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# FROM IT EMPLOYEE TO IT ENTREPRENEUR: THE CONCEPT OF IT ENTREPRENEURIAL EPIPHANY

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# FROM IT EMPLOYEE TO IT ENTREPRENEUR: THE CONCEPT OF IT ENTREPRENEURIAL EPIPHANY

*Completed Research Paper*

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## **Abstract**

*This paper addresses an under-investigated thematic area of IT turnover personnel literature: IT Entrepreneurial Turnover. Drawing upon the IT Entrepreneurial Turnover model and following a grounded theory methodological approach, we introduce a conceptual construct, the IT Entrepreneurial Epiphany (ITEE), to describe the moment when the IT employee/future entrepreneur realizes that a critical aspect of the necessary conditions for her to quit her job and start her own business have been met. Five lower-level concepts compose the core category of IT Entrepreneurial Epiphany: the rules of the business game (in the corporation and in the market), the estimation of the risk involved in the new venture creation process compared to salaried employment, long-term considerations, the socio-economic context, and the dimension of time. We suggest that ITEE can inform the research on turnover behavior of IT and non IT personnel.*

**Keywords:** Turnover; IT Entrepreneurial Turnover; IT Entrepreneurial Epiphany; Necessary Configuration to Quit; Readiness To Quit

## Introduction

*“Is there such a thing like the ‘right time’ for me to quit?”*

Understanding the conditions under which an IT professional decides to leave salaried employment in order to start her own company is a critical issue for CIOs, future IT entrepreneurs and policy makers. Retaining IT professionals is important for both IT and non-IT organizations because the management and the use of technological resources may prove to be a competitive advantage (Andrew et al. 1998). Fostering IT entrepreneurship is important for policy makers because entrepreneurship is considered to be a source of technological innovation and economic growth (Birley 1987; Kumar et al. 2005; Schumpeter 1934). By shedding light on the conditions that underpin entrepreneurial decisions, this paper provides useful insights to future IT entrepreneurs who may consider leaving their salaried employment, to IT managers who want to decrease their IT employees’ likelihood to quit and to policy makers who aim to support initiatives for new ventures creation.

Although much effort has been placed on understanding the conditions that foster entrepreneurship (Carter et al. 2003; Davidsson et al. 2003; Delmar et al. 2000; Giacomini et al. 2007), and explain IT turnover (Agarwal et al. 2007; Igbaria et al. 1991; Igbaria et al. 1992a; Igbaria et al. 1992b; Moore 2000), research on the aforementioned topics has been rather fragmented (i.e. few cross-citations). Apart from a few exceptions (Mourmant et al. 2009), current research treats the issue of IT turnover and IT entrepreneurship as two distinct research agendas. The paper builds upon the research tradition which brings the two research streams together and aims at deepening our understanding of the conditions that underpin IT Entrepreneurial Turnover.

To do this we introduce a conceptual construct, *IT Entrepreneurial Epiphany (ITEE)*, to describe the critical moment when the IT employee/future entrepreneur realizes that some or all of the necessary conditions for her to quit her job and start her own business has been met. The notion of *ITEE* draws upon the model of IT Entrepreneurial Turnover (RTQ/NCQ model) which describes the conditions and processes that influence or trigger changes in employee attitudes towards leaving their job to set up their own company, (Mourmant et al. 2009). The RTQ – Readiness to Quit – construct represents the configuration of all relevant dimensions (e.g. perceived job satisfaction, perceived level of self-efficacy in a set of skills and dexterities, etc) that potentially influence the decision to quit. The NCQ – Necessary Configuration to Quit- construct is a specific configuration of these dimensions at a specific point of time, i.e. a current final set of RTQ dimensions, for which the employee will eventually quit her job. The IT employee/prospective entrepreneur at each point of time engages in a process comparing her current RTQ to the set of NCQ. The *ITEE* is the tipping point when the fit between the employee’s RTQ and NCQ is reached: the moment when the employee is ready to leave her job and will leave.

Through this theoretical lens of IT Entrepreneurial Epiphany, we shift the attention from the study of the behavioural intention to “quit and start a new business” to the general contingencies which rapidly or gradually trigger or pave the way for such a decision to be made. In particular, the IT Entrepreneurial Epiphanies can occur as the result of a catalytic event or gradual evolution of the relevant dimensions (e.g. level of job dissatisfaction, level of self-efficacy in IT skills). We suggest that IT Entrepreneurial Epiphanies are composed of the subjective perceptions of future IT entrepreneurs (Arenius et al. 2005) with regard to the following five lower-level concepts : (1) the rules of the business game, (2) the estimation of the risk involved in the new venture creation compared to salaried employment, (3) the long-term considerations, (4) the identification of the characteristics of the socio-economic context and (5) the dimension of time.

The paper is structured as follows. First, we review the IT Entrepreneurial Turnover (RTQ/NCQ) model to frame our research and set the scene for the processes and factors that trigger changes in employees’ attitudes to leave their salaried employment and set up their own business. Secondly, we introduce the theoretical construct of IT Entrepreneurial Epiphany and analyze its constituting components. We conclude by discussing the implications of the paper for research and practice.

## Literature Review

### *Literature on entrepreneurship and IT turnover*

In the entrepreneurship literature, we can identify several definitions and categorizations of entrepreneurs according to i) their entrepreneurial goals (Stewart Jr. et al. 2001), ii) their entrepreneurial status and length of entrepreneurial experience (Davidsson 2006), iii) the degree and length of their engagement in the entrepreneurial field (Brixy et al. 2008), etc. In this paper, we are interested in the third categorization which distinguishes nascent entrepreneurs (i.e. “are actively involved with the idea of a business start-up, but who have not yet completed the formal launch of the start-up” (Brixy et al. 2008), from new entrepreneurs (i.e. have entered the entrepreneurial arena fairly recently) and established entrepreneurs (i.e. display a lengthy entrepreneurial career). The type of nascent entrepreneur is most relevant to the notion of IT Entrepreneurial Epiphany which is the focus of the study. More precisely, a nascent entrepreneur can be seen as an entrepreneur-to-become, a person who is at the early stages of the process of establishing a new organization<sup>1</sup>. By definition a *nascent* entrepreneur needs to have taken some action to create a kind of business in the past year, is expected to share ownership of the new firm and cannot be classified under the regime of salaried employment (Reynolds et al. 2002). Unit of analysis of this study is the IT professional who decides to leave salaried employment in order to start her own company, i.e. a ‘future’ nascent IT entrepreneur.

In the relevant literature, there have been several studies which propose theories of entrepreneurship or identify antecedents of entrepreneurial behaviour or IT turnover intention. For instance, Lazear and others posit a ‘*jack-of-all-trades*’ approach of entrepreneurship where breadth of education, balance of skills, and number of roles served in prior job positions are better predictors of entrepreneurial behaviour than specialization or years of experience (Lazear 2002; Lazear 2004; Wagner 2006). Drawing upon Carter et al.’s (2003) findings on the entrepreneurs’ need for recognition and role models, Davidson (Davidsson 2006) suggests a rebel theory of entrepreneurship which highlights the IT entrepreneurs’ lack of hesitation to fight the status quo. In addition, entrepreneurial self-efficacy, - ‘*confidence in having the relevant skills for running one’s own business*’ (Davidsson 2006, p.7), -, innovativeness and risk-taking (Chen et al. 1998) and ability to perceive business opportunities, -alertness to opportunities-(Arenius et al. 2005), are other key attributes of entrepreneurs.

In the same respect, a large body of IS research has identified individual level factors that are linked either in a positive way (e.g., role ambiguity, role conflict, threat of professional obsolescence, work exhaustion), or in a negative way (e.g. affective commitment, job satisfaction, boundary spanning activities, autonomy, fairness of reward) to the turnover intention (Ferratt et al. 2005; Guimaraes et al. 1992; Igbaria et al. 1991; Igbaria et al. 1992a; Igbaria et al. 1994b; Igbaria et al. 1992b; Joseph et al. 2007; Moore 2000; Trauth et al. 2009). The IT Turnover models which can be found in the literature (see (Joseph et al. 2007) for more details), include a) the Organizational Equilibrium Theory (March et al. 1958), b) Met Expectations Theory (Porter et al. 1973), c) Linkage Model (Mobley 1977), d) the Unfolding Model of Turnover (Lee et al. 1996) and e) the Job Embeddedness Theory (Mitchell 2001).

It is worth noticing that a part of the studies found in the literature rejects the examination of static factors and suggests *process models* in order to explain the gradual -i.e. over time- creation of entrepreneurial ventures (Bhave 1994; Bygrave 1994; Carter et al. 1996; Hayton et al. 2002; Shaver et al. 1991) or the gradual maturation of IT turnover decision (Lee et al. 1994; Lee et al. 1999). The rationale behind the conceptualization of these process models is to describe the possible stages or paths the individual goes through in order to take up an entrepreneurial opportunity or depart from an organization. Although these models display commonalities such as focusing on the process itself, relying on decision making theory (often on March and Simon’s theory of organizational equilibrium), they are used either to explain entrepreneurial behaviour or IT turnover behaviour. To the best of our knowledge, it is only the process model of IT entrepreneurial turnover or RTQ/NCQ model (Mourmant et al (2009) which analyzes in parallel IT turnover and entrepreneurial behaviour, and thus is considered as the most relevant for the study of *ITEE*.

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<sup>1</sup> Although in the entrepreneurship literature, the notion of entrepreneur as a person who establishes a new organization has been criticized for overlooking the dimension of discovering, evaluating and exploiting opportunities – activities which lie at the core of entrepreneurial endeavor, (Shane and Venkataraman, 2000, pp 217-226), we deliberately choose to employ a simplified definition of the term for the sake of clarity.

RTQ/NCQ model is a decision making mental model which builds upon the theoretical foundations (image theory) of contemporary turnover perspectives i.e. the unfolding model (Lee et al. 1994), takes into account antecedents of entrepreneurship and focuses on the process that the individual follows in order to quit her job and start her own business. By reconciling the two streams of literature, it responds to the call expressed for alternative theoretical perspectives to explain IT turnover (Joseph et al. 2007) and venture creation (Hayton et al. 2002). In the following subsections, the two main core categories of the RTQ/NCQ model are briefly described, the model is presented and its relevance for our paper is discussed.

### ***Readiness To Quit (RTQ) and Necessary Configuration to Quit (NCQ)***

Introduced by Mourmant et al. (2009) as an attempt to reconcile the gap between intention and actual turnover behavior, *Readiness To Quit* (RTQ) is a construct that describes “the image representing ‘the configuration’ of all relevant dimensions that *potentially influence the decision to quit*” (2009, p.5). In other words, it depicts the set of dimensions e.g. perceived state of job satisfaction, perceived level of self-efficacy for certain skills and dexterities, which change over time (we notice different configurations of these dimensions at different points of time) and may influence the individual’s decision to quit her job. Considering a simplified example for which the current RTQ is composed of three dimensions: the level of job satisfaction, the level of self efficacy in marketing and the level of self efficacy in IT skills. The degree of intensity (how high or low) of these dimensions altogether describes to what extent the individual is ready to quit her job.

We notice that a specific instantiation of RTQ, the *current (working) RTQ* is defined as ‘the measure of RTQ at a point in time for a given person’, (Mourmant et al. 2009). In this sense, at time t1 the RTQ of an employee may be consisted by a relative low level of self efficacy in marketing skills, a moderate level of self-efficacy in IT skills and a high level of job satisfaction. If we assume that the employee attends a training course in marketing, at time t2 her efficacy in marketing skills increases and thus the current RTQ has changed and is represented by the new configuration of the three attributes.

Another instantiation of RTQ is the *necessary configuration to quit (NCQ)* construct. This construct represents ‘the configuration of relevant dimensions for which the employee *will eventually quit* her job’. In other words, an *NCQ* corresponds to a final *current RTQ*, the RTQ just before the employee quits her job.

We should notice that a future IT entrepreneur has not just one *NCQ*, but a set of *NCQ* (e.g. NCQ1: high level of job dissatisfaction, moderate level of self-efficacy in marketing skills and high level of self-efficacy in IT skills; NCQ2: low level of job dissatisfaction, high level of self-efficacy in marketing skills and high level of self-efficacy in IT skills). In other words, there are many possible configurations of these attributes that will trigger the employee’s decision to quit.

In deciding whether to quit or remain, the employee performs a screening and compatibility test (Beach 1998) and she compares her *current RTQ* (level of readiness to quit) and her set of *NCQs* (if she is actually ready to quit). If the compatibility test is successful (i.e., there is sufficient fit between *current RTQ* and one of the *NCQs*), then the employee reaches a “tipping point” and she decides to quit her job (Beach 1998). In other words, the final *current RTQ* (corresponding to the moment when the individual decides to quit and start her business) perfectly matches the dimensions of one of the set of *NCQ*. The RTQ/NCQ concept is embedded into the conceptual framework that we describe next.

### ***The IT Entrepreneurial Turnover process model***

The conceptual framework can be described as follows. The individual’s decision is considered to be embedded in the environmental and firm level context (Ang et al. 2000). Within the various levels of context, the employee will experience changes over time with regard to her current RTQ. The employee (facing the decision to quit and start a business) may encounter two types of scenarios regarding the configuration of its *current RTQ*. The first scenario refers to the *gradual increase or decrease* of specific dimensions of the individual’s *current RTQ* whereas the second scenario refers to a *specific event* (e.g. a shock) which emerges unexpected and directly influences specific dimensions of her *current RTQ*.

At each point in time, the individual engages in a process of comparing her current RTQ to the set of NCQ. When there is a fit (Beach 1998) between the employee’s RTQ and her NCQ, this is the point at which she is ready to leave

and will leave. For instance, one NCQ for a particular individual may be the following one: NCQ1: high level of job dissatisfaction, moderate level of self-efficacy in marketing skills and high level of self-efficacy in IT skills.

We assume that her RTQ at t1 has been configured as such RTQ1: low level of job dissatisfaction, moderate level of self-efficacy in marketing skills and high level of self-efficacy in IT skills, then at t1 the RTQ is different from the NCQ1. At t2, if there is a big fight between the IT employee and her manager and the former realizes that the level of her disagreement with the firm's policy and way of doing things has reached to an extreme, her RTQ changes and becomes identical to the NCQ1, since the dimension of the job dissatisfaction reaches a high level.

It is worth noticing that in the model of IT Entrepreneurial Turnover there is no description of the specific moments or the conditions that triggers such moments under which the individuals realizes that there is a fit between one or several dimensions of her RTQ compared to one of her NCQ. Taking this into account, the current study aspires to bring forward the aforementioned concern by analyzing the conditions under which the IT employee/nascent entrepreneur realizes that a critical aspect of the necessary conditions for her to quit her job have been met and thus she is ready and will start her own business.

As it will be shown in the following sections the conditions that trigger the moments under which an IT professional decides to leave salaried employment in order to start her own company are not a straightforward process. They may vary among individuals and there may be several for the very same individual. Understanding these conditions or processes is a critical issue for CIOs, future IT entrepreneurs and policy makers. The practical implications of understanding the mechanism under which these IT epiphanies have been generated will be presented after the findings section.

## IT Entrepreneurial Epiphany

In the grounded, interpretive research approach used in this study, the theoretical concepts and framework are grounded in and emerge from the data (Corbin et al. 2008; Glaser et al. 1967). If we were to follow a "purist" rendition of interpretive research [...], the theory would normally appear *after* the data presentation" (Anonymous, in Suddaby 2006, p. 637). Yet, following Suddaby's (Suddaby 2006) suggestion for advanced clarity in the presentation of our arguments, we "employ the more traditional presentational strategy of providing a theoretical overview first, to preview the major findings and resulting model." (2006, p.637) It is important to keep in mind, however, that the concept of IT Entrepreneurial Epiphany actually emerged from the data itself, as a core thematic category (i.e. a higher-level concept, (Corbin et al. 2008, p.159)).

### Definition

According to Webster dictionary, we choose the following definition of epiphany:

- (1) *"an intuitive grasp of reality through something (as an event) usually simple and striking"*
- (2) *"an illuminating discovery, realization, or disclosure"*

The concept of epiphany as used in this paper is different from how it is described in other fields of research such as psychology. Firstly, in the psychology literature, epiphany often describes a profound change in the self-identity of the individual (Cullen 2009; McDonald 2008; Miller 2004). However, in the context of entrepreneurship, such a radical change is 'limited' to the shift from being an employee to being an entrepreneur. Although, in our opinion, such a change is important, this change is not as radical as the type of change usually discussed in the psychology literature. Second, we encounter several smaller epiphanies with much less intensity when compared to the single epiphanic moment discussed in the psychology literature. Finally, the type of epiphany we study does not – a priori – embed any reference to spirituality.

We define IT entrepreneurial epiphany by drawing upon this first definition of Epiphany, the definition of Image Violation<sup>2</sup> (Beach 1998) and the analysis of the empirical data (see the vignette in the appendix for a description of

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<sup>2</sup> An image is defined as "a schematic knowledge structures to organize [the decision maker] thinking about decisions" (p.12).

"Image violation: Violations are defined as negations, contradictions, contraventions, preventions, retardations or

the method). The IT employee has an image of what is the configuration of the right level of dimensions (e.g. skills) that she needs to have in order to be able to quit and become an entrepreneur (e.g. this image could be reflected in one of her NCQs: NCQ1). This image is violated when the perceived level of skills she has at a specific point of time  $t_1$  (e.g. RTQ1) do not fit or diverge from the perceived level of skills she should be expected to have (NCQ1) in order to be able to quit and become entrepreneur. As soon as an epiphanic moment occurs, at time  $t_2$ , this image violation comes to an end i.e. the IT employee perceives that there is indeed a fit between her current levels of skills (RTQ2) and NCQ1 and thus she is ready to quit her job and become entrepreneur. In other words, before the epiphany, there is an image violation (e.g. the IT employee does not think she has enough marketing skills to start a business) and then, when the epiphanic moment happens, she realizes that she has enough skills (e.g. after reading a book on marketing) to start her own business. Bearing in mind the above, we suggest the following definition of *IT Entrepreneurial Epiphany*:

*'An IT Entrepreneurial Epiphany is defined as an illuminating realization which indicates the end or the resolution of an image violation of one or several specific NCQ dimensions.'*

Alternatively, *ITEE* can be defined as the critical moment when the IT employee/future entrepreneur realizes that some or all of the necessary conditions for her to quit her job and start her own business have been met. For example, IT entrepreneurs, when talking about their *IT Entrepreneurial Epiphanies*, often include phrases such as “I realized...”, “... So that was my realization”, “From there, it became clear...”, “the exact moment you were waiting suddenly comes”, etc.

We suggest that an *ITEE* suddenly happens in the following ways : (1) as a consequence of a catalytic event i.e. something like a shock or unexpected event which happens suddenly and changes to some extent the individual's state of mind with reference to her abilities to quit and start her own business, and (2) as the final result of a gradual evolution of the situation, i.e. gradual maturation of the several behavioural dimensions that trigger the individual's decision to quit and set up her own business. We also suggest that the *ITEE* accelerates the employee's decision to quit and start a business or even directly triggers the action of leaving.

## Methodology

We collected 57 cases, following a theoretical sampling<sup>3</sup> methodology, but also aiming at maximizing the variation (Corbin et al. 2008) among the sample<sup>4</sup> (e.g. age group, gender, type of entrepreneurs, software/hardware industry, company size, country). Our analysis of the findings followed a hybrid research approach combining elements mainly from grounded theory (Corbin et al. 2008), but also from multiple case studies approach (Eisenhardt 1989; Yin 1981a; Yin 1981b) and life story (Bertaux 2005). The majority of the tools related to Grounded Theory, i.e. theoretical saturation, ‘memoing’, diagrams, open, axial and selective coding, has been extensively used. The chosen methodological approach is also strengthened by the combination of retrospective and longitudinal data collection, (Ang et al. 2000).

The core category - *ITEE* - emerged from the analysis of data stemming from a first set of interviewees. Thereafter, we validated the relevance of the core category and enriched it with a second set of interviews. The first set of data was collected throughout France, Canada and the US (N=27), while the second set of data was collected in Greece (N=30).

More precisely, the core category of *ITEE* emerged throughout the open coding process and resulted from different specific codes that were gradually grouped. In addition to the use of memos and diagrams, we employed several strategies suggested by Corbin and Strauss (2008, p. 65-86) in order to break this core category into its various components and thus identify its properties and dimensions (Corbin et al. 2008, p. 46). These strategies include

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any similar form of interference with the realization of one of the images' constituents. Each violation is all-or-none” (Beach, 1998, p.15).

<sup>3</sup> The process of sampling “on the basis of concepts derived from data”, with a focus on situations “that would bring out the varying properties and dimensions of a concept” (Corbin and Strauss, 2008, p. 65, 117).

<sup>4</sup> Due to space constraints, we did not include the details on the demographics of the sample. Those are available upon request.

asking questions, making constant comparisons, “turning a concept “inside out” (p. 79), questioning the finding itself (so what?), etc. To put it in other words, after having identified the prevalence of this core category of *ITEE* in our data, we wanted to ‘dig’ deeper in their respondents’ recounted stories. For instance, we wanted to understand what happened to them this particular moment, how did they realize it (i.e. level of consciousness), how strong or weak the memory of this moment has been (intensity and rememberability), to what extent they have been able to describe it in detail, how often did this happen to them (frequency), etc. To illustrate the use of this methodology in practice, the emergence of the *ITEE core category*, its properties and lower-level concepts is described in the vignette found in the appendix.

Finally, it is important to emphasize the fact that the study of *ITEE*, drawing upon the theoretical legacy of IT Entrepreneurial Turnover model, focuses not just on the individual’s intention to quit, but rather on the actual turnover, as the latter has been observed through the data. Indeed, IT research (Joseph et al. 2007) and general management research (Lee et al. 1999) have questioned the relevance of ‘intention to quit’ as a valid indicator of ‘actual turnover’.

## Findings

In this section, we introduce the properties of IT Entrepreneurial Epiphany, as defined previously and present the lower-level concepts composing this core category.

### *Properties of IT Entrepreneurial Epiphany*

Several properties of the *ITEE* emerged from our data. Regarding intensity, level of consciousness and rememberability; on the one hand, many IT entrepreneurs seem to vividly remember these points in time; on the other hand, it is worth noticing that not all *IT Entrepreneurial Epiphanies* are so obvious or memorable. Therefore, we suggest that the level of consciousness and ease of recollection of the *ITEE* will be higher for an intense *ITEE*, when compared to less intense *ITEE*.

The *IT Entrepreneurial Epiphanies* we identified were either negative or positive. For instance, they could be related to the realization that the future entrepreneur loves the type of industry in which he or she is going to work, or to the contrary, some *IT Entrepreneurial Epiphanies* were negative, often related to the job itself. Illustrating the above, Bill explains:

*‘ [...] my frustration level got so high. I just was no longer having fun working, [...]. And I just figured life is short. I want to have fun every day if I can. So that was my realization. ’*

Another interesting property of the *ITEE* is its frequency for one individual. According to the stories we collected, an individual may experience not only one *ITEE*, but several ones. For example, in the case of Roger – we collected longitudinal data over a period of one year- we identified the following succession of *IT Entrepreneurial Epiphanies*. For Roger, there were clear points at different moments in time that suggested that he should quit his job. Firstly, in the course of a project evaluation, when he felt that his performance had been unfairly judged, he commented the following:

*“It was the worst performance review I have ever had as a professional. Let’s put it in perspective. From there, it became clear that this was no longer the type of work I wanted to do.*

At some other point of time, he noted that a marketing book played an important role in making him believe in himself and strengthening his decision to quit:

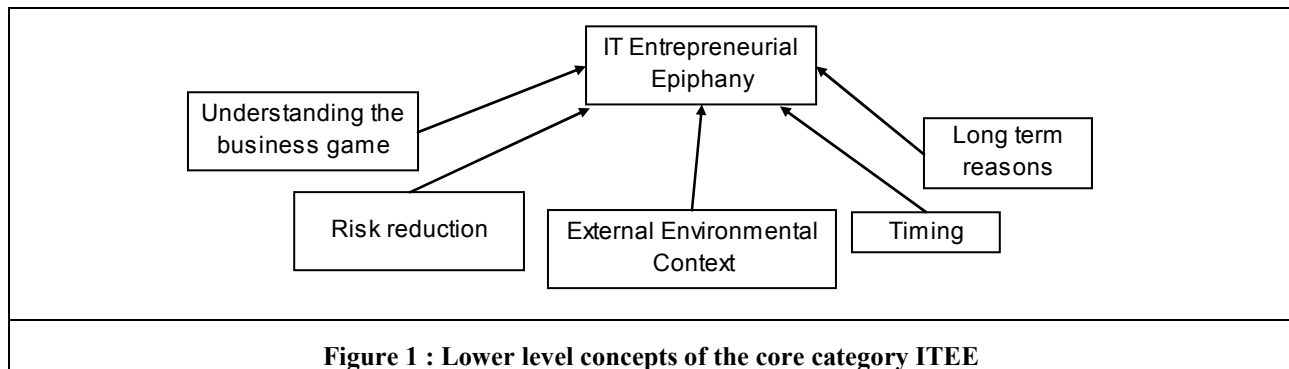
*“The ‘E-Myth Revisited’ [the title of the book] [...] I’m glad I read it when I did because it spoke to me directly about, hey, I have this skill. I can put this skill into practice. I don’t need to work for somebody to put this skill into practice”.*

At last, the final epiphany occurred after the consulting company asked him to cancel a family trip while changing the initial rules and planning: *“That was the last push”*



### Lower-level concepts composing the IT Entrepreneurial Epiphany

According to the grounded theory approach (Corbin et al. 2008), both core categories and lower-level concepts composing them emerged from the data. We triggered this emergence by using the various tools of grounded theory (e.g. open coding, axial coding, selective coding, memoing, diagrams, theoretical sampling). However, before presenting the resulting lower-level concepts (Figure 1), it is important to note the following: (1) not all dimensions of the RTQ emerged as *IT Entrepreneurial Epiphanies* that were conscious, intense or relevant enough to be mentioned by the interviewee. (2) As this paper focuses both on IT turnover and entrepreneurship, some of the concepts emerged as a combination of both (e.g. understanding the rule of the game could be applied to both the market but also to the employing organization). Following a grounded theory approach, we only discuss those that emerged from the data, thus, we minimize the risk of an “immaculate conception” (Glaser 2007b, p. 108). The five lower-level concepts are represented in Figure 1.



#### Understanding the business game

Understanding the *business game* refers to the capability of the employee to make sense of the explicit and implicit (“hidden”) rules that govern the corporate affairs and the market structure of the IT industry. Once the IT employee/future entrepreneur is aware of the business rules, she is able to formulate an opinion about the following concern: to what extent the environment is best (more suitable, favourable or compatible) to her interests, priorities, values and skills profile.

In particular, as long as the IT employee/future entrepreneur is willing to accept, play or live by the rules of the corporate life, she is more prone to remain a salaried employee. As long as she strongly disagrees or feels that she cannot handle the rules of the corporate life, she is more prone to decide to quit.

Instances of IT Entrepreneurial Epiphanies referring to the understanding of the rules which govern the business game are the following: IT employees may realize that

- a) they can make more money by setting up their own company than by working as a salaried employee. They can make much more money by selling a product or billing hours, rather than selling their own time

*“I was tired of making money for others and not for myself. I didn’t want to share. I wanted to keep the profits myself, I guess.” (David)*

*“The effort and the time I was devoting to my job was paying back. The more resources I invested the more benefits I received. This is not always the case in the corporate world” (Nikolas)*

- b) IT employees have more ambitious plans for their career and want to experience various organizational contexts,

*“There’s more to your career than just one company”. (Bob, while talking about his past career)*

*“I really believe in my skills as an IT professional. I didn’t want to spend my whole life being the CIO in a shampoo company. I did the best I could for them. It was time for me to move on and do something challenging again.” (Nikos)*

- c) the cost (e.g. emotional, psychological) they have to pay in order to deal with the political coalitions, power games and inefficient management is too high for them.

In this case, Bill was in charge of a project and disagreed with his boss's management,

*So I made one of those ultimate mistakes. I went to his boss...". And she thanked me. All of a sudden, I went from the top performance reviews [to] the worst reviews that you could ever imagine." (Bill)*

d) the organizational irrationalities and rigidity of corporate structures are an obstacle to their advancement and job satisfaction. The future IT entrepreneurs seemed not hesitate to fight the status quo and if it proved impossible to do, then they would find another way to make it happen

*"I could not anymore take the unwillingness and inadequacy of managers to run the business in an efficient or even "reasonable" way. I could see my career and talent being destroyed within the wheels of politics and rigidity of bureaucracy"(Nikolas)*

e) the unfairness of rewards and ethical compromises they need to subject themselves to are against their system value,

*"I had given up my life in order to complete this project. My family rarely saw me for the last few months. And what was my reward for that? Because I denied to undertake my manager's portion of work I got one of the lowest scores in the evaluation feedback report" (Themos)*

f) the lack of job security, etc.

*"after having witnessed massive lay-offs in seemingly healthy companies, I knew I could no longer rely upon one employer" (Manolis)*

Apart from being conscious of their level of agreement or disagreement with the explicit and implicit corporate rules, an understanding of the rules of the market is necessary as well. The respondents suddenly realized that they could possibly quit their job and start their own business, once they understood that they have all the *necessary skills* to do so (closely related to the entrepreneurial self-efficacy concept (Chen et al. 1998)) or they have a *well-established network of business acquaintances*. Lack of this knowledge conflicted with the desire to start a business (Image violation between the *current RTQ* and the *NCQ*).

Not surprisingly<sup>5</sup>, the IT entrepreneurs we interviewed, mentioned that marketing skills, negotiation skills, business and communication skills were the skills that they felt they lack the most. A frequent and important *ITEE* occurs once the IT employees-entrepreneurs realized that they have a satisfactory combination of hard skills (technology-related skills which are highly demanded in the market) and soft-skills (communication-related).

*'I felt that I have all the necessary skills to run my own business. My past experience along with the approval and recognition that I received from my fellow workers and customers made me think that opening my own business would be the natural evolution in my career ladder' (Joseph)*

In sum, the dimension of 'Playing the game' is about understanding the underlying and implicit rules of the business (at the market and corporate level), as well as agreeing or disagreeing with them. The *ITEE* regarding the understanding of the rules of the business game provided an answer to the three following set of questions: 1) what are the corporate rules? Which are the rules of the market? 2) To what extent I agree with the corporate and/or the market rules? 3) Do I have the necessary skills to compete in the corporate world/ in the open market? What are my possibilities of finding new deals or prospective customers?

### **Risk reduction**

The notion of *IT Entrepreneurial Epiphanies* is related to the realization that the risk is acceptable compared to a salaried employment and, taking into consideration the possible "upside" to becoming an entrepreneur. Another aspect of the risk reduction is that the efforts of the IT entrepreneur to reduce this level of risk have been successful. A shift in the IT employee's perception regarding the evaluation of risk -the idea of being (voluntarily) naïve, is also presented.

a) What is the perceived risk of starting a business compared to remaining as an employee?

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<sup>5</sup> Without necessarily debating the question of "who is an IT professional", we refer here to the specific dimension of *Introversion* and *Thinking* of the Myers-Briggs Typology Indicator, which have been found to be predominant among IT professionals (Lyon, 1985).

Generally speaking, at some point in time, the future IT employee experiences an *ITEE*, indicating that the perceived risk of starting a business become less important compared to the perceived risk of being employed. We study here some factors which are related to the estimation of the perceived risk.

#### b1) Social networks

The informal networks of ex-peers and friends were perceived as a safety net against the risk of future unemployment. These networks operated as a source of prospective deals and new business opportunities.

*“Once you have the network established and companies have started trusting you there is no way that you will be left without a job contract” (Dimitris)*

*“Social relationships and business relationships based on trust are the greatest guarantee for a brilliant career” (Giannis)*

The majority of the interviewees referred to the cultivation of social networks as a way to reduce the risk of new venture creation. For them, the social network was a guarantee of continuous viability in business. Many of them emphasized that they would feel more secure to have their own network of clients than being salaried executives who may be terminated without prior notification.

#### b2) Reality check (“I did all the maths”)

For our respondents, “doing the maths” was a central activity in their attempt to assess their decision to start a business. In fact, several IT entrepreneurs experienced IT Entrepreneurial Epiphanies after doing a “reality check” of their situation. This “reality check” referred to the comparative assessment of various aspects of their current reality and future potential as entrepreneurs.

Developing concrete contingency plans in case of failure (e.g. they tried to estimate the possibility of finding a new job or being an associate in another firm in case their new business failed), calculating the amount of savings available, estimating the period of time in which they could support themselves (and their families) without working, etc. were some components of the reality checks that the entrepreneurs reported conducting before making the decision to quit their jobs.

#### b3) (Voluntary) naivety

*Are people voluntarily naïve or are they just ignorant of all it takes to start a business?*

An additional approach observed by the interviewees to reduce the risk perceived is related to the idea of (voluntarily) naivety. We use parenthesis for the term ‘voluntarily’, as sometimes, this naivety is voluntarily (conscious decision), sometimes it is not. Globally, the very idea of (voluntary) naivety is that not being fully aware of a situation may decrease the perception of the risk involved, so that the IT entrepreneur will make the move. This is related to the recognition of the impossibility of predicting everything and therefore to accept the risk as being part of the entrepreneurial adventure. By consequence, this recognition will reduce the impact of the risk on the decision making of starting a business.

*‘Voluntarily, I occulted specific aspects, I told myself « No, I don’t want to think about it, I don’t want to apprehend them now, because I very well know that it will take some time and that it won’t be easy », but I prefer to live the situation, instead of living it through imagination, and somewhere, slowing me down by telling myself “Caution, this, caution that, [...] it’s not even worth it to think about it”, whereas, in fact, we all very well know, that in front of the problem, up against the wall, we will find resources to succeed and that very often, if we think too much in advance, we have a tendency to lock ourselves in, leading to a lack of action. (Marc)*

In addition to the above, the (voluntary) naivety can also lead to a miscalculation of the amount of work involved in setting the venture. The future IT entrepreneur may not know or have forgotten about how to practically estimate what it takes to start a new business.

*Interviewee: It was harder than anything I’d ever done, once we started the business.*

*Interviewer: Were you anticipating that it would be so hard?*

*Interviewee: No. I wasn’t. I knew it would be - my partner was much more optimistic than me. He thought it would be easy. I thought it would be hard, and it turned out to be extraordinarily hard. It was 100 times harder than I thought. But that’s how, I think, all initiatives are. (Bill)*

## External Environmental Context

Some *IT Entrepreneurial Epiphanies* refer to the realization by the future entrepreneur that the context is excellent for a new business venture (e.g. the dot com bubble, the decrease of the French administrative costs/complexity to start a new business) or a new opportunity has suddenly emerged or gradually revealed

*“The opportunity was presented to me without me actually having to go find it. It was presented to me. And so I took it and figured out, “What are the risks for this?” In 2000, at that time, there was none (sic)”(Andrew)*

It is interesting to notice that none of the IT entrepreneurs we interviewed predicted the dot com burst. To the contrary, one of the most influential factors for them was precisely a perception of a booming market, i.e. an excellent IT context. So, the perception about a positive IT context could trigger the decision. This leads to practical implications regarding the relative importance of the context (and its perception) when starting a business.

## Timing

The IT entrepreneurial Epiphanies regarding the notion of timing can be categorized as such:

a) Time pressure. Some of the interviewees realized that ‘life is short’, for instance, they are getting older and they needed to start their business as soon as possible.

*“I am at a critical age and if I don t do it now, I will never do it” (Nikolas)*

b) The right moment. Other interviewees noted that they felt that it was the “right time” for them to leave and start their own company.

*“For me opening my own business was just a matter of time. My father and grand-father had also been entrepreneurs. It is like you always know what you want to do but for various reason you wait until the exact moment you were waiting suddenly comes” (Nico)*

c) Long-term desire. Other interviewees emphasized the fact that they always felt that they should have their business and the time had come for them to do that, while others admitted that it was pure chance for them to start their own business, leaving behind the corporate world.

*“I had enough! I think I had been at a stage in my career when I can do some quality-related choices about my work and my life” (Sotiris)*

d) End of a cycle. Finally, another group of interviewees stated that they felt that a particular cycle in their career (e.g. the end of specific project) had reached an end and it was time for them to move on and do something different.

## Long term reasons

*IT Entrepreneurial Epiphanies* related to long term reasons and goals range from self-realization, financial success, independence (no structure, no time pressure), the idea of fun/ pleasure/passion to lifestyle.

*“I would never exchange the autonomy and control which I have over my time with anything in the world. In particular, our job cannot fit into strict time schedules. This schedule from 9 to 5pm has never worked out from me” (Alexander)*

Although most of those themes have been already researched; we confirm the relevance of studying the notion of pleasure and passion, supporting the call of Cardon et al. (2009; 2005) to reconsider emotion as an important component of entrepreneurship. We summarize all the five lower-level concepts in Table 1.

<b>Table 1 : Details of the lower-level concepts, codes and quotations that compose and illustrate IT Entrepreneurial Epiphany</b>			
<b>Lower-level concepts</b>	<b>Low-level concepts / codes</b>	<b>Quotations</b>	<b>Related concepts in Entrepreneurship and IT Turnover literature</b>
<i>The business game</i>	<i>Understanding the business game</i>	"I then realized that business is business. Bob is a cool and nice guy, [...] but if there is some money to make, he will do it" (Jean, after witnessing a business acquisition)	<i>Prior start-up experience</i> , (Davidsson et al. 2003; Delmar et al. 2000; Kim et al. 2003); <i>Prior work experience in small and "young" firms</i> , (Davidsson 2006; Wagner 2004a; Wagner 2004b); <i>Managerial experience</i> , (Davidsson et al. 2003); <i>The "Jack-of-all-trades" model</i> , (Lazear 2002; Lazear 2004; Wagner 2006); <i>Career (orientation)</i> , (Igarria et al. 1995), (Igarria et al. 1994a) and <i>plateau</i> , (Igarria et al. 1992a)); <i>Boundary spanning activities</i> , (Baroudi et al. 1995); <i>Organization-Based Rewards</i> , (Igarria et al. 1994a); <i>Pay; procedural justice</i> , (Paré et al. 2000); <i>Promotability</i> , (Baroudi et al. 1995)
	<i>Do I agree?</i> (Agreeing or disagreeing with the rules of the business game)	"So recently, I told myself: "either I continue like this and we change the orientation of the company, or I start my business" and this is the latter option that I chose." (Thérèse)	<i>Rebel theory (Roles and recognition)</i> , (Carter et al. 2003), (Giacomin et al. 2007), (Davidsson 2006); <i>Reasons for preferring org. employment : workload, avoiding responsibility, career path</i> , (Kolvereid 1996); <i>Constriction of Control</i> , (Joseph et al. 2001); <i>Career (satisfaction and orientation)</i> , (Igarria et al. 1995), (Igarria et al. 1994a); <i>plateau</i> , (Igarria et al. 1992a)); <i>Workload, work exhaustion</i> , (Moore 2000); <i>work-family</i> (Gutek et al. 1991); <i>Fairness of rewards</i> , (Moore 2000); <i>Human Resources Practices</i> , (Agarwal et al. 2002); <i>Organization-Based Rewards</i> , (Igarria et al. 1994a); <i>Pay; procedural justice</i> , (Paré et al. 2000); <i>Promotability</i> , (Baroudi et al. 1995)
	<i>Necessary skills</i> (e.g. do I have the necessary skills to play the game?)	"I felt that I have all the necessary skills to run my own business."	<i>Self-efficacy to run one's business</i> , (2005; Boyd et al. 1994; Koellinger et al. 2007; Zhao et al. 2005); <i>Entrepreneurial Self-Efficacy (ESE)</i> , (Chen et al. 1998); <i>Education</i> , (Wagner 2004b); <i>Job performance</i> , (Murphy et al. 1997); <i>Overconfidence or excessive self-efficacy in IT skills</i> , (Busenitz et al. 1997; Cooper et al. 1988; Forbes 2005; Koellinger et al. 2007)
<i>Risk reduction</i>	<i>Comparing risks</i>	"I would feel more secure to have my own network of clients than being a salaried executive who can be laid off without prior notification". (Manos)	<i>Entrepreneurial Self-Efficacy (ESE) – Risk-taking</i> , (Chen et al. 1998); <i>Overconfidence or excessive self-efficacy in IT skills</i> , (Busenitz et al. 1997; Cooper et al. 1988; Forbes 2005; Koellinger et al. 2007); <i>Reasons for preferring organizational employment : Security, avoiding responsibility</i> , (Kolvereid 1996); <i>Threats of professional obsolescence</i> , (Joseph et al. 2001)
	<i>Social Network and risk</i>		<i>Network</i> , (Arenius et al. 2005; Koellinger et al. 2007; Wagner 2004b); <i>Relatives</i> , (Kim et al. 2003)
	<i>Reality check</i>	"I did all the maths" (Therese)	<i>Analytical intelligence</i> , (Sternberg 2004)
	<i>(Voluntary) naivety</i> (Are people voluntarily naïve)	"I was definitely optimistic. It's funny because my partner often, when he talks about our history, he will say we were a little bit stupid, and what he means by that	<i>Overconfidence or Excessive Self-Efficacy in IT skills</i> , (Busenitz et al. 1997; Cooper et al. 1988; Forbes 2005; Koellinger et al. 2007)

	or are they just ignorant of all it takes to start a business?)	is that you're part optimistic, you're part naïve, and you're just confident that you can make it work." (Dan)	
<i>External environmental Context</i>	<i>Perceived opportunity</i>	"I knew right now there were no other companies doing it. We researched it." (Stephen)	<i>Opportunity</i> , (Arenius et al. 2005; Bhawe 1994; Wagner 2004b); <i>Economic Outlook</i> , (Davidsson 2006); <i>Perceived Job Alternatives</i> , (March et al. 1958)
<i>Timing</i>	<i>Time pressure</i>	"Life's too short" (Claude)	<i>Age, Marital Status</i>
	<i>The right moment</i>	"It was just that the timing was correct for me"	<i>Opportunity</i> , (Arenius et al. 2005; Bhawe 1994; Wagner 2004b); <i>Economic Outlook</i> , (Davidsson 2006); <i>Household Income and Wealth</i> , (Arenius et al. 2005, p.239; Davidsson 2006; Kim et al. 2003; Reynolds 1997; Wagner 2004b); <i>Career path</i> , (Kolvereid 1996); <i>career orientation</i> , (Igbaria et al., 1995); <i>Age; Marital Status; Work-Family</i> , (Guttek et al. 1991)
	<i>Long-term desire</i>	"I somehow always felt I would have my own business" (Stephen)	<i>Need for Achievement</i> , (Shaver et al. 1991; Wagner et al. 2008); <i>Need for Innovation, Independence, Self-Realization and Financial Success</i> , (Carter et al. 2003); <i>Growth Need Strength</i> , (Lee 2000); <i>job autonomy</i> , (Hackman et al. 1975); <i>Age, Marital Status; Promotability</i> , (Baroudi et al. 1995)
	<i>End of a cycle</i>	"I like to have a new challenge every two years"	<i>Boredom with coworkers, with the company's line of business, Cyclical Patterns of Interest (e.g. industry, people, product)</i> , (Mourmant et al. 2009)
<i>Long term reasons</i>	<i>self-realization</i>	"I was discouraged in this work,"	<i>Career reasons for entrepreneurship : Self-realization</i> , (Carter et al. 2003); <i>Achievement Need Strength</i> , (Lee 2001); <i>Need for achievement</i> , (Shaver et al. 1991; Wagner et al. 2008)
	<i>financial success</i>	"There are some risks, but I want to increase my income, maybe not now, but in 4-5 years" (Louis)	<i>Career reasons for entrepreneurship : Financial Success</i> , (Carter et al. 2003)
	<i>Independence (no structure, no time pressure)</i>	"I sensed that I wanted to have more control" (Stephen)	<i>Roles, Recognition</i> , (Carter et al. 2003), (Giacomin et al. 2007); <i>Constriction of Control</i> , (Joseph et al. 2001); <i>Job Autonomy</i> (Hackman et al. 1975); <i>Need for autonomy</i> , (Vecchio 2003), (Wagner et al. 2008); <i>Career reasons for entrepreneurship : independence</i> , (Carter et al. 2003) : <i>Workload and Work Exhaustion</i> , (Moore 2000)
	<i>Pleasure/passion</i>	Roger, about his future entrepreneurial work: "I really like this. This is kind of selling me in this kind of work"	<i>Passion</i> , (Cardon et al. 2009; Cardon et al. 2005); <i>Work Exhaustion</i> , (Moore 2000); <i>Boredom with coworkers, with the company's line of business, Cyclical Patterns of Interest (e.g. industry, people, product)</i> , (Mourmant et al. 2009)
	<i>lifestyle</i>	"I don't have to do this anymore. I don't want to travel full-time. It's about time I did this" (Bob)	<i>Workload, Work Exhaustion and Work-Family</i> , (Moore 2000)

To conclude, the majority of the lower-level concepts that emerged from the data are (at a few exceptions, such as the (voluntary) naivety, to the best of our knowledge) related to various models in the literature (see research implication below). However, we believe that approaching them with the *IT Entrepreneurial Epiphany* lens is a contribution as it highlights a different point of view on those themes, emphasizing the moment of realization and how to trigger it. Furthermore, although not all *IT Entrepreneurial Epiphanies* are present for each person, we noticed that all IT entrepreneurs experienced several different types of *IT Entrepreneurial Epiphanies* at varying levels of intensity.

The capability to identify the causes of an *ITEE* has also very practical implications for an individual aspiring to become an IT entrepreneur. The specific causes of an *ITEE* will be discussed in the next section where we integrate all the categories and concepts in the RTQ model.

## Practical Implications

Being aware of the conditions under which an IT employee decides to leave salaried employment in order to start her own company is a critical issue for CIOs, future IT entrepreneurs and policy makers. In the same vein, this paper provides some guidance to future IT entrepreneurs who may consider leaving their salaried employment, IT managers who want to decrease the possibility of their IT employees quitting in order to start a new business and policy makers who aim at fostering entrepreneurship and thus supporting related initiatives for new ventures creation.

As far as the nascent entrepreneurs are concerned, we argue the following: Focusing on the image violations between the *current RTQ* and the *NCQ*, rather than on all the dimensions of the *NCQ*, is helpful for IT employees/nascent entrepreneurs, as it reduces the number of dimensions to consider (more than 60 variables—Mourmant et al, 2009). Once the image violations are identified, the IT employees can work more easily towards reaching an *IT ITEE*, and increasing their likelihood to quit their job and become entrepreneurs. For example, if they identify an image violation related to a critical lack of marketing skills, they can educate themselves in the relevant field or choose to work on project which will allow them to develop this specific skill.

Furthermore, the list of lower-level concepts is a good way to quickly evaluate the ‘condition’ of an IT employee in relation to her potential to quit her job and become entrepreneur. For instance, the concept of (voluntary) naivety appears to be quite important in the IT employees’ decision to quit and start her own business. Accepting that it is impossible for somebody to know and predict everything beforehand (e.g. unpredictable events such as financial crisis, burst of the internet bubble may happen) can serve as strong motivation for nascent entrepreneurs who are scared of the unknown and unplanned while the ability to adequately understand the rules of the business (e.g. through education) can allow IT employees to make efficient entrepreneurial decisions (e.g. grounded to reality with good prospects of feasibility). Having a relatively clear idea of their prospects to become entrepreneurs, IT employees are introduced to a new spectrum of options which were not available to them before. For instance, once they realize that they do not fit into the structure of a hierarchical organization and understand that this is a *common*<sup>6</sup> *ITEE*, they can then pursue the alternative path of quitting and starting their business instead of forcing themselves into an organizational setting. Acquaintance with the notion of IT epiphany and its sub-concepts may allow IT employees to cut the cord that keep them tied to the convention of the salaried employment.

As far as the CIOs are concerned, we argue that retaining IT professionals is important for both IT and non-IT organizations. Losing a good IT employee may pose a risk for every organization, let alone if this employee launches a business in competition to her former employer. By understanding the mechanisms or the conditions under which IT Entrepreneurial Epiphanies are most probably to be triggered, CIOs can possibly initiate strategies to decrease the possibility of such an epiphany happening to an IT employee whom they want to retain. In other words, having the conceptual tools provided by the core category of IT Entrepreneurial Epiphany and its sub-categories, the managers become more aware of the factors that influence the employee’s behaviour regarding her decision to stay or quit. In this way, the managers can be proactive and take the necessary steps to decrease the possibility of epiphanic moments and thus prevent the employees from quitting their job in order to become

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<sup>6</sup> Although our sample size is too small to draw definitive conclusions, it still indicates that many IT entrepreneurs experienced this type of problems (e.g. Bill, Bob, Louis, Thérèse, Mary, Louise, etc.)

entrepreneurs. For instance, the manager recognizes that the lack of challenge or the loss of interest in every day work may be one of the reasons the IT employee no longer wishes to remain in the corporate world and wishes to start her own company. In order to reduce this possibility, the manager can give her extra responsibilities and autonomy and encourage her to participate to multi-divisional teams. In general, CIOs who want to retain their good IT professional can decrease the possibility of epiphanic moments by altering their human resources strategies directly related to organizational and job-related attributes. Alterations at the level of rewards, enhancement of perceived job security, introduction of flexibility programs, etc. can possibly inhibit or delay the manifestation of epiphanic moments leading to turnover decisions.

Finally, fostering IT entrepreneurship is important for policy makers because entrepreneurship is considered to be a source of technological innovation and economic growth (Birley 1987; Kumar et al. 2005; Schumpeter 1934). Policy makers can trigger entrepreneurship-related epiphanic moments and foster entrepreneurial endeavours in various ways. They can implement efficient programs which aim at decreasing the perceived risk related to the undertaking of a new venture (lower taxation, enhanced financial support, lessen administrative burdens for nascent entrepreneurs) or increasing the awareness with regard to the necessary skills for a successful entrepreneurial career (training seminars or support of related communal activities).

In conclusion, we would like to emphasize the fact that by understanding the particulars and the various types of IT Entrepreneurial Epiphanies, we are potentially able to identify specific courses of action that lead or trigger these epiphanies. The notion of *ITEE*, although theoretical, is closely linked to the field of action in two ways: a) as already pointed previously, the *ITEE* itself can be triggered by specific actions and b) after the *ITEE* is experienced, it also leads to some form of action, i.e. quit and start a new business. Although the detailed identification and subsequent typology of shocks or courses of actions related to IT EE reside beyond the scope of the current paper, the introduction of the *ITEE* paves the way for the exploration of a future research agenda with highly practical implications. In this sense, this paper is a first step to build a bridge between various types of *ITEE* and the relevant actions which can trigger them.

## Research Implications

Interestingly enough, the large majority of the emerging lower-level concepts of the core category *IT Entrepreneurial Epiphany* can be found here and there in the entrepreneurship and IT turnover literature. These lower-level concepts are usually identified in the literature as antecedents of entrepreneurial behaviour or factors which are positively or negatively related to IT turnover intention.

For instance, the perceived promotability (Baroudi et al. 1995) and fairness of rewards (Moore 2000) which have been suggested to influence negatively the turnover intention (Joseph et al, 2007) are related to the IT employee's ability to understand the rules of the business game, and her decision to agree or not with these rules. Similarly, the 'jack-of-all-trades' theory (Lazear 2002; Lazear 2004; Wagner 2006) is highly compatible with the desire of the entrepreneur to understand 'all' the rules of the game before playing it. The rebel theory (Davidsson 2006), combined with the need for independence and control (Carter et al. 2003) also explains that once entrepreneurs understand the rules of the game (and for example realized that they can't control them), they decide to start their own business and therefore regain control.

Among the emerging lower-level concepts, the only concept which seemed to rather be missing from the literature is that of the (*voluntary*) *naivety*. Yet, although this concept as such has not been found in the literature, we argue that it can be related to the unpredicted, extensive workload that leads the entrepreneurs to retrospectively realize they underestimated the work necessary to start a business. This is a theme related to overconfidence or excessive self-efficacy (Koellinger et al. 2007). Table 1 provides a detailed summary of the emergent concepts of the study as well as the previous studies which refer to these concepts.

In this respect, the majority of the lower-level concepts composing the *IT Entrepreneurial Epiphany* have already been discussed in the literature. Yet, the presentation of these concepts in the literature has taken place in a rather fragmented way. Through the lens of *ITEE*, we offer a unified and enriched way to describe and comprehend the actual IT entrepreneurial turnover. A detailed analysis of the subjective perceptions of the IT employees/nascent entrepreneurs (Arenius et al. 2005) regarding the critical moments or conditions that trigger their decision to quit and start their own businesses can advance our knowledge about IT turnover and entrepreneurial initiatives in general.



It is worth noticing that although the concept of *ITEE* has been developed in the context of IT Entrepreneurial Turnover, it can theoretically inform the literature on IT Turnover and Turnover in general. For instance, using a formal grounded theory approach (Glaser 2007b; Kearney 2001; Kearney 2007), we could abstract the core category, *ITEE* to a higher level that represents a general concept (e.g. ‘Turnover Epiphany’) that can be applied to a broad range of turnover behavior. Therefore, the concept of turnover epiphany can refer to (1) any type of turnover decision, not necessarily entrepreneurial decisions (e.g. the desire to have children (Ahuja et al. 2007) or the will to change occupation (Reich et al. 1999)) and (2) any type of occupational group (e.g. nurses (Morrell et al. 2008; Morrell et al. 2004)). That said, such abstraction will require more research to assess the different properties and lower-level concepts of a more general Turnover Epiphany.

## **Discussion and conclusion**

In this paper, we addressed an under-investigated thematic area of IT turnover personnel literature: IT Entrepreneurial Turnover. We introduced a conceptual construct – IT Entrepreneurial Epiphany – to describe the critical moment when the IT employee/future entrepreneur realizes that some or all of the necessary conditions for her to quit her job and start her own business have been met. To do this, we reviewed the model of IT Entrepreneurial Turnover – RTQ/NCQ model – (Mourmant et al. 2009) which reconciles two streams of literature: voluntary IT personnel turnover literature and the entrepreneurship literature. We drew upon this model to frame our research and highlight the importance of understanding the conditions and processes that influence or trigger changes in employee attitudes towards leaving their job to set up their own company. In particular, we demonstrated that the *ITEE* occurs when there is a fit between one or several dimensions of her current Readiness To Quit (RTQ) compared to one of her Necessary Configuration to Quit (NCQ). In an attempt to thoroughly describe the core category of ‘*ITEE*’, we identified five lower-level concepts: 1) the understanding of the business game (in the corporation and in the market), 2) the estimation of the risk involved in the new venture creation process compared to salaried employment, 3) long-term considerations, 4) the socio-economic context, and 5) the dimension of time. Alternatively, we suggested that the subjective perceptions of future IT entrepreneurs with reference to above lower-level concepts play a critical role in the nascent entrepreneurs’ actual turnover decision.

In sum, we introduced the IT Entrepreneurial Epiphany conceptual lens as a way for the researcher to focus on actionable (and therefore practical) dimensions leading to an epiphany and therefore to the decision to quit to start a business. Following this line of thought, future research should explore the catalytic events triggering an *ITEE*, or the conditions leading to the gradual evolution of specific dimensions that will generate an *ITEE*. In addition, the set of lower-level concepts may require additional clarification and definition when they are used to examine other type of turnover, occupational groups or even more diversified samples. It is possible that additional research on *ITEE* will uncover other “universal” concepts or may show that some of these concepts are specific to just IT Entrepreneurial Turnover. Following a cumulative tradition of building research (Kuhn 1971), as well as a Formal Grounded Theory approach (Glaser 2007a), we consider these five concepts to be a useful starting point which emerged from our specific Grounded Theory Methodology.

## **Appendices -Vignette illustrating the conceptual development of *IT Entrepreneurial Epiphany* using a Grounded Theory Methodology**

This vignette has been first developed as a memo in Atlas.ti, and then adapted to fit the space requirements of this paper. The objective of the vignette is to give the reader a sense of how the concepts of this paper have been developed (here the IT Entrepreneurial Epiphany). While writing this memo, I (the first author) was clearly influenced by Corbin’s detailed descriptions of how she analyzed the data from the Vietnam war, (Corbin et al. 2008).

### **Open Coding - Origin and definition of IT Entrepreneurial Epiphany**

I will present here the brief history of the emergence of IT Entrepreneurial Epiphany. This category emerged throughout the open coding process and resulted from different specific codes that were gradually grouped<sup>7</sup>:

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<sup>7</sup>. I kept the French terms there, as it was also part of the challenge to find a corresponding English concept.

1)Prise de conscience (awareness) 2)"I realized that..." 3)"Ha ha moment" 4) Insight 5) A moment of realization 6) Sudden insight 7) "Je m'apercevais..." (I became conscious/aware of... / I realised that...)

While I was informally discussing with friends about the translation of “Prise de conscience”, they suggested looking at epiphany. According to the Webster dictionary, the most interesting definitions of an epiphany (in this context) are the following: (1) “an intuitive grasp of reality through something (as an event) usually simple and striking” (2) “an illuminating discovery, realization, or disclosure”. These two definitions are very interesting for the model, as the first one is related to the influence of a catalytic event (e.g. a shock). The second definition is also interesting in the sense that it refers to the idea of “realization”. However, at that point, I was not completely “feeling right” (Corbin et al. 2008, p. 45-46) about these two definitions, although the meaning was very close to what I was looking for.

Having the term epiphany in mind, I decided to see how I could contextualize it into the conceptual model as well as extending, refining and/or modifying the definition. Following the grounded theory methodology, I went back to the interviews and looked for other codes that could fit in the emerging epiphany concept (constant comparison). In addition, while interviewing additional IT entrepreneurs, I was attentive to any mention of anything close or related to an epiphany. I also modified the interview guide to incorporate an open question related to the notion of epiphany. I finally made sure to interview various type of entrepreneur to capture different types of epiphanies (theoretical sampling). I came up with the following additional terms. However, at that stage, I was still not able to have a clear definition related to my specific context; neither could say why this was so important.

1) A clicking moment 2) Un déclic (a brain wave) 3) To have a brain wave 4) An epiphanic moment/event

While travelling to a conference, I decided to take some distance (Corbin et al. 2008) with the idea of epiphany and read the literature about Quantum Change (Miller 2004). The idea of reading about quantum change was to look at the extreme side of the scale of intensity of the epiphany. Although this reading was interesting, I was still struggling with the concept of epiphany. Then, while discussing this issue with some colleagues, they suggested the following:

1) The consciousness of sense making 2) The recognition of a meaningful coincidence, from the Japanese "guzen"

Although they all appears relatively relevant, none of them made me "feel right", I continued to write this memo and while exploring the interaction of epiphany with the unfolding model (Lee et al. 1999), the image theory (Beach 1998) and the other components of the IT Entrepreneurial Turnover model, (Mourmant et al. 2009), I had during one night, the ‘eureka’ moment. I came up with the following definition that "felt right". At that moment, I realized that this concept could indeed be a category, i.e. a ‘higher-level concept’ (Corbin et al. 2008, p.159):

- An ‘Epiphany’ (in this context) is defined as an illuminating realization which indicates the end or the resolution of an image violation of one or several specific NCQ dimensions.

From there, I continued writing and clarifying the integration and interaction of the epiphany within the conceptual model and described in length in this paper.

Although I am now “feeling right” regarding the definition of epiphany, the word “epiphany” alone does not “felt right” because of the general meaning that it carries. I was then facing the decision to either create a completely new term (or group of two words) or contextualize and expand the term epiphany to include this definition. While writing this memo, I ‘accidentally’ wrote Entrepreneurial Epiphany, which once contextualized to IT entrepreneurs led me to ‘*IT Entrepreneurial Epiphany*’, therefore:

- An *IT Entrepreneurial Epiphany* is defined as an illuminating realization which indicates the end or the resolution of an image violation of one or several specific NCQ dimensions.

The properties, dimensions and type of *IT Entrepreneurial Epiphanies*; as well as the process of axial and selective coding were also part of this memo, but due to space limitations, I do not detail them here.

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