

# Career Pathways and Professional Transitions: Preliminary Results from the First Wave of a 7-Year Longitudinal Study

Christian Maggiori, Jérôme Rossier, Franciska Krings, Claire S. Johnston,  
and Koorosh Massoudi

## 1 Introduction

Work and the professional domain represent essential aspects of adult-life and are strongly related to individuals' somatic and mental health, and potentially vulnerable situations as well (Fouad and Bynner 2008; Friedland and Price 2003). However, current career paths and professional development are challenged by increased instability and demands related to – amongst others – productivity and coping with constant uncertainty (Rudisill et al. 2010). In addition to unemployment, in the current world of work other risk-situations may contribute to the emergence of critical situations, such as frequent transitions and unstable or precarious situations (e.g., time-limited employment and positions with a high risk of lay-off and minimum wage employment). For these reasons, and considering that almost no longitudinal studies of the professional trajectories of adults from a psychological perspective are available, the need for a closer and longitudinal examination of middle-aged adults' career pathways and transitions is fundamental.

The purposes of this chapter are to present the main characteristics and implementation of our longitudinal project, the strategies used to collect data on

---

C. Maggiori (✉)

NCCR LIVES, University of Lausanne, Lausanne, Switzerland

School of Social Work Fribourg, University of Applied Sciences and Arts Western Switzerland,  
Fribourg, Switzerland

e-mail: [christian.maggiori@hefr.ch](mailto:christian.maggiori@hefr.ch)

J. Rossier • K. Massoudi

Institute of Psychology, University of Lausanne, Lausanne, Switzerland

C.S. Johnston

NCCR-LIVES, University of Lausanne, Lausanne, Switzerland

F. Krings

Department of Organizational Behavior, University of Lausanne, Lausanne, Switzerland

© The Author(s) 2016

M. Oris et al. (eds.), *Surveying Human Vulnerabilities across the Life Course*,  
Life Course Research and Social Policies 3, DOI 10.1007/978-3-319-24157-9\_6

professional experiences using a mixed-mode approach, and to highlight initial results and indications from the first data collection wave (such as vulnerability and work stress or the predictors of the agreement to participate in the next waves). First, after introducing the general aim of the project, we present briefly some elements emerging from the current literature on workers' experience and career paths, and a definition of vulnerability to contextualize the project and position its hypothesis. Second, we introduce some methodological aspects, such as the design, the research protocol and the data collection procedure. Third, we present some of the preliminary results from the first data collection wave of our study. Finally, in the conclusion section we highlight the main findings and considerations emerging from the implementation and the first data collection wave and discuss some implications and challenges for the next waves.

### ***1.1 Career Pathways and Professional Transitions: An Overview***

Overall, adopting a broad psychological perspective including counseling, positive, work and organizational, as well as life-span psychology, this project studies the direct and indirect impacts of individual characteristics (such as personality, character strengths, or justice beliefs), individual resources (such as social support or self-regulatory skills), and socio-cultural and economic background (such as SES or acculturation) on adults' professional transitions and career pathways and their successful development (i.e., professional success, life-satisfaction, general and domain-specific well-being) (Klings and Olivares 2007; Petersen et al. 2010; Rossier et al. 2012b; Wiese and Freund 2005). A longitudinal survey design implying a yearly follow up spanning 7 years on a large sample of employed and unemployed middle-aged adults living in Switzerland was implemented. The longitudinal perspective will offer the opportunity to evaluate psychological processes, inter-individual differences and intra-individual variability across time in relation to professional experiences (including job search and unemployment) and professional transitions. Moreover we will focus on identifying the individual strengths (or resilience factors) and vulnerabilities in order to predict objective and subjective aspects of career pathways. More specifically, our study will make it possible to estimate the impact of these factors on the experienced trajectories of workers, and on employees' work conditions, such as underemployment, time-limited employment, multiple-jobs and job loss.

Another central characteristic of this study is the adoption of a mixed-mode approach for the data collection. In fact, in order to offer the opportunity to participants to choose the most convenient way to participate and to target different subgroups in our sample (Dillmann et al. 2009), we implemented several formats<sup>1</sup> to complete the research protocol. More precisely, participants could choose to

---

<sup>1</sup>That is, modes of data collection (such as, phone interview).

complete the two parts of the research protocol via a full online version, a phone interview (CATI) plus an online questionnaire or a CATI plus a paper-pencil questionnaire.

## ***1.2 Why Study Career Pathways?***

To position our study in the current labor market context, we consider some relevant literature pertaining to careers and the world of work.

Due to the changing social and economic conditions, the work context – and consequently professional pathways – has profoundly changed over the last two decades (Rudisill et al. 2010). The current labor market requires individuals to face increasing job instability and demands related to flexibility and geographical mobility, productivity and management of constant insecurity (Kanfer et al. 2001; Rudisill et al. 2010). Furthermore, current work-profiles are very heterogeneous, in terms of, for example work activity rate (part-time vs. full-time), type of contract (time-limited vs. non-time limited employment), or job security. Moreover, in the coming years individuals can expect to encounter a growing number of job transitions, and hence periods of (partial-) unemployment during their work life (Kanfer et al. 2001; Zikic and Klehe 2006). It is important to underline that individuals making these changes have to cope with different psychological (and social) challenges (e.g. cope with constant stress, adopt a new, or leave behind an old social role). This seems particularly true when these changes are not made voluntarily and are imposed by external factors (e.g. due to a layoff) (Fouad and Bynner 2008; Sapin et al. 2007). In this context, professional trajectories across adulthood are severely challenged and become more instable and less predictable (Mercurio 2001; Sennett 1998; Rudisill et al. 2010). At the same time, due to societal changes, developmental tasks and personal goals have shifted across cohorts during the last five to six decades (Bangerter et al. 2001; Grob et al. 2001). Currently individuals face an increasing diversification of developmental pathways. Compared to previous cohorts, family and work-related goals have become less important for current young adults, whereas education and personal time/leisure goals (such as travelling or community involvement) have become more central concerns (Bangerter et al. 2001). This reflects a tendency towards individualism and self-fulfilment, as indicated by Grob and colleagues (2001).

In a general way, we can consider that career pathways and professional experiences are the result of the interaction between personal characteristics and socio-cultural conditions: (i) Individuals' skills, competencies, socio-economic background and/or goals; (ii) Labor market's needs and demands (for instance, in terms of adaptation skills, willingness to relocate, mastery of new technologies, or the ability to take frequent and complex decisions, and to update one's skills) (Sennett 1998; Briscoe and Hall 2006); (iii) The necessity for and competence to make several career-related choices throughout the life-span (rather than deciding once and for all upon a specific career) (Fouad and Bynner 2008). Of course, individual career choices and contextual challenges influence people's professional

and personal development in terms of subjective and objective career pathways, and physical as well as psychological well-being (Klehe et al. 2011). For example, unemployment and unfavorable conditions at the workplace, such as job insecurity, underemployment and the experience of workplace incivilities have a negative impact on individuals' functioning and professional and general well-being (among others in terms of quality of life, stress, depression and work satisfaction) and can lead to vulnerability (Cortina et al. 2001; Friedland and Price 2003). Lucas et al. (2004), highlighted that the unemployment experience can also impact personal well-being in the medium- and long-term even after re-entering the labor market. In fact, even after reemployment, individuals continue to exhibit lower life satisfaction. Hence, contemporary professional trajectories occasionally induce at-risk situations, such as difficult transitions (Schlossberg et al. 1995), social and professional exclusion or discrimination (Haeberlin et al. 2004), and trajectories towards unemployment or poverty (Meyer and Stalder 2003).

For these reasons, analyzing individuals' professional experience and career paths represents an important research area. Understanding the relationship between individual characteristics, vulnerabilities and resources, and environmental aspects like job characteristics and opportunities, and their dual impact on well-being outcomes seems important in order to understand how people adapt to changing work conditions. Research on these types of topics is of prime importance for psychologists dealing with the prevention of at-risk psychosocial situations and negative health outcomes, and more generally with vulnerability processes arising within or from the domain of work (Bakker et al. 2005).

### ***1.3 Vulnerability and the Professional Context***

To understand and analyze various forms and process of vulnerability represents one of the main purposes of the NCCR-LIVES. More specifically, in our project we address aspects of vulnerability related to the work domain and professional paths (such as work stress and job loss).

According to the social cognitive theory of Lent et al. (1994), and to the life-design theoretical perspective of Savickas et al. (2009) people have to adapt to new situations in their everyday life. Thus, they need to be able to use their dispositions to respond to the environment and to maximize their capacities and resources. These models suggest that the relationship between dispositions, environment, and people's behavior (in terms of, for example, career choice, work performance or work engagement) are mediated by process variables or regulation abilities, such as self-efficacy, external expectations, career adapt-ability and emotional regulation (Rossier et al. 2012a, b). In accordance with this theoretical background, vulnerability related to entry, participation and development within the professional context is characterized by:

1. The presence of individual (e.g., disability, poor health and well-being, inadequate regulatory capacities) and/or contextual risk factors (e.g., minority, low SES, unemployment, high stress conditions);

2. The deficit or lack of individual (e.g., adaptive capacities, character strengths) and/or contextual resources (e.g., financial, social support and network, labor market situation);
3. The possible interactions between risk factors and resources.

Overall, our research design with annual measurements allows us to take a longitudinal approach to vulnerability and to deal empirically with questions such as which factors increase vulnerability in the long run and which resources mitigate these effects.

Considering the elements presented so far, the general focus for our project concerns relations between individual resources and characteristics, social support (both actual and potential support), cultural background, job conditions (e.g., job demands and job control) and, job-related (e.g. work stress and job satisfaction) and general outcomes (e.g., health and quality of life). Specifically we hypothesize that in addition to a direct impact on outcomes including professional and general well-being and career related transitions (e.g. from unemployment to employment or job-to-job transitions), individual resources and characteristics, social support, and cultural background will moderate and/or mediate the relations between job conditions and outcomes.

## **2 Data Collection Tools and Measures to Explore Career Paths and Professional Experiences**

In this section we present some methodological characteristics of our study on career pathways and professional transitions of employed and unemployed adults and general information concerning the procedure implemented for the first data collection wave realized from January to April 2012.

### ***2.1 Sampling***

According to the Swiss State Secretariat for Economy (SECO), in the first quarter of 2011 – at the time we started the project – the number of employed individuals in Switzerland was 4.5 million which represents about 58 % of the overall Swiss resident population. Women and non-Swiss represented respectively 45.6 % and 23.3 % of the employed population. At the same period, according to the International Labour Office's (ILO) criteria, there were more than 197,000 unemployed (about 4.4 % of the active population). Women and non-Swiss represented respectively 48.2 % and 44.7 % of the unemployed population. However, only about 134,000 people were officially registered at an official regional placement office (RPO). Concerning the length of unemployment, for these registered individuals about 39 % were unemployed for 6 months or more (SECO 2012).

For the purposes of this study, a first random sampling list was realized by the Swiss Federal Statistic Office (SFSO) (N = 9000) and drawn from the national

register of the inhabitants. However, it was not possible to distinguish active and non-active individuals at this step. To increase the number of unemployed participants, in order to obtain a more detailed picture and increase statistical power, a second random sample was realized by the SECO (N = 2400). This sample was drawn from the national register of unemployed. Concerning the sampling criteria, both samples included exclusively adults aged 25–55 years from the French and German speaking regions of Switzerland. It is important to note that, at the beginning of the interview, we verified additional inclusion criteria that were not possible to control at the moment of the sampling. More specifically, participants had to meet the following criteria: (a) non-Swiss citizens needed to have at least an annual work permit; (b) live in a private household (people living in an institution were not sampled); (c) have a professional activity and/or be searching for a job. For practical and economic reasons (such as the necessity to translate and validate the majority of our instruments or to have Romansh and Italian speaking interviewers) we didn't include individuals living in the Italian- and Romansh- speaking regions, that represent <8 % of the Swiss population. Moreover, women were slightly oversampled to obtain a more comparable proportion of both genders.

## ***2.2 Design and Research Protocol***

As indicated previously, the project intends to realize a 7-year longitudinal study with an annual assessment (from T1 to T7). For T1, each participant completed a research protocol, consisting of two successive steps using a mixed-mode method for the data collection. More specifically, participants could choose: (a) To fill in the two parts of the research protocol using an online self-administered form; (b) To complete the first step by CATI and the second online; (c) To complete the first part by CATI and the second with a paper-pencil questionnaire. Overall, the estimated time to complete the total research protocol (240 items) was 10–15 min for the first step and 30–40 min for the second step.

In the first step, we assessed characteristics of the professional situation (e.g. employed or unemployed, current number of jobs or different employers, work rate and main activity), and professional experience and biography (e.g., start date of first job), including factors related to unemployment (e.g., receive – or not – unemployment benefits or length of unemployment). We also evaluated job satisfaction, perceived discrimination (e.g., sexual harassment and physical violence in the current work environment and/or during the job search process) and job search characteristics for employed and unemployed individuals (e.g., external support during job search). In this first part of the research protocol we used essentially items developed specifically for the study and questions proposed in other national surveys of the SFSO. Importantly, at the beginning of this part of the research protocol inclusion criteria mentioned previously were verified. More concretely, 910 individuals did not meet the criteria, or stopped the questionnaire and were excluded from the sample.

In the second step, we evaluated professional environment (in terms of, for example, job strain, job insecurity, work stress, and perceived organizational justice) and individual characteristics and resources, such as career adapt-ability, personality, and just world beliefs. In order to evaluate the respondents' general well-being, we assessed – amongst others – health, satisfaction with life and quality of life. Finally, we collected additional personal information (such as marital status, household income and education level). In relation to the employment status, a different questionnaire was proposed to employed and unemployed people.

### 2.2.1 Measures

In this section we present briefly the main measures analyzed in this chapter. Regarding individuals' characteristics and personal resources, the *Career Adapt-abilities Scale* (Savickas and Porfeli 2012) was employed to assess adapt-ability resources. This questionnaire contains 24 items that yield a total score, which indicates a person's career adapt-ability. The items are divided equally into four subscales that measure the adapt-ability resources of concern, control, curiosity, and confidence as psychosocial resources to face occupational transitions and work related challenges. Career adapt-ability is conceptualized as a hierarchical construct comprised of four dimensions: (i) Concern allows one to plan, activate and prepare an adaptive response; (ii) Control allow to engage the person's subjectivity in this adaptive response; (iii) Curiosity allows one to explore and find new responses; (iv) Confidence is the perceived capacity to express an adaptive response (Savickas et al. 2009). Participants rated how strongly they have developed each ability using a five-items rating scale (1 = "Not strong", 5 = "Strongest"). Personality was evaluated using the French-version of the *NEO Five-Factor Inventory Revised* (NEO-FFI-R; McCrae and Costa 2004; Aluja et al. 2005). The NEO-FFI-R includes 60 items, with a five-point scale ranking from "Strongly disagree" to "Strongly agree". The items are equally distributed to measure five personality dimensions (i.e., neuroticism, extraversion, openness, agreeableness and conscientiousness). The *Beliefs in a Just World Questionnaire*, developed by Dalbert (1999), was used to assess general (GBJW) and personal beliefs in a just world (PBJW). GBJW concerns the belief that people generally live in a just world, while the PBJW concerns whether they are personally treated fairly or not (Dalbert 2001; Wu et al. 2011). Six items are designed to describe GBJW and seven for PBJW. The questionnaire proposes a rating scale from 1 = "Strongly disagree" to 6 = "Strongly agree". The eight-item *Functional Social Support Questionnaire* (FSSQ, Broadhead et al. 1988) is an instrument to measure the level of the perceived personal social support. The items are scored on a five-point scale (1 = "Much less than I would like", 5 = "As much as would like").

Concerning professional outcomes, to evaluate work-related stress we used the *General Work Stress Scale* (GWSS; de Bruin and Taylor 2005). Participants responded to the nine items on a five-point rating scale, where the response options were labeled from 1 = "Never" to 5 = "Always". Job satisfaction was measured by

an abbreviated version of the *Inventaire JobSat* of Rolland (Massoudi 2009). The five items proposed to our participants were selected to cover different domains of the professional satisfaction (i.e., supervisor behaviors, job security, salary, working conditions and relationships with colleagues). Each item was rated on a four-point rating scale, where 1 = “Not satisfied at all” and 4 = “Very satisfied”.

Regarding individual risk factors, general stress was measured with the five-item version of the *Perceived Stress Scale* (PSS; Cohen and Williamson 1988). These items assess the extent to which situations in one’s life were appraised as stressful during the last month using a rating scale ranking from 1 (“Never”) to 5 (“Very often”). Life satisfaction was assessed using the *Satisfaction With Life Scale* (SWLS, Diener et al. 1985). The five items were rated on a seven-point scale (1 = “Strongly disagree”, 7 = “Strongly agree”). Furthermore, we introduced in the research protocol the single-items suggested by the World Health Organization Quality of Life (WHOQOL)-Group (and used for example in the WHOQOL-Bref study, Skevington et al. 2004) to assess general *quality of life* and *self-rated health*. Respondents answered on a five-point rating scale from 1 = “Very poor” to 5 = “Very good”.

## 2.3 Data Collection Procedure

For the data collection we established a formal contract with the main Swiss polling institute in social and political sciences: Link Institut. All efforts related to the field work: CATI programming, interviewer selection, instruction and training, organizing and managing the hotline, printing and mailing initial and reminder letter (and reminder phone call) were guaranteed by the polling institute with the supervision of the research team. Concerning the interviewer instruction and training, the program was developed and realized by two PhDs of the research team in collaboration with the polling institute. In this way, we tried to guarantee a certain quality and the same information to all the interviewers (French and German speakers). Two call centers were organized, one in Lausanne for the French-speakers and one in Zürich for the German-speakers, and a free-hotline was available throughout the data collection period from Monday to Saturday. Finally, two members of the research team were available during the data collection to answer participants’ questions about the content of the survey and provide additional information about its purposes.

### 2.3.1 Mixed-Mode Method to Collect Data in T1

First of all, an advance personalized letter was sent to all target individuals describing the purpose and importance of the study, the data collection procedure and inviting them to participate. Individuals were encouraged to visit the project’s web site to fill in a complete online version of the research protocol. To do so, each

individual received a personal user name and password to have immediate access to a secure server. However, in this letter we also indicated the possibility to call a free-hotline to complete the first part of the research questionnaire by phone, to schedule an appointment or just to obtain additional information. Participants choosing CATI to complete the first part, were invited at the end of the interview to answer the second part of the research protocol via a paper-pencil or an online questionnaire. To reduce the time between the two parts of the research protocol, participants choosing the online version received an invitation by e-mail immediately after the initial interview. People choosing the paper-pencil format received the questionnaire by mail within 3–4 days, with a pre-stamped envelope to return the questionnaire.

With reference to the first part of the research protocol, those who did not complete the online questionnaire or did not call the hotline received a first reminder by mail 3 weeks after the initial contact. When necessary, a second reminder took place 2 weeks later by phone (when a phone number was available) or by mail. A similar reminder procedure was implemented for participants who never sent back the questionnaire or didn't complete the second part online. Furthermore, at the end of the main data collection, a conversion-strategy was implemented and realized by specially trained interviewers. More specifically, when a phone number was available, the interviewers re-contacted individuals who initially refused participation to try and persuade them to participate. More information about rates of refusal and drop-out at the different steps, and about the completion modes are presented in section “[Participation: Key Data](#)”.

### **2.3.2 Subsequent Data-Collection Waves**

Regarding the next waves (from T2 to T7), as indicated previously data collection will be realized once a year and it will take place during the same period (i.e., from January to April) to avoid seasonal bias. It is important to note that the same data collection procedure (i.e., a research protocol consisting of two successive steps and proposing a mixed-mode method) will be implemented. However, each year – in respect to the questionnaires' rotation system–, the content of the research protocol will be adapted. In fact, some new questionnaires will be integrated to replace others and will give us the opportunity to assess additional variables such as acculturation and personal strengths and follow changes related to professional situation.

## ***2.4 Why Use a Mixed-Mode Method?***

Considering the characteristics of our sample (for example in terms of employment situation), a mixed-mode method (including an online version of the research protocol) presents several advantages compared to a single-mode survey. First, the mixed-mode method offers participants the possibility to choose the most appropriate and comfortable format to complete the research protocol. Furthermore,

they had the opportunity to schedule the phone interview at a convenient time. Second, in comparison to a face-to-face or phone interview, it reduces the costs of the data collection (Herrero and Meneses 2006; McHorney et al. 1994). For our project, this reduction – estimated at 15–20 % – is essentially related to the decreased number of phone interviews. Third, if participants chose the full online version, the research protocol could be completed relatively quickly as there was no time lag between the first and second parts. Furthermore, for participants choosing to complete the first part by CATI and then to continue online, they immediately received an invitation and an Internet link to complete the second part. This short time lag helps to prevent a lack of motivation as participants did not have to wait to complete the second part (Riva et al. 2003). Furthermore, the online versions allowed participants to complete the questionnaire in more than one session, permitting the participants to choose a convenient time to complete the questionnaire. Finally, for sensitive questions, a mixed-mode format using self-administered questionnaires results in increased comfort for respondents, possibly yielding a higher response rate than other interview formats (e.g. face-to-face interview) (de Leeuw 1992, 2005). For this reason, we introduced the more sensitive questions in the second self-administered part (online or paper) of the research protocol. Overall, the different opportunities presented by this kind of mixed-mode method aims to maximize participation by reducing the annual dropout rate and to consequently obtain the largest possible sample in T7.

However, a mixed-mode method presents some disadvantages too, which could have an impact on the quality of the collected data. For instance, measurement differences may emerge because not all participants used the same response format (de Leeuw 2005). Moreover, as indicated by de Leeuw (2005), the same question proposed online or by CATI, will not necessarily offer the same stimulus to the participant. To reduce this problem, during the first step of our survey (completed by CATI or online) we essentially asked for formal and objective information. Concerning psychological constructs – such as psychological distress or personal resources and characteristics – using online or paper-pencil questionnaires, several studies show that these methods produce equivalent assessments (e.g., Aluja et al. 2007; Herrero and Meneses 2006; Riva et al. 2003; Tse 1998). Furthermore, as with other methods based on self-report, a mixed-mode solution is not immune to potential sources of common method variance (such as consistency motif, social desirability or transient mood state) (Podsakoff et al. 2003). Moreover, due to the specific data collection format and even though questions were kept as simple as possible, people needed sufficient knowledge of German or French to participate. This limitation – which is not uniquely related to the mixed-mode method – is probably more important among non-Swiss individuals and subgroups with higher levels of low skilled people (such as unemployed individuals). Nevertheless, as indicated by Laganà et al. (2011), reaching more marginal groups –for example due to language limitations – is a recurrent problem in this kind of survey. Finally, online surveys, similar to surveys based on phone interviews, are affected by

coverage bias (or error) (i.e., not all the household are equipped with Internet or phone connections, and coverage could differ within groups, e.g., lower-income vs. higher-income) (de Leeuw 2005). Nevertheless, about 80 % of Swiss households have Internet access (SFSO 2012). When we consider exclusively households with individuals aged 20–50 years, Internet coverage increases to 95 %. With reference to the professional situation, about 88 % of the unemployed have Internet access at home (SFSO 2012). Moreover, mixed-mode designs permit partial compensation of the coverage bias (Parackal 2003).

#### **2.4.1 Sample Attrition and Participant Retaining Strategies**

Regarding the sample attrition, considering an annual dropout of about 20 % after the first year (from T1 to T2), and about 10–15 % for the following waves, the number of individuals at the end of the study (T7) is expected to be 800. This estimation is based on previous national longitudinal surveys conducted by polling institutes and is similar to the attrition observed for the Swiss longitudinal youth study 2001–2010 (Bergman et al. 2011). Overall, part of this attrition will partially be due to the impossibility to survey all addresses and name changes or individuals moving to other countries. However, to try and limit the problem of non-valid contact details, respondents themselves have the possibility to update personal information (via the project website or a pre-stamped card). Moreover, the polling institute guarantees a verification of the mail addresses throughout the longitudinal study.

In order to retain participants in our study, we used different strategies. First of all, each participant could choose a gift (for an amount of CHF 20, about 22 USD or 16.5€) as an incentive to participate. Gift choices included a gift card to use at a supermarket, a gift card for a department store, a book voucher or a donation to a non-profit organization for children's aid. At each wave, participants completing the research protocol will be able to choose a gift of the same amount. Second, each year they will receive a newsletter (summarizing some of the main results in an appealing and more accessible format) and a greeting card. Furthermore, participants can access non-scientific articles and general information (such as new results) on the project website. Finally, after the second wave we will definitively exclude only people not participating in two consecutive waves. This means that people who decide not to participate in T2 will be contacted again in T3.

### **3 First Results and Indications from the Data Collection (T1)**

This section of the manuscript presents some indications and results based on T1. These results are intended to describe general tendencies and relationships using non-weighted values, knowing in particular that unemployed participants and women were oversampled.

**Table 1** Participation and refusal at different stages of the data collection procedure

Contacted initially by letter	7600			
Non-valid address			439	5.77 %
Participant not at the address			100	1.31 %
Others (e.g., death, move abroad)			31	0.39 %
Valid contacts	7030			
Interviews not possible			430	6.12 %
Refusing to participate			679	9.66 %
Never responded or contacted the hotline			1376	19.57 %
Visit to Website or call the hotline without starting the RP			679	9.66 %
1st part RP:				
Start 1st part RP	3866			
(By CATI)	(1255)	(32.46 %)		
(Online)	(2611)	(67.54 %)		
Not eligible			910	23.54 %
(CATI)			(407)	(10.53 %)
(Online)			(503)	(13.01 %)
2nd part RP:				
Start 2nd part RP	2956			
(Paper after CATI)	(613)	(20.73 %)		
(Online after CATI)	(235)	(7.95 %)		
(Online after online)	(2108)	(71.31 %)		
Not returned/timed out			487	16.47 %
(Paper not returned)			(180)	(6.09 %)
(Timed out – online after CATI)			(72)	(2.43 %)
(Timed out – online after online)			(235)	(7.95 %)
Total completed RP	2469			

RP = Research protocol; Percentages (%) refer to initial value of each section

### 3.1 Participation: Key Data

As shown in Table 1, during the data collection procedure, with the aim to obtain a final sample of about 2400 participants, the polling institute activated a total of 7600 addresses (or target persons)<sup>2</sup> but 570 were not valid (e.g. participant not at the address) and for 430 individuals the interview was not possible (e.g. target person outside Switzerland for a long period, language problems, health problems or in an institution). About 670 explicitly refused to participate and more than 1370 never responded to the letters or phone calls. Regarding refusal

<sup>2</sup>Of the 7600 target persons, 6000 were from the sample drawn from the national register of the inhabitants by the SFSO, and 1600 were from the sample drawn from the national register of the unemployed by the SECO.

motivations, the majority of the individuals indicated an opposition to any form of survey, no interest in the topic or lack of time. It is important to note that interviewers registered refusal motivations during the phone contact using pre-established categories. Consequently, we do not have any information about possible motivation of individuals that never contact the hotline. Moreover, 679 people called the hotline or visited the web site (using the personal password) without starting the questionnaire.

A little <3870 individuals started to complete the first part of the research protocol, but among these more than 910 were screened-out (for example because not professional active and not searching for a job). So, 2956 participants completed the first part of the research protocol (2108 online and 848 by CATI). Of those who completed the CATI, 613 requested the paper-pencil version and 235 decided to complete the second part online. The others participants continued with the online version. At the end, of the individuals who started the second part, we obtained 2469 complete research protocols, meaning that these participants completed both parts of the protocol. So, 487 individuals didn't complete the second part or never sent back the paper questionnaire. Unfortunately, we have no information about the reasons for stopping the questionnaire. The rate of completion for the research protocol (first and second part) within the valid addresses was 35.1 %. Importantly, research protocols were considered as complete only if participants responded up until the last question. However, as suggested by McHorney and colleagues (1994), when we calculate the response rate as the ratio of completed research protocols to the eligible sample (i.e., excluding out-of-scope individuals, such as non active people), the total participation rate was estimated at 40.3 %. Concerning the choice of method to complete the protocol, to summarize, we observed that 75.9 % ( $n = 1873$ ) of the participants choose the "full" online version (i.e., the online questionnaire both for the first and second part), 6.6 % ( $n = 163$ ) choose the CATI and online format, and 17.5 % the CATI and paper format ( $n = 433$ ). Although a majority of the participants chose the full online version, about one-quarter opted for another format supporting the decision to propose several ways to complete the research protocol.

### ***3.2 Characteristics of Participants at T1***

As mentioned above, the final sample for T1 was composed of 2469 participants from the French and German regions of Switzerland aged from 25 to 55 years old, with a mean age of 41.9 years ( $SD = 8.6$ ). With reference to the age groups, 25–35, 36–45 and 46–55 years represented respectively 27.4 %, 33.5 % and 39.1 % of the total sample. About half of the participants (50.7 %) were women and 53.5 % were married. More than one third of the respondents (36.1 %) had tertiary education, 55.6 % reported a secondary education and 8.3 % a primary education. Concerning

the nationality and professional situation, non-Swiss<sup>3</sup> and unemployed participants represented respectively 21.6 % and 23.2 %. Of the 533 non-Swiss participants, 26.1 % came from Germany, 11.6 % from France, 11.1 % from Portugal and 10.1 % from Italy. Finally, 89.1 % of the total sample gave us their consent to be contacted next year to participate in the second wave of our study.

On a descriptive level, in comparison to the active population in Switzerland, in our sample we oversampled women and unemployed. In fact, in 2012 women and unemployed aged 25–55 years represented respectively 45.5 % and 3.8 % of the active population (SFSO 2013b). The rate of non-Swiss individuals was close to the one observed in the active population (i.e., 23.8 %). Concerning non-Swiss active individuals, about 69 % came from European Union countries and – as in our sample – the largest group was represented by German individuals (27 %) (SFSO 2013a). With reference to education, there are some notable differences in the lower levels. In fact, data from the SFSO (2011) indicated that 14.4 % of the general population had a primary education, 50.3 % a secondary education and 35.3 % a tertiary education. Regarding specific characteristics of the employed and unemployed groups, some information was presented above (see section “[Sampling](#)”).

### 3.2.1 Employed and Unemployed Participants: Personal and Professional Characteristics

Considering the main purpose of this project, it is essential to distinguish and specify information about employed and unemployed participants.

Concerning *demographic characteristics*, among employed participants ( $n = 1895$ ) women represented 50.8 %, and married 56.6 %. Non-Swiss individuals constituted 16.3 % (308) of this sub-sample. Within the non-Swiss group, the majority of participants were German (32.9 %). The mean age of the professionally active sub-sample was 42.0 years ( $SD = 8.6$ ). With regard to education, 38.4 % of the employed completed a tertiary education, 55.5 % a secondary education and 6.1 % a primary education. In the group of unemployed ( $n = 574$ ), about half (50.5 %) were women. Furthermore, 43.4 % were married, 22.6 % currently lived with their children and 39.2 % were non-Swiss. Once again, German people were the most frequently represented group (17.0 %) within the non-Swiss group. The mean age of this sub-sample was 41.7 ( $SD = 8.7$ ). In relation to schooling, 38.3 % of the unemployed participants completed a tertiary education, 56.1 % a secondary education and 15.3 % attained a primary education.

Regarding the *professional characteristics and situation*, among employed individuals 66.2 % had a full-time<sup>4</sup> job. Caring for children (or other persons) and assumed domestic tasks (71.3 %) and the desire not to work full-time (58.9 %) were

<sup>3</sup>For these analyses, participants with double-nationality with Swiss citizenship are classified as Swiss.

<sup>4</sup>According to the SECO (2012), we consider an activity rate equal or >90 % as full-time rate.

the most frequently given reasons for part-time work. Furthermore, <6 % indicated that it was impossible to find a job to increase current working time. About a tenth (10.7 %) of the employed participants actively looked for a new job during the last 6 months. Concerning job insecurity 13.3 % of the employed group indicated that, in the course of the last year, they faced at least once the risk of lay-off, and 8.6 % fear losing their own job in the next 12 months. More than half (54.2 %) of the employed reported that finding a similar job would be difficult or very difficult. Furthermore, about one-third (35.2 %) of the employed participants reported being unemployed in the past. In the *unemployed subsample*, 85.4 % were registered at a RPO and 72.6 % received unemployment benefits during the last 6 months. About half of the unemployed (49.6 %) have been unemployed for 6 months or more, and three-quarters (74.0 %) were looking for a full-time job and 15.6 % for a job at an activity rate equal to or below 60 %. Similar to employed participants, the main reasons to look for a part-time job were the necessity to take care of children (or other people) and domestic responsibilities (67.1 %) and the desire to keep time for themselves (36.6 %). Among unemployed individuals, 41.8 % were forced to leave their job following restructuring or dismissal, while 11.7 % lost their job at the end of a fixed-term contract. Other frequently mentioned reasons were health problems (9.9 %) and willingness to change job or employer (11.0 %). In relation to the job search, 49.0 % reported having no-one to help and support them in their job search process, except for the person in charge of their file at the RPO. From an economic point of view, about 38.1 % indicated that it was very urgent for them to find a job, and that this should happen in the next month. To conclude, 48.3 % of the currently unemployed participants reported periods of previous unemployment.

When we asked about *unfair treatment* (e.g., sex or age-related discrimination, harassment), 20.3 % of currently employed participants reported being the target of discrimination or unfair behaviors in their current work place. Among unemployed individuals, about half (48.3 %) indicated receiving unfair treatment or discrimination at their last job. For both groups, the most frequent behaviors were mobbing and age, national origin and sex-related discrimination. Considering that the questions were not exactly the same we cannot directly compare these results. However, it is important to emphasize that jobless people reported a higher frequency of unfair treatment at the work place.

### ***3.3 Choice of the Format to Complete the Research Protocol***

To assess possible predictors of the choice of format used to answer our questions (full online, CATI and online, or CATI and paper), we conducted multinomial logistic regression with full-online format as reference category (see Table 2). To do this, we introduced in the model different personal criteria as factors (i.e., age group, professional situation, household income, nationality and education level).

The first half of Table 2 compares the *CATI and paper format against the full online format*. Analyses highlighted that both the two youngest groups (25–35,

**Table 2** Choice of data collection format: Multinomial logistic regression

	$\beta$	$SE \beta$	Wald's $\chi^2$	$df$	$p$	Odds ratio
CATI and paper						
Age (reference: 46–55 years)						
25–35 years	−1.06	0.17	38.42	1	<0.001	0.35
36–45 years	−0.61	0.14	18.33	1	<0.001	0.54
Employed	−0.25	0.15	2.95	1	>0.05	0.77
Household income (reference: >139,000)						
<60,000	1.29	0.24	30.36	1	<0.001	3.64
60–99,000	0.73	0.22	11.05	1	0.001	2.08
100–139,000	0.69	0.23	9.31	1	0.002	2.00
Swiss	−0.31	0.15	3.94	1	0.047	0.55
Level of education (reference: tertiary)						
Primary	1.18	0.23	26.78	1	<0.001	3.26
Secondary	0.71	0.16	19.35	1	<0.001	2.04
CATI and online						
Age (reference: 46–55 years)						
25–35 years	0.10	0.20	0.24	1	>0.05	1.10
36–45 years	−0.15	0.20	0.54	1	>0.05	0.86
Employed	0.08	0.21	0.13	1	>0.05	1.08
Household income (reference: >139,000)						
<60,000	0.98	0.27	13.52	1	<0.001	2.67
60–99,000	0.28	0.25	1.31	1	>0.05	1.32
100–139,000	0.12	0.26	0.20	1	>0.05	1.12
Swiss	0.46	0.24	3.68	1	>0.05	1.50
Level of education (reference: tertiary)						
Primary	−0.72	0.43	2.81	1	>0.05	0.50
Secondary	−0.15	0.18	0.68	1	>0.05	0.86

The reference category is “full online” format. Pearson and Deviance statistic tests,  $p > 0.05$ . Cox and Snell  $R^2 = 0.09$ , Nagelkerke  $R^2 = 0.12$ ; Model  $\chi^2 (18) = 204.83$ ,  $p < 0.001$ . Household income: Evaluate in CHF; CHF 1.00 = EUR 0.82; CHF 1.00 = USD 1.06 (Exchange rate as of 31.01.2012)

36–45 years) chose the full online version more often than the oldest group (46–55 years). The model indicated also that – compared to the higher household income group (>139,000) – the others groups are more likely to choose the CATI and paper format (odd ratios varying from 2.00 for 100–139,000 CHF to 3.64 for <60,000 CHF). Concerning nationality, Swiss participants choose the CATI and paper format less often than the full online version. With reference to the level of education, results emphasized that participants with primary or secondary education opted more often for CATI and paper version than participants with a tertiary education. Finally, no differences were observed in relation to professional situation. The second half of Table 2 compares the *CATI and online format against the full online*

*format*. Interestingly, analyses indicate that the age group, professional situation and level of education did not significantly predict whether participants chose the full online or the CATI and online format. Regarding income, the results emphasized only a significant difference between the two extreme groups. In fact, compared to the >139,000 CHF group, the lowest household income group was about 2.7 times more likely to choose the CATI and online format.

### 3.4 Choice of Gift

Concerning the choice of the gift, overall the most selected gifts were the supermarket card (40.9 %) and the donation (34.4 %). Concerning the other gift options, 16.8 % of the individuals chose the department store card and only 7.9 % the book voucher.

Multinomial logistic regressions were conducted to assess whether personal criteria predicted the choice of the gift (see Table 3), with donation as the reference category. When we compared *department store and donation*, results indicated that age, household income and education of the participants significantly predicted their choice. More specifically, compared to the oldest participants (46–55 years), the youngest individuals (25–35 and 36–45 years) were more likely to choose the department store card. In relation to the household income, compared to the highest income group (>139,000 CHF), others participants (i.e., <60,000 CHF and 100–139,000 CHF groups) preferred more often the department store card. Concerning education, analyses highlighted that, in comparison to the others groups, individuals with tertiary education opted more frequently for the donation. Finally, it is interesting to underline that employed participants and Swiss citizens were not more likely to make a donation compared respectively to unemployed and non-Swiss. The comparison between *supermarket card and donation* highlighted an impact of all personal criteria, except for nationality. As for the previous comparison, the younger groups (25–35 and 36–45 years) choose about two times more often the supermarket card than the oldest group (46–55 years). Employed individuals were less likely to choose the supermarket gift. With regard to household income, data highlighted that the highest income group (>139,000 CHF) opted more frequently for a donation than the other groups. Finally, the choice of the gift varied in relation to the level of education. In fact, participants with a primary or secondary education were more likely to choose the supermarket card, respectively 3.4 and 1.8 times more than participants with a tertiary education.

The last part of Table 3 compares the *book voucher with donation*. Results indicated that only the household income was a significant predictor of the choice between these two options. In fact, the highest income group chose the donation more often than the others groups, except for the 60–99,000 CHF group. However, it is important to emphasize that <8 % of the participants choose the book voucher.

**Table 3** Choice of gift: multinomial logistic regression

	$\beta$	$SE \beta$	Wald's $\chi^2$	$df$	$p$	Odds ratio
<b>Department store</b>						
Age (reference: 46–55 years)						
25–35 years	0.95	0.16	34.23	1	<0.001	2.59
36–45 years	0.69	0.16	29.24	1	<0.001	1.99
Employed	−0.24	0.18	20.2	1	>0.05	0.79
Household income (reference: >139,000)						
<60,000	0.60	0.22	7.64	1	0.006	1.82
60–99,000	0.29	0.19	2.37	1	>0.05	1.33
100–139,000	0.39	0.19	4.10	1	0.043	1.47
Swiss	−0.23	0.16	2.03	1	>0.05	0.79
Level of education (reference: tertiary)						
Primary	1.43	0.28	27.02	1	<0.001	4.19
Secondary	0.66	0.15	19.79	1	<0.001	1.92
<b>Supermarket</b>						
Age (reference: 46–55 years)						
25–35 years	0.64	0.13	24.78	1	<0.001	1.91
36–45 years	0.67	0.12	31.66	1	<0.001	1.95
Employed	−0.38	0.13	8.22	1	0.004	0.68
Household income (reference: >139,000)						
<60,000	0.74	0.17	18.21	1	<0.001	2.09
60–99,000	0.55	0.14	14.72	1	<0.001	1.73
100–139,000	0.46	0.15	9.61	1	0.002	1.58
Swiss	−0.14	0.13	0.1	1	>0.05	0.99
Level of education (reference: tertiary)						
Primary	1.22	0.24	26.76	1	<0.001	3.39
Secondary	0.61	0.11	29.73	1	<0.001	1.85
<b>Book voucher</b>						
Age (reference: 46–55 years)						
25–35 years	0.29	0.21	2.00	1	>0.05	1.34
36–45 years	−0.02	0.21	0.01	1	>0.05	0.98
Employed	0.32	0.23	0.02	1	>0.05	1.03
Household income (reference: >139,000)						
<60,000	0.84	0.29	8.84	1	0.003	2.31
60–99,000	0.31	0.24	1.65	1	>0.05	1.37
100–139,000	0.59	0.23	6.28	1	0.012	1.80
Swiss	−0.08	0.22	0.14	1	>0.05	0.92
Level of education (reference: Tertiary)						
Primary	−0.63	0.51	1.52	1	>0.05	0.59
Secondary	−0.19	0.18	1.06	1	>0.05	0.83

The reference category is “donation”. Pearson and Deviance statistic tests,  $p > 0.05$ . Cox and Snell  $R^2 = 0.10$ , Nagelkerke  $R^2 = 0.11$ ; Model  $\chi^2 (18) = 227.51$ ,  $p < 0.001$ . Household income: Evaluate in CHF; CHF 1.00 = EUR 0.82; CHF 1.00 = USD 1.06 (Exchange rate as of 31.01.2012)

**Table 4** Intention to participate in the future waves: binary logistic regression (final model)

	$\beta$	<i>SE</i> $\beta$	<i>Wald's</i> $\chi^2$	<i>df</i>	<i>p</i>	Odds ratio
Age (reference: 46–55 years)						
25–35	0.42	0.19	4.98	1	0.026	1.52
36–45	0.04	0.16	0.07	1	>0.05	1.04
Employed	–0.14	0.19	0.56	1	>0.05	0.87
Household income (reference: >139,000)						
<60,000	–0.89	0.25	12.51	1	<0.001	0.41
60–99,000	–0.55	0.23	5.81	1	0.016	0.58
100–139,000	–0.53	0.23	5.36	1	0.021	0.59
Swiss	0.26	0.17	2.33	1	>0.05	1.30
Level of education (reference: tertiary)						
Primary	–0.12	0.27	0.22	1	>0.05	0.88
Secondary	0.02	0.17	0.01	1	>0.05	1.02
Neuroticism	–0.34	0.16	4.47	1	0.035	0.70
Extraversion	0.01	0.17	0.01	1	>0.05	1.01
Openness	0.82	0.16	26.57	1	<0.001	2.27
Agreeableness	0.19	0.16	1.37	1	>0.05	1.21
Conscientiousness	0.08	0.16	0.26	1	>0.05	1.09
Self-rated health	–0.02	0.10	0.03	1	>0.05	0.98
General stress	0.33	0.14	5.38	1	0.020	1.20

Cox and Snell  $R^2 = 0.10$ , Nagelkerke  $R^2 = 0.11$ ; Model  $\chi^2 (18) = 227.51, p < 0.001$ . Hosmer & Lemeshow  $\chi^2 (8) = 14.36, p > 0.05$

### 3.5 Intention to Participate in the Next Wave

We also conducted a binary logistic regression to assess possible predictors of the initial agreement to participate in the next wave of the study (0 = No, reference category; 1 = Yes, predicted category). More specifically, after controlling for personal criteria (i.e., age group, professional situation, household income, nationality and education), we introduced in the model personality dimensions in the second step. Moreover, we decided to also enter self-rated health and perceived general stress in the second step as independent variables. We expected that these two variables could contribute to explain the variance in the intention to participate (Etter and Perneger 1997).

The final model (see Table 4) highlighted that age group, household income, neuroticism, openness and general stress were important variables in predicting the agreement for the second wave. In fact, compared to the oldest group of participants, the youngest group (25–35 years) was more likely to agree to be contacted again the next year. Regarding household income, participants in the highest income group (CHF >139,000) gave from 1.5 to 2.5 times more frequently the agreement to continue to participate compared to those with a lower household income. Moreover, analyses highlighted that participants with higher scores on openness and stress and

lower scores on neuroticism indicated agreement to participate in the next wave more frequently.

It is important to underline that – in terms of odd ratio – income and openness were the most important predictors of the intention to participate in the future waves. With regard to stress, although higher levels of stress seemed to predict agreement to participate, actually participants in our study reported very low levels of stress. Alternatively, individuals who feel stress may appreciate the opportunity to share their personal situation and concerns by participating in the survey. Finally, the intention to continue in the survey was not predicted by nationality, professional situation, level of education, health and the other dimensions of personality. Concerning the health state, as emphasized by the main reasons relating to non-participation, it is possible that individuals with poorer health were not integrated in the first wave of this survey.

### 3.6 *Vulnerability and Resources Promoting Well-Being*

To conclude the results section, we present some results concerning several characteristics and resources related to vulnerability, such as adapt-ability, quality of life, health and social support.

#### 3.6.1 *Quality of Life as an Indicator of Vulnerability*

Overall, the *participants in this study* ( $N = 2468$ ) indicated a more than satisfactory quality of life ( $M = 4.10$ ,  $SD = 0.74$ ). However, a series of ANOVAs revealed that Swiss ( $M_{\text{Swiss}} = 4.15$ ,  $M_{\text{Non-Swiss}} = 3.92$ ,  $F(1, 2450) = 40.92$ ,  $p < 0.001$ ), women ( $M_{\text{Men}} = 4.06$ ,  $M_{\text{Women}} = 4.14$ ,  $F(1, 2452) = 7.82$ ,  $p = 0.005$ ) and employed ( $M_{\text{Employed}} = 4.22$ ,  $M_{\text{Unemployed}} = 3.71$ ,  $F(1, 2452) = 4224.90$ ,  $p < 0.001$ ) reported a higher quality of life. Moreover, results highlighted significant differences between the three levels of education for all possible comparisons ( $M_{\text{Primary}} = 3.62$ ,  $M_{\text{Secondary}} = 4.03$ ,  $M_{\text{Tertiary}} = 4.31$ ). Subsequently we repeated the analyses independently for both employed and unemployed subgroups. Among *employed*, consistent with the previous results, Swiss ( $M_{\text{Swiss}} = 4.25$ ,  $M_{\text{Non-Swiss}} = 4.08$ ,  $F(1, 1884) = 16.84$ ,  $p < 0.001$ ), and participants with higher education level ( $M_{\text{Primary}} = 3.89$ ,  $M_{\text{Secondary}} = 4.14$ ,  $M_{\text{Tertiary}} = 4.38$ ) indicated a higher quality of life score. Interestingly, data showed no difference in relation to gender, work activity rate and type of contract (fixed-term contract and permanent contract). Quite a different picture emerged among *unemployed individuals*. In fact, women reported a greater perceived quality of life ( $M_{\text{Men}} = 3.60$ ,  $M_{\text{Women}} = 3.83$ ,  $F(1, 565) = 10.53$ ,  $p = 0.001$ ), while no differences emerged concerning nationality. Once again, individuals with a higher education level ( $M_{\text{Primary}} = 3.26$ ,  $M_{\text{Secondary}} = 3.66$ ,  $M_{\text{Tertiary}} = 4.00$ ) indicated a greater quality of life. Finally, all these effects were verified using ANCOVAs to control for possible effects of the format choice used to

**Table 5** Quality of life and personal resources – correlation coefficients

	Quality of life	
	Employed ( <i>n</i> = 1895)	Unemployed ( <i>n</i> = 574)
Career adapt-abilities (CAAS)		
Concern	0.21***	0.28***
Control	0.26***	0.23***
Curiosity	0.18***	0.15***
Confidence	0.19***	0.16***
Social support (FSSQ)	0.39***	0.45***
Beliefs in a just world (BJW)		
General	0.03	0.10*
Personal	0.42***	0.48***

\**p* < .05, \*\**p* < .01, \*\*\**p* < .001

complete the research protocol. Overall, the patterns of results were similar to those indicated here.

### 3.6.2 Personal Resources as Protective Factors Against Vulnerability

Regarding personal resources, overall the participants of our entire sample reported more than satisfactory perceived social support (*M* = 4.13, *SD* = 0.83) and adequate adapt-ability resources. In fact, adapt-ability dimensions’ scores varied from 3.55 for concern (*SD* = 0.67) to 3.94 for control (*SD* = 0.63). Furthermore, they indicated a higher belief in a personal just world (*M* = 4.19, *SD* = 0.88) than in a general just world (*M* = 3.13, *SD* = 0.90).

When we analyzed the association between perceived quality of life and personal resources, analyses pointed out a similar pattern of results for employed and unemployed (see Table 5). In fact, except for the general beliefs in a just world, both for employed and unemployed individuals the perceived quality of life is positively correlated with all adapt-ability dimensions (i.e., concern, confidence, control and curiosity), functional social support and personal justice beliefs. Finally, partial correlations (controlling for the mixed-mode format) confirmed these patterns of association.

### 3.6.3 Career Adapt-Ability, Professional Context and Vulnerability for Employed Respondents

Concerning the employed participants in T1 (*n* = 1884), the impact of job insecurity (past and future) on career adapt-ability and, general and professional well-being (i.e., life satisfaction, general health, job satisfaction and work stress) were tested with ANCOVAs (Maggiori et al. 2013). Regarding perceived past job insecurity (i.e., the risk of being dismissed during the last year), those employed with higher

insecurity indicated lower scores on the concern and control dimensions of the CAAS. Furthermore, compared to employees with lower job insecurity, they also reported a poorer health status, lower life and professional satisfaction and a higher level of work-related stress (Maggiori et al. 2013). Moreover, when we considered future job insecurity (i.e., the fear of losing one's job in the coming year), the results highlighted the same pattern of trends concerning adapt-ability resources and well-being. In other words, people in a more insecure professional situation (past and/or future) were more vulnerable and seemed to possess fewer career resources to face and cope with professional challenges and career paths. Once again, analyses showed no impact of the chosen research protocol format. Finally, structural equation modeling highlighted that career adapt-ability resources partly mediated the impact of work conditions (in terms of job strain and both past and future professional insecurity) on employees' professional and general well-being (Maggiori et al. 2013).

## 4 Conclusions

In this chapter we presented the main purposes, an overview of some methodological aspects and initial results from the first wave of our 7-year longitudinal study on professional trajectories. However, unlike other research focused mainly on economic and sociopolitical aspects of the current labor market and the different professional realities (e.g., professional security and unemployment), this project adopts several psychological perspectives to address the role and impact of personal characteristics and resources (such as, adapt-ability resources, justice beliefs and functional social support) on career paths and professional experiences. To do this, we analyzed a large sample of middle-aged employed and unemployed adults living in Switzerland.

Concerning the data collection, a mixed-mode method combining CATI, online and paper-pencil questionnaires was implemented to offer the participants a more flexible and adaptable format to complete the research protocol, and as a way to reduce the costs (de Leeuw 2005; Herrero and Meneses 2006). Even if a large majority of the participants chose the full online version to answer to the questions, some differences related to age, household income, level of education and nationality in the preference for the format were observed. These indications support the decision to offer different options to match the sample characteristics and preferences thus maximizing the participation. However, the implemented procedure is not without some limitations. For example, in such studies some less well-integrated subgroups (such as individuals with poorer health or low language skills) could be more difficult to contact and convince to participate (Laganà et al. 2011). Consistent with previous studies (e.g., Aluja et al. 2007; Riva et al. 2003), the first analyses indicated no differences in the evaluation of psychological processes related to survey format. Nevertheless, it would be important to assess more in detail and in a longitudinal perspective the possible impact of the way information is transmitted

on participants' evaluations and answers (cf. de Leeuw 2005). Regarding the choice of the gift – which is an important element for the retention of the participants – data highlighted different preferences related, amongst others, to the age group, the household income and professional situation. So, giving multiple gift choices rather than one appears to match more with individuals' preferences. However, it would be interesting, to compare these results with those that emerge from studies proposing for example a gift of a different value (or simply cash) or a unique gift (so, the same present for all the participants) in terms of participation rates. Moreover, personality dimensions (notably in terms of openness and agreeableness) and income represented an important factor in determining this choice.

Further to some demographic and economic variables (such as household income), personality dimensions predicted initial agreement to participate in the next wave of our study. In fact, openness and neuroticism seem to influence the intention to participate in the next wave. In our point of view, personality, which was probably under emphasized until now in this kind of study, plays an important role in the conduct of a study and represents an aspect to take into consideration in future research, for example at the time of data analysis. However, it is important to stress that initial agreement to participate in future waves was not determined by personal characteristics such as health, nationality, professional situation or level of education (and only partly by age).

With reference to vulnerability criteria, although the participants overall reported a more than satisfactory quality of life, some differences existed in relation to level of education, nationality, gender or professional situation for example. Moreover, independent of the professional situation, quality of life was positively associated with several personal characteristics and resources (such as just-world beliefs and career adaptability resources). However, it would be interesting to repeat analyses with weighted data (for example, for professional situation and age) to confirm the observed pattern of results. Concerning employed participants, previous analyses highlighted a negative impact of job insecurity on individuals' general and professional well-being, in terms of work-related stress, job satisfaction or general health (Maggiori et al. 2013). Moreover, employees' with a more insecure professional situation reported lower adapt-ability resources to face work-related everyday challenges and demands. On a practical level, this pattern of preliminary results seem to support the importance of developing interventions based on strengths and resources, with the goal of ameliorating work-related outcomes (e.g. job satisfaction and work engagement) and decreasing the impact of precarious professional situations, such as underemployment and unemployment, on people's well-being.

To conclude, the data collected in the next waves will permit us to study more in depth the personal characteristics and resources involved in the professional experience and transitions – such as becoming unemployed or reentering the work force – in a changing career context. Furthermore, new data will give us the opportunity to verify and assess more intricately the pattern of results presented in this chapter, for instance concerning the real impact of the personality dimensions on actual participation and not just on the intention to participate in the successive waves of the study.

**Open Access** This chapter is distributed under the terms of the Creative Commons Attribution-Noncommercial 2.5 License (<http://creativecommons.org/licenses/by-nc/2.5/>) which permits any noncommercial use, distribution, and reproduction in any medium, provided the original author(s) and source are credited.

The images or other third party material in this chapter are included in the work's Creative Commons license, unless indicated otherwise in the credit line; if such material is not included in the work's Creative Commons license and the respective action is not permitted by statutory regulation, users will need to obtain permission from the license holder to duplicate, adapt or reproduce the material.

## References

- Aluja, A., García, O., Rossier, J., & García, L. F. (2005). Comparison of the NEO-FFI, the NEO-FFI-R and an alternative short version of the NEO-PI-R (NEO-60) in Swiss and Spanish samples. *Personality and Individual Differences*, *38*, 591–604. doi:[10.1016/j.paid.2004.05.014](https://doi.org/10.1016/j.paid.2004.05.014).
- Aluja, A., Rossier, J., & Zuckerman, M. (2007). Equivalence of paper and pencil vs internet forms of the ZKPQ-50-CC in Spanish and French samples. *Personality and Individual Differences*, *43*, 2022–2032. doi:[10.1016/j.paid.2007.06.007](https://doi.org/10.1016/j.paid.2007.06.007).
- Bakker, A. B., Demerouti, E., & Euwema, M. C. (2005). Job resources buffer the impact of job demands on burnout. *Journal of Occupational Health Psychology*, *10*, 170–180. doi:[10.1037/1076-8998.10.2.170](https://doi.org/10.1037/1076-8998.10.2.170).
- Bangerter, A., Grob, A., & Krings, F. (2001). Personal goals at age 25 in three generations of the twentieth century: Young adulthood in historical context. *Swiss Journal of Psychology/Schweizerische Zeitschrift für Psychologie/Revue Suisse de Psychologie*, *60*, 59–64. doi:[10.1024//1421-0185.60.2.59](https://doi.org/10.1024//1421-0185.60.2.59).
- Bergman, M., Hupka-Brunner, S., Keller, A., Meyer, T., & Stalder, B. E. (2011). *Youth transitions in Switzerland: Results from the TREE panel study*. Zürich: Seismo.
- Briscoe, J. P., & Hall, D. T. (2006). The interplay of boundaryless and protean careers: Combinations and implications. *Journal of Vocational Behavior*, *69*, 4–18. doi:[10.1016/j.jvb.2005.09.002](https://doi.org/10.1016/j.jvb.2005.09.002).
- Broadhead, W. E., Gehlbach, S. H., de Gruy, F. V., & Kaplan, B. H. (1988). The duke-UNC functional social support questionnaire: Measurement of social support in family medicine patients. *Medical Care*, *26*, 709–723. doi:[10.2307/3765493](https://doi.org/10.2307/3765493).
- Cohen, S., & Williamson, G. M. (1988). Perceived stress in a probability sample of the United States. In S. Spacapan & S. Oskamp (Eds.), *The social psychology of health* (pp. 31–67). Newbury Park: Sage.
- Cortina, L. M., Magley, V. J., Williams, J. H., & Langhout, R. D. (2001). Incivility in the workplace: Incidence and impact. *Journal of Occupational Health Psychology*, *6*, 64–80. doi:[10.1037/1076-8998.6.1.64](https://doi.org/10.1037/1076-8998.6.1.64).
- Dalbert, C. (1999). The world is more just for me than generally: About the personal belief in a just world scale's validity. *Social Justice Research*, *12*, 79–98. doi:[10.1023/A:1022091609047](https://doi.org/10.1023/A:1022091609047).
- Dalbert, C. (2001). *The justice motive as a personal resource: Dealing with challenges and critical life events*. New York: Springer.
- De Bruin, G. P., & Taylor, N. (2005). Development of the sources of work stress inventory. *South African Journal of Psychology*, *35*(4), 748–765.
- de Leeuw, E. D. (1992). *Data quality in mail, telephone, and face-to-face surveys*. Amsterdam: TT-Publicaties.
- de Leeuw, E. D. (2005). To mix or not to mix data collection modes in survey. *Journal of Official Statistics*, *21*(2), 233–255.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, *49*(71), 75. doi:[10.1207/s15327752jpa4901\\_13](https://doi.org/10.1207/s15327752jpa4901_13).

- Dillman, D. A., Smyth, J. D., & Melani, L. C. (2009). *Internet, mail, and mixed-mode surveys: The tailored design method*. Hoboken: Wiley & Son.
- Etter, J.-F., & Perneger, T. V. (1997). Analysis of non-response bias in a mailed health survey. *Journal of Clinical Epidemiology*, *50*, 1123–1128. doi:[10.1016/S0895-4356\(97\)00166-2](https://doi.org/10.1016/S0895-4356(97)00166-2).
- Fouad, N. A., & Bynner, J. (2008). Work transitions. *American Psychologist*, *63*, 241–251. doi:[10.1037/0003-066X.63.4.241](https://doi.org/10.1037/0003-066X.63.4.241).
- Friedland, D. S., & Price, R. H. (2003). Underemployment: Consequences for the health and well-being of workers. *American Journal of Community Psychology*, *32*, 33–45. doi:[10.1023/A:1025638705649](https://doi.org/10.1023/A:1025638705649).
- Grob, A., Krings, F., & Bangerter, A. (2001). Life markers in biographical narratives of people from three cohorts: A life span perspective in its historical context. *Human Development*, *44*, 171–190. doi:[10.1159/000057057](https://doi.org/10.1159/000057057).
- Haerberlin, U., Imdorf, Ch., & Kronig, W. (2004). *Von der Schule in die Berufslehre. Untersuchungen zur Benachteiligung von ausländischen und von weiblichen Jugendlichen bei der Lehrstellensuche*. [From school to apprenticeship. Investigations of the disadvantage of foreign and female adolescents during the search for an apprenticeship]. Bern: Haupt.
- Herrero, J., & Meneses, J. (2006). Short web-based versions of the perceived stress (PSS) and center for epidemiological studies-depression (CESD) scales: A comparison to pencil and paper responses among internet users. *Computers in Human Behavior*, *22*, 830–846. doi:[10.1016/j.chb.2004.03.007](https://doi.org/10.1016/j.chb.2004.03.007).
- Kanfer, R., Wanberg, C. R., & Kantrowitz, T. M. (2001). Job search and employment: A personality–motivational analysis and meta-analytic review. *Journal of Applied Psychology*, *86*(5), 837–855. doi:[10.1037/0021-9010.86.5.837](https://doi.org/10.1037/0021-9010.86.5.837).
- Klehe, U.-C., Zikic, J., Van Vianen, A. E. M., & De Pater, I. E. (2011). Career adaptability, turnover and loyalty during organizational downsizing. *Journal of Vocational Behavior*, *79*, 217–229. doi:[10.1016/j.jvb.2011.01.004](https://doi.org/10.1016/j.jvb.2011.01.004).
- Krings, F., & Olivares, J. (2007). At the doorstep to employment: Discrimination against immigrants as a function of applicant ethnicity, job type and raters' prejudice. *International Journal of Psychology*, *42*, 406–417. doi:[10.1080/00207590701251721](https://doi.org/10.1080/00207590701251721).
- Laganà, F., Elcheroth, G., Penic, S., Kleiner, B., & Fasel, R. (2011). National minorities and their representation in Swiss surveys (II): Which practices make a difference? *Quality and Quantity*, *47*, 1287–1314. doi:[10.1007/s11135-011-9591-1](https://doi.org/10.1007/s11135-011-9591-1).
- Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of career and academic interest, choice, and performance. *Journal of Vocational Behavior*, *45*, 79–122. doi:[10.1006/jvbe.1994.1027](https://doi.org/10.1006/jvbe.1994.1027).
- Lucas, R. E., Clark, A. E., Georgellis, Y., & Diener, E. (2004). Unemployment alters the set point for life satisfaction. *Psychological Science*, *15*, 8–13. doi:[10.1111/j.0963-7214.2004.01501002.x](https://doi.org/10.1111/j.0963-7214.2004.01501002.x).
- Maggiori, C., Johnston, C., Krings, F., Massoudi, K., & Rossier, J. (2013). The role of career adaptability and work conditions on general and professional well-being. *Journal of Vocational Behavior*. Advance online publication. doi:[10.1016/j.jvb.2013.07.001](https://doi.org/10.1016/j.jvb.2013.07.001)
- Massoudi, K. (2009). *Le stress Professionnel: Une analyse des vulnérabilités individuelles et des facteurs de risque Environnementaux*. Bern: Peter Lang.
- McCrae, R. R., & Costa, P. T., Jr. (2004). A contemplated revision of the NEO five-factor inventory. *Personality and Individual Differences*, *36*, 587–596. doi:[10.1016/S0191-8869\(03\)00118-1](https://doi.org/10.1016/S0191-8869(03)00118-1).
- McHorney, C. A., Kosinski, M., & Ware, J. E. (1994). Comparisons of the costs and quality of norms for the SF-36 health survey collected by mail versus telephone interview: Results from a national survey. *Medical Care*, *32*(6), 551–567.
- Mercure, D. (2001). *Une Société-monde? Les dynamiques sociales de la mondialisation [A world-society? Social dynamics of globalization]*. Québec: Presses de l'Université Laval – De Boeck Université.
- Meyer, T., & Stalder, B. E. (2003). *Ungebildet in die Wissensgesellschaft? Ein Blick auf die VerlierInnen im Transitionsprozess* [Uneducated into the knowledge society? A look at the losers in the transition process]. Communication présentée à la conférence internationale “Übergänge/Transitions”. Aarau (Suisse).

- Parackal, M. (2003). Internet-based and mail survey: A hybrid probabilistic survey approach. In A. Treloar & A. Ellis (Eds.), *Proceedings of AusWeb03, the ninth Australian world wide web conference: Changing the way we work* (pp. 1–12). Lismore: Southern Cross University.
- Peterson, C., Stephens, J. P., Park, N., Lee, F., & Seligman, M. E. P. (2010). Strengths of character and work. In P. A. Linley, S. Harrington, & N. Page (Eds.), *Oxford handbook of positive psychology and work* (pp. 221–233). New York: Oxford University Press.
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88, 879–903. doi:10.1037/0021-9010.88.5.879.
- Riva, G., Teruzzi, T., & Anolli, L. (2003). The use of the internet in psychological research: Comparison of online and offline questionnaires. *CyberPsychology & Behavior*, 6, 73–80. doi:10.1089/109493103321167983.
- Rossier, J., Verardi, S., Genoud, P. A., & Zimmermann, G. (2012a). Ouverture émotionnelle et personnalité [Emotional openness and personality]. In M. Reicherts, P. A. Genoud, & G. Zimmermann (Eds.), *L'ouverture émotionnelle: Une nouvelle approche du vécu et du traitement des émotionnels* (pp. 69–84). Wavre: Mardaga.
- Rossier, J., Zecca, G., Stauffer, S., Maggiori, C., & Dauwalder, J.-P. (2012b). Career adaptabilities scale in a French-speaking Swiss sample: Psychometric properties and relationships to personality and work engagement. *Journal of Vocational Behavior*, 80, 734–743. doi:10.1016/j.jvb.2012.01.004.
- Rudisill, J. R., Edwards, J. M., Hershberger, P. J., Jadwin, J. E., & McKee, J. M. (2010). Coping with job transitions over the work life. In T. W. Miller (Ed.), *Handbook of stressful transitions across the lifespan* (pp. 111–131). New York: Springer.
- Sapin, M., Spini, D., & Widmer, E. (2007). *Les parcours de vie. De l'adolescence au grand âge [Life course. From adolescent to old age]*. Lausanne: Presses polytechniques et universitaires romands.
- Savickas, M. L., & Porfeli, E. J. (2012). Career adaptabilities scale: Construction, reliability, and measurement equivalence across 13 countries. *Journal of Vocational Behavior*, 80, 661–673. doi:10.1016/j.jvb.2012.01.011.
- Savickas, M. L., Nota, L., Rossier, J., Dauwalder, J. P., Duarte, M. E., Guichard, J., Soresi, S., van Esbroeck, R., & van Vianen, A. E. M. (2009). Life designing: A paradigm for career construction in the 21st century. *Journal of Vocational Behavior*, 75, 239–250. doi:10.1016/j.jvb.2009.04.004.
- Schlossberg, N. K., Waters, E. B., & Goodman, J. (1995). *Counseling adults in transition: Linking practice with theory* (2nd ed.). New York: Springer.
- Sennett, R. (1998). *The corrosion of character: The personal consequences of work in the New capitalism*. New York: W. W. Norton.
- Skevington, S. M., Lotfy, M., & O'Connell, K. A. (2004). The World Health Organization's WHOQOL-BREF quality of life assessment: Psychometric properties and results of the international field trial. A report from the WHOQOL group. *Quality of Life Research*, 13, 299–310. doi:10.1023/B:QURE.0000018486.91360.00.
- Swiss Federal Statistic Office. (2011). *Niveau de formation de la population résidante selon l'âge et le sexe. (je-f-15.03.01.01)* [Excel file] [Education level of the resident population by age and sex]. Retrieved from <http://www.bfs.admin.ch/bfs/portal/fr/index/themen/15/01/new.html>
- Swiss Federal Statistic Office (SFSO). (2012). *Internet dans les ménages en Suisse – Résultats de l'enquête Omnibus TIC 2010* [Internet in Swiss households – Results of the Omnibus TIC 2010 survey]. Retrieved from <http://www.bfs.admin.ch/bfs/portal/fr/index/news/02/03/04.html>
- Swiss Federal Statistic Office. (2013a). *Vie active et rémunération du travail* [Working life and remuneration of work]. Neuchâtel: Office Fédéral de Statistique.
- Swiss Federal Statistic Office. (2013b). *Statut sur le marché du travail selon le sexe, la nationalité, les groupes d'âges, le type de famille* [Status in the labor market by sex, nationality, age and type of family]. Retrieved from [http://www.bfs.admin.ch/bfs/portal/fr/index/infothek/erhebungen\\_quellen/blank/blank/enquete\\_suisse\\_sur/08.html](http://www.bfs.admin.ch/bfs/portal/fr/index/infothek/erhebungen_quellen/blank/blank/enquete_suisse_sur/08.html)

- Swiss State Secretariat for Economy. (2012). *La situation sur le marché du travail en avril 2012* [Labor market situation in April 2012]. Retrieved from <http://www.seco.admin.ch/themen/00385/00387/index.html>
- Tse, A. C. B. (1998). Comparing the response rate, response speed, and response quality of two methods of sending questionnaires: E-mail vs. mail. *Journal of the Market Research Society*, 40(4), 353–361.
- Wiese, S. B., & Freund, A. (2005). Goal progress makes one happy, or does it? Longitudinal findings from the work domain. *Journal of Occupational and Organizational Psychology*, 78, 287–304. doi:10.1348/096317905X26714.
- Wu, M. S., Yan, X., Zhou, C., Chen, Y., Li, J., Zhu, Z., Shen, X., Han, B. (2011). General belief in a just world and resilience: Evidence from a collectivistic culture. *European Journal of Personality*, 25, 431–442. doi:10.1002/per.807
- Zikic, J., & Klehe, U.-C. (2006). Job loss as a blessing in disguise: The role of career exploration and career planning in predicting reemployment quality. *Journal of Vocational Behavior*, 69, 391–409. doi:10.1016/j.jvb.2006.05.007.