

6 Modeling the freelance career

This chapter states the research problem and sheds some light on the research method. It then discusses the research model which is used in this study, to test our hypotheses. The chapter highlights the various choices that are inherent in operationalization of research, i.e. the selection of the study group, the detailed research model, choices regarding the variables used, and the measurement of the various variables.

6.1 Problem statement

The problem statement of this thesis is twofold:

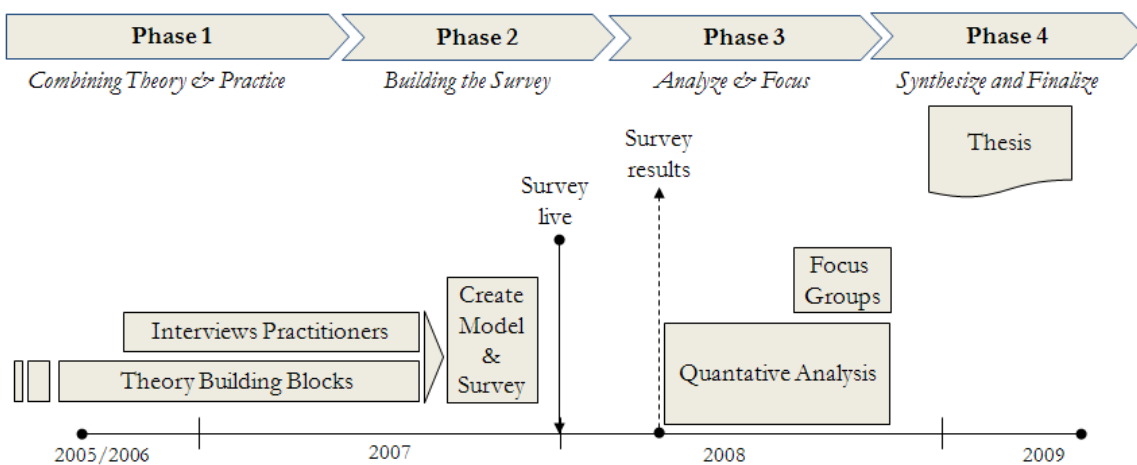
1. *What are the determinants of freelance career success?*
2. *How does age influence freelance career success?*

The first question is broader than the second, as the second question addresses a specific variable from the complete set of potential factors. However, the second question is researched more in detail to deepen our insight in the career patterns of independent professionals through the various life stages.

6.2 Research methodology

The research approach consisted of 4 phases (Figure 11). In *phase one* all relevant documents were collected and interviews were held with experts in the field.

Figure 11: The phases of the research project



In *phase two* the research model was built. Based on the available theories and our insights from the interviews a detailed research model and corresponding on-line survey was created. The survey was then tested by a relevant subgroup of interviewees, before it was sent to our target group. *Phase three* consisted of detailed quantitative and qualitative analyses of the results, and discussing these results in focus groups. In *phase four* all the arguments were brought together to produce this thesis.

Phase 1: Combining theory and practice

An important part of the study was the collection and study of all the relevant research. This included research on older individuals, strategic management, self-employment, independent professionals, employability, career theory, and more. Because the object of study is quite new and the world of the independent professional is continuously changing, a fairly broad field of research was studied. In 2006 and 2007 a total of 51 interviews were held with various experts in the field (Table 14). Three types of experts were interviewed: 1) independent professionals, 2) employment agencies and sponsor organizations who hire independent professionals (the interviews were with general managers, senior line managers and HRM managers), and 3) other experts (e.g. academics and professional and other representing organizations). All interviews were structured around a common set of open-ended questions based on a preliminary research model to ensure that each interview covered the same topics. This set of questions depended on the expert group to which the interviewee belonged (professional, sponsor, other). The interviews were conducted face-to-face and were transcribed. Much of the qualitative data was based upon obtained information from the interviews (see the appendix for a list of interviewed organizations).

Table 14: List of interviews

Type	Number of interviews
Independent professionals	18
Employment agencies and sponsor organizations	18
Outside experts (i.e. professional associations)	15

Phase 2: Building the survey

In the second phase a theoretical model of freelance career success was created based on the existing literature. Although the draft research model of the first phase was regarded as a good starting point, some variables were added and revised based on our interviews. All interviewees agreed with the basic structure of the research model, which included the career competences of

personality capital, social capital, and human capital. Most interviewees were convinced that specific knowledge (human capital) and a large network (social capital) are the real keys to success. The abstract research model was then turned into a tangible on-line survey using existing methods and tools. The on-line survey was also extensively pre-tested and tested by respectively 10 and 50 freelancers before the final on-line survey was sent to our study population.

The internet survey was made with the tool Examine (www.examine.nl). One of the advantages of such a tool is that it is possible to create random sequences of questions and answers minimizing the chance of common variance. The internet survey was in Dutch. This meant that all tests and questions first were translated from the original English to Dutch, then by another person back from Dutch to English. If there were differences between the original English text and the English text that was twice translated, both translators and a third independent person (all fluent in Dutch and English) decided on the final text in Dutch. By way of compensation for the trouble of completing the survey, all respondents were promised a personal benchmark report consisting of their score relative to their peers. This incentive was used to improve response rates and respondents' accuracy and honesty.

Phase 3: Analyze and focus

In phase three the results of the survey were analyzed using both quantitative methods and qualitative insights. The quantitative methods were based on econometrical analysis of the data. The qualitative insights were a result of the interviews and the use of focus groups. Focus groups (Wilkinson, 1998) are moderator-facilitated discussions among multiple participants to collect information on a designated topic. Two focus groups were used: 'A: older freelancers' and 'B: employment agencies and sponsor organizations'. The focus groups generated interactions (between participants and with the facilitator) that allowed full exploration of views. Guidelines were developed for moderating the focus groups.

Phase 4: Synthesize and finalize

In the last phase all results were brought together ensuring an objective view of freelancers from various perspectives (the independent professional, the sponsor, the agency and various professional organizations).

6.3 Research relevance

This study is relevant to both organizational scientist and policy makers. Despite the strong growth of the number of independent professionals in the Western world, there are only a limited number of scientific papers on independent professionals. With the increased importance of the independent knowledge worker and the vital role of this individual in the creative industry, it becomes increasingly important to appreciate how knowledge workers behave and how they maintain, improve, and distribute their skills like honeybees in a garden. Our current understanding of the world of the independent professional is still marginal considering its predicted growth. Our awareness of the machinery of the freelance triangle (professional, agency and organization) is scarce at best.

Most of our understanding of independent knowledge professionals is based on studies into entrepreneurship and employee behavior. But it is not always realistic to see an independent knowledge professional as a specific combination of a high-tech entrepreneur, a small shop keeper, and an assembly line worker. Moreover, almost all studies that focus on the subject are of a theoretical and/or qualitative nature. The number of scientific empirical, quantitative studies with independent professionals as their main subject of study, is limited. Almost all studies on independent professionals have been performed in the Anglo-Saxon countries, such as: Australia, Canada, the UK and the US, with most studies being performed in the US. Some interesting examples are: Barley and Kunda (2004), Davis-Blake et al. (2003), Donnelly (2006), Inkson et al. (2001), McKeown et al. (2006), Marler (2002), Platman (2004), and Spalter-Roth (1997).

In The Netherlands, the only studies are those of EIM (e.g. Pleijster and van der Valk, 2007; Bangma and Timmermans, 2008), but these studies are more of a descriptive than explanatory nature. This has resulted in a knowledge base that is more grounded in political view than in empirical fact. This study wants to contribute to a more balanced view of freelancers, as the current political views do not do justice to their complex and ever-changing world.

The social relevance of this study stretches far beyond the direct impact freelancers have on the economy. This is because more and more traditional employees are managed as if they were independent professionals. In the knowledge-based service economy, job security is a distant memory, employees are often laid off at the first economic hiccup. The competitive position on the external labor market is therefore crucial to all employees. Given these facts the independent

professional should be seen as nothing less than the extreme archetypical example of the future boundaryless career worker. Our understanding of the independent professional of today will help us understand the knowledge employee of tomorrow. As knowledge is generated by and stored in individuals instead of organizations, it is important to understand the mechanisms by which individuals generate, maintain and lose valuable and rare knowledge and how this all contributes to economic progress. As far as I know, no comprehensive study has ever been performed on the economic and social value of freelancer. Some studies have pointed to the added value of freelancers for the labor market or the added value of freelancers as a form of entrepreneur, but no overall study has been performed.

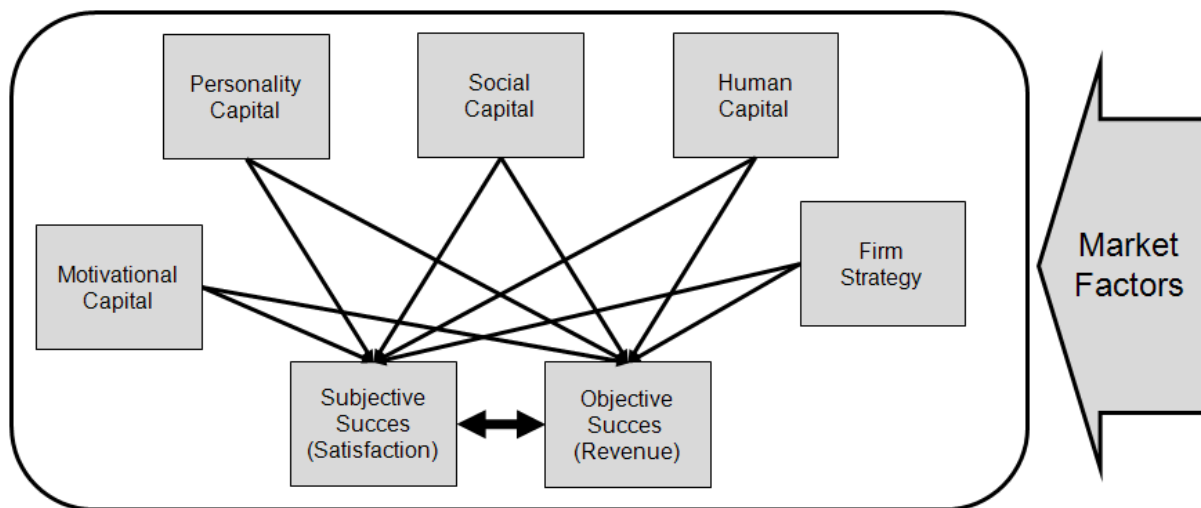
The discussion on the employability of independent professionals is also relevant in the light of the coming age wave. The majority of Western governments seek to increase the labor participation rates of older individuals. To turn the tide, nearly all Western governments have implemented soft measures, such as age discrimination. measures and gradually changing labor regulations (e.g. retirement age). To tackle one of the most important causes of the low participation and skills obsolescence, most governments stress the importance of lifelong learning. Yet no government has substantially invested in lifelong learning initiatives. Strong evidence of firms that assume this responsibility for continuous development is also lacking. On the contrary, organizations are making individuals more and more responsible for their own development. The labor participation of the older generations is therefore not determined by government policies, but largely by the individual choices of the boundary less knowledge worker. However, from earlier studies it has become very clear that boundaryless professionals invest significantly less in formal personal developmental activities. Is there a risk that these new knowledge workers are myopic and under invest in their personal development? This is relevant to broader economic policy. If it is true that these knowledge workers are not investing enough in their skills, then labor participation and productivity will not increase by giving individuals more responsibility. On the contrary, crucial economic potential will be lost. The participation rate of older freelancers will give the government clues on what to expect when individuals are made fully responsible for their own productivity and labor participation.

6.4 Research model and hypotheses

This thesis uses Eby's et al. (2003) operationalization of Arthur and DeFillipi's (1996) boundary less career model as a starting point. The variables and measures of the model are adapted where this is necessary given the different subject of the study (i.e. freelancers instead of employees).

The review of entrepreneurial theory resulted, amongst other things, in adding a number of firm-relevant variables to Arthur and DeFillipi's model such as: business strategy and marketing mix. The comments of interviewees resulted in 3 additional important modifications, various minor improvements, and the formulation of various testable hypotheses. The second important change to Eby's starting model was the addition of the market environment. As the original model was set in an employee world, the external labor market was not considered. However, it quickly became very clear that local market conditions play a central role in determining freelance career success. In some markets (e.g. the market for independent engineers) there is so much demand, that even a freelancer with a limited skill set can earn large amounts of money. In other markets (e.g. journalists) the competition is much fiercer, and any freelancer needs to stand out of the crowd in order to earn a decent living. The third major change to the original model was the addition of partner support. Many independent professionals considered this an important aspect. Several interviewees emphasized the importance of partner support as the market environment of freelancers is precarious, and freelancers often lack other sources of support (e.g. organizational support). The fourth main amendment to the model was adding the time invested in networking, and networking activity as important social capital variables. Figure 12 shows the resulting research model.

Figure 12: The proposed research model



Although Eby's original study on career success focuses on subjective career success and perceived marketability, the current study is interested in both objective and subjective career success, as well as the interrelation between those 2 concepts. The distinction between objective and subjective success is important in this context because some independent professionals

choose self-employment for monetary reasons, but others choose self-employment to increase flexibility and improve work-life balance.

The impact of human capital on freelance career success

From the literature on employees and business founders it is clear how important human capital is for both career success as well as the competitiveness of firms. Because the risks of skill obsolescence are larger for freelancers than for employees,¹⁸ freelancers seem more aware of the need to continuously develop their human capital. Independent professionals continuously balance the demand for specialization with the need for future opportunities. They are always scanning knowledge sources (e.g. internet, books, and magazines) to be up to date on the latest industry trends, then they assess these trends and decide where to invest in. Barley and Kunda (2004) report that independent professionals use a variety of low cost strategies to obtain the latest knowledge; they take classes at universities, attend sponsored training programs, and join local user groups. But most independent professionals prefer to teach themselves, and not to use formal schooling. These stories seem to suggest that the figures on formal schooling grossly underestimate the true schooling for independent professionals and that one should not only measure formal schooling, but other forms of professional development as well. Stretchwork, for instance, is not measured although a lot of independent professionals use stretchwork assignments as their method of choice to enhance their human capital, that later on can be marketed. Nevertheless, based on the wealth of evidence on human capital, the following is formulated:

Hypothesis 1: Human capital will be positively related to freelance career success.

The impact of social capital on freelance career success

Arthur and DeFillippi's (1996) concept of *know whom* is comparable to the concept of social capital. In the entrepreneurial literature the relationship of social capital to firm success is well researched. As freelancing is a lonely profession where the freelancer lacks support of an organization and colleagues, social support from other sources becomes more important. Barley and Kunda (2004) argue that it is important for independent professionals to receive support from staffing agencies. Staffing agencies are in many cases central to their livelihood. Agencies broker the market; they compile information on job openings, as well as on contractors. They

¹⁸ As the marketplace is continuously changing, there is always the risk that an independent professional specializes in a wrong field (i.e. an expertise or a client where there is insufficient employment) or the risk that a specialized skill suddenly becomes obsolete (e.g. because of the arrival of a new technology).

match organizations and independent professionals, negotiate deals and, sometimes, act as the employer-of-record. It is also important to receive support from the partner. Greenhaus and Friedman (1990) show how important partner support is for career success. Therefore:

Hypothesis 2: Social capital will be positively related to freelance career success.

The impact of personality capital on freelance career success

Eby's (2003) example was largely followed for the operationalization of personality. The first personality capital variable is **career insight** (i.e. the extent to which one has realistic career expectations and knowledge of one's strengths and weaknesses, as well as specific career goals (London, 1993; Noe, Noe and Bachhuber, 1990). This variable was suggested by many interviewees. Insight in the career and knowing which assignments to accept and which assignments to refuse in order to build a clear profile and strong résumé was seen as very important to career success. The second personality capital variable is **proactive personality**. Highly proactive individuals identify opportunities and take action on them and persevere in the face of setbacks (Bateman and Crant, 1993). Seibert, Kraimer and Crant (2001) demonstrate that pro-active personality is linked with career success via innovation, career initiative, and political knowledge. The third personality capital variable is the Big Five personality trait of **openness to experience**. Individuals high on this trait tend to be imaginative, curious, broad-minded, and active (Barrick and Mount, 1991). Other, more traditional psychological traits from the entrepreneurial research (e.g. locus of control, self-efficacy, or need for achievement) were not used for three reasons. Firstly, we needed to limit the survey to a small set of personality test in order to maximize the number of respondents. Secondly, because of the greater importance of adaptability in the new career world pro-activeness and openness seemed more important than the more traditional entrepreneurial personality traits. Moreover, based on our interviews, career insight was thought to be a crucial (personality) characteristic. Thirdly, the body of entrepreneurial research has taught us that the explained variance of the more traditional entrepreneurial traits of objective success is always very small.

Hypothesis 3: Personality capital will be positively related to freelance career success.

The impact of motivational capital on freelance career success

To these existing personality variables, measures of motivation ("why did you start a freelance career") and ambition were added. The possible answers in the on-line survey were based on our earlier

interviews. Based on these interviews we also expected that individuals, who consciously choose a freelance career because of flexibility and work-life balance reasons, score higher on subjective career success, and lower on objective career success. These arguments lead to the following two hypotheses:

Hypothesis 4a: Individuals who are motivated by flexibility and work-life balance will report lower objective freelance career success.

Hypothesis 4b: Individuals who are motivated by flexibility and work-life balance will report higher subjective freelance career success.

The impact of strategy capital on freelance career success

Based on Ostgaard and Birley (1996), 6 different organizational strategies were defined. Furthermore it was proposed, based on the theories of Porter (1980) and Baum (2001), that not all of these possible combinations can realistically improve firm competitiveness. According to these theories only those strategies that are aimed at low *cost*, *focus* or *differentiation* will lead to success. As low cost strategies are probably not particularly attractive to freelancers, as it signals weaknesses and directly impacts the quality of life, we formulate:

Hypothesis 5: Focus and differentiation strategies will be positively related to freelance career success.

Hypothesis on dominance, synergy and interaction

In firm research it is well established (e.g. Sandberg and Hofer, 1987) that organizational and industry variables completely dominate individual-level variables, as causes of venture success. Although the market is almost completely overlooked in the traditional career literature, for freelance careers one should expect the market to be the most crucial variable. Structural and cyclical market conditions of demand and supply, transparency, industry structure, and industry institutional arrangements, probably largely determine the professional fee levels in a market. For instance in some markets (e.g. accounting, law) there are continuous learning requirements that in effect regulate and limit supply and necessitate investments in human capital for all independent professionals in the market. In other markets (e.g. health care, reintegration, and some technical sectors) there are only a limited number of companies which employ the specialized services of freelancers (i.e. an oligopsony), leading to lower fees (see Bhaskar and To, 2003). However, no quantitative information is available on these local market conditions. To estimate the effects of

the local markets, occupational dummies are used in this study. These dummies capture a range of market effects that would go unnoticed otherwise.

This research is not only interested in the significance of the linkages between career success and the various resource endowments. It is also interested in the relative dominance of the resource endowments (i.e. which is more important), and in the possible interaction effects between the resource endowments. Based on our interviews and theoretical insights from the organizational literature we hypothesize that market factors are the most important determinant of freelance objective career success.

Hypothesis 6: Market factors dominate other factors in explaining objective freelance career success.

From earlier research it is clear that personality does not have a huge effect on firm success. But various career studies (Ng et al., 2005) show that personality has a very strong impact on subjective career success. For freelancers the following hypothesis is therefore formulated:

Hypothesis 7: Personality capital dominate other factors in explaining subjective freelance career success.

One might argue that to be successful in freelancing, two main resources need to be in place at the same time: one needs knowledge, as well as access to sponsors. One resource without access to the other does not add value. It is the combination of these resources which ultimately leads to revenue. Many interviewees suggested this complementary characteristic. To test this positive interaction between knowledge and network the following hypothesis is formulated:

Hypothesis 8: Human capital and social capital are complementary factors in determining objective freelance career success (i.e. these resources strengthen each other).

Many interviewees, especially employment agencies representatives, but also freelancers, were quite adamant on the added value of an employment agency. These professionals argued that an employment agency is an alternative channel for those independent professionals who have no network of their own. The following hypothesis is therefore postulated:

Hypothesis 9: Agency support is especially positively related to objective career success for those independent professionals who score low on other social capital measures (i.e. network size and network activity).

In this thesis we also explore the impact of matching resources (“the concept of fit”). Here we follow modern organizational theories, and apply them in the world of career success. These modern strategic management theories teach us that firm success is often the result of a complex and dynamic fit between various resources (Venkatraman and Camillus, 1984). Firm success is achieved by a strategy that aligns these internal resources with external opportunities. For freelancers this would mean that success is a consequence of a fit between strategy, market factors, personality, motivational, human, and social capital. However, it is hard to predict which complex fit strategies lead to career success. There has been some work in this respect (e.g. Wijbenga and van Witteloostuijn, 2007; Jones and Bergmann, 2001), which shows that there are mediating and moderating relationships between (founder) personality and firm strategy, but as far as we know, no theories have been developed on the strategic fit between the market and personality, human, motivational, and social capital. Therefore this part of the thesis (Chapter 10) will remain exploratory in nature.

6.5 Testing the impact of age on freelance career success

Skills obsolescence is a major issue for freelancers. Firstly, freelancers are professional knowledge workers that base their success on their knowledge. Freelancers quickly learn that if they do not keep pace with the latest skills, sponsors turn their back to them. Especially in innovative fields the halftime of new technologies and skills is so short that independent professionals need to continuously develop themselves. The value of a certain skill can be described as a concave function of time that, in the end, crashes suddenly (Barley and Kunda, 2004). When a skill first attracts attention, an independent professional can demand high fees. When competition kicks in the professional fees fall rapidly. When a new skill becomes more important, most competitors will learn the new skill. This then increases the value of the old skill as the competition lessens. This process is visible for various industries and sectors, although this process of skill obsolescence is faster in the high-tech sectors. Secondly, the problem of skill obsolescence is emphasized by the fact that self-employed individuals invest less in education (in terms of formal schooling and training) than employees (Kawaguchi, 2003). Especially older entrepreneurs are less likely to educate themselves when they age. This suggests that human capital obsolescence is a larger problem for freelancers than for employees and entrepreneurs. Experience concentration

is also a problem for freelancers as both sponsors and employment agencies (Barley and Kunda, 2004) have a strong preference for freelancers with unambiguous skills and experience. It is hard for independent professionals with a diverse background and various competences, to find an assignment. Given all this evidence, the following is postulated:

Hypothesis 10: Skill obsolescence of freelancers increases with age.

Hypothesis 11: Experience concentration of freelancers increases with age.

The existing research on aging independent professionals (i.e. Platman, 2005) points to decreasing career success through diminishing human capital (by not investing in new skills) and diminishing social capital (through senior contacts who retire). This leads to the following hypothesis:

Hypothesis 12: Objective freelance career success decreases with age.

A rich history of research shows a positive linear or U-shaped relationship between age and job satisfaction for employees. Good examples of such studies are: Yeararta and Warr (1996), Eskildsen and Kristensen (2004), and Houtman (2004). The combined body of research suggests that the U-shaped relationship between age and job satisfaction is significantly caused by non-job factors of life-stage. Friedman and Greenhaus (2000) report a strong positive relationship between employee age and career satisfaction. Almost 44 percent of employees in their 20s and 30s are on average highly satisfied with their career success. This percentage increases to 57 percent for employees older than 40. Although the positive relationship between career satisfaction and age is never investigated for self-employed workers, as far as we are aware, the following hypothesis is formulated:

Hypothesis 13: Subjective freelance career success increases with age.

Kanfer and Ackerman (2004) review the relationship between intellectual ability and age. There are two broad intellectual ability categories: 1) **fluid intellectual abilities**, and 2) **crystallized intellectual abilities**. Critical thinking and reasoning require use of fluid intellectual abilities. There is a steady decline of fluid intellectual abilities (G_f) over the years, with G_f peaking around

25 and beginning a steady decline thereafter. Crystallized Intellectual Abilities (G_c) are connected with a positive growth path. Crystallized Intellectual stands for accumulations of knowledge, vocabulary, and verbal comprehension that positively affect work performance. Crystallized Intellectual tends to grow until about age 60-70. It is thus much harder for individuals who work in occupations, which score high on Fluid Intellect, to remain productive until high age, than for individuals who work in occupations which score low on Fluid Intellect and high on Crystallized Intellect. We therefore hypothesize that professions who have a high need for Fluid Intellect will see their utilization rates drop.

Hypothesis 14a: Professions with a high need of Fluid Intellect will see their utilization rate diminish with age.

Hypothesis 14b: Professions with a low need of Fluid Intellect will see no relationship between utilization and age.

6.6 Measurement of career variables

All measurements used in this study are based on frequently cited and proven questionnaires (see appendix for a paper version of the on-line survey). Subjective career success was assessed using a slightly modified version of the widely used (e.g. Boudreau, Boswell and Judge, 2001; Judge and Ferris, 1995; Seibert, Kraimer and Liden, 2001) career satisfaction measure of Greenhaus, Parasuraman and Wormley (1990). This six-item measure (instead of five) was earlier used by Heslin (2005) and adapted slightly for freelancers where necessary. Consistent with Greenhaus, career success was measured by asking these questions “*relative to my career aspirations*”. A five-point Likert-type scale was used. Objective career success was measured using 4 indicators: 1) revenue, 2) capacity utilization, 3) professional fees, and 4) demand for services. In most research into firm success a definition of income is used instead of revenue. In the case of the independent professional revenue is ‘a good enough’ (i.e. unbiased and objective) measure of monetary success. Because all independent professional in our survey are highly educated knowledge professionals, they all have similar (and limited) costs. They all need a laptop, a telephone, an internet connection, and a car to perform their profession. Usually revenue is a bad proxy for entrepreneurial success. This is because the cost structure for one entrepreneur (e.g. a car dealer with large stock) can be totally different for another entrepreneur (e.g. an owner of an industrial company). It is not that the cost structure is exactly the same for all freelancers, but that revenue is a good enough proxy for objective success.

The second measure for objective success which was used, is capacity utilization. Capacity utilization is measured by the number of days or hours, which an independent professional invoices in a year divided by 200 (assumed maximum billable days per year) or 1600 (assumed maximum billable hours per year). Theoretically an independent professional can have a capacity utilization of more than 100%. The measure of capacity utilization is cruder than revenue, as there is no information about the level of the professional fee. The measure is a better proxy for success in professions with many assignments and sponsors per year (like journalists, trainers, and coaches), than in professions with only a few assignments (IT professionals, interim managers).

The third measure of success is professional fee. This is the net (after agency fees) fee per hour or per day of an independent professional. This measure of success is the complement of capacity utilization. To compare fees per day with fees per hour, it is assumed that a billable day has eight billable hours. As a last measure of success, all respondents were asked whether they thought that the demand for their services had improved over the last two years. The change in client demand was measured using a seven-point Likert-type scale (1: undoubtedly less demand for my services to 7: undoubtedly more demand for my services).

Human capital

Total work experience and total experience as an independent professional were both measured using the same scale (possible answers were: '0 – 6 months', '7 - 12 months', '1 - 2 years', '3 - 5 years', '6 - 10 years', '11 - 15 years', '16 - 20 years' and '21 years or more'). Educational level was determined by the highest educational level of the freelancer ('Lagere School', 'MAVO', 'HAVO', 'VWO', 'MBO', 'HBO', 'Universitair', 'Post-Doctoraal') and the year of graduation. The third variable that was used was the number of recent training days. Based on van der Heijden (2006), and Tharenau and Conroy (1994), respondents were asked to estimate the number of training days in the last two years. This was split in three types of training: training in core skills, training in developing new skills, and training in adjacent or supporting skills (e.g. administration, personal effectiveness, et cetera).

Social capital

Size of the network was measured by asking respondents to estimate the size of their personal and business network. The network definition was given to respondents following the one of Witt (2004). Strong contacts were defined following Granovetter (1973), as those personal contacts that are family or friends. Based on Barbieri (2003) and Davidson and Honig (2003) the

network was also divided in high value network contacts and lower value network contacts. High value network contacts were defined as those contacts on senior management level or higher (i.e. director, VP, Sr. VP, C-level). Respondents were not only asked about the size of their network, but also about how much time they invested in networking activities. Based on Aldrich and Reese (1993) respondents were asked the time per week (in hours) that they are busy networking. Forret and Dougherty's (2001) list of networking activities was used to get a feel for network activity. Individuals were asked to rate how frequently they have done each of the following on a six-point scale ranging from 'never' to 'almost every day': 'Give out business cards,' 'Send thank you note or gift to people who have helped you in work or career,' 'Send cards, newspaper clippings, faxes, or e-mails to keep in touch,' 'Phone business contacts to keep in touch,' and 'Lunch with persons outside the company.' This resulted in an alternative overall measurement of network activity. To measure the influence of agency support, we asked for the number of employment agencies a freelancer was registered with. Based on Barbieri (2003) and Davidson and Honig (2003) all respondents were asked whether they were member of a business club or network, such as: Lions, Rotary, Round Table, et cetera. To measure the effect of social business networks. such as: Linked In, a binary variable was used (0 = no use, 1 = use). Another type of social capital is partner support. The support of the partner was assessed using Friedman and Greenhaus (2000) four-item measure using a five-point Likert-type scale. Respondents were asked whether they had a long relationship (yes/no), before partner support was assessed.

Personality capital

Proactive personality was measured using Kickul's (2002) five-item scale of Bateman and Crant's (1993) measure. Openness to experience was assessed using Saucier's (1994) Mini-Markers Set. Noe's (1990) six-item measure was used to assess career insight. Proactive personality and career insight were measured using a five-point Likert-type scale (1: strongly disagree to 5: strongly agree), Openness was measured using a seven-point Likert-type scale (1: strongly disagree to 7: strongly agree). Ambition was measured, by asking respondents their long term ambition (1: stable traditional labor relation, 2: stay freelancing, 3: establish a network of independent professionals, 4: grow a professional services company, and 5: do not know). Motivation was measured by asking respondents the reasons why they opted for a freelance career. Eight predefined answers were possible.

Strategy capital

Four business strategy variables were added to the above individual variables. The first variable was whether the business was specialized in one or more industries ('yes'/'no'). The second variable determined whether the freelancer considered his/her business proposition to be differentiating vis-à-vis the competition. A differentiating business proposition was measured using a seven-point Likert-type scale (1: not differentiating to 7: very differentiating). Thirdly, to measure the business strategy, respondents were asked what the differentiating factors are in their value proposition in comparison with the competition. Various answers could be given: 'I focus on a single industry or even a single organization', 'I focus on a single product/service', 'I offer better service', 'I offer my services to lower costs than the competition', 'I have a broad product portfolio', and 'I offer innovative services and products'. Fourthly and last, to measure the effects of marketing, we asked respondents which marketing instruments they used to increase the visibility of their business. These selected marketing instruments were also established in the interviews: 'My business has a website', 'I publish regularly in professional magazines, web logs and other media', 'I am a regular speaker on congresses and seminars', and 'I am a trainer and give (various) courses in my profession'.

Skill obsolescence

It is very hard to measure skill obsolescence. Allen and de Grip (2005) distinguish 4 major ways to measure human capital obsolescence: 1) objective methods by testing the deterioration of the human capital workers possess, 2) subjective methods by asking individuals if they face obsolescence of their human capital, 3) measurement of productivity, fees, downtime, and income, and 4) measurement of the probability to become unemployed or to withdraw from the labor market.

Objective methods, such as: direct testing of skills and knowledge are costly, as they often involve labor-intensive assessments. Moreover, they typically focus on assessing technical skills. It is hard to infer the obsolescence of social capital and career motivation. In the economic and sociological literature there are some studies that use subjective methods to measure human capital obsolescence by means of workers' self-assessments in a questionnaire. Van Loo, de Grip and de Steur (2001) asked individuals directly whether their qualifications have depreciated due to changes in their job. This resulted in a binominal variable (yes/no). Blechinger and Pfeiffer (2000) asked German former apprentices "How much of the occupational knowledge and skills you acquired during your apprenticeship, can you still apply in your current work". Allen and van

der Velden (2002) asked respondents “What percentage of the knowledge and skills that you acquired during (tertiary) education is now out of date?” These measures have as drawbacks that they: 1) do not measure specific skills, 2) do not measure social skills and 3) do not recognize the value of on-the-job experience.

Measures three and four of Allen and De Grip do not compute skills obsolescence directly, but indirectly by looking at financial and occupational indicators. In this view skill obsolescence can be seen as the combined effect of all competences. Defined like this, skill obsolescence is equal to employability, and can be measured by employment measures. For a freelancer, skill obsolescence can become manifest in several ways: return to a steady employment relationship, or unemployment, lower fees, and longer downtimes.

In this research skill obsolescence is both measured indirectly by a number of proxies and directly by measuring objective career success (i.e. revenue). The latter variable implicitly tells you the value of the total skill set as it is perceived by the market. The used proxies are human capital measures (e.g. recent training effort), social capital measures (e.g. size of network) and psychological capital measures (e.g. career insight).

Experience concentration

Thijssen (1996) measured experience concentration in various ways. He divided the career in a first and a second half. To estimate educational experience concentration, he looked at both halves of the career and determined: 1) number of educational programs, 2) the duration of the educational programs, and 3) the diversity of the educational programs. To estimate functional experience concentration he looked at both halves of the career and determined: 1) the number of job changes, 2) the average duration of jobs, and 3) the diversity of the jobs. To estimate recent networking experience Thijssen used: 1) network size, 2) recent network renewal (i.e. number of individual contacts, who were not part of the network five years ago), and 3) network diversity (i.e. number of different relations (partner/family, professional relations and friends/acquaintances). It is hard to measure experience concentration of independent professionals. In this study three proxies are used to estimate human and social capital renewal. To measure human capital experience concentration, the total training effort and training effort in new skills (both in the last two years) is measured. To measure social capital experience concentration, the refreshment of the network in the last two years is measured.

Market capital

The influence of the market was measured using 2 indicators: 1) the profession of the freelancer (e.g. interim manager, IT professional, et cetera), and 2) the location of the worker based on his/her postal code. The latter was translated into a binary variable that distinguished between 'Randstad' and the rest of The Netherlands. As there is a lack of reliable information on market variables, such as: numbers of suppliers, number of competitors, market transparency, intellectual property rights, educational requirements, all this information is captured in single dummy variables.

Age

Age is an independent variable in this study and used to gauge the influence of aging on both objective as well as subjective career success.

Control variables

Several control variables are used in the study. Since gender and health may be related to subjective and/or objective career success, these variables are controlled for in all analyses. Health status was measured using a self-assessed Likert-type scale ranging from: 1: poor health condition to 7: excellent health condition. The last control variable indicated whether the freelancers had another source of income as some freelancers may have a regular job or another source of income, besides their freelance activities.