DETERMINANTS AFFECTING INTENTION TO LEAVE BY THAI INFORMATION TECHNOLOGY PROFESSIONALS: A CONCEPTUAL PERSPECTIVE

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Abstract— In Asia, voluntary intention to leave within the information technology sector is reaching epidemic proportions. In multiple ASEAN countries, HR professionals have stated that information technology professional 'job hopping' has become a culture with the cost to productivity and the corporate bottom line becoming enormous. The researchers have therefore undertaken a study to investigate the variables affecting Thai Information technology professionals' intention to leave. Simple random sampling will be used to gather data through self-administrated questionnaires from an anticipated total of 340 respondents comprising IT managers, executives, and HR managers so as to study how work exhaustion, job satisfaction and organizational commitment affect intention to leave. The importance of the study is significant as Thailand's ICT market accounts for 11 percent of GDP and is the largest in Southeast Asia, with Thai government plans to make the Kingdom the hub for ASEAN's new $US2.5 trillion GDP digital economy.

Keywords— ASEAN, Data Processing, Job, MIS, Networking, Organizational Commitment, Thailand, Turnover Intention.

I. INTRODUCTION

In the 21st century as trade shifts towards the internet and technology, Thailand is transforming itself from not only an industrial economy but a digital powerhouse as well. No aspect of business, public, or private lives in developed economies can be discussed today without acknowledging the role of information and communication technologies (ICT).

The digital revolution has already greatly changed the way 67 million Thai consumers interact with the world and each other and according to Thailand's Board of Investment; there are over 35 million Thai internet users along with 30 million social network users [1]. Of the total 67 million Thai citizens, 27 million are Internet users, 28 million use social media, and 34.6 million use smart phones, with an additional 4.7 million using tablets [2].

These kinds of numbers however require huge amounts of information technology support. And according to Rouse [3] "voluntary turnover in many fields, especially in information technology is reaching epidemic proportions".

The Thai government also plans to establish the Ministry of Digital Economy and Society to replace the existing Ministry of Information and Communication Technology and a National Digital Economy and Society Committee [1]. In order to prepare itself for the new digital economy, the Thai government has developed a large scale program to align synergies and produce a digital economy framework revolving around 4 aspects of development and 5 strategies. The 4 areas for development are: digital commerce, digital entrepreneur, digital innovation, and digital content.

The 5 strategies to ensure these 4 aspects are successfully implemented focus on hard infrastructure, soft infrastructure, service infrastructure, digital economy promotion and innovation, and digital society.

Now, most major developed economies in the world now have a "digital strategy" focused on how they can co-opt these new technologies to boost economic growth.It all depends however on a stable and motivated IT professional workforce.

Driven by the increasing use of technology in all aspects of society, the information technologyindustry in Thailand has grown rapidly since 2000,as the ever-expanding diversity of products, lowerprices, and wider access to knowledge has encouraged demand in the public, private and civil society sectors [4]. Thailand's ICT market accounts for 11 percent of GDP and is the largest in Southeast Asia with growth from 2010-2014 at 12% [5].

On a wider scale the benefits are potentially huge in the digital sector for both Thailand and its membership in the Association of Southeast Asian Nations (ASEAN) community which has an opportunity to leapinto the top five digital economies in the world by 2025 [6].In hard cash terms, the implementation of a proper digital agenda and strategy could add $1 trillion to ASEAN GDP over the next decade and at current GDP levels, that's an impressive 40 percent boost to overall output over the next decade [6].

It is interesting to note however that changes in work environments introduced by globalization have brought in new concepts related to turnover and thus necessitated additional career anchors such as creativity, identity, autonomy and variety [7].

In the long run, regions grow by creating entirely new types of jobs and industries. Whether it is the shift from agricultural work to the assembly line, or the

more recent transition from manufacturing towards knowledge-intensive services, the creation of new work has been central to maintain growth [8].

According to the IT Governance Institute (ITGI) for many enterprises, information and the technology that supports it represent their most valuable but often least understood asset. Successful enterprises recognize the benefits of information technology and use it to drive their stakeholders' value [9].

According to Shropshire and Kadlec the information technology field has highly fluid, rapidly-evolving workforce requirements [10] with the nature of the profession creating unique challenges and strains for IT workers. As a result, many IT professionals leave the field and seek alternative careers. A 2007 meta-analysis of 31 articles on turnover in the IT field identified over 40 independent predictors [11].

This is consistent with Beecham et al. which indicated from the research that the he most commonly cited motivator in software engineering is the job itself [12]. They cited 21 different motivators for software engineers with the most frequently cited motivators as 'the need to identify with the task' such as having clear goals, a personal interest, understanding the purpose of a task, how it fits in with the whole, having job satisfaction; and working on an identifiable piece of quality work.

Further research by Lee confirmed the importance of an individual's growth needing strength which was defined as the need for challenge and achievements, which plays a significant role in influencing organizational commitment [13].

Messersmith focused on work-life conflict in the IT profession and determined that mounting evidence indicates that workers in the IT sector are experiencing longer work hours, more work-life conflict, and higher indices of burnout than their coworkers in other functional areas [14]. The academic literature has documented numerous consequences of work-life conflict, including decreased levels of job satisfaction, career dissatisfaction, and increased turnover intentions.

The characteristics mentioned above can affect the intention to leave by an IT professional and has become a major problem for companies in many Asian countries such as Hong Kong, South Korea, Malaysia, Singapore, and Taiwan.

Therefore, the purpose of this study is to understand the factors which contribute to the decision of an IT professional's intention to leave. To that end, a conceptual framework is proposed and will be tested. The model includes four determinant variables. The constructs were selected following a review of the extant literature on IT related intention to leave. They are *intention to leave*, *work exhaustion, organizational commitment,*and *job satisfaction.*

The corresponding hypotheses will be tested using survey data from a simple random sampling of IT managers and executives and HR managers in Thai IT enterprises and organizations. The results are expected to provide guidance for further studies on the intention to leave Thai IT professionals.

II. CONCEPTUAL DEVELOPMENT

2.1. Intention to Leave

Intention to leave refers to a conscious and deliberate willfulness to leave an organization [15] which reflects the probability that a person will change jobs within a certain time period. According to Basak et al., [15] job satisfaction and organizational commitment are the two most important factors which play an important role in determining employees' intention to leave their job.

Sukriket in research conducted on 400 Thai software engineers discovered that there are three factors related to turnover intention [16]. They were benefits, nature of work and supervision in terms of the pull factor. For the push factor, two factors, nature of work and job conditions were associated with turnover intention. Pull factors were shown to have a stronger impact on turnover intention than push factors.

Another interesting aspect concerning Thai IT professional intention to leave thus far has been the stated low priority of pay as a condition to leave. It seems for Thai IT workers, benefits and job security are far more important than salary as their salaries are already much higher than other Thai workers. This is in spite of the fact that at the end of 2011, the average monthly salary of programmers, administrators and engineers in Thailand's IT sector was US$1,056, a significantly lower level than that of the same professionals in the United States and the European Union [17]. This is consistent with research by Lowry et al. that tangible rewards are the most important component to IT professionals in their willingness to stay or their intention to leave [18] with job satisfaction subsequently influencing employee turnover intention [19].

Intention to leave therefore has proven it to be one of the most costly and apparently difficult human resource challenges faced globally by different organizations in the whole world [20]. According to the report of a task force on job-hopping in Singapore, more than two-thirds of the organizations indicated that they had suffered a productivity loss of greater than 10% as a result of the high employee turnover [21].

From the above and other review of the literature, the researchers have determined the following 8 areas as measureable components of Thai IT professionals' intention to leave:

1) considering quitting;
2) looking for a new job [20];
3) intention to leave[19];
4) working at the same company;
5) takingsteps duringthe next year to find new work;
6) feel like quitting your present job;

7) where do I want to be in the next 5 years?;
8) more employee focused employer [22];

In addition to the above research case studies, multiple theories were investigated to explain the intention to leave. These included:
Organizational Equilibrium Theory [23];
Met Expectations Theory [24];
Mobley's intermediary chain model – Fig. 1 below [25],and the *Unfolding Model of Turnover* [26], as well as others.
This far after a review of the literature it has been determined that organizational commitment and job satisfaction have a direct influence on an IT professionals' intention to resign [22], [27], [28].
Work exhaustion has a direct influence intention to leave as well [10], [19], [27], [29].

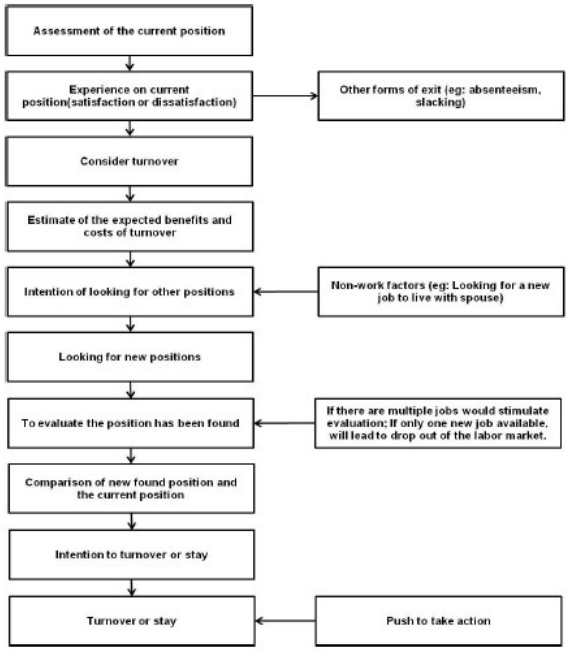


Fig.1. Mobley's intermediary chain model [25]

2.2. Organizational Commitment

Porter et al.'s study changed some of the previous research on what leads to intention to leave. Prior to their research, it was felt that job satisfaction was the major cause of job turnover, however Porter et al.'s subsequent research highlighted the importance of organizational commitment in explaining turnover and stated that it was a better predictor of turnover than job satisfaction [31].
In research from Cho and Huang concerning Hong Kong IT professionals' intention to leave their organizations for professional advancement (ILPA), it was found that organizational affective commitment (OAC) is more effective for reducing ILPA [30].
The level of *organizational commitment*can be measured in six areas[22], [32], [33]:
1) job commitment
2) organizational pride
3) organizational loyalty
4) organizational respect
5) organizational caring and
6) inspired performance.
Other literature reviews indicate that organizational commitment has a direct effect on intention to leave [22], [27], [28].

2.3. Job Satisfaction

Spector described job satisfaction as the degree of how much people like their jobs [20]. Others find their work to be a main part of their whole life and may actually enjoy working, while others only work because they must work. Moreover, a *positive attitude* towards one's job will lead to job satisfaction [34].
For this study, job satisfaction is being measured with 15 variables including: 1) job stability 2) physical conditions 3) fringe benefits 4) salary/wages 5) job recognition 6) promotion 7) job satisfaction 8) interesting work 9) routine work 10) good work 11) creative work 12) work accomplishment 13) useful work 14) frustrating work 15) challenging work.
Preliminary review of the literature indicates that job satisfaction has a direct influence on intention to leave although Porter et al.'s study indicated that organizational commitment has a greater impact [22], [27], [28], [31], [35]. Further research will hopefully highlight these issues.

2.4. Work Exhaustion

According to the Mayo Clinic "job burnout is a special type of job stress — a state of physical, emotional or mental exhaustion combined with doubts about your competence and the value of your work [36]." By the year 2000, it has been estimated that there are approximately 6,000 scientific articles and books about burnout with every year about 200 more added to the total [37]. Additionally, the clinical approach to burnout has revealed more than 130 possible symptoms [37, 20-31].
Recognized for more than a decade as the leading measure of burnout, the Maslach Burnout Inventory (MBI) incorporates the extensive research that has been conducted in the more than 25 years since its initial publication [38]. The MBI Surveys address three general scales:

- **Emotional Exhaustion** measures feelings of being emotionally overextended and exhausted by one's work
- **Depersonalization** measures an unfeeling and impersonal response toward recipients of one's service, care treatment, or instruction
- **Personal Accomplishment** measures feelings of competence and successful achievement in one's work.

For this study, measurement of*work exhaustion*will be drawn from the following five areas[10], [19], [27], [29], [39], [40]:
1) emotional drain

2) end of day fatigue
3) fatigue
4) job burnout
5) work stress

Preliminary review of the literature indicates that work exhaustion has a direct influence on intention to leave [10], [19], [27], [29].

2.5. Proposed Hypotheses

Proposed Research Hypotheses (Fig. 2)

H1: *Organizational Commitment* has a direct influence on *Intention to Leave.*

H2: *Job Satisfaction* has a direct influence on *Intention to Leave.*

H3: *Workplace Exhaustion* has a direct influence on the *Intention to Leave.*

H4: *Job Satisfaction* has a direct influence on *Organizational Commitment.*

H5: *Workplace Exhaustion*has a direct influence on *Job Satisfaction.*

H6: *Workplace Exhaustion* has a direct influence on *Organizational Commitment.*

2.6. Proposed Conceptual Model

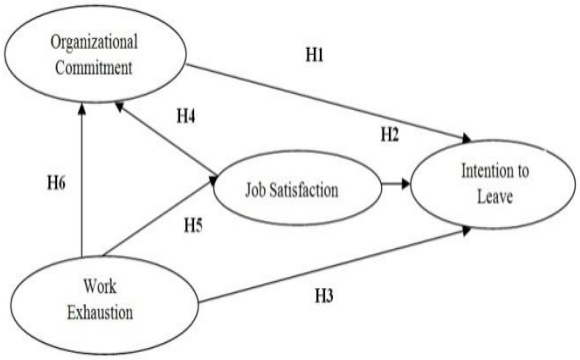


Fig.2.Proposed Conceptual Model

III. METHODOLOGY

This research aims to model the structure of the factors that influence Thai IT professionals' *intention to leave*. Therefore, researchers have determined the following detailed steps of how to carry out the proposed research.

3.1. The Study's Approach

Forthis study the researchers will use both quantitativeandqualitative research from both primary andsecondary data which will include the following steps and resources:

3.1.1. Primary and Secondary Research Data

The researchers are currently reviewing the literature related to Thai IT professionals' *intention to leave* and the related effects on *organizational commitment*, *work exhaustion* and *job satisfaction*. Thus far, research has been comprised of published research, textbooks, internet materials, media reports, and data which have been synthesized from the secondary data to develop a conceptual model for the variables that influence the *intention to leave* by Thai IT professionals.

3.1.2. Qualitative and Quantitative Research Approaches

The research first step will be to confirm the parameters of the literature review. The qualitative research in the latter stages will be performed to confirm the model of quantitative research. Quantitative research will beperformed usingtheprimary data by collectinga questionnairefrom thetarget sample of those involved with the causes of *intention to leave*including IT organization's supervisors and managers, HR managers and Thai IT executives. Thequestionnaire to be used to collectdata is structured and written in a realistic, easy to understand format which is deemed to be reliable and reasonable. Further measurement and reliability validation will be undertaken as follows:

1. Questionnaire review will be conducted by academic scholars to validate the investigation questions and the use of rhetoric and the simplicity and comprehension of the questions.
2. During the questionnaire trial stage, questions and responses will be monitored so better clarity can be achieved, with questions being updated as required.
3. Performdata collection and statistical analysis.

3.2. Population and Sample

The population in this study is Thai information technology companies which have been registered by the Ministry of Commerce's Department of Business Development as of 23 March, 2016 which numbered 5,861 enterprises which included hardware, software, network and web pages companies as well as data processing and other related IT services.

3.2.1. Sample

The sample used in this study are information technology companies operating in the categories of hardware, software, networking and web page design as well as data processing and other related IT services.

3.2.2. The Sample Size

Schumacker and Lomax [41] stated that Structural Equation Modeling (SEM) uses a variety of models to show the relationships between observed variables with the same basic goal of providing a quantitative test of a theoretical model hypothesized by a researcher. Meldrum [42] further stated that a sample size smaller than 100 should not be used in SEM as it is unreliable. Therefore, using a factor of 10 for each of the proposed 34 variables from the research survey, it is anticipated that a total of 340 samples are adequate to assure a reliable sample size [41], [43].

To confirmthe modelofquantitative research, 10 in-depth interviews withthoseinvolvedas IT enterprise supervisors and managers, HR managers and IT executives will be undertaken.

3.3. Tools used in the Research

For this research, the measurement instrument or questionnaires utilized were prepared from the literature. A self-administered questionnaire (SAQ) is being used as it is exploratory in nature and serves as a starting point for other methodologies.

Researcherswillcontinue to monitorthe qualityof the instruments usedin the research to beusedas ameasurementof quality.Theentirecontent validityand reliabilityis divided intotwostages:

*Stage 1:*The index of Item-Objective Congruence (IOC) developed by Rovinelli and Hambleton [44] is also being employed to carry out the screening of the questionnaire created by the research team, and be peer-reviewed and tested by use of the content validity of item objective congruence index (IOC) by five experts in their respective fields.

The IOC for each item is the summation of scores given by the experts divided by the number of experts. This ensures the quality of the questionnaire with any IOC score less than 0.05 being eliminated. The IOC is a procedure used in test development for evaluating content validity at the item development stage. This measure is limited to the assessment of unidimensional items or items that measure specified composites of skills.

The method prescribed by Rovinelli and Hambleton [44] results in indices of item congruence in which experts rate the match between an item and several constructs assuming that the item taps only one of the constructs which is unbeknownst to the experts. The study then proceeded to select items that with an IOC index higher than 0.5 which is considered acceptable.

*Stage 2:*Questionnaire validity will be confirmed by fiveexperts in their respective fields including:

Human Resource Manager	1 individual
Information Technology Manager	1 individual
System Analyst	1 individual
Network Administrator	1 individual
Programmer	1 individual

3.4. Data Collection (Primary and Seconday)

Primary Data is concerned with a collection of factors that influence the causes of *intention to leave* by *organizational commitment, job satisfaction* and *work exhaustion*of Thai IT professionals.

Secondary Data will consist of studying thetheoriesrelated to the research from various sources; including the Internet, books,manuals, tutorials, articles, research papers, etc., which will be used to definetheconceptsand theoriesusedin the study.

3.5. Data Analysis and Statistics Used

Quantitativedata analysis researchwill be conductedusingstatisticalanalysisas follows:

1. Descriptive statistics including frequency, percentages, means, and standard deviations will be used to demonstrate the profiles as well as rating scores and response rate [45].
2. An analysis will be conducted usingstructural equation modeling (SEM)to determine the relationshipof the factorsinfluencing *intention to leave*by Thai IT professionals.

To confirm the results of the quantitative analysis are credible and the findings reliable, the researchers will conduct interviews with those involved as IT organization's supervisors and managers, HR managers and Thai IT executives. Afterwards, the researchers will proceed to interpret qualitative information, including classified information.

According to Hancock, Windridge, and Ockleford [46] data collection and analysis should proceed concurrently, as data collection allows researchers to refine the research question and data collection procedures in the light of new findings, but in reality, this is hard to achieve (e.g. because transcribing recorded interviews takes time, and analysis takes even more time).

However it is important to review transcripts as they are transcribed and to undertake informal modification of prompt guides. The idea that qualitative data is mainly 'unstructured' is useful, if this is taken not as a definition but rather as an imperative for analysis.

CONCLUSIONS

Employee turnover by IT professionals is a serious problem for Asian economies which comes at a high cost. Since the late 1990s, the labour market for Thai IT professionals has been hit by shortages, and IT levels of compensation have skyrocketed by 15-20% annually [16].

In many Asian countries such as Hong Kong, South Korea, Malaysia, Singapore, and Taiwan voluntary turnover is a major problem for companies. For example in research conducted in Singapore, South Korea, and Taiwan on IT professional turnover, the average monthly resignation rates were 3.4%, 2.9%, and 2.7%, respectively (Barnard & Rodgers, 1998).

In an HR forum, participants from professional bodies in Hong Kong, Malaysia, Singapore, and Malaysia unanimously expressed their views that job-hopping had become so rampant in these countries that it had become a culture [48]. For example, in 1995, the average monthly resignation rates were 3.4%, 2.9%, and 2.7% in Singapore, South Korea, and Taiwan, respectively [47].

The researchers therefore wish to continue the research on how Thai IT professionals' intention to leave is affected by job satisfaction or national commitment and work exhaustion.

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