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ABSTRACT

Career Success is an important but often overlooked outcome of a person's career experiences. All businesses and organizations operate in a changing World, with global energy crisis and emerging technologies. These organizations need more successful engineers for the development of competitive advantages that sustain his future development.

The primary purpose of this study was to explain engineer's career success. Building upon academic literature (e.g, Arthur et al (2005); Heslin (2005); Gunz (2005); Baruch (2006)) a model of determinants of career success was studied; both objective and subjective perspectives were used, developing empirical evidence for career success of this category of knowledge workers in Latin America.

Research questions were focused on the relationship between technologists' career success and their personal network, individual competences, professional experience, organizational structures, and individual aspirations. Data were gathered from a survey of 1135 graduates of engineering technology programs; 1011 responded, for a response rate of 89.7 % and archives of Engineering School.

The results suggest that career success of technologist are strongly determined by organizational structures and individual competences. In second level, career success s determined by personal network and in third level the professional experience, and individual aspirations.

Suggestions for future research and implications for practitioners, researchers and educative organizations are provided.

RESUMEN

El éxito de carrera es un importante pero frecuentemente ignorado resultado de la carrera personal. Todas las compañías y organizaciones operan en este mundo cambiante, con crisis globales en el sector energético, financiero y tecnologías emergentes. Estas organizaciones necesitan ingenieros más exitosos para el desarrollo de ventajas competitivas que sustente su desarrollo futuro.

El propósito primario de este estudio fue explicar el éxito de carrera de los ingenieros. Construido sobre las bases de la literatura académica (entre otros, Arthur et al (2005); Heslin (2005); Gunz (2005); Baruch (2006)) un modelo de determinantes de éxito de carrera fue estudiado que considera la perspectiva objetiva y subjetiva de este constructo, desarrollo la evidencia empírica del éxito de carrera de esta categoría de trabajador del conocimiento en latino America.

Las preguntas de investigación estuvieron centradas en verificar la relación entre el éxito de carrera de ingenieros, graduados de programas con orientación practica, y la red personal de contactos, la competencia individual para la administración, la experiencia Professional, la estructura organizacional y las aspiraciones individuales. Los data fueron obtenidos de un encuestar a 1135 graduados; 1011 respondieron, representando un tasa de respuesta de 89.7 % y archivos complementarios de la escuela de ingeniería Tecsup.

Los resultados sugieren que el éxito de carrera esta fuertemente determinada por la estructura de carrera en las organizaciones. En segundo nivel, el éxito de carrera es determinado por la red personal y en un tercer nivel por la experiencia Professional y las aspiraciones individuales.

Sugerencias para futuras investigaciones e implicaciones para investigadores, gerentes de recursos humanos y organizaciones educativas son provistas.

RESUM

L'èxit de la carrera és un resultat important de la trajectòria personal que sovint s'ignora. Totes les empreses i les organitzacions actuals operen en un món canviant, amb crisis globals en el sector energètic, financer i de les tecnologies emergents. Aquestes organitzacions necessiten disposar d'enginyers amb èxit per tal de desenvolupar els avantatges competitius que sustentin el seu desenvolupament futur.

La finalitat primera d'aquest estudi ha estat explicar l'èxit en la carrera dels enginyers. Sobre la base de la literatura acadèmica (entre d'altres, Arthur *et al*., 2005; Heslin, 2005; Gunz, 2005; Baruch, 2006), s'ha elaborat un model de determinants d'èxit de la carrera que considera la perspectiva objectiva i subjectiva d'aquest constructe i s'ha desenvolupat l'evidència empírica de l'èxit en la carrera d'aquesta categoria de treballador del coneixement a l'Amèrica Llatina.

Les preguntes de recerca s'han centrat a verificar la relació entre l'èxit en la carrera dels enginyers i els graduats de programes amb orientació pràctica, i la xarxa personal de contactes, la competència individual per a l'administració, l'experiència professional, l'estructura organitzativa i les aspiracions individuals. Les dades s'han obtingut d'una enquesta a 1.135 graduats, que van respondre 1.011, cosa que representa un índex de resposta de 89,7 %, i d'arxius complementaris de l'escola d'enginyeria Tecsup.

Els resultats suggereixen que l'èxit en la carrera sovint és determinat, primer, per l'estructura de la carrera a les organitzacions; en un segon nivell, per la xarxa personal i, en un tercer nivell, per l'experiència professional i les aspiracions individuals.

Es fan suggeriments per a futures investigacions i s'esmenten les implicacions que poden tenir per als investigadors, els gerents de recursos humans i les organitzacions educatives.

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Chapter 1

Introduction

Careers are of great interest to both the individual and the management of an organization. An administrator's main responsibility is to manage his or her subordinates. In turn, one of the subordinate's main concerns is to manage his own career. In addition, any administrator needs to understand careers in order to manage his own career more effectively. Most people do not consider such vital issues as how to make well-informed career choices, how to cope with conflicts between work and personal life, and how to arrive at career goals (Hall, 2002).

The understanding of careers is a rich and active field of study. Careers arise from the interaction of individuals with organizations and society. It is, therefore, the legitimate concern of several disciplines and subdisciplines, such as organization psychology, counseling psychology, sociology, labor economics, organization and management studies (Collin, 1998). Career development has become a significant component of policy development in many countries, because of its potential impact on the labor market (Richard, 2005).

In the new economy, both the technological and social realms transcend organizational and systems boundaries. Careers have become more open and more diverse, but also less structured and controlled by employers (Baruch, 2003). Bartlett and Ghoshal (2002) hold that one of today's scarcest and most highly sought-after strategic resources is employee expertise. Being able to build competitive advantages

through people and managing the careers of knowledgeable employees—like engineers—is a challenge for departments of Human Resources.

Technological and scientific advances are becoming available more quickly, and the company that misses the window of opportunity for taking advantage of these advances loses the pricing and profit premium available to market leaders. In many companies, science and technology has eclipsed marketing, finance, and even sales as the critical employee segment. These professionals can create the franchise for company growth. Managers of technical employees have a lot to consider as they attempt to limit the turnover of valuable employees. Career opportunities yielded significant predictors of retention than any other type of reward for technical professionals (Kochanski & Ledford, 2001). In the face of global competition for engineering talent, Human Resource Managers need to pay more attention to the career success of the company's engineers.

Gunz & Heslin (2005) observe that, despite the extensive literature on the precedents of career success, there has been a paucity of the attention paid to the nature of the criterion for success. Obvious deficiencies in the way both objective and subjective career success have typically been operationalized lead to some suggestions for the improvement of measurement.

Thus, it is important, on both the organizational and the individual level, to understand the determinants of the career success of engineering technology graduates. The purpose of this study is to fill this gap in the literature and provide empirical data on engineers' careers in developing countries.

Purpose of the Study

Careers are a major component of modern life. Life revolves around work, and work provides people with a sense of purpose, with challenges, self-fulfillment, and, of course, income. Moreover, work is a source of identity and creativity, as well as of status and access to social networking. A career can be seen as one of life's journeys. People can either take the beaten path or opt to navigate (Baruch, 2004). The author's research examines the determining factors of career success for professionals in the technology sector.

The key role of engineers in company performance has been emphasized in several studies. Engineers, in fact, represent a distinct occupational group: engineering does not *quite* fit the classic definition of a profession like medicine or law; but there are many elements of professionalism in engineering. Engineers, however, have a stronger need for personal development and growth compared to professionals in other occupations. They need to learn new things, and to feel challenged. As a result of changes in economic, social, and technological conditions, engineering managers today face more problems in retaining engineers than ever before. This fact, in addition to engineers' orientations and expectations to be treated as professionals, has caused considerable tension and strain in the engineer-management relationship. This calls for changes in engineering management styles to maintain motivation and productivity (Keenan, 1994; Bligliardi, Petroni & Dormio, 2005). This research analyzes the determinants of career success in the Latin American work environment. Specifically, this study provides an analysis of career success for engineers with an orientation to applied sciences, as well as such factors as Personal Network, Individual Competences, Professional Experience, Organizational Structures, and Individual Aspirations.

This cross-sectional survey study employed a questionnaire and a search of archival data in order to explain the engineer's criteria for career success generally, and specifically to examine the determinants of their career success. Both objective and subjective perspectives were used, developing empirical evidence for career success of this category of knowledge workers in Latin America.

Statement of the Research Problem

Although research on careers has increased dramatically over the last twenty years, most of it has focused on those in the Western world, and more particularly on the U.S. Moreover, the little research that has been published on the careers of people outside the U.S. has been conducted in countries with cultures and languages similar to the U.S. (e.g., England, Australia). While there have been calls to expand the research on careers outside the West, to date there are only few published studies on the career experiences of those in non-Western countries (Tu, Forret & Sullivan, 2006).

The world economy is rapidly changing, due to globalization and outsourcing. Some engineering technology programs are struggling with low enrollment, even as high-tech manufacturing relies on graduates from these programs. There is reluctance on the part of students to enter such programs, despite market demand and an engineering career's potential (ASSE, 2004).

The careers of engineers have been the subject of a series of studies that have in common the implicit assumption that the manufacturing of a country is dependent, at least in part, on the quality of its professional engineers (Keenan, 1994). However, very promising engineers are being promoted to managerial positions as a way of recognizing their contribution to an organization's goals. But in doing so, the companies

lose very knowledgeable professionals and, unfortunately, many of the engineers in question become poor managers (Baruch, 1999).

While considerable research has been made on career success from different perspectives, almost no empirical research has examined the determinants of career success of engineers by considering the dualities in the careers of engineers (subjective and objective; technical and managerial; individual and organizational) (Ismail, 2005; Petroni, 2000a).

A better understanding of engineers' career success determinants can help both organizations to be better companies and individuals to achieve their specific goals. Latin American and Western academic journals have contained few papers that discussed career of Latin American engineers

Research Question and Hypotheses

The design of the present research was guided by one central question: What is the relationship between technologists' career success and their personal network, individual competences, professional experience, organizational structures, and individual aspirations?

Following the model of scientific inquiry that involves the testing of hypotheses derived from both deductive reasoning and general theoretical considerations (Rosenberg, 1968), this study examines ten hypotheses derived from the relevant literature (see chapter 2):

H1: Having a personal network will be positively related to subjective career success.

H2: Having a personal network will be positively related to objective career success.

H3: Individual competences for management will be positively related to subjective career success.

H4: Individual competences for management will be positively related to objective career success.

H5: Professional experience will be positively related to subjective career success.

H6: Professional experience will be positively related to objective career success.

H7: Organizational structure will be positively related to subjective career success.

H8: Organizational structure will be positively related to objective career success.

H9: Individual aspirations will be positively related to subjective career success.

H10: Individual aspirations will be positively related to objective career success.

Definition of Terms

*Career***:** the unfolding sequence of a person's work experiences over time. This definition insists on the relevance of time, rather than adopting any static view of work arrangements.

*Subjective Career***:** An individual's sense of his or her own career and the direction in which it is heading.

*Objective Careers***:** More or less publicly observable positions, situations, and statuses.

*Engineer***:** A person employed in technical work for which the normal qualification is a bachelor's degree in science or engineering from an accredited College, Institute, or University. Engineering programs are divided into two types: programs geared toward the development of conceptual skills, built on a foundation of complex mathematics and science courses like engineering, and programs oriented toward application like Engineering Technology.

*Career success***:** The accumulation of achievements (real or perceived) arising from work experiences.

*Objective career success***:** Sequence of official positions, salary changes, formal structures and titles, all of which are publicly accessible and defined independently of any particular person.

*Subjective career success***:** Individual's personal evaluation of his or her career, across any dimensions that are important to that individual.

*Determinant of career success***:** Factor that has been identified as predictive of career success.

*Personal Network***:** A network that provides career help, emotional support, and contact with key technical professionals, who have strong connections to both internal and external sources of critical information.

Individual Competences for Management: Cluster of related abilities, commitments, knowledge, and skills that enables a person to act effectively on the job or in a wide variety of situations.

*Professional Experience***:** Number of career years after professional studies.

*Organizational Structure***:** Internal labor market structure that includes career system, size, structure, technology, organizational life cycle, etc., and that shapes the

mobility patterns, career development opportunities, and the types of career individuals can have.

*Individual Aspiration***:** The strength of an individual's motivation to achieve progressively goals based on experiences of success and failure—both his own and those of others who constitute his reference models.

Underlying Assumptions of the Study

Past research has demonstrated a relationship between happiness and career success, and has often assumed that an employee is happy and satisfied if he or she is successful. This is a reciprocal cycle. This study holds the same assumption and uses indicators of success that are related to happiness, such as income and subjective satisfaction in life, job, and interpersonal relations (Boehm & Lyubomirsky, 2008).

Another assumption is related to the duality of career success, e.g., both subjective and objective success. Facets dating back to the initial theoretical distinction provided by Hughes in his seminal papers "Institutional Office and the Person" (1937) and "Men and their work" (1958) (cited in Lee, Lirio & Kossek, 2006, pp. 2).

Finally, the study assumes that engineering B.A. programs have two basic orientations: Programs oriented toward research and those with a practical orientation (ASSIN, 2008).

Significance of the Study

Employment is the main source of income for the immense majority of Latin Americans. Employment is always considered a sure fix for poverty. The traditional

argument holds that if the poor were able to take advantage of their most abundant resource—labor— they would no longer be poor (IADB, 2008).

To date, most studies in this area have been conducted in Europe and North America, plus a few in Asia. Further research is needed, however, to establish the extent to which the conclusions of these studies are applicable in Latin American contexts. This is especially important in an era where companies increasingly expand their activities outside their national borders, and individuals are increasingly more likely to pursue international careers (Bozionelos, 2004)

A career represents a person's entire life in the workplace. In addition, for most people, work is a primary factor in determining the overall quality of life. Therefore, it is important to study careers, because work plays a key role in people's lives (Hall, 2002).

Engineers are needed in this age of sustained business growth. By understanding their career success and its determinants, both engineers and the companies they work for can take the appropriate measures toward reaching their goals, thereby contributing to a better future both for themselves and society as a whole (Irrimki, S., 2006).

The Labor Observatory of Mexico (STYPS, 2008) reports that between 1998 and 2007, engineering careers were those with the biggest volume of professionals working in different areas, followed by economic sciences and administration. The same report states that engineers are the best-paid professionals on average, with the best occupational level in their specialty (64.9 %) while Administration has 45.5 %, Law 29.9 %, and Accounting and Finance 29%.

While career success may be expected to involve both subjective and objective aspects, researchers continue to focus on career success in terms of a person's organizational position, or of attained promotions from one position to another. A

number of studies rely on the argument that objective career success affects subjective career success. Another group of papers elevates the role of subjective career success over objective career success. A third group of papers insists that the subjective and objective sides of career success are interdependent (Arthur, Khapova & Wilderom, 2005).

The conclusions of the present study can help engineers and companies to drive the careers of these knowledge workers as a way to help them to be happier and help their companies to have more dynamic and proactive engineers.

At the same time, educational institutions with engineering programs will gain a better understanding of an engineer's career, and will be able to use this knowledge to review the effectiveness of their educational programs.

Chapter 2

Review of Literature

During the last few years, interest in career and career success measures has grown, as evidenced by the large amount of literature investigating work outcomes, managerial advances, managerial career attainment, career effectiveness, career advancement, career planning, career outcomes, career decision-making self efficacy, career optimism, career paths, career outcomes, career satisfaction, subjective career success and objective career success.

In this chapter, a synthesis of a body of research is presented for the purpose of developing constructs. In the area of career success, this would be especially useful, given the large number of studies on the topic and the large variability in findings across individual studies. Scholars have used various operationalizations of career success, and some argue that there are conceptually different indicators (Ng, Eby, Sorensen & Feldman, 2005).

Traditionally, the nature and notion of careers was based on a hierarchical, highly structured, and rigid structure. Nowadays, the nature and notion of careers has changed significantly (Baruch, 2004). 'The ways in which they have been altered are discussed in the next section.

Career

An immediate problem the researcher faces in the area of careers is the fact that the literature is extensive but fragmented. This characteristic can be observed in the many competing definitions of career put forward.

"Career" derives from the Latin *carraria*, meaning a road or a carriage-road. Although it has come to mean "a person's course or progress through life (or a distinct portion of life)," there is a vast and fascinating gulf between the story people tell themselves about their career, and the 'actual' course over which the person travels during his or her career. Is a career primarily the story of the way the person interprets the meaning of what he or she has done, and of the things that have happened to him or her—the so-called "subjective" career? Or is it mainly a map of the social territory they have traversed—for example, the schools they have attended, the jobs they have held, the honors that have been conferred on them (the "objective" career)? Who has a career? Is it a property of someone in professional life, which affords the opportunity for progress or advancement in the world, or can anyone have a career? (Gunz & Heslin, 2005).

From a sociological perspective, a career is defined with a structural term as a succession of related jobs, arranged in hierarchy of prestige, through which persons move in an ordered (more or less predictable) sequence (Garavan, 1996). In a more psychologically oriented definition, career is the sequence of a person's work-related activities, behaviors, and associated attitudes, values, and aspirations over the span of one's life (Hall, 1986; Garavan 1996; Adamson, 1997).

A career can be viewed fundamentally as a "vehicle" for the continuous realization of self, or more accurately, as a vehicle by means of which an individual

may begin to construct a clearer conception of self and self in the world (Adamson, 1997).

In this way, the concept of career has a different set of associations when viewed as a sequence of promotions and other upward moves than when it is viewed as a lifelong sequence of jobs or of role-related experiences (Hall, 2002).

One widely accepted definition of career is the unfolding sequence of a person's work experiences over time. This definition insists on the relevance of time, rather than adopting a static view of work arrangements (Arthur, Khapova & Wilderom, 2005).

The world of careers is changing. The demand of jobs changes frequently and/or suddenly due to technological and administrative innovations. The latter often entails a change in the nature of a job to encompass different activities and skills, and perhaps a greater range of them (Arnold, 2004).

The concept of career changes from the traditional linear model of career as a sequence of hierarchical promotions with a clear uni-dimensional or linear direction of prescribed "advancement" within the organizational hierarchy, to modern, non-traditional models that pay attention to the changing world of career that include alternative career paths as the careers of individuals who may opt-out of corporations in order to start their own businesses (Baruch, 2004; Sullivan, Forret, Mainiero & Terjesen, 2007).

The most important concepts occurring in studies of the state of today's career realities are:

1. The "boundaryless" career introduced by DeFillipi & Arthur (1994) (short-termism and involves a new form of employability in which the individual, rather than the organization, takes an active rather than passive role in managing his or her career);

2. The "protean" career presented by Hall (1996), an individual-focused approach, in which it is claimed that individuals are responsible for their careers and that their unique human resource qualities are based on continuous learning and growth in the pursuit of career goals. The protean model assumes that careers continue to develop throughout life as skills and knowledge are continuously sought in accordance to individual goals;

- The Goal: Psychological Success
- The Career is Managed by the Person, not the Organization
- The Career is a Lifelong Series of Identity Changes and Continuous Learning
- "Career Age" Counts, not Chronological Age
- The Organization Provides
  - Work Challenges and
  - Relationships
- Development is not Necessarily:
  - Formal Training
  - Retraining
  - Upward Mobility
- Profile for Success:
  - From Know-How ..... To Learn-How
  - From Job Security ..... To employability
  - From Organizational Careers ..... To Protean Careers
  - From Work Self ..... To Whole Self

Source: Douglas T. Hall and Philip H. Mirvis, "New styles of management: Career builders or career blockers." Presented at the 1995 Work and Family Conference, "The New Employee-Employer Contract: A Work-Family Perspective," sponsored by the Conference Board and the Families and Work Institute. New York, N.Y., April 26, 1995.

Figure 1. Protean Career of the Twenty-First Century
(Source: Hall, 1996, Table 1, p. 9)

3. The "intelligent" career proposed by DeFillipi & Arthur (1994), which speaks of the development of three "ways of knowing": knowing-why, knowing-how, and

knowing-whom, which are primarily individual assets of motivation, skills, and relationships;

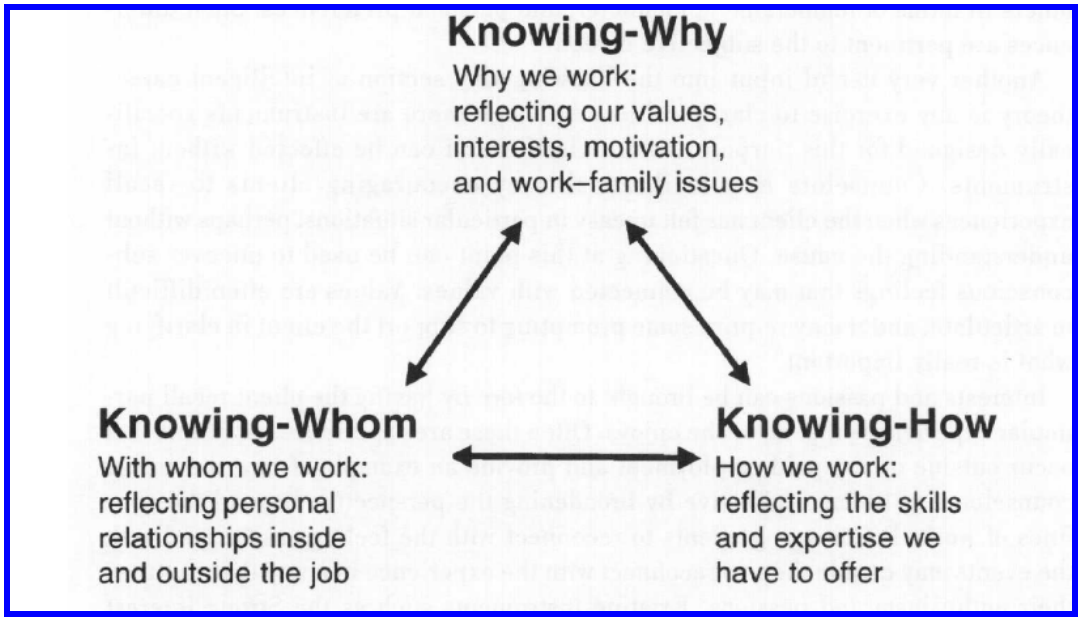


Figure 2. The Intelligent Career as the Result of Interplay interaction among Three Ways of Knowing (Source: Parker, 2002, Figure 1, p. 87)

4. The "post-corporate" career presented by Peiperl and Baruch (1997). On their view, career paths are horizontally rather than vertically evolving links that transcend geographical and organizational boundaries);

5. The "multidirectional" career by Baruch (2004);

6. The "customized" career presented by Valcour, Bailyn & Quijada; and

7. The "kaleidoscope" career model of Mainiero & Sullivan (2005), according to which careers are created on the individual's own terms, and are not defined by the corporation, but by the individual's personal values and life choices. Like a kaleidoscope, individuals' careers are dynamic and in motion. As their lives change, they can alter their career paths to adjust to these changes and need not rely on corporate

dictates (MacDermid, Lee, Buck & Willimans, 2001; Hassan, 2007; Sullivan, Forret, Mainiero & Terjesen, 2007).

Also important are the internal and external perspectives presented by Van Maanen & Schein (1975). The external career refers to the more or less objective categories used by members of society to describe the progression of steps through a given occupation. The internal career refers to the set of steps that make up the individual's own concept of his progress within an occupation. Career development is a function of individual and organizational dimentions of career.

According to these two perspectives, careers can also be described in two fundamentally different ways. On the one hand, there are subjective careers, reflecting the individual's own sense of his or her career and the direction in which it is heading. On the other hand, there are objective careers, which reflect the more or less publicly observable positions, situations, and status "that serve as landmarks for gauging a person's movement through the social milieu" (Arthur, Khapova & Wilderom, 2005).

It is not only the individual who needs to pay attention to career transitions. Organizations should not merely look at past, static, narrow concepts of careers, but should enlarge the concept to encompass new, more change-oriented careers. This repeated cycle of "out with the old, in with the new" is likely to increase rather than reduce pandemonium. Rather, a more powerful strategy is to incorporate older, more static career concepts along with newer, more dynamic career concepts into a pluralistic strategy for dealing with careers and organizational arrangements. A pluralistic framework will serve as a means for coping with change and the diverse needs of organizations and people, and at the same time as a tool for realigning individuals and organizations (Brousseau, Driver, Eneroth & Larsson, 1994).

Baruch (2004) joins the individual and organizational dimensions of career by stating: “On the one hand, career is the ‘property’ of individuals, but on the other hand, for employed people, it will be planned and managed by their organizations” (p. 50).

Past research has led to the integration of the terms “career” and “success” to refer to objective and subjective elements of achievement and progress of an individual throughout the vocational lifespan (Nabi, 1999). A successful career implies the achievement of the specific desired results of an individual in his or her career (Okurame, 2005).

To understand what the best practice for career management is in the age of boundaryless organization, where careers have become transitional and flexible, is very important for organization and individuals. The new models of careers contain a variety of options, and many possible directions of development (Baruch, 2004; Arthur & Rousseu, 1996). Table 1 summarizes these aspects of career transition.

In this study the definition of career adopted is “the unfolding sequence of a person's work experiences over time”. This definition insists on the relevance of time, rather than adopting any static view of work arrangements.

It is necessary to consider the importance of contextual in the career(race). The interest for contextual has been recently updated by the contribution of out-standing authors like Claes (2003) on " the challenge in the future for the study of the career(race) is to consider the context and the complexity of the person in its entirety".

In Latin America, this is specially important when the variables in which the career is developed have extreme changes of country in country (OIT, 2007). While in Costa Rica and Panama the principal source of employment for the young people are the employment section of newspaper or one employment agency, in Venezuela, Nicaragua and Paraguay the best form to find employment is the reference of relatives and friends.

Table 1. Transition of Career
(Source: From Baruch, 2004, Table 1, p. 66)

Aspect	Traditional deal	Transformed deal
Environment characteristic	Stability	Dynamism
Career choice being made	Ones, at an early career age	Repeated, sometimes cyclical, at different age stages
Main career responsibility lies with	Organization	Individual
Career horizon (workplace)	One organization	Several organizations
Career horizon (time)	Long	Short
Scope of change	Incremental	Transformational
Employer expect/employee give	Loyalty and commitment	Long time working hours
Employer give/employee expect	Job security	Investment in employability
Progress criteria	Advance according to tenure	Advances according to results and knowledge
Success means	Winning the tournament i.e. progress on the hierarchy ladder	Inner feeling of achievement
Training	Formal programmes, generalist	On-the-job, company specific
Essence of career direction	Linear	Multidirectional

Likewise 60 % of young people that leaves his/her studies and therefore his/her, careers indicates that is due to economics reasons.

Career in Engineering Technologies

It has been argued that careers in the technological professions do not offer well-defined career paths. The structure of many technology departments indicates that only a minority of professionals have the opportunity to make it to the top. Even though

some organizations may draw up elaborate career plans for engineers, these plans often go awry because rapid changes in technology affect staffing requirements (Lee, 2002).

An engineer is defined as a person employed in technical work for which the normal qualification is a degree in science or engineering. Historically the image of engineering has been heavy, dirty and involving machinery (Ismail, 2003).

Engineering technology and engineering are similar in many ways and there is much overlap between these two fields in the workplace. The most important distinction involves a difference in focus. Engineering technology emphasizes application and implementation of known technologies, while engineering focuses on research and the development of new technologies. From a course content viewpoint, engineering technology programs require mathematics and science courses that are more application-based compared to the theoretical concepts that are the focus of engineering programs (ODU, 2008).

Engineering technologists are professionals with an understanding of both operations and design. Engineering technologists are capable of analyzing, implementing, modifying, and maintaining systems. Engineering technologists are hands-on people who work directly with systems. They have the capacity to work in teams and to lead workers to a successful performance. Engineering technology combines science and engineering knowledge with application skills to provide a solid foundation for success in the technology-driven workplace.

Engineering technology graduates receive excellent starting salaries, and such diverse entry-level titles as Engineer, Project Manager, Maintenance Supervisor, and Technical Sales Specialist. Engineering technology graduates have a number of graduate study alternatives. Many enroll in Masters in Engineering Management

programs either on-campus or through e-learning to further their education. Others pursue graduate degrees in engineering or business (ODU, 2008).

The number of engineering degree programs has increased at all levels. For example, in the U.S., there has been strong growth at the B.A., M.A., and doctoral levels in the fields of computer science, biomedicine, and aerospace (ASEE, 2004). The number of women receiving engineering degrees has not changed and remains at 9.7 percent in North America (ASEE, 2006).

The under-representation of women in Science, Engineering, and Technology (SET) has been well documented, and the underlying causes of this problem have been well studied. In many countries, more than half of all university degrees are conferred on women, but only around 30% of these degrees are awarded in science and technology (OECD, 2006).

Peruvian institutions of higher education that offer programs equivalent to Engineering Technology had a total of 284,996 students in 2006 (MINEDU, 2008) Professionals graduated from Tecsup's (Tecsup is an Engineering Technology Organization) programs such as Industrial Automation, Electronics, Maintenance of Heavy Equipment, Maintenance of Plant Machinery, Network and Data Communications, Industrial Electricity, and Chemical and Metallurgical Processes have a 95% employment rate, while in Peru the average is 44% (MINTRA, 2008).

Engineers are largely responsible for creating the flat earth (world in which the distance disappears) (Lucky, 2008) and they need to know how to increase their level of career success. The literature has demonstrated a diversity of internal career desires among technical professionals. Recognizing that engineers have a variety of career needs and aspirations, organizations should attempt to provide work situations that meet employees' underlying internal career aspirations (Bigliardi, Petroni & Dormio, 2005).

Some organizations' career planning and management systems have special practices for technical staffs as a dual ladder that represents a parallel hierarchy which allows them upward mobility and recognition without having to play a managerial role. The practice of the dual ladder is a response to the need to provide a different path for promotion to engineers in no managerial roles. However, the effectiveness of the dual ladder system has been the subject of debate in both academic and industrial circles (Katz & Allen, 1992; Keenan, 1994; Baruch, 1999).

Career Success

Judge et al. (as cited in Poon, 2004, p. 375) gives the following statement as a definition of career success: “the accumulation of achievements (real or perceived) arising from work experiences.”

Career success is an outcome of a person's career experiences. Career success may be defined as the accomplishment of desirable work-related outcomes at any point in a person's work experiences over time. This encompasses the definition of career provided above. It also encompasses two meanings of success given by the Oxford English Dictionary (1989): “the attainment of an object according to one's desire,” and “the prosperous achievement of something attempted.” The first meaning suggests a form of success that is personally (i.e., subjectively) desirable, while the second suggests a form of success—prosperity—that is likely to rely on (largely objective) social comparisons. These alternative meanings suggest that, as with careers, there are two distinct ways of viewing career success (Arthur, Khapova & Wilderom, 2005).

The concept of career success has followed the evolution of the concept of career from traditional definitions of career success as climbing up the corporate ladder and seeking such extrinsic rewards as salary and bonuses, to more recent definitions of

career success, which typically include objective, extrinsic measures as well as subjective assessments, including the individual's attitudes about his or her career. The concept of success changes throughout the work lives of professionals. Young professionals perceive career success especially as an individualistic and multidimensional concept (Tu, Forret & Sullivan, 2006; McDonald, 2008).

In this way, the generic term *career success* can be divided into objective and subjective forms (Nabi, 2001). Career success comprises both objective or extrinsic and subjective or intrinsic elements, and the variables that lead to objective career success are often quite different from those that lead to success subjectively defined (Hetty, 2004).

Extrinsic outcomes of career success (i.e., objective career success) comprise such visible outcomes as pay and promotions, and take a third-person perspective (Poon, 2004).

There has been a tendency in the literature to give more attention to objective career. An objective career is defined as a sequence of official positions, salary changes, formal structures, and titles, all of which are publicly accessible and defined independently of any particular individual. Objective career success is therefore measured in terms of society's evaluation of achievement with reference to extrinsic measures, such as salary and managerial level (Hay & Hodgkinson, 2006).

Intrinsic outcomes of career success (i.e., subjective career success) depend on a person's own appraisal of his or her success. Subjective career success refers to a person's own internal perspective on his or her success (Poon, 2004). The idea of the protean career, managed by the person not the organization, is strongly advocated by Hall & Moss (2004), the criteria for success here being internal not external (Atkinson, 2002).

Subjective career success is theoretically more complex. It refers to an employee's evaluations of his or her own career success with reference to self-defined standards, career stage, aspirations, and the opinions of significant others. Subjective career success is a broad, multidimensional construct. It incorporates perceptions of intrinsic success (e.g. work-role, interpersonal success) and extrinsic success (financial, hierarchical success) with respect to achievements, aspirations, and colleagues in the present organizations (Nabi, 2001).

Subjective career success may be defined as the individual's internal understanding and evaluation of his or her career, across any dimensions that are important to that individual. People have different career aspirations, and place different values on such factors as income, employment security, the location of work, status, progression through a series of different jobs, access to learning, relative importance of work and personal or family time, etc. (Arthur, Khapova & Wilderom, 2005).

The significance of investigating both objective and subjective career success should not be underestimated, since they are conceptually distinct and often not parallel to each other (Nabi, 1999). Although related, objective and subjective career success can have different causes. For example, one study found educational achievement to be a predictor of objective career success but not of subjective career success, and work centrality to be a predictor of subjective career success but not objective career success. Therefore, both objective and subjective success need to be considered in models of career success (Poon, 2004). Nevertheless, we cannot qualify a priori one determinant with only a dimension of the career success without having proved the relationship with each dimension in a specific context. For example, educational achievements can be associated to promotions and wage improvements , then the positive relationship with the objective career success can be expected, but it does not deny that this promotions

and better wage obtained do not generate in turn satisfaction and proud for his/her career and can be positively related to subjective career success specially in poor countries where the employment is the main source of personal satisfaction a principal way to leave from a life full of limitations.

Relatively little research has simultaneously examined both types of career success. Furthermore, the research that has done so has employed short, secondary, or single-item measures of subjective career success (Nabi, 1999). A dual operationalization of career success as extrinsic and intrinsic is necessary because extrinsic and intrinsic career evaluations do not always overlap (Bozionelos, 2004).

The balance needed here is between seeing career success from a completely external point of view, as, for example, climbing up the organizational ladder (with the associated power and remunerations), or wholly internally, as, for example, the personal feeling of worthiness and achievement (Baruch, 2006)

Heslin (2005) detects four implicit assumptions that are prevalent in the career success literature. The first is that objective outcomes (e.g., pay and promotions) are adequate proxies for success, presumably even beyond the managerial and professional contexts in which most career success research has been conducted. The second assumption is that the satisfaction/dissatisfaction distinction adequately captures the range of reactions people can have to their careers. Third is the inherent assumption that people are similar in their concern about the success they attain in the objective, as opposed to subjective, domain. Finally, the career success literature largely presumes that people conceptualize and evaluate their career success only relative to self-referent criteria, such as their career aspirations.

People conceptualize and evaluate their career success only relative to personal criteria, such as their career aspirations. Different persons have different career

concepts—different in terms of direction and frequency of movement within and across different kinds of work over time. Distinctly different sets of motives underlie each concept. That is, individuals who differ in their endorsement of one particular career concept as descriptive of the ideal career also differ predictably in their underlying work and career-related motives (Brousseau, Driver, Eneroth, and Larsson, 1994).

McDermid, Buck, & Williams (2001) reported very important differences in the definition of career success among employees, according to their level of benefits within an organization. Members of the low net benefit group seemed to rely on a traditional model of career success, i.e., one that focuses on promotions, raises, and job titles, while members of the high net benefit group seemed to focus more on the content and the process of their jobs.

Figure 3 provides a synopsis and a road map of the various views in the literature of the concepts of career and career success.

The subjective-objective duality has been a traditional concern of those who have studied the trade-offs between work and family, or work and leisure activities.

Only through conceiving both sides could the researcher grasp the social processes that lie behind careers, and behind career success (Arthur et al., 2005, p. 180).

Interdependence occurs over time. People experience objective reality, understand what constitutes career success differently, and then individually act on their different notions of career success. The career is a succession of learning cycles and career transitions (Hall, 2005); different family and leisure activities are associated with each family stage, career stage, and career approach.

This study is addressed to pay attention to the two dimensions of career success: both objective and subjective sides.

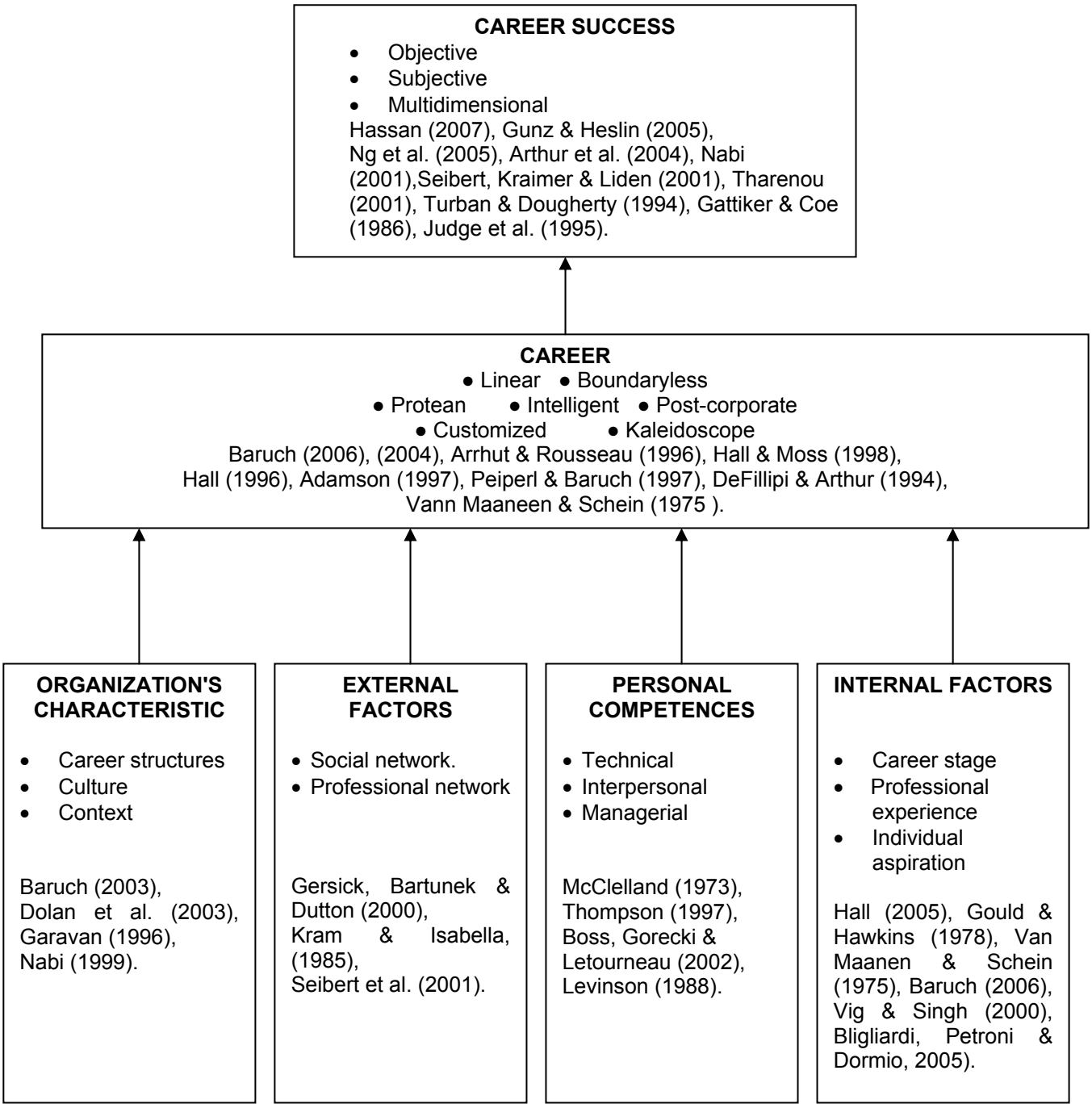


Figure 3. Sinoptic map of the literature on Career Success

Determinants of Career Success

A number of competing approaches have been identified to explain career success predictors. The three well-known approaches are the individual (the individual is the one who develops his or her own human capital and therefore maximizes his or her own education and skill investments for achieving success in careers); the structural (organizational factors, such as organization size and internal promotion practices, are prerequisites for successful careers in organizations); and the behavioral (career achievement is a function of certain career strategies, including politically influenced behavior) (Hassan, 2007).

The study of determinants of career follow the evolution of the career success construct. First career success has typically been measured using such relatively objective measures as salary and promotions. Then researchers have argued, however, that definitions of career success should also incorporate individuals' perceptions of their career success, which might not parallel the objective measures. Therefore, there have been calls or the use of both objective and subjective career success measures (Turban & Dougherty, 1994).

In general, objective career success has been measured in terms of society's evaluation of achievement, with reference to extrinsic measures such as salary and managerial level (Turban & Dougherty, 1994; Nabi, 1999). The deficiency of traditional objective criteria, such as pay and promotions, stems from the fact that they are not the only objective outcomes that people seek from their careers (Heslin, 2005).

Subjective career success has been measured in terms of an individual's feelings of success with reference to intrinsic indexes, such as perceptions of career accomplishments and future prospects. More specifically, subjective career success has

been defined as a conceptually distinct construct referring to an individual's judgment of his or her own success, evaluated in terms of personal standards, age, aspirations, and views of a significant other (Nabi, 1999). There are each individual's perceptions of their career success, which may not parallel objective measures (Turban & Dougherty, 1994, Seibert, Kraimer & Liden, 2001 & Poon, 2004).

Baruch (2004) explains that the nature of careers has changed, and so has the meaning of career success. Career success may be seen as having different levels for different persons:

- an internal level—defined in terms of how a person sees the development of own career in terms of inner values, goals, aspirations;
- an external level—defined in terms of how career success is perceived by the external environment, in terms, for example, of status, hierarchy, income or power;
- an organizational level—defined in terms of organizational power and influence; once measured by advance up the career ladder, and now in different ways;
- a society level—defined in terms of labor markets, professional development, globalization.

Different studies provide different analyses of the predictors of subjective and objective career success (Ng, Eby, Sorensen & Feldman, 2005; Gattiker, 1988). This research reviews Personal Network, Personal Competences, Professional Experience, Organizational Structure, and Individual Aspirations as factors in career success.

Hypothesis grounded in theory is present in the following paragraphs.

Personal Network

One of the definitions of network that we can find in the dictionary is "an extended group of people with similar interests or concerns who interact and remain in informal contact for mutual assistance or support", Personal network is the group of human contacts known to an individual, with whom that individual would expect to interact at intervals to support his/her career. Within organization the networks has been consistently described by organizational researchers as providing two types of benefits: instrumental career help and emotional support (Gersick, Bartunek & Dutton, 2000). Other researchers have studied the role of mentoring and peer relationships in career development (Kram and Isabella, 1985).

Seibert et al. (2001) studied the network benefits of access to information, access to resources, and career sponsorship and its effects on career success. Katz et al. (1995) showed that engineers are often socialized into their technical occupations and the socialization affects career outcomes. Earlier studies showed the importance of gatekeeping supervisors to the career outcomes of their technical subordinates. Gatekeepers are those key technical professionals who are strongly networked to both internal and external sources of critical information. As a result, professionals who report to gatekeeping supervisor may have greater access and exposure to the managerial hierarchy than those reporting to non-gatekeeping supervisors.

In a study of sixty technically trained scientists and engineers, Mainiero (1986) reported that successful technical managers were those with most access to a mentor or sponsor figure that provided them with some sort of career guidance. In some cases, these individuals did not function as mentors per se, but as role models who provided the young professional with a way to evaluate those skills needed for competent management.

There is a considerable amount of literature on the importance of workplace relationships for individuals' careers. One of the most influential branches of that literature is the study of networks. Network researchers have typically construed relationships as a resource for career mobility, for which organization members actively compete (Gersick, Bartunek & Dutton, 2000).

The fact that both subjective and objective career success can be better with a bigger personal network suggest the following two hypotheses:

Hypothesis 1: Personal networks will be positively related to subjective career success.

Hypothesis 2: Personal networks will be positively related to objective career success.

Individual Competences for Management

The notion of competence can be traced back to the late 1960s. It was put forward by David McClelland, who developed the concept of competence as a key element of personnel assessment in his article “Testing for competence rather than for intelligence” (Liu, 2005).

McClelland's concept has deeply influenced the theoretical and applicational levels of human resource management. McClelland claims that grades in school do not predict occupational success; nor do intelligence or aptitude tests predict occupational or other important life success. He argued that competencies were better able to predict important behaviors than were more traditional tests (McClelland 1973, Liu 2005).

Alles (2002) defines competence as behavior that scores high when measured by a standard of success in a specific job or situation. Alles made a special review of some

characteristics of the competences described by Spencer. Spencer describes competences as a person's underlying characteristics and he also describes the causal relation between competences and effectiveness.

Bergenhenegouwen, Horn & Mooijman (1997) explain (a) that competences are more important than knowledge and skills for the successful performance of professional/management tasks, (b) that managerial competences are aspects of human competence that largely determine how a person acts in professional situations, and (c) that these competences distinguish the successful employee from the unsuccessful one.

Arthur & Rousseau (1996) present the concept of career competences from the point of view of research about company competences and their strategic and competitive implications. This body of research discusses overlapping areas of competency that are broadly related to a firm's culture, know-how, and networks. Each area of a firm's competency suggests a matching area of career competency, and introduces the knowing-why, knowing-how, and knowing-whom competencies.

Knowing-why answers the question "Why?" as it relates to career motivation, personal meaning, and identification. Knowing-how competencies reflect career-relevant skills and job-related knowledge, and explain how people contribute to a firm's repertoire of overall capabilities. Knowing-whom competencies reflect the growth of career-relevant networks, and explain how people contribute to interfirm communication (Levinson 1988).

The use of skills as main focus of personnel assessment is not uncontroversial. Some researchers doubt that it is possible to measure the performance of individuals, especially in positions that involve management only with few competences. Rothordam & Jubb (1996) claim that the notion that competence for management, for example, can be measured, is an unwarranted assumption, which fails to consider the

wide range of activities that the term management implies. Other researchers, like Thompson, Stuart, & Lindsay (1997), were looking for the identification of key management competences. The assertion made by Thompson et al is that managers who possess and deploy these competences perform better and more effectively in their jobs, and obtain better career results.

Today, there is a basic assumption that professional success depends on the professional being both technically and interpersonally competent (Boss, Gorecki & Letourneau, 2002). Being well-informed and skilled in the art and science of his or her specific discipline, but ineffective in the area of interpersonal communications, marginalizes both personal and organizational success.

Levinson claims that an effective career depends on three basic personal skills, which he calls the "technical," "the human," and "the conceptual." The professional needs: (a) sufficient technical skill to accomplish the mechanics of the particular job for which he is responsible; (b) sufficient human skill in working with others to be an effective group member and to be able to build cooperation among the members of the team he leads; (c) sufficient conceptual skill to recognize the interrelationships of the various factors involved in his situation, which will lead him to take the action most likely to achieve the maximum good for the whole organization (Levinson, 1988).

For their own career management and personal development, individuals use several ways in which they may develop their own competences. For example, employees may engage in job-related training in order to broaden and deepen their abilities and skills, or they may obtain higher levels of proficiency by enlarging their experiences within a certain work domain. All these activities help to increase individuals' human capital, that is, their value on the labor market, which will lead to more promotions and higher salaries (Van Vianen, De Pater & Preenen, 2008).

The human capital theory suggests that employees differ in the amount and quality of the human assets they possess (Nabi, 1999). Research has shown linkages between managerial skills and career success. Most engineering schools do not teach these so-called “soft” skills, despite the fact that they are more important than technical skills in advancing an engineering career (Waldman & Korbar, 2004; Irrinki, 2006).

The previous paragraphs suggest relationship between to possess managerial competences and career success. It was expected that individuals who have managerial competences in high level can reach high level of subjective and objective career success. This leads to the following two hypotheses:

Hypothesis 3: Individual management skills will be positively related to subjective career success.

Hypothesis 4: Individual management skills will be positively related to objective career success.

Professional Experience

Researchers have established that there are different stages in a professional career (Hall, 2005; Gould & Hawkins, 1978; Van Maanen & Schein, 1975), and the timing of the different career stages varies with the career path chosen. For people working in industry, an early career begins after the completion of a B.A., whereas in academia, an early career begins for new faculty after completion of their Ph.D. or post-doctoral work (OECD, 2006). This study considers the beginning of the professional experience in conclusion of the studies of undergraduate program. .

Both external and internal careers generate different issues at different times in the individual's lifecycle, as professionals build definitions of their careers through their work experience (Katz, Tushman & Allen, 1995; Van Maanen & Schein, 1975).

The study of Judge et al. (1995) and the meta-analysis by Ng et al. (2005) of 140 studies, undertaken between 1980 and 2003, of the predictors of career success, shows that job tenure, organizational tenure, and work experience are positively related to compensation (Tu, Forret & Sullivan, 2006). This suggest relationship between objective career success and year of professional experience.

With years of experience, engineers have progressively defined their career orientation (technical or managerial) and their career aspirations more clearly; in this way they can feel better about their career success (Keenan, 1994; Katz, Tushman & Allen, 1995). At the same time, there is a higher expectation to have a better salary with more years of experience, and work experience is considered the strongest and most consistent predictor of career success (Van Vianen, De Pater & Preenen, 2008). This body of research suggest relationship between subjective career success and years of professional experience

These considerations lead to the following two hypotheses:

Hypothesis 5: Professional experience will be positively related to subjective career success.

Hypothesis 6: Professional experience will be positively related to objective career success.

Organizational Structures

Engineers develop his/her career within organizations that offer a broad of positions from logistics, communications, IT, production, maintenances and sales divisions with potential opportunities for both personal and professional development in a multicultural working environment. While the recent literature emphasizes the individual's role in career management, it by no means claims that organizations are excluded from the equation. Organizations do not need to abandon career management; instead, they need to adjust the career system to the new paradigms (Baruch, 2003). Likewise, the design or structural form of the organization determines and explains the movements that are made in it, and therefore is a condition in the career of individuals (Dolan et al., 2007).

Organizational structure defines the hierarchical ladder and the level of coordination and subordination of employees, opportunities for new positions, responsibilities and ways of contribution to organizational goals. The structure of an organization will determine the modes in which employees can reach specializations, and recognitions on his/her individual performance. The lack of career prospects within organizations has often been cited as a reason for the high turnover among engineers. The career strategies that help employers to manage their engineers must take into account their strong need for growth and personal development as compared to professionals in other occupations, as well as their need for learning and the strong desire to be challenged. They are likely, therefore, to seek jobs that fulfill their developmental needs (Lee, 2002; Cougers et al., 1992). One of organizational practices to administer the career inside the company is the creation of the dual ladder designed

with the aim of create an alternative path of development for the engineers. Since it has expressed in the page 32, the efficiency of the dual ladder is controversial.

The dual ladder system has worked satisfactorily up to a certain level specially when organization was heavy and very hierarchic. Despite the dual ladder ambitious and highly educated people endeavour to move as soon as possible from a technical starting position to the bottom rungs of the management ladder. The preference for a career in management is partly determined by the fact that the two ladders are not of equal status. Vital decisions are still taken by managers, not by technical specialists. Additionally, the corporations are restructuring their process and division according to principles of lean and flat organizations.

The relationships between organizational career practices (career management, career planning and career path) and employee career effectiveness has been studies in several past research . Organizational career practices clearly defined enhanced the affective aspects of career like career attitudes and identity. This suggests that there is relationship between organizational structures and subjective career success.

Organizational context influences an individual's career. Career dynamics are influenced to a considerable degree by organizational matters. The complexity of the internal labor market structure, the type of career system, size, structure, technology, organizational life cycle, etc., shape mobility patterns, career development opportunities, and the kinds of career individuals can have (Garavan, 1996).

Scholars of organizational structures also suggest that the existence of an internal labor market influences career success. An internal labor market refers to a structured job progression ladder with entry at the bottom and advancement linked to the development of appropriate skills and experiences. Previous research suggests that the presence of a well-structured internal labor market positively influences the

opportunities for objective career success in terms of hierarchical mobility and financial remunerations (Nabi, 1999).

The contribution of organizational structures to subjective and objective career success seems the logic conclusions of the results of previous studies reported in academic journals. This reasoning suggests the following hypotheses:

Hypothesis 7: Organizational structure will be positively related to subjective career success.

Hypothesis 8: Organizational structure will be positively related to objective career success.

Individual Aspirations

Baruch's (2006) application of his Career Active System Triad (CAST) model presents the individual's aspirations as a determining factor for measuring career success, while a company's philosophy of whether to use traditional or contemporary viewpoint is instrumental in achieving certain commitment and in applying specific career practices.

Vig & Singh (2000) define aspiration as "the strength of an individual's motivation to achieve progressively higher or conversely lower goals based on experiences of success and failure, his own and of others who constitute his reference models, in short, it is the expected level of achievement. The level set is in fact the compromise between the desire for success and the desire to avoid failure, the first pushing the level up, and second pulling it down."

Earlier research had found that individuals with the most successful careers engaged in extensive career planning. The notion of a career plan is closely linked to that of career goals. It is not possible for someone to have a career plan unless he or she knows his or her career goals. Prior literature has suggested that work for engineers can be classified into two broad categories, technical and managerial, and that engineers have diverse career aspirations (Lee, 2002; Petroni, 2000a; Bligliardi, Petroni & Dormio, 2005).

Many engineers, for example, prefer the freedom to pursue their technical interests and to make judgments in their areas of technical competence rather than having to assume more managerial responsibility. These engineers are motivated by the aspiration to gain a reputation in their field. Other engineers aspire to achieve more upward organizational mobility, and are committed to developing their organizational identities (Katz, Tushman & Allen, 1995).

In a study of 464 technical professionals, Idbaria, Greenhaus & Parasuraman (1991) reported that employees' career orientations can have important implications for their job satisfaction, retention, and commitment to organizations. The most important finding was that employees whose career orientations were compatible with their job setting reported high job satisfaction, high career satisfaction, and strong commitment to their organization. These findings lead to the possible relationship between individual aspirations and subjective career success.

The individual seeks work for other reasons than merely to sustain existence. Some people will not work except in jobs that will provide them with status or prestige. Another common desire of employees is that an organization or employer be well known and have a good reputation. Some people look for good working conditions, good fringe benefits, or employment security; others will only work at jobs that provide

them with a sense of accomplishment, that make use of their talents, or that allow them to serve others altruistically (Dawis, 1980). Individual aspiration is one motor for personal development. Each individual aspirations generate different behaviors for achieve career success with more emphasis in subjective or objective side.

Individuals are motivated by the prospect of different outcomes in their careers: for example, the opportunity to make important things happen, power, achievements, security, proper balance between work and family, etc. Once their career aspirations have been accomplished, individual focus on further developing and refining his or her knowledge and skills.

Career orientation is comprised of values and attitudes. An individual's personal history and career orientation affects the career decisions that the person makes. The theory of career success orientation claims to focus specifically on career success aspirations, rather than on career orientation in general. According to this theory, a person's career aspirations are likely to determine—or at least influence—his or her career success (Kim, 2002).

The above paragraphs lead to the two final hypotheses:

Hypothesis 9: Individual aspirations will be positively related to subjective career success.

Hypothesis 10: Individual aspirations will be positively related to objective career success.

Based on the literature review above and the hypotheses formulated, the model of determinants of career success, together with the ten hypotheses, are shown in Figure 4.

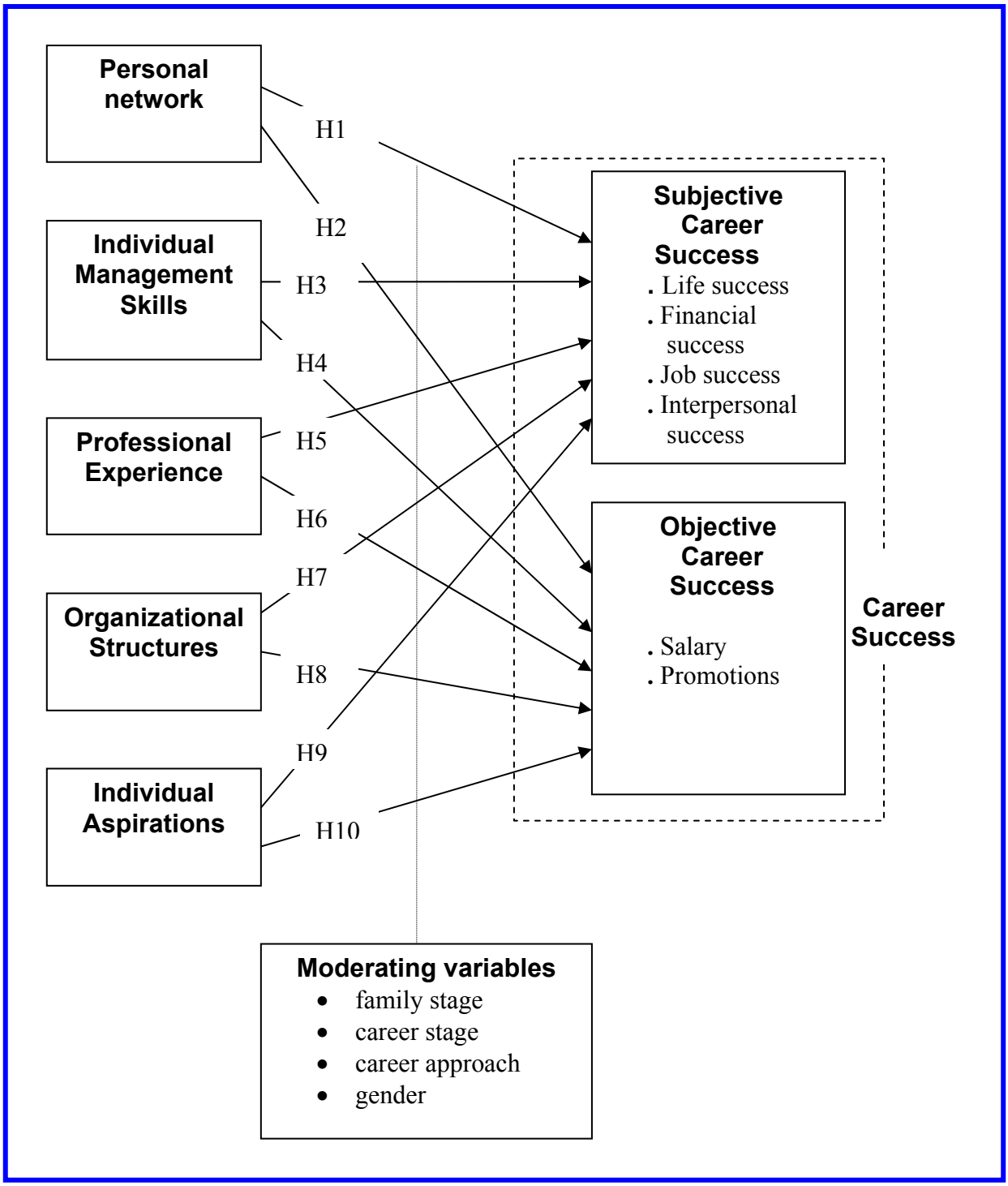


Figure 4. Model of Determinants of career success and Hypotheses
(The present researcher's own elaboration)

Chapter 3.
Data and Methodology

Data

The study has two data sources. The first was a survey designed specially for this study, with scales used in previous studies. The new research tool was tested in order to assure its validity and reliability.

The second data source was the archives of the Graduate Development Office of Tecsup. This service of Tecsup has been recognized as a referent in the management of graduate career development for its quality. It is a continually updated database: 90% of the data has been updated within the last six months (Tooley, 1999).

This historic data register from the Graduate Development Office archive made it possible to know the statistical distributions of salary, residence location, labor conditions, educational level, specialties, and years of experience, and to contrast them with the statistical distribution of the data collected by the survey. (See Table 1.) Table 2 shows that the data collected by the survey and the data from the archive have very good adjustment in the distribution of residence location, labor situation, educational level, career, and years of graduation.

Table 2. Population—Sample Adjustment

Variable	Characteristics	Total population	Sample	Population Adjustment – Sample
Salary (With Box-Cox transformation)	Media	2.55	2,58	
	Standard Deviation	0,031	0,031	
Residence location	Peru's capital	65,58%	64,65%	98.92%
	Other Peruvian locations	21,94%	28,28%	95.33%
	Other countries	12,48%	7,07%	96.41%
Labor situation	Unknown	4,08%	0,79%	98.67%
	Incapacity	0,35%	0,20%	99.94%
	Unemployed	4,67%	3,66%	98.54%
	Dependent worker	80,51%	90,00%	93.42%
	Independent worker	10,39%	5,35%	96.16%
Educational level	Not student	56,38%	46,93%	95.18%
	University student	13,12%	14,65%	99.59%
	Full-time M.A. student	0,44%	0,50%	100.00%
	Part-time M.A. student	1,94%	2,67%	99.52%
	Second career	0,12%	0,20%	99.94%
	Other studies	28,00%	35,05%	96.13%
Sector	Chemical and Metallurgical	12,00%	11,29%	99.41%
	Heavy Equipment	15,32%	16,44%	99.58%
	Plant Machinery	20,16%	20,00%	99.92%
	Electricity	17,26%	18,42%	97.95%
	Electronic and Automation	17,11%	17,52%	99.82%
	Network & Data communication	18,14%	16,34%	98.38%
Year of graduation	1986 to 1991	13,76%	10,31%	98.94%
	1992 to1995	22,49%	20,42%	99.91%
	1995 to 2000	37,93%	40,44%	98.37%
	2000 to 2004	25,82%	28,84%	99.52%

As Ming & Choy (2005, 235-236) explain, there is a disadvantage to using surveys with a five- or seven-point scale for measuring degree of satisfaction or similar variables, because satisfaction or perception about career success is a continuous variable. It is worth mentioning that crude and artificial quantification categorizes many different degrees of satisfaction to the same value as illustrated in Figure 5.

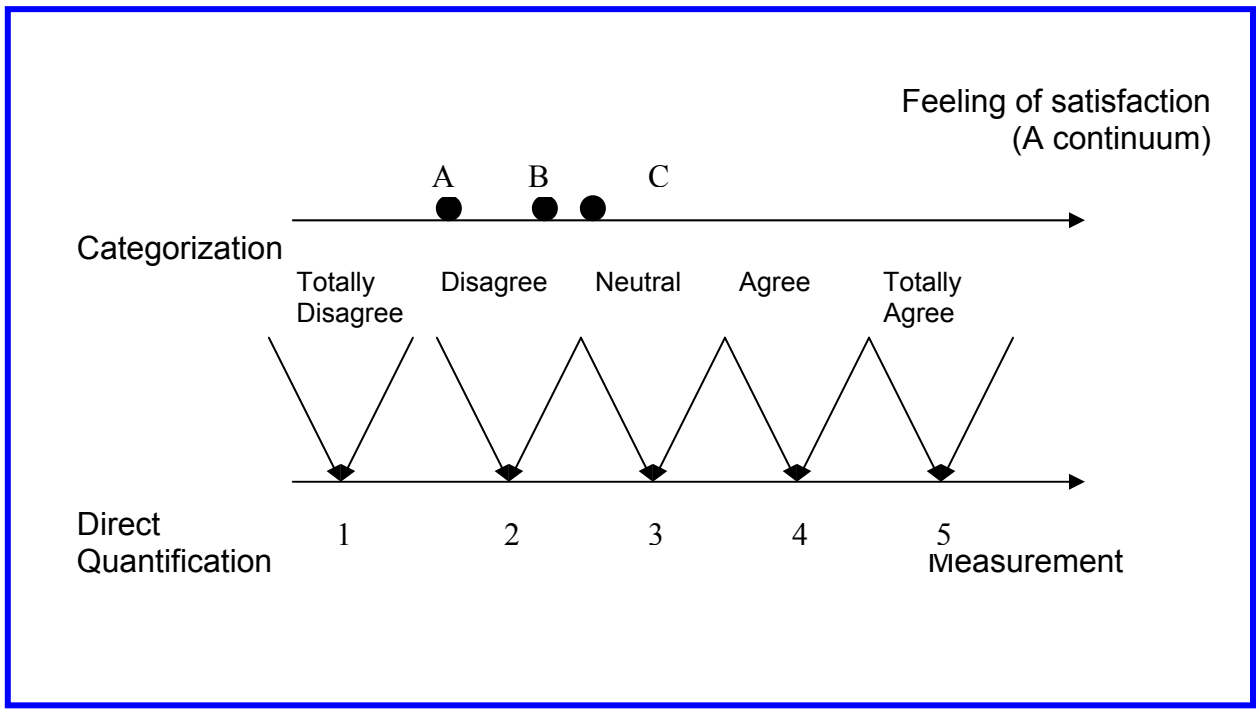


Figure 5. Illustration of the Artificial Categorization of a Continuum
(Source: Ming & Choy, 2005, Figure 1, p. 235)

Ming & Choy (2005) explain that respondents A and B, for example, possess different degrees of satisfaction. With a very limited number of categories, they might both choose 'disagree' and end up being assigned the same value '2'. Respondents B and C, as shown in the figure, have a very similar feeling of satisfaction. Due to their own personal relative scale, however, they might choose different categories and end up being assigned values '2' and '3', respectively. Clearly, the ordering of categories describes only the relative levels, but not the absolute values of the respondents' feelings.

The Optimal Scaling (OS) procedure lets us to rescale the direct quantification. This method is a quantification process that assigns 'suitable' numerical values to observation categories in such a way that the relation between the observations and the

data analysis model is maximized while respecting the measurement characteristics of the raw data (Ming & Choy, 2005; Shen & Lai, 1998; and Young, 1981),

As a result of rescaling, the difference between measurements A and B shown in Figure 5 may be restored and assigned values A1 and B1 as shown in Figure 6 rather than the artificially assigned identical value of '2'. The relative relationship between A, B, and C shown in Figure 5 can be recovered and assigned values A1, B1, and C1 as shown in Figure 6.

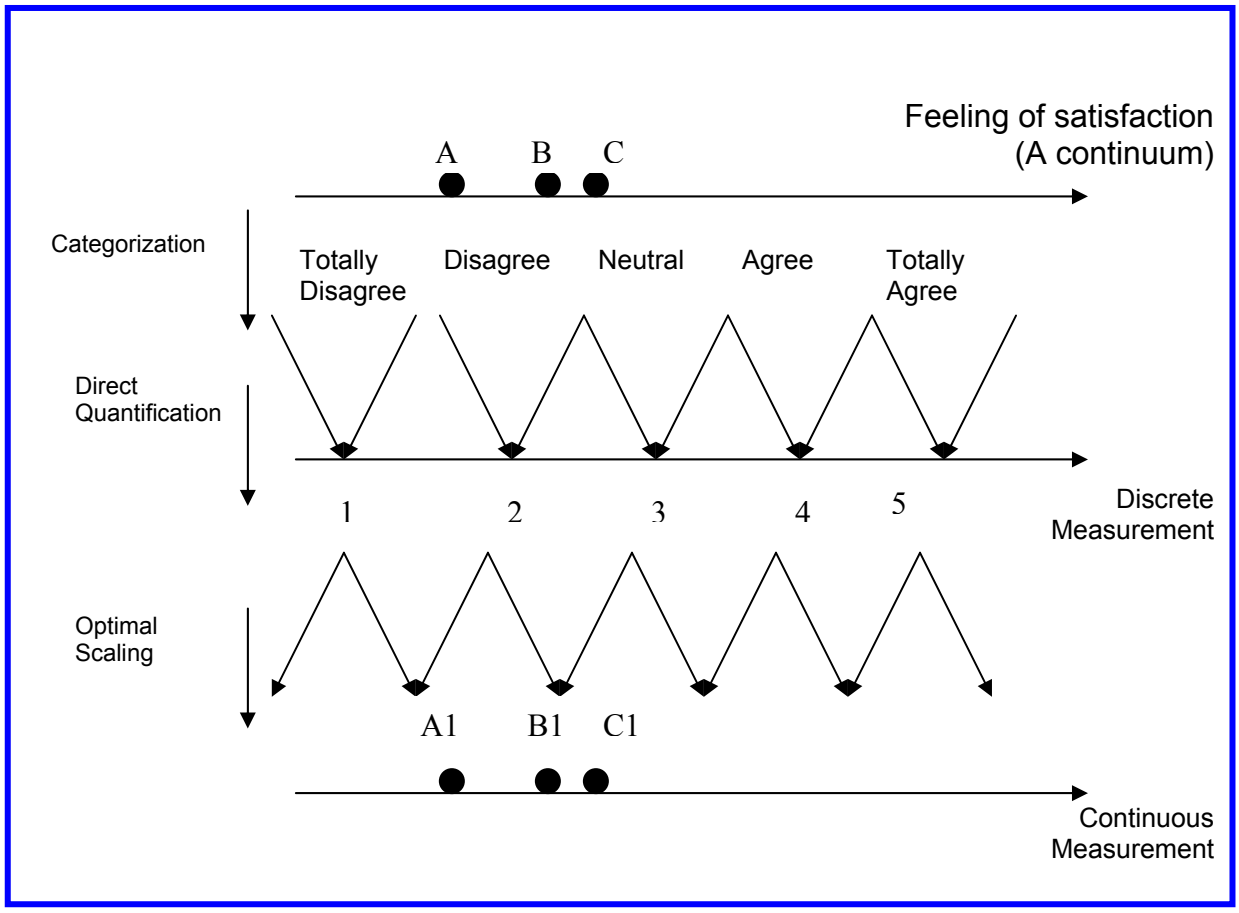


Figure 6. Reconstruction of Continuity of Measurement with Scaling
(Source: From Ming & Choy, 2005, Figure 2, p. 236)

In this study, optimal scaling was used to quantify categorical data collected from Likert scales. Optimal scaling plus software for structural equation modeling has

been used in previous studies. As De Leeuw (1988) indicates: “there are already quite a number of successful applications of the combination Optimal Scaling plus LISREL or Optimal Scaling plus Factor Analysis in the applied literature” (De Leeuw, 1988, p. 26).

Methodology

Research Design

According to Creswell (2003), three elements need to be considered in a study design in order to improve its rigor: its knowledge claims, its strategy of inquiry, and its methods of data collections and analysis.

In this study, the post-positive knowledge statements are adopted. The post-positivist assumption is described as follows: “There are some lawful, reasonably stable relationships among social phenomena. These may be known imperfectly” (Tashakkori & Teddlie, 1998; Creswell, 2003).In this way, the study reflects a need to examine determinants that influence career success, and it is also reductionist when testing selected variables that constitute hypotheses and research questions based on measurement of the objective reality.

The strategy of inquiry selected was the quantitative approach, usually associated with the post-positivist perspective. It is often employed when the study is oriented to testing theory and understanding the best predictors of outcomes (Creswell, 2003; Tashakkori & Teddlie, 1998).

The specific method of data collection in this cross-sectional study was a questionnaire with statistical analysis, with the intent of generalizing from a sample to a population that does not require control of behavioral events and focuses on contemporary events (Yin, 2003). The second source of data for the study is the archives from the Graduate Development Office of Tecsup.

This type of research is specially recommended when the researcher verifies theories, relates variables in hypotheses and uses standards of validity and reliability. Surveys employ a strategy of inquiry and collect data on predetermined instruments that yield statistical data (Creswell, 2003).

Population and Sample

In this study the universe was made up of all graduates from engineering technology programs, and the population consisted of: the graduates of Tecsup; graduates from the Institution of Applied Engineering in Peru program accredited by ABET (Accreditation Board of Engineering and Technology - USA); NVQs By City & Guilt (UK); ASIIN (Accreditation Agency for Degree Programmes in Engineering - Germany); and ICACIT (Instituto de la Calidad en la Acreditación de las Carreras de Ingeniería y Tecnología – Perú).

Tecsup was founded in 1984 as a private non-profit organization dedicated to higher education in technology with three campuses in the most important cities of Peru (Lima, Arequipa and Trujillo). This institution hosts approximately 1800 students annually and has 300 new graduates every year.

The total number of graduates with between 3 and 21 years of experience was 3407 at the time of this study. According to the literature, it is possible to determine the size of the sample if the size of population, the level of precision, and the level of confidence or risk are known (Israel, 2003). For a population size of 3000, 3% precision levels, a confidence level of 95%, and a maximum P =.5 variability, the suggested sample size is 811 respondents.

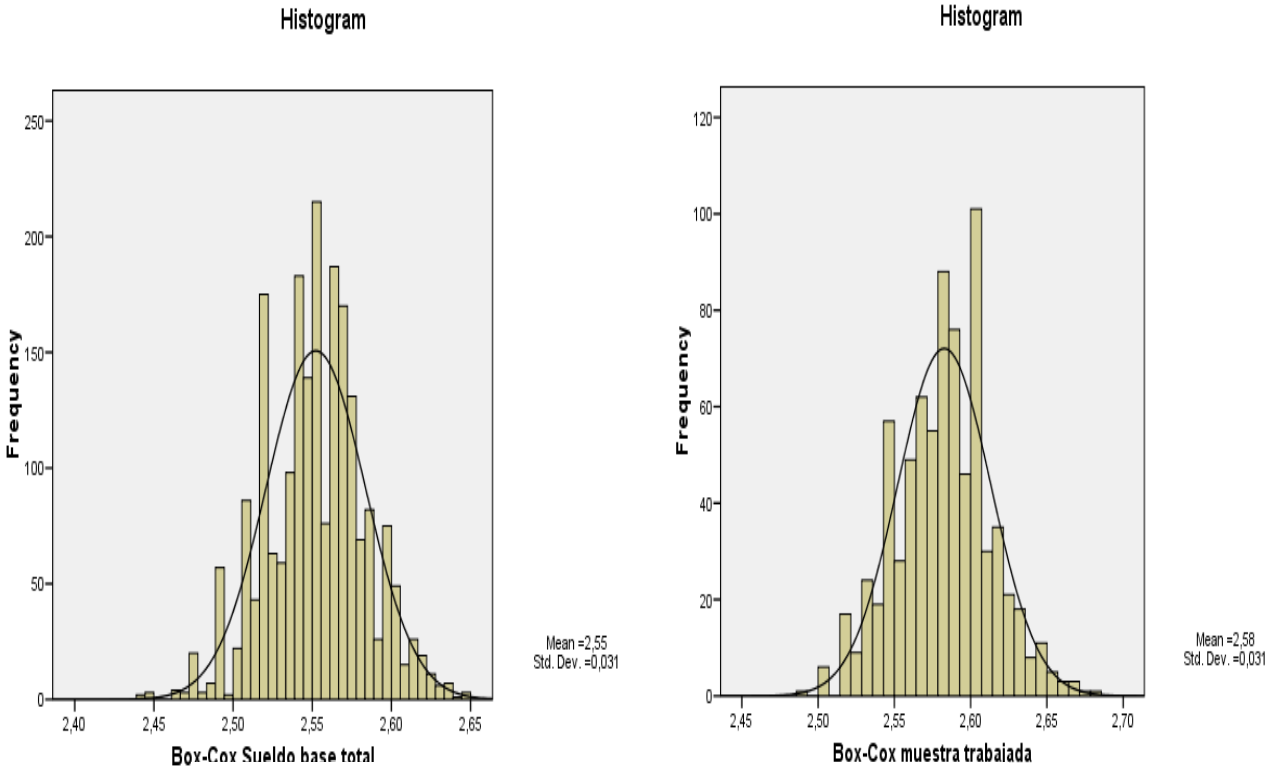
Aiming to obtain 1000 answers, a stratified sample was defined with 1135 graduates. From the relation of the total population of 3407 graduates sorted by years of

experience (arranged in a descending order from bigger than minor professional experience) and with jump of 3, 1135 graduates were selected.

After the piloting (pre-testing) phase, the final survey was sent on January 2, 2008, and the total number of answers received as of February 29, 2008 was 1011. The response rate was 89.07%, extremely high.

Table 2 shows the adjustment of the data obtained from the survey and the data from the archive from the Graduate Development Office with a general adjustment over 95%.

Figure 7 shows the distribution of salary from the archive and survey data. The mean in the salary from the archive is 2.55; that in the salary from the survey is 2.58. The standard deviations in both data were 0.031 (salary after Box-Cox transformation used to reduce data variation and make the data more normal distribution-like).



Archive data Survey data

Figure 7. Distribution of Salary in Data from Archive and Survey

Unit of Analysis

In this study, the unit of analysis considered is the individual graduated from an engineering technology program.

Survey Design

The development of instruments for all dimensions in this study was carried out in three stages according the procedure proposed Boon - itt, S. & Paul, H. (2006). First, in the design stage, scales for each variable used in previous research were selected through a literature review. The initial set of scales was translated into Spanish with a special attention to question phrasing in order to create a reliable instrument and with this purpose it was pre-tested with graduates and practitioners in order to provide confirmatory reliability.

The second stage includes survey development through a pilot test using a small sample of the target population for assessing the validity and reliability of the translated survey. In this stage, each item was tested in relation to how it works with each construct.

Finally, in the third stage, survey evaluation was developed with the final version of the survey and it was applied to the final sample. The validity and reliability assessment measures were probed again.

The survey was designed with special attention to the relevance of the hypotheses, the goals of the study and the construct of interest (Bailey, 1994; Schwartz, 1978). Table 3 shows the source of each scale.

In order to be able to analyze the model in relation to gender, family stage, type of career and career stage specific items for demographic data and items related to career and family were added. Table 4 shows the variables and scales used by each one.

Table 3. Survey Sources

VARIABLE		SOURCE
Subjective Career Success	Job success	Gattiker, U. & Coe, L. (1986)
	Life success	
	Financial success	
	Interpersonal success	
Individual Competences for management		IPIP (2007).
Organizational Structures		Nabi, G. (2001)
Individual Aspirations	Becoming Independent	Kim, N. (2002)
	Reaching Balance	
	Obtaining Secureness	
	Reaching a high level	

Measurement

The operationalization in this study was made according the following criteria: the experience of the researcher, variables which the researcher believe he can measures, the focus of the study, costs and time

Theoretical constructs were operationalized by using validated scales that exhibited strong psychometric properties. All original measurement scales showed high reliability, with Cronbach's alpha coefficients for all constructs exceeding 0.71, the only exception being the Becoming Independent scale within individual's aspiration, with Cronbach's alpha of 0.57.

Table 4. Variables and Items in Pilot (Pre-testing) Phase

Variables	Name		Items	Type	Measurement scale
Dependent	Subjective Career Success	Job success	1 to 18	Qualitative Ordinal	Likert
		Life success	19 to 26	Qualitative Ordinal	Likert
		Financial success	27 to 32	Qualitative Ordinal	Likert
		Interpersonal success	33 to 38	Qualitative Ordinal	Likert
	Objective Career Success	Salary	39	Quantitative Continua	Ratio
		Promotions	40	Quantitative Discrete	Ratio
Independent	Individual Management skills		42 to 51	Qualitative Ordinal	Likert
	Organizational Structures		52 to 55	Qualitative Ordinal	Likert
	Individual Aspirations	Getting Free	56, 57, 58 and 64	Qualitative Ordinal	Likert
		Getting Balance	60, 61, 63, 66 and 68	Qualitative Ordinal	Likert
		Getting Secure	59,62, 69, 71 and 75	Qualitative Ordinal	Likert
		Getting High	65,67,70, 72,73 and 74	Qualitative Ordinal	Likert
	Personal network	Number of contacts in other functions	76	Quantitative Discrete	Ratio
		Contacts at higher levels	77	Quantitative Discrete	Ratio
	Professional Experience		78	Quantitative Discrete	Ratio
Moderating	Career approach		79	Qualitative Nominal	Nominal
	Age		80	Quantitative Discrete	Ratio
	Gender		81	Qualitative Nominal	Nominal
	Family stage		82	Qualitative Nominal	Nominal
	Career stage		83	Qualitative Nominal	Nominal

Subjective Career Success

This was assessed with the five-point scale used by Gattiker & Coe (1986) to define four factors of perception of career success:

(1) Job Success (Initially with 18 items and alpha = 0.94 in the pilot phase and finally with 16 items and alpha = 0.93), which reflects individual perceptions about job satisfaction;

(2) Life Success (Initially with 8 items and alpha = 0.81 in pilot phase and finally with 4 items and alpha = 0.81), which reflects individual perceptions about satisfaction with life overall;

(3) Financial Success (Initially with 6 items and alpha = 0.86 in pilot phase and finally with 3 items and alpha = 0.86), which reflects individual perceptions of compensation, and

(4) Interpersonal Success (Initially with 6 items and alpha = 0.72 in the pilot phase and finally with 4 items and alpha = 0.69), which reflects individual perceptions about satisfaction about the relationship with peers.

The respondents were requested to check a box from (1) “Agree completely” to (5) “Disagree completely” to indicate their level of agreement with such statements as “I am receiving positive feedback about my performance from all peers” (job success); “I am happy with my private life” (life success); “I am receiving fair compensation compared to my peers” (financial success); “I am often asked for advice on private matters by my peers” (interpersonal success).

Objective Career Success

As the literature shows (Van Vianen, De Pater & Preenen, 2008; Keenan, 1994; Katz, Tushman & Allen, 1995), objective career success was assessed in terms of annual salary and the number of promotions in professional life.

- Salary: Current annual salaries (including bonuses and other direct income).
- Promotions: increases in job responsibilities or job scope.

Personal Network

Personal network was taken to mean the number of persons who have acted to help an individual's career, plus the number of contacts in higher levels of the organization.

- Network size: The total number of people who have helped your career by speaking on your behalf, providing you with information, career opportunities, advice, or psychological support, or with whom you have regularly spoken regarding difficulties at work, alternative job opportunities, or long-term career goals was recorded.
- Contacts at higher levels: the respondents reported the number of contacts who were former or current members of a respondent's organization.

The attribute of size was principally used, but also the quality attribute of contacts was considered when the questionnaire has asked on for those persons who

have acted to support the career and has asked too for the contacts bigger positions in the hierarchy of the company.

Individual Management Skills

Researchers (Lans, Bergevoet, Mulder & Van Woerkum) hold that different methods exist for the measurement of competences like qualitative, quantitative, retrospective, concurrent, objectives and self - reported methods. In this thesis I select the self -reported questionnaire by the facility of his application (to collect data with bigger scope) and especially for low cost. The lack of this method is that they can have bigger exposition to the subjectivity associated with any evaluation.

Individual management skills were measured by a scale from the International Personality Item Pool, a Scientific Collaboratory for the Development of Advanced Measures of Personality and Other Individual Differences (IPIP, 2007) that was specially devised to measure managerial potential. The scale has ten items on a Likert Scale (1 to 5) in which 1 = Very Inaccurate, 2 = Moderately Inaccurate, 3 = Neither Inaccurate nor Accurate, 4 = Moderately Accurate, 5 = Very Accurate. Examples of the items are phrases describing people's managerial potential such as: "Come up with good solutions" and "Get things done quickly."

Professional Experience

In order to measure professional experience, all their years of experience after graduating are recorded. . This includes the time spent in self-investment, in additional education courses, or in gaining experience (Reimer & Garvey, 1979). For this variable, the number of years as a graduate student was considered. The professional trajectory was not considered due to the fact that the model might be complicated.

Organizational Structures

The survey of internal labor practices market (Nabi, 2001) with a four-item scale was used. This survey measures whether there is a clearly defined promotion structure by career progression in the companies they work for, by (career) progression, progression of skills and knowledge, entry-level jobs offering career progression, and internal job ladder. Respondents were required to asses the extent to which each item described their organization's structures on a five-point scale (Completely disagree =1 to Completely agree = 5).

Individual Aspirations

Individual aspirations were measured with the Individual Aspiration Scale constructed by Kim (2002). It emphasizes the degree to which a person aspires to achieve high expertise (Getting High), autonomy or becoming independent (Getting Free), Reaching Balance (Getting Balance) and obtaining stability or security (Getting Secure). The respondents were required to indicate how accurately each of the items applied to them. The scale has 4 subscales of the 7-point Likert scale, ranging from 1 (Never) to 7 (Always).

These included Getting High (initially with 6 items and alpha = 0.75 in pilot phase and finally with 3 items and alpha = 0.65) which reflects pursues excitement and expertise; Getting Free (initially with 4 items and alpha = 0.52 in pilot phase and finally with 2 items and alpha = 0.67) which reflects pursues autonomy and independence; Getting Balance (initially with 5 items and alpha = 0.82 in pilot phase and finally with 4 items and alpha = 0.74) which reflects pursues a balance between personal and professional life and Getting Secure (Initially with 5 items and alpha = 0.53 in pilot

phase and finally with 3 items and alpha = 0. 58) which reflect pursue of security and stability.

Kim original scale included one additional type of individual aspiration: getting ahead. This dimension was not selected because this subscales was with Cronbach alpha lower than 0.55.

Moderating Variables

As moderating variables the family stage (alone without dependents, alone with dependents, married without dependents and married with dependents), career stage (exploration, progress, maintenance, and retirement), career approach (linear or boundaryless), and gender were asked in the survey.

Translation of the Survey

Since these surveys were published in English, it was necessary to translate them into Spanish. Warwick & Osherson (1973) suggest that the problems of attaining linguistic equivalence through translation is wrongly focused on finding the exact "meaning" of words; the primary aim of translation, they argue, must be the conceptual equivalence rather than strict lexical comparability.

In order to attain the proper lexical meaning, proper context, and proper response style, the translation process was developed following the procedures of Lesser (1967) as quoted in Warwick & Osherson (1973):

The original scales in English were translated into Spanish, and then another translator independently translated this Spanish version back into English.

Original and re-translated versions were then compared and discrepancies eliminated or corrected. The primary emphasis in translation was conceptual equivalence—comparability of ideas rather formally identical words.

As many translation problems can be avoided by advance familiarity with the cultures to be studied, the second Spanish version was reviewed by practitioners experienced in the career development of individuals from the target populations.

The third Spanish version was pre-tested in interviews with ten graduates from target population engineering programs in order to assess the meaning of the questions to them. Based upon this pre-test information, the Spanish questionnaire was revised again. After assessing the meaning, the piloting survey phase of the Spanish version was conducted.

Piloting Survey, Content and Construct Validity and Reliability

Initially, the research instrument was pre-tested with ten graduates from the target population, each having from 3 to 19 years of professional experience, with the intention of testing the understanding of each item as assessment of face validity. They were asked to complete the questionnaire and then give their understanding of each item. These graduates were invited to complete the questionnaires by casual sampling when they visited the Career Development Office of Tecsup.

As content validation—considered as the representativeness of a measuring instrument—is basically judgmental (Tull & Albaum, 1973), two experts in career development, who have experience with graduates from the target population and psychometric scales, were individually asked to judge the questions for appropriateness, clarity, and completeness; they were also asked to assess the survey's entire appearance,

question sequence, and completion time. After the experts' revision of the items and the opinion of ten graduates, the ambiguity and vagueness identified were eliminated.

The Spanish version of the survey with 83 items (Appendix I) was pre-tested with 120 graduates, selected by a random sampling technique from the target population, to check the psychometric properties of the scales (Straub, 1989; Lewis, Templeton & Byrd, 2005). The survey in the pilot phase was administered during August 2007 by electronic mail, and 96 responses were received as of September. The overall response rate in this phase was 80%. Electronic mail was selected to enable sending the survey to all respondents simultaneously, to be completed at the respondent's convenience and especially because of the wide geographical distribution of the graduates in mountain and jungle regions of Peru and in other countries, and the cost of sending them the survey by postal mail would represent.

The central goal of all social research is to obtain accurate measurements of the phenomena under study (Warwick & Osherson, 1973). Reliability measures and validity assessment are used as part of this process. Reliability refers to the internal consistency of the items that are used to measure a latent construct, while validity is defined as the extent to which the instrument captures what is intended to be captured (Boon – itt, S. & Paul, H. 2006).

Construct validity concerns more than just knowing how a measuring instrument works; it involves the factors that lie behind the measurement scores obtained (Tull & Albaum, 1973). Holton III, Bates, Seyler & Carvalho (1997) point out that factor analysis has been recognized as a powerful and indispensable method for construct validation, and is at the heart of the measurement of psychological constructs.

The convergent validity of each of the items in the scale was verified by a main component analysis. A separate Principal Component Analysis (PCA) was run for each

construct. A single eigenvalue above 1 for each construct verified that it was unidimensional, showing the convergent validity of each scale.

In the present study, PCA was conducted to identify the underlying latent structure of the data. An oblique rotation was used because of its suitability latent variable investigation when latent variables are expected to have some correlations (Holton III, Bates, Seyler & Carvalho, 1997). The acceptance of component loading was approximately 0.50 and above, the level considered practically significant (Hair, Anderson, Tatham & Black, 1998).

The conducted reliability test refers to the internal consistency of the items that are used to measure a construct: The item-total analysis checks if each item is correlated with the total score. Items that do not correlate highly can be eliminated from the scale (Bailey, K., 1994).

Item-total analysis measures the relationship of an individual item with each variable of the scale or construct. If the correlation is low for an item, this means the item isn't really measuring the same thing the rest of the survey is trying to measure. Additionally, with the item-total statistics of SPSS, it is possible to know the corrected item-total correlation, that is, the correlation between an item and the rest of the scale, without this item being considered as part of the scale. If the corrected item-total correlation is higher than the item-total correlation, this means that the researcher should consider deleting this item to improve internal consistency. At the same time, this analysis shows the alpha if an item is deleted, when the alpha value is higher than the current alpha with the item included, the researcher should consider deleting this item to improve the overall reliability of the survey. A high level of Cronbach's alpha coefficient represents a higher reliability of the scales.

Table 5 shows the Cronbach's alpha of the original scales. The complete Item-Total Analysis and Principal Component Analysis of the survey is shown in Appendix II. Tables 6, 7, 8 and 9 display Item-Total Analysis and Principal Component Analysis of the survey after deletions of in testing phase.

Table 5. Cronbach's Alpha of the Survey

Variables		**Cronbach's Alpha**
		Original scale
Subjective Success	Job Success	0.9
	Life Success	0.84
	Financial Success	0.8
	Interpersonal Success	0.72
Individual competences		0.8
Organizational structures		0.84
Individual Aspiration	Getting Balance	0.71
	Getting Free	0.57*
	Getting Secure	0.72
	Getting High	0.82

* This value was improved in the final scale

Table 6. Principal Component and Item-total Analysis
Subjective Career Success
(After Deletion of Items-Pilot Phase)

	Rotated Component Matrix(a)				Item-Total Statistics		
Item	Component						
	Job Success	Life Success	Financial Success	Interpersonal Success			
	1	2	3	4	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
P1	0.51050711				0.541457822	0.9345	0.935745465
P2	0.576310902				0.569268478	0.9340	
P3	0.561365346				0.573631688	0.9339	
P4	0.672714872				0.629732787	0.9326	
P5	0.726575242				0.743528254	0.9298	
P6	0.611828072				0.600245945	0.9333	
P7	0.681298634				0.730053464	0.9301	
P8	0.641855998				0.61424213	0.9330	
P9	0.790027317				0.75708	0.9294	
P10	0.76352289				0.698571349	0.9309	
P11	0.787811579				0.706926277	0.9307	
P13	0.813440154				0.728591947	0.9302	
P14	0.78678637				0.739741017	0.9299	
P15	0.856384214				0.782716279	0.9287	
P17	0.610358968				0.472150633	0.9358	
P18	0.727219487				0.723403573	0.9303	
P20			0.72740333		0.71315011	0.7272	0.813410798
P21			0.660492053		0.635149509	0.7660	
P24			0.581198642		0.565791921	0.7954	
P26			0.677549244		0.622118898	0.7704	
P27		0.726036696			0.695602833	0.8338	0.860802417
P28		0.678929141			0.626785995	0.8428	
P29		0.789402571			0.771283725	0.8139	
P30		0.73718242			0.665444845	0.8361	
P31		0.601069325			0.635719037	0.8408	
P32		0.673308357			0.577511748	0.8526	
P35				0.5077542	0.426548901	0.7044	0.719560117
P36				0.6106771	0.539420045	0.6642	
P37				0.5559893	0.5915825	0.6096	
P38				0.6485259	0.560869805	0.6293	
Extraction Method: Principal Component Analysis.							
Rotation Method: Quartimax with Kaiser Normalization.							
Rotation converged in 5 iterations.							(a)

Table 7. Principal Component and Item-total Analysis
Individual Competences Items
(After Deletion of Items—Pilot Phase)

	Rotated Component Matrix(a)	Item-Total Statistics		
Item	Component			
	1	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
P42	0.979308673	0.96394116	0.90921819	0.93210016
P43	0.813313708	0.70574765	0.9266962	
P44	0.745062606	0.62410157	0.9311065	
P45	0.930402114	0.91798054	0.91272217	
P46	0.928247138	0.91570051	0.9128923	
P47	0.574659921	0.55962998	0.93422568	
P49	0.942072843	0.93288088	0.91162506	
P50	0.502097067	0.49501234	0.93705043	
P51	0.647909468	0.58534776	0.9332317	
Extraction Method: Principal Component Analysis.				
Rotation Method: Quartimax with Kaiser Normalization				
(a)	Rotation converged in 3 iterations.			

Table 8. Principal Component and Item-Total Analysis
Organizational structures Items
(After Deletion of Items-Pilot Phase)

	Component Matrix(a)	Item-Total Statistics		
Item	Component			
	1	Corrected Item-Total Correlation	Cronbach's Alpha if Item is Deleted	Cronbach's Alpha
P52	0.86343453	0.75969253	0.89600928	0.91006649
P53	0.894201607	0.80635193	0.87982658	
P54	0.885364235	0.79259489	0.88469812	
P55	0.906154271	0.82545282	0.87292371	
Extraction Method: Principal Component Analysis.				
(a)	1 extracted components.			

Table 9. Principal Component and Item-Total Analysis
Individual Aspirations Items
(After Deletion of Items-Pilot Phase)

	Rotated Component Matrix(a				Item-Total Statistics		
Item	Component						
	Getting Balance	**Getting Free**	**Getting Secure**	**Getting High**			
	1	2	3	4	**Corrected Item-Total Correlation**	**Cronbach's Alpha if Item is Deleted**	**Cronbach's Alpha**
P57		0.80325896			0.360598081	0.25695693	0.52087048
P58		0.849205209			0.360598081	0.32669854	
P60	0.824057929				0.788809296	0.70442416	0.822965724
P61	0.654576961				0.721630166	0.74132745	
P63	0.538242377				0.482577594	0.84304218	
P68	0.829658321				0.620370576	0.78981614	
P69			0.504048031		0.450328635	0.28726166	0.534792558
P62			0.623934065		0.346609466	0.4411983	
P75			0.818764049		0.325581319	0.49433091	
P67				-0.686831821	0.515813067	0.74018177	0.751441294
P73				-0.698957009	0.617327151	0.62470475	
P74				-0.693763472	0.60785645	0.63476853	
Extraction Method: Principal Component Analysis.							
Rotation Method: Oblimin with Kaiser Normalization							
(a)	Rotation converged in 17 iterations.						

Survey Procedures

Mail surveys are more frequently used for social research because they are cheap and easy to implement. However, there are four important sources of error in mail surveys: sampling, non-coverage, measurement and non-response. Aiming to improve the results of mail surveys, Dillman (1991) recommended several steps that were considered in the present procedure. Since electronic mail (e-mail) surveys have demonstrated superiority over postal surveys in terms of response speed, coverage, and cost efficiency (Sheehan, 2001), this study used e-mail to distribute the survey and collect data.

Procedures with the following steps were considered by design and administration of the survey:

- Designing and implementing the survey with the participation of translators, practitioners, and academic reviewers.
- Developing and improving the understanding of the items with simple, direct, and clear words; in a concise and attractive survey format.
- Pilot testing the survey with individuals from the same universe of the survey respondents.
- Preparing a cover letter explaining the purpose of the survey and assuring confidentiality.
- Three e-mail reminders were used (one after one week, another after two weeks, and a final reminder after three weeks). Post-notification or follow-up has been seen to have positive effects on response rates, while Sheehan and Hoy (quoted by Sheehan, 2001) found that a reminder message in an e-mail survey increased responses by 25%.
- E-mail software was used for the precise tracking of e-mailed surveys, the control of the number of undeliverable e-mails, and the time when the survey e-mail was opened, replied to, and deleted.

Final Survey Statistics

After the pilot test, the survey was defined in 65 items (see Appendix III) and the structure of the survey is shown in Table 10.

The survey defined after the pilot phase was sent to 1135 graduates with 3 to 21 years of professional experience who were selected by a stratified sample. The 1011 answers that were obtained in this final phase represent an 89.07% answer rate.

The Principal Component Analysis was performed on the individual items contained in the questionnaire in order to establish their suitability for performing the multivariate analyses used. The acceptance of factor loadings was of approximately 0.50 and above. (According to Hair, Anderson, Tatham & Black, 1998, this level is considered significant for practical purposes.) Tables 11, 12, 13 and 14 show the statistics of principal component and item-total analysis obtained through the final survey and the final sample.

Table 10. Structure of Final Survey

Variables	Name		Items	Type	Measuring Scale
Dependent	Subjective Career Success	Job success	1 to 16	Qualitative Ordinal	Likert
		Life success	17 to 20	Qualitative Ordinal	Likert
		Financial success	21 to 26	Qualitative Ordinal	Likert
		Interpersonal success	27 to 30	Qualitative Ordinal	Likert
	Objective Career Success	Salary	31	Quantitative Continua	Ratio
		Promotions	32	Quantitative Discrete	Ratio
Independent	Individual Management skills		33 to 41	Qualitative Ordinal	Likert
	Organizational Structures		42 to 45	Qualitative Ordinal	Likert
	Individual Aspirations	Getting Free	46 y 47	Qualitative Ordinal	Likert
		Getting Balance	49,50, 52 and 54	Qualitative Ordinal	Likert
		Getting Secure	48, 51 and 57	Qualitative Ordinal	Likert
		Getting High	53,55 and 56	Qualitative Ordinal	Likert
	Personal network	Number of contacts in other functions	58	Quantitative Discrete	Ratio
		Contacts at higher levels	59	Quantitative Discrete	Ratio
	Professional Experience		60	Quantitative Discrete	Ratio
Moderating	Career approach		61	Qualitative Nominal	Nominal
	Age		62	Quantitative Discrete	Ratio
	Gender		63	Qualitative Nominal	Nominal
	Family stage		64	Qualitative Nominal	Nominal
	Career stage		65	Qualitative Nominal	Nominal

Table 11. Principal Component and Item-total Analysis
Subjective Career Success
(Final Survey)

Component Matrix(a)

Variables	Items	Factor Loading	% of Variance	Corrected Item -Total Correlation	Cronbach's Alpha if Item is Deleted	Cronbach's Alpha
Job Success	p1	0.52373552	31.68699253	0.50054543	0.93148764	0.9322043
	p2	0.582336808		0.54371088	0.9306068	
	p3	0.679028469		0.65781066	0.92793651	
	p4	0.639269309		0.59734573	0.92941503	
	p5	0.759829219		0.72699566	0.92606968	
	p6	0.687037665		0.66183923	0.92784422	
	p7	0.712382938		0.66478553	0.92775643	
	p8	0.719433022		0.69919078	0.92685741	
	p9	0.726928727		0.66417735	0.92777955	
	p10	0.754782638		0.69937892	0.92683687	
	p11	0.71905538		0.64557774	0.92824826	
	p13	0.768059595		0.69962001	0.92683126	
	p14	0.75152223		0.68565579	0.92721351	
	p15	0.808661842		0.74299474	0.92561626	
	p16	0.596517092		0.55488078	0.93037003	
	p17	0.73528787		0.70444703	0.92669845	
Life Success	p18	0.741494082	10.5982842	0.58675678	0.77999898	0.8097217
	p19	0.684087409		0.70198029	0.72389046	
	p20	0.667208252		0.69209705	0.72934681	
	p21	0.729894252		0.55312387	0.79685917	
Financial Success	p22	0.568385861	8.042110478	0.68127485	0.87136387	0.88638393
	p23	0.577769906		0.65309683	0.87418439	
	p24	0.740002029		0.79109002	0.85102569	
	p25	0.715784352		0.70178132	0.86677922	
	p26	0.75124896		0.73758186	0.86107756	
	p27	0.679586865		0.65153373	0.87433731	
Interpersonal Success	p28	0.542578384	6.633966137	0.38395064	0.6722344	0.68582967
	p29	0.758831893		0.54990291	0.58057192	
	p30	0.709657268		0.5542986	0.56078091	
	p31	0.541007384		0.41236373	0.65643864	
Total % of Variance explained			56.96135335			

Extraction Method: Principal Component Analysis.
Rotation Method: Quartimax with Kaiser Normalization.

A	Rotation converged in 6 iterations.

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.943645731
Bartlett's Test of Sphericity	Approx. Chi-Square	13928.96735
	df	435
	Sig.	0

Table 12. Principal Component and Item-Total Analysis
Individual Competences
(Final Survey)

	Component Matrix(a)					
Variables	**Items**	**Factor Loading**	**% of Variance**	**Corrected Item-Total Correlation**	**Cronbach's Alpha if Item is Deleted**	**Cronbach's Alpha**
Individual competences	P33	0.87515955	54.8633844	0.871002	0.87165506	0.89714517
	P34	0.889219246		0.89603591	0.86984364	
	P35	0.837986175		0.77859898	0.87610059	
	P36	0.781739499		0.74775907	0.8819887	
	P37	0.772148832		0.7638669	0.88285805	
	P38	0.400026702		0.4169138	0.90502957	
	P39	0.677400291		0.73030225	0.89082069	
	P40	0.541170798		0.60862242	0.89914253	
	P41	0.748184364		0.72789232	0.88510642	
	Total % of Variance explained		54.8633844			
Extraction Method: Principal Component Analysis.						
KMO and Bartlett's Test						
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.872967575				
Bartlett's Test of Sphericity	Approx. Chi-Square	6021.491974				
Df	36		Sig.	0		

Table 13. Main Component and Item-Total Analysis
Organizational Structure Items
(Final Survey)

Component Matrix(a)						
		Component				
Variables	**Items**	**Factor Loading**	**% of Variance**	**Corrected Item-Total Correlation**	**Cronbach's Alpha if Item is Deleted**	**Cronbach's Alpha**
Organizational structures	p42	0.85116989	77.1761002	0.73883819	0.887005123	0.90141954
	p43	0.90158303		0.81551192	0.859258528	
	p44	0.87121393		0.76810509	0.876736886	
	p45	0.88920647		0.79575889	0.866670271	
Total % of Variance explained			77.1761002			
Extraction Method: Principal Component Analysis.						
1 component extracted.						
KMO and Bartlett's Test						
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		0.83056516				
Bartlett's Test of Sphericity	Approx. Chi-Square	2507.51676				
Df		6		Sig.	0	

Table 14. Principal Component and Item-total Analysis
Individual Aspirations Items
(Final survey)

	Component Matrix(a)					
Variables	**Items**	**Factor Loading**	**% of Variance**	**Corrected Item-Total Correlation**	**Cronbach's Alpha if Item is Deleted**	**Cronbach's Alpha**
Getting Free	p46	0.85079211	11.2726956	0.53579071		0.6963201
	p47	0.84349587		0.53579071		
Getting Secure	p49	0.52308513	9.32315291	0.38759729	0.4955134	0.58251731
	p52	0.79005091		0.4011859	0.46780916	
	p58	0.77923188		0.39251294	0.48388888	
Getting Balance	p49	0.85726395	32.998971	0.60481201	0.64214978	0.74205212
	p50	0.82829074		0.59946573	0.64453256	
	p53	0.50779739		0.47600465	0.71621136	
	p54	0.65185085		0.46458916	0.72048625	
Getting High	p53	-0.83525303	8.14422256	0.42561063	0.60714609	0.65307344
	p55	-0.42346282		0.42017068	0.62054597	
	p56	-0.80190437		0.55654003	0.4205979	
Total % of Variance explained			61.7390421			

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.
Rotation converged in 5 iterations.

KMO and Bartlett's Test
Kaiser-Meyer-Olkin Measure of Sampling Adequacy. 0.81814148

Bartlett's Test of Sphericity
Approx. Chi-Square 2857.22332
Df 66
Sig. 0

The Cronbach's alpha of all the scales was acceptable (Nunnally & Bernsteins, 1994), with only one 0.58 and all other alpha coefficients of at least 0.68. Table 15 shows the Cronbach's alpha of the original scale, the survey in the pilot phase, and the survey in the final phase.

Table 15. Cronbach's Alpha of the Survey

Variables		Cronbach's Alpha		
		Original scale	***Pilot phase***	***Final phase***
Subjective Success	Job Success	0.9	0.9357	0.932204
	Life Success	0.84	0.8134	0.809722
	Financial Success	0.8	0.8608	0.886384
	Interpersonal Success	0.72	0.7196	0.68583
Individual Competences		0.8	0.9321	0.897145
Organizational Structures		0.84	0.9101	0.90142
Individual Aspirations	Getting Balance	0.71	0.823	0.742052
	Getting Free	0.57	0.5209	0.69632
	Getting Secure	0.72	0.5348	0.582517
	Getting High	0.82	0.7514	0.653073

Data Analysis

This section has the purpose of presenting the numerical data in order to interpret the result. It contains descriptive statistics and inferential statistics obtained with the SPSS 15.0.

Table 16 shows the descriptive statistics that includes mean as a measurement for central tendency, and standard deviation as a measurement for variability about the average of each variable.

Kolmogorov - Smirnov Test							
	Subjective Career Success	Objective Career Success	Career Success	Individual Aspirations	Organizational Structures	Individual Competence	Network
N	872	841	740	961	998	66	779
Normal parameter (a,b) Mean	0.0000000	0.0000000	0.000000	0.0000000	0.0000000	0.0000000	0.00000
Std. Deviation	1.00000000	1.0000000	1.000000	1.00000000	1.00000000	1.00000000	1.00000
Most Extreme Absolute	0.49	0.02	0.03	0.106	0.106	0.312	0.44
Positive	0.49	0.015	0.03	0.106	0.106	0.312	0.44
Negative	-0.28	-0.02	-0.019	-0.064	-0.064	-0.299	-0.027
Z of Kolmogorov - Smirnov	1.436	0.574	0.814	0.61	3.334	9.71	1.219
Asymp.Sig (2 tailed)	0.32	0.897	0.521	0.85	0.000	0.000	0.103

a. Test distribution is normal
b. Calculated from data

Table 16. Descriptive Statistics and Kolmogorov–Smirnov Test

The Kolmogorov-Smirnov test shows the largest absolute difference between the cumulative observed proportion and the cumulative proportion expected on the basis of normal distribution.

The two-tailed significance level testing that observed distribution is significantly deviant from the normal distribution in either direction. Subjective career success, objective career success, career success, individual aspirations and personal network have non-significant correlations and it is possible assume that the distributions for these variables are normal. Organizational structure and individual competence may not be assumed to come from a normal distribution.

The study uses statistical tests that help to make deductions from the data collected and to test hypotheses. First, the study investigates the relation between career

success and each independent variable trough the correlation coefficient of Pearson (see Table 17 and Table 18).

The Pearson correlation shows that the associations between objective career success and organizational structure, personal network and professional experience have a correlation coefficient not very different from zero ($P < 0.001$). In addition, it is possible say that association between objective career success and individual aspiration has a correlation coefficient significantly different from zero ($P < 0.005$) and the association between objective career success and individual management skills has a coefficient barely different from zero with $P < 0.0077$. All relations are positive.

		Objective Career Success	Individual Aspirations	Organizational Structures	Individual Competences	Personal Network	Professional experience
Objective career success	Pearson correlation	1	,088(*)	,180(**)	0.062	,121(**)	,342(**)
	Sig. 2-talied)		0.012	0.000	0.077	0.002	0.000
	N	841	800	832	809	678	841
*. Correlation is significant at the 0,05 level (2 -tailed). **. Correlation is significant at the 0,01 level (2-tailed).							

Table 17. Pearson Correlations of Objective Career Success vs. Determinants.

The associations between subjective career success and individual aspirations, organizational structure, individual management skills, and personal network have a correlation coefficient only slightly different from zero ($P < 0.001$). The association between subjective career success and individual aspiration has a correlation coefficient very significantly different from zero ($P < 0.005$) and the association between objective career success and professional experience has a coefficient somewhat significantly different from zero with $P < 0.0939$. All relations are positive.

		Subjective Career Success	Individual Aspirations	Organizational Structures	Individual Competences	Personal Network	Professional Experience
Subjective career success	Pearson correlation	1	,348(**)	,391(**)	,175(**)	,120(**)	0.003
	Sig. 2-talied)		0.000	0.000	0.000	0.002	0.939
	N	872	839	870	847	676	872
*. Correlation is significant at the 0,05 level (2 -tailed). **. Correlation is significant at the 0,01 level (2-tailed)							

Table 18. Pearson Correlations of Subjective Career Success vs. Determinants

Missing data can seriously affect results. To ensure entering the data analysis stage using data that takes missing values into account, the SPSS Missing Values options was used as part of data management, a preparation step and to remove hidden bias from data. After this procedure, the correlation among variables was:

objective career success ($P < 0.001$); association among objective career success and individual aspirations was not significant at the 0.005 level.

Individual competences, organizational structures, individual aspirations, and personal network were significantly and positively related to subjective career success ($P < 0.001$). The correlations between subjective career success and professional experience were not significant at the 0.005 level.

Bryan et al. (2007) remark that "the advent of accessible structural equation modeling (SEM) programs (e.g. AMOS, Mplus, EQS, and LISREL) has caused an explosion in the use of SEM to test theory-based questions" (Bryan, Schmiege & Broaddus, 2007, p. 365).

Table 19. Bivariate Correlations

Variables	Career Success	Subjective Career Success	Objective Career Success
career success	1		
Subjective career success	**.823(**)**	1	
Objective career success	**.823(**)**	**.355(**)**	1
Individual Competences	**.271(**)**	**.308(**)**	**.139(**)**
Competences_unmarried_indepen	.188(**)	.203(**)	.107(**)
Competences_unmarried_depen	.087(**)	.114(**)	0.029
Competences_married_indepen	.088(**)	.099(**)	0.046
Competences_married_depen	.163(**)	.182(**)	.087(**)
Competences_exploration	.180(**)	.177(**)	.119(**)
Competences_advance	.131(**)	.168(**)	0.047
Competences_maintenance	.185(**)	.206(**)	.099(**)
Competences_retirement	0.046	0.028	0.049
Competences_Linear	.162(**)	.181(**)	.086(**)
Competences_Nonlinear	.217(**)	.250(**)	.107(**)
Organizational Structures	**.423(**)**	**.480(**)**	**.217(**)**
Structure_unmarried_indep	.229(**)	.289(**)	.087(**)
Structure_unmarried_dep	.170(**)	.157(**)	.123(**)
Structure_married_indep	.144(**)	.163(**)	.074(*)
Structure_married_dep	.278(**)	.313(**)	.145(**)
Structure_exploration	.147(**)	.185(**)	0.057
Structure_advance	.228(**)	.297(**)	.079(*)
Structure_maintenance	.326(**)	.331(**)	.205(**)
Structure_retirement	0.04	0.023	0.043
Structure_Linear	.265(**)	.334(**)	.103(**)
Structure_Nonlinear	.330(**)	.346(**)	.196(**)
Individual Aspirations	**.159(**)**	**.229(**)**	0.032
Aspirations_unmarried_indep	.079(*)	.096(**)	0.034
Aspirations_unmarried_dep	0.036	.074(*)	-0.016
Aspirations_married_indep	0.047	.075(*)	0.003
Aspirations_married_dep	.134(**)	.189(**)	0.031
Aspirations_exploration	0.06	0.054	0.045
Aspirations_advance	.070(*)	.160(**)	-0.045
Aspirations_maintenance	.141(**)	.165(**)	.068(*)
Aspirations_retirement	-0.043	-0.044	-0.027
Aspirations_Linear	.117(**)	.174(**)	0.02
Aspirations_Nonlinear	.111(**)	.153(**)	0.028
Personal Network	**.151(**)**	**.109(**)**	**.138(**)**
P_network_unmarried_indep	.085(**)	.065(*)	.076(*)
P_network_unmarried_dep	0.019	0.002	0.03
P_network_married_indep	-0.016	-0.005	-0.022
P_network_married_dep	.137(**)	.102(**)	.122(**)
P_network_exploration	0.061	0.053	0.047
P_network_advance	.090(**)	.067(*)	.082(*)
P_network_maintenance	.090(**)	0.062	.085(*)
P_network_retirement	0.014	0.009	0.014
P_network_Linear	.083(*)	0.03	.106(**)
P_network_Nonlinear	.109(**)	.106(**)	.071(*)
Professional Experience	**.228(**)**	0.021	**.354(**)**
Experience_unmarried_indep	-.112(**)	-.081(*)	-.104(**)
Experience_unmarried_dep	-.072(*)	-.066(*)	-0.052
Experience_married_indep	0.043	0.039	0.032
Experience_married_dep	.245(**)	.086(**)	.317(**)
Experience_exploration	-.076(*)	-.073(*)	-0.053
Experience_advance	0.029	-0.011	0.057
Experience_maintenance	.172(**)	0.057	.226(**)
Experience_retirement	-0.051	-0.051	-0.033
Experience_Linear	0.006	-.081(**)	.092(**)
Experience_Nonlinear	.161(**)	.091(**)	.174(**)

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Among the three approaches usually associated with SEM (strictly confirmatory, alternative models, and model development), this study uses the confirmatory approach; in this way, the model generated by theory was tested using SEM procedures to determine if the pattern of data was consistent with the theoretical model.

A further advantage of examining variables within an SEM framework is the ease with which problems in the data, such as abnormal or missing data, can be handled using special and/or robust estimators that can be implemented in most SEM packages. Depending on the software package, estimation methods have been developed recently that are capable of addressing both abnormal and missing data (Bryan & Broaddus, 2007).

This study uses AMOS, the SPSS version of SEM. AMOS provides different methods for estimating structural equation models. The most commonly selected method for estimating the parameters is maximum likelihood estimation, when the normality of all observed variables is a standard distribution.

Although the theoretical condition of the normal distribution assumption is still not present in the study, the influence of non-normal data is reduced when using an SEM with a larger sample size. A sample size is considered large when the ratio between the sample size and the number of observed variables is not less than 15 (Stevens, 1996). In this study the sample is considered to be large since the ratio is 1011/65 > 15, more than the recommended threshold (Cao, Mokhtarian & Handy, 2007).

The method of *generalized least squares* (GLS) was used to improve the estimation of parameter (Kuan, 2001) and to compute parameter estimates, correctness of fit tests, and standard errors. The SEM model with standardized coefficients is

presented in Figure 8 (Objective Career Success), Figure 9 (Subjective Career Success), and Figure 10 (Career Success).

The next step was to assess the overall model and check to see if the model fits the empirical data. Overall fit of SEM models can be determined by a multitude of fit indexes, each with its associated advantages and disadvantages. Hu and Bentler provide an overview of available indexes, as well as guidelines for assessing the acceptable range for each index (Bryan & Broaddus, 2007).

Initially CMIN/DF was used. CMIN/DF is the minimum sample discrepancy divided by degrees of freedom. This is called the *relative chi-square* or normal chi-square. Some researchers allow values as large as 5 for adequate fits, but more conservative researchers reject models with a relative chi-square greater than 2 or 3 (Garson, 2008).

Given the fact that chi-square statistics and the CMIN/DF (chi-square divided by the degrees of freedom) are affected by sample size, and are very unlikely to meet accepted levels, the Goodness of Fit Index (GFI), the Adjusted Goodness of Fit Index (AGFI), and the Parsimonious Goodness of Fit Index (PGFI) were also used to assess the model's fit.

GFI is the Goodness of Fit Index. GFI varies from 0 to 1. By convention, GFI should be equal to or greater than 0.90 if the model is to be accepted. AGFI is the Adjusted Goodness of Fit Index. AGFI is a variant of GFI and varies from 0 to 1. AGFI should also be at least 0.90. PGFI should be equal to or greater than 0.05.

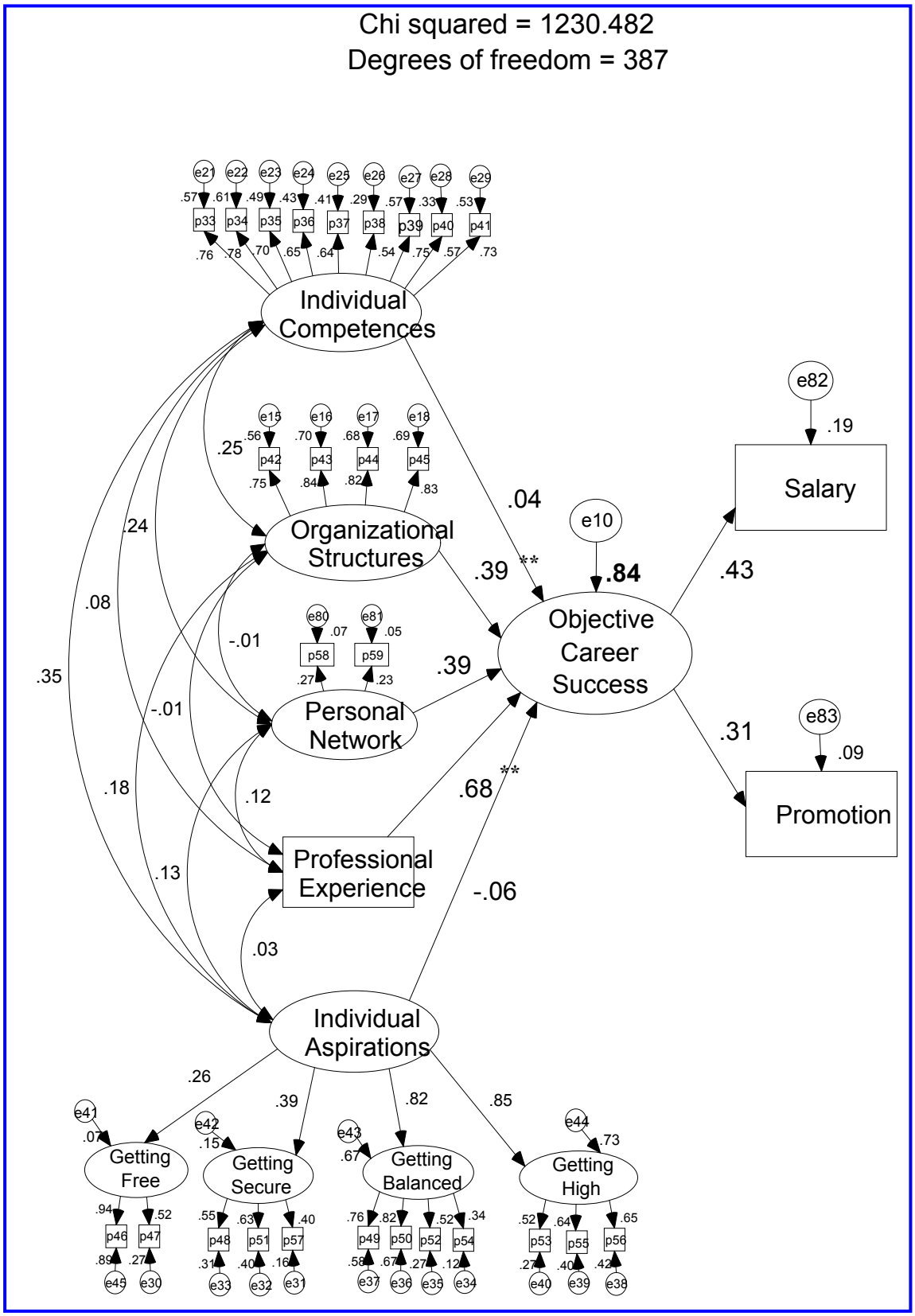


Figure 8. Model of Objective career success (** *P* < 0.01)

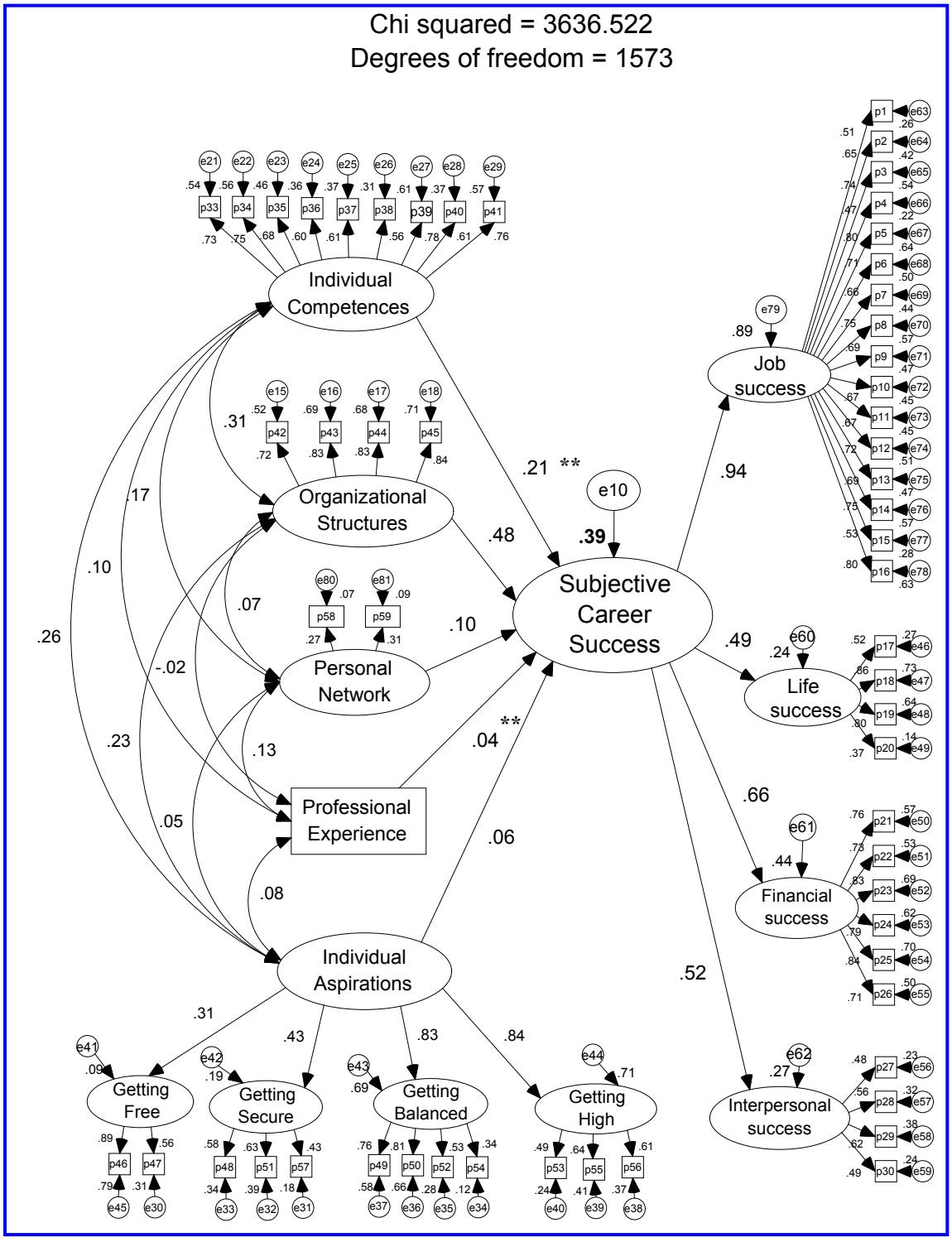


Figure 9 Model of Subjective Career Success
** $P < 0.01$

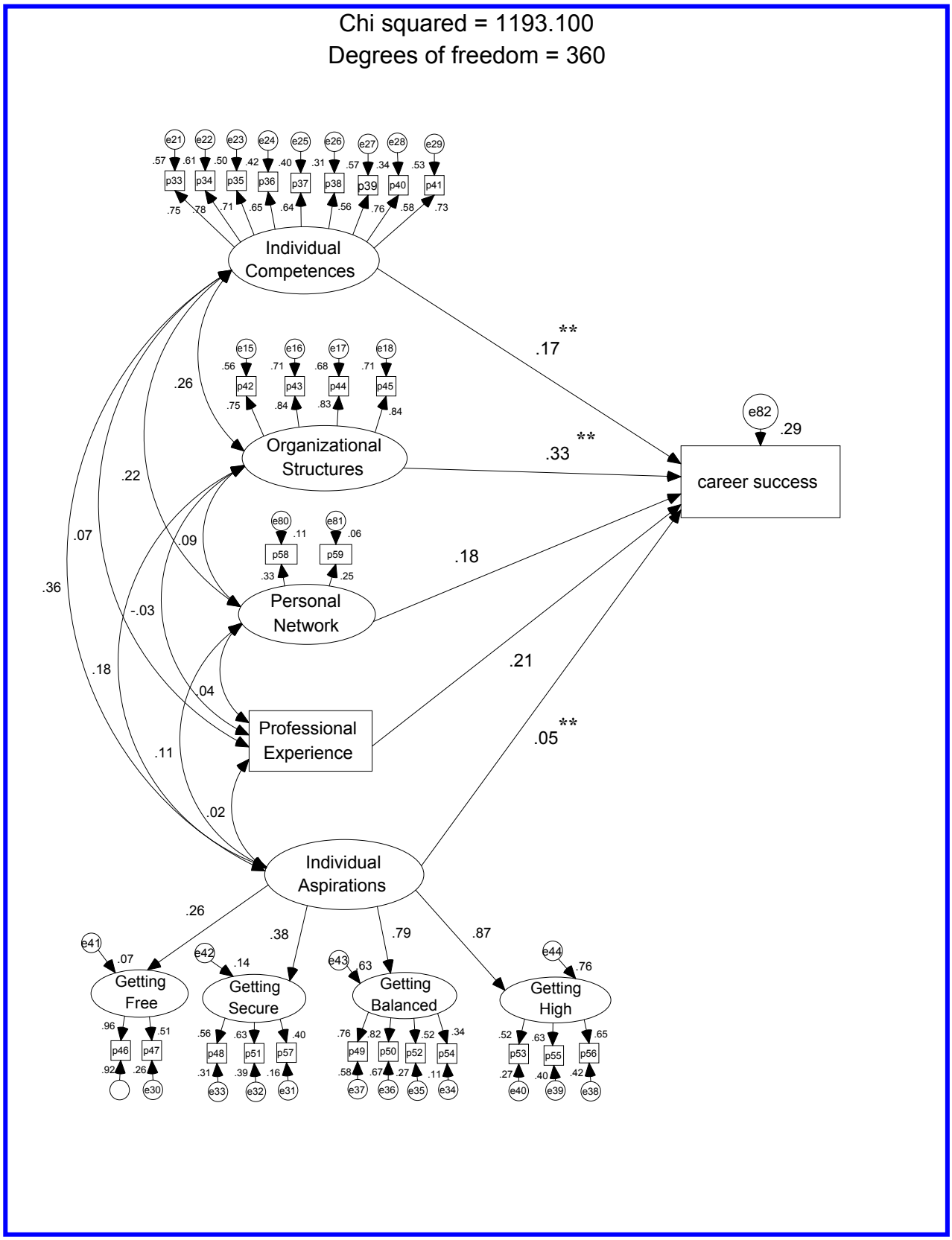


Figure 10. Model of Career Success
** *P* < 001

The GFI, AGFI, CFI, and IFI were higher or closer to 0.9, and PGFI was higher than 0.5; these indexes indicated a good fit (Table 20) (Corral & Calvete, 2000).

MODEL	CMIN/DF	GFI	AGFI	PGFI
Objective Career Success	3.180	.919	.902	.765
Subjective Career Success	2.312	.876	.865	.805
Career success	3.314	.919	.902	.760

Table 20. Measures of Model Fit

Finally, the squared multiple correlation (R square) values, which are similar to the coefficient of determination R^2 in regression analysis, show the fraction that the model accounts of the variance of career success, objective career success and subjective career success (ranges from 0 to 1), and indicates the ability of the research model of determinants to explain career success (Barua, Konana, Whinston & Yin, 2004). The values presented in Table 21 show that the research model achieves a fairly good fit (Jen & Hu, 2003).

Model	R square
Objective career success	0.84
Subjective career success	0.39
career success	0.29

Table 21. Model Summary

Chapter 4

Results

The theoretical model and the respective hypotheses consist of five determinants of career success (individual management skills, organizational structures, individual aspirations, personal network, and professional experience) and three dependent constructs (objective career success, subjective career success, and career success).

SEM models were created to test relationships among observed (data from survey) or latent (such as aspiration and competences) variables; those models were then used to confirm the relationships. The path diagram shows the strength of the hypothesized relationship among variables. The graphical option of AMOS 7.0 provides a powerful and easy-to-use structural equation modeling tool.

Table 22 summarizes the results of the SEM analysis (βeta weights or path coefficients and *p*) and bivariate correlation analysis (Pearson coefficient and significance).

H1: Personal networks will be positively related to subjective career success.

The results suggest partial support for H1. The coefficient of Pearson is positive and is very highly significant (0.109, $p<0.01$). SEM analysis computed a positive relationship between personal networks and subjective career success and not significant ($\beta = 0.10$ and $p = 0.286$).

Hypotheses			SEM analysis		Bivariate correlation analysis	Results
			βeta standardized	*p*	Coefficient of Pearson	
Subjective Career Success	**<--- H1**	Personal Network	**0,10**	0.286	**0.109(**)**	**Partial support**
Objective Career Success	**<--- H2**	Personal Network	**0.39**	0.22	**0.138(**)**	**Partial support**
Subjective Career Success	**<--- H3**	Individual Competences	**0.21**	***	**0.308(**)**	**Strong support**
Objective Career Success	**<--- H4**	Individual Competences	**0.04**	0.704	**0.139(**)**	**Partial support**
Subjective Career Success	**<--- H5**	Professional Experience	0.04	0.301	0.021	**No support**
Objective Career Success	**<--- H6**	Professional Experience	**0.68**	***	**0.354(**)**	**Strong support**
Subjective Career Success	**<--- H7**	Organizational Structures	**0.48**	***	**0.480(**)**	**Strong support**
Objective Career Success	**<--- H8**	Organizational Structures	**0.39**	***	**0.217(**)**	**Strong support**
Subjective Career Success	**<--- H9**	Individual Aspirations	**0.06**	0.181	**0.229(**)**	**Partial support**
Objective Career Success	**<--H10**	Individual Aspirations	-0.06	0.507	0.032	**No support**

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 22. Summary of results

H2: Personal networks will be positively related to objective career success.

The relationship between personal networks and objective career success was supported by the positive and very highly significant Pearson's coefficient (0.138, $p<0.01$). SEM analysis computed a positive relationship between personal networks and subjective career success but not significant ($\beta = 0.39$ and $p = 0.220$). H2 received partial support.

H3: Individual management skills will be positively related to subjective career success.

Individual competence for management was positively related to subjective career success, both in correlation and SEM analysis. The coefficient of Pearson was positive and very highly significant (0.308, $p<0.01$); βeta standardized was positive and very highly significant ($p<0.001$). Our analysis strongly supported Hypothesis 3.

H4: Individual management skills will be positively related to objective career success.

Correlation analysis of management skills and objective career success shows a positive coefficient of Pearson with very high significance (0.139, $p<0.01$). SEM analysis did reported show a significant positive relationship ($\beta = 0.04$ and $p = 0.704$). Hypothesis H4 was partially supported.

H5: Professional experience will be positively related to subjective career success.

The study did not support this hypothesis. Neither the Pearson coefficient of correlation nor the Beta was significant ($\beta = 0.04$ and $p = 0.301$). In other words, the number of years spent working is not positively related to the employees' subjective career success.

H6: Professional experience will be positively related to objective career success.

The strong relationship found between professional experience and objective career success was supported by a positive and very significant coefficient of Pearson (0.354, $p<0.01$). SEM analysis also showed a highly significant relationship ($\beta = 0.68$ and $p < 0.001$). Strong support for H6 was found.

H7: Organizational structure will be positively related to subjective career success.

The results of our analysis support the hypothesis that organizational structure is positively related to subjective career success, with a highly significant Pearson coefficient (0.480, $p<0.01$). In addition, the results of SEM analysis showed a highly significant relationship ($\beta = 0.48$ and $p<0.001$). Hypothesis 7 was strongly supported.

H8: Organizational structure will be positively related to objective career success.

As predicted by this hypothesis, a significant relationship was found between organizational structure and objective career success ($\beta = 0.39$ and $p< 0.001$). Furthermore, the direction of this relationship was positive, as predicted (0.217 coefficient of Pearson with $p < 0.01$). H8 was strongly supported.

H9: Individual aspirations will be positively related to subjective career success.

Our findings also provide partial support for a positive relationship between individual aspirations and subjective career success. Correlation analysis registered a positive and very highly significant Pearson's coefficient (0.229, $p<0.01$). SEM analysis computed a positive relationship between individual aspirations and subjective career success but with low significance ($\beta = 0.06$ and $p = 0.181$).

H10: Individual aspirations will be positively related to objective career success.

The analysis of the data of this study does not support the relationship between individual aspiration and objective career success (coefficient of Pearson not significant: equal to 0.032). Furthermore, the Beta reported was negative (β = - 0.06 and p = 0.507).

The new model of determinants of career success that strongly or partially support the hypotheses in this study are presented in Figure 11.

The results of AMOS for the model of hypothesis revealed that overall fit indexes were acceptable: CMIN/DF less than 5, GFI and AGFI values greater than or equal to 0.90, and PGFI over 0.5. These values show a good model fit, which indicates that the model of hypothesis fit the data very well (Bagozzi & Foxal, 2006; Serretti & Olgiati, 2004; Dhungana et al., 2007).

Utilizing the same hypothesized models that were added to the moderating variables, separate structural models were created in order to test their effects (See Appendix IV). No statistically significant changes were found between paths of determinants and career success.

According to Baron & Kenny (1986), a moderator is a qualitative or quantitative variable that affects the direction and/or strength of the relation between an independent or predictor variable and a dependent or criterion variable. In this study, the moderating variables (family stage, career stage, and career approach) affected the strength of the relation between determinants and career success, objective career success, and subjective career success, respectively, as was shown in tables 19.

Utilizing the same hypothesized three new structural models were created with Family Stage, Career Stage and Career Approach adds as mediators variables and mediation was tested through AMOS SEM analysis (See appendix IV). Demonstrating

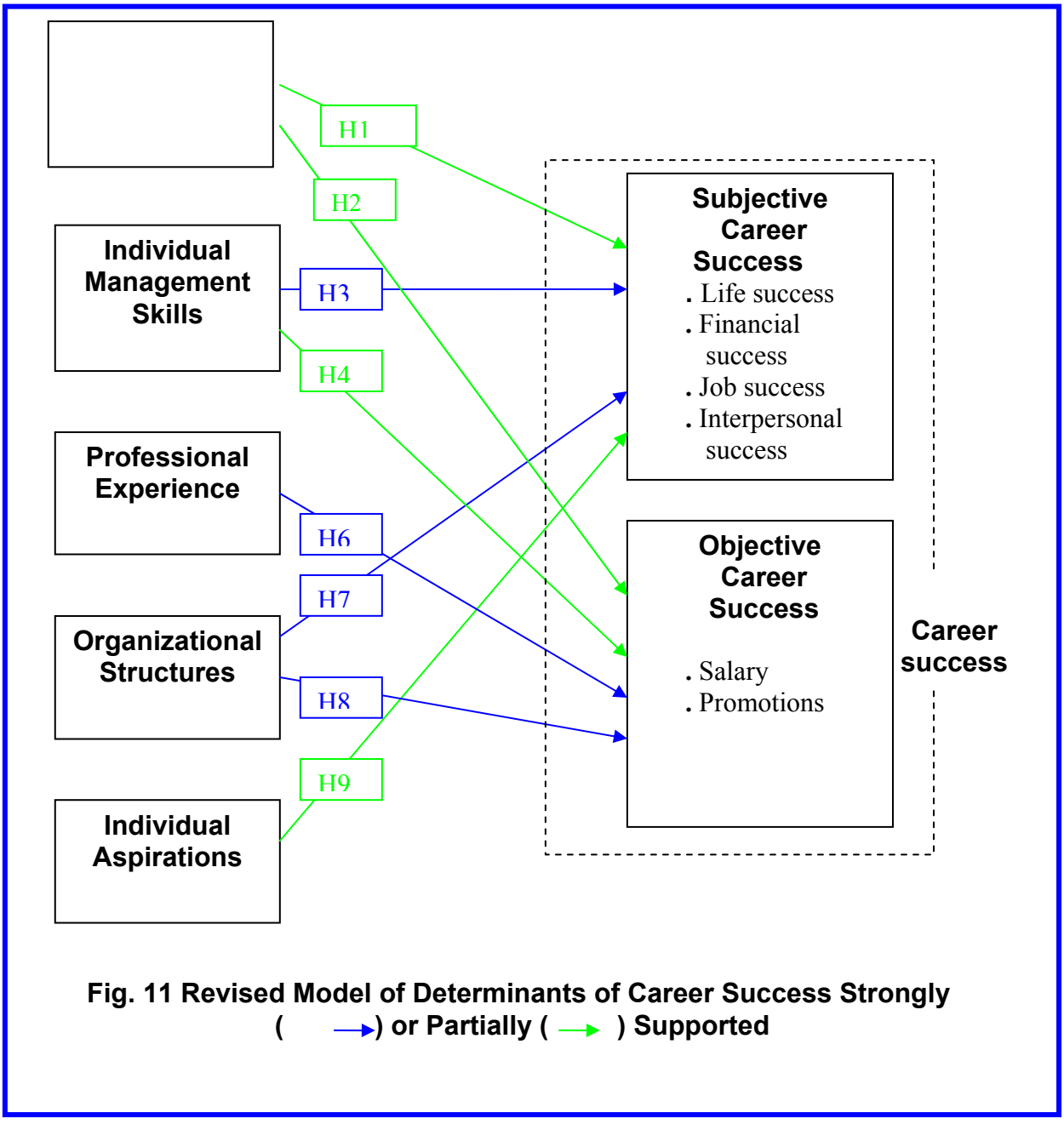


Fig. 11 Revised Model of Determinants of Career Success Strongly (⟶) or Partially (⟶) Supported

mediation requires that: a) the independent variable must significantly impact the dependent variable; b) the independent variable must have a significant effect on the mediator; c) the mediator must significantly impact the dependent variable; and d) the effect of the independent variable on the dependent variable should decrease when the mediator is included (Bryan & Broaddus, 2007). In the present study, none of these conditions was present. No mediation was found between determinants and career success, objective career success and subjective career success with family stage, career stage, age, sex, and career approach.

Chapter 5

Discussion, Conclusions, Implications, and Further Research Directions

Methodology

Theory and method are highly interrelated in practice, and there is significant interplay between theory and method within research work (Van Maanen, Sorensen & Mitchell, 2007).

To investigate the hypothesized relationships and the model of determinants of career success, the study followed the procedures recommended by Edmondson & McManus (2007). They offer a framework that relates the stage of prior theory to research questions, type of data collected and analyzed, and theoretical contributions.

Research question focuses a study, review of literature provide state of prior theory and research. The nature of the research question was testing ten theory-driven hypotheses, according to which the relationships between subjective and objective career success, on the one hand, and organizational structure, personal network, professional experience, individual aspiration, and individual competences, on the other, are positive.

Mature theory was found with extensive researches but fragmented. A model of career success's determinants was proposed and opportunities for new researches are generated from the results.

The primary method of data collection was a survey instrument with quantitative measures of objective career success, subjective career success, and other established constructs in organizational structure, personal network, professional experience, individual aspiration, and individual competences. Difficulties have been had to identify significant moderation of family stage, career stage, career approach or gender in the relationship between career success and its determinants

The data analysis method was standard correlation statistical analyses and structural equations modeling. The results of this quantitative research can be used in new study with qualitative measures that would allow a greater understanding of the dynamics of engineer's career.

Discussion

The purpose of this research was to test determinants of career success of engineers. This study reveals characteristics on career development of Peruvian engineers with orientation to the practice who is a doer or implementer, able to apply mathematics, and engineering science for the design, operation and improvement of systems, processes and machines and with the capabilities to provide simple solutions to complex problems in a context of very high pressure. Specially high is the rate of employment (more than 95 %) and the development of his/her professional career in dependent employment.

Scholarly literature (Arthur et al., 2005; Heslin, 2005; Tu, Forret & Sullivan, 2006, and Baruch, 2006) support the significant and positive relationship found between career success and objective career success, and between career success and subjective career success.

The results of the present study support the body of research that claims that the subjective and objective sides of career success are interdependent (Seiber, Kraimer & Liden, 2001; Arthur et al., 2005; Turban & Dougherty, 1994; Judge, Butcher & Prey, 2005). The relationship between subjective career success and objective career success is positive and very significant.

The need to improve the measurement of subjective career success has been demonstrated in several studies (Heslin, 2005: Arthur et al., 2005, Gunz & Heslin, 2005). In the present study, the questionnaire has self -referent items (evaluation of career success relative to personal standards and preferences) as well as other-referring items (evaluation of career success relative to the outcomes achieved by other people). Items related to job success explain a significant amount of total variance in subjective career success and SEM shows high value of beta (0.94) between job success and subjective career success. One possible explanation of this finding has to do with the Latin American context, in which jobs are people's foremost concern. In Peru 60 % of the population is unemployed or underemployed and some of the first effects of the financial world crisis is a strong reduction of the growth of the employment.

In accordance with the results of previous studies (Tharenou, 2001; Seibert, Kreimer & Liden, 2001; Judge, Cable, Boudres & Bretz, 1995; Orpen, 1994), both salary and promotions are good variables for the measurement of objective career success. The study assumed that these variables would be significant. For the most part, the results of this investigation support this assumption.

The importance and prominence of organizational career planning and management as part of Human Resources management has been recognized by many scholars (Baruch, 2003; Hall, 1986; Van Mannen and Schein, 1975; Hasann, 2007). The positive relationships found among organizational structures with career success,

organizational structures with subjective career success, and organizational structures with objective career success is consistent with these past researches. Part of the explanation may be the fact that careers of engineers mostly take place within an organization. In this study, the percentage of engineers employed as dependent worker was 94%, as against only 6% independent workers.

Moving into higher positions in the career of engineers is associated with positions as senior engineer or, at least, expert coordinator. These positions need a specific set of skills for effective performance and career success (Mainiero, 1986). The results of the present study identify individual management skills as a strong determinant of subjective career success of engineers, and this is supported by the reported links between career success and management skills in past studies (Waldman et al., 2004; Irrinki, 2006; Boss, Gorecki & Letourneau, 2002). Additionally, many studies (Ritti, 1971; Krulee and Nadler, 1960; Bailyn, 1980, as cited in Allen & Katz, 1986, p. 186) have shown that a very high proportion of engineers in industry see their career goals in terms of eventual progress in management.

The careers of engineers need special treatment. The relative complexity of this aspect is probably the reason why it is difficult to retain them within organizations; it is also proably the reason for their problematic transitions into management (Petroni, 2000a; Mainiero, 1986; Baruch, 2003). In this study, the associations of promotions that engineers have with the type of projects that they are in charge of was especially relevant. Engineers pay special attention to the total amount of investment and the technological aspects of their work. During the interviews of the pre-test phase of the present study, engineers used expressions such as the following:

“For me, the position is important. Associated to bigger positions there are bigger projects and the opportunity to use emergent technology.”

"Yes, promotions are very important, because I have a better opportunity to train in new technologies, and better opportunities to personally design new and innovative projects"

The data show that professional experience and objective career success are very highly significant and positive relationship. This result corroborates the findings of previous research on salary and promotions with more years of experience (Van Vianen, De Pater & Preenen, 2008; Keenan, 1994; Katz, Tushman & Allen, 1995) and receives additional support from the facts that employers of engineers pay special attention to adequate engineering experience in recruitment and promotions programs. Additionally, higher specialization in a specific field of engineering is offered after some years of relevant professional experience.

One interesting finding was that personal networks receive only partial support as determinants of career success. This contradicts a group of papers that rely on the argument that contacts with experienced engineers and persons in higher position within a company determine career success (Gersick, Bartunek & Dutton, 2000; Seibert et al., 2001; Katz et al., 1995; Mainiero, 1986). This result can have sustenance in the fact of institutional support that the Tecsup's graduated ones receive in his/her career development. Tecsup works the labour insertion of all your graduated ones in less than three months and realizes permanent practices of career advisor . Studies with graduated from other center of engineering could show a relationship more strong where your individual networks of contact would be more relevant.

The model of determinants of career success presented in this study moves beyond traditional models that treat subjective or objective approaches to career success separately (e.g., Tharenou, 2001). The revised model of determinants received general support from relationships reported in the directions predicted in hypotheses. This study

delivers a questionnaire to measure determinants of career with enough statistical support that will allow it to be used in other studies.

It is possible to wait for different relations, in terms of strength and significance, between the different facets of some determinants as individual aspirations and the two dimensions of career success. New analyses will be able to show ,for example, the relationship between each type of career aspiration and subjective career success

The hypothesis 10 about the positive relation between the individual aspirations and the objective career success was not supported. This result is congruent with the fact that to have clear aspirations of career does not imply to have effective career strategies for objective success of career. In Peru this can be explained due to the subordination that the persons do of his individual aspirations and choose for limited opportunities of career and several professional keep their career in plateaus stage for long period.

The results also showed that hypothesis 5 was not supported and this imply that professional experience measures like years after graduation is not a significant determinant of subjective career success. This result might change if instead of the years of professional experience the determinant changes to professional trajectory including the different types of works developed in his/her professional life.

The career within organizations is usually in a multicultural and multinational environment in several mining, energy and agricultural projects in multidisciplinary teams where the management skills are very important. The support to the positive relationship between subjective career success and management competences is conform with this fact. The partial support to hypothesis H4 about the relationship between management competences and objective career success was only partially

supported, it can show the need to incorporate evaluations of the competencies for management and team work by the supervisors or chiefs of the engineers or their peers.

Conclusions

In this research, further insight into the determinants of career success was sought. Overall, an organizational structure was found as very important determinant of career success in careers of engineers . The results support the hypothesized relationship between organizational structure and career success with empirical data. The organizational labor market allocates labor, determines wages, and defines the scope of specific jobs according to sets of rules and procedures (O'Mahony and Bechky, 2006).

Furthermore, the study indicates that the years of professional experience is an important determinant of objective career success, and that individual management skills are important determinants of subjective career success.

This study confirms and extends career theory. It confirms the relationship between the two dimensions —objective and subjective—of career success. Career provides a link between the inner world of self and the outer world of society. This link is an important one, because it is through their careers that many people seek personal meaning in their lives (Parker, 2002). Career success is cited as an individual assessment of career outcomes, and in this assessment concurrent both objective and subjective outcomes at the same time in integrated form.

The questionnaire used in research may be used in other studies of the region given its good psychometric properties and its good statistical validity and reliability. The model of career success and its determinants integrates predictors or factors studied

in prior researches. The study extends career theory in that it attends to both the subjective and objective dimensions of career success.

This study also provides evidence for the important role of organizational structures, individual management skills, and professional experience as determinants of career success.

The analysis reveals that the relationship between career success and individual management skills, organizational structures, individual aspirations, personal network, and professional experience are moderated by a career approach, a career stage, and a family stage.

Implications for Organizations

Organizations can use the results of this study to design internal labor markets, internal career structures, and specific programs aimed at enhancing the career success of employees. Despite the fact that the literature on career has focused on the individual, it is necessary for the organization to have an effective management of the careers of their knowledge workers, so as not to lose this competitive value. Strategic human resource scholars have argued that companies can effectively influence the interactions, behaviors, and motivation of employees through different human resource (HR) practices, both in transaction-based HR practices, which emphasize individual short-term exchange relationships, and commitment-based HR practices, which focus on mutual, long-term exchange relationships (Collins & Smith, 2006).

The management of modern business faces a variety of challenges. Changes in business re-engineering processes, restructuring, flattening, downsizing, or others, can bring innovation and progress, but they can also bring chaos to the management of people in the workplace (Baruch, 1999).

Many organizations do not implement practices that research have shown to be positively associated with employee productivity and sound financial performance (Rynes, Giluk & Brown, 2007). Organizations have the opportunity to implement "evidence-based practices" in career management or career systems translating findings and principles based on empirical evidence into organizational practices. The findings of this study support the implementation of internal career programs to attract and retain engineers.

This suggests that education organizations must pay more attention to developing so-called "soft skills," with a special emphasis on managerial competences and evidence-based management. They can do this by using textbooks that cover research findings and teachers with Ph. D.'s who use scientific evidence in their area of instruction (Rynes, Giluk & Brown, 2007). New educational objectives and academic outcomes specifically oriented to managerial competences must be integrated into study plans. It is especially important in Latin America where a higher education accreditation system is not in place in all countries of the region.

Organizations must attend to the proportion of the technical staff that prefers to remain in full contact with technical problem solving, for which management has no attraction. The traditional technical ladder of promotion then becomes a consolation prize, and very often de-motivates an otherwise productive member of the technical staff (Mainiero, 1986; Petroni, 200b). According with the results one good internal career market and training in individual management skills in first level in conjunction can help young engineers to reach bigger projects, new promotions and reach better salary.

One alternative for managing engineering professionals in corporations is the intra-organizational mobility as a means both to develop engineers' skills and to

manage careers in the lean organization era, with limited upward mobility opportunities (Mignonac &. Herrbach, 2003). Organizations have in the practices of mobility within its operational units and rotation a source of training and motivation of its staff.

Implications for Researchers

The literature on careers has failed to account for career dynamics in diverse cultures. Indeed, very few studies have explored what career means in an international context, and career- related perceptions and strategies have almost never been investigated in third-world countries (Kim, 2004). The present research tries to fill the gap in research about careers by supplying empirical career research for Latin America and in the field of engineering technology.

Further research might also extend the findings and build effective career theory that includes other factors that help to predict the career success and test the effectiveness of these determinants with graduates from other disciplines, several countries in the region and several types of career.

In Latin America there is little academic research, few magazines ISI and very limited data sources that causes high cost to develop an investigation with little or no support for funds to develop it. In this context this research represents the first empirical study of Latin American careers in engineering technology. The result should lead to a better understanding of what factors are relevant for career success in Peruvian technological careers. They should also lead to a better understanding of how to design human resources development systems, to develop new models of career planning, and to improve career prospects in companies. Other studies can test the effectiveness of these determinants in other disciplines.

The current research represents an important contribution to theory by extending the literature on career success to technical staff. It does this by operationalizing the

construct of career success in a way that takes into account job success, promotions, salary, life success, financial success, and interpersonal success.

Implications for Career Practitioner

The failure to implement research-supported practices has been observed in nearly every field where there is a separation between those who conduct research and those who are in a position to implement it.

The present study should lead to a better understanding of what factors are relevant in career success. This better understanding will teach practitioners how to design human resources development systems, how to develop new models of career development programs, and how to improve career prospects in companies.

The need for special treatment by management of the careers of engineers has been proved by two themes: the difficulty of retaining them and their problematic transition into management (Petroni, 2000a). To pay attention to the determinants of their career success offers companies the opportunity to appreciate this necessary factor for innovation and creativity.

The failure to implement research-supported practices has been observed in nearly every field where there is a separation between those who are in a position to conduct research and those who are in position to implement research findings. The very separate worlds of academic and practical human resource management can be reduced, as practitioners learn more about evidence-based human resource management. Through evidence-based management, practitioners can develop into experts who make organizational decisions informed by social science, not based on mere personal preference (Rynes, Giluk, & Brown, 2007).

The results of this study can be applied in mentoring programs of young engineers. New engineers can plan their careers more intelligently if they know the main determinants of career success. Career development offices can give better support to engineers in the early years of their careers if they use the results of this research.

Limitations and Recommendations for Further Research

The study has limitations that suggest areas for future research.

The first limitation is associated to the universe of the population. This study has been centered on engineer's careers mainly by two motives:1) the world crisis for new engineers. Low vocations there are between young people in relations with other disciplines and 2) The access to good data.

The findings of this research are based on a sample of 1011 engineers with a practical orientation, all of whom graduated from a single institution. They have many common features such as the support of a dynamic and outstanding Graduate's Career Development Office.

Considering the contextual side of career in Latin American the findings of this study should be interpreted with caution when will be applied to engineers outside Peru. The sample did not allow us to analyze the relationship between career success and its determinants with bigger spectrums. Future research with graduates from different institutions, different disciplines and different countries are very good opportunities for enhances the understanding on career in Latin America.

This study has employed a model of career success determinants, which was devised on the basis of general theoretical considerations derived from the literature review. Its analysis is quantitative, and pays special attention to the interaction between

theory and method. Additional qualitative research is needed to improve the understanding of key factors in career success.

Another limitation of the study is derived from the fact that it has a cross-sectional design that considers career success at a specific time; it does not allow for the possibility that changes in career success may be due to changes in the determinants of the individual's career success. Accordingly, further research is required to develop theories about changes in the determinants of career success over time. Longitudinal studies could illuminate the mechanisms by means of which determinants are related to career success.

As Kainins (2007) claims, researchers who wish to add to our store of knowledge should not conclude from accumulated empirical evidence that they have discovered a theoretically-driven relationship, until they consider that multiple explanations may exist for any empirically observed relationship. They need to collect additional data to distinguish among multiple explanations before settling on any one theory to explain their findings. Analyzing via SEM in a cross-sectional, observational data set can never provide strong evidence of causation (Bryan & Broaddus, 2007), for this reason relationship in supported hypotheses are consistent with theoretical explanations. Future researchers with new experimental designs may be able to discover evidence of a causal relationship between career success and its determinants.

Another source of future researches are studies with groups of engineers with different professional trajectories as with only one employer versus different employers, one field of specialization versus different fields of specializations , technical paths versus managerial career paths and population divided by career stage ..

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Appendix I

Survey
(Pilot phase)

Santa Anita, Agosto 2007

Estimado egresado de Tecsup:

Usted ha sido invitado a participar en un estudio de investigación de carrera de tecnólogos en el Perú. Su nombre ha sido seleccionado aleatoriamente de la base de datos de la Institución.

Este estudio tiene la intención de investigar cuáles son los determinantes para el éxito de carrera de tecnólogos peruanos y sus resultados serán usados para mejorar los planes de desarrollo de programas de tecnología.

A continuación se le presenta un cuestionario que tomará un tiempo aproximado de 25 minutos.

Los resultados de este estudio se mantendrán en reserva y sólo serán consultados por los investigadores para la elaboración de las variables estadísticas considerados en él.

Agradeciendo tu participación.

Atentamente,

Alberto Bejarano Heredia
Director Académico
TECSUP

Investigación sobre Determinantes del Éxito de las Carreras de los Graduados de Programas de Tecnología

Este cuestionario está diseñado para identificar sus opiniones sobre el éxito de carrera y sus determinantes. Está dividido en tres partes: La parte 1 referida al éxito de la carrera, la parte 2 a los determinantes del éxito de carrera y la parte 3 a la información demográfica que nos servirá para caracterizar a la población que responda al cuestionario.

No existen respuestas malas o buenas por lo que le agradeceré responder todas ellas de acuerdo a su percepción.

Parte 1: ÉXITO DE CARRERA

Por favor haga un círculo en el número que mejor refleje su propia percepción.

	Completamente de acuerdo	De acuerdo	Ni de acuerdo ni en desacuerdo	En desacuerdo	Completa-mente en desacuerdo
1. Estoy recibiendo información positiva sobre mi desempeño permanentemente	1	2	3	4	5
2. Tengo oportunidades de capacitación ofrecidas por mi empleador	1	2	3	4	5
3. Estoy contento con las promociones laborales recibidas hasta el momento	1	2	3	4	5
4. Estoy teniendo suficiente responsabilidad en mi trabajo	1	2	3	4	5
5. Estoy en un trabajo que ofrece oportunidades de promoción y desarrollo profesional	1	2	3	4	5
6. Estoy alcanzando las metas de mi carrera dentro del tiempo que yo establecí	1	2	3	4	5
7. Tengo total apoyo de la gerencia en mi trabajo	1	2	3	4	5
8. Estoy alcanzando todas las metas de mi carrera	1	2	3	4	5
9. Estoy en un trabajo que me ofrece la oportunidad de aprender nuevas habilidades	1	2	3	4	5
10. Estoy muy contento cuando estoy en el trabajo	1	2	3	4	5
11. Tengo desafíos en mi trabajo	1	2	3	4	5
12. Tengo la confianza de mis superiores	1	2	3	4	5
13. Estoy en una posición donde hago el trabajo que realmente me gusta	1	2	3	4	5
14. Estoy en una posición donde puedo poner mis propias metas	1	2	3	4	5
15. Estoy disfrutando los objetivos desafiantes que tengo en mi actual trabajo	1	2	3	4	5
16. Soy elogiado a menudo por mi(s) superior(es)	1	2	3	4	5
17. Estoy dedicado a mi trabajo	1	2	3	4	5
18. Tengo oportunidades de promoción ofrecidas por mi empleador	1	2	3	4	5
19. Soy respetado por mis compañeros	1	2	3	4	5
20. Soy feliz con mi vida privada	1	2	3	4	5
21. Soy aceptado por mis compañeros	1	2	3	4	5
22. Estoy disfrutando mis actividades fuera del trabajo	1	2	3	4	5
23. Estoy satisfecho con mi vida completa	1	2	3	4	5
24. Tengo la confianza de mis compañeros	1	2	3	4	5
25. Estoy disfrutando el tiempo libre con mis amigos	1	2	3	4	5
26. Estoy disfrutando una familia feliz (esposa/pareja, niños, etc.)	1	2	3	4	5

27. Estoy recibiendo compensación justa comparada a la de mis compañeros	1	2	3	4	5
28. Tengo un ingreso mayor comparado al de mis compañeros	1	2	3	4	5
29. Estoy ganando lo que considero que vale mi trabajo	1	2	3	4	5
30. Estoy ganando lo suficiente para pagar mis cuentas	1	2	3	4	5

	Completamente de acuerdo	**De acuerdo**	**Ni de acuerdo ni en desacuerdo**	**En desacuerdo**	**Completa-mente en desacuerdo**
31. Estoy obteniendo un salario que cubre mi actual estilo de vida	1	2	3	4	5
32. Estoy bien pagado cuando comparo mi remuneración con lo ofrecido por trabajos similares en otras compañías	1	2	3	4	5
33. Estoy obteniendo información positiva de mis compañeros sobre mi desempeño laboral	1	2	3	4	5
34. Estoy estableciendo mi propio tiempo para los objetivos de carrera	1	2	3	4	5
35. A menudo estoy haciendo algo con mis compañeros después del trabajo	1	2	3	4	5
36. Soy requerido a menudo por mis compañeros para consejo en asuntos privados	1	2	3	4	5
37. Estoy obteniendo con frecuencia información de mis compañeros sobre mi desempeño	1	2	3	4	5
38. Soy consultado con frecuencia para asesorar a un colega sobre un asunto del trabajo	1	2	3	4	5

39. Indique su salario anual en soles (incluyendo bonos y otros ingresos directos).

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40. Indique el numero de promociones (incremento en las responsabilidades del trabajo, alcance del trabajo, rotación a otras áreas con mayor responsabilidad) recibidas en su carrera profesional.

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41. Considera Ud. que adicionalmente al salario y a las promociones recibidas, existe otro indicador relevante del éxito de su carrera. Si es así, por favor indíquelo.

A) _____

B) _____

C) _____

D) _____

Parte 2: DETERMINANTES DE ÉXITO

Competencias Individuales

Las siguientes afirmaciones describen comportamientos de las personas. Favor indicar que tan preciso lo describe a usted cada afirmación:

	Muy imprecisa	Moderadamente imprecisa	Ni imprecisa ni precisa	Moderadamente precisa	Muy precisa
42. Propongo buenas soluciones	1	2	3	4	5
43. Completo las tareas exitosamente	1	2	3	4	5
44. Llevo a cabo mis planes	1	2	3	4	5
45. Termino gran cantidad de trabajo	1	2	3	4	5
46. Consigo que las cosas sean hechas rápidamente	1	2	3	4	5
47. Siento que a mi vida le falta dirección	1	2	3	4	5
48. No estoy seguro donde va mi vida	1	2	3	4	5
49. Doy vueltas sin hacer nada	1	2	3	4	5
50. Hago el trabajo suficiente para sobrevivir	1	2	3	4	5
51. Enredo las cosas	1	2	3	4	5

Estructura laboral de su Organización

Por favor haga un círculo en el número que mejor refleje su propia percepción sobre la estructura del mercado laboral en su empresa.

	Completamente en desacuerdo	En desacuerdo	Ni de acuerdo ni en desacuerdo	De acuerdo	Completa-mente de acuerdo
52. Hay una estructura claramente definida de promoción	1	2	3	4	5
53. Existe progresión de carrera relacionada a la progresión en habilidades y conocimientos	1	2	3	4	5
54. Los niveles de los trabajos al ingresar ofrecen progresión en la carrera	1	2	3	4	5
55. Existe una estructura interna de trabajo ascendente	1	2	3	4	5

Aspiraciones de carrera

Por favor haga un círculo en el número que mejor refleje sus aspiraciones de carrera.

	Nunca	Casi nunca	En forma Ocasional	En forma Constante	Con Frecuencia	Casi siempre	Siempre
56. Deseo controlar las circunstancias de mi trabajo	1	2	3	4	5	6	7
57. El trabajo auto-dirigido es mejor para mí	1	2	3	4	5	6	7
58. Me gusta trabajar independientemente	1	2	3	4	5	6	7
59. Considero mi carrera exitosa si mi compañía me garantiza un trabajo a largo plazo	1	2	3	4	5	6	7

	Nunca	Casi nunca	En forma Ocasional	En forma Constante	Con Frecuencia	Casi siempre	Siempre
60. Dedicarle tiempo a la familia es tan importante como mi carrera	1	2	3	4	5	6	7
61. Un buen balance entre las necesidades de mi trabajo y las necesidades de mi familia es un buen criterio para el éxito de carrera	1	2	3	4	5	6	7
62. El puesto de trabajo ideal para mí está donde yo pueda trabajar por toda mi vida	1	2	3	4	5	6	7
63. El trabajo ideal para mí es el que da tiempo para la familia y actividades externas	1	2	3	4	5	6	7
64. Estoy interesado en un trabajo que esté libre de interrupciones externas	1	2	3	4	5	6	7
65. Me siento orgulloso cuando la gente se refiere a mí como un experto en mi área	1	2	3	4	5	6	7
66. Yo veo el éxito en mi carrera manteniendo un buen balance entre el trabajo, la familia y el desarrollo personal	1	2	3	4	5	6	7
67. Desearía obtener un trabajo que sea crucial para la organización	1	2	3	4	5	6	7
68. No quiero sacrificar mi vida personal por la profesional, ni viceversa	1	2	3	4	5	6	7
69. Disfrute o no de los beneficios a largo plazo provenientes de mi trabajo, ellos son un aspecto muy importante para el desarrollo futuro de mi carrera	1	2	3	4	5	6	7
70. Me siento orgulloso cuando trabajo para una compañía donde existe un fuerte sentido de pertenencia	1	2	3	4	5	6	7
71. Estoy más interesado en mantener seguro mi puesto que estar en una mayor posición	1	2	3	4	5	6	7
72. Me gusta ser mi propio jefe	1	2	3	4	5	6	7
73. El desarrollo de relaciones personales significativas es tan importante como el trabajo	1	2	3	4	5	6	7
74. Deseo la oportunidad de enfrentar problemas desafiantes que constituyen un reto para aumentar mi experiencia	1	2	3	4	5	6	7
75. Un trabajo permanente es más importante que un alto ingreso	1	2	3	4	5	6	7

Redes personales

76. Indique el número total de personas que han actuado para ayudar a tu carrera, hablando por ti, proporcionándote información, oportunidades para la carrera, asesoría o apoyo psicológico, o con quién has hablado regularmente sobre dificultades en el trabajo, oportunidades de trabajo, alternativas u objetivos de la carrera a largo plazo.

---

77. Por favor indique el número de contactos, que fueron en el pasado o son actuales miembros de la organización donde se desempeña, que se encuentran o encontraron en niveles mayores al de usted en la organización.

Experiencia profesional

78. Años de experiencia profesional.

Parte 3: DATOS DEMOGRÁFICOS

El cuestionario sobre el éxito de carrera y sus determinantes a concluido.
Las siguientes preguntas están dirigidas a obtener información demográfica necesaria para el estudio.
Agradeceremos responder según corresponda

Tipo de carrera

79. Indique cual de las dos proposiciones describe mejor el desarrollo de su carrera. Seleccione solo una de ellas.

79.a Carrera desarrollada dentro de una organización, en función de las oportunidades que la empresa brinda	
79.b Carrera conducida por mi mismo dentro de una o varias organizaciones, redefiniendo mis objetivos de carrera acuerdo a los cambios personales y profesionales.	

80. Edad

	Años

81. Género

	Masculino
	Femenino

82. Etapa familiar

	Soltero sin dependientes
	Soltero con dependientes
	Casado sin dependientes
	Casado con dependientes

83. En que etapa de carrera te encuentras:

	Exploración (Identificando áreas de interés, preferencias y oportunidades)
	Avance (Puesto de relevancia intermedia en la organización, aprendizaje de aportes)
	Mantenimiento (Reconocido y estimado por superiores, aprende nuevas capacidades y conocimientos)
	Retiro (Declive de carrera proximo a separarse de la organización)

Gracias por su tiempo y esfuerzo en llenar este cuestionario

Appendix II

Item – Total Statistics

And

Principal Component Analysis

(Pilot study)

Subjective Career Success

	Rotated Component Matrix(a)				Item-Total Statistics		
Item	Component				Corrected		
	Job success	Financial success	Interpersonal success	Life success	Item-Total	Cronbach's Alpha	Cronbach's Alpha
	1	2	3	4	Correlation	if Item Deleted	
P1	0.458753059				0.566761438	0.9334	
P2	0.475152422				0.584357487	0.9330	
P3	0.518195425				0.585749664	0.9330	
P4	0.658253569				0.622662926	0.9323	
P5	0.664429381				0.738154216	0.9297	
P6	0.549174402				0.604959352	0.9326	
P7	0.567171659				0.751602982	0.9293	
P8	0.551409067				0.618808155	0.9323	
P9	0.760747656				0.769896014	0.9289	0.93533589
P10	0.739417178				0.722433369	0.9300	
P11	0.833693777				0.716133113	0.9302	
P12	0.293303578				0.459598825	0.9352	
P13	0.822584072				0.724535508	0.9300	
P14	0.803217363				0.726894461	0.9299	
P15	0.890749849				0.775494118	0.9287	
P16	**0.283608877**				**0.296758961**	**0.9371**	
P17	0.623188136				0.483477321	0.9348	
P18	0.69153553				0.712865405	0.9303	
P19				0.0801242	0.553008126	0.8289	
P20				0.7017393	0.689135536	0.8102	
P21				0.4078592	0.672189088	0.8121	
P22				0.2118242	0.564920301	0.8268	0.843509396
P23				0.4261448	0.544477743	0.8302	
P24				0.2983906	0.568925331	0.8260	
P25				**0.1829492**	**0.347056686**	**0.8488**	
P26				0.6805803	0.685910716	0.8105	
P27		0.733725927			0.695602833	0.8338	
P28		0.631335363			0.626785995	0.8428	
P29		0.817323523			0.771283725	0.8139	0.860802417
P30		0.756828145			0.665444845	0.8361	
P31		0.596484663			0.635719037	0.8408	
P32		0.670327255			0.577511748	0.8526	
P33			0.245889406		0.482829355	0.7014	
P34			**-0.09938931**		**0.33735311**	**0.7423**	
P35			0.489069481		0.327006758	0.7377	0.738964492
P36			0.552120575		0.468684455	0.7125	
P37			0.539743869		0.72632697	0.6153	
P38			0.611902461		0.561827494	0.6752	

Extraction Method: Principal Component Analysis.

Rotation Method: Quartimax with Kaiser Normalization.

(a) Rotation converged in 7 iterations.

Subjective Career Success

	Rotated Component Matrix(a)				Item-Total Statistics		
Item	Component						
	Job success	Financial success	Interpersonal success	Life success	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
	1	2	3	4			
P1	0.496299476				0.555194209	0.9356	
P2	0.560528614				0.579111971	0.9352	
P3	0.547969808				0.582516312	0.9351	
P4	0.697651748				0.629876172	0.9342	
P5	0.706234954				0.744274188	0.9315	
P6	0.606670374				0.60616974	0.9347	
P7	0.673158262				0.754093385	0.9312	
P8	0.626022101				0.621901531	0.9343	
P9	0.801926182				0.77191101	0.9308	0.937145926
P10	0.781402652				0.715880837	0.9322	
P11	0.829916488				0.716854963	0.9322	
P12	**0.402320316**				**0.451584458**	**0.9375**	
P13	0.811811532				0.730203041	0.9319	
P14	0.791230639				0.730051263	0.9319	
P15	0.881358028				0.779131147	0.9306	
P17	0.625600154				0.470935288	0.9371	
P18	0.726788326				0.716553164	0.9322	
P19				**0.1712242**	**0.554948393**	**0.8348**	
P20				0.7160707	0.700532881	0.8125	
P21				0.4982688	0.683975712	0.8142	
P22				0.2596308	0.545286959	0.8355	0.84773312
P23				0.4064777	0.531833601	0.8388	
P24				0.3869794	0.561431353	0.8331	
P26				0.7083482	0.67683382	0.8160	
P27		0.699346118			0.695602833	0.8338	
P28		0.622668247			0.626785995	0.8428	
P29		0.778229457			0.771283725	0.8139	0.860802417
P30		0.74995743			0.665444845	0.8361	
P31		0.59164436			0.635719037	0.8408	
P32		0.664343143			0.577511748	0.8526	
P33			0.142445435		0.427983028	0.7196	
P35			**0.463699756**		**0.340415556**	**0.7370**	
P36			0.532109794		0.529714564	0.6915	0.733169421
P37			0.482505376		0.682035195	0.6018	
P38			0.572452075		0.567987412	0.6569	

Extraction Method: Principal Component Analysis.
Rotation Method: Quartimax with Kaiser Normalization.

Rotation Method: Quartimax with Kaiser Normalization.

(a) Rotation converged in 6 iterations.

Subjective Career Success

	Rotated Component Matrix(a)				Item-Total Statistics		
Item	Component				Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
	Job success	Financial success	Interpersonal success	Life success			
	1	2	3	4			
P1	0.51050711				0.541457822	0.9345	0.935745465
P2	0.576310902				0.569268478	0.9340	
P3	0.561365346				0.573631688	0.9339	
P4	0.672714872				0.629732787	0.9326	
P5	0.726575242				0.743528254	0.9298	
P6	0.611828072				0.600245945	0.9333	
P7	0.681298634				0.730053464	0.9301	
P8	0.641855998				0.61424213	0.9330	
P9	0.790027317				0.75708	0.9294	
P10	0.76352289				0.698571349	0.9309	
P11	0.787811579				0.706926277	0.9307	
P13	0.813440154				0.728591947	0.9302	
P14	0.78678637				0.739741017	0.9299	
P15	0.856384214				0.782716279	0.9287	
P17	0.610358968				0.472150633	0.9358	
P18	0.727219487				0.723403573	0.9303	
P20			0.72740333		0.71315011	0.7272	0.813410798
P21			0.660492053		0.635149509	0.7660	
P24			0.581198642		0.565791921	0.7954	
P26			0.677549244		0.622118898	0.7704	
P27		0.726036696			0.695602833	0.8338	0.860802417
P28		0.678929141			0.626785995	0.8428	
P29		0.789402571			0.771283725	0.8139	
P30		0.73718242			0.665444845	0.8361	
P31		0.601069325			0.635719037	0.8408	
P32		0.673308357			0.577511748	0.8526	
P35				0.5077542	0.426548901	0.7044	0.719560117
P36				0.6106771	0.539420045	0.6642	
P37				0.5559893	0.5915825	0.6096	
P38				0.6485259	0.560869805	0.6293	

Extraction Method: Principal Component Analysis.

Rotation Method: Quartimax with Kaiser Normalization.

(a) Rotation converged in 5 iterations.

Individual competences

	Rotated Component Matrix(a)	Item-Total Statistics		
Item	Component 1	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
P42	0.960861926	0.97722746	0.8934223	0.92750089
P43	0.884863695	0.75859078	0.93609352	
P44	0.821083612	0.67883076	0.94874949	
P45	0.881852414	0.88971693	0.9117327	
P46	0.878299309	0.88253373	0.91319054	
P47	0.402493455	0.61746732	0.74990828	
P48	**0.313672857**	**0.52594421**	**0.78133708**	
P49	0.878114403	0.68163935	0.74606249	
P50	0.332019247	0.57637243	0.76626368	
P51	0.568572031	0.60777451	0.75330653	

Extraction Method: Principal Component Analysis..
Rotation Method: Quartimax with Kaiser Normalization
(a) Rotation converged in 3 iterations.

Individual competences

	Rotated Component Matrix(a)	Item-Total Statistics		
Item	Component 1	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
P42	0.979308673	0.96394116	0.90921819	0.93210016
P43	0.813313708	0.70574765	0.9266962	
P44	0.745062606	0.62410157	0.9311065	
P45	0.930402114	0.91798054	0.91272217	
P46	0.928247138	0.91570051	0.9128923	
P47	0.574659921	0.55962998	0.93422568	
P49	0.942072843	0.93288088	0.91162506	
P50	0.502097067	0.49501234	0.93705043	
P51	0.647909468	0.58534776	0.9332317	

Extraction Method: Principal Component Analysis..
Rotation Method: Quartimax with Kaiser Normalization
(a) Rotation converged in 3 iterations.

Organizational structures

	Component Matrix(a)	Item-Total Statistics		
Item	Component 1	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
P52	0.86343453	0.75969253	0.89600928	0.91006649
P53	0.894201607	0.80635193	0.87982658	
P54	0.885364235	0.79259489	0.88469812	
P55	0.906154271	0.82545282	0.87292371	

Extraction Method: Principal Component Analysis.

(a) 1 components extracted.

Individual Aspirations

	Rotated Component Matrix(a				Item-Total Statistics		
Item	Component						
	Getting Balanced	Getting Free	Getting Secure	Getting High	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
	1	2	3	4			
P56		0.099696346			0.271304186	0.30625586	
P57		0.762306387			0.303412829	0.25250269	
P58		0.795320827			0.249181674	0.31766595	0.386673475
P64		**-0.091841769**			**0.129161664**	**0.3944887**	
P60	0.997962746				0.774643626	0.79978424	
P61	0.858352459				0.782691825	0.79720282	
P63	0.413941885				0.513891675	0.863882	0.857362118
P66	0.406979585				0.701329557	0.82296572	
P68	0.675965705				0.614866734	0.8426081	
P59			0.515568686		0.469098706	0.37006215	
P62			0.380300997		0.356725248	0.47071419	
P69			-0.17721327		0.33861882	0.48866221	0.54455054
P71			**-0.02926825**		**0.155998652**	**0.56279555**	
P75			0.709431868		0.290372246	0.51090949	
P65				-0.193029416	0.522834613	0.79160543	
P67				-0.664400253	0.574984761	0.78044999	
P70				-0.242602258	0.579951713	0.77912296	0.810774425
P72				**-0.30700639**	**0.471738196**	**0.80154775**	
P73				-0.71712351	0.646564023	0.76350456	
P74				-0.442092051	0.633048927	0.76658125	

Extraction Method: Principal Component Analysis. .
Rotation Method: Oblimin with Kaiser Normalization
(a) Rotation converged in 23 iterations.

	Rotated Component Matrix(a				Item-Total Statistics		
Item	Component						
	Getting Balanced	Getting Free	Getting Secure	Getting High	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
	1	2	3	4			
P56			**0.049305614**		**0.232770128**	**0.52107427**	
P57			0.775128613		0.322845676	0.1984528	0.389792338
P58			0.838152498		0.279203436	0.30108363	
P60	0.901123043				0.774643626	0.79978424	
P61	0.74948976				0.782691825	0.79720282	
P63	**0.530180145**				**0.513891675**	**0.863882**	0.857362118
P66	**0.341543513**				**0.701329557**	**0.82296572**	
P68	0.80322737				0.614866734	0.8426081	
P59		0.542075329			0.478007385	0.35045214	
P62		0.481112344			0.385980055	0.46791265	
P69		**-0.122823328**			**0.320718676**	**0.54358582**	0.556632884
P75		0.836594583			0.268931459	0.54730658	
P65				**-0.2974013**	**0.492569756**	**0.79068313**	
P67				-0.720782075	0.586754102	0.76289005	
P70				**-0.326380963**	**0.576972719**	**0.76589351**	0.801547755
P73				-0.739738834	0.626328506	0.75032555	
P74				-0.667116922	0.640309701	0.74548878	

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization.
Rotation Method: Oblimin with Kaiser Normalization
(a) Rotation converged in 22 iterations.

	Rotated Component Matrix(a				Item-Total Statistics		
Item	Component						
	Getting Balanced	Getting Free	Getting Secure	Getting High	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's Alpha
	1	2	3	4			
P57		0.80325896			0.360598081	0.25695693	0.52087048
P58		0.849205209			0.360598081	0.32669854	
P60	0.824057929				0.788809296	0.70442416	0.822965724
P61	0.654576961				0.721630166	0.74132745	
P63	0.538242377				0.482577594	0.84304218	
P68	0.829658321				0.620370576	0.78981614	
P69			0.504048031		0.450328635	0.28726166	0.534792558
P62			0.623934065		0.346609466	0.4411983	
P75			0.818764049		0.325581319	0.49433091	
P67				-0.686831821	0.515813067	0.74018177	0.751441294
P73				-0.698957009	0.617327151	0.62470475	
P74				-0.693763472	0.60785645	0.63476853	

Extraction Method: Principal Component Analysis.
Rotation Method: Oblimin with Kaiser Normalization
(a) Rotation converged in 17 iterations.

Appendix III

Final Survey

Santa Anita, Enero 2008

Estimado egresado de Tecsup:

Usted ha sido invitado a participar en un estudio de investigación de carrera de tecnólogos en el Perú. Su nombre ha sido seleccionado aleatoriamente de la base de datos de la Institución.

Este estudio tiene la intención de investigar cuáles son los determinantes para el éxito de carrera de egresados de Tecsup y sus resultados serán usados para mejorar los servicios de la oficina de desarrollo de egresados.

A continuación te presento un cuestionario que tomará un tiempo aproximado de 25 minutos para responderlo.

Los resultados de este estudio se mantendrán en reserva y sólo serán consultados por los investigadores para la elaboración de las variables estadísticas considerados en él.

Agradeciendo tu participación.

Atentamente,

Alberto Bejarano Heredia
Director Académico
TECSUP

Investigación sobre Determinantes del Éxito de Carrera De Graduados de Programas de Tecnología

Este cuestionario está diseñado para identificar sus opiniones sobre el éxito de carrera y sus determinantes. Está dividido en tres partes: La parte 1 referida al éxito de la carrera, la parte 2 a los determinantes del éxito de carrera y la parte 3 a la información demográfica que nos servirá para caracterizar a la población que responda al cuestionario.

No existen respuestas malas o buenas por lo que le agradeceré responder todas ellas de acuerdo a su percepción.

Parte 1: ÉXITO DE CARRERA

Por favor haga un círculo en el número que mejor refleje su propia percepción.

	Completamente de acuerdo	De acuerdo	Ni de acuerdo ni en desacuerdo	En desacuerdo	Completa-mente en desacuerdo
1. Estoy recibiendo información positiva sobre mi desempeño permanentemente	1	2	3	4	5
2. Tengo oportunidades de capacitación ofrecidas por mi empleador	1	2	3	4	5
3. Estoy contento con las promociones laborales recibidas hasta el momento	1	2	3	4	5
4. Estoy teniendo suficiente responsabilidad en mi trabajo	1	2	3	4	5
5. Estoy en un trabajo que ofrece oportunidades de promoción y desarrollo profesional	1	2	3	4	5
6. Estoy alcanzando las metas de mi carrera dentro del tiempo que yo establecí	1	2	3	4	5
7. Tengo total apoyo de la gerencia en mi trabajo	1	2	3	4	5
8. Estoy alcanzando todas las metas de mi carrera	1	2	3	4	5
9. Estoy en un trabajo que me ofrece la oportunidad de aprender nuevas habilidades	1	2	3	4	5
10. Estoy muy contento cuando estoy en el trabajo	1	2	3	4	5
11. Tengo desafíos en mi trabajo	1	2	3	4	5
12. Estoy en una posición donde hago el trabajo que realmente me gusta	1	2	3	4	5
13. Estoy en una posición donde puedo poner mis propias metas	1	2	3	4	5
14. Estoy disfrutando los objetivos desafiantes que tengo en mi actual trabajo	1	2	3	4	5
15. Estoy dedicado a mi trabajo	1	2	3	4	5
16. Tengo oportunidades de promoción ofrecidas por mi empleador	1	2	3	4	5
17. Soy feliz con mi vida privada	1	2	3	4	5
18. Soy aceptado por mis compañeros	1	2	3	4	5
19. Tengo la confianza de mis compañeros	1	2	3	4	5
20. Estoy disfrutando una familia feliz (esposa/pareja, niños, etc.)	1	2	3	4	5
21. Estoy recibiendo compensación justa comparada a la de mis compañeros	1	2	3	4	5
22. Tengo un ingreso mayor comparado al de mis compañeros	1	2	3	4	5
23. Estoy ganando lo que considero que vale mi trabajo	1	2	3	4	5
24. Estoy ganando lo suficiente para pagar mis cuentas	1	2	3	4	5

	Completamente de acuerdo	De acuerdo	Ni de acuerdo ni en desacuerdo	En desacuerdo	Completa-mente en desacuerdo
25. Estoy obteniendo un salario que cubre mi actual estilo de vida	1	2	3	4	5
26. Estoy bien pagado cuando comparo mi remuneración con lo ofrecido por trabajos similares en otras compañías	1	2	3	4	5
27. A menudo estoy haciendo algo con mis compañeros después del trabajo	1	2	3	4	5
28. Soy requerido a menudo por mis compañeros para consejo en asuntos privados	1	2	3	4	5
29. Estoy obteniendo con frecuencia información de mis compañeros sobre mi desempeño	1	2	3	4	5
30. Soy consultado con frecuencia para asesorar a un colega sobre un asunto del trabajo	1	2	3	4	5

31. Indique su salario anual en soles (incluyendo bonos y otros ingresos directos).

---

32. Indique el numero de promociones (incremento en las responsabilidades del trabajo, alcance del trabajo, rotación a otras áreas con mayor responsabilidad) recibidas en su carrera profesional.

Parte 2: DETERMINANTES DE ÉXITO

Competencias Individuales

Las siguientes afirmaciones describen comportamientos de las personas. Favor indicar que tan preciso lo describe a usted cada afirmación:

	Muy imprecisa	Moderadamente imprecisa	Ni imprecisa ni precisa	Moderadamente precisa	Muy precisa
33. Propongo buenas soluciones	1	2	3	4	5
34. Completo las tareas exitosamente	1	2	3	4	5
35. Llevo a cabo mis planes	1	2	3	4	5
36. Termino gran cantidad de trabajo	1	2	3	4	5
37. Consigo que las cosas sean hechas rápidamente	1	2	3	4	5
38. Siento que a mi vida le falta dirección	1	2	3	4	5
39. Doy vueltas sin hacer nada	1	2	3	4	5
40. Hago el trabajo suficiente para sobrevivir	1	2	3	4	5
41. Enredo las cosas	1	2	3	4	5

Estructura laboral de su Organización

Por favor haga un círculo en el número que mejor refleje su propia percepción sobre la estructura del mercado laboral en su empresa.

	Completamente en desacuerdo	En desacuerdo	Ni de acuerdo ni en desacuerdo	De acuerdo	Completa-mente de acuerdo
42. Hay una estructura claramente definida de promoción	1	2	3	4	5
43. Existe progresión de carrera relacionada a la progresión en habilidades y conocimientos	1	2	3	4	5
44. Los niveles de los trabajos al ingresar ofrecen progresión en la carrera	1	2	3	4	5
45. Existe una estructura interna de trabajo ascendente	1	2	3	4	5

Aspiraciones de carrera

Por favor haga un círculo en el número que mejor refleje sus aspiraciones de carrera.

	Nunca	Casi nunca	En forma Ocasional	En forma Constante	Con Frecuencia	Casi siempre	Siempre
46. El trabajo auto-dirigido es mejor para mí	1	2	3	4	5	6	7
47. Me gusta trabajar independientemente	1	2	3	4	5	6	7
48. Considero mi carrera exitosa si mi compañía me garantiza un trabajo a largo plazo	1	2	3	4	5	6	7
49. Dedicarle tiempo a la familia es tan importante como mi carrera	1	2	3	4	5	6	7
50. Un buen balance entre las necesidades de mi trabajo y las necesidades de mi familia es un buen criterio para el éxito de carrera	1	2	3	4	5	6	7
51. El puesto de trabajo ideal para mí está donde yo pueda trabajar por toda mi vida	1	2	3	4	5	6	7
52. El trabajo ideal para mí es el que da tiempo para la familia y actividades externas	1	2	3	4	5	6	7
53. Desearía obtener un trabajo que sea crucial para la organización	1	2	3	4	5	6	7
54. No quiero sacrificar mi vida personal por la profesional, ni viceversa	1	2	3	4	5	6	7
55. El desarrollo de relaciones personales significativas es tan importante como el trabajo	1	2	3	4	5	6	7
56. Deseo la oportunidad de enfrentar problemas desafiantes que constituyen un reto para aumentar mi experiencia	1	2	3	4	5	6	7
57. Un trabajo permanente es más importante que un alto ingreso	1	2	3	4	5	6	7

Redes personales

58. Indique el número total de personas que han actuado para ayudar a tu carrera, hablando por ti, proporcionándote información, oportunidades para la carrera, asesoría o apoyo psicológico, o con quién has hablado regularmente sobre dificultades en el trabajo, oportunidades de trabajo, alternativas u objetivos de la carrera a largo plazo.

---

59. Por favor indique el número de contactos, que fueron en el pasado o son actuales miembros de la organización donde se desempeña, que se encuentran o encontraron en niveles mayores al de usted en la organización.

Experiencia profesional

60. Años de experiencia profesional.

Parte 3: DATOS DEMOGRÁFICOS

El cuestionario sobre el éxito de carrera y sus determinantes a concluido.
Las siguientes preguntas están dirigidas a obtener información demográfica necesaria para el estudio.
Agradeceremos responder según corresponda

Tipo de carrera

61. Indique cual de las dos proposiciones describe mejor el desarrollo de su carrera. Seleccione solo una de ellas.

61.a Carrera desarrollada dentro de una organización, en función de las oportunidades que la empresa brinda	☐
62.b Carrera conducida por mi mismo dentro de una o varias organizaciones, redefiniendo mis objetivos de carrera acuerdo a los cambios personales y profesionales.	☐

62. Edad

☐ Años

63. Género

☐ Masculino

☐ Femenino

64. Etapa familiar

☐ Soltero sin dependientes

☐ Soltero con dependientes

☐ Casado sin dependientes

☐ Casado con dependientes

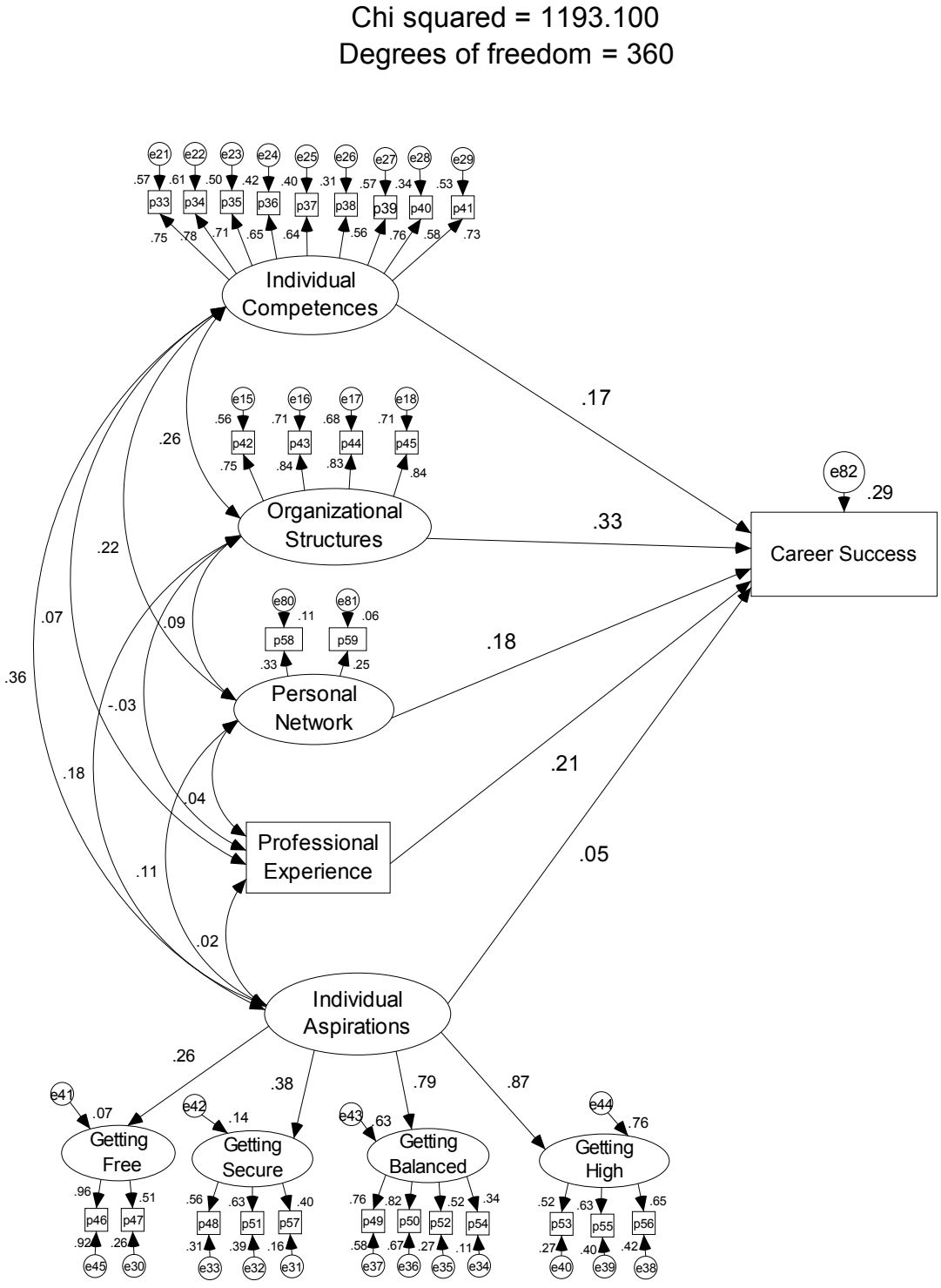
65. En que etapa de carrera te encuentras:

☐	Exploración (Identificando áreas de interés, preferencias y oportunidades)
☐	Avance (Puesto de relevancia intermedia en la organización, aprendizaje de aportes)
☐	Mantenimiento (Reconocido y estimado por superiores, aprende nuevas capacidades y conocimientos)
☐	Retiro (Declive de carrera próximo a separarse de la organización)

Gracias por tu tiempo y esfuerzo en llenar este cuestionario

Appendix IV

Results of SEM



Scalar Estimates (Group number 1 - Default model)

Generalized Least Squares Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
Getting Secure	<---	Individual Aspirations	1.295	.448	2.893	.004	
Getting Balanced	<---	Individual Aspirations	2.588	.837	3.092	.002	
Getting High	<---	Individual Aspirations	2.691	.859	3.134	.002	
Getting Free	<---	Individual Aspirations	1.000				
p42_1	<---	Organizational Structures	1.000				
p43_1	<---	Organizational Structures	1.041	.041	25.615	***	
p44_1	<---	Organizational Structures	.969	.043	22.726	***	
p45_1	<---	Organizational Structures	1.011	.042	24.208	***	
p33_1	<---	Individual Competences	1.000				
p34_1	<---	Individual Competences	1.084	.044	24.376	***	
p35_1	<---	Individual Competences	1.049	.051	20.566	***	
p36_1	<---	Individual Competences	1.025	.057	18.098	***	
p37_1	<---	Individual Competences	.957	.053	18.113	***	
p38_1	<---	Individual Competences	1.180	.086	13.772	***	
p39_1	<---	Individual Competences	1.295	.074	17.515	***	
p40_1	<---	Individual Competences	1.213	.083	14.555	***	
p41_1	<---	Individual Competences	1.204	.065	18.575	***	
p47_1	<---	Getting Free	1.000				
p46_1	<---	Getting Free	1.862	.496	3.751	***	
p57_1	<---	Getting Secure	1.000				
p51_1	<---	Getting Secure	1.644	.238	6.902	***	
p48_1	<---	Getting Secure	1.450	.205	7.086	***	
p54_1	<---	Getting Balanced	1.000				
p52_1	<---	Getting Balanced	1.145	.131	8.757	***	
p50_1	<---	Getting Balanced	1.741	.197	8.831	***	
p49_1	<---	Getting Balanced	1.542	.174	8.840	***	
p56_1	<---	Getting High	1.000				
p53_1	<---	Getting High	1.103	.097	11.351	***	
p55_1	<---	Getting High	1.323	.108	12.288	***	
p58_1	<---	Personal network	1.000				
p59_1	<---	Personal network	.625	.334	1.869	.062	
Career_Success	<---	Individual Competences	.332	.086	3.843	***	
Career_Success	<---	Organizational Structures	.378	.042	8.901	***	
Career_Success	<---	Personal network	.031	.021	1.516	.130	
Career_Success	<---	Professional_Experience	.049	.007	6.777	***	
Career_Success	<---	Individual Aspirations	.224	.221	1.014	.310	

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
Getting Secure	<---	Individual Aspirations	.379
Getting Balanced	<---	Individual Aspirations	.794
Getting High	<---	Individual Aspirations	.870
Getting Free	<---	Individual Aspirations	.258
Career_Success	<---	Individual Competences	.170

			Estimate
Career_Success	<---	Organizational Structures	.335
Career_Success	<---	Personal network	.175
Career_Success	<---	Professional_Experience	.213
Career_Success	<---	Individual Aspirations	.045

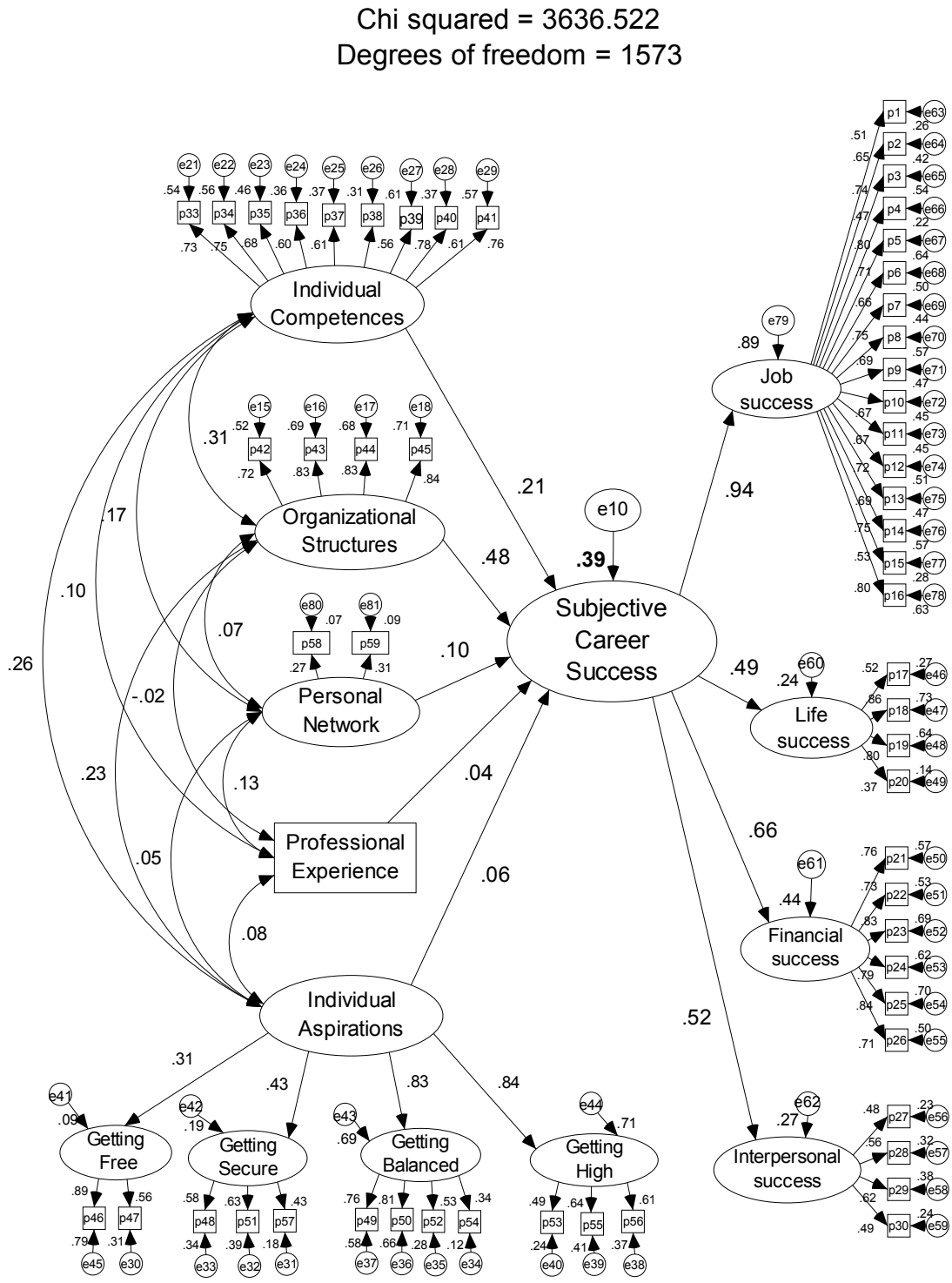
Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	75	1193.100	360	.000	3.314
Saturated model	435	.000	0		
Independence model	29	2590.551	406	.000	6.381
Zero model	0	14645.000	435	.000	33.667

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	1.047	.919	.902	.760
Saturated model	.000	1.000		
Independence model	1.731	.823	.810	.768
Zero model	14.314	.000	.000	.000



Scalar Estimates (Group number 1 - Default model)

Generalized Least Squares Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
Subjective Career Success	<---	Individual Aspirations	.086	.064	1.338	.181	
Subjective Career Success	<---	Organizational Structures	.231	.025	9.210	***	
Subjective Career Success	<---	Individual Competences	.177	.037	4.811	***	
Subjective Career Success	<---	Personal network	.009	.008	1.066	.286	
Subjective Career Success	<---	Professional_Experience	.003	.003	1.034	.301	
Getting Secure	<---	Individual Aspirations	1.225	.343	3.571	***	
Getting Balanced	<---	Individual Aspirations	2.116	.567	3.733	***	
Getting High	<---	Individual Aspirations	1.825	.469	3.888	***	
Interpersonal success	<---	Subjective Career Success	.628	.086	7.335	***	
Life success	<---	Subjective Career Success	.389	.058	6.660	***	
Financial success	<---	Subjective Career Success	1.239	.120	10.357	***	
Job success	<---	Subjective Career Success	1.000				
Getting Free	<---	Individual Aspirations	1.000				
p42_1	<---	Organizational Structures	1.000				
p43_1	<---	Organizational Structures	1.083	.047	22.818	***	
p44_1	<---	Organizational Structures	1.039	.051	20.382	***	
p45_1	<---	Organizational Structures	1.059	.049	21.632	***	
p33_1	<---	Individual Competences	1.000				
p34_1	<---	Individual Competences	1.094	.050	21.848	***	
p35_1	<---	Individual Competences	1.055	.058	18.217	***	
p36_1	<---	Individual Competences	.962	.062	15.548	***	
p37_1	<---	Individual Competences	.970	.060	16.132	***	
p38_1	<---	Individual Competences	1.248	.097	12.901	***	
p39_1	<---	Individual Competences	1.509	.090	16.746	***	
p40_1	<---	Individual Competences	1.415	.099	14.257	***	
p41_1	<---	Individual Competences	1.415	.080	17.697	***	
p47_1	<---	Getting Free	1.000				
p46_1	<---	Getting Free	1.553	.329	4.722	***	
p57_1	<---	Getting Secure	1.000				
p51_1	<---	Getting Secure	1.536	.204	7.530	***	
p48_1	<---	Getting Secure	1.435	.191	7.525	***	
p54_1	<---	Getting Balanced	1.000				

			Estimate	S.E.	C.R.	P	Label
p52_1	<---	Getting Balanced	1.173	.136	8.596	***	
p50_1	<---	Getting Balanced	1.687	.195	8.657	***	
p49_1	<---	Getting Balanced	1.489	.172	8.658	***	
p56_1	<---	Getting High	1.000				
p53_1	<---	Getting High	1.135	.111	10.241	***	
p17_1	<---	Life success	1.000				
p18_1	<---	Life success	1.466	.147	9.989	***	
p19_1	<---	Life success	1.532	.154	9.962	***	
p20_1	<---	Life success	.875	.101	8.664	***	
p21_1	<---	Financial success	1.000				
p22_1	<---	Financial success	.970	.044	22.251	***	
p23_1	<---	Financial success	1.231	.052	23.675	***	
p24_1	<---	Financial success	1.089	.058	18.921	***	
p25_1	<---	Financial success	1.123	.056	19.966	***	
p26_1	<---	Financial success	.982	.052	18.850	***	
p27_1	<---	Interpersonal success	1.000				
p28_1	<---	Interpersonal success	.951	.104	9.138	***	
p29_1	<---	Interpersonal success	1.004	.107	9.391	***	
p30_1	<---	Interpersonal success	.727	.092	7.949	***	
p55_1	<---	Getting High	1.472	.131	11.259	***	
p2_1	<---	Job success	1.711	.129	13.216	***	
p3_1	<---	Job success	1.779	.129	13.840	***	
p4_1	<---	Job success	1.116	.104	10.759	***	
p5_1	<---	Job success	1.922	.140	13.753	***	
p6_1	<---	Job success	1.521	.115	13.187	***	
p7_1	<---	Job success	1.422	.107	13.253	***	
p8_1	<---	Job success	1.527	.113	13.465	***	
p9_1	<---	Job success	1.412	.112	12.655	***	
p10_1	<---	Job success	1.282	.098	13.090	***	
p11_1	<---	Job success	1.175	.093	12.659	***	
p12_1	<---	Job success	1.456	.115	12.703	***	
p13_1	<---	Job success	1.481	.114	12.952	***	
p14_1	<---	Job success	1.500	.114	13.172	***	
p15_1	<---	Job success	.890	.080	11.107	***	
p16_1	<---	Job success	1.971	.144	13.654	***	
p1_1	<---	Job success	1.000				
p58_1	<---	Personal network	1.000				
p59_1	<---	Personal network	.932	.649	1.436	.151	

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
Subjective Career Success	<---	Individual Aspirations	.058
Subjective Career Success	<---	Organizational Structures	.483
Subjective Career Success	<---	Individual Competences	.213

			Estimate
Subjective Career Success	<---	Personal network	.102
Subjective Career Success	<---	Professional_Experience	.036
Getting Secure	<---	Individual Aspirations	.434
Getting Balanced	<---	Individual Aspirations	.833
Getting High	<---	Individual Aspirations	.843
Interpersonal success	<---	Subjective Career Success	.520
Life success	<---	Subjective Career Success	.494
Financial success	<---	Subjective Career Success	.664
Job success	<---	Subjective Career Success	.945
Getting Free	<---	Individual Aspirations	.305

Model Fit Summary

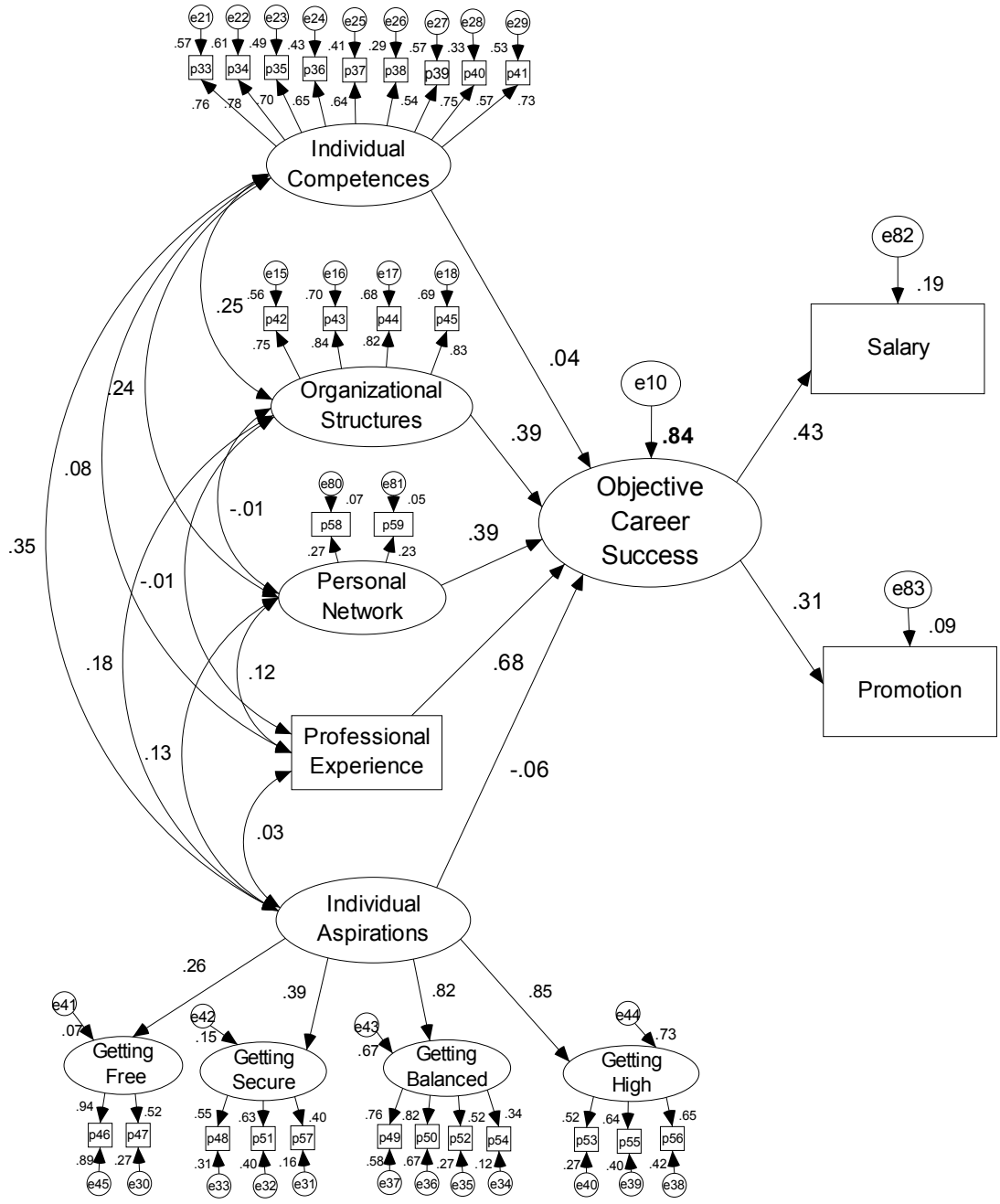
CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	138	3636.522	1573	.000	2.312
Saturated model	1711	.000	0		
Independence model	58	5810.297	1653	.000	3.515
Zero model	0	29290.000	1711	.000	17.119

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.912	.876	.865	.805
Saturated model	.000	1.000		
Independence model	1.156	.802	.795	.774
Zero model	7.221	.000	.000	.000

Chi squared = 1230.482
Degrees of freedom = 387



Scalar Estimates (Group number 1 - Default model)

Generalized Least Squares Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
Getting Secure	<---	Individual Aspirations	1.271	.425	2.990	.003	
Getting Balanced	<---	Individual Aspirations	2.584	.809	3.194	.001	
Getting High	<---	Individual Aspirations	2.527	.776	3.255	.001	
Objective Career Success	<---	Individual Aspirations	-.018	.027	-.663	.507	
Objective Career Success	<---	Organizational Structures	.026	.006	4.370	***	
Getting Free	<---	Individual Aspirations	1.000				
Objective Career Success	<---	Individual Competences	.005	.012	.380	.704	
Objective Career Success	<---	Personal network	.005	.004	1.227	.220	
Objective Career Success	<---	Professional_Experience	.009	.001	8.080	***	
p42_1	<---	Organizational Structures	1.000				
p43_1	<---	Organizational Structures	1.044	.042	25.029	***	
p44_1	<---	Organizational Structures	.967	.044	22.197	***	
p45_1	<---	Organizational Structures	.997	.042	23.628	***	
p33_1	<---	Individual Competences	1.000				
p34_1	<---	Individual Competences	1.087	.045	24.409	***	
p35_1	<---	Individual Competences	1.038	.051	20.491	***	
p36_1	<---	Individual Competences	1.028	.057	18.154	***	
p37_1	<---	Individual Competences	.963	.053	18.204	***	
p38_1	<---	Individual Competences	1.131	.084	13.432	***	
p39_1	<---	Individual Competences	1.273	.073	17.386	***	
p40_1	<---	Individual Competences	1.188	.083	14.371	***	
p41_1	<---	Individual Competences	1.197	.065	18.532	***	
p47_1	<---	Getting Free	1.000				
p46_1	<---	Getting Free	1.804	.463	3.899	***	
p57_1	<---	Getting Secure	1.000				
p51_1	<---	Getting Secure	1.646	.240	6.859	***	
p48_1	<---	Getting Secure	1.448	.206	7.043	***	
p54_1	<---	Getting Balanced	1.000				
p52_1	<---	Getting Balanced	1.150	.131	8.796	***	
p50_1	<---	Getting Balanced	1.732	.195	8.880	***	
p49_1	<---	Getting Balanced	1.539	.173	8.876	***	
p56_1	<---	Getting High	1.000				
p53_1	<---	Getting High	1.104	.098	11.278	***	
p55_1	<---	Getting High	1.337	.109	12.233	***	
p58_1	<---	Personal network	1.000				
p59_1	<---	Personal network	.701	.392	1.786	.074	

			Estimate	S.E.	C.R.	P	Label
Salary	<---	Objective Career Success	1.000				
Promotion	<---	Objective Career Success	6.854	1.056	6.488	***	

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
Getting Secure	<---	Individual Aspirations	.389
Getting Balanced	<---	Individual Aspirations	.817
Getting High	<---	Individual Aspirations	.851
Objective Career Success	<---	Individual Aspirations	-.064
Objective Career Success	<---	Organizational Structures	.386
Getting Free	<---	Individual Aspirations	.263
Objective Career Success	<---	Individual Competences	.041
Objective Career Success	<---	Personal network	.394
Objective Career Success	<---	Professional_Experience	.685
Promotion	<---	Objective Career Success	.308

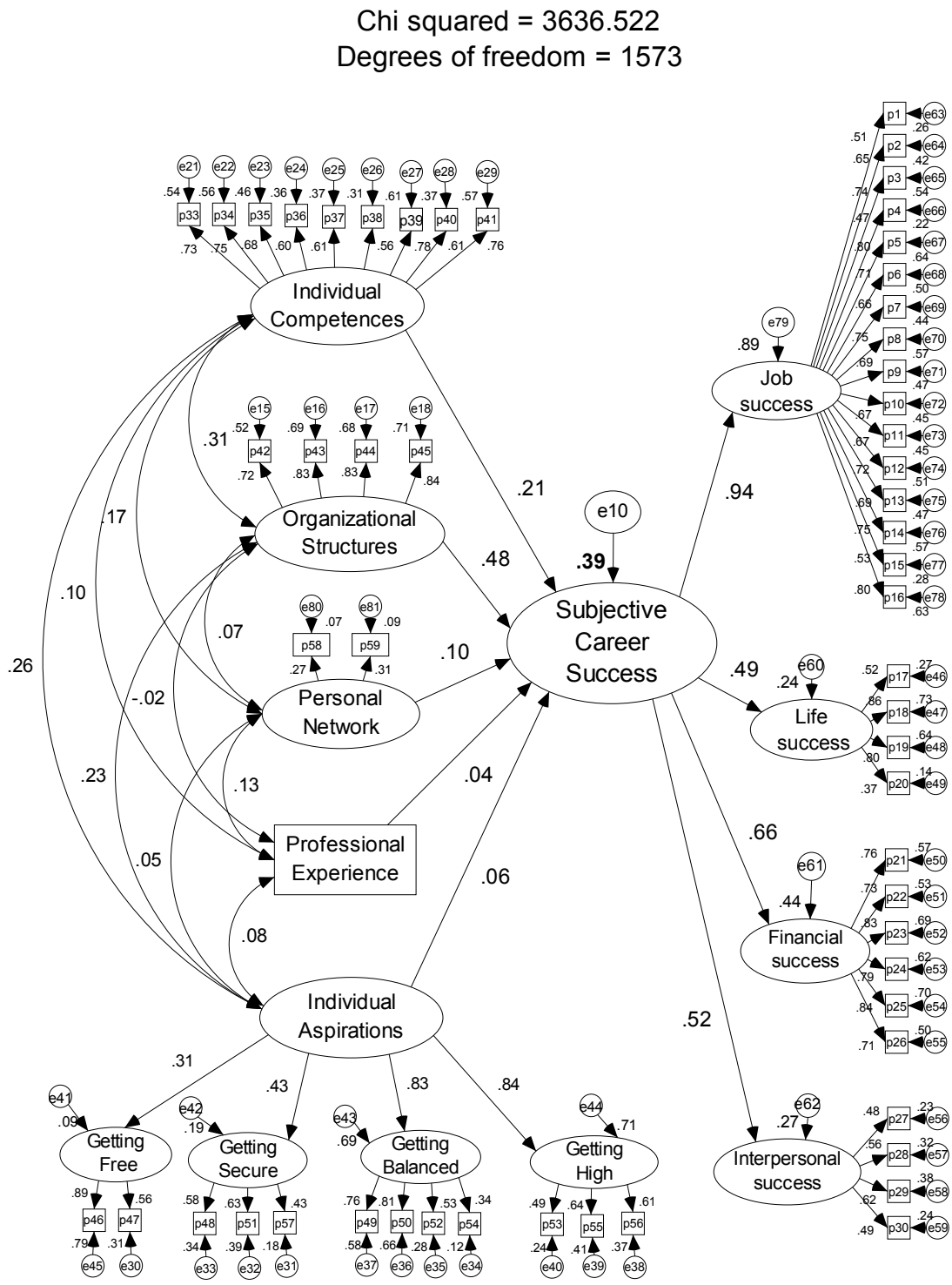
Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	78	1230.482	387	.000	3.180
Saturated model	465	.000	0		
Independence model	30	2668.431	435	.000	6.134
Zero model	0	15150.000	465	.000	32.581

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	1.393	.919	.902	.765
Saturated model	.000	1.000		
Independence model	1.851	.824	.812	.771
Zero model	13.845	.000	.000	.000



Scalar Estimates (Group number 1 - Default model)

Generalized Least Squares Estimates

Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Subjective Career <--- Individual Aspirations	.086	.064	1.338	.181	

			Estimate	S.E.	C.R.	P	Label
Success							
Subjective Career Success	<---	Organizational Structures	.231	.025	9.210	***	
Subjective Career Success	<---	Individual Competences	.177	.037	4.811	***	
Subjective Career Success	<---	Personal network	.009	.008	1.066	.286	
Subjective Career Success	<---	Professional_Experience	.003	.003	1.034	.301	
Getting Secure	<---	Individual Aspirations	1.225	.343	3.571	***	
Getting Balanced	<---	Individual Aspirations	2.116	.567	3.733	***	
Getting High	<---	Individual Aspirations	1.825	.469	3.888	***	
Interpersonal success	<---	Subjective Career Success	.628	.086	7.335	***	
Life success	<---	Subjective Career Success	.389	.058	6.660	***	
Financial success	<---	Subjective Career Success	1.239	.120	10.357	***	
Job success	<---	Subjective Career Success	1.000				
Getting Free	<---	Individual Aspirations	1.000				
p42_1	<---	Organizational Structures	1.000				
p43_1	<---	Organizational Structures	1.083	.047	22.818	***	
p44_1	<---	Organizational Structures	1.039	.051	20.382	***	
p45_1	<---	Organizational Structures	1.059	.049	21.632	***	
p33_1	<---	Individual Competences	1.000				
p34_1	<---	Individual Competences	1.094	.050	21.848	***	
p35_1	<---	Individual Competences	1.055	.058	18.217	***	
p36_1	<---	Individual Competences	.962	.062	15.548	***	
p37_1	<---	Individual Competences	.970	.060	16.132	***	
p38_1	<---	Individual Competences	1.248	.097	12.901	***	
p39_1	<---	Individual Competences	1.509	.090	16.746	***	
p40_1	<---	Individual Competences	1.415	.099	14.257	***	
p41_1	<---	Individual Competences	1.415	.080	17.697	***	
p47_1	<---	Getting Free	1.000				
p46_1	<---	Getting Free	1.553	.329	4.722	***	
p57_1	<---	Getting Secure	1.000				
p51_1	<---	Getting Secure	1.536	.204	7.530	***	
p48_1	<---	Getting Secure	1.435	.191	7.525	***	
p54_1	<---	Getting Balanced	1.000				
p52_1	<---	Getting Balanced	1.173	.136	8.596	***	

		Estimate	S.E.	C.R.	P	Label
p50_1	<--- Getting Balanced	1.687	.195	8.657	***	
p49_1	<--- Getting Balanced	1.489	.172	8.658	***	
p56_1	<--- Getting High	1.000				
p53_1	<--- Getting High	1.135	.111	10.241	***	
p17_1	<--- Life success	1.000				
p18_1	<--- Life success	1.466	.147	9.989	***	
p19_1	<--- Life success	1.532	.154	9.962	***	
p20_1	<--- Life success	.875	.101	8.664	***	
p21_1	<--- Financial success	1.000				
p22_1	<--- Financial success	.970	.044	22.251	***	
p23_1	<--- Financial success	1.231	.052	23.675	***	
p24_1	<--- Financial success	1.089	.058	18.921	***	
p25_1	<--- Financial success	1.123	.056	19.966	***	
p26_1	<--- Financial success	.982	.052	18.850	***	
p27_1	<--- Interpersonal success	1.000				
p28_1	<--- Interpersonal success	.951	.104	9.138	***	
p29_1	<--- Interpersonal success	1.004	.107	9.391	***	
p30_1	<--- Interpersonal success	.727	.092	7.949	***	
p55_1	<--- Getting High	1.472	.131	11.259	***	
p2_1	<--- Job success	1.711	.129	13.216	***	
p3_1	<--- Job success	1.779	.129	13.840	***	
p4_1	<--- Job success	1.116	.104	10.759	***	
p5_1	<--- Job success	1.922	.140	13.753	***	
p6_1	<--- Job success	1.521	.115	13.187	***	
p7_1	<--- Job success	1.422	.107	13.253	***	
p8_1	<--- Job success	1.527	.113	13.465	***	
p9_1	<--- Job success	1.412	.112	12.655	***	
p10_1	<--- Job success	1.282	.098	13.090	***	
p11_1	<--- Job success	1.175	.093	12.659	***	
p12_1	<--- Job success	1.456	.115	12.703	***	
p13_1	<--- Job success	1.481	.114	12.952	***	
p14_1	<--- Job success	1.500	.114	13.172	***	
p15_1	<--- Job success	.890	.080	11.107	***	
p16_1	<--- Job success	1.971	.144	13.654	***	
p1_1	<--- Job success	1.000				
p58_1	<--- Personal network	1.000				
p59_1	<--- Personal network	.932	.649	1.436	.151	

Standardized Regression Weights: (Group number 1 - Default model)

		Estimate
Subjective Career Success	<--- Individual Aspirations	.058
Subjective Career Success	<--- Organizational Structures	.483
Subjective Career Success	<--- Individual Competences	.213
Subjective Career Success	<--- Personal network	.102

			Estimate
Subjective Career Success	<---	Professional_Experience	.036
Getting Secure	<---	Individual Aspirations	.434
Getting Balanced	<---	Individual Aspirations	.833
Getting High	<---	Individual Aspirations	.843
Interpersonal success	<---	Subjective Career Success	.520
Life success	<---	Subjective Career Success	.494
Financial success	<---	Subjective Career Success	.664
Job success	<---	Subjective Career Success	.945
Getting Free	<---	Individual Aspirations	.305

Model Fit Summary

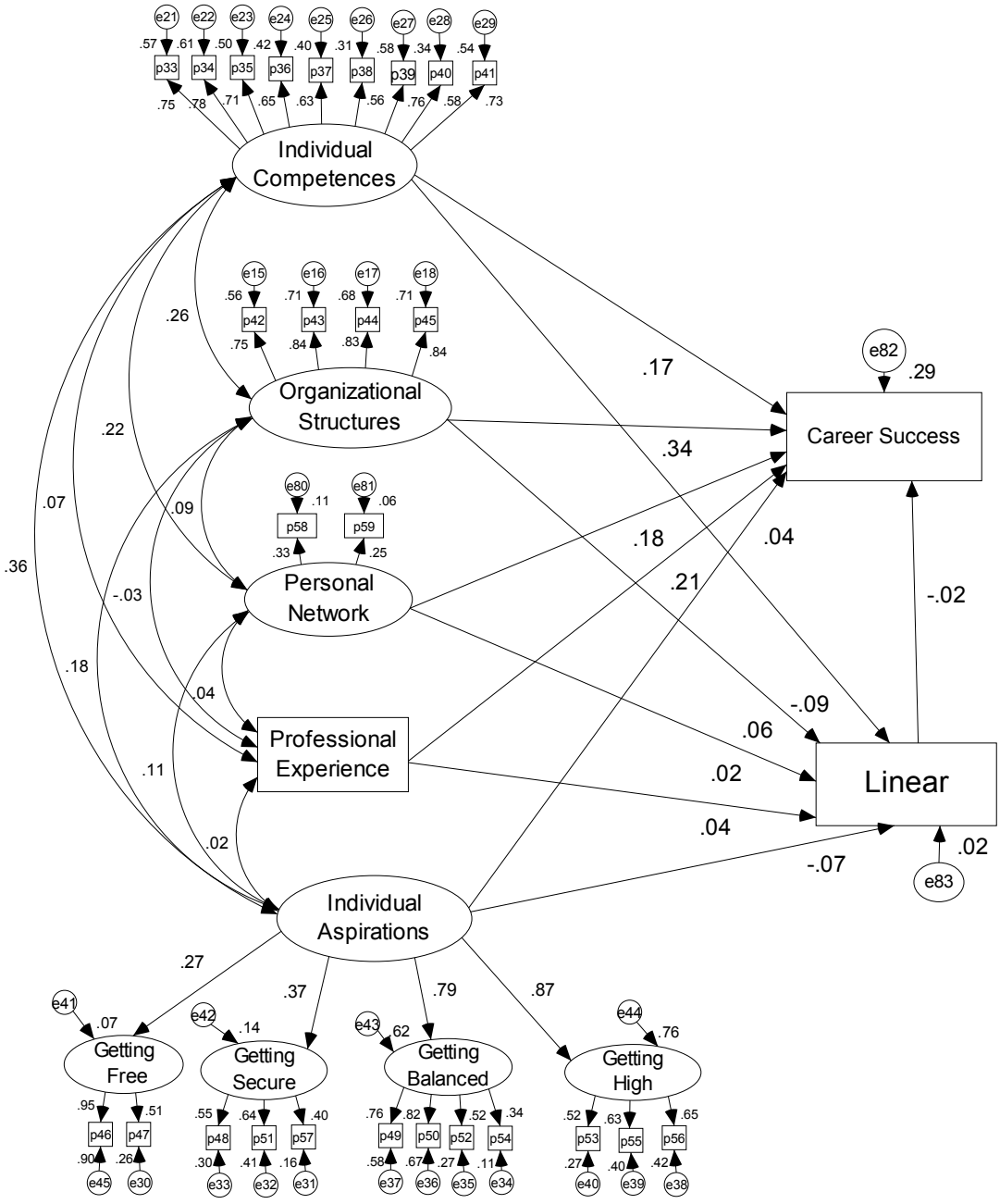
CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	138	3636.522	1573	.000	2.312
Saturated model	1711	.000	0		
Independence model	58	5810.297	1653	.000	3.515
Zero model	0	29290.000	1711	.000	17.119

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	.912	.876	.865	.805
Saturated model	.000	1.000		
Independence model	1.156	.802	.795	.774
Zero model	7.221	.000	.000	.000

Chi squared = 1230.879
Degrees of freedom = 383



Scalar Estimates (Group number 1 - Default model)

Generalized Least Squares Estimates

Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Getting Secure <--- Individual Aspirations	1.243	.425	2.926	.003	
Getting Balanced <--- Individual Aspirations	2.513	.800	3.141	.002	

			Estimate	S.E.	C.R.	P	Label
Getting High	<---	Individual Aspirations	2.654	.833	3.188	.001	
Getting Free	<---	Individual Aspirations	1.000				
Linear	<---	Organizational Structures	.034	.022	1.566	.117	
Linear	<---	Personal network	.002	.008	.216	.829	
Linear	<---	Professional_Experience	.004	.004	1.092	.275	
Linear	<---	Individual Competences	-.094	.045	-2.108	.035	
Linear	<---	Individual Aspirations	-.186	.121	-1.528	.126	
p42_1	<---	Organizational Structures	1.000				
p43_1	<---	Organizational Structures	1.040	.041	25.630	***	
p44_1	<---	Organizational Structures	.967	.043	22.739	***	
p45_1	<---	Organizational Structures	1.009	.042	24.223	***	
p33_1	<---	Individual Competences	1.000				
p34_1	<---	Individual Competences	1.083	.044	24.371	***	
p35_1	<---	Individual Competences	1.050	.051	20.573	***	
p36_1	<---	Individual Competences	1.023	.057	18.077	***	
p37_1	<---	Individual Competences	.956	.053	18.095	***	
p38_1	<---	Individual Competences	1.184	.086	13.806	***	
p39_1	<---	Individual Competences	1.300	.074	17.546	***	
p40_1	<---	Individual Competences	1.218	.083	14.595	***	
p41_1	<---	Individual Competences	1.209	.065	18.612	***	
p47_1	<---	Getting Free	1.000				
p46_1	<---	Getting Free	1.847	.484	3.820	***	
p57_1	<---	Getting Secure	1.000				
p51_1	<---	Getting Secure	1.675	.244	6.857	***	
p48_1	<---	Getting Secure	1.437	.202	7.126	***	
p54_1	<---	Getting Balanced	1.000				
p52_1	<---	Getting Balanced	1.149	.132	8.700	***	
p50_1	<---	Getting Balanced	1.752	.200	8.771	***	
p49_1	<---	Getting Balanced	1.553	.177	8.781	***	
p56_1	<---	Getting High	1.000				
p53_1	<---	Getting High	1.101	.097	11.347	***	
p55_1	<---	Getting High	1.318	.107	12.288	***	
p58_1	<---	Personal network	1.000				
p59_1	<---	Personal network	.624	.334	1.871	.061	
Career_Success	<---	Individual Competences	.329	.087	3.800	***	
Career_Success	<---	Organizational Structures	.378	.042	8.917	***	
Career_Success	<---	Personal network	.032	.021	1.518	.129	
Career_Success	<---	Professional_Experience	.049	.007	6.792	***	
Career_Success	<---	Individual Aspirations	.217	.217	.999	.318	
Career_Success	<---	Linear	-.031	.061	-.510	.610	

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
Getting Secure	<---	Individual Aspirations	.372
Getting Balanced	<---	Individual Aspirations	.790
Getting High	<---	Individual Aspirations	.873
Getting Free	<---	Individual Aspirations	.266
Linear	<---	Organizational Structures	.059
Linear	<---	Personal network	.019
Linear	<---	Professional_Experience	.036
Linear	<---	Individual Competences	-.092
Linear	<---	Individual Aspirations	-.073
Career_Success	<---	Individual Competences	.168
Career_Success	<---	Organizational Structures	.336
Career_Success	<---	Personal network	.176
Career_Success	<---	Professional_Experience	.214
Career_Success	<---	Individual Aspirations	.044
Career_Success	<---	Linear	-.016

Model Fit Summary

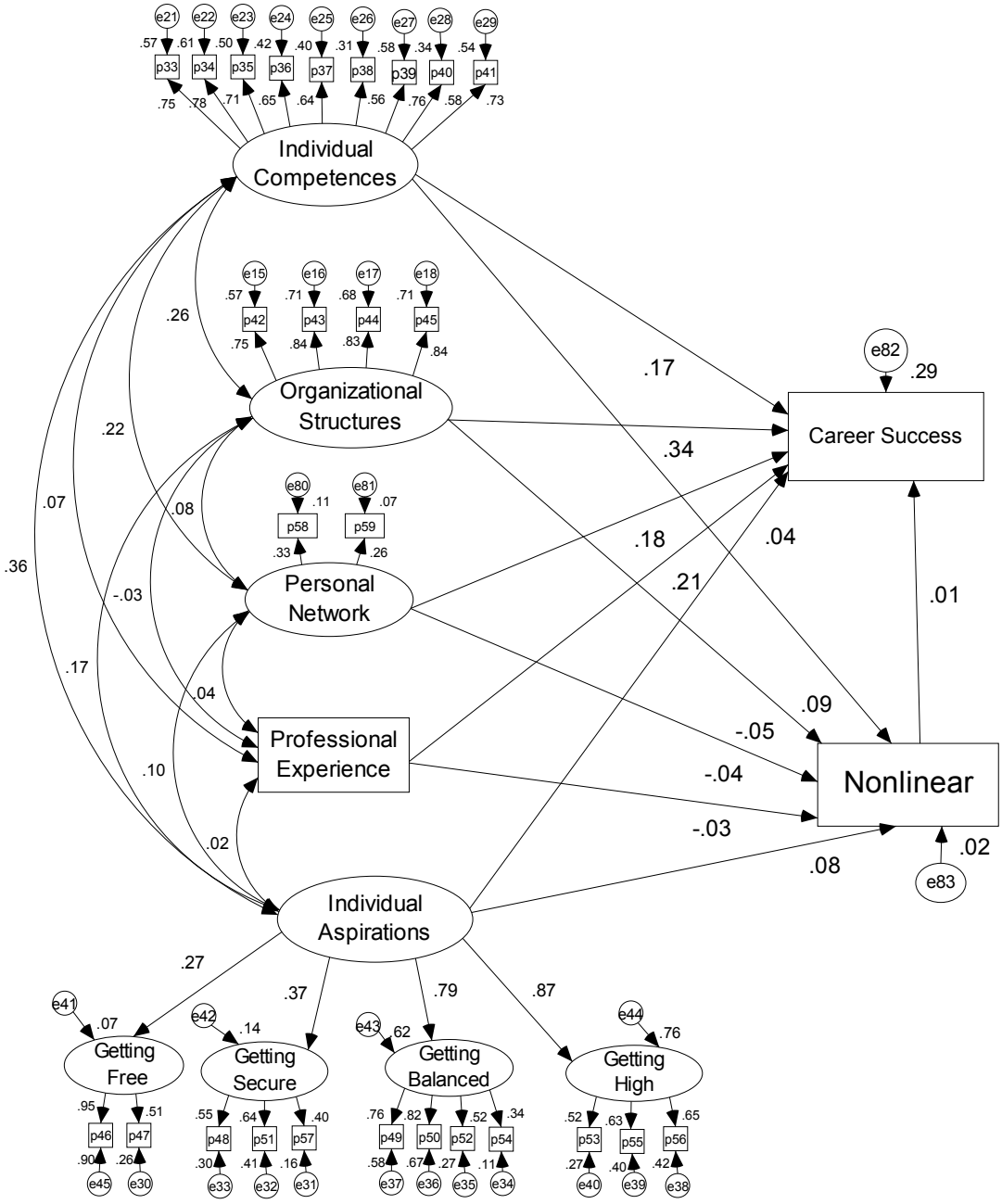
CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	82	1230.879	383	.000	3.214
Saturated model	465	.000	0		
Independence model	30	2625.821	435	.000	6.036
Zero model	0	15150.000	465	.000	32.581

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	1.012	.919	.901	.757
Saturated model	.000	1.000		
Independence model	1.674	.827	.815	.773
Zero model	13.844	.000	.000	.000

Chi squared = 1235.033
Degrees of freedom = 383



Scalar Estimates (Group number 1 - Default model)

Generalized Least Squares Estimates

Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Getting Secure <--- Individual Aspirations	1.229	.420	2.923	.003	
Getting Balanced <--- Individual Aspirations	2.510	.798	3.143	.002	
Getting High <--- Individual Aspirations	2.658	.833	3.190	.001	

			Estimate	S.E.	C.R.	P	Label
Getting Free	<---	Individual Aspirations	1.000				
Nonlinear	<---	Organizational Structures	-.032	.022	-1.442	.149	
Nonlinear	<---	Personal network	-.004	.008	-.488	.625	
Nonlinear	<---	Professional_Experience	-.004	.004	-1.002	.316	
Nonlinear	<---	Individual Competences	.091	.045	2.032	.042	
Nonlinear	<---	Individual Aspirations	.198	.123	1.609	.108	
p42_1	<---	Organizational Structures	1.000				
p43_1	<---	Organizational Structures	1.040	.041	25.621	***	
p44_1	<---	Organizational Structures	.967	.043	22.733	***	
p45_1	<---	Organizational Structures	1.009	.042	24.216	***	
p33_1	<---	Individual Competences	1.000				
p34_1	<---	Individual Competences	1.083	.044	24.379	***	
p35_1	<---	Individual Competences	1.049	.051	20.574	***	
p36_1	<---	Individual Competences	1.023	.057	18.081	***	
p37_1	<---	Individual Competences	.956	.053	18.103	***	
p38_1	<---	Individual Competences	1.183	.086	13.801	***	
p39_1	<---	Individual Competences	1.299	.074	17.550	***	
p40_1	<---	Individual Competences	1.218	.083	14.598	***	
p41_1	<---	Individual Competences	1.210	.065	18.625	***	
p47_1	<---	Getting Free	1.000				
p46_1	<---	Getting Free	1.841	.482	3.822	***	
p57_1	<---	Getting Secure	1.000				
p51_1	<---	Getting Secure	1.691	.248	6.818	***	
p48_1	<---	Getting Secure	1.440	.203	7.109	***	
p54_1	<---	Getting Balanced	1.000				
p52_1	<---	Getting Balanced	1.151	.132	8.702	***	
p50_1	<---	Getting Balanced	1.751	.200	8.770	***	
p49_1	<---	Getting Balanced	1.552	.177	8.779	***	
p56_1	<---	Getting High	1.000				
p53_1	<---	Getting High	1.102	.097	11.361	***	
p55_1	<---	Getting High	1.316	.107	12.294	***	
p58_1	<---	Personal network	1.000				
p59_1	<---	Personal network	.650	.341	1.904	.057	
Career_Success	<---	Individual Competences	.328	.087	3.770	***	
Career_Success	<---	Organizational Structures	.378	.043	8.897	***	
Career_Success	<---	Personal network	.033	.021	1.541	.123	
Career_Success	<---	Professional_Experience	.049	.007	6.769	***	
Career_Success	<---	Individual Aspirations	.219	.218	1.005	.315	
Career_Success	<---	Nonlinear	.027	.062	.438	.661	

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
Getting Secure	<---	Individual Aspirations	.370
Getting Balanced	<---	Individual Aspirations	.790

			Estimate
Getting High	<---	Individual Aspirations	.874
Getting Free	<---	Individual Aspirations	.265
Nonlinear	<---	Organizational Structures	-.054
Nonlinear	<---	Personal network	-.043
Nonlinear	<---	Professional_Experience	-.033
Nonlinear	<---	Individual Competences	.090
Nonlinear	<---	Individual Aspirations	.078
Career_Success	<---	Individual Competences	.168
Career_Success	<---	Organizational Structures	.336
Career_Success	<---	Personal network	.178
Career_Success	<---	Professional_Experience	.214
Career_Success	<---	Individual Aspirations	.045
Career_Success	<---	Nonlinear	.014

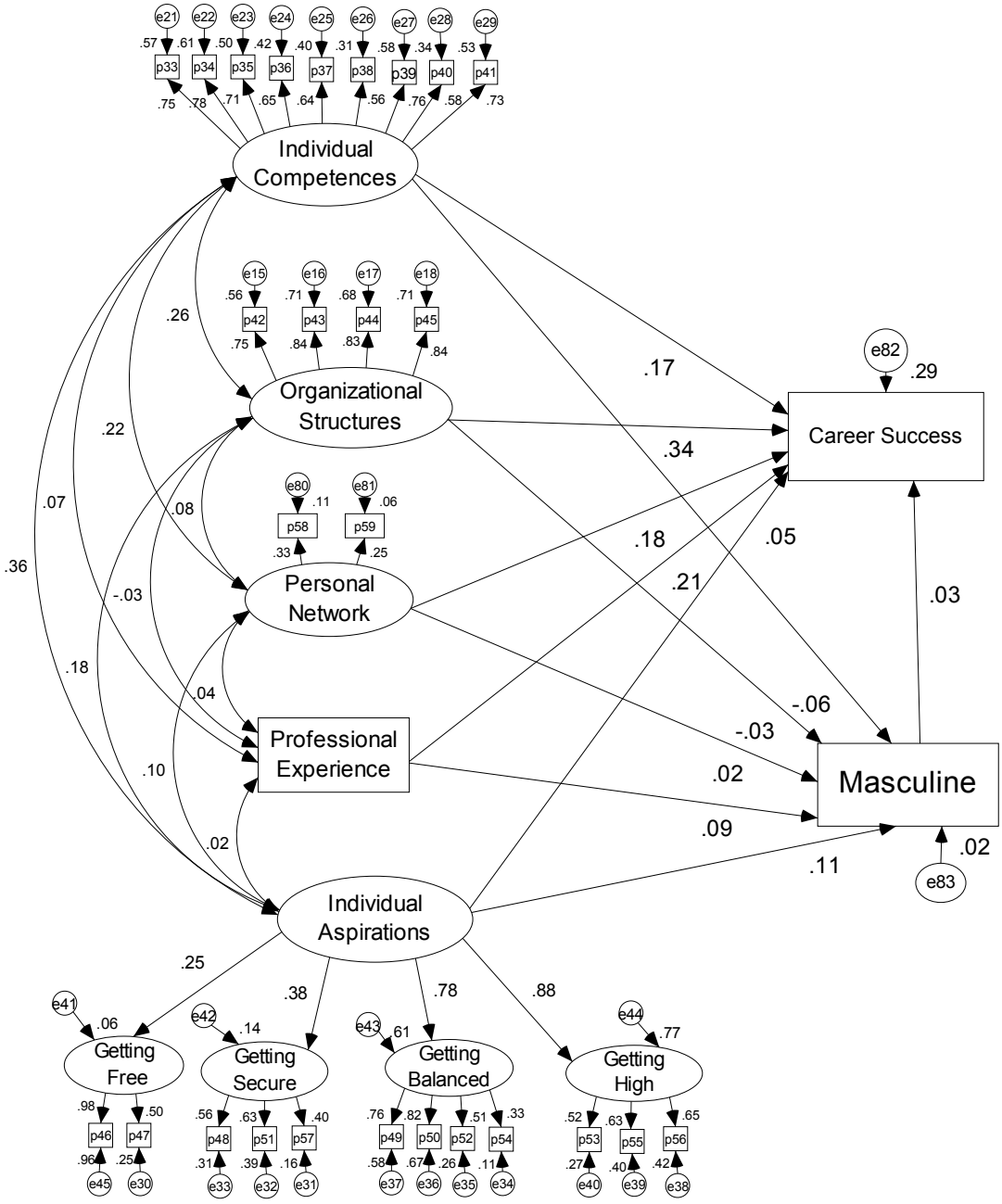
Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	82	1235.033	383	.000	3.225
Saturated model	465	.000	0		
Independence model	30	2629.726	435	.000	6.045
Zero model	0	15150.000	465	.000	32.581

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	1.015	.918	.901	.757
Saturated model	.000	1.000		
Independence model	1.677	.826	.814	.773
Zero model	13.844	.000	.000	.000



Scalar Estimates (Group number 1 - Default model)

Generalized Least Squares Estimates

Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Getting Secure <--- Individual Aspirations	1.339	.477	2.809	.005	
Getting Balanced <--- Individual Aspirations	2.613	.874	2.991	.003	
Getting High <--- Individual Aspirations	2.825	.934	3.024	.002	

			Estimate	S.E.	C.R.	P	Label
Getting Free	<---	Individual Aspirations	1.000				
Masculine	<---	Organizational Structures	-.006	.009	-.687	.492	
Masculine	<---	Personal network	.001	.003	.195	.846	
Masculine	<---	Professional_Experience	.005	.002	2.843	.004	
Masculine	<---	Individual Competences	-.026	.018	-1.415	.157	
Masculine	<---	Individual Aspirations	.122	.064	1.916	.055	
p42_1	<---	Organizational Structures	1.000				
p43_1	<---	Organizational Structures	1.041	.041	25.622	***	
p44_1	<---	Organizational Structures	.970	.043	22.734	***	
p45_1	<---	Organizational Structures	1.011	.042	24.215	***	
p33_1	<---	Individual Competences	1.000				
p34_1	<---	Individual Competences	1.083	.044	24.388	***	
p35_1	<---	Individual Competences	1.048	.051	20.579	***	
p36_1	<---	Individual Competences	1.023	.057	18.095	***	
p37_1	<---	Individual Competences	.956	.053	18.111	***	
p38_1	<---	Individual Competences	1.182	.086	13.802	***	
p39_1	<---	Individual Competences	1.297	.074	17.544	***	
p40_1	<---	Individual Competences	1.217	.083	14.597	***	
p41_1	<---	Individual Competences	1.206	.065	18.605	***	
p47_1	<---	Getting Free	1.000				
p46_1	<---	Getting Free	1.933	.535	3.613	***	
p57_1	<---	Getting Secure	1.000				
p51_1	<---	Getting Secure	1.641	.238	6.900	***	
p48_1	<---	Getting Secure	1.462	.207	7.065	***	
p54_1	<---	Getting Balanced	1.000				
p52_1	<---	Getting Balanced	1.152	.133	8.646	***	
p50_1	<---	Getting Balanced	1.763	.202	8.719	***	
p49_1	<---	Getting Balanced	1.569	.180	8.728	***	
p56_1	<---	Getting High	1.000				
p53_1	<---	Getting High	1.104	.097	11.376	***	
p55_1	<---	Getting High	1.321	.107	12.314	***	
p58_1	<---	Personal network	1.000				
p59_1	<---	Personal network	.632	.339	1.862	.063	
Career_Success	<---	Individual Competences	.335	.087	3.873	***	
Career_Success	<---	Organizational Structures	.379	.042	8.914	***	
Career_Success	<---	Personal network	.032	.021	1.518	.129	
Career_Success	<---	Professional_Experience	.049	.007	6.668	***	
Career_Success	<---	Individual Aspirations	.233	.232	1.005	.315	
Career_Success	<---	Masculine	.122	.142	.859	.391	

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
Getting Secure	<---	Individual Aspirations	.379
Getting Balanced	<---	Individual Aspirations	.783

			Estimate
Getting High	<---	Individual Aspirations	.879
Getting Free	<---	Individual Aspirations	.253
Masculine	<---	Organizational Structures	-.026
Masculine	<---	Personal network	.016
Masculine	<---	Professional_Experience	.092
Masculine	<---	Individual Competences	-.061
Masculine	<---	Individual Aspirations	.108
Career_Success	<---	Individual Competences	.171
Career_Success	<---	Organizational Structures	.335
Career_Success	<---	Personal network	.175
Career_Success	<---	Professional_Experience	.211
Career_Success	<---	Individual Aspirations	.045
Career_Success	<---	Masculine	.027

Model Fit Summary

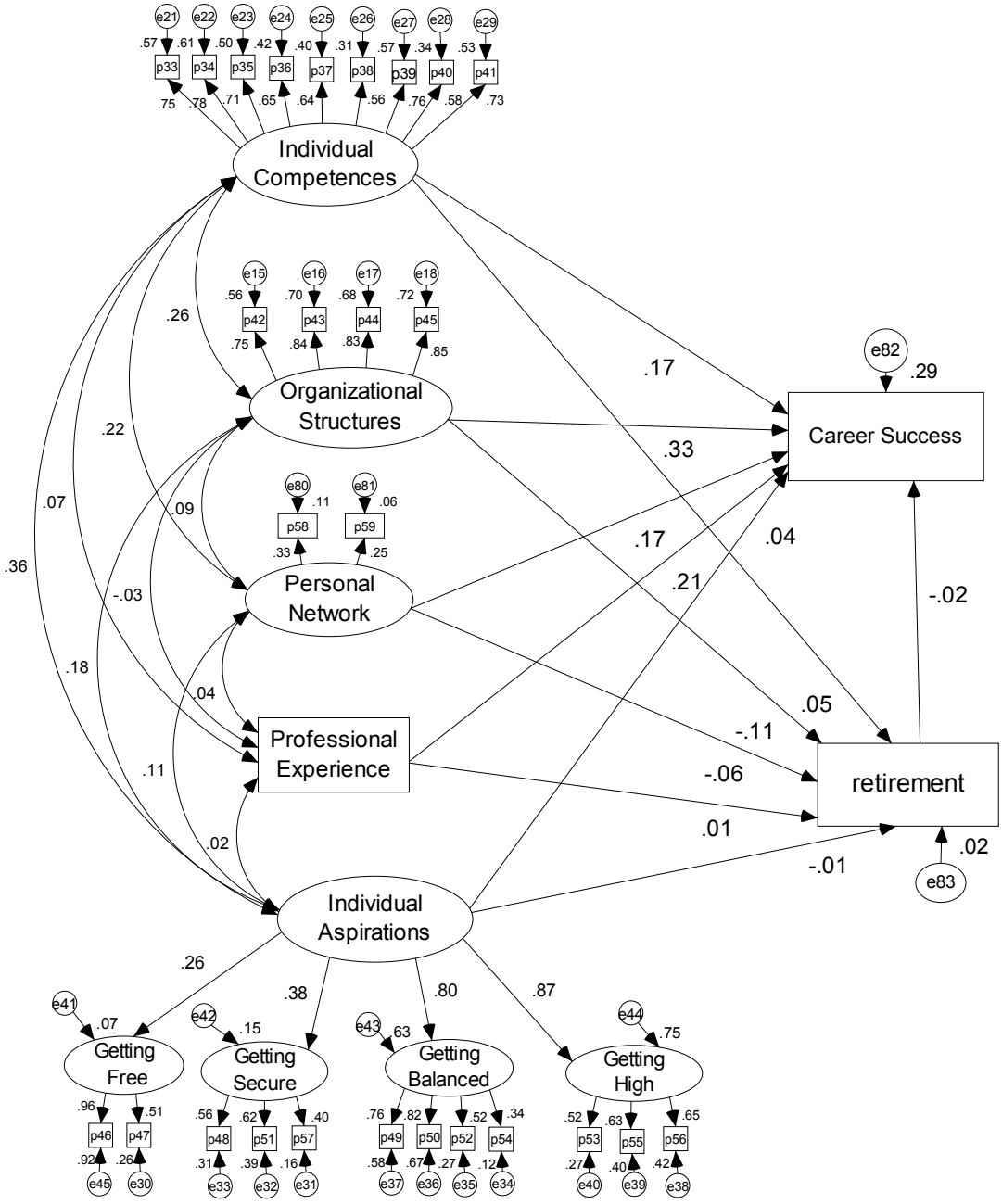
CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	82	1208.664	383	.000	3.156
Saturated model	465	.000	0		
Independence model	30	2614.408	435	.000	6.010
Zero model	0	15150.000	465	.000	32.581

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	1.015	.920	.903	.758
Saturated model	.000	1.000		
Independence model	1.675	.827	.816	.774
Zero model	13.844	.000	.000	.000

Chi squared = 1215.620
Degrees of freedom = 383



Scalar Estimates (Group number 1 - Default model)

Generalized Least Squares Estimates

Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Getting Secure <--- Individual Aspirations	1.309	.452	2.898	.004	
Getting Balanced <--- Individual Aspirations	2.597	.838	3.098	.002	
Getting High <--- Individual Aspirations	2.684	.855	3.140	.002	

			Estimate	S.E.	C.R.	P	Label
Getting Free	<---	Individual Aspirations	1.000				
retirement	<---	Organizational Structures	-.009	.003	-2.978	.003	
retirement	<---	Personal network	-.001	.001	-.645	.519	
retirement	<---	Professional_Experience	.000	.001	.375	.708	
retirement	<---	Individual Competences	.006	.006	1.117	.264	
retirement	<---	Individual Aspirations	-.003	.015	-.222	.824	
p42_1	<---	Organizational Structures	1.000				
p43_1	<---	Organizational Structures	1.041	.041	25.656	***	
p44_1	<---	Organizational Structures	.969	.043	22.760	***	
p45_1	<---	Organizational Structures	1.016	.042	24.266	***	
p33_1	<---	Individual Competences	1.000				
p34_1	<---	Individual Competences	1.084	.044	24.375	***	
p35_1	<---	Individual Competences	1.051	.051	20.587	***	
p36_1	<---	Individual Competences	1.025	.057	18.092	***	
p37_1	<---	Individual Competences	.957	.053	18.112	***	
p38_1	<---	Individual Competences	1.181	.086	13.776	***	
p39_1	<---	Individual Competences	1.297	.074	17.519	***	
p40_1	<---	Individual Competences	1.215	.083	14.564	***	
p41_1	<---	Individual Competences	1.205	.065	18.576	***	
p47_1	<---	Getting Free	1.000				
p46_1	<---	Getting Free	1.856	.494	3.758	***	
p57_1	<---	Getting Secure	1.000				
p51_1	<---	Getting Secure	1.623	.236	6.888	***	
p48_1	<---	Getting Secure	1.428	.202	7.059	***	
p54_1	<---	Getting Balanced	1.000				
p52_1	<---	Getting Balanced	1.144	.130	8.776	***	
p50_1	<---	Getting Balanced	1.736	.196	8.851	***	
p49_1	<---	Getting Balanced	1.538	.174	8.860	***	
p56_1	<---	Getting High	1.000				
p53_1	<---	Getting High	1.105	.097	11.365	***	
p55_1	<---	Getting High	1.323	.108	12.299	***	
p58_1	<---	Personal network	1.000				
p59_1	<---	Personal network	.618	.327	1.890	.059	
Career_Success	<---	Individual Competences	.334	.086	3.868	***	
Career_Success	<---	Organizational Structures	.377	.043	8.845	***	
Career_Success	<---	Personal network	.031	.021	1.508	.131	
Career_Success	<---	Professional_Experience	.049	.007	6.799	***	
Career_Success	<---	Individual Aspirations	.221	.220	1.006	.314	
Career_Success	<---	retirement	-.234	.467	-.502	.616	

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
Getting Secure	<---	Individual Aspirations	.382
Getting Balanced	<---	Individual Aspirations	.795
Getting High	<---	Individual Aspirations	.869
Getting Free	<---	Individual Aspirations	.258
retirement	<---	Organizational Structures	-.113
retirement	<---	Personal network	-.058
retirement	<---	Professional_Experience	.012
retirement	<---	Individual Competences	.049
retirement	<---	Individual Aspirations	-.010
Career_Success	<---	Individual Competences	.171
Career_Success	<---	Organizational Structures	.334
Career_Success	<---	Personal network	.173
Career_Success	<---	Professional_Experience	.214
Career_Success	<---	Individual Aspirations	.045
Career_Success	<---	retirement	-.016

Model Fit Summary

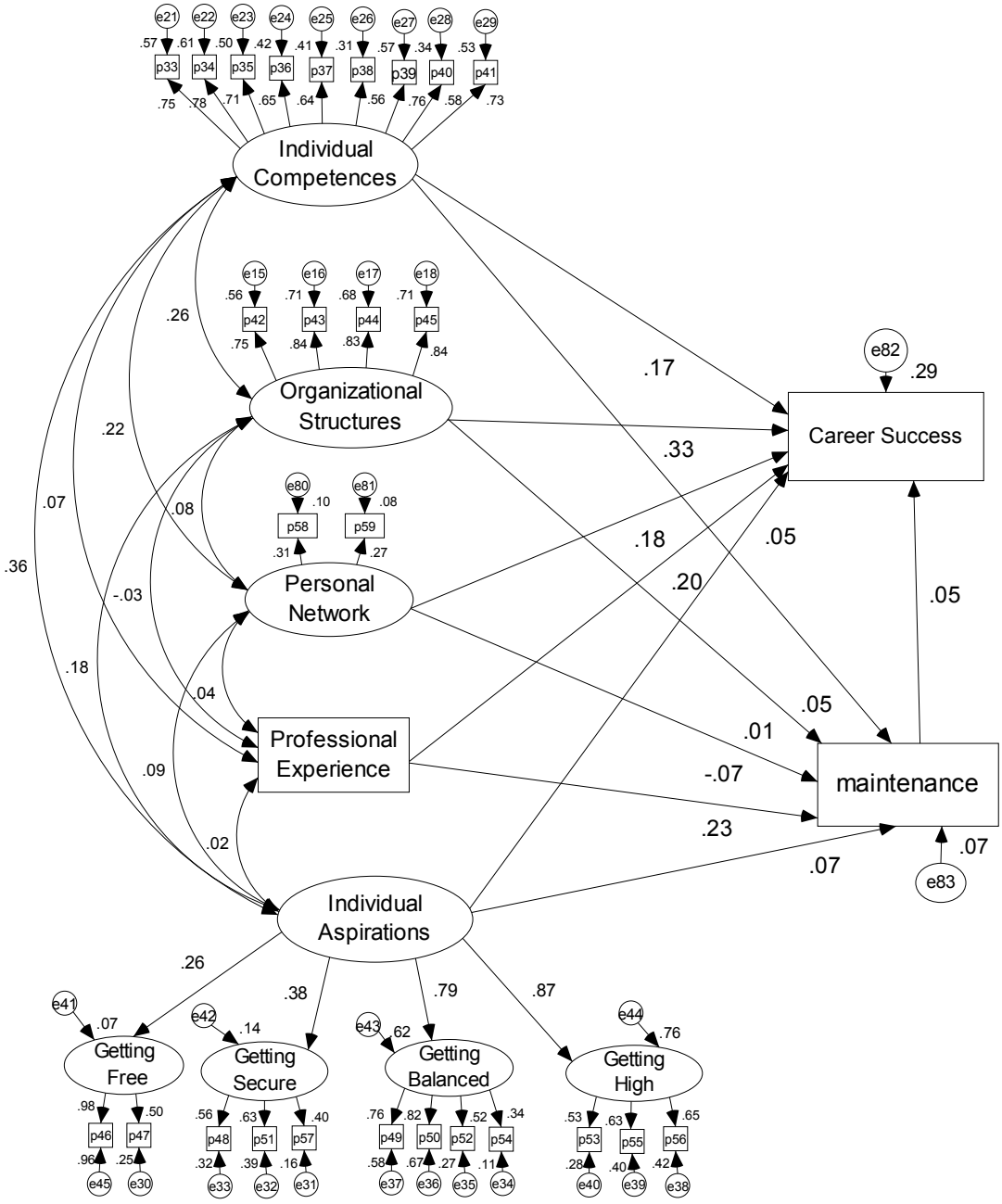
CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	82	1215.620	383	.000	3.174
Saturated model	465	.000	0		
Independence model	30	2614.693	435	.000	6.011
Zero model	0	15150.000	465	.000	32.581

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	1.011	.920	.903	.758
Saturated model	.000	1.000		
Independence model	1.675	.827	.816	.774
Zero model	13.844	.000	.000	.000

Chi squared = 1218.529
Degrees of freedom = 383



Scalar Estimates (Group number 1 - Default model)

Generalized Least Squares Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
Getting Secure	<---	Individual Aspirations	1.305	.454	2.874	.004	
Getting Balanced	<---	Individual Aspirations	2.585	.842	3.069	.002	
Getting High	<---	Individual Aspirations	2.727	.877	3.109	.002	
Getting Free	<---	Individual Aspirations	1.000				
maintenance	<---	Organizational Structures	.005	.022	.239	.811	
maintenance	<---	Personal network	-.007	.009	-.776	.438	
maintenance	<---	Professional_Experience	.029	.004	7.248	***	
maintenance	<---	Individual Competences	.053	.045	1.170	.242	
maintenance	<---	Individual Aspirations	.187	.131	1.434	.152	
Career_Success	<---	Individual Competences	.323	.088	3.687	***	
Career_Success	<---	Organizational Structures	.377	.043	8.818	***	
Career_Success	<---	Personal network	.036	.022	1.615	.106	
Career_Success	<---	Professional_Experience	.047	.008	6.146	***	
Career_Success	<---	Individual Aspirations	.226	.225	1.002	.316	
Career_Success	<---	maintenance	.091	.062	1.477	.140	

Model Fit Summary

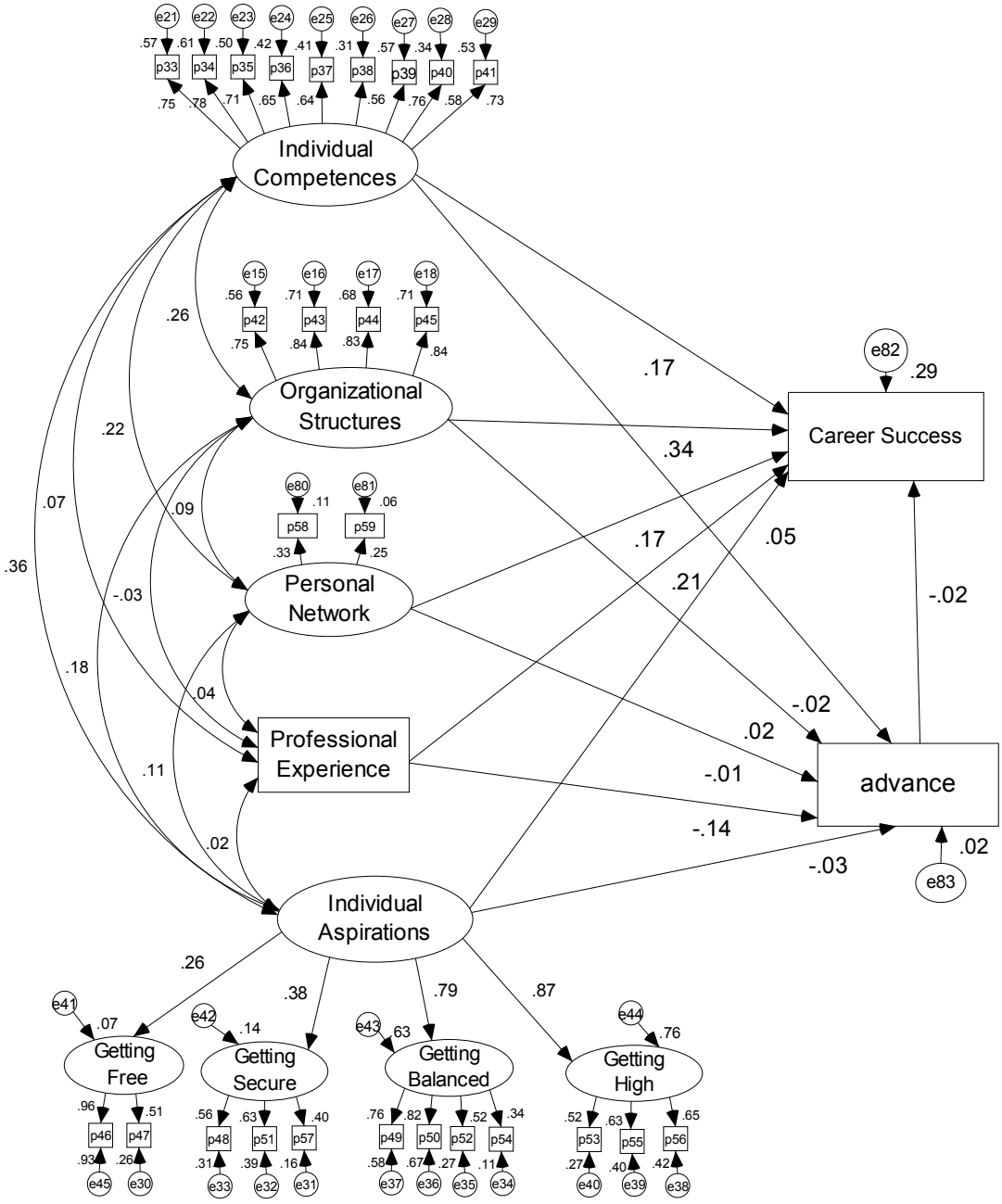
CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	82	1218.529	383	.000	3.182
Saturated model	465	.000	0		
Independence model	30	2657.311	435	.000	6.109
Zero model	0	15150.000	465	.000	32.581

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	1.024	.920	.902	.757
Saturated model	.000	1.000		
Independence model	1.687	.825	.813	.771
Zero model	13.844	.000	.000	.000

Chi squared = 1211.012
Degrees of freedom = 383



Scalar Estimates (Group number 1 - Default model)

Generalized Least Squares Estimates

Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Getting Secure <--- Individual Aspirations	1.292	.445	2.902	.004	
Getting Balanced <--- Individual Aspirations	2.580	.831	3.104	.002	

			Estimate	S.E.	C.R.	P	Label
Getting High	<---	Individual Aspirations	2.683	.853	3.146	.002	
Getting Free	<---	Individual Aspirations	1.000				
advance	<---	Organizational Structures	.014	.022	.659	.510	
advance	<---	Personal network	-.001	.008	-.070	.945	
advance	<---	Professional_Experience	-.017	.004	-4.423	***	
advance	<---	Individual Competences	-.025	.043	-.568	.570	
advance	<---	Individual Aspirations	-.069	.113	-.610	.542	
p42_1	<---	Organizational Structures	1.000				
p43_1	<---	Organizational Structures	1.042	.041	25.618	***	
p44_1	<---	Organizational Structures	.970	.043	22.731	***	
p45_1	<---	Organizational Structures	1.011	.042	24.212	***	
p33_1	<---	Individual Competences	1.000				
p34_1	<---	Individual Competences	1.084	.044	24.383	***	
p35_1	<---	Individual Competences	1.048	.051	20.569	***	
p36_1	<---	Individual Competences	1.025	.057	18.107	***	
p37_1	<---	Individual Competences	.958	.053	18.127	***	
p38_1	<---	Individual Competences	1.179	.086	13.769	***	
p39_1	<---	Individual Competences	1.294	.074	17.512	***	
p40_1	<---	Individual Competences	1.213	.083	14.564	***	
p41_1	<---	Individual Competences	1.203	.065	18.575	***	
p47_1	<---	Getting Free	1.000				
p46_1	<---	Getting Free	1.873	.497	3.766	***	
p57_1	<---	Getting Secure	1.000				
p51_1	<---	Getting Secure	1.642	.238	6.900	***	
p48_1	<---	Getting Secure	1.453	.205	7.076	***	
p54_1	<---	Getting Balanced	1.000				
p52_1	<---	Getting Balanced	1.141	.130	8.764	***	
p50_1	<---	Getting Balanced	1.736	.196	8.844	***	
p49_1	<---	Getting Balanced	1.543	.174	8.852	***	
p56_1	<---	Getting High	1.000				
p53_1	<---	Getting High	1.101	.097	11.353	***	
p55_1	<---	Getting High	1.319	.107	12.290	***	
p58_1	<---	Personal network	1.000				
p59_1	<---	Personal network	.624	.333	1.871	.061	
Career_Success	<---	Individual Competences	.331	.086	3.839	***	
Career_Success	<---	Organizational Structures	.378	.042	8.913	***	
Career_Success	<---	Personal network	.031	.021	1.517	.129	
Career_Success	<---	Professional_Experience	.049	.007	6.637	***	
Career_Success	<---	Individual Aspirations	.223	.220	1.012	.311	
Career_Success	<---	advance	-.033	.060	-.555	.579	

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
Getting Secure	<---	Individual Aspirations	.380
Getting Balanced	<---	Individual Aspirations	.793
Getting High	<---	Individual Aspirations	.869
Getting Free	<---	Individual Aspirations	.260
advance	<---	Organizational Structures	.024
advance	<---	Personal network	-.006
advance	<---	Professional_Experience	-.143
advance	<---	Individual Competences	-.024
advance	<---	Individual Aspirations	-.027
Career_Success	<---	Individual Competences	.169
Career_Success	<---	Organizational Structures	.335
Career_Success	<---	Personal network	.175
Career_Success	<---	Professional_Experience	.211
Career_Success	<---	Individual Aspirations	.045
Career_Success	<---	advance	-.017

Model Fit Summary

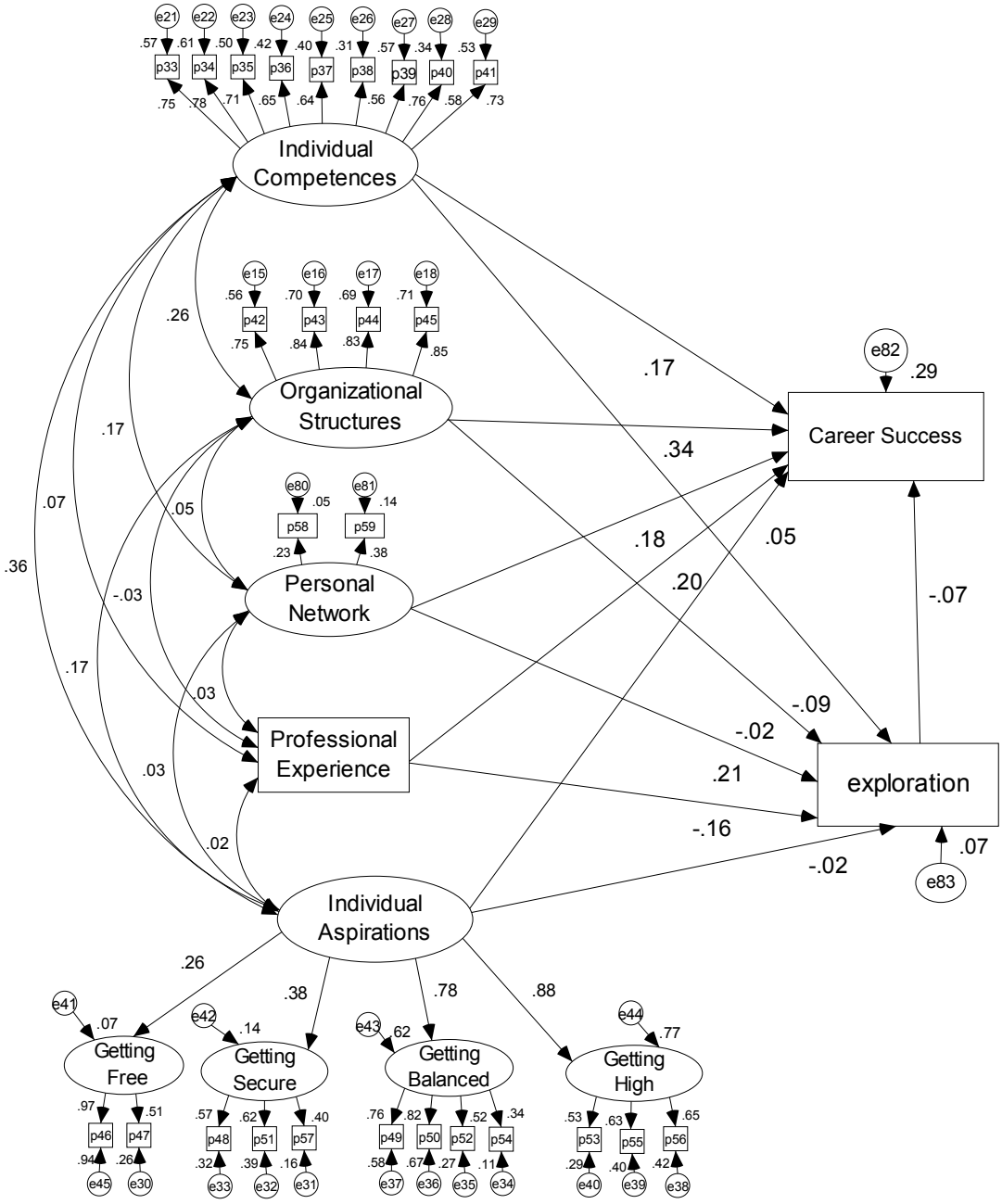
CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	82	1211.012	383	.000	3.162
Saturated model	465	.000	0		
Independence model	30	2622.994	435	.000	6.030
Zero model	0	15150.000	465	.000	32.581

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	1.012	.920	.903	.758
Saturated model	.000	1.000		
Independence model	1.677	.827	.815	.774
Zero model	13.844	.000	.000	.000

Chi squared = 1223.730
Degrees of freedom = 383



Scalar Estimates (Group number 1 - Default model)

Generalized Least Squares Estimates

Regression Weights: (Group number 1 - Default model)

	Estimate	S.E.	C.R.	P	Label
Getting Secure <--- Individual Aspirations	1.308	.458	2.856	.004	
Getting Balanced <--- Individual Aspirations	2.573	.845	3.046	.002	
Getting High <--- Individual Aspirations	2.768	.897	3.084	.002	

			Estimate	S.E.	C.R.	P	Label
Getting Free	<---	Individual Aspirations	1.000				
exploration	<---	Organizational Structures	-.006	.014	-.427	.669	
exploration	<---	Personal network	.016	.009	1.835	.067	
exploration	<---	Professional_Experience	-.011	.002	-4.573	***	
exploration	<---	Individual Competences	-.052	.028	-1.841	.066	
exploration	<---	Individual Aspirations	-.037	.074	-.497	.619	
p42_1	<---	Organizational Structures	1.000				
p43_1	<---	Organizational Structures	1.041	.041	25.564	***	
p44_1	<---	Organizational Structures	.970	.043	22.686	***	
p45_1	<---	Organizational Structures	1.012	.042	24.161	***	
p33_1	<---	Individual Competences	1.000				
p34_1	<---	Individual Competences	1.086	.045	24.382	***	
p35_1	<---	Individual Competences	1.046	.051	20.525	***	
p36_1	<---	Individual Competences	1.028	.057	18.117	***	
p37_1	<---	Individual Competences	.959	.053	18.125	***	
p38_1	<---	Individual Competences	1.176	.086	13.732	***	
p39_1	<---	Individual Competences	1.294	.074	17.491	***	
p40_1	<---	Individual Competences	1.208	.083	14.508	***	
p41_1	<---	Individual Competences	1.210	.065	18.617	***	
p47_1	<---	Getting Free	1.000				
p46_1	<---	Getting Free	1.893	.513	3.691	***	
p57_1	<---	Getting Secure	1.000				
p51_1	<---	Getting Secure	1.626	.234	6.942	***	
p48_1	<---	Getting Secure	1.467	.207	7.071	***	
p54_1	<---	Getting Balanced	1.000				
p52_1	<---	Getting Balanced	1.157	.133	8.681	***	
p50_1	<---	Getting Balanced	1.747	.200	8.738	***	
p49_1	<---	Getting Balanced	1.555	.178	8.746	***	
p56_1	<---	Getting High	1.000				
p53_1	<---	Getting High	1.127	.098	11.539	***	
p55_1	<---	Getting High	1.306	.106	12.320	***	
p58_1	<---	Personal network	1.000				
p59_1	<---	Personal network	1.358	.662	2.050	.040	
Career_Success	<---	Individual Competences	.324	.087	3.741	***	
Career_Success	<---	Organizational Structures	.378	.042	8.965	***	
Career_Success	<---	Personal network	.048	.027	1.788	.074	
Career_Success	<---	Professional_Experience	.047	.007	6.300	***	
Career_Success	<---	Individual Aspirations	.266	.228	1.166	.244	
Career_Success	<---	exploration	-.243	.127	-1.904	.057	

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
Getting Secure	<---	Individual Aspirations	.377
Getting Balanced	<---	Individual Aspirations	.785
Getting High	<---	Individual Aspirations	.877
Getting Free	<---	Individual Aspirations	.256
exploration	<---	Organizational Structures	-.017
exploration	<---	Personal network	.207
exploration	<---	Professional_Experience	-.160
exploration	<---	Individual Competences	-.088
exploration	<---	Individual Aspirations	-.024
Career_Success	<---	Individual Competences	.166
Career_Success	<---	Organizational Structures	.336
Career_Success	<---	Personal network	.182
Career_Success	<---	Professional_Experience	.203
Career_Success	<---	Individual Aspirations	.053
Career_Success	<---	exploration	-.074

Model Fit Summary

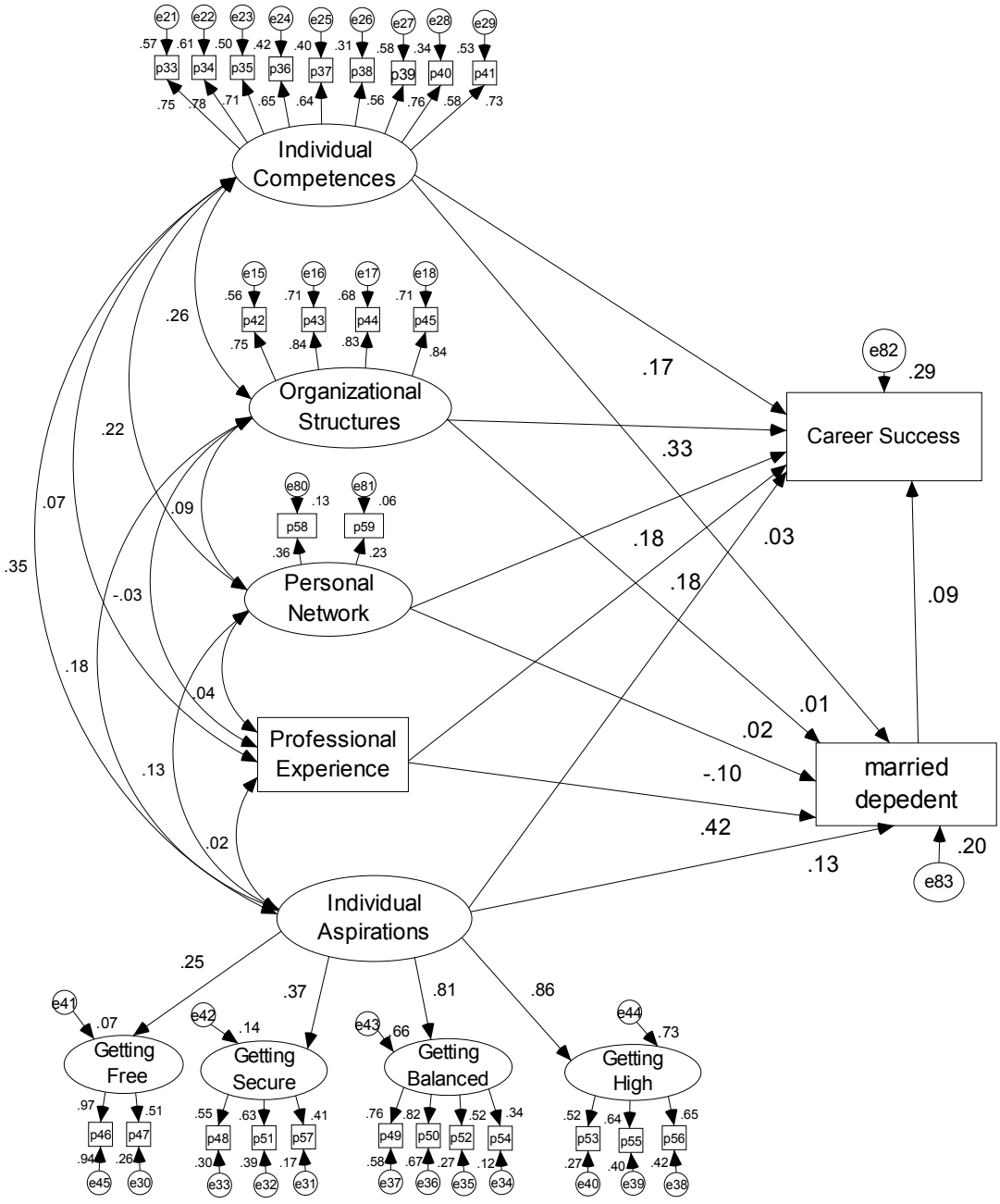
CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	82	1223.730	383	.000	3.195
Saturated model	465	.000	0		
Independence model	30	2648.094	435	.000	6.088
Zero model	0	15150.000	465	.000	32.581

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	1.076	.919	.902	.757
Saturated model	.000	1.000		
Independence model	1.719	.825	.813	.772
Zero model	13.844	.000	.000	.000

Chi squared = 1218.764
Degrees of freedom = 383



Estimates (Group number 1 - Default model)

Scalar Estimates (Group number 1 - Default model)

Generalized Least Squares Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	PLabel
Getting Secure	<---	Individual Aspirations	1.329	.466	2.851	.004
Getting Balanced	<---	Individual Aspirations	2.718	.892	3.046	.002

Getting High	<---	Individual Aspirations	2.700	.875	3.087	.002
Getting Free	<---	Individual Aspirations	1.000			
married_depedent	<---	Organizational Structures	.013	.021	.637	.524
married_depedent	<---	Personal network	-.009	.008	-1.097	.273
married_depedent	<---	Professional_Experience	.051	.004	13.687	***
married_depedent	<---	Individual Competences	.013	.042	.318	.751
married_depedent	<---	Individual Aspirations	.336	.156	2.146	.032
p42_1	<---	Organizational Structures	1.000			
p43_1	<---	Organizational Structures	1.042	.041	25.631	***
p44_1	<---	Organizational Structures	.969	.043	22.739	***
p45_1	<---	Organizational Structures	1.011	.042	24.221	***
p33_1	<---	Individual Competences	1.000			
p34_1	<---	Individual Competences	1.086	.045	24.362	***
p35_1	<---	Individual Competences	1.050	.051	20.551	***
p36_1	<---	Individual Competences	1.026	.057	18.081	***
p37_1	<---	Individual Competences	.957	.053	18.086	***
p38_1	<---	Individual Competences	1.182	.086	13.766	***
p39_1	<---	Individual Competences	1.298	.074	17.507	***
p40_1	<---	Individual Competences	1.218	.084	14.569	***
p41_1	<---	Individual Competences	1.205	.065	18.549	***
p47_1	<---	Getting Free	1.000			
p46_1	<---	Getting Free	1.906	.517	3.685	***
p57_1	<---	Getting Secure	1.000			
p51_1	<---	Getting Secure	1.610	.234	6.880	***
p48_1	<---	Getting Secure	1.398	.197	7.087	***
p54_1	<---	Getting Balanced	1.000			
p52_1	<---	Getting Balanced	1.142	.130	8.797	***
p50_1	<---	Getting Balanced	1.731	.195	8.881	***
p49_1	<---	Getting Balanced	1.538	.173	8.884	***
p56_1	<---	Getting High	1.000			
p53_1	<---	Getting High	1.093	.097	11.281	***
p55_1	<---	Getting High	1.329	.108	12.278	***
p58_1	<---	Personal network	1.000			
p59_1	<---	Personal network	.537	.276	1.946	.052
Career_Success	<---	Individual Competences	.335	.085	3.936	***
Career_Success	<---	Organizational Structures	.376	.042	8.932	***
Career_Success	<---	Personal network	.029	.019	1.499	.134
Career_Success	<---	Professional_Experience	.041	.008	5.026	***
Career_Success	<---	Individual Aspirations	.152	.221	.685	.493
Career_Success	<---	married_depedent	.169	.070	2.437	.015

Standardized Regression Weights: (Group number 1 - Default model)

			Estimate
Getting Secure	<---	Individual Aspirations	.375
Getting Balanced	<---	Individual Aspirations	.811
Getting High	<---	Individual Aspirations	.856
Getting Free	<---	Individual Aspirations	.255
married_depedent	<---	Organizational Structures	.022
married_depedent	<---	Personal network	-.101
married_depedent	<---	Professional_Experience	.418

married_depedent	<---	Individual Competences	.013
married_depedent	<---	Individual Aspirations	.126
Career_Success	<---	Individual Competences	.171
Career_Success	<---	Organizational Structures	.333
Career_Success	<---	Personal network	.175
Career_Success	<---	Professional_Experience	.177
Career_Success	<---	Individual Aspirations	.030
Career_Success	<---	married_depedent	.089

Model Fit Summary

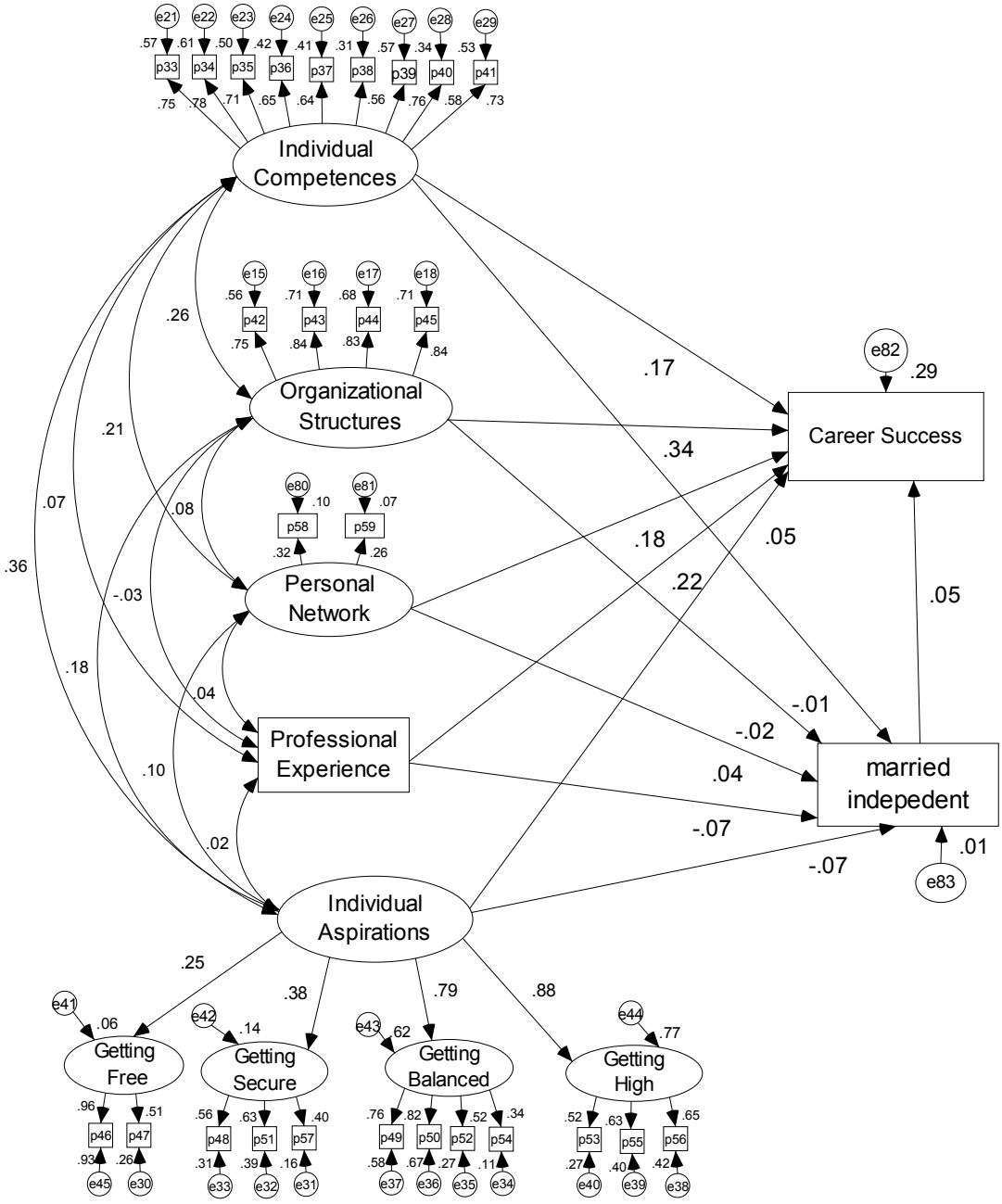
CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	82	1218.764	383	.000	3.182
Saturated model	465	.000	0		
Independence model	30	2727.821	435	.000	6.271
Zero model	0	15150.000	465	.000	32.581

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	1.006	.920	.902	.757
Saturated model	.000	1.000		
Independence model	1.735	.820	.808	.767
Zero model	13.844	.000	.000	.000

Chi squared = 1207.051
Degrees of freedom = 383



Estimates (Group number 1 - Default model)

Scalar Estimates (Group number 1 - Default model)

Generalized Least Squares Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	P	Label
Getting Secure	<---	Individual Aspirations	1.312	.461	2.846	.004	
Getting Balanced	<---	Individual Aspirations	2.606	.858	3.038	.002	
Getting High	<---	Individual Aspirations	2.771	.901	3.074	.002	
Getting Free	<---	Individual Aspirations	1.000				
married_indepedent	<---	Organizational Structures	-.006	.013	-.484	.628	
married_indepedent	<---	Personal network	.002	.005	.456	.648	
married_indepedent	<---	Professional_Experience	-.005	.002	-2.053	.040	
married_indepedent	<---	Individual Competences	-.007	.025	-.279	.780	
married_indepedent	<---	Individual Aspirations	-.101	.074	-1.355	.175	
Career_Success	<---	Individual Competences	.332	.086	3.858	***	
Career_Success	<---	Organizational Structures	.379	.042	8.930	***	
Career_Success	<---	Personal network	.032	.021	1.551	.121	
Career_Success	<---	Professional_Experience	.050	.007	6.867	***	
Career_Success	<---	Individual Aspirations	.257	.229	1.119	.263	
Career_Success	<---	married_indepedent	.164	.103	1.590	.112	

Model Fit Summary

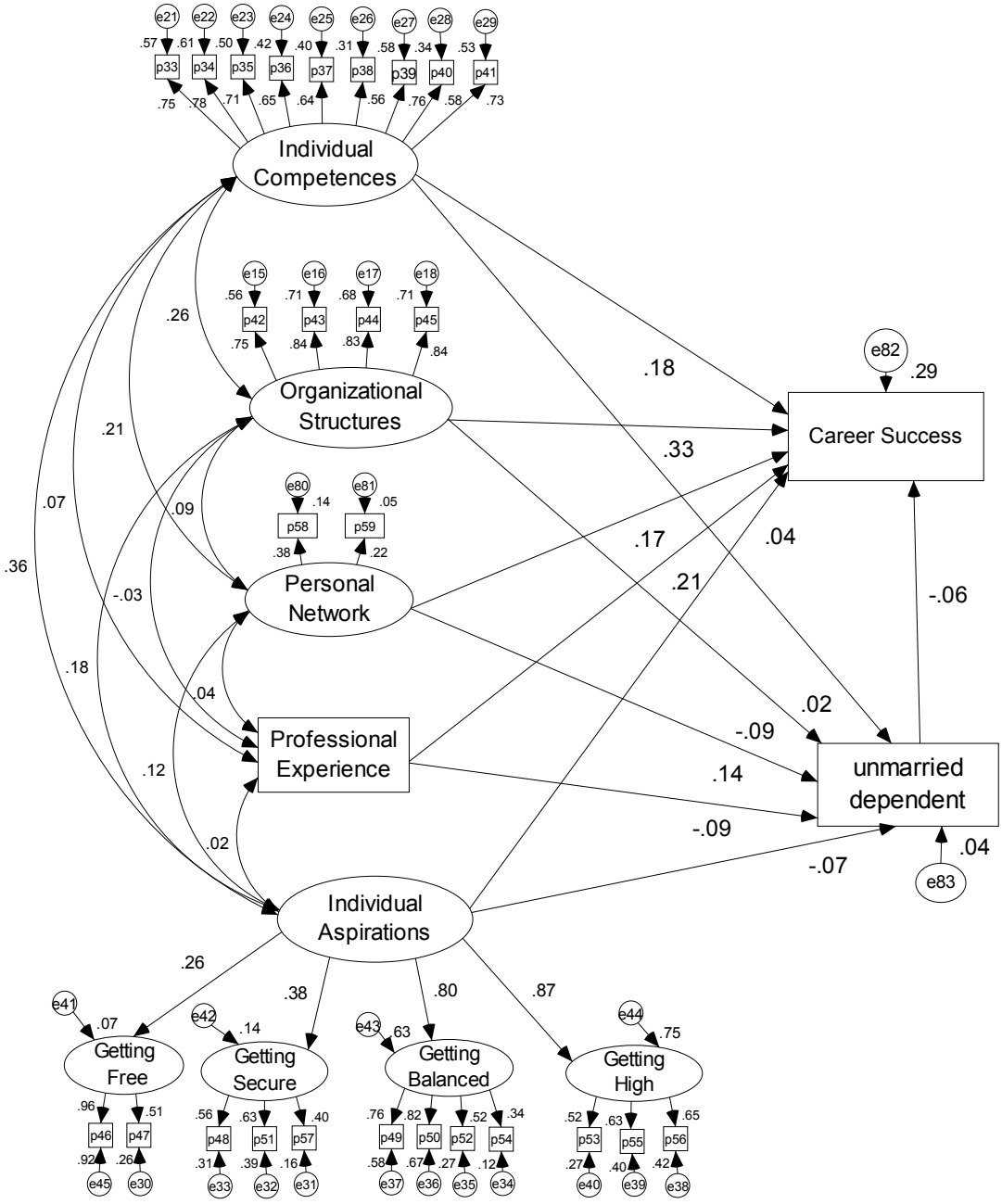
CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	82	1207.051	383	.000	3.152
Saturated model	465	.000	0		
Independence model	30	2614.534	435	.000	6.010
Zero model	0	15150.000	465	.000	32.581

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	1.025	.920	.903	.758
Saturated model	.000	1.000		
Independence model	1.683	.827	.816	.774
Zero model	13.844	.000	.000	.000

Chi squared = 1203.171
Degrees of freedom = 383



Scalar Estimates (Group number 1 - Default model)

Generalized Least Squares Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	PLabel
Getting Secure	<---	Individual Aspirations	1.284	.441	2.911	.004
Getting Balanced	<---	Individual Aspirations	2.579	.827	3.119	.002
Getting High	<---	Individual Aspirations	2.661	.841	3.163	.002
Getting Free	<---	Individual Aspirations	1.000			

unmarried_dependent	<---	Organizational Structures	-.044	.018	-2.464	.014
unmarried_dependent	<---	Personal network	.009	.007	1.258	.208
unmarried_dependent	<---	Professional_Experience	-.009	.003	-2.659	.008
unmarried_dependent	<---	Individual Competences	.015	.036	.404	.686
unmarried_dependent	<---	Individual Aspirations	-.139	.100	-1.383	.167
Career_Success	<---	Individual Competences	.344	.084	4.109	***
Career_Success	<---	Organizational Structures	.372	.042	8.842	***
Career_Success	<---	Personal network	.027	.018	1.450	.147
Career_Success	<---	Professional_Experience	.048	.007	6.694	***
Career_Success	<---	Individual Aspirations	.196	.215	.910	.363
Career_Success	<---	unmarried_dependent	-.142	.081	-1.754	.079

Model Fit Summary

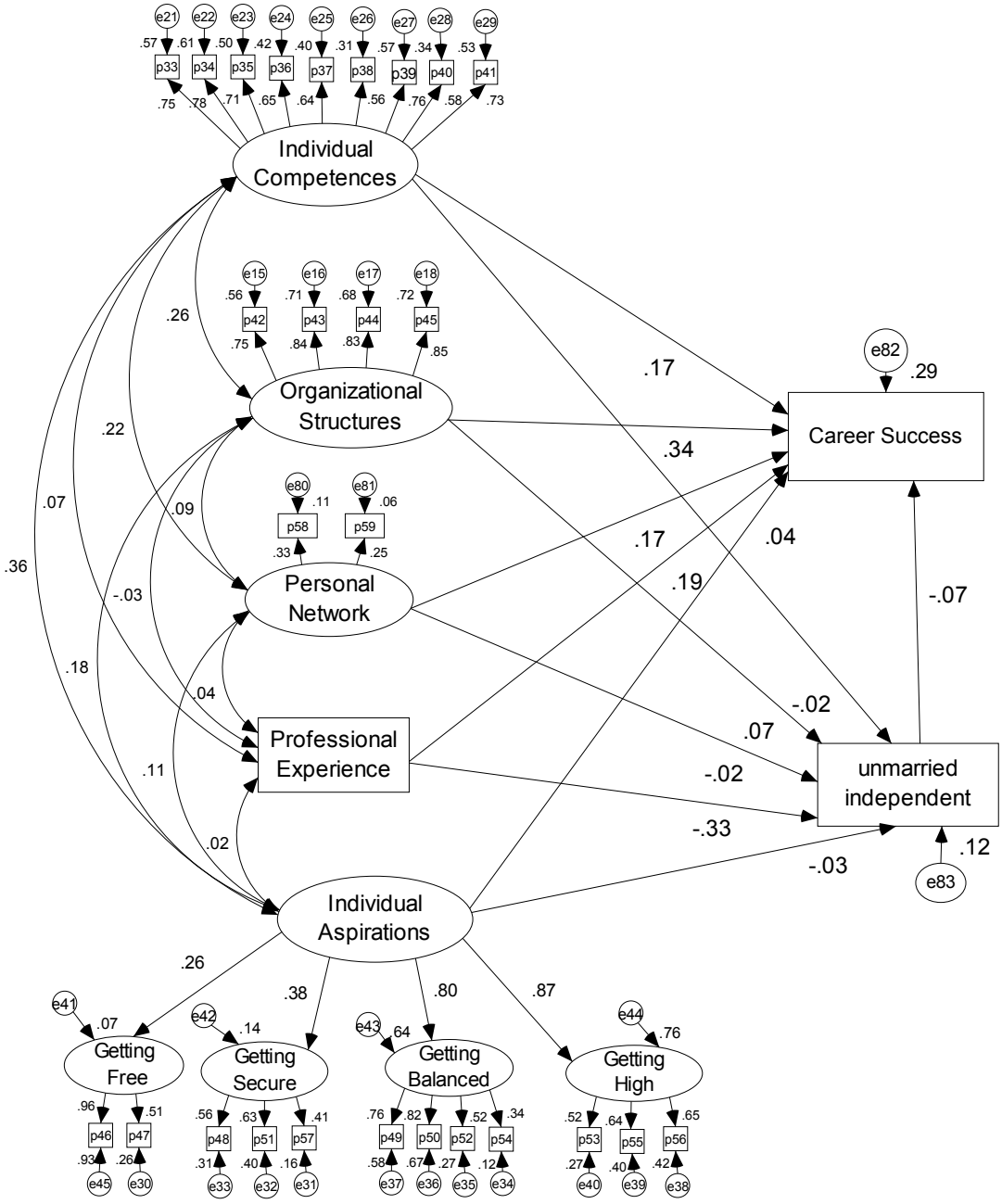
CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	82	1203.171	383	.000	3.141
Saturated model	465	.000	0		
Independence model	30	2607.397	435	.000	5.994
Zero model	0	15150.000	465	.000	32.581

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	1.011	.921	.904	.758
Saturated model	.000	1.000		
Independence model	1.732	.828	.816	.774
Zero model	13.844	.000	.000	.000

Chi squared = 1220.536
Degrees of freedom = 383



Scalar Estimates (Group number 1 - Default model)

Generalized Least Squares Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	PLabel
Getting Secure	<---	Individual Aspirations	1.312	.454	2.890	.004
Getting Balanced	<---	Individual Aspirations	2.622	.850	3.085	.002
Getting High	<---	Individual Aspirations	2.699	.864	3.126	.002
Getting Free	<---	Individual Aspirations	1.000			

unmarried_independent	<---	Organizational Structures	.037	.020	1.856	.063
unmarried_independent	<---	Personal network	-.002	.007	-.239	.811
unmarried_independent	<---	Professional_Experience	-.038	.004	-10.644	***
unmarried_independent	<---	Individual Competences	-.018	.040	-.460	.646
unmarried_independent	<---	Individual Aspirations	-.063	.107	-.592	.554
Career_Success	<---	Individual Competences	.330	.086	3.853	***
Career_Success	<---	Organizational Structures	.384	.042	9.051	***
Career_Success	<---	Personal network	.031	.020	1.515	.130
Career_Success	<---	Professional_Experience	.044	.008	5.698	***
Career_Success	<---	Individual Aspirations	.213	.219	.971	.332
Career_Success	<---	unmarried_independent	-.148	.066	-2.251	.024

Model Fit Summary

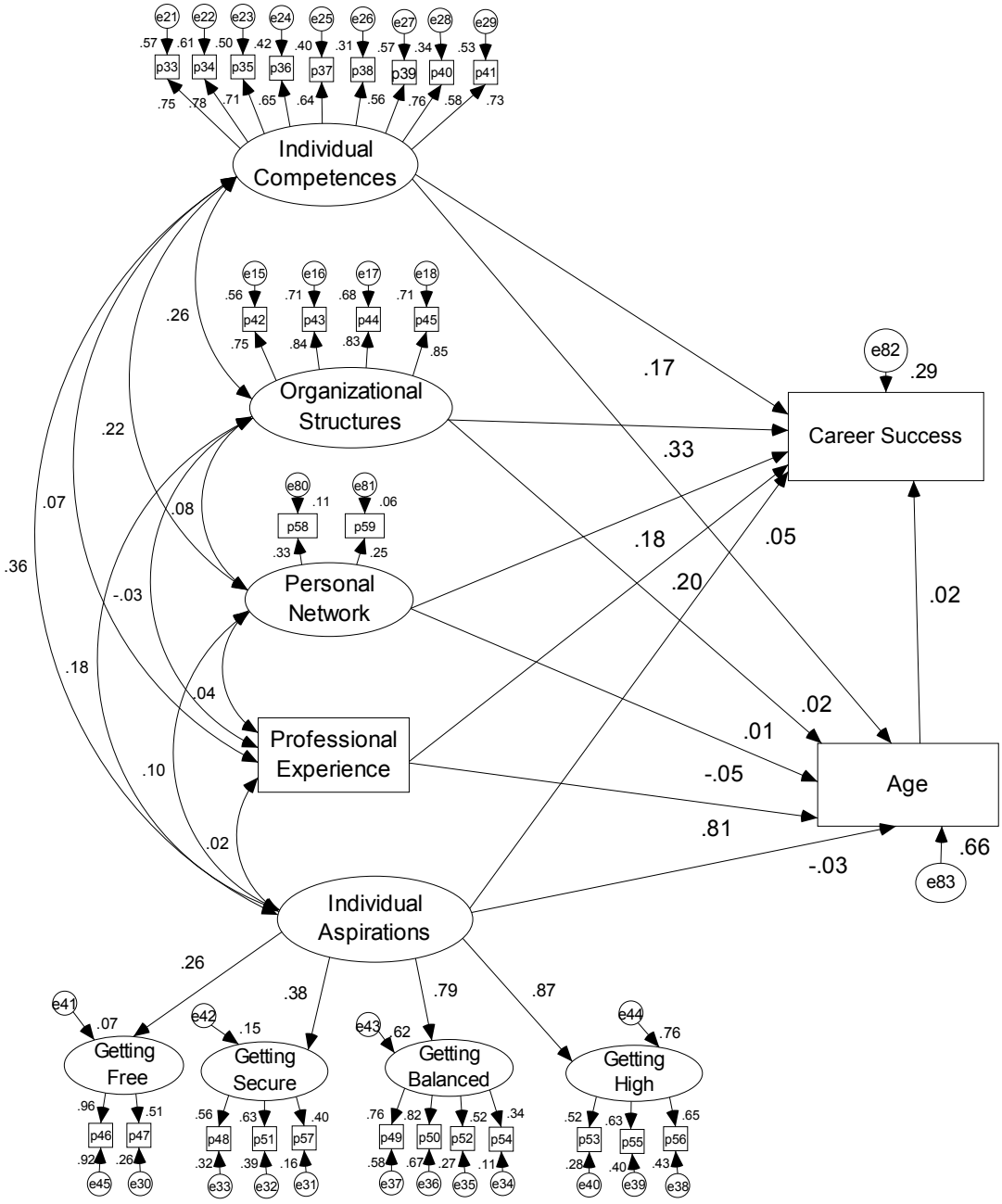
CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	82	1220.536	383	.000	3.187
Saturated model	465	.000	0		
Independence model	30	2690.252	435	.000	6.184
Zero model	0	15150.000	465	.000	32.581

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	1.013	.919	.902	.757
Saturated model	.000	1.000		
Independence model	1.689	.822	.810	.769
Zero model	13.844	.000	.000	.000

Chi squared = 1207.339
Degrees of freedom = 383



Estimates (Group number 1 - Default model)

Scalar Estimates (Group number 1 - Default model)

Generalized Least Squares Estimates

Regression Weights: (Group number 1 - Default model)

			Estimate	S.E.	C.R.	PLabel
Getting Secure	<---	Individual Aspirations	1.275	.437	2.916	.004
Getting Balanced	<---	Individual Aspirations	2.543	.815	3.123	.002

Getting High	<---	Individual Aspirations	2.688	.849	3.166	.002
Getting Free	<---	Individual Aspirations	1.000			
Career_Success	<---	Individual Competences	.331	.087	3.823	***
Career_Success	<---	Organizational Structures	.378	.043	8.889	***
Career_Success	<---	Personal network	.032	.021	1.527	.127
Career_Success	<---	Professional_Experience	.046	.013	3.634	***
Career_Success	<---	Individual Aspirations	.232	.220	1.054	.292
Career_Success	<---	p62_1	.003	.012	.293	.770

Model Fit Summary

CMIN

Model	NPAR	CMIN	DF	P	CMIN/DF
Default model	82	1207.339	383	.000	3.152
Saturated model	465	.000	0		
Independence model	30	2930.732	435	.000	6.737
Zero model	0	15150.000	465	.000	32.581

RMR, GFI

Model	RMR	GFI	AGFI	PGFI
Default model	1.026	.920	.903	.758
Saturated model	.000	1.000		
Independence model	2.088	.807	.793	.755
Zero model	13.896	.000	.000	.000