. Cho and Huang (2012) have identified that ILPA, which is defined as the intention of a professional to leave an organization for the sake of his/her advancement of the professional development in another organization, is inarguably one prominent type of turnover among professionals. With the importance of ILPA and the increasing popularity of professional network sites, this study investigates the motivations to participate in professional network sites, which will have impacts on professionals' ILPA. This is a new research paradigm on how social media and technology in the 21st century could impact human resource management.

Addressing the literature of career planning and development, Steel (2002) from his empirical evidence on turnover theories reflected on the evolution of the job search process with professionals moving from passive scanning of the labor market to active solicitation of employers. In line with one of the 21st century's turnover theories and

research trends described by Hom et. al. (2017), it is common for job seekers to actively acquire labor market information, obtain feedback about job prospects, and thus promote their own employability.

Through the growth of the web 2.0 technology over the past few decades, thousands of online social network sites (SNSs) have been created not only for leisure and personal development, but also for professional advancement. Job search processes are evolving and progressing in parallel with technology. Osborn and LoFrisco (2012) surveyed 78 university career centers to determine how they use SNSs, the benefits and drawbacks, and the advice they would give to a career center when using SNSs. The most commonly used SNSs by this study include Facebook, LinkedIn, and Twitter, was mainly to provide career information.

With the increasing popularity of LinkedIn and its ease of use and accessibility, more and more professionals participate in professional online network to maximize their exposure, and to seize better job mobility and career advancement. Kasprzak (2012) illustrated that LinkedIn is used by chemical professionals to establish their online presence, to connect with other chemical professionals and to advance their careers. Baruffaldi et al. (2017) investigated the profile of PhD graduates and found that their activities in LinkedIn enable their career to move into the industry sector. Along with this trend, Brown et al. (2019) and Mogaji (2019) promoted that university leaders need to educate students to be connected with the online professional communities such as LinkedIn in order to help them become employable graduates. In this regard, Bridgstock (2019) highlighted three phases (foundational, broadening and deepening, and capstone) in the learning activities using LinkedIn. In the foundational phase, undergraduates may benefit from exploration of the industry sectors of interest and investigation of potential career opportunities online. For the broadening and

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deepening phase, undergraduates need to build a connected identity, make connections and strengthen connections with the professional communities in LinkedIn. In the capstone phase, undergraduates need to work with the connections and fine-tune their profiles in order to establish a strong connected identity in their professional communities. However, most past studies are based on the behavioral outcomes such as turnover, which are the consequence of ILPA, but not from a more fundamental and underlying motivational approach when participation in LinkedIn.

To understand ILPA, it is important to investigate what motivate professionals to participate in a professional network site, which may alter the entire global job market landscape and human resource development. Self-determination theory (SDT) has been applied to study the motivations behind online gaming addiction, e-learning tool adoption, and dental home care and treatment behavior (Neys et al., 2014; Roca and Gagne, 2008; Halvari et al., 2013). For instance, Niemiec and Ryan (2009) suggested supports for learners by attending to their psychological needs for autonomy, competence and relatedness, students are intrinsically motivated to learn and to develop capabilities. In the context of work performance and career development, Howard et al. (2016) found that highly motivated employees are superior in their work performance and have high levels of wellbeing. Moreover, Rigby and Ryan (2018) have promoted applying SDT to empower managers to support each other for the need of autonomy, competence and relatedness in their efforts to build a culture of high quality motivations for career development of employees. This provides a practical basis for talent retention to workplace wellness.

It is interesting to understand if SDT would be a relevant framework for studying the motivations behind users participating in LinkedIn for their professional development and career advancement. The underlying factors behind the motivations

are fulfillment of psychological needs on autonomy, competence and relatedness. In this research, we pay attention to the support for autonomy, competence and relatedness in a professional social media such as LinkedIn and see if these factors will drive the motivations of users to participate in LinkedIn. As such, we have the following research question.

How professionals are supported psychologically on their autonomy, competence and relatedness when participating in LinkedIn, and how these supports can lead to different motivations of using LinkedIn, which would have impacts on ILPA.

To fill and supplement the gap between SDT and professional online networking and human resource development, this study contributes to the SDT literature by examining how the motivations to participate in a professional social media site, LinkedIn, influence professionals' intention to leave for professional advancement.

Lastly, with respect to commercial practice, we ask if the supports for autonomy, competence and relatedness would motivate users participating in LinkedIn. Our findings may help social networking site developers to enhance their platforms by addressing the supports for professionals.

In the following sections, we provide the rationale underlying our framework and develop theoretical arguments supporting each of the hypothesized relationships. We use SDT as an overarching framework to demonstrate how the three basic psychological needs and motivations that affect ILPA are fulfilled through professionals' participation in LinkedIn. Finally, we conclude with theoretical and practical implications on professionals' motivation to participate in LinkedIn that might affect their ILPA.

Framework Background and Hypothesis Development

A central tenet of SDT is that human beings have three basic psychological needs: autonomy, competence, and relatedness (Deci and Ryan, 1985; 1991; 2000). Individuals perform and persevere better in activities when these three basic needs are satisfied (Deci et al., 2001). In this vein, support for these three needs is essential to individuals' motivation. There are two major types of motivation to perform a task: intrinsic motivation and extrinsic motivation. Intrinsic motivation refers to the willingness to undertake a task because of a person's own interests and values. When intrinsically motivated, a person engages fully in an activity for the enjoyment and excitement it brings. While intrinsic motivation is an important component, extrinsic motivation refers to behavior that is driven by external rewards such as money, fame, grades and praise. In between, there are various regulatory processes along the intrinsic and extrinsic motivation continuum.

The adoption of intrinsic motivation or the internalization of self-determined types of extrinsic motivation, namely, integrated regulation and identified regulation, depends on the extent to which the support of the three basic needs is met (Deci and Ryan, 1985). Integrated regulation is a form of motivation that arises when a person has fully integrated a motivation within himself/herself. His/her behavior is influenced by integrated regulation when he/she undergoes self-examination and then internalizes and assimilates the reasons behind an action. Very closely, identified regulation refers to performing an activity because a person identifies with the personal importance of the behavior and accepts it as his/her own. When people internalize external requirements, they feel more self-determined and self-motivated. They feel as though their behavior originates from their sense of self. Previous studies had difficulty

separating integrated regulation from identified regulation and intrinsic motivation (Gagne et al., 2010). Malhotra, Galletta, and Kirsch (2008) found that both identified regulation and intrinsic motivation are associated with feelings of volition and are often perceived as the "origin" of behavior. As such, we consider intrinsic motivation as an inclusive construct for the three motivations (intrinsic motivation, identified regulation, and integrated regulation) in this study. In the context of LinkedIn usage, if a professional enjoys and is satisfied when participating in LinkedIn, he/she is motivated intrinsically.

The two least self-determined types of extrinsic motivation on the continuum are external regulation and introjected regulation. These two motivations have little to no internalization. They are highly distinguishable with intrinsic motivation and the nature of these two extrinsic motivations are vastly different from each other. Introjected regulation pressures people to act in such a way as to feel worthy and use ego involvement to buttress their fragile selves (DeCharms, 1968; Ryan, 1982). In this regard, if a professional is anxious about lagging behind and being inferior to others, his/her LinkedIn use is not completely voluntary but rather subject to introjected regulation.

When a person is externally regulated, he/she acts with the intention of obtaining a desired consequence or avoiding an undesired one, so he/she is spurred to action only when the action is instrumental to those ends. If a professional thinks LinkedIn help him/her to build his/her career, he is externally regulated in using LinkedIn. Our proposed framework is illustrated in Figure 1 and is followed by a detailed description.

(Insert Figure 1 here)

Perceived autonomy support is the perceived support on a person when his/her friends or peers try to understand the person's interests, preference, and perspectives and provide the person with information and opportunities for choice and option (La Guardia and Patrick, 2008; Black and Deci, 2000). Individuals tend to be more intrinsically motivated to do something when people important to them act in a supporting way and give them advice on different ways to do so (Grolnick and Ryan, 1987; Kage and Namiki, 1990). In LinkedIn, professionals receive perceived autonomy support for control over career planning and development through participation. When professionals are accepted into a discussion group or other communication channel in LinkedIn, they perceive that the other professionals trust and share with them the latest industry and market information. Moreover, LinkedIn provides a platform for industry influencers (e.g., Meg Whitman or Bill Gates) to publish their views and visions for their industry. This attracts followers to stay on LinkedIn (Kaufman, 2013). The continual inflow of information and knowledge gained from the industry influencers, in addition to the exchanges within discussion groups, give professionals new choices and options for their career planning and development and help them derive a sense of satisfaction from using LinkedIn. As such, we claim that professionals receiving autonomy support for career development are motivated to use LinkedIn.

According to SDT, people need to gain mastery of tasks and learn different skills for their competence. When people think that they have the skills needed for success, they are more likely to take actions that will help them achieve their goals. In a competence-supporting environment, a person is given the opportunity to gain his/her skills. LinkedIn is viewed as an informational hub for professionals as many influencers share their experience. Through reading the published articles from influencers and self-initiated exchanges with others in LinkedIn's discussion groups, professionals can

enhance their existing skills and develop new ones. Hence, feelings of competence are fostered and use of LinkedIn is motivated out of professionals' own interests.

Ryan and Deci (2000) stated that relatedness, belonging and feeling connected to others is centrally important for internalization to perform. When a person is engaged in a relatedness support environment, acknowledgement, positive regard, caring, and interest in one's own experience are emphasized (Roca and Gagne, 2008). In LinkedIn, a professional can publish and update his/her LinkedIn profile that may receive numerous "likes" and positive feedback from others. This connection provides people with identity, helps them to feel valued and be included in a community. Relatedness can also be established through the exchange with other professionals in various discussion groups within LinkedIn. In this regard, relatedness support is attained and a sense of closeness and belonging is nurtured. According to Ryan and Deci (2001), relatedness is a strong predictor of psychological well-being, and this feeling intrinsically motivates professionals to use LinkedIn out of enjoyment. Table 1 summarizes the relationship among each support and LinkedIn functions. Hence, we predict the following hypotheses:

H1a: Perceived autonomy support has a positive influence on intrinsic motivation for using LinkedIn.

H1b: Perceived competence support has a positive influence on intrinsic motivation for using LinkedIn.

H1c: Perceived relatedness support has a positive influence on intrinsic motivation for using LinkedIn.

(Insert Table 1 here)

A professional's LinkedIn use may be enjoyable or uninteresting depending on the professional's own agenda. Meeting other professionals, gaining information, and learning knowledge can be fun and rewarding, while job seeking, posting resumes, and updating profiles can be tedious and uninteresting. In terms of SDT, if a person loses interest in an activity, he/she must be extrinsically motivated to continue (Ryan and Deci, 2000).

Since participations in LinkedIn are voluntary and there are no authorities to impose any external rewards or punishments for participations. Hence, the controlling conditions with participation contingent rewards are not salience in LinkedIn. Somehow, the supports among participants from LinkedIn play important roles to keep professional participating in LinkedIn. In general, participants of LinkedIn are professionals who are looking for career development. While autonomy, competence and relatedness supports will drive autonomous motivation for student to learn (Ryan and Niemiec, 2009), which is related to intrinsic aspiration (viz personal growth), career development is close to extrinsic aspirations (viz., money, fame, and image) as suggested by Niemiec, et al. (2009). In this regard, the autonomy, competence and relatedness supports of LinkedIn on career development may also induce extrinsic or introjected motivation for using LinkedIn. The followings are further elaborations of this reasoning.

Introjected regulation defines that people who act in such a way as to feel worthy and use ego involvement to buttress their fragile selves (DeCharms, 1968; Ryan, 1982). In terms of autonomy and competence supports, some professionals feel obliged to participate in LinkedIn because they do not want to miss out new job postings and opportunities to enhance their autonomy in career planning and development. Some other professionals get involved in LinkedIn may want to get recognition from others

by showing they are competent and knowledgeable. Still, there are some who worry whether they are lag behind on the profession-related and industry-related information and being considered inferior to others. Hence, their LinkedIn use is not completely enjoyable but rather subject to introjected regulation.

Based on the definition of relatedness, a person who is engaged in a relatedness support environment, acknowledgement, positive regard, caring, and interest in one's own experience are emphasized (Roca and Gagne, 2008). In LinkedIn, when professionals publish their profile, they want to be "likes" and receive positive feedback from others. Contrarily to being "dislikes" or rejected, the positive feedbacks provide people with identity, help them to feel valued and being cared for. To an extent, relatedness support is attained and a sense of closeness and belonging is nurtured. According to Ryan and Deci (2001), relatedness is a strong predictor of psychological well-being, we presume some professionals are obliged to connect and be liked and accepted by others through LinkedIn participation. Hence, we hypothesize the following:

> *H2a: Perceived autonomy support has a positive influence on introjected regulation for using LinkedIn.*

> *H2b: Perceived competence support has a positive influence on introjected regulation for using LinkedIn.*

> *H2c: Perceived relatedness support has a positive influence on introjected regulation for using LinkedIn.*

External regulation is referred as when one acts with the intention of obtaining a desired consequence or avoiding an undesired one, so he/she is spurred to action only

when the action is instrumental to those ends (Ryan, 1982). People may become involved in an activity to gain something or because they are externally regulated to participate (McLean et al., 2003). For the autonomy and competence supports in LinkedIn, the exchanges in discussion groups and influencers' views are helpful for providing choices, options, and the latest knowledge and skills for career development and advancement. Hence, their autonomy and competence for career development be enhanced. As such, we propose that some professionals are externally regulated to participate in LinkedIn.

To a certain extent, using LinkedIn for networking and being "likes" and accepted are rewarding. Professionals will usually accept the connections with others if they already know each other such as they are classmates, colleagues or acquaintance. Successful reconnections and new connections with others are welcoming as proves of being "likes" and accepted. All these rewards from relatedness supports drive professionals to use LinkedIn. Hence, we hypothesize the following:

H3a: Perceived autonomy support has a positive influence on external regulation for using LinkedIn.

H3b: Perceived competence support has a positive influence on external regulation for using LinkedIn.

H3c: Perceived relatedness support has a positive influence on external regulation for using LinkedIn.

LinkedIn enables its members to search for employment opportunities, to research companies and industries, to establish profiles, and to post resume information (Bradley, 2011). Professionals who use LinkedIn to establish and actively update their

profile and build social network tend to have a higher probability to leave their organizations for professional advancement. Within LinkedIn, professionals can promote and market themselves through various functions such as their profile page. In addition, the ongoing interactions and exchanges within the discussion groups enable professionals to establish connections with others and attract potential recruiters. These benefits apply to those who are intrinsically motivated to use LinkedIn, those who are motivated in an introjected manner to use LinkedIn to avoid missing out any opportunities, and those who are externally motivated to use LinkedIn to enhance their career development and obtain rewards from career advancement.

In this regard, we argue that professionals who are triggered by intrinsic motivation, introjected regulation, or external regulation to use LinkedIn are more likely to enter the job market. Hence it follows that the more frequently professionals use LinkedIn, the higher the probability that they intend to leave their organizations for professional advancement. Hence, we hypothesize the following:

H4a: Intrinsic motivation for using LinkedIn has a positive influence on ILPA.

H4b: Introjected regulation for using LinkedIn has a positive influence on ILPA.

H4c: External regulation for using LinkedIn has a positive influence on ILPA.

Research Methodology

Procedure and participants

To examine the theoretical model, our target population was professionals who were registered LinkedIn users, active for at least six months during the time this survey conducted, and were members of at least one discussion group. LinkedIn discussion groups are intended to offer trusted platforms for professionals to engage valuable

exchanges of views, establish interactions between one and another. According to LinkedIn's rules, a discussion group can have a maximum of 20,000 members. Table 2 shows the thirty discussion groups that were selected. In total, 5,810 professionals were randomly chosen. The number of messages sent to each discussion group was roughly proportional to the number of members in the group. Using the "inMail messaging service", which was the only available communication service among users within LinkedIn, it took us seven months to send the 5,810 inMail messages (as shown in the Appendix 1) together with two rounds of reminder messages. A total of 17,000 inMail messages were sent in order to achieve a good and acceptable response rate. As a result, the data collection lasted for seven months, from January 1, 2015 to July 31, 2015, to complete.

(Insert Table 2 here)

The inMail message explained the importance and objectives of the survey (Dillman, 2000). A hyperlink leading to an online questionnaire for data collection was included in the message. All collected data were checked for consistency to minimize data entry errors. Out of the 5,810 invitations, 379 questionnaires had been completed by August 1, 2015. The response rate is approximately 6.5 percent, which is comparable with other online random sampling studies (Nulty, 2008). Table 3 shows the demographic information of the respondents, including their gender, age, education, income level, number of connections, weekly average LinkedIn use, and number of years as a LinkedIn member. These demographic statistics are comparable with the general population of LinkedIn as reported by Pew Research Center in the Social Media Update (Greenwood et al., 2016). The report stated that over 50 percent of LinkedIn users are college graduates and post-college graduates, and 45 percent fall into the income group of US$75,000 and above.

(Insert Table 3 here)

Measurements

All the constructs in this study were measured by a self-reported questionnaire using a 7-point scale ranging from "highly disagree" (1) to "highly agree" (7). The items used to operationalize the variables in our research model were adapted from prior studies, with some changes in wording to reflect the specific intention and professional advancement context for the LinkedIn users.

Perceived autonomy support (PAS), perceived competence support (PCS) and perceived relatedness support (PRS) were extracted from the Work-Related Basic Need Satisfaction Scale (W-BNS, Baard et al., 2004). A simplified version of 12 items with 4 items in each support is adapted. In our questionnaire, the items are rephrased in the context of LinkedIn usage. For instance, an original item from perceived relatedness support is "I get along with people at work". This item is rephrased as "I get along with other professionals when using LinkedIn". Another item from perceived autonomy support is "my manager provides me with choices and options about my work." This item is rephrased as "Other professionals provide me with choices and options for my career planning and development." An item from perceived competence support is "I feel competence at my job." This item is rephrased as "I feel competent when receiving endorsements and positive remarks from other professionals on LinkedIn." Intrinsic motivation (IM), introjected regulation (IR), and external regulation (ER) were extracted from the study by Gagne and his colleagues (2010). These motivation scales are rephrased in the context of using LinkedIn. For instance, an item from intrinsic motivation is rephrased as "I enjoy using LinkedIn very much." To measure ILPA, questions were adapted from Cho and Huang (2012), Meyer et al. (1993) and Shafer et

al. (2002). One item of ILPA is "I am likely to leave this company for career advancement at another company within the next year."

Control variables

Based on literature of ILPA (Cho and Huang, 2012), we included numerous control variables that could affect ILPA: affective professional commitment (APC), normative professional commitment (NPC), continuance professional commitment (CPC), affective organization commitment (AOC), normative organization commitment (NOC), continuance organization commitment (COC) and organizational support for development (OSD).

According to Becker (1960), direct and indirect investment in a profession represents costs that are operationalized mainly by variables such as income, age, education, position, and years of service in current organization, which were included in the control variables. Due to individual difference in adopting new technologies (Agarwal and Prasad, 1999; Gefen and Straub, 1997), we also included gender in the control list.

Motivation to use technology will drive the actual use of that technology (Roca and Gagne, 2008). In this study, we controlled for actual LinkedIn usage. The number of discussion groups being involved, Weekly average time spent on LinkedIn, and the number of years as a LinkedIn member were considered as control variables that could affect ILPA.

To measure APC, four items are extracted from Meyer and Allen's (1991). These items are "I would be very happy to spend the rest of my career with this

profession", "I enjoy discussing my profession with people outside it", "This profession has a great deal of personal meaning for me", and "I do not feel a strong sense of belonging to my profession."

To measure CPC, four items are extracted from Meyer and Allen's (1991). These items are "Too much of my life would be disrupted if I decided to leave my profession now", "It would be too costly for me to leave my profession now", "Right now, staying with my profession is a matter of necessity as much as desire", and "One of the few serious consequences of leaving this profession would be the scarcity of available alternatives."

To measure NPC, four items are extracted from Meyer and Allen's (1991). These items are "Jumping from profession to profession does not seem at all unethical to me.", "I do not believe that a person must always be loyal to the IT profession.", "I think that people these days move away from the IT profession too often," and "If I got offer for another profession, I would not feel it was right to leave the IT profession."

The measurements of AOC, NOC, COC are similar to the three components used to measure professional commitment, but we changed "profession" to "organization."

OSD is measured by five items from Kraimer et al. (2011). For example, "My organization has programs and policies that help employees to advance in their functional specialization", and "My organization provides opportunities for employees to develop their specialized functional skills".

In this study, gender is coded as 0 for "male" and 1 for "female." Age is coded from 1 for "18 to 25" to 5 for "51 or above." Education is coded from 1 for "secondary

school" to 4 for "post-graduate." Annual income is coded from 1 for "below US$20,000" to 6 for "over US$100,000." Years of service in current organization is coded from 1 for "0 to 2 years" to 5 for "9 years or above." Position is coded from 1 for "CEO/senior management", to 4 for "junior staff." Number of connections is coded from 1 for "0 – 100" to 5 for "401 or above." Number of discussion groups being involved is coded from 1 for "0 to 3", to 4 for "10 or above." Weekly average of using LinkedIn is coded from 1 for "0 – 2 hours" to 5 for "9 hours or over." Years joined is coded from 1 for "1 year" to 7 for "7 years or above."

Analysis and Results

Data analysis

We computed the means, standard deviations, and bivariate correlations for all data. To ensure that the instruments of this study are reliable and valid, we conducted factor analysis of the essential constructs, including the support for the three basic innate needs, intrinsic motivation, introjected regulation, and external regulation, and the intention to leave an organization for professional advancement due to LinkedIn use. To test the hypotheses, we used structural equation modeling to analyze the theoretical framework. We also checked whether the control variables had any significant effects on ILPA.

Instrument reliability and validity

Reliability is defined as the degree to which a construct is free from errors and provides consistent results. We used Cronbach's alpha to measure the internal consistency of the multi-item scales. As shown in Table 4, the Cronbach's alphas of all constructs in this study exceeded 0.7. This shows that the sets of items correlated well with each other, therefore, all of them are deemed reliable. In addition, because all the

items in these constructs were adapted from past studies, all constructs can be considered representative in terms of face validity.

Means, standard deviations, Cronbach's alpha, and correlation variables

Considering the standard deviations of all constructs as shown in Table 4, there are enough variations for the sampled data to represent the population of LinkedIn users. The mean of PAS is 4.89, which is higher than the neutral point of 4, indicating that professionals receive a high degree of autonomy support from their use of LinkedIn. PRS and PCS have means of 4.03 and 4.41 respectively, which are close to the neutral point of 4, indicating that professionals receive a fair amount of competence and relatedness support from LinkedIn use. IM, IR, and ER have mean values of 4.88, 3.85, and 5.46, respectively, indicating that professionals are most strongly motivated by external regulation, second by intrinsic motivation, and third by introjected regulation. The mean value for ILPA is 4.79, indicating that active participants in LinkedIn intend to leave their organizations in the near future.

(Insert Table 4 here)

Common method bias

To test for common method bias, we applied Harman's single factor test (Podsakoff et al., 1986). The results for the total variance obtained from the exploratory factor analysis of the essential variables (PAS, PCS, PRS, IM, IR, ER, and ILPA) indicate that no single factor, with a dominant value of 14.2%, accounts for most of the covariance. We also applied the marker variable technique to examine the effect of common method variance on structural relationships (Williams et al., 2010; Malhotra et al., 2006). In this regard, two unrelated items, "I enjoy watching Hong Kong movies"

and "Hong Kong movies are entertaining," were included in the survey. To test the common method variance, we applied structural equation modeling (SEM) with and without the marker. Our analysis showed no obvious difference between the path coefficients with and without the marker. Furthermore, the results of the SEM indicated different levels of significance for the path coefficients. These findings confirmed that common method bias was not significant and therefore not a concern in the current study.

Factor Analysis

Convergent validity was evaluated in the measurement scales using two criteria (Fornell and Larcker, 1981). First, all the indicator factor loadings should be significant and exceed 0.70. Second, the average variance extracted (AVE) by each construct should exceed the variance due to the measurement errors for that construct (i.e., should be above 0.50). Table 5 shows the result of the factor analysis on essential variables in the theoretical model and Table 6 shows the result of the confirmatory factor analysis on the controlled variables: APC, NPC, CPC, AOC, NOC, COC, and OSD. From Table 6, it indicates that the confirmatory factor analysis model (CFA model), which closely meets the indices for desire model (Hu and Bentler, 1999) and is better than the one factor model in terms of model fit.

(Insert Tables 5 and 6 here)

Table 7 demonstrates the correlation matrix of the constructs, verifies whether the constructs potentially overlap by their correlations, and helps to analyze whether the constructs are independent. This table consists of three pieces of information: 1) the correlation coefficients among all constructs, 2) the AVE which indicates the explained variance of the measurements of related constructs, and 3) the square root of AVE as

stated on the diagonal in the matrix. If the correlation coefficients between two constructs are below 0.7, they are deemed independent. As indicated in Table 7, all correlation coefficients are below 0.7 which indicates that they are independent of each other. Moreover, according to Fornell and Larcker (1981), if the square roots of the AVE are all higher than the correlations between constructs, then discriminant validity of all constructs can be assumed. The diagonal elements shown in Table 7 (reporting the square roots of the variance shared between a construct and its measures) are higher than the correlations between the target constructs, without exception. Hence, the discriminant validity of all the constructs in this research are considered acceptable and both conditions for convergent validity are satisfied.

(Insert Table 7 here)

Next, the structural model fit of the framework for our model is presented in Figure 2. Table 8 shows the indices of the model in compliance with the combinational rule on desired levels for various kinds of fit from Hu and Bentler (1999). The analysis shows evidence of good model fit.

(Insert Table 8 here)

(Insert Figure 2 here)

Figure 2 shows the result after running structural equation modeling. All three kinds of support have different extents of motivations (intrinsic, introjected and external) on professionals' participation in LinkedIn. PAS has a positive influence on intrinsic motivation ($\beta = 0.500$, $p < 0.001$), introjected regulation ($\beta = 0.114$, $p = 0.022$), and external regulation ($\beta = 0.640$, $p < 0.001$). PCS also has a positive influence on intrinsic motivation ($\beta = 0.124$, $p = 0.009$), introjected regulation ($\beta = 0.616$, $p < 0.001$), and

external regulation (β = 0.175, p < 0.001). While PRS has a positive influence on intrinsic motivation (β = 0.274, p < 0.001), it has no significant effect on introjected regulation (β = -0.085, p = 0.057) or external regulation (β = -0.062, p = 0.182). The three motivations, intrinsic motivation (β = 0.142, p = 0.008), introjected regulation (β = 0.230, p < 0.001), and external regulation (β = 0.092, p = 0.045) have positive effects on ILPA.

For the structural model as shown in Figure 2, we also find that the control variables NPC (β = -0.109, p = 0.046), AOC (β = -0.209, p < 0.001), COC (β = -0.206, p < 0.001), OSD (β = -0.323, p < 0.001), age (β = -0.093, p = 0.047), and position (β = -0.108, p = 0.021) have significant negative effects on ILPA. This is consistent with the notion that if a professional is obliged to stay with his/her profession (NPC), his/her tendency to stay with his/her profession is relatively high. To a certain extent, when a professional has a strong sense of belonging to his/her organization (AOC), is older (age), has a relatively high position within the organization (position), or must sacrifice too much to leave his/her organization (COC), his/her desire to leave is low. Furthermore, when a professional receives strong support from his/her organization (OSD), he/she is highly likely to remain and stay loyal to the organization.

Hypotheses Testing

This study examines the effect of motivation to participate in LinkedIn on professionals' intention to leave their organizations for professional advancement. From the analysis of structural equation modeling, H1a, H1b, and H1c are supported. Consistent with SDT, it is confirmed that autonomy support, competence support, and relatedness support have positive influences on intrinsic motivation. As expected, professionals receive support for autonomy, competence, and relatedness through LinkedIn use. The information learned and knowledge gained provide professionals

with new choices and options for their career planning and development and give them new skill sets to sustain their competence. The friendly environment helps reinforce professionals' intrinsic motivation to continue using LinkedIn.

Introjected regulation is positively influenced by perceived autonomy and competence support, but unaffected by perceived relatedness support with its standardized coefficient on introjected regulation to be insignificant. Thus, H2a and H2b are supported while H2c is rejected. A professional should not ignore the benefits gained from participation in LinkedIn. The information learned and knowledge gained provide professionals with new choices and options for their career planning and development. It also enables professionals to acquire new skill sets to sustain their competence. As such, many professionals feel obliged and pressure themselves, which is a kind of introjected regulation, to continue using LinkedIn. As for perceived relatedness support, the reason for its rejection could be because LinkedIn encourages professionals to connect and build networks with others, but to build direct connections, invitations must be sent to others. We suppose some professionals may not accept invitations unless they know the inviter in advance, such as former schoolmates, colleagues, or acquaintances. Furthermore, some may decline invitations because the purpose of their LinkedIn participations is not for job-seeking or connections with others but rather for information-seeking. To a certain extent, professionals are not obliged to use LinkedIn to build networks with others as LinkedIn is not the only one media for network building. Thus, to be liked or disliked or to feel belonging within LinkedIn networks seem irrelevant.

External regulation is positively influenced by perceived autonomy and competence support but has no relationship with perceived relatedness support with its standardized coefficient on external regulation to be insignificant. Hence, H3a and H3b

are supported and H3c is rejected. Once again, information learned and knowledge gained not only offer professionals new choices and options for their career planning and development but also help professionals develop new skill sets to enhance their competence. Autonomy and competence supports are therefore important to regulate professionals to participate in LinkedIn for career development and advancement. For the rejection of H2c, we suppose some professionals may decline invitations because the purpose of their LinkedIn participations is not for connections with others but rather for information-seeking. To a certain extent, professionals are not benefited from building networks with others.

H4a, H4b, and H4c are supported. ILPA from using LinkedIn is positively influenced by intrinsic motivation and introjected and external regulations. LinkedIn offers searching for career opportunities for professionals and a recruitment function for headhunters to identify potential candidates. Positive experiences and the opportunity for better career development and advancement encourage professionals' continued LinkedIn use. Eventually, they have a high likelihood of leaving their organization for professional advancement.

Post-hoc Analyses and Findings

Our results in Figure 2 uncover strong connections between the three sets of support and motivations – PAS and ER, PCS and IR, PRS and IM. Moreover, IR also has a strong connection with ILPA. To verify the relative strengths of these associations, the Cohen and Cohen (1983) equation is used:

$$t = (r_{xz} - r_{yz}) \cdot sqr((n-3)(1 + r_{xy}))/sqr\ (2 \cdot (1 - r^2_{xz} - r^2_{yz} - r^2_{xy} + 2\ r_{xz} \cdot r_{yz} \cdot r_{xy}))$$

First, for the perceived autonomy support and external regulation pair, we apply x = external regulation, y = introjected regulation, z = perceived autonomy support, n = sample size (379), r_{xy} = 0.42, r_{yz} = 0.30, r_{xz} = 0.61, the t value is equal to 2.61, and the corresponding p is < 0.05 (one-tailed test). Then, we substitute x = external regulation, y = intrinsic motivation, z = perceived autonomy support, n = 379, r_{xy} = 0.49, r_{yz} = 0.60, r_{xz} = 0.61, and the t value is 2.96 (p < 0.05, one-tailed test). Both analyses show that PAS has a stronger effect on ER than IM and IR.

For the second pair, perceived competence support and introjected regulation, we apply, x = introjected regulation, y = external regulation, z = perceived competence support, n = 379, r_{xz} = 0.56, r_{yz} = 0.40, r_{xy} = 0.43, the t value is 3.59, with p < 0.05. This confirms that perceived competence support has a stronger effect on introjected regulation than on external regulation. When we apply x = introjected regulation, y = intrinsic motivation, z = perceived competence support, n = 379, r_{xz} = 0.56, r_{yz} = 0.41, r_{xy} = 0.32, the t value is 3.26, with p < 0.05, both analyses confirm that PCS has a stronger effect on IR than on IM and ER.

For the third pair, perceived relatedness support and intrinsic motivation, we substitute x = intrinsic motivation, y = introjected regulation, z = perceived relatedness support, n = 379, r_{xy} = 0.32, r_{yz} = 0.22, r_{xz} = 0.53; the t value is 1.97 (p < 0.05, one-tailed test). Next, to compare the effects of PRS on IM and ER, we substitute x = intrinsic motivation, y = external regulation, z = perceived relatedness support, n = sample size (379), r_{xy} = 0.49, r_{yz} = 0.35, r_{xz} = 0.53; the t value is 3.19 (p < 0.05, one-tailed test). Both findings demonstrate that PRS has a stronger effect on IM than IR and ER.

To verify the last pair, introjected regulation and ILPA, we apply x = introjected regulation, y = external regulation, z = ILPA, n = 379, r_{xz} = 0.23, r_{yz} = 0.20, r_{xy} = 0.43, the t value is 0.56, with p < 0.05. This means that introjected regulation does not have

a stronger effect on ILPA than external regulation. We substitute x = introjected regulation, y = intrinsic motivation, z = ILPA, n = 379, r_{xz} = 0.23, r_{yz} = 0.19, r_{xy} = 0.32; the t value is 0.69, with $p < 0.05$, and confirm that introjected regulation does not have a stronger effect on ILPA than intrinsic motivation. Finally, we substitute x = intrinsic motivation, y = external regulation, z = ILPA, n = 379, r_{xz} = 0.19, r_{yz} = 0.20, and r_{xy} = 0.49; the t value is -0.197, which means that intrinsic motivation does not have a stronger effect on ILPA than external regulation. In sum, no single motivation posits the strongest impact on ILPA, but all three (intrinsic motivation, introjected regulation, and external regulation) have fairly similar impact on ILPA.

To further validate the findings for the above four pairs, we also impose four constrained models as follows: 1) assuming that perceived autonomy support has equal effects on external regulation, intrinsic motivation, and introjected regulation; 2) assuming that perceived competence support has equal effects on external regulation, intrinsic motivation, and introjected regulation; 3) assuming that perceived relatedness support has equal effects on external regulation, intrinsic motivation, and introjected regulation; and 4) assuming that the effects of intrinsic motivation, introjected regulation and external regulation, on ILPA are identical. We compare the four models with the unconstrained model and find that there are significant differences between constrained models 1, 2, and 3 and the unconstrained model. However, the difference between constrained model 4 and the unconstrained model is not significant, which indicates that constrained model 4 and the unconstrained model are statistically identical. In sum, we affirm that the four findings above are valid.

Discussion

Theoretical implications

A great deal of research attention has been devoted to exploring factors that influence voluntary employee turnover in organizations (Hancock et al., 2013). This landscape of turnover study has been adjusted according to the presence of LinkedIn. On the one hand, professionals may intend to leave their organizations if they perceive their services are not properly valued (Niederman et al., 2007; Rong and Grover, 2009), especially when switching jobs is more accessible and easier upon using LinkedIn. On the other hand, organizations may suffer costly turnover and production deficiencies from losing talent, yet could benefit from recruiting better-fit talent when the talent pools are more accessible through professional network sites such as LinkedIn.

The findings of this LinkedIn study have several implications for theory. First, the suitability of applying SDT on participation of professional network sites is appropriate. In line with self-determination theory on other domains, the results demonstrate the supports of perceived autonomy, competence, and relatedness are fulfilled through LinkedIn use and that professionals are intrinsically and extrinsically motivated to continue their LinkedIn use, which will lead professionals an intention to leave an organization for professional advancement. This is consistent with many previous studies on motivation through the self-determination approach. For instance, Ntoumanis (2001) suggested that individuals are intrinsically and extrinsically motivated to exercise through the support of all three basic psychological needs for enjoyment and good health. Similarly, Halvari et al. (2013) demonstrated that dental home care and treatment behavior are sustained through intrinsic and extrinsic motivations. Our study confirms that the LinkedIn website enables and supports professionals to search for jobs, gain new insights and information, and build networks, whether their use is intrinsically or extrinsically motivated.

Second, our study sheds new light on the evolution of job search processes that have progressed in parallel with technology. Professionals are increasingly dependent on social media for professional development and career advancement, prompting increased mobility. The easy access to Internet at anytime and anywhere no doubt has changed the way professionals are motivated and how they interact with others for their career development and advancement. The nature of LinkedIn not only serves as a platform for professionals to exchanges their knowledge and experience, but also enables professionals to establish relationship with other professionals. As a whole, professionals can build autonomy, competence and relatedness for their professional advancement. This enables professionals a higher intention to leave an organization for professional advancement in long term.

Furthermore, we conducted a post-hoc analysis to demonstrate that each of the three basic psychological needs and motivations according to the SDT model could be time relevant and that such time relevancy plays an important role impacting on one's behaviors and leading outcomes. Many researchers to date have only concentrated on the connections between time perspective and motivational regulations while excluding the three basic psychological needs (Nuttin and Lens, 1985; Mouratidis and Lens, 2015). How time perspectives relate to, and influence, the support of the three needs together with the corresponding motivations has not been explored to the same extent and remains unclear. Our findings from the post-hoc analysis help explain a professional's behavior and motivation to participate in LinkedIn applying the time perspective concept. Many previous studies documented the future time perspective, showing positive associations between intrinsic motivation and introjected regulation on self-regulated learning (De Bilde et al., 2011) and between intrinsic motivation and identified and integrated regulations on exercise behavior (Wininger and DeSena,

2012), however, almost no research has fully investigated, or even included, the three basic psychological needs the way we have done in this research.

Time perspective is defined as "the often non-conscious process whereby the continual flows of personal and social experiences are assigned to temporal categories, or time frames, that help to give order, coherence and meaning to those events" (Zimbardo and Boyd, 1999). Conceptually, present-oriented individuals react to instant stimuli and social settings. They think more about how their current actions can bring immediate pleasure and excitement (Wininger and DeSena, 2012). Contrary to this, future-oriented individuals make decisions and take actions based on the anticipated consequences of imagined future scenarios, and they think more about how their current actions influence their future (Wininger and DeSena, 2012). Individuals with a present–future orientation combine both types of characteristics. They care about immediate results and future consequences.

In our opinion, both perceived autonomy support and external regulation are associated with future orientation. To a certain extent, it is logical to think that people take actions because they want to gain something in the future. Perceived autonomy support offers choice and options that induce people to think of the future. Arney et al. (2006) suggested that the choice of college or a specific major affects a person's future success, as if one may become a successful CEO of a Fortune 500 Company due to the choice he/she makes. Using LinkedIn gives professionals choices and options that encourage them to plan and act on their future career development and advancement. Professionals believe the new choices and options may help them progress in their career in the future as a reward. If no choices and options are available, a professional will stay put and is likely to do nothing because nothing will change in the future.

For perceived competence support and introjected regulation, we suggest this pair represents a continual time horizon, the present and the future. De Bilde, et al. (2011) reviewed in a study on learning outcomes found that there is a positive association between introjected regulation and the present and future time perspective. Through LinkedIn participation, professionals can continuously learn new knowledge and information in the hope of better equipping themselves for any advancement opportunity. Competent professionals typically want to be the best and aim to remain highly employable in the job market. They must continue to learn and enhance their competitiveness. Because of this, professionals often feel obliged and pressured to continue using LinkedIn, because if they stop, they may miss out on something important. Because LinkedIn offers such opportunities, it makes sense that professionals would visit the website continually. Hence, we suggest both perceived competence support and introjected regulation are associated with present and future orientation.

For the pair of perceived relatedness support and intrinsic motivation, we suggest they are associated to present orientation. Cox et al. (2009) demonstrated that feelings of acceptance by peers and superiors were related positively to self-determined motivation and enjoyment and represented a simultaneous sentiment rather than a presumed future. Professionals using LinkedIn tend to establish and expand their social network with other professionals for bonding and acceptance. Although most support is generally positive, sometimes criticism is also voiced. Whether it is positive or negative support, these responses are instant rather than delayed. The act of LinkedIn users therefore represents an immediate reaction showing their own interests rather than a pushed or controlled reaction coming from external factors. Hence, it is reasonable to categorize perceived relatedness support and intrinsic motivation as present orientation.

For ILPA, we claim it is associated with present and future time horizons because professionals using LinkedIn can find new jobs and receive new job offers at any time. Instead of having a sole association with introjected regulation, the post-hoc analyses verified all intrinsic motivation, introjected and external regulations have similar influences on ILPA. In general, we agree that professionals using LinkedIn can have mixed agendas along different time horizons. Some professionals have an immediate need for a new job, possibly because of dissatisfaction with their current job, layoff pressure, or being fired, while others have no intention of changing jobs now but keep their options open and use the LinkedIn platform to build up their network and credentials for the future. Other professionals may not have a set schedule for changing jobs and are keeping their options open should an offer for a better job be made. After all, the time perspective concept as one of the possible interpretations along the full SDT model to explain how participation in LinkedIn would influence professionals' ILPA is not empirically tested. Future research will be needed to verify this insightful finding.

Practical implications

From an organization's perspective, employees' participation in professional online network could trigger high turnover which is a negative indicator of organizational effectiveness as it is associated with high costs from losing human capital, recruiting and training substitute employees, reduced productivity, and service quality (Shaw et. al., 2013; Tse et. al., 2013). Organizations should understand that professional network sites play an important role for professional advancement. The motivations to participate in professional network sites are supports on autonomy and competence. At the same time, active participants in LinkedIn would have high level

of ILPA. Hence, it is beneficial for human resource managers to get familiar with the LinkedIn platform to identify and recruit professionals.

For the social platform designers, LinkedIn is proven as a recognized professional network site that attracts hundreds of thousands of users and organizations to participate and visit. To sustain users' participation, it is vital for platform designers to continue enhancing supports on autonomy and competence for career development. For instance, LinkedIn may consider allowing users to build their own webpage for presenting their achievements and work experience. This personal webpage can be resume of the user.

Limitations

This study has several limitations that need to be considered. First, this research used a relatively small sample considering that there are hundreds of millions of LinkedIn members. Therefore, a large-scale study should be conducted to confirm the results of this research.

Second, all respondents are existing active LinkedIn users and there is no comparison group who are not participants of LinkedIn. Our findings are limited to the current active LinkedIn users and we cannot generalize the results to non-LinkedIn users or inactive LinkedIn users. Nevertheless, there are more than 630 million professionals registered in LinkedIn. They are of different levels: 90 million senior-level influencers, 63 million decision makers, 40 million mass affluent, 10 million c-level executives, 17 million opinion users, 6 million IT decision makers, 3 million MBA graduates and 46 million students and recent graduates as of September 2018 from the statistics of LinkedIn.

Third, there are many other professional network sites besides LinkedIn. In China, for example, several professional networks have been established and are attracting a growing number of subscribers. Future research should consider including these websites in order to be more representative. In addition, it would be interesting to further explore and compare the perception, attitudes and intention of leaving an organization for professional advancement among professionals who use network sites as well as who do not use any social media at all.

Fourth, the investigated constructs are not supposed to remain unchanged over time, and the research method may not fully capture the dynamics of professionals' career development and network building.

Finally, the problem of common method bias may exist, although it is not a significant concern as discussed in our analysis. To address potential problem in common method bias, future research should consider using multi-methods and longitudinal research designs. A longitudinal study combining qualitative and quantitative data would enable a process-oriented perspective that cannot be achieved using a variance-based approach, such as the one used here. This would allow better understanding of professionals' motivation and thereby underlying "how/why" of the relationships.

Conclusions

The results of this study suggest that professionals who use LinkedIn intend to leave their organizations for professional advancement, whether immediately or in the future. Many companies and recruiters use LinkedIn to identify potential employees (Bohnert and Ross, 2010; Sacks and Graves, 2012; Wetsch, 2012). Our findings confirm that professionals obtain supports of autonomy, competence, and relatedness

for professional advancement through LinkedIn use and are motivated both intrinsically and extrinsically to continue participating in LinkedIn. A professional seeking advancement, whether to remain in the same organization or to move to a different organization, is likely to believe that using LinkedIn will help him/her to achieve this goal. With the increasing popularity of online social media that promote professional networking, human resource managers must consider new and different measures to retain valuable employees, as turnover is time consuming and costly. Jeff Weiner, founder and CEO of LinkedIn, once said that "The days where you could go to school, study something, graduate, then have a job for the rest of your life is over." LinkedIn, without any doubt, has made its impact on professionals for their advancement in the 21st century global working environment.

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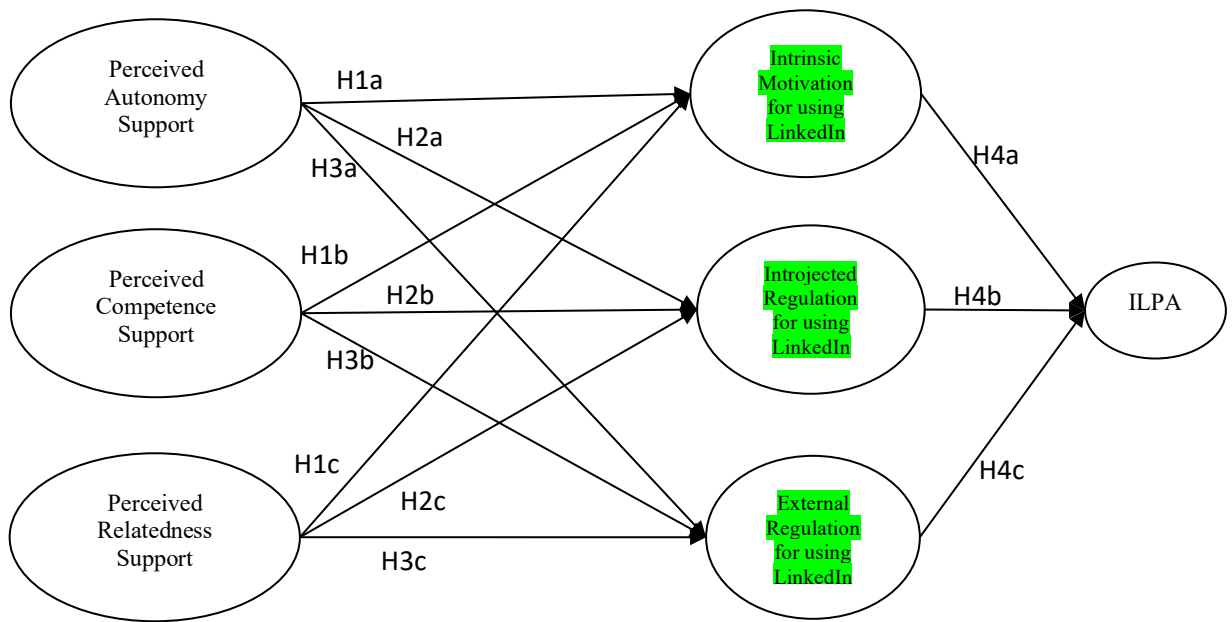
Figure 1: Theoretical framework

The darker lines indicate stronger relationships between the corresponding constructs

* *p* < .05, ** *p* < .01, *** *p* < 0.001
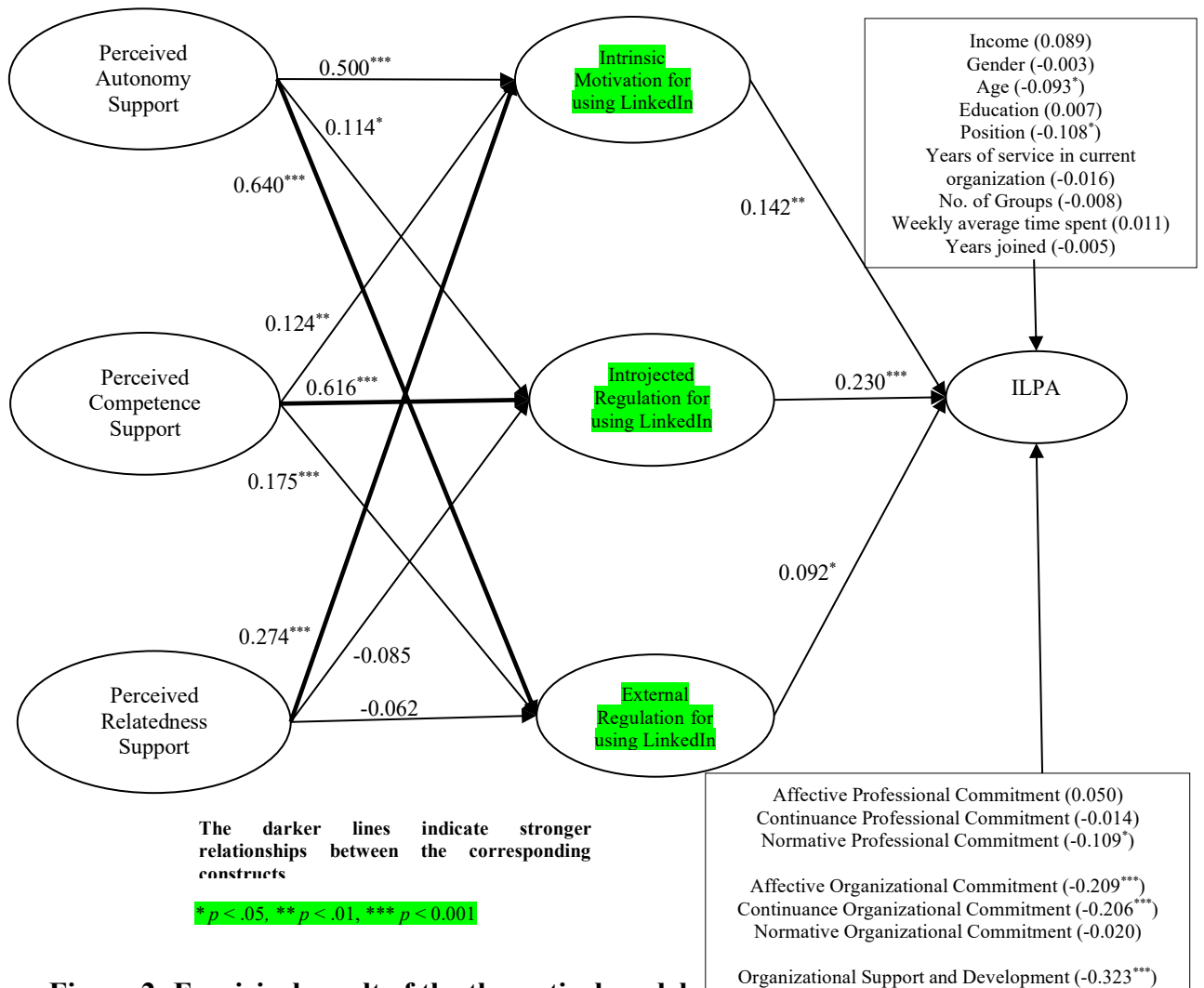
Figure 2: Empirical result of the theoretical model

Table 1: Perceived supports and related LinkedIn functions

	LinkedIn Functions
Perceived Autonomy Support	Ideas of new choice and options for career planning and development can be obtained from the influencers' sharing, and from the exchange with other professionals in various discussion groups within LinkedIn
Perceived Competence Support	Skill set enhancement and development can be obtained from the influencers' sharing, and from the exchange with other professionals in various discussion groups within LinkedIn
Perceived Relatedness Support	Attain sense of closeness and belonging can be obtained from being liked in the user's profile and from the exchange with other professionals in various discussion groups within LinkedIn

Table 2: Number of invitations sent to the LinkedIn discussion groups

Discussion group	Number of invitations via inbox message
American Society of Transportation and Logistics (ASTL)	360
Deutsche Bank	300
Robert Half	280
American Psychological Association of Graduate Students	250
Android Developer Group	250
Banking Careers	250
Business Analyst Professional	250
DBS Group	250
Digital Marketing	250
Hotel Industry Professionals Worldwide	250
Human Resources (HR) and Talent Management Executive	250
ISM – Purchasing and Supply Chain Manager Professionals	250
Logistics and Supply Chain professionals	250
Public Diplomacy and Diplomatic Academy	250
Social Media News and Tech	250
TDWI – Business Intelligence and Data Warehousing Discussion Group	250
Travel and Tourism Industry Professionals Worldwide	250
Worldwide Management Consultants	250
Big Data and Analytics	200
SAP Community	140
Australian Universities HR Network	100
Design Research Society	100
Hong Kong Computer Society (HKCS)	100
Hong Kong IT Professionals Association	100
IT Developers Hong Kong	100
Supply Chain Young Professionals	100
APICS Group	50
Barclays Global Network Group	50
Harvard Business Review	50
Job Mentors	30
Total	**5,810**

Table 3: Descriptive statistics of the respondents

Gender	Male	25.1%
	Female	74.9%
Age	Below 25	5.3%
	26-30	10.6%
	31-40	29.4%
	41-50	32.5%
	51 or above	22.2%
Education	Secondary School	1.3%
	Diploma/Higher diploma	6.1%
	Graduate	20.6%
	Post-graduate	72.0%
Annual Income (US$)	Below $20,000	11.4%
	$20,001-$40,000	10.8%
	$40,001-$60,000	9.8%
	$60,001-$80,000	20.6%
	$80,001-$100,000	14.6%
	$100,001 or above	32.8%
No. of professional connections	0-100	13.2%
	101-200	9.8%
	201-300	6.1%
	301-400	8.5%
	401 or above	62.4%
Weekly average time spent on LinkedIn	0-2 hours	46.2%
	3-4 hours	25.7%
	5-6 hours	12.7%
	7-8 hours	3.2%
	9 hours or above	12.2%
Years joined (LinkedIn membership duration)	1 year	11.9%
	2 years	10.6%
	3 years	6.3%
	4 years	7.4%
	5 years	19.6%
	6 years	10.6%
	7 years or above	33.6%
Years of service in current organization	0 to 2 years	36.5%
	3 to 4 years	20.1%
	5 to 6 years	12.7%
	7 to 8 years	10.3%
	9 years or above	20.4%
Number of discussion groups being involved	0 to 3	35.7%
	4 to 6	20.6%
	7 to 9	10.6%
	10 or above	33.1%
Position	CEO/Senior Management	8.2%
	Middle Management	13.2%
	Front Line Staff	47.6%
	Junior Staff	31.0%

Table 4: Descriptive Statistics and Reliability

Variables		Mean[*]	Std. Dev.
Perceived autonomy support (PAS) (Cronbach's alpha = 0.933)		4.89	1.111
PAS1	Other professionals on LinkedIn give me advice that helps me build a sense of control over my career.	4.81	1.193
PAS2	I can be open about my career aspirations with other professionals on LinkedIn.	4.97	1.222
PAS3	I can trust other professionals in exchanges relating to my career choice when using LinkedIn.	4.72	1.225
PAS4	Other professionals on LinkedIn provide me with choices and options for my career planning and development.	5.08	1.230
Perceived competence support (PCS) (Cronbach's alpha = 0.859)		4.41	1.196
PCS1	I have become masterful in my profession from LinkedIn use.	4.75	1.310
PCS2	I feel competent when receiving endorsements and positive remarks from other professionals on LinkedIn.	4.21	1.353
PCS3	I gain new information and knowledge from other professionals on LinkedIn.	4.51	1.353
PCS4	I feel that I can develop new skill sets by using LinkedIn.	4.22	1.307
Perceived relatedness support (PRS) (Cronbach's alpha = 0.895)		4.03	1.191
PRS1	I get along with other professionals when using LinkedIn.	3.87	1.350
PRS2	I feel a sense of belonging with other professionals when using LinkedIn.	4.07	1.327
PRS3	I can share my feelings and talk with other professionals on LinkedIn.	4.22	1.273
PRS4	Other professionals on LinkedIn care about me so I don't feel alone through LinkedIn use.	3.96	1.442
Intrinsic motivation (IM) (Cronbach's alpha = 0.884)		4.88	1.282
IM1	I enjoy using LinkedIn very much.	5.15	1.433
IM2	I have fun using LinkedIn.	4.83	1.382
IM3	I enjoy the moments of pleasure that LinkedIn brings me.	4.66	1.385
Introjected regulation (IR) (Cronbach's alpha = 0.793)		3.85	1.313
IR1	I have to visit LinkedIn because using LinkedIn makes me feel active in developing my career.	4.41	1.512
IR2	I don't want to feel stuck in my career if I don't use LinkedIn.	3.53	1.552
IR3	My career reputation depends on using LinkedIn.	3.60	1.629
External regulation (ER) (Cronbach's alpha = 0.861)		5.46	1.204
ER1	LinkedIn helps me to build my career path.	5.39	1.437
ER2	LinkedIn enables me to meet many people in my profession who can help my career development and advancement.	5.57	1.258
ER3	Using LinkedIn enhances my career development and advancement.	5.42	1.380
Intention to leave an organization for professional advancement (ILPA) (Cronbach's alpha = 0.832)		4.79	1.328
ILPA1	I sometimes explore my opportunities for career advancement in other companies.	5.38	1.218
ILPA2	I am likely to leave this company for career advancement at another company within the next year.	4.40	1.658
ILPA3	I am likely to leave this company for career advancement at another company within the next two years.	4.61	1.685

* 1 = strongly disagree and 7 = strongly agree

Table 5: Factor Analysis

	Component						
	1	2	3	4	5	6	7
IM1	**0.780**	0.062	0.244	0.215	0.251	0.175	0.085
IM2	**0.855**	0.127	0.127	0.192	0.168	0.226	0.108
IM3	**0.772**	0.186	0.127	0.266	0.232	0.208	0.072
IR1	0.196	**0.670**	0.295	0.117	0.178	0.168	0.088
IR2	0.141	**0.875**	0.061	0.031	0.128	0.159	0.005
IR3	0.003	**0.766**	0.200	0.147	0.238	0.004	0.087
ER1	0.180	0.237	**0.806**	0.189	0.207	0.074	0.083
ER2	0.134	0.123	**0.725**	0.333	0.195	0.173	0.024
ER3	0.148	0.205	**0.797**	0.226	0.118	0.002	0.190
PAS1	0.250	0.146	0.260	**0.718**	0.331	0.250	-0.014
PAS2	0.244	0.071	0.212	**0.786**	0.197	0.269	-0.007
PAS3	0.171	0.125	0.203	**0.790**	0.322	0.163	0.057
PAS4	0.182	0.080	0.262	**0.764**	0.289	0.236	0.036
PCS1	0.172	0.174	0.131	0.224	**0.793**	0.286	0.064
PCS2	0.230	0.131	0.160	0.228	**0.788**	0.276	0.028
PCS3	0.178	0.139	0.125	0.205	**0.787**	0.292	-0.004
PCS4	0.109	0.177	0.120	0.260	**0.766**	0.336	0.053
PRS1	0.158	0.150	0.094	0.206	0.365	**0.758**	0.081
PRS2	0.110	0.128	0.108	0.257	0.364	**0.757**	0.006
PRS3	0.178	0.019	0.071	0.145	0.264	**0.773**	0.082
PRS4	0.196	0.119	0.030	0.183	0.168	**0.832**	-0.051
ILPA1	0.119	-0.088	0.272	0.008	0.043	0.143	**0.714**
ILPA2	0.050	0.112	-0.003	0.054	0.033	-0.007	**0.913**
ILPA3	0.033	0.108	0.012	-0.013	0.046	-0.046	**0.924**

Extraction method: Principal component analysis. Rotation method: Varimax with Kaiser normalization. Rotation converged in 7 iterations. Factor loading greater than 0.67 are bold

Table 6: Confirmatory factor analysis for the control variables of APC, NPC, CPC, AOC, NOC, COC, and OSD.

Fit Indices	One factor model	CFA Model	Desired Level
χ2 /df	4.130	3.189	<3.0
CFI	0.785	0.862	>0.90
TLI	0.774	0.840	>0.90
RMSEA	0.091	0.076	<0.08
GFI	0.758	0.898	>0.90
AGFI	0.660	0.776	>0.80

APC – affective professional commitment, NPC – normative professional commitment, CPC – continuance professional commitment, AOC – affective organization commitment, NOC – normative organization commitment, COC – continuance organization commitment, OSD – organization support for development, χ^2 – Model Chi Square, CFI – Comparative Fit Index, TLI – Tucker Lewis Index, RMSEA – Root Mean Square Error of Approximation, GFI – Goodness of Fit, AGFI – Adjusted Goodness of Fit.

Table 7: Correlation matrix

	AVE	1	2	3	4	5	6	7
1. PAS	0.585	0.765						
2. PCS	0.582	0.476**	0.763					
3. PRS	0.608	0.587**	0.452**	0.780				
4. IM	0.643	0.600**	0.407**	0.526**	0.802			
5. IR	0.593	0.307**	0.562**	0.216**	0.322**	0.770		
6. ER	0.602	0.605**	0.398**	0.346**	0.492**	0.428**	0.776	
7. IPLA	0.723	0.101*	0.148**	0.065	0.187**	0.225**	0.204**	0.850

* p < .05, ** p < .001

Diagonal of the correlation matrix indicates the square root of Average Variance Extracted (AVE).

Table 8: Structural Model Fit

Fit Indices	Structural model as indicated by Figure 2	Desired Level
χ2 /df	2.468	<3.0
CFI	0.950	>0.90
TLI	0.941	>0.90
RMSEA	0.062	<0.08
GFI	0.883	>0.90
AGFI	0.851	>0.80

χ^2 – Model Chi Square, CFI – Comparative Fit Index, TLI – Tucker Lewis Index, RMSEA – Root Mean Square Error of Approximation, GFI – Goodness of Fit, AGFI – Adjusted Goodness of Fit.

Appendix 1

This is the inMail message sent to the respondents within LinkedIn. Please note that xxx is the mask for the details of the researcher and respondent

Subject: Questionnaire

Dear xxx,

I am xxx from department of xxx in the University of xxx. I am writing to you to request your participation in a questionnaire. This questionnaire is a part of my research on social media platform that aims to investigate how LinkedIn affects professionals' behavior for professional advancement. Your participation is crucial for success of the research.

The questionnaire is attached to the email. It is very brief and will only take about 10 minutes to complete. The result will be delivered to you after analysis in combination with other members' responses. To show our courtesy in conducting this survey, a donation of US$5 would be made to the World Wide Fund for Nature (WWF) for you with every survey collected for this use.

Your participation is completely voluntary and all of your identity will be kept confidential. Should you have any comments or questions, please feel free to contact me at [email address].

Thank you very much for your time and attention.

Sincerely,

xxx
Department of xxx
The University of xxx