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THE ROLE OF PERSONALITY TRAITS ON WORKING HOUR MISMATCHES AND UNEMPLOYMENT

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SOMMARIO

INTRODUCTION

Human capital is a fundamental concept in social sciences. The Organization for Economic Co-operation and Development defines it as 'the stock of knowledge, skills and other personal characteristics embodied in people that helps them to be productive. Pursuing formal education (early childhood, formal school system, adult training programmes) but also informal and on-the-job learning and work experience all represent investment in human capital' (OECD, 2020). Human capital includes all those skills and abilities that an individual accumulates and that will affect his or her productive life.

The importance of human capital is widely recognized. It has been demonstrated to be positively correlated with almost every economic index, such as economic growth (Barro, 2001), firm performance (Ketchen, 2011) and technological development (Benhabib & Spiegel, 2002).

For a long time, the effect of human capital on the labour market has been measured through the effect of the measurable abilities such as intelligence, numeracy and literacy skills, knowledge and so on. However, the importance of other skills related to a person's characteristics, also called 'soft skills', has been overlooked. Soft skills include all those features of an individual's personality and attitudes, such as motivation, social skills and others, that affect the individual's performance in different environments (work, school, social, etc.) (Balcar et al., 2014). For a long time, these characteristics have been ignored.

There are two main reasons for this bias. With respect to the better-known cognitive skills, soft skills are harder to conceptualise and measure, and it generally takes years of research to stabilise commonly accepted indexes or scales. It is straightforward to create scores and indexes to measure, for example, the ability to recognize words or calculating skills. But it is more complex to create a scale for measuring individual attitudes or personality traits. Despite the efforts of psychologists to build precise scales, only a few of them are commonly accepted. The lack of recognised scales makes difficult for researchers from other disciplines to utilize them.

The second issue regards the potential instability, and therefore the potential endogeneity, of soft skills. If we take the example of motivation, it is easy to imagine how it affects the labour market. More motivated people are more likely to get better jobs and higher wages but, at the same time, positive labour market outcomes (such as promotions or

high wages) may increase individuals' motivation. The substantial difficulty lies in the possibility of accounting for the causal effects of soft skills and overcoming the problem of endogeneity between them and labour market performance.

Thanks to the pioneering works of Heckman (see, for example, Heckman & Kautz, 2012), the importance of soft skills is starting to be recognised, and they are now commonly accepted as integral parts of human capital. According to Heckman, this awareness allows the planning of policy interventions that consider not only cognitive skills but also attitudes and behaviours that shape individual work histories.

This dissertation focusses on the role of personality in labour market performance through the commonly accepted taxonomy of the Big Five Inventory and the locus of control. The Big Five inventory is a taxonomy of five personality traits that are supposed to broadly define an individual's personality. They are: emotional stability, conscientiousness, extraversion, agreeableness and openness to experience. The locus of control refers to how strongly individuals believe that what happens to them depends either on their actions or fate and luck. Even if some correlations with the Big five have been demonstrated, the locus of control is not a measure of personality, but an attitude towards external events.

The Big Five and the locus of control have become quite popular among economists in the last three decades. They represent rare cases of taxonomies widely accepted in the psychological field that facilitated their transposition to different fields. They have been demonstrated to affect all individuals' labour market outcomes, such as wages, job satisfaction, employability, unemployment duration and so on (see chapter 1).

In this dissertation, I analyse how personality traits affect individuals' reactions to two types of undesired conditions in the labour market: mismatched working hours (namely working more or less hours than desired) and unemployment. In both cases, the focus remains on well-being and whether possessing some personality traits, or a combination of them, make people more resilient to those uncomfortable situations and more capable of reacting to them.

The first chapter is a systematic review of the research on the relationship between labour market outcomes and personality traits, with special attention on wages and employability. Through a broad survey of this literature, a general pattern emerges. Emotional stability, locus of control and conscientiousness, especially, are generally good predictors of both wages and employability. Extraversion is not related to specific outcomes,

while agreeableness is a negative predictor. Finally, openness has different and, in some cases, contradictory outcomes that are probably related to the higher job mobility of open-minded individuals.

Chapters 2 and 3 analyse the role of personality traits in people's reactions to mismatched working hours. The analysis takes into consideration different outcomes: the probability of developing and resolving a mismatch; the probability of adapting to it (through changing working hours or changing the job); and the effect on well-being.

The final chapter analyses the mediating role of personality traits with respect to the effect of unemployment on an individual's well-being. I explore whether some specific personality traits can be considered as resilient factors against unemployment. Using a combination of personality traits, two resilience scales were built, an individual one and a social one, which are then tested as resilience factors against unemployment.

CHAPTER 1 – THE BIG FIVE AND LABOUR MARKET OUTCOMES: A SYSTEMATIC REVIEW

In this chapter I present a systematic review (Grant & Booth, 2009) of the recent literature on personality traits and labour market outcomes. I focus on the associations found between personality traits and the following outcome: wages, employability, unemployment duration.

1.1. Historical introduction: The Big Five taxonomy

Introduction

In the recent years, a growing interest in the so-called soft skills has spread in the economic literature (Balcar et al, 2014). Besides intelligence and the other cognitive skills, the importance of which have been underlined since the first studies by Becker (1962), the role of other personal features, such as personality and attitudes, has caught the attention of economists. Soft skills summarise all attitudes, personality characteristics and other facets that can affect an individual's education, health, performance at work and other aspects of life (Balcar et al, 2014). With respect to the classic hard skills, which are easy to observe and measure, they are more difficult to conceptually isolate and measure. They encompass leadership, motivation, communication, personality and many others (Ivi).

In this chapter, I provide with a systematic review of the recent literature on one specific type of soft skills, namely personality traits, and mention locus of control and a few others. This allows to prepare the ground for the following chapters and clarify the state of the art on this topic. Personality is a very difficult concept to define and to measure, and psychologists have developed several different constructs and theories over time. In the 60s', one taxonomy has become more prominent than others – the 'Big Five' taxonomy. It conceptualises personality on five distinct dimensions, each one conceived as a continuum into which every personality can fall. The five dimensions are Emotional Stability, Conscientiousness, Extraversion, Agreeableness and Openness to Experience. This taxonomy is not exempt from criticism, and some authors are looking for new ways of conceptualising personality. However, the success that it has acquired over time has also allowed different disciplines to use it and to build interdisciplinary knowledge.

The development of the Big Five scales

The Big Five taxonomy represents the first psychological taxonomy of personality traits to acquire a general consensus in the psychological field. The embryonic plan, started in the '30s, was to classify personality attributes into a few categories derived from natural language (and then transposed to the scientific one) (John & Srivastava, 1999). The underlying idea is that individuals have 'consistent and enduring individual differences in ways of thinking, feeling, and acting; that individuals were capable of describing themselves with reasonable accuracy if asked appropriate questions; and that psychometric tools (such as factor analysis) and principles (such as construct validation) could be used to develop useful measures of traits (Costa & McCrae, 2008, p. 180). This huge project started by listing all the terms of the natural language that describe features of people's personalities and then reducing those categories progressively (Goldberg, 1990). The number and names of the categories changed over the following 60 years, until the well-known and commonly accepted taxonomy of the Big Five scale was created (John et al., 1991).

The first five-factor model was obtained by Fiske (1949), who found five underlying factors: social adaptability, emotional control, conformity, intellect and confident self-expression. In the following years, various researchers found the same five underlying factors, using different samples and different questionnaires (see, for example, Borgatta, 1964; Hakel, 1974; Smith, 1967). In this sense, the work of Norman (1963) was very important, since the names of categories that he used are the ones commonly accepted today: extraversion, agreeableness, emotional stability, conscientiousness and openness (except for openness, which was called 'culture').

The reduction from a big number and more varied categories to a taxonomy of only five happened through decades of empirical studies and factor analysis, which finally converged into a taxonomy of five latent factors that seem reliable across different types of populations and cultures. Trapnell and Wiggins (1990), for example, started with a theoretical framework of eight underlying factors, which then converged into the Big Five after the factor analysis. Similarly, Costa and McCrae started their research in the '70s with three traits – extraversion, emotional stability and openness, and they finally added agreeableness and conscientiousness as well in the NEO Personality Inventory (NEO-PI-R) (Costa & McCrae, 2008).

The importance of having a commonly accepted taxonomy does not only improve psychological knowledge itself but also allows other disciplines to use it and to improve interdisciplinary knowledge. Today, some of the most used questionnaires are the NEO Personality Inventory Revised (NEO-PI-R), developed through the years by Costa and McCrae (see Costa & McCrae, 2008); the Big Five inventory (BFI) (John, Donahue, & Kentle, 1991); Goldberg's Big Five markers (Goldberg, 1992); and the Hogan Personality Inventory (HPI; Hogan & Hogan, 2002).

The big five – definitions

Usually, the Big Five are conceptualised on a double-level hierarchy, with the dichotomic traits at the top (for example, emotional stability – neuroticism) and the so-called 'facets' at the lower level. I now briefly present the single traits with their six facets as built by Costa and McCrae in the NEO-PI-R (1992).

Emotional stability. It defines the ability to process life events without being overwhelmed by negative emotions and stress (Heckman et al., 2011). Neurotic people (the opposite pole) are anxious, tend to change moods constantly, perceive the environment as a source of threats and are more likely to develop pathological disorders (Barlow et al., 2014). The facets of emotional stability measure the capacity of a person to manage stress, negative emotions and frustration (*Depression*, *Anxiety* and *Vulnerability*) and the tendency to remain calm and self-conscious despite external events (*Angry hostility*, *Self-consciousness* and *Impulsiveness*) (Costa, McCrae, & Dye, 1991).

Conscientiousness. This trait describes people who tend to follow socially prescribed norms, to be goal-directed and to plan in advance (Roberts et al., 2009). According to Costa, McCrae and Dye (1991), it has both proactive and inhibitive aspects. The proactive side defines the need for success and commitment at work, and it is measured by the following facets: *Competence* (the sense of being capable and confident), *Achievement* (the need for success, especially at work) and *Deliberation* (the ability to plan in advance and be organised). The inhibitive side is characterised by attention to social and moral norms, and it is associated with the Freudian super-ego. Its facets are characterised by the tendency to keep the environment orderly and organized (*Order*), the adherence to norms (*Dutifulness*) and persistence in tasks and duties (*Self-discipline*) (Costa, McCrae, & Dye, 1991).

Extraversion. Extraversion is defined by two features: interpersonal engagement, which consists of the tendency to build interpersonal bonds and affiliations with others, and agency, which defines a type of dominant role that the individual manifests in the presence of others, such as leadership characteristics, being assertive and direct (Depue & Collins, 1999). The six facets from Costa and McCrae (1995) describe individuals who love staying and talking with other people, who are the soul of the party and who are active, excited and full of energy (*Warmth*, *Activity*, *Positive Emotions* and *Excitement-Seeking*). They are also socially intelligent; they tend to put people together and to communicate directly (*Gregariousness* and *Assertiveness*).

Agreeableness. This describes a type of interaction with others, and it defines a continuum between compassion and antagonism (Costa, McCrae, & Dye, 1991), where agreeable people are characterized by altruism and empathy (Jensen-Campbell & Graziano, 2001). Its facets draw a picture of an altruistic individual who cares for others (*Altruism*) and who tends to attribute benevolent intentions to other people (*Trust*). This individual, driven by *Tender-Mindedness,* is direct and frank in interactions rather than trying to be manipulative (*Straightforwardness*) and to judge and evaluate other people. On the opposite side, at the cost of not hurting others or fighting, agreeable people tend to defer to others (*Compliance*) and they show modesty (*Modesty*) (Costa, McCrae, & Dye, 1991).

Openness to Experience. Openness describes open-minded people who like to have new experiences, ideas and feelings (Corr & Matthews, 2009). This construct is characterised by the need for new experiences and feelings (*Actions and Feelings*) and the tendency to fantasise and daydream (*Fantasy*). Open-mind people are more likely to embrace progressive values (*Values*) and to be interested in aesthetic and artistic experiences (*Aesthetics*). Openness is correlated with sensation seeking, namely the need for various and novel sensations and experiences (even at the cost of physical or social risk) (Aluja et al., 2003), and it is the only trait that is associated with intelligence (Ashton et al., 2000).

Table 1
The big five factor model

	LOADING FACTORS	FACETS	APA DEFINITION
Extraversion vs Introversion	Extraverted - introverted Energetic - unenergetic Talkative - Silent Enthisiastic - unenthusiastic Bold - timid Active - inactive Spontaneous - inhibited Unassertive - assertive Unadventorous - adventorous Sociable - unsociable	Gregariousness (sociable) Assertiveness (forceful) Activity (energetic) Excitement-seeking (adventurous) Positive emotions (enthusiastic) Warmth (outgoing)	Orientation of one's interests and energies toward the outer world of people and things rather than the inner world of subjective experience. Extraverts are relatively outgoing, gregarious, sociable, and openly expressive.
Emotional stability vs Nauroticism	Calm - angry Relaxed - tense At ease - nervous Not envious - envious Stable - unstable Discontented - contented Secure - insecure Emotional - unemotional Guilti free - guilty ridden Steady - moody	Anxiety (tense) Angry hostility (irritable) Depression (not contented) Self-consciousness (shy) Impulsiveness (moody) Vulnerability (not self-confident)	Predictability and consistency in emotional reactions, with absence of rapid mood changes. Compare emotional instability.
Openness vs Closedness	Intelligent - unintelligent Perceptive - imperceptive Analytical - unalytical Reflective - unreflective Curious - inquisitive Imaginative - unimaginative Creative - uncreative Cultured - uncultured Refined - unrefined Sophisticated - unsophisitcated	Ideas (curious) Fantasy (imaginative) Aesthetics (artistic) Actions (wide interest) Feelings (excitable) Values (unconventional)	Tendency to be open to new aesthetic, cultural, or intellectual experiences.

Agreeableness vs antagonism	Warm - cold kind - unkind Cooperative - uncooperative Unselfish - selfish Polite - rude Agreeable - disagreeable Distrustfull - trustfull Generous - stingy Flexible - inflexible Fair - unfair	Trust (forgiving) Straightforwardness (not demanding) Altruism (warm) Compliance (not stubborn) Modesty (not showing off) Tender-mindedness (sympathetic)	The tendency to act in a cooperative, unselfish manner
Conscientiousness vs carelessness	Organized - disorganized Responsible - Irresponsible Reliable - undependable Conscientious - negligent Practical - impractical Thorough - careless Hardworking - lazy Thrifty - extravagant Cautious - Rash Serious - frivolous	Competence (efficient) Order (organized) Dutifulness (not careless) Achievement striving (thorough) Self-discipline (not lazy) Deliberation (not impulsive)	The tendency to be organized, responsible, and hardworking, Also called industriousness

(APA, 2020)

Economics and soft skills

Despite the growing popularity of the Big Five, the economic literature remained diffident with respect to the importance of soft skills for a long time. One reason is that it is not clear whether personality traits are time-invariant or fixed over time. In terms of the relationship between labour market outcomes and personality, the two are usually considered as mutually affecting each other. This undermines the possibility of accounting for the causal effects of soft skills on labour market performances. Another reason is that while psychologists generally use small scale samples with clear information on personality, economists tend to prefer large, generalizable samples with less information on individuals' psychology (Borghans et al., 2008). Heckman recently contributed to the success of personality and soft skills in economics (see Heckman & Kautz, 2012; Heckman & Rubinstein, 2001). One of his most important claims was that if personality affects education and labour market performances, and it is malleable until adolescence, early intervention may be both psychologically and economically advantageous (Heckman, 2006; Heckman et al., 2009).

In the last two decades, there has been an increasing interest in the role of the Big Five in labour market performances. Part of their success was due to the creation and validation of shorter questionnaires, such as the Five-Item Personality Inventory (FIPI; Gosling et al., 2003) and the Big Five Inventory 10 (BFI-10), developed by Rammstedt and John (2007). In addition, big surveys such as the British Household Panel survey and the German Socio-Economic Panel (Hahn Gottschling, & Spinath, 2012) validated a 15-item scale (three per trait) that is inserted into general questionnaires every three to five years. Regarding the classical scales and questionnaires, which are composed of 60 or more items, 10 to 15 questions are used to measure personality traits; thus, they were much more usable in household surveys. Those questionnaires showed good levels of validity and facilitated the access of personality traits in the economic field.

1.2. Data and outcomes

Literature search

The research of the literature started by looking at papers and book of interest in two main web search engines: google scholar and IDEAS (Economics and finance research). I used two main fields of keywords to conduct the exploration. The first field was intended to select those researches related with labour market outcomes and considered the following key expressions: 'wage', 'employability', 'unemployment', 'unemployment duration', 'productivity', 'labour market performance'. With the second field I intended to retain research on personality traits, and I used the following expressions: 'personality traits', 'Big five', 'non cognitive skills', 'psychological characteristics', plus all the personality traits singularly (Petticrew & Roberts – 2008).

A second step of the online search consisted in looking at the retrieved papers' bibliographies to find other relevant researches. This procedure kept going through a snowballing process and ended once the literature was saturated.

A first selection was made by focussing on published papers and books. In case of unpublished papers, they were kept considered of interest and if presented starting from 2017. Secondly, I kept only those papers specifically assessing wage or employability.

Criteria

I collected recent studies that examines the relationship between the big five and labour market outcomes. Table 2 reports all the studies taken in consideration. It shows the authors, the year of publication, the outcome examined, the type of questionnaire used, the methodology, the width of the sample, all the control variables used and the country of the study. Finally, it shows which personality traits have a positive relationship with the outcome considered.

Secondly, I summarize the results that emerge from all the studies. The selection of the results was made with these hierarchical criteria. First, I only retained the significant results (p values < .5). Secondly, I focussed on the most conservative specification (e.g., the one with more covariates). In those cases where the number of covariates conflicted with the number of observations, I retained the ones with more observations and less control variables. In case of more than one specification in the same study (for example, a cross section analysis and a longitudinal analysis) I kept both the results. Finally, I divided the results per gender and, if different information per gender were not available, I retained the whole sample. The final selection contains 32 papers and 75 results (31 on the whole sample, 22 results separated per gender).

Outcomes

I divided the outcomes of interest in two main categories: *earnings*, that only takes in consideration wages, and *employability*, that summarizes all the other outcomes. Most of them measure the effect of personality on the probability of being employed and the length of unemployment spells. However, it also includes a few different types of outcomes, such as type of job and career advancement.

Descriptive statistics

I present now some descriptive statistics derived from all the researches token in consideration. The aim of this study is not to ultimately show which personality traits have an effect on labour market outcomes, but to show the direction on which the current literature is moving.

Table 3
Countries' frequencies

Country	Freq.
Australia	1
Belgium	1
Canada	1
Finland	3
Germany	5
JA	2
Netherlands	2
Poland	1
UK	6
USA	10
Total	32

Table 3 shows the frequencies of the studies per country. As expected, there is a bias towards Germany, the UK and the USA. This is mainly due to the data availability. The most used surveys to carry this type of research, indeed, are the German Socio-Economic Panel (GSOEP), the British Household Panel Survey (BHPS) and various American datasets. These surveys have the advantage of collecting data on both socio-economic and psychological variable in a longitudinal perspective, allowing for representative and generalisable studies that include psychological information. Surprisingly, there is a lack of representation of the Household, Income and Labour Dynamics in Australia Survey (HILDA), which is used only in 1 case. The reason is probably its younger age (HILDA started in 2001, while the GSOEP in 1986).

Since the studies taken in consideration strongly differ per the number of observations considered, I also took in consideration the sample size. According to the dimension of the sample, I divided the studies in 2 groups: below or above 3000 observations (see Appendix 1). After this categorization, I have 33 studies made on small samples, and 42 made on big samples. This is important to control whether significant results are potentially driven by the dimension of the sample. Figure 1 shows the mean of positive significant results (contrasted to non-significant and negative ones), split on the two size dimensions. Apart from emotional stability and conscientiousness, the other traits are potentially biased by the sample size. The case of openness is less concerning, since significant results come from big sample-studies. Extraversion and agreeableness, instead, are potentially biased. Significant results mainly derive from small samples, while non-significant results derive from big and more

representative ones. Note that agreeableness is reversed (namely, positive results mean negative labour market outcomes).

Figure 1. Positive results and sample size
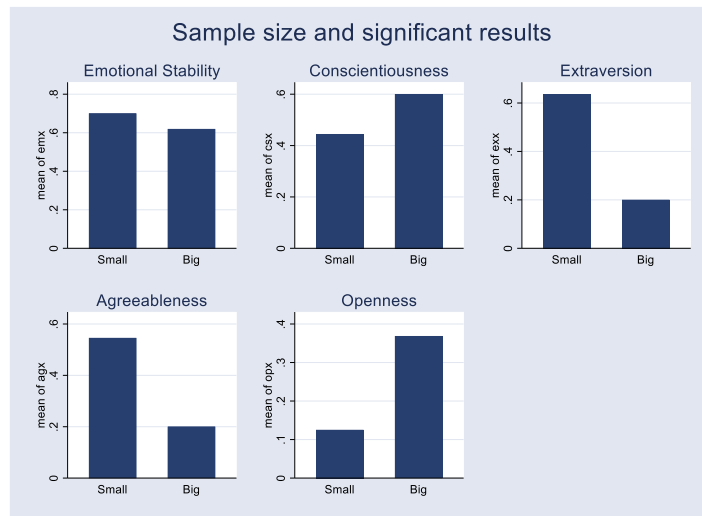
Figure 1 shows the rate of studies that report significant positive results (on the total number of studies), comparing studies using small ang wide samples

Table 2

ARTICLES ON PERSONALITY TRAITS AND LABOUR MARKET OUTCOMES

Study	YEAR	OUTCOME	RESULTS: ALL SAMPLE	MALES	FEMALES	SPECIFICATION	COVARIATES	BIG FIVE QUESTIONNAIRE	SURVEY	SAMPLE	COUNTRY
Cuesta & Budría	2017	Unempl. duration		ES, A (-)	ES, A (-)	Random effects	Other personality traits, health, children, marital status, education, previous unemployment	15-item BFI	SOEP	78909	Germany
Duckworth, Tsukayama, Kwok	2012	Wage	ES, C, A (-), O (-)			Structural Equation model	Cognitive ability, income, wealth, positive/negative affect, life sat.	Midlife Development Inventory personality scales	Health and Retirement Study (HRS)	9646	USA
Egan et al.	2016	Probability of being unempl. from age 16 to 38	C, EX (-), A (-)			OLS	gender, education, academic motivation, year, socio economic status	15-item BFI	British Cohort Study	3,848	UK
Fletcher	2013	Wage	A (-)	ES, C, EX, O (-)	ES, C,	OLS	PPVT score, birth order, education, ever married, attractiveness	.	National Longitudinal Study of Adolescent Health (Add Health)	12,983	USA
Fletcher	2013	Wage		ES,		Fixed effects (Twin design)	PPVT score, birth order, education, ever married, attractiveness	.	National Longitudinal Study of Adolescent Health (Add Health)	12,983	USA
Fletcher	2013	Wage	C, O	ES, EX,	ES, C, EX, A (-)	Correlation	PPVT score, birth order, education, ever married, attractiveness	.	National Longitudinal Study of Adolescent Health (Add Health)	1,384	USA
Fruyt & Mervielde	1999	Being employed	ES, EX,			OLS (logit)	Vocational interests,	NEO-PI-R	independent survey (graduating students)	612	Belgium

Author	Year	Outcome				Method	Controls	Personality measure	Data	N	Country
Furnham & Cheng	2013	Wage		C,	ES, O	Structural Equation model	parents' education, cognitive abilities education, RGSC (social class)	international personality item pool (IPIP) (Goldberg, 1999)		5300	UK
Ganzach & Pazi	2015	Occupational status	ES (-,) A (-), O			OLS	Parents' education, gender, intelligence	BFI (John & Srivastava, 1999)	NLSY (National Longitudinal Survey of Youth)	12,686	USA
Ganzach & Pazi	2015	Wage	O			OLS	Parents' education, gender, intelligence	BFI (John & Srivastava, 1999)	NLSY (National Longitudinal Survey of Youth)	12,686	USA
Gelissen & de Graaf	2006	Wage		ES, EX, O (-)	ES,	OLS	Sex, age, education, parents' education, parents' occupation, marital status, young children	Big Five model	Dutch Family Survey	2926	Netherlands
Genowsky	2017	Wage		C, EX, A (-)	ES, C,		IQ, parental immigrant status	Terman study (similar to NEO PI-R)	Terman survey	595	USA
Heineck & Anger	2015	Wage		EX, A (-), O (-)	A (-), O	Hausman–Taylor IV	Cognitive abilities, locus of control, education, socio-demographics, job characteristics	BFI-S	SOEP	13021	Germany
Heineck & Anger		Wage				RE	Cognitive abilities, locus of control, education, socio-demographics, job characteristics	BFI-S	SOEP	13021	Germany
Heineck	2011	Wage		A (-), O	ES, C, A (-), O	OLS	cognitive ability, age, education, smoking, job characteristics (tenure, private vs public, contract, industry).	NEO-PI-R	BHPS	51982	UK

Author	Year	Outcome	Col A	Col B	Col C	Method	Controls	Measure	Data source	N	Country
Heineck	2011	Wage		A (-), O	ES, C, A (-), O	Random effects	cognitive ability, education, smoking, job characteristics (tenure, private vs public, part-time, permanent industry), age	NEO-PI-R	BHPS	51982	UK
Jonason et al.	2018	Wage	C,	EX,	ES, EX,	CORR	Age, other personality traits	BFI-2	independent survey	533	Australia
Judge et al.	1999	Extrinsic career success	ES (-), C, O			OLS	Childhood general mental ability,	.	Intergenerational Studies	116	USA
Lee & Ohtake	2018	Wage	O	C, A (-)		OLS	job characteristics (hours, size, occupation, industry), education	2-items scale self-reported questionnaire	Preference and Life Satisfaction Survey" (Osaka University)	818	USA
Lee & Ohtake	2018	Wage		C, EX, A	EX,	OLS	job characteristics (hours, size, occupation, industry), education	Ten Item Personality Measure (TIPI)	Preference and Life Satisfaction Survey" (Osaka University)	1758	JAP
Lee & Ohtake	2018	Careed advancement		EX,		OLS	job characteristics (hours, size, occupation, industry), education	2-items scale self-reported questionnaire	Preference and Life Satisfaction Survey" (Osaka University)	396	USA
Lee & Ohtake	2018	Careed advancement		EX,		OLS	job characteristics (hours, size, occupation, industry), education	Ten Item Personality Measure (TIPI)	Preference and Life Satisfaction Survey" (Osaka University)	1137	JAP
Lee & Ohtake	2012	Wage		C,	ES, C, EX,	OLS	Risk aversion, behavioural factors, cognitive abilities, socioeconomic characteristics	2-items scale self-reported questionnaire	Preference and Life Satisfaction Survey" (Osaka University)	3,653	USA

Author	Year	Outcome				Method	Controls	Personality measure	Data source	N	Country
Lee & Ohtake	2012	Wage			ES, C, EX,	OLS	Risk aversion, behavioural factors, cognitive abilities, socioeconomic characteristics	Ten Item Personality Measure (TIPI)	Preference and Life Satisfaction Survey" (Osaka University)	4,588	JAP
Maczulskij	2018	Long-term earnings	ES, A (+)			OLS, panel	education, married, socioeconomic status	?	Older Finnish Twin Cohort Study	9284	Finland
Maczulskij & Viinikainen	2018	Long-term earnings	ES,			twins	education, married, socioeconomic status	?	Older Finnish Twin Cohort Study	1557	Finland
McLean et al.	2019	Wage	ES, EX, A (-)	C,			Province, industry, skill, education cognitive ability, experience, occupation	15-item BFI	Longitudinal and International Study of Adults	3,571	Canada
Mueller & Plug	2006	Wage		ES (-), C, A (-), O	C, A (-), O	OLS	IQ, education, occupation industry, job characteristics	NEO-PIR	Wisconsin Longitudinal Study (WLS)	4374	USA
Nandi & Nicoletti	2014)	Wage	ES, EX, O			OLS (quantile reg)	education, job characteristics, health, training, Unempl.	15-item BFI	BHPS	2688	UK
Nyhus & Pons	2005	Wage		ES,	ES, EX(-), A (-)	OLS	Education, Tenure, work experience, wage	FFPI scale	DNB Household Survey (DHS)	828	Netherlands
O'Connell & Sheikh	2011	Wage	ES, C, EX, A (-), O			OLS	gender, education, cognitive skills	NEO-Personality Inventory-Revised	British National Child Development Study (NCDS).	5328	UK

Author	Year	Outcome	Traits			Method	Controls	Measure	Data source	N	Country
Palczyńska & Świst	2018	Wage	ES, A (-), O(-)			OLS	Age, gender, cognitive skills	15-item BFI	Polish follow-up study to PIAAC	4355	Poland
Palczyńska & Świst	2018	Labour force participation (being active)	C, A (-)			OLS	Age, gender, cognitive skills	15-item BFI	Polish follow-up study to PIAAC	4355	Poland
Palczyńska & Świst	2018	Employability	ES, C, A (-)			OLS	Age, gender, cognitive skills	15-item BFI	Polish follow-up study to PIAAC	4355	Poland
Rammstedt, Danner & Lechner	2017	Employment status (full time)	ES, C, A (-)			Mincer regression, OLS	cognitive skills, age, gander, education, migrant	15-item BFI	International Assessment of Adult Competencies (PIAAC)	2868	Germany
Rammstedt, Danner & Lechner	2017	Wage	O(-)			Mincer regression, OLS	cognitive skills, age, gander, education, migrant	15-item BFI	International Assessment of Adult Competencies (PIAAC)	2868	Germany
Rammstedt, Danner & Lechner	2017	Unempl. duration	ES, C, O(-)			Mincer regression, OLS	cognitive skills, age, gander, education, migrant	15-item BFI	International Assessment of Adult Competencies (PIAAC)	2868	Germany
Sutin et al	2009	Extrinsic career (occupational prestige, income	C, EX,			Cross-lagged models (logit)	sex, ethnicity, age and education	Revised NEO-Personality Inventory (NEO PI-R	Baltimore Epidemiologic Catchment Area (ECA) study	242	USA
Sansale, DeLoach & Kurt	2019	Unempl. duration			C,	The Competing Risk (CR) framework	previous employment, industry, occupation, benefits, wage	.	National Longitudinal Survey of Youth 1997 (NLSY97)	4705	Usa

Author	Year	Outcome	Trait	Method	Controls	Personality measure	Data source	N	Country
Semeijn, van der Heijden, & De Beuckelaer	2020	Promotion in life	A (-)	OLS	Gender, age, education, tenure, resilient trait	Dutch translation of NEO Five-Factor instrument (60 items)	Independent survey (workers from a multinational firm; 50 countries)	293	Netherlands
Semeijn, van der Heijden, & De Beuckelaer	2020	Wage		OLS	Gender, age, education, tenure, resilient trait	Dutch translation of NEO Five-Factor instrument (60 items)	Independent survey (workers from a multinational firm; 50 countries)	293	Netherlands
Uysal & Pohlmeier	2011	Employability (finding a job	C,	Survival analysis	gender, immigrant, occupational status, blue/white collar, industry	15-item BFI	SOEP	4191	Germany
Uysal & Pohlmeier	2011	Unempl. duration	C, O	Survival analysis	gender, immigrant, occupational status, blue/white collar, industry	15-item BFI	SOEP	4466	Germany
Viinikainen & Kokko	2012	Number unempl. spells 33-50	EX, O (-)	Poisson regression	education, region, occupation, gender, married, previous Unempl., child personality,	.	Jyväskylä Longitudinal Study of Personality and Social Development (JYLS)	151	Finland
Viinikainen & Kokko	2012	Number unempl. spells 33-50	A (-)	Survival analysis	education, region, occupation, gender, married, previous Unempl., child personality,	.	Jyväskylä Longitudinal Study of Personality and Social Development (JYLS)	56	Finland

Williams	2017	Wage	A (-), O		Random effects	region, industry, occupation, job characteristics, self-evaluation (attitudes towards work)	.	BHPS	5412	UK

Note: ES = emotional stability, C = conscientiousness, EX = extraversion, A = agreeableness, O = openness

1.3. Outcomes

Figure 2 collapses the two types of outcomes (with regard to wages and employability) and shows, for each trait, the frequencies of positive and negative outcomes and the null results, with no distinction for gender. As expected, emotional stability and conscientiousness are the best predictors of positive labour market outcomes, followed by extraversion. Agreeableness significantly predicts negative outcomes, while openness to experience does not show a clear pattern. Figure 3 shows the number of positive outcomes compared with non-significant and negative ones (agreeableness is reversed) regarding wages and employability. Results do not suggest any particular difference between the two outcomes, meaning that personality traits affect wages and employability similarly. Finally, Figure 4 splits the results referring to either males or females. It seems that personality traits boost wages and employability similarly for the two sexes (with only a little difference for emotional stability).

Figure 2. Personality traits: frequencies of positive, negative and neutral results
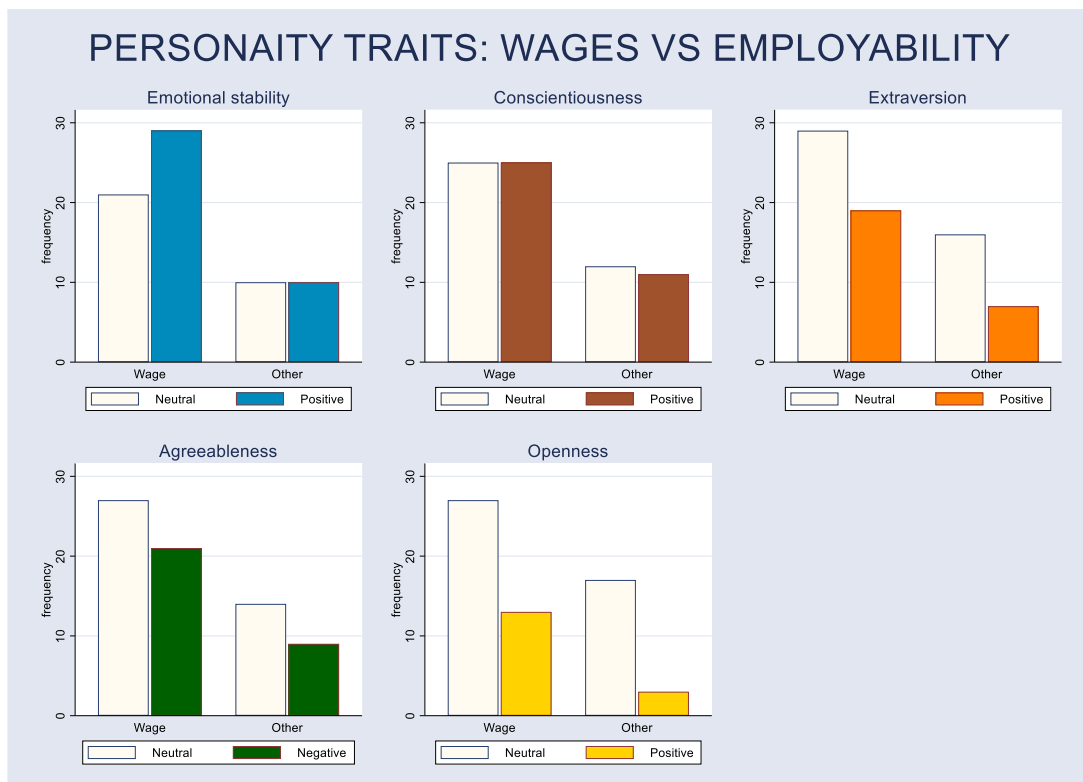
Figure 2 shows the frequencies of positive significant results, negative significant and non-significant results

Figure 3. Personality traits: frequencies of significant results per outcomes
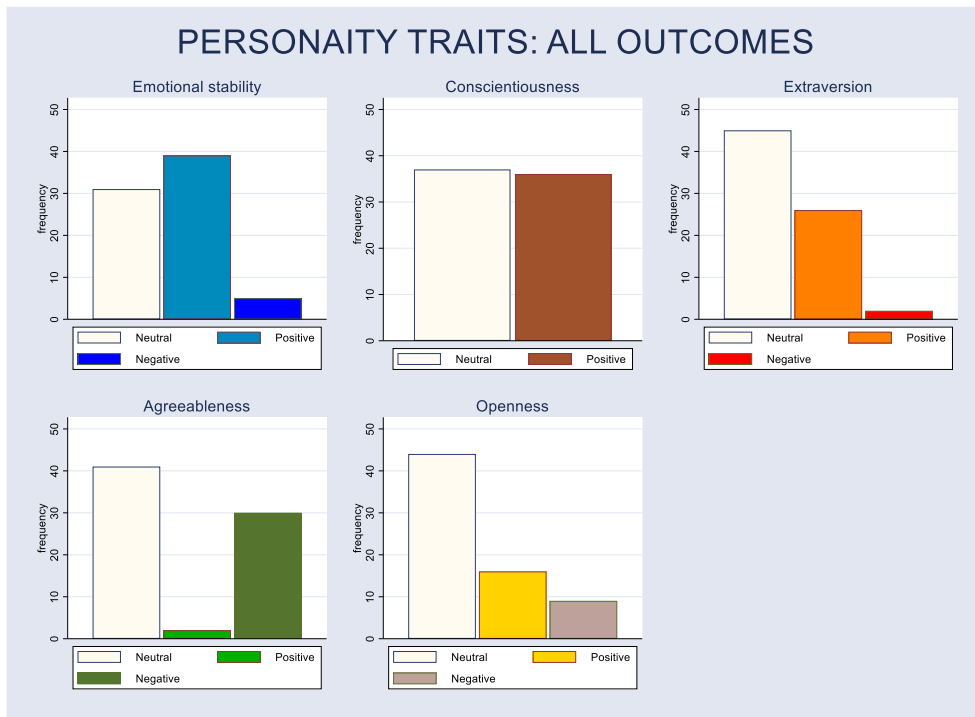
Figure 3 shows the frequencies of positive significant results and non-significant (or negative) results comparing the two categories of outcomes.

Figure 4. Personality traits: positive results per gender
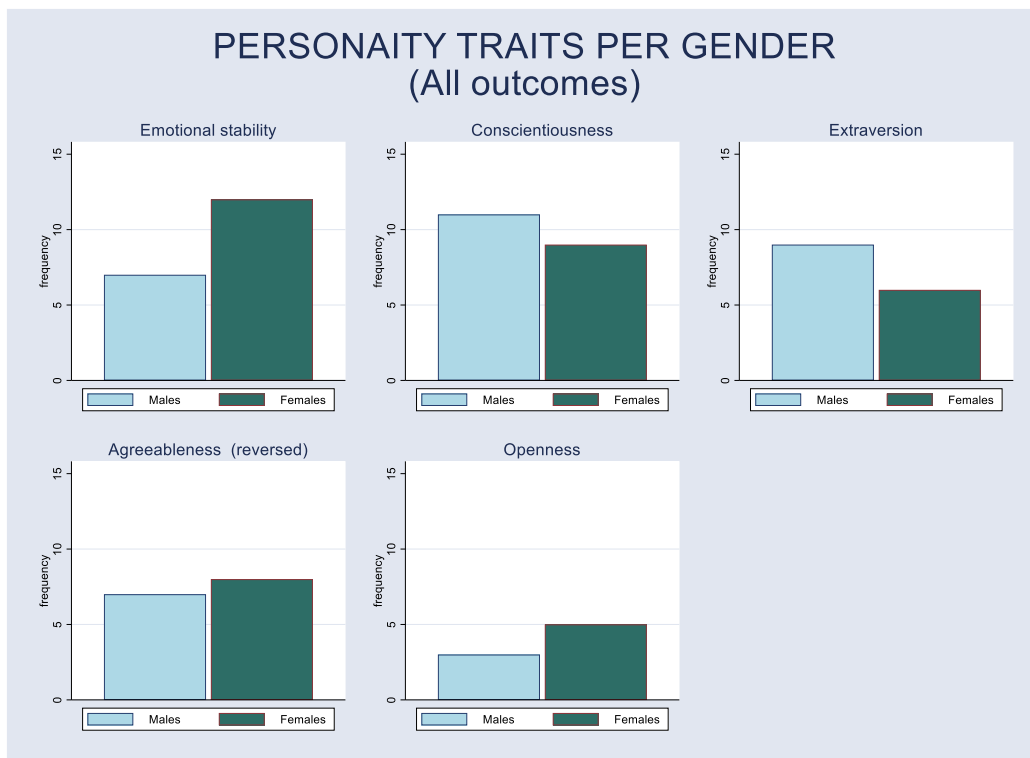
Figure 4 shows the frequencies of positive significant results differentiated per gender

Conscientiousness is the only trait that never predicts a negative outcome, either in terms of wages or employability, and is indifferent to the type of method and the size of the sample. A few research studies that show neutral results have particular designs, such as the study conducted on twins by Fletcher (2013) or the research conducted by Lee in Japan (2012, 2018), where conscientiousness seems irrelevant only for women. Other exceptions are, for example, the studies by Rammstedt, Danner, Lechner (2017), Nyhus and Pons (2005) and Gelissen and de Graaf (2005), which consistently found non-significant results. Other classical research designs, using either ordinary least squares or random effects, found significant results (see, for example, Heineck, 2011; Palczyńska & Świst, 2018; Uysal & Pohlmeier, 2011). Genowsky (2018) also explored the age at which each trait affects most wages. Conscientiousness seems to have a constantly increasing effect until it peaks in the age range of 50–60 years. Finally, most of the studies analysing the duration of unemployment found that conscientiousness significantly reduces its duration and eases the search for a new job.

Emotional stability presents similar results to conscientiousness. In most cases, it is positively correlated with both wages and employability. Despite that, I did not find other particular patterns.

Extraversion also seems a good predictor of labour market outcomes, even if the number of total positive results is 26 (in contrast with the 37 for conscientiousness and 39 for emotional stability. As shown before, however, a little concern is due to the sample sizes of the significant outcomes. Significant results systematically come from the studies that use small sample sizes.

Agreeableness is a consistent negative predictor of wages and employability. The only two positive outcomes come from studies conducted in Finland (Maczulskij, 2018) and Japan (Lee & Ohtake, 2018). Its reverse – antagonism – therefore represents a strong predictor of both wages and employability. However, similar to extraversion, the issue of the sample size should be kept in mind.

Finally, openness remains the only trait not showing a clear pattern. The outcomes do not seem to depend either on the sample size or the sex. Even when the various types of outcomes are separated, no pattern emerges: openness is correlated with both positive and negatives results for wages, unemployment duration and career advancement. In the next section, I will provide possible interpretations.

In general, results go on the expected direction. The two most important predictors of wage and employability are emotional stability and conscientiousness, followed by extroversion. This also confirms the results of a previous metanalysis conducted by Barrick and Mount (1991). Agreeableness has a strong negative impact, while openness doesn't show a clear pattern.

1.4.   Discussion and open questions

Even though economists have started looking at the relationships between the Big Five and the labour market, analysis usually focusses more on the empirical results and less on the theoretical reasons why some traits are more effective than others. I briefly present now some hypotheses on the role of the Big Five in the labour market, and I list the potential questions that are still open.

The reason why conscientiousness is generally correlated with higher wages and employability is straightforward, since it is also defined as industriousness and productivity (American Psychological Association, 2020). Conscientious workers possess all those characteristics that allow them to perform well at work: ability to plan, concentration, motivation and so on (Roberts et al., 2009). Another feature of these workers – which is less discussed in terms of consequences for the labour market – is that they tend to care more about social norms. Therefore, we can assume that where social norms on employability and career are strong, conscientious people are more likely to abide by them. Some studies have found, for example, that conscientious people suffer more after experiencing unemployment (Boyce et al., 2017). A final explanation of the effect of conscientiousness lies in its mediating effect through education. Many researchers have demonstrated the correlation between conscientiousness and better school outcomes, such as scores and years of education (see, for example, Almludn et al., 2011). Therefore, conscientiousness may affect wages and employability through educational attainment.

Explaining why emotional stability is usually found to be correlated with wages and employability is more difficult. A first hypothesis is that unstable and neurotic people function badly in every field of life. Emotional stability represents the capacity to remain calm and not be overwhelmed by the events of life. It is arguable that in the modern labour market, which requires flexibility and adaptability, the ability to resist stress is fundamental. Further research

should analyse whether emotional stability is a fundamental characteristic for each type of job, or only for those jobs that imply higher amount of stress.

Extraversion is not such a good predictor as the previous two traits and, in some cases, it is even correlated with negative outcomes. Some researchers have pointed out that extraverted people tend to reach leadership roles and, in general, to move towards higher positions. A possible explanation is the higher social skills of extraverted workers, which may have a relative advantage in jobs that require social interactions. Extraversion is also correlated with social regulation – the ability to adapt the expression of emotions and feelings to social needs. Some studies have pointed out that jobs that require social interactions, caring, establishing cooperation and communicating properly reward extraversion (Borgans et al., 2008). Another hypothesis would state that extraverted people have a wider social network that they can use to find a job by exploiting what Granovetter (1973) called weak ties.

Agreeableness is the only trait with a clear negative pattern. A hypothesis is that labour markets reward egoism and punish altruism, and therefore agreeable people are objectively disadvantaged. This remains an interesting issue that opens to further research. At the current state, we cannot say now whether the lower outcomes of agreeable people are due to their preference or to the fact that they are hampered in a labour market that requires egoistic behaviours. A possible explanation is that agreeable individuals tend to prefer family to work, and therefore they choose to have more free time at the cost of lower salaries. Whether it is due to preferences or objective obstacles is still an open issue.

Openness remains the most controversial among the Big Five. Most of the studies do not find any correlation between openness and higher wages or employability; however, the significant results are divided into both positive (16) and negative (9). There are different possible interpretations for this problem. The first intuition would be to expect openness to consistently predict positive results. Openness is the only trait correlated with intelligence (in the past, it was called 'Intellect'), and it is related to cultural and artistic interest. For these reasons, open-minded people tend to move towards high positions and good jobs (Nieß & Zacher, 2015). However, openness is also strictly correlated with sensation seeking. This characteristic describes the need for constant novelty and to keep experiencing new things and feelings. Open-minded workers tend to move across different jobs in their search for new experiences (Vianen et al., 2003). In some cases, as shown by Viinikainen and Kokko (2012),

it translates into more unemployment spells and consequently into more time spent voluntarily in unemployment. Nieß and Zacher (2015) found that open-minded people tend to move towards high managerial professions, and Ng et al. (2007) hypothesised that they tend to seek both internal-lateral and external mobility as new experiences. To conclude, it seems that open-minded people are characterised by two contrasting forces: on one side, the need for new experiences translates into lower continuity at work and eventually less accumulated experience; on the other side, their creativity and intelligence allow them to move into better positions. Furthermore, it is likely that age plays an important role. It is arguable that younger workers with an open mind have a higher need for moving across different jobs than their elderly counterparts. All of these different characteristics may explain the controversial findings on this trait.

Another important discussion must be initiated on the effects of personality traits on different types of job. So far, little research has directly explored how the Big Five perform differently according to the occupation. In general, occupational type is a control variable; however, it would be interesting to observe whether some traits affect workers' performances differently in different occupations. We can assume, for example, that conscientiousness positively affects wages in any type of job but boosts performances significantly higher in jobs that require less creativity and more commitment. The opposite would be true for openness, which probably boosts individuals who work in creative occupations and jeopardize individuals' commitment to jobs that involve routine tasks. Social traits (extraversion and agreeableness) are more likely to produce better outcomes in occupations where collaboration is more important than competition and which require social interactions.

A final note must be made on the contextuality of the role of personality traits. The works of Lee (2012, 2018) show that the effects of the Big Five on labour market performances are culturally related. She demonstrated that the same trait, agreeableness, predicts opposite outcomes in different labour markets: it is a good predictor of positive outcomes in Japan and a bad predictor in the US. This suggests that egoism and antagonism are rewarded in the western labour markets, where the focus is on competitiveness, but it may perform differently in different cultural contexts. By splitting the results of personality traits in different cultural contexts would shed light on which characteristics are rewarded in western societies.

1.5. Other soft skills

Besides the Big Five, another personality characteristic that has caught economists' attention is the locus of control. The locus of control is considered mainly as an attitude towards the external world. The American Psychological Association (2020) defines it as a 'construct that is used to categorize people's basic motivational orientations and perceptions of how much control they have over the conditions of their lives. People with an external locus of control tend to behave in response to external circumstances and to perceive their life outcomes as arising from factors out of their control. People with an internal locus of control tend to behave in response to internal states and intentions and to perceive their life outcomes as arising from the exercise of their own agency and abilities'. The concept was introduced by Rotter (1966), who found that the effect of reinforcement of individuals' behaviour depends on how much they perceive a reward as contingent on their behaviour or independent of it. Over the following decades, the construct became more and more popular, and it spread over different disciplines (Lefcourt, 1992).

The success that locus of control has in economics is still not comparable to that of the Big Five; however, in the recent years, it has been getting more and more attention. The internal locus of control is always considered a good predictor of any type of labour market outcome (for a review, see Cobb-Clark, 2015). I list some of the most recent studies that assess the effect of locus of control on the labour market. Girtz (2015), Heineck and Anger (2009), McGee (2013) and Piaket and Pianger (2010) assessed the effect of locus of control on earnings. In all cases, the internal locus of control is significantly related to higher wages (in the last paper, via education). The locus of control also affects employment patterns. Cobb-Clark (2015) found that unemployed 'internals' commit more to looking for a new job because they believe their efforts will be rewarded. The locus also seems to affect job choices, and internals are more likely to become managers (John & Thomsen, 2013). Finally, internal locus of control also negatively affects the probability of being unemployed and the unemployment duration (Cuesta & Budría, 2017).

Those studies support the hypothesis that the locus of control is potentially the best predictor of labour market outcomes. However, the interpretation is a bit different than that for the Big Five. Personality traits are more conceivable as 'fitting' or 'not fitting' the labour

market. For example, an altruistic and agreeable personality may not fit into a labour market where egoism is rewarded, while being hardworking and able to focus on duty (conscientiousness) are objective advantages. Locus of control, instead, is an attitude towards external events, and it can combine with personality traits transversely. This leads to new questions specifically regarding how combinations of internal locus of control and the Big Five create new labour market patterns. For example, we can hypothesise that agreeable people, who may prefer to focus more on family than their career, would perform worst in terms of wages and job positions, but not in terms of life or job satisfaction. Similarly, open-minded people are more likely to find jobs that satisfy their curiosity and need for experiences if they have an internal locus of control.

In the last chapter of this thesis, I also explore two other attitudes: trustworthiness and altruism[1]. Similar to locus of control, they are not personality characteristics but patterns of behaviour and beliefs with regard to the external world. More specifically, they refer to attitudes towards society and other people. Trustworthiness is defined as individuals' readiness to trust other individuals unknown to them (Stolle, 2002). When a society is highly trustworthy, people are more likely to engage with each other. Altruism is one of the three factors measuring life goals[2], and it measures the perceived importance of helping other people and being involved in social activities (Headey, 2007) (for a detailed description of personality traits measured in the SOEP, refer to the *SOEP Scales Manual by* Richter et al., 2013).

Relationships between these social attitudes and the labour market have not been studied yet. A few exceptions come from Byrne (2011), who found that managerial trustworthiness is positively related to job performance and organisational commitment, and Englmaier et al. (2014), who found evidence that employers pay wage premia to people who show trustworthy behaviour.

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[1] Note that in this altruism and trustworthiness are not considered personality traits or facets of them, but as attitudes towards the society. They consist in specific and separated scales.
[2] The other two are importance of career and importance of family.

1.6.   Conclusions

Although the research on the labour market and personality traits is still young, some clear patterns have already emerged. Conscientiousness and locus of control are strongly correlated with wages and employability, together with emotional stability. The same is true for the reverse of agreeableness (also called antagonism), which suggests that western labour markets punish altruism. Extraversion seems less correlated with labour market outcomes and, finally, openness still needs to be explained.

Further research needs to confirm these results in different countries and eventually in different labour markets. We have seen that these studies present a bias towards the UK, the USA and Germany. Similar studies should confirm the same results in other countries. In addition, as demonstrated by Lee and Ohtake (2012), a different labour market such as the Japanese one rewards altruism rather than punish it. The most likely explanation is that the effects of personality traits are context-specific and that they probably perform differently according to social norms and type of labour market in which the individual works.

Finally, future research should focus on micro-patterns of the labour market, such as the type of job or the job-mobility patterns, in relation to personality traits. This would shed more light on how personality shapes our labour market paths.

CHAPTER 2 - WORKING HOURS MISMATCHES AND WELL-BEING: THE ROLE OF PERSONALITY TRIAITS

2.1. Introduction

Chapters 2 and 3 explore the relationship between mismatched working hours and personality traits in Australia. The recent literature on mismatched working hours has focused on demonstrating that, unlike what the neoclassical theory assumes, workers are not always free to choose their working times (Altonji, 1990; Martinez-Granado, 2004; Otterbach, 2009; Reynolds, 2006): in advanced economies, a large portion of workers face time constraints between their desired and actual times of work. As shown by Otterbach, (Figure 5; Otterbach, 2010), all 21 countries considered present significant portions of mismatched workers (either underemployed or overemployed).

These mismatches have both economic and psychological implications. Galinsky et al. (2001) and Caruso (2014) reported that overemployed workers have higher probabilities of making mistakes and feeling angry towards their employers, thus affecting organizational productivity. On the contrary, involuntary part-time work is related to lower levels of organizational citizenship (Stamper & Van Dyne 2001). In addition, long hours are related to lower levels of well-being and mental health (Angrave & Charlwood, 2015; De Moortel et al., 2017; Wooden et al., 2009), especially in the elderly (Miranti & Li, 2020) and general health (Bassanini & Caroli, 2015; Bell et al., 2012; Grosch et al., 2006), with overemployment having a stronger effect than underemployment (Wunder, 2014). The importance of working time is also recognized by the International Labour Organization, which states that 'working time is a key factor that can either facilitate work-life balance (e.g., through reductions in working hours and certain forms of flexible working time arrangements) or hinder it (e.g., excessively long hours, unpredictable schedules)'. In Chapter 1, we have seen that personality traits are correlated with different outcomes in the labour market. We can expect, therefore, that personality traits also affect individuals' working hours, their preferences and how they adapt to them. We can expect, for example, that agreeable workers prefer to work fewer hours and to have more family time, but to be more prone to work more if asked by superiors. Differently, conscientious workers are more likely to invest more in their careers and are more likely to feel good in long-hours jobs.

Figure 5. Rates of working hours mismatches in 21 countries
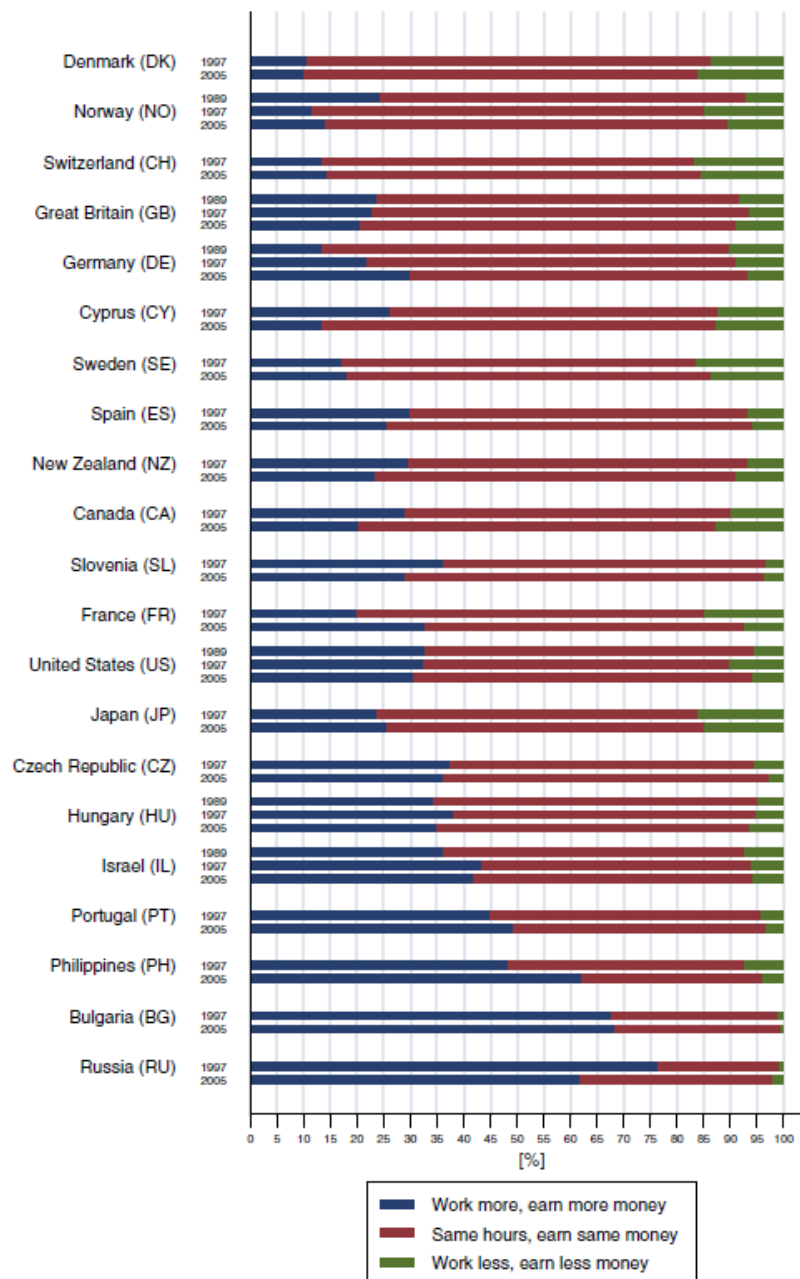
Note: The countries are ordered according to the share of unconstrained workers

I will give my contribution to the literature by combining two strains of research that haven't been connected yet. From one side, the research on personality traits and labour market hasn't considered yet the working hours mismatches as an outcome. On the other side, the literature on working hours mismatches has focussed on the socio-demographic determinants of the mismatches and their effect on well-being. However, individual personality hasn't been considered as a source of heterogeneity yet.

2.2. Literature review

The literature on mismatched working hours started exploring the determinants of those mismatches. Böheim and Taylor (2003) and Tam (2010), for example, focussed on the labour market and individual socio-economic characteristics that are correlated with time constraints in the UK. Generally, the probability of being overemployed is positively correlated with wages (more consistently for men), level of education, age, opportunities for promotion, receiving bonuses at work, white-collar jobs, the size of the company and with having young children (especially for women); it is negatively correlated with being in a trade union and tenure. On the contrary, being underemployed is positively correlated with being employed with a fixed-term contract, part-time work and age; it is negatively correlated with promotion opportunities and job tenure.

Once a mismatch in working hours is established, it is not always easy to resolve it. Reynolds demonstrated that, in the US, many workers who want to work fewer hours still want fewer hours five years. In many cases, workers also tend to resolve their mismatches by adapting their preferences rather than adjusting the actual hours worked, especially in the case of overemployment (Reynolds & Aletraris, 2006). Women and non-white workers, for example, tend to adapt their preferences more than getting the hours they want (Reynolds & Aletraris, 2010).

Analysing the resolution of the mismatches is more complex. As shown by Reynolds and Aletraris (2010), there are several ways to develop and resolve a mismatch, as shown in Figure 6. People can change both their actual hours and their preferences. This leads to a large number of possibilities. There are also different ways of adapting to a mismatch: a worker can remain in the same job and try to adjust his or her hours with his or her current employer. Alternatively, they can try to change employer.

Figure 6. Development and resolution of working hours mismatches: all possible patterns (Reynolds & Aletraris, 2010)
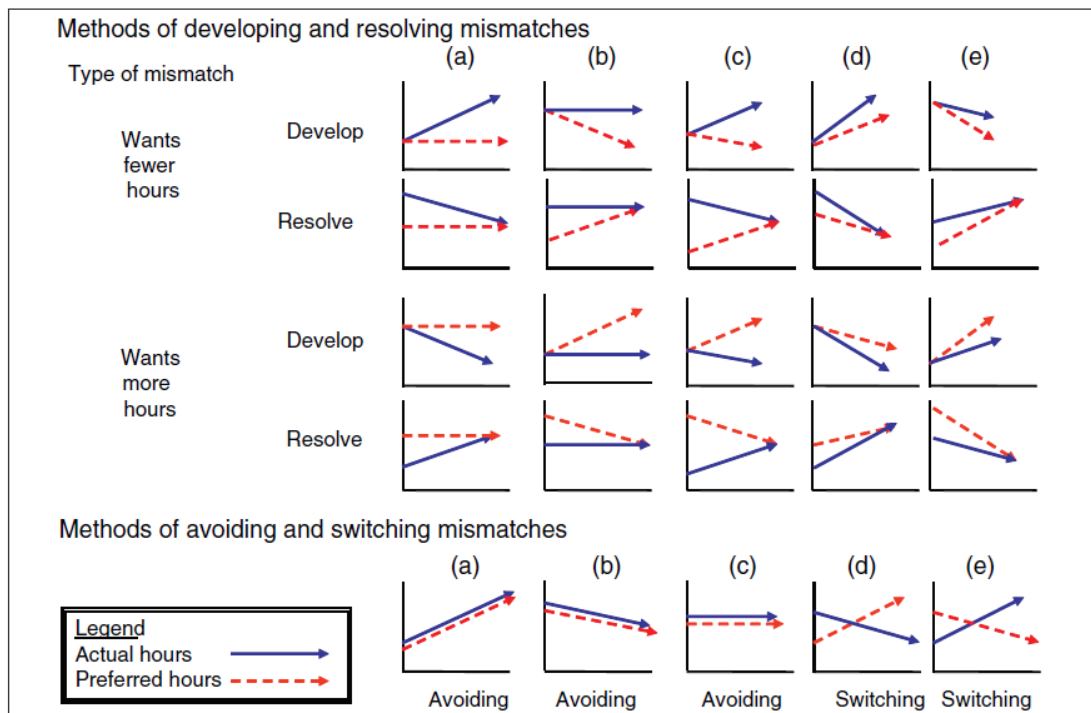
Figure 6 shows all the possible patterns of creation and resolution of underemployment and overemployment. The numerous outcomes are the results the combination of the 2 possible actions: changing working hours vs changing preferences.

Böheim and Taylor (2004) extrapolated the socio-demographic characteristics correlated with the probability of adapting working hours if mismatched. The probability of reducing hours in the case of overemployment increases with age, wages and the presence of young children (especially for women) and decreases with education and tenure. In general, underemployed part-timers are more likely to adapt their hours than overemployed people; changing jobs is also the best way to resolve both types of mismatches. Otterbach and Knaus (2019) recently reached similar results. By separating the resolution of mismatches into two possible channels (increasing or reducing the actual hours towards the preferred hours, or adapting preferences to the actual hours), they showed that people who change jobs have more possibilities of resolving mismatches by getting the hours they want rather than adapting their preferences.

According to Böheim and Taylor (2004), socio-demographic and job characteristics cannot explain roughly 40% of the total variance in labour supply preferences and the possibility of falling into a mismatch, which rely on unobservable individual specific effects. In

addition, a large portion of job mobility and resolution rates are due to individual characteristics. I aim to fill part of this gap by accounting for the individual heterogeneity through observing the role of personality traits.

There are different reasons why personality traits may affect working hours mismatches and their dynamics. First, personality traits affect various labour market outcomes, included type of job (see chapter 1). Conscientious and emotionally stable workers, for example, are more likely to get higher status jobs. Schieman, Whitestone and Van Gundy (2006) theorised that higher status occupations require a higher amount of effort and energy and, therefore, are potentially more stressful and driver of family conflicts. They are more exposed to job demands, which can bring to long working hours and, therefore, to the risk of developing overemployment. Another issue to consider is the importance of the balance between work and free time, which includes family, fun, and any other activities outside of job. This is well explained by the concept of ideal worker (Dowd et al, 2000). It represents the figure of the worker that is available to work full time and overtime hours and who has no need to take further time to spend with the family of for himself. I expect that people internalise the figure of the ideal worker differently according to their personality traits. Conscientious individuals, for example, who care of social norms, are expected to invest more in career and to embody more this figure, while open-minded and agreeable people are more likely to prefer, respectively, free time and family and not to adhere to it. Of course, there will be strong differences per gender. As pointed out by Girtz (2020), the figure of the ideal worker can't be the same for men and women, especially in those societies where the men is still expected to focus on work and the women on the caregiving. Open-minded women, for example, are more at risk of developing underemployment where they are expected to take care of the family and renounce to work. Similarly, conscientious neo-mothers are probably more disposal to temporarily leave job or decrease working hours where social norms suggest this gendered division of roles.

In general, my research is intended as an exploratory study of how personality traits can mediate the dynamics of working hours mismatches, both in terms of how these mismatches are created and how they are resolved. In this chapter I analyse the role of psychological traits in predicting, first, the probability of developing a mismatch. Secondly, I will observe whether these traits reduce the negative effects of mismatches on mental health and satisfaction with

free time. Finally, in chapter 3, I will study the probability of resolving a mismatch and how it can happen.

The chapter is structured as follow. Section 3 describes the dataset (the sample selection, the variables and the outcomes). Sections 4 and 5 briefly present the method used and some descriptive statistics on mismatched working hours in Australia. Finally, Section 6 reveals the results.

2.3. The dataset

Sample

The dataset used in this study is the Household, Income and Labour Dynamics in Australia (HILDA), a panel survey data representative of the Australian population. The HILDA survey is one of the few panel data that collect information in these different fields: work, family and psychological characteristics. Started in 2001, with a national probability sample of Australian households, this survey followed about 2,000 individuals every year for 17 waves, leading to a final sample of approximately 320,000 observations (Wooden, 2007).

Since my focus is the working-age population, the first sample selection is made by dropping all the individuals younger than 25 and older than 60. In addition, as demonstrated by two studies conducted by Cobb-Clark on HILDA (2012, 2013), the Big Five and the locus of control are reasonably stable between these age ranges. They tend to stabilize around age 25 and to drop after age 60. The final sample is composed of 10,126 individuals that have experienced at least a spell of overemployment and 6,630 that have experienced a spell of underemployment.

Psychological variables

The personality traits used for this research are the Big Five and the locus of control. For a summary of the Big Five, see Chapter 1. The HILDA already contains derived variables for each of the five personality traits; the items composing the transformed variable are

already selected through a factor analysis (see Losoncz, 2009). The first Big Five scale was added into HILDA in 2005, and it has been collected every four years[3].

The locus of control is definable as an individual's attitude towards the perception of auto-efficacy with respect to his own actions. People with external locus of control tend to believe that what happens to them is mainly due to external forces over which they have no control. People with internal locus of control ('internals') instead believe that they are the architects of their own fate, and that their actions have actual and concrete effects on their outcomes. In terms of action, this translates into a higher proactivity of internals. HILDA contains two items measuring internal locus, and five items measuring external locus. I run a factor analysis to confirm that each item refers to its own construct (see Appendix 2). Locus of control is measured at irregular intervals, generally every three to four years. All the traits use a scale from 1 to 7.

After retaining those in the 25–60 age range in the final sample selection, I used the scores from each wave available and I computed the average for each individual. This translates in single score fixed over the time[4]. The rationale behind this choice was to reduce the measurement error: people may choose a number on the scale one year that is different from the number in the following wave. Using all the information from all the waves available reduces the errors and approximates the 'real' value better.

Table 4
Personality traits: descriptive statistics

Trait	Mean	sd	Median	max	min	iqr	N
Locus of control	5.40	1.01	5.57	7	1	1.43	7942
Emo. stability	5.09	0.98	5.17	7	1	1.38	7607
Conscientiousness	5.11	0.95	5.17	7	1	1.38	7608
Extraversion	4.42	1.03	4.40	7	1	1.46	7611
Agreeableness	5.39	0.86	5.50	7	1	1.17	7608
Openness	4.27	0.99	4.25	7	1	1.29	7607

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[3] For the questionnaires of HILDA, see Appendix 2.

[4] An alternative way to solve this issue is to take into account the values from one specific wave (generally, the first one) (see, for example, Cobb-Clark, 2009)

Trait	Mean	sd	Median	max	min	iqr	N
Locus of control	5.41	1.02	5.57	7	1	1.40	7218
Emo. stability	5.10	0.99	5.17	7	1	1.39	7147
Conscientiousness	5.09	0.96	5.17	7	1.17	1.42	7145
Extraversion	4.44	1.04	4.44	7	1	1.42	7148
Agreeableness	5.43	0.85	5.50	7	1	1.07	7148
Openness	4.28	1.02	4.28	7	1	1.39	7145

Sd = standard deviation
iqr = interquartile range
N refers to the total number of individuals with information on that trait.

Table 4 presents descriptive statistics of the Big Five and locus of control. On average, all traits present means close to the median and a standard deviation of 1.

After computing the average, I standardized all the traits and divided them into four equal quartiles, where 0 is the lowest quantile and 3 is the highest one[5]. Figure 7 shows the distribution of the standardized measures of each trait. All the Big Five traits present a normal distribution, while many individuals score the highest possible score on locus of control, showing a right-skewed distribution.

Figure 7. Histograms of personality traits' distributions

PERSONALITY TRAITS' DISTRIBUTIONS

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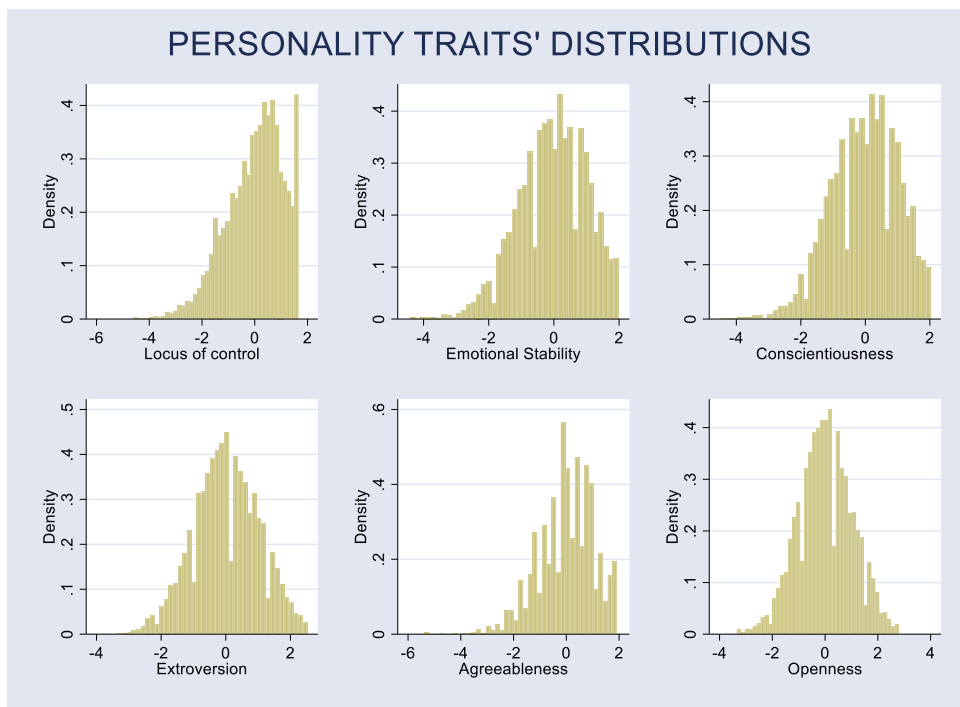
[5] For example, Locus of control is divided in: very external locus, moderately external locus, moderately internal locus, ve ry internal locus.

Outcomes

The first part of this study analyses the relationship between the probability of developing a working-hours mismatch and personality traits. Compared with other panel data, HILDA contains a specific question to observe working-time preferences. Specifically, respondents are asked: 'If you could choose the number of hours you work each week, *and taking into account how that would affect your income*, would you prefer to work … fewer hours than you do now? About the same hours as you do now? Or more hours than you do now?' This question also considers the possibility of reducing (or increasing) the wage if changing hours, which leads to more precise information. Therefore, the first two outcomes of this research are built as dummy variables for being mismatched (overemployed or underemployed) or unconstrained.

The second part of the research analyses the effect of mismatched working hours on mental health and satisfaction with free time. According to the World Health Organization, mental health is one of the three pillars of individuals' health (together with physical and social), and it includes subjective well-being, perceived self-efficacy, autonomy, competence, intergenerational dependence and recognition of the ability to realize one's intellectual and emotional potential (WHO, 2003). In HILDA, it is measured through the Short Form Health Survey (SF-36), a self-reporting questionnaire that measure all aspects of health. The scale dedicated to mental health is composed of five items; the aggregated variable is already present in the final dataset (Butterworth & Crosier, 2004). The second outcome is a single question asking how individuals are satisfied with their free time. I standardised both variables.

Covariates

As demonstrated by Böheim and Taylor (2004), both the family characteristics and job-related variables are correlated with working-time preferences. For example, the probability of overemployment rises with education and decreases with wage. All things being equal, non-manual workers are also more likely to prefer to work fewer hours than manual workers, while fixed-term contracts are correlated with underemployment. As for personal features, the probability of overemployment increases until about the age of 50, after which it declines.

Finally, overemployment is correlated with being married for men and with having young children for women.

My regression analysis contains those variables that may affect the probability of developing a working-hours mismatch. The construction of these variables is usually straightforward. There is a first set of socio-demographic variables: age, age squared, marital status, presence of kids below 14 or below five years of age dummies for education (in terms of level of education reached), household income (divided per 1,000) and nationality. Secondly, I used a set of job characteristics: a dummy for temporary vs. permanent contract, dummies for occupation[6] and having a health condition that limits work. Finally, I added year dummies to account for business-cycle effects.

2.4. Methodology

Following the previous literature on the labour market and personality traits, I expect these traits to also be significantly correlated with my outcomes: the probability of developing a working-hour mismatch and the well-being associated with it. In particular, traits related to positive labour market outcomes (such as locus of control, conscientiousness and emotional stability) should prevent workers from being underemployed but are also expected to increase the loss in mental health. On the contrary, the same traits are potential triggers of overemployment, since they are correlated with higher-status jobs (see Chapter 1). Regarding overemployment, I expect agreeableness and openness to prevent its manifestation and overemployment to be correlated with higher loss in mental health (and higher satisfaction with free time in the case of underemployment).

There are two groups of models for the two sets of outcomes. The first model considers the probability of falling into mismatches and its relationship with personality traits. I use a linear probability model in random effects:

$$y_{it} = \alpha_{it} + \beta X_{it} + \gamma Z_i + \mu_i + \varepsilon_{it}, \qquad (1)$$

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[6] I used the Australian and New Zealand Standard Classification of Occupations (ANZSCO). In this classification, there are eight types of job: managers, professionals, technicians and trade workers, community and personal service work, clerical and administrative workers, sales workers, machinery operations and drivers, and labourers.

where y is a dummy variable for being underemployed versus unconstrained[7] or alternatively overemployed versus unconstrained. X is the set of covariates (household income, marital status, having kids, educational attainment, type of contract, occupation, nationality, health condition limiting work and wave dummies), while $\mu_i + \varepsilon_{it}$ are the time invariant and time variant error terms, respectively. Finally, Z is a variable that captures the position in the distribution of each personality trait (where 0 is the lowest quartile and 3 the highest one). Therefore, the coefficient of interest γ represents the different probability of falling in mismatch related to the position in the distribution of each trait[8].

Secondly, I study the effect of developing a mismatch on two different outcomes: mental health and satisfaction with free time. As the literature has pointed out (Wooden, 2009), constraints on working hours have a negative impact on happiness. However, I expect personality traits to affect how people react. For this, I use the following linear regressions in fixed effects:

$$y_{it} = \alpha_{it} + \beta M_{it} + \gamma(M_{it} * Z_i) + \theta X_{it} + \varepsilon_{it} + \mu_i \qquad (2)$$

Here, y is either mental health or satisfaction with free time and β represents the effect of developing a mismatch (M) on y. Since the estimation is carried out in fixed effects, all the time-invariant characteristics disappear, including the time-invariant error and the personality traits. To extrapolate the effect of personality traits, I interacted them with the mismatch ($M_{it} * Z_i$), where Z is a the 4-categoreis variable for the distribution of each trait (see [1]). X is composed of all the time-variant characteristics that may affect the development of a mismatch: the beginning or the end of a relationship, having children below five or 14 years old family income, age and wave dummies. Here, γ is our coefficient of interest. It describes how people react to underemployment and overemployment in term of change in y on the basis of their personality.

With respect to the second model, the inclusion of individual fixed effects allows me to control for the part of the unobserved selection process into mismatches due to individual

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[7] In the literature, they generally refer to 'unconstrained' as the workers with no working hours mismatches.

[8] This exercise is descriptive in nature, since I am not able to completely rule out self-selection based on unobserved individual characteristics or the endogeneity of the traits.

time-invariant characteristics. Furthermore, by including individual fixed effects, the endogeneity bias due to omitted variables is partly solved.

2.5. Descriptive statistics

In this section, I present some descriptive information on overemployment and underemployment and their correlations with personality traits and well-being. Figure 8 shows the rates of underemployed and overemployed workers compared with unconstrained workers over time. Interestingly, after 2005, there is a convergence between underemployment and overemployment rates, where the former is increasing, and the latter is decreasing. In addition, the rate of unconstrained workers is increasing, independent of sex. However, in line with Otterbach's (2009) results, mismatched workers, especially overemployed ones, still represent a big portion of the total labour force (about one-third). Even if the number of constrained people changes, western societies always have a significant portion of workers who would prefer to work more or less hours.

Figure 8. Rate of mismatched workers over the years
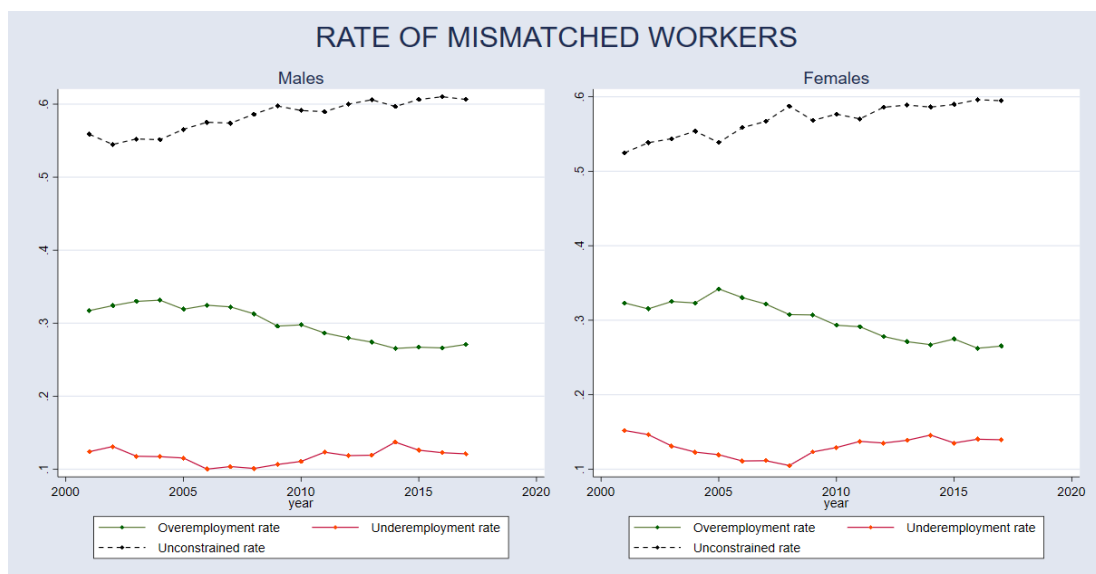
Figure 9 shows the average weekly hours worked for all workers (for males and females), the hours worked by underemployed and overemployed people, and the hours they would like to work.

Figure 9. Comparison between hours preferred and hours worked per week by underemployed and overemployed workers
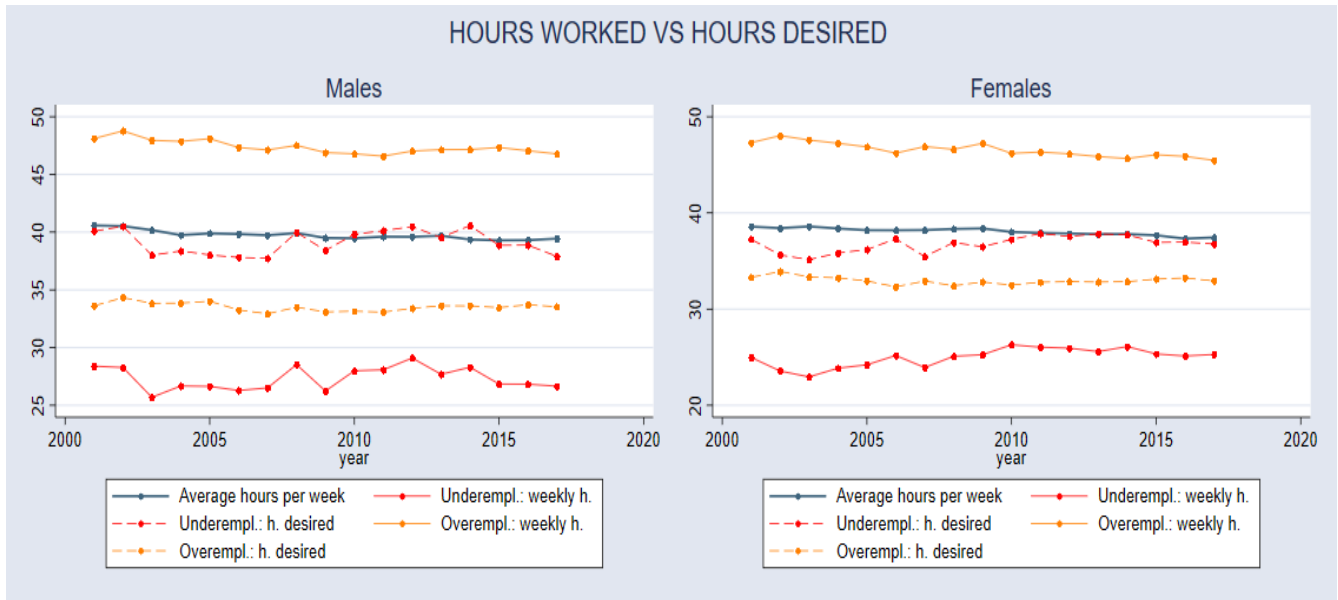
It is interesting to note that while underemployed workers' preferences align with the average full-time hours, overemployed workers' preferences stabilize a little lower.

Table 5 presents descriptive statistics about the variable of interest. We see that men and women score statistically differently in almost any data. Men are more likely than women to have permanent contracts, to be partnered and to have higher incomes, and they are less likely to suffer from invalidity affecting work, to be migrants and to have dependent kids. The only information with no significant difference is education

Table 5
Descriptive statistics of the sample

	Age	Family income	Partner	Depend. kids	Education (deciles)	Contract (casual vs permanent)	Australian	Invalidity
Males	42.37	1.68	.77	.58	5.49	1.98	.028	.14
Females	41.64	1.59	.69	.65	5.49	1.92	.036	.15
T test (p val)	**0.00**	**0.00**	**0.00**	**0.00**	.87	**0.00**	**0.00**	**0.00**

Figure 10 shows hours preferred and hours worked per personality trait over the working age. The information on hours preferred is directly requested from all the mismatched workers. I also computed hours preferred as the same of hours worked in the case of no mismatch. The comparison is made between the two quantiles of each trait (e.g., internal vs, external locus of control). Some traits present potential significant differences. Open-minded people and those with an internal locus of control tend to work more whereas, surprisingly, conscientious workers tend to prefer less hours. This may confirm the hypothesis that conscientious workers are more likely to become overemployed. Finally, the trait that seems to most affect working hours is agreeableness. Agreeable people work and would prefer to work significantly less then antagonistic people.

Figure 10. Hours worked and hours preferred, by personality traits

HOURS WORK AND HOURS PREFERRED
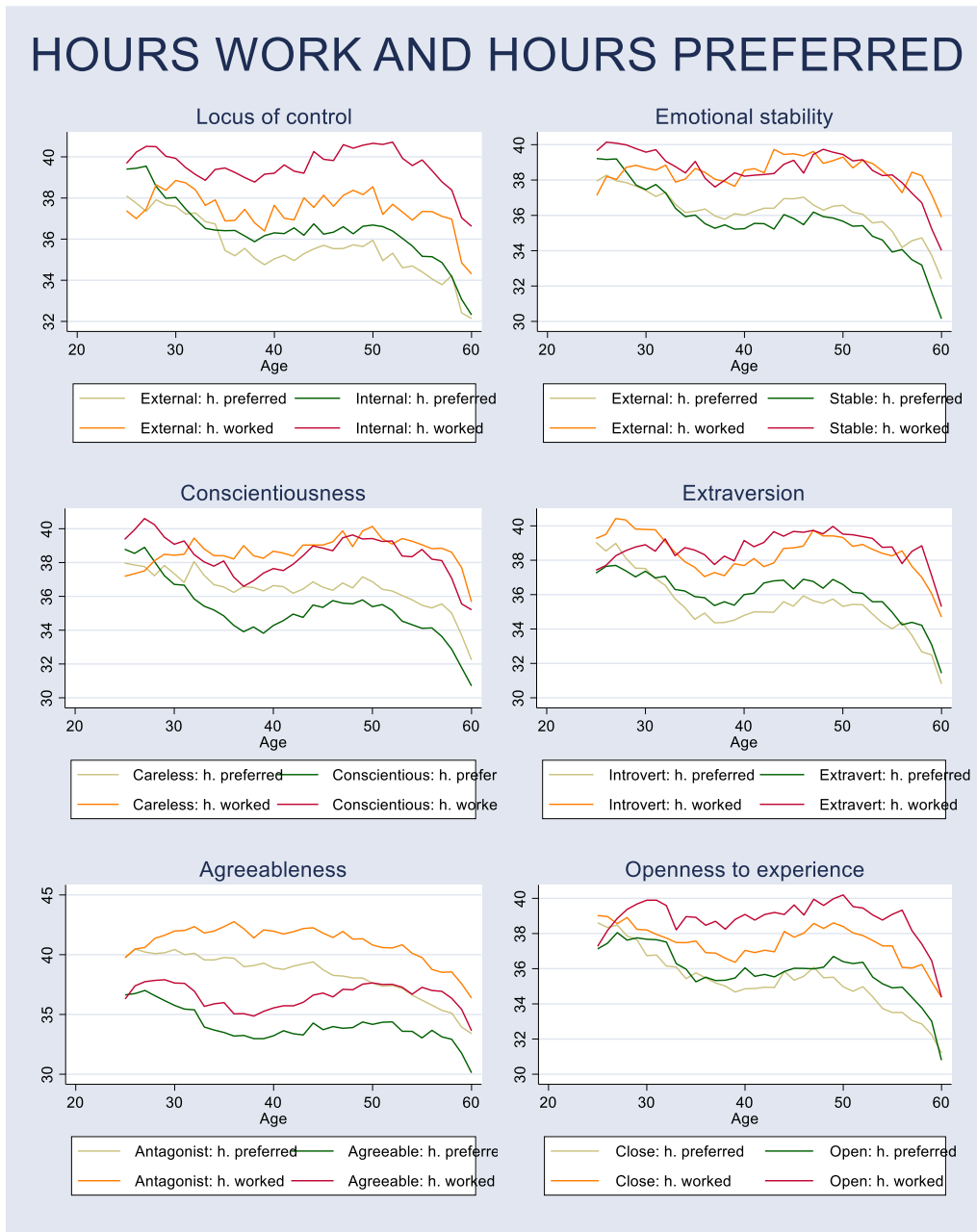
Figure 9 shows the difference in hours worked per week and hours desired over the working age, comparing the lowest and the highest quartile of each personality trait.

Figures in Appendix 3 also show the means of hours worked, hours preferred, mental health and satisfaction with free time with respect to personality traits. Confidence intervals graphically give an idea of how the results are spread out according to each trait. Agreeableness is, in general, the trait that mostly shapes all the results. Agreeable people, independent of gender, tend to work and prefer to work significantly less, while they have significantly higher levels of mental health and satisfaction with free time. Emotional stability

seems to be the trait that affects hours worked and preferred less. Conscientiousness and extraversion show an interesting difference: high levels of these traits predict higher weekly hours for men and lower hours for women. Finally, open-minded people and internals work significantly more, independent of gender. In terms of well-being variables, all traits are positively correlated with positive outcomes, with the interesting exception of openness, which correlates with lower levels of both mental health and satisfaction with free time.

Table 6 shows the probability of developing a mismatch associated with personality traits. As expected, the best predictors of labour market outcomes (locus of control, emotional stability and conscientiousness) are negatively correlated with the probability of underemployment and positively correlated with overemployment. Agreeable people seem more likely to fall into underemployment. Interestingly, open-minded workers have more chances to feel both underemployed and overemployed.

Table 6
PROBABILITY RATES OF DEVELOPING A MISMATCH OVER PERSONALITY TRAITS

	Underemployment			Overemployment		
	Low	**High**	**P value**	**Low**	**High**	**P value**
Locus	0.174	0.096	**0.000**	0.292	0.290	0.713
Emo. stab.	0.157	0.103	**0.000**	0.288	0.307	**0.000**
Conscient.	0.150	0.099	**0.000**	0.282	0.320	**0.000**
Extraversion	0.118	0.115	0.365	0.307	0.308	0.718
Agreeab.	0.117	0.135	**0.000**	0.293	0.297	0.278
Openness	0.120	0.130	**0.000**	0.264	0.329	**0.000**

Note: The table compares the probability rates of developing a mismatch, by comparing the highest quartile with the lowest quartile of each personality trait. The second column presents the average probability of the lowest quartile of each trait (e.g.: very external locus of control) of developing underemployment, while the third column presents the probability associated with the highest quartile (e.g.: very internal locus). The fourth presents the P-values derived from T tests of the differences between them.
The same logic follows for overemployment.

In the last tables (7 and 8), I show the average scores of mental health and satisfaction with free time of underemployed and overemployed workers, according to their personality traits. Every trait predicts a significantly higher level of mental health in the cases of both underemployment and overemployment, with the exception of openness, which shows an opposite effect.

Satisfaction with free time presents similar patterns (Table 8). Interestingly, the only trait that predicts a higher probability of falling into underemployment – agreeableness – is also correlated with higher satisfaction with free time (see the discussion section for a possible explanation).

TABLE 7
AVERAGE MENTAL HEALTH SCORES OF MISMATCHED WORKERS,
OVER PERSONALITY TRAITS

	Underemployment			Overemployment		
	Low	**High**	**P value**	**Low**	**High**	**P value**
Locus	-0.676	0.441	**0.000**	-0.614	0.462	0.713
Emo. stab.	-0.533	0.367	**0.000**	-0.484	0.437	**0.000**
Conscient.	-0.335	0.085	**0.000**	-0.210	0.203	**0.000**
Extraversion	-0.366	0.143	**0.000**	-0.192	0.209	0.718
Agreeab.	-0.213	-0.006	**0.000**	-0.082	0.119	0.278
Openness	-0.016	-0.213	**0.000**	0.144	-0.069	**0.000**

Note: see above

TABLE 8
AVERAGE SATISFACTION WITH FREE TIME SCORES OF MISMATCHED WORKERS, OVER PERSONALITY TRAITS

	Underemployment			Overemployment		
	Low	High	P value	Low	High	P value
Locus	-0.013	0.374	**0.000**	-0.741	-0.255	0.713
Emo. stab.	0.087	0.243	**0.000**	-0.570	-0.316	**0.000**
Conscient.	0.109	0.190	0.001	-0.523	-0.400	**0.000**
Extraversion	0.143	0.189	0.066	-0.515	-0.425	**0.000**
Agreeab.	0.133	0.210	0.001	-0.496	-0.425	**0.000**
Openness	0.171	0.150	0.383	-0.380	-0.496	**0.000**

Note: see above

2.6. Results

I now present the estimates of the regression analysis shown in Section 3. First, I present the results on the probability of developing a mismatch; secondly, the effect of personality traits on mental health and satisfaction with free time in the case of a mismatch; and in the final paragraph, I discuss them.

Probability of developing a mismatch

Tables 9 and 10 show the probability of developing a mismatch. Every trait was divided into four equal quartiles, where quantiles I (I Q.) corresponds to the lowest scores (e.g., high external locus of control) and quantile (IV Q.) to the highest scores (e.g., high internal locus of control).

Internal locus of control is correlated with a lower probability of developing underemployment. Men and women with high internal locus of control are, respectively, 6% and 4% less likely to end up in underemployment than people with high external locus. Similar results are found for emotional stability and conscientiousness, for both sexes. People with high level of agreeableness and openness, instead, are around 2-3% more likely to develop

underemployment. Apparently, internal locus of control also protects workers from feeling overemployment, while conscientiousness works only for men. Interestingly, high openness is also correlated with around a 3% higher probability of developing overemployment than high closeness.

Table 9
LOGISTIC RANDOM EFFECT ESTIMATIONS OF THE PROBABILITY OF DEVELOPING UNDEREMPLOYMENT

	Males					
	Locus	Emo. stab.	Cosc.	Extrav.	Agreeab.	Openn.
I Q.	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
II Q.	-0.030***	-0.020**	-0.014*	-0.001	0.010	0.020**
	(0.00)	(0.01)	(0.10)	(0.90)	(0.22)	(0.01)
III Q.	-0.052***	-0.030***	-0.009	-0.005	0.014*	0.012
	(0.00)	(0.00)	(0.28)	(0.56)	(0.09)	(0.13)
IV Q.	-0.062***	-0.036***	-0.027***	-0.011	0.022***	0.033***
	(0.00)	(0.00)	(0.00)	(0.15)	(0.00)	(0.00)
Observations	46808	46037	46043	46043	46033	46037

	Females					
	Locus	Emo. stab.	Cosc.	Extrav.	Agreeab.	Openn.
I Q.	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
II Q.	-0.034***	-0.026***	-0.035***	0.008	0.000	0.010
	(0.00)	(0.00)	(0.00)	(0.36)	(0.97)	(0.22)
III Q.	-0.040***	-0.025***	-0.029***	0.005	0.011	0.003
	(0.00)	(0.00)	(0.00)	(0.58)	(0.19)	(0.72)
IV Q.	-0.040***	-0.029***	-0.032***	0.003	0.014*	0.022***
	(0.00)	(0.00)	(0.00)	(0.73)	(0.10)	(0.01)
Observations	42038	41485	41481	41492	41496	41484

Note: this table presents random effect estimations of the probability of developing a mismatch in relation to each quartile of each personality trait.
the first columns represent the quartiles, where I Q. is the lowest quartile (e.g. very external locus of control) and the IV Q. the highest quartile (e.g. very internal locus of control). The I Q. is used as the reference category; the other lines shows how the higher quartiles differ from the lowest one. All the other columns present the regression coefficients of each personality trait.
P values are shown in parenthesis.
For the entire table with all the control variables, see Appendix 5.

Table 10.
LOGISTIC RANDOM EFFECT ESTIMATIONS OF THE PROBABILITY OF DEVELOPING OVEREMPLOYMENT

	Males					
	Locus	Emo. stab.	Cosc.	Extrav.	Agreeab.	Openn.
I Q.	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
II Q.	-0.014	-0.004	0.010	-0.012	0.008	-0.005
	(0.16)	(0.71)	(0.32)	(0.20)	(0.42)	(0.64)
III Q.	-0.011	-0.005	-0.004	-0.019**	-0.009	0.007
	(0.28)	(0.61)	(0.65)	(0.04)	(0.34)	(0.44)
IV Q.	**-0.038***	-0.010	0.005	-0.010	0.008	**0.023**
	(0.00)	(0.28)	(0.61)	(0.29)	(0.41)	**(0.02)**
Observations	46839	46071	46077	46077	46067	46071

	Females					
	Locus	Emo. stab.	Cosc.	Extrav.	Agreeab.	Openn.
I Q.	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
II Q.	-0.003	-0.004	0.008	-0.014	-0.012	0.010
	(0.76)	(0.71)	(0.46)	(0.17)	(0.23)	(0.31)
III Q.	0.001	**-0.018***	0.010	-0.018*	-0.014	**0.022**
	(0.90)	**(0.07)**	(0.30)	(0.08)	(0.17)	**(0.03)**
IV Q.	**-0.026***	**-0.020**	0.000	0.003	-0.011	**0.043***
	(0.01)	**(0.04)**	(0.98)	(0.78)	(0.24)	**(0.00)**
Observations	42078	41526	41522	41533	41537	41525

Note: see above

Effect on mental health and satisfaction with free time

In Tables 11 and 12, I show how personality traits mediate the effect of underemployment and overemployment on mental health and life satisfaction with free time, respectively. Males with high levels of emotional stability, conscientiousness and agreeableness suffer more from underemployment. Women with high emotional stability and conscientiousness are protected from loss in mental health due to unemployment.

TABLE 11.

FIXED-EFFECT ESTIMATIONS OF THE EFFECT OF UNDEREMPLOYMENT ON MENTAL HEALTH

	Males					
	Locus	**Emo. stab.**	**Cosc.**	**Extrav.**	**Agreeab.**	**Openn.**
I Q.	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
II Q.	-0.053	**-0.071***	**-0.082****	-0.007	-0.043	0.059
	(0.17)	**(0.06)**	**(0.02)**	(0.85)	(0.24)	(0.11)
III Q.	-0.044	**-0.066***	**-0.090****	0.027	-0.008	0.053
	(0.23)	**(0.09)**	**(0.01)**	(0.46)	(0.84)	(0.15)
IV Q.	-0.019	**-0.119*****	**-0.138*****	-0.063	**-0.087****	**0.061***
	(0.62)	**(0.00)**	**(0.00)**	(0.10)	**(0.03)**	**(0.10)**
Observations	45033	44511	44514	44514	44509	44511

	Females					
	Locus	**Emo. stab.**	**Cosc.**	**Extrav.**	**Agreeab.**	**Openn.**
I Q.	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
II Q.	0.036	**0.111*****	**0.069***	-0.017	-0.008	0.038
	(0.38)	**(0.01)**	**(0.07)**	(0.68)	(0.84)	(0.31)
III Q.	0.059	**0.093****	**0.083****	-0.021	-0.003	-0.050
	(0.14)	**(0.02)**	**(0.04)**	(0.61)	(0.93)	(0.19)
IV Q.	**0.073***	0.058	**0.067***	-0.042	0.025	-0.021
	(0.07)	(0.14)	**(0.10)**	(0.32)	(0.52)	(0.60)
Observations	40562	40251	40249	40258	40253	40250

Note: This table and the following ones present the fixed effect estimations of the effect of mismatches on mental health. The coefficients present the effect of the interaction between the mismatch and personality traits.

As before, the first column represents the quartiles, where I Q. is the lowest quartile (e.g. very external locus of control) and the IV Q. the highest quartile (e.g. very internal locus of control). The I Q. is used as the reference category; the other lines shows how the higher quartiles differ from the lowest one.

TABLE 12.

FIXED-EFFECT ESTIMATIONS OF THE EFFECT OF OVEREMPLOYMENT ON MENTAL HEALTH

	Males					
	Locus	**Emo. stab.**	**Cosc.**	**Extrav.**	**Agreeab.**	**Openn.**
I Q.	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
II Q.	-0.042	0.019	0.017	-0.003	-0.023	-0.012
	(0.17)	(0.51)	(0.54)	(0.91)	(0.37)	(0.62)
III Q.	0.014	0.039	0.030	0.018	-0.003	-0.010
	(0.61)	(0.16)	(0.25)	(0.49)	(0.89)	(0.67)
IV Q.	-0.002	0.037	**0.047***	0.036	-0.006	-0.034
	(0.95)	(0.14)	**(0.08)**	(0.17)	(0.81)	(0.23)
Observations	45059	44540	44543	44543	44538	44540

	Females					
	Locus	Emo. stab.	Cosc.	Extrav.	Agreeab.	Openn.
I Q.	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
II Q.	-0.024	-0.021	0.041	-0.021	0.041	0.044
	(0.47)	(0.51)	(0.18)	(0.51)	(0.18)	(0.14)
III Q.	-0.026	0.004	0.009	0.004	0.009	**0.071****
	(0.42)	(0.90)	(0.76)	(0.90)	(0.76)	**(0.01)**
IV Q.	-0.049	0.022	0.002	0.022	0.002	0.034
	(0.11)	(0.45)	(0.95)	(0.45)	(0.95)	(0.21)
Observations	40599	40289	40287	40289	40287	40296

Note: see above

In general, personality traits seem less correlated with mental health alterations following overemployment. The only data worth mentioning is that very high conscientious men seem to suffer significantly less.

To conclude, results on satisfaction present cleaner patterns (Tables 13 and 14). Extraverted workers are significantly less satisfied with their time if underemployed, while open-minded people enjoy their time significantly more. Similarly, for both sexes, openness is negatively correlated with satisfaction with free time in the case of overemployment.

TABLE 13.
FIXED-EFFECT ESTIMATIONS OF THE EFFECT OF UNDEREMPLOYMENT ON SATISFACTION WITH FREE TIME

	Males					
	Locus	Emo. stab.	Cosc.	Extrav.	Agreeab.	Openn.
I Q.	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
II Q.	-0.015	-0.028	-0.004	**-0.150*****	-0.014	**0.101****
	(0.72)	(0.51)	(0.93)	**(0.00)**	(0.75)	**(0.02)**
III Q.	-0.009	0.046	0.005	**-0.116*****	0.015	0.045
	(0.84)	(0.30)	(0.91)	**(0.01)**	(0.73)	(0.31)
IV Q.	-0.041	-0.036	-0.031	**-0.157*****	0.058	**0.135*****
	(0.39)	(0.42)	(0.51)	**(0.00)**	(0.20)	**(0.00)**
Observations	48680	48050	48056	48056	48045	48050

	Females					
	Locus	Emo. stab.	Cosc.	Extrav.	Agreeab.	Openn.
I Q.	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
II Q.	-0.016	-0.034	-0.001	**-0.154***	-0.007	**0.108**
	(0.70)	(0.43)	(0.98)	**(0.00)**	(0.87)	**(0.01)**
III Q.	-0.006	0.046	0.000	**-0.133***	0.009	0.056
	(0.89)	(0.31)	(0.99)	**(0.00)**	(0.85)	(0.20)
IV Q.	-0.035	-0.052	-0.044	**-0.156***	0.054	**0.146***
	(0.46)	(0.25)	(0.34)	**(0.00)**	(0.24)	**(0.00)**
Observations	48684	48054	48060	48060	48049	48054

Note: see above

TABLE 14.
FIXED-EFFECT ESTIMATIONS OF THE EFFECT OF OVEREMPLOYMENT ON SATISFACTION WITH FREE TIME

	Males					
	Locus	Emo. stab.	Cosc.	Extrav.	Agreeab.	Openn.
I Q.	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
II Q.	0.033	0.040	-0.004	**0.058**	0.007	-0.002
	(0.30)	(0.20)	(0.89)	**(0.04)**	(0.81)	(0.93)
III Q.	0.014	0.018	0.008	**0.054***	0.038	-0.021
	(0.64)	(0.55)	(0.80)	**(0.07)**	(0.18)	(0.48)
IV Q.	0.033	0.033	-0.002	0.027	-0.012	**-0.102***
	(0.30)	(0.27)	(0.94)	(0.36)	(0.67)	**(0.00)**
	48713	48087	48093	48093	48082	48087

FREE TIME SAT. − OVEREMPL.

	Males					
	Locus	Emo. stab.	Cosc.	Extrav.	Agreeab.	Openn.
I Q.	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
II Q.	**0.097***	0.031	0.020	0.003	0.044	-0.024
	(0.00)	(0.34)	(0.54)	(0.92)	(0.18)	(0.45)
III Q.	**0.106***	**0.053***	0.037	0.035	-0.007	-0.014
	(0.00)	**(0.09)**	(0.23)	(0.28)	(0.81)	(0.65)
IV Q.	0.041	0.042	0.002	-0.010	-0.016	**-0.076**
	(0.21)	(0.18)	(0.94)	(0.74)	(0.61)	**(0.02)**
	43821	43434	43430	43441	43445	43433

Note: see above

Discussion

Most of the results were in line with the expectations, with a few exceptions.

As expected, locus of control is the best predictor against both types of mismatch, even if it does not present particularly significant results on well-being outcomes. In the literature, locus of control is strongly correlated with labour market performances (see Chapter 1). Internals are more likely to have higher wages and better labour market positions, generally characterized by longer working hours (Cobb-Clark, 2015). Despite that, they are still less likely to end up overemployed. A possible explanation is that internals, who are more proactive in their actions and choices, have more chances to get what they want, independent of working hours and job positions. We can assume, for example, that a new mother who prefers to reduce working hours has a higher probability of doing that without feeling underemployed. To put it simply, this matches her preferences. Similarly, workers who want to get higher job positions, despite longer working hours, are more likely to do that if they have an internal locus of control.

Both emotional stability and conscientiousness consistently predict a lower probability of underemployment. This also was not surprising, since these traits are generally correlated with positive labour market outcomes. Stable and conscientious workers tend to have good jobs and probably longer working hours (see Chapter 1). One of the most interesting results is the mediating role of those two traits on the effect of underemployment on mental health. Emotional stability and conscientiousness predict lower levels of mental health for underemployed men and higher levels for underemployed women. A possible interpretation lies in work and social norms. As hypothesized by Powdtawee (2018), it is more socially acceptable for women to work short hours (and less acceptable to work long hours). Considering that conscientiousness is associated with a strong adherence to social norms, we can expect that conscientious women are more influenced by social norms regarding family and taking care of children. On the contrary, conscientious men who cannot work as much as they want tend to suffer more.

Extraversion does not have any notable effect on the probability of developing a mismatch or on mental health. The only significant results are found in the mediating effect of free time satisfaction: extraverted workers enjoy their free time less when underemployed. I expected an opposite effect, in other words, extraverted people would compensate for their short working hours with other activities. This result may open interesting questions about

the importance of jobs for extraverted people and the role of work in socialization. A possible explanation, indeed, is that extraverted people, who tend to feel comfortable in socially dense situations, prefer to have jobs that increase social interactions.

Agreeableness does not present many significant results. However, as expected, it is correlated with a higher probability of underemployment. With respect to a question raised in the first chapter – namely whether agreeable people have lower labour market outcomes because of their preferences or because there are disadvantaged, this result leans towards the latter. Eventually, agreeable people are not able to satisfy their expectations in the labour market and may end up feeling underemployed.

Openness results reflect the general uncertainty that surrounds this trait in the literature. Interestingly, openness is positively correlated with both underemployment and overemployment. Explaining the correlation with overemployment is easier: open-minded people who constantly need new experiences are more likely to feel limited by long working hours. It is more complex to understand the positive correlation with underemployment. A hypothesis proposed in Chapter 1 may provide an explanation. Open-minded people are characterized by high job mobility and, in some cases, they experience longer unemployment durations due to numerous job changes (Nieß & Zacher, 2015). I hypothesized that this mobility is due to their need for constant novelty in experiences and feelings. If this is true, the feeling that their working hours are mismatched – regardless of whether it is too much or too little – may be triggered by the need for change. Another possibility is that open-minded people who need creative and intriguing jobs are less likely to find these characteristics in part-time and short-hour jobs. The results on satisfaction with free time, on the other hand, were in line with the expectations. Openness is correlated with higher satisfaction in underemployed workers and less satisfaction in overemployed ones. The explanation is that open-minded underemployed people are more likely to have different activities to compensate for this lack, while overemployed ones, as explained above, cannot have the diversification of experiences that they need, and work is experienced as a limitation.

CHAPTER 3 - RESOLUTION OF WORKING HOUR MISMATCHES AND PERSONALITY TRAITS

3.1. Introduction and literature review

This short chapter is a direct continuation of the previous one. In Chapter 2, I explored the correlations between the probability of working hours mismatches and personality traits. In this chapter I examine how mismatched workers try to fix their mismatched working hours and whether this depends on personality traits.

Mismatched working hours affect both well-being (see, for example, Grosh et al., 2006; Wooden et al., 2009; Wunder, 2014) and productivity (Galinsky, 2001; Stamper & Van Dyne, 2001). Reynolds has shown several different ways that a mismatch can develop and be resolved. Workers can change both their preferences and/or their actual working hours; they can develop and resolve a mismatch by remaining in the same job or changing it; or they can change their working hours or adapt their preferences to the situation (Reynolds, 2006). In many cases, constrained workers are not able to resolve their mismatches. Reynolds demonstrated that workers who want to work fewer hours still want fewer hours five years later in the US and that women and non-white workers tend to settle more for the hours they can get rather than get the hours that they want (Reynolds & Aletraris, 2010). In many cases, workers tend to resolve their mismatches by adapting their preferences rather than adjusting the actual hours worked, while underemployed workers are more likely to adapt their hours than overemployed ones (Reynolds, 2006). Böheim and Taylor (2004) extrapolated the socio-demographic characteristics that are related to reducing or increasing hours in the direction of the preferred hours. The probability of reducing working hours increases with age, wage and the presence of young children (especially for women) and decreases with education and tenure, while underemployed part-timers are more likely to increase their hours. They also found that both underemployed and overemployed people who change jobs have the best chances to resolve their mismatches. Otterbach and Knaus (2019) recently reached similar results. By separating the resolutions of mismatches into its two possible channels (increasing or reducing the actual hours towards the preferred hours, or adapting the preferences to the actual hours), they show that people who change jobs have more possibilities of resolving mismatches by adapting actual hours rather than preferences.

I expect psychological characteristics to be correlated with the process of adjusting mismatched working hours. Those traits related to positive labour market outcomes, for example, can push mismatched workers to adjust their working hours towards their preferences more easily. Also, the high job mobility correlated with openness may facilitate mismatched workers to resolve the mismatch through changing job.

3.2. Data and method

Sample

For this study, I used the same dataset as the previous one – HILDA. The biggest difference is that the current sample does not consider the whole population but only the workers experiencing mismatched working hours.

Outcomes

To observe how individuals react to mismatched working hours, I used three sets of outcomes.

The first is the probability of resolving the mismatch. A resolution of a mismatch figures as 1 if the individual was mismatched in the previous wave and not mismatched in the current wave, and 0 if the mismatch still exists in the following wave. Note that a resolution itself does not explain much about how it happened (see Reynolds, 2006). A worker can, for example, adapt his working hours and successfully resolve the mismatch, or adapt his preferences without changing the actual weekly hours.

The second outcome observes whether the worker was able to change his working hours in the direction of his preferences (namely, reducing hours in case of overemployment and vice versa). The variable is computed as 1 if the worker changed his working time by at least 1 hour toward the preferred direction. An overemployed worker, for example, is considered as a 'changer' if he reduced his weekly hours by 1 or more hours, and not a changer if he did not change at all, or if he increased them. This outcome directly observes the measure of interest, namely the working hour, however, it does not say whether the mismatch was actually resolved. An overemployed worker can, for example, reduce his working hours by five but still feel overemployed in the following wave.

The last outcome takes into consideration job mobility, and it observes whether mismatched workers change employers in the wave following the mismatch. The variable takes the value 0 if the employer is still the same, and 1 when the workers change employers. As in the previous case, changing employers does not necessarily resolve the mismatch.

Empirical strategy

To observe correlations between personality traits and adaptation to mismatched working hours, I use the same linear probability models with random effects specifications used in the first part of Chapter 2:

$$y_{it} = \alpha_{it} + \beta X_{it} + \gamma Z_i + \mu_i + \varepsilon_{it} \qquad (g)$$

Where *y* is a set of dummy variables for being mismatched in the wave after the mismatch, for changing hours more than three and for changing employer. The covariates used are the following: age, being in a relationship, having little kids, permanent versus temporary contract, nationality, occupation, having a disability affecting work and wave dummies.

The main issue of the current study is the sample selection. The aim is to observe correlations of mismatched workers' personality traits and the probability of resolving a mismatch. However, the previous chapter has already demonstrated that personality traits also affect the probability of developing a mismatch. Therefore, the independent variable (personality traits) is supposed to be correlated with both the sample selection (namely the probability of developing a mismatch) and the outcome (the probability of resolving it). For this reason, this study is conceived as a descriptive and exploratory study.

3.3. Descriptive statistics

Table 15 shows information on the personality traits of underemployed and overemployed workers. Values spread around 5, with standard deviations of 1.

Table 15
Personality traits of mismatched workers

Males							
Variable	mean	sd	median	max	min	iqr	N
Locus	5.36	1.02	5.46	7	1.00	1.43	1,711
Emo. Stab.	4.98	1.01	5.00	7	1.00	1.38	1,733
Consc.	5.00	0.99	5.04	7	1.17	1.33	1,733
Extra.	4.46	0.98	4.46	7	1.67	1.29	1,733
Agreaab.	5.43	0.87	5.50	7	1.00	1.13	1,733
Openn.	4.34	1.01	4.33	7	1.00	1.33	1,733
Females							
Variable	mean	sd	median	max	min	iqr	N
Locus	5.51	0.93	5.67	7	1.00	1.20	3,305
Emo. Stab.	5.17	0.96	5.22	7	1.17	1.38	3,187
Consc.	5.19	0.93	5.29	7	1.00	1.33	3,187
Extra.	4.47	1.06	4.50	7	1.33	1.50	3,188
Agreaab.	5.41	0.81	5.50	7	2.00	1.08	3,186
Openn.	4.37	0.97	4.33	7	1.00	1.29	3,187

Sd = standard deviation
Iqr = interquartile range

Figure 11 shows the duration of mismatches. Even if no one remains either underemployed or overemployed more than seven consecutive years, the two types of mismatches present different patterns in terms of duration. Underemployment seems easier to resolve, since most of the individuals resolved their mismatches after one wave. Overemployment shows a smoother pattern, where about half of the observations were still mismatched in the second wave, as well as in the following ones.

Figure 11. Mismatches' duration (in years)
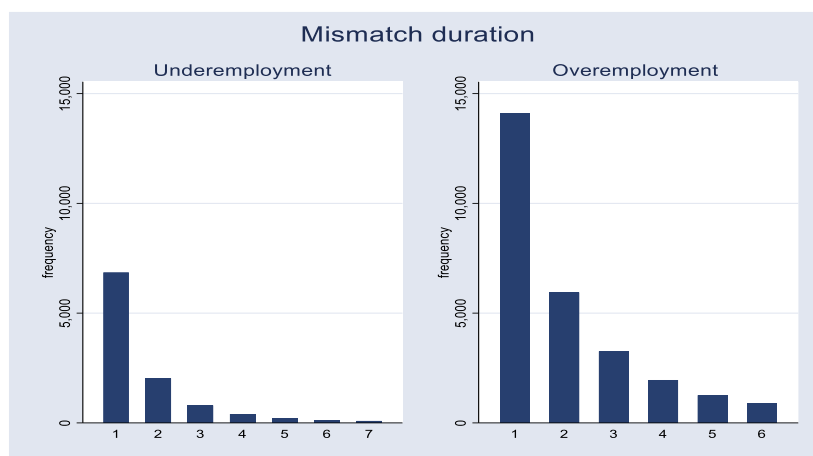
TABLE 16
PROBABILITY OF RESOLVING MISMATCHES

	Underemployment			Overemployment		
	Low	High	P value	Low	High	P value
Locus	0.493	0.563	**0.000**	0.384	0.389	0.593
Emo. stab.	0.515	0.551	**0.007**	0.396	0.367	**0.000**
Conscient.	0.534	0.562	**0.043**	0.392	0.355	**0.000**
Extraversion	0.521	0.552	**0.023**	0.358	0.383	**0.001**
Agreeab.	0.533	0.528	0.718	0.390	0.381	0.275
Openness	0.540	0.545	0.671	0.398	0.364	**0.000**

Note: The table compares the highest quartile with the lowest quartile of each personality trait. The first line of each trait shows the trait (e.g.: Locus of control). The second line presents the average probability of the lowest quartile (e.g.: very external locus of control), and the third line the highest quartile. The lower line presents the p values derived from T tests of the differences between them.

Table 16 compares the probability of resolution of underemployment and overemployment based on personality traits, where 1 represents the resolution and 0 the permanence in the mismatch. Significant p-values come from the triad emotional stability, internal locus and conscientiousness for underemployment, and also openness for overemployment. Extraversion too seems significant in both cases.

Table 17 presents the probability of changing weekly hours by three or more, and table 18 the probability of changing employers after developing a mismatch. As expected, openness is potentially the best predictor of changing jobs, both for underemployed and overemployed individuals. Similar patterns are shown for extraversion and emotional stability.

TABLE 17
PROBABILITY TO ADAPT WORKNG HOURS (AT LEAST 3 HOURS)

	Underemployment			Overemployment		
	Low	High	P value	Low	High	P value
Locus	0.583	0.580	0.795	0.627	0.626	0.881
Emo. stab.	0.576	0.587	0.372	0.628	0.649	**0.006**
Conscient.	0.588	0.594	0.628	0.625	0.638	0.106
Extraversion	0.562	0.615	**0.000**	0.657	0.623	**0.000**
Agreeab.	0.568	0.594	**0.025**	0.648	0.619	**0.000**
Openness	0.567	0.620	**0.000**	0.644	0.619	**0.001**

Note: see above

TABLE 18
PROBABILITY TO CHANGE EMPLOYER

	Underemployment			Overemployment		
	Low	High	P value	Low	High	P value
Locus	0.202	0.208	0.566	0.128	0.126	0.660
Emo. stab.	0.222	0.177	**0.000**	0.141	0.108	**0.000**
Conscient.	0.198	0.219	0.059	0.124	0.110	0.011
Extraversion	0.178	0.218	**0.000**	0.102	0.129	**0.000**
Agreeab.	0.221	0.206	0.161	0.125	0.122	0.694
Openness	0.173	0.229	**0.000**	0.111	0.134	**0.000**

Note: see above

Finally, table 18 shows that extraversion and openness both predict a higher probability of changing employer both in underemployment and overemployment.

3.4. Results

Mismatches resolutions

I now present the results from the random effects specifications. I divided personality traits into four equal quantiles, as in the previous chapter. With the random effect regressions, I show whether the three higher quantiles predict a higher probability of my outcomes significantly more than the lowest quantile (reference category).

TABLE 18
RANDOME EFFECT ESTIMATIONS OF THE PROBABILITY OF RESOLVING UNDEREMPLOYMENT

	Males					
	Locus	**Emost.**	**Consc.**	**Extrav.**	**Agreea.**	**Openn.**
I Q.	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
II Q.	**0.051***	0.014	-0.001	0.015	0.040*	-0.018
	(0.01)	(0.48)	(0.97)	(0.47)	(0.06)	(0.40)
III Q.	**0.062***	0.038*	-0.016	0.014	0.005	-0.004
	(0.00)	(0.07)	(0.42)	(0.50)	(0.81)	(0.83)
IV.	0.029	0.030	-0.034	0.010	-0.004	-0.006
	(0.19)	(0.17)	(0.13)	(0.65)	(0.86)	(0.79)
Obs.	4460	4414	4414	4414	4408	4414

	Females					
	Locus	**Emost.**	**Consc.**	**Extrav.**	**Agreea.**	**Openn.**
I Q.	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
II Q.	**0.056***	-0.011	0.028	0.002	0.022	-0.051**
	(0.00)	(0.58)	(0.18)	(0.94)	(0.35)	(0.01)
III Q.	**0.040***	0.032	0.018	0.022	-0.018	0.005
	(0.06)	(0.13)	(0.38)	(0.30)	(0.41)	(0.81)
IV.	**0.040***	0.028	**0.041***	0.007	-0.019	-0.021
	(0.05)	(0.18)	**(0.05)**	(0.75)	(0.38)	(0.34)
Obs.	4486	4407	4406	4410	4407	4407

Note: The first columns represent the quartiles, where I Q. is the lowest quartile (e.g. very external locus of control) and the IV Q. the highest quartile (e.g. very internal locus of control). The I Q. is used as the reference category; the other lines shows how the higher quartiles differ from the lowest one. All the other columns present the regression coefficients of each personality trait.
P values are shown in parenthesis.

TABLE 19
RANDOME EFFECT ESTIMATIONS OF THE PROBABILITY OF RESOLVING OVEREMPLOYMENT

	Males					
	Locus	Emost.	Consc.	Extrav.	Agreea.	Openn.
I Q.	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
II Q.	-0.014	-0.005	-0.015	**0.030***	-0.010	0.010
	(0.39)	(0.77)	(0.37)	**(0.06)**	(0.53)	(0.53)
III Q.	-0.011	-0.009	-0.011	**0.036****	-0.003	-0.007
	(0.48)	(0.59)	(0.48)	**(0.02)**	(0.86)	(0.66)
IV.	0.014	-0.023	**-0.030***	0.013	-0.008	-0.013
	(0.40)	(0.14)	**(0.07)**	(0.40)	(0.61)	(0.44)
Obs.	12173	11941	11942	11942	11941	11941

	Females					
	Locus	Emost.	Consc.	Extrav.	Agreea.	Openn.
I Q.	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
II Q.	0.006	0.004	0.002	0.014	0.003	0.004
	(0.75)	(0.82)	(0.89)	(0.40)	(0.87)	(0.80)
III Q.	0.015	0.004	-0.004	0.027	0.007	0.003
	(0.39)	(0.81)	(0.83)	(0.11)	(0.67)	(0.88)
IV.	0.017	0.008	-0.022	0.010	0.026	-0.003
	(0.33)	(0.63)	(0.19)	(0.53)	(0.11)	(0.85)
Obs.	10789	10620	10620	10620	10621	10620

Note: see above

In general, personality traits don't seem significantly correlated with the resolution of working hour mismatches. Internal locus of control shows a higher probability of resolution of underemployment, especially for women (only the mid quartiles for men), while high conscientious women are 4% more likely to resolve underemployment. As per overemployment, the only significant results come from high conscientiousness, correlated with a 3% lower probability of resolving the mismatch, and the mid quartiles of extraversion, correlated with higher probability of resolution.

Changing hours

In general, personality traits are not strongly correlated with the probability of increasing weekly hours of underemployed workers, with the exception of openness for females (Tables 19 and 20).

On the other side, extraversion, agreeableness and openness are positively correlated with the probability of decreasing working hours, with openness representing the strongest driver of change (higher likelihood of 4%).

TABLE 20
RANDOME EFFECT ESTIMATIONS OF THE PROBABILITY OF UNDEREMPLOYED WORKERS TO WORK MORE

	Locus	Emostab.	Consc.	Extrav.	Agreea.	Openn.
Males						
I Q.	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
II Q.	-0.013	-0.015	0.010	0.002	0.027	0.003
	(0.43)	(0.37)	(0.59)	(0.89)	(0.16)	(0.89)
III Q.	0.016	0.030*	-0.013	0.013	-0.007	-0.020
	(0.38)	(0.10)	(0.44)	(0.46)	(0.69)	(0.28)
IV.	0.011	0.015	-0.025	0.015	0.009	0.013
	(0.55)	(0.41)	(0.19)	(0.42)	(0.61)	(0.48)
Obs.	5300	5272	5272	5272	5265	5272
Females						
I Q.	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
II Q.	-0.031*	0.030*	0.005	-0.036**	0.006	-0.012
	(0.06)	(0.09)	(0.78)	(0.04)	(0.74)	(0.49)
III Q.	-0.021	0.033*	-0.006	-0.013	0.013	0.011
	(0.24)	(0.06)	(0.71)	(0.48)	(0.49)	(0.53)
IV.	-0.024	0.021	0.019	0.006	0.012	**0.034***
	(0.18)	(0.22)	(0.29)	(0.76)	(0.50)	**(0.06)**
Obs.	5468	5403	5401	5406	5403	5403

Note: see above

TABLE 21
RANDOME EFFECT ESTIMATIONS OF THE PROBABILITY OF OVEREMPLOYED WORKERS TO WORK LESS

	Locus	Emostab.	Consc.	Extrav.	Agreea.	Openn.
			Males			
I Q.	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
II Q.	-0.008	-0.011	-0.002	**0.041***	0.003	0.000
	(0.51)	(0.34)	(0.84)	**(0.00)**	(0.77)	(0.98)
III Q.	-0.022*	-0.020*	-0.014	**0.029****	0.011	0.002
	(0.08)	(0.08)	(0.22)	**(0.01)**	(0.36)	(0.86)
IV.	-0.001	-0.018	-0.004	**0.042***	**0.030****	**0.041***
	(0.94)	(0.13)	(0.75)	**(0.00)**	**(0.01)**	**(0.00)**
Obs.	13802	13506	13507	13507	13506	13506

	Locus	Emostab.	Consc.	Extrav.	Agreea.	Openn.
			Females			
I Q.	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
II Q.	0.004	-0.008	-0.012	-0.005	0.011	-0.009
	(0.73)	(0.50)	(0.37)	(0.70)	(0.38)	(0.49)
III Q.	-0.018	-0.005	-0.027**	0.004	0.003	0.014
	(0.16)	(0.70)	(0.03)	(0.77)	(0.78)	(0.26)
IV.	0.003	-0.014	-0.013	**0.025****	**0.026****	**0.043***
	(0.84)	(0.23)	(0.29)	**(0.03)**	**(0.03)**	**(0.00)**
Obs.	12331	12117	12117	12117	12118	12117

Note: see above

Changing employer

Underemployed workers are more likely to change employers when they have high levels of openness (7%) and conscientiousness (5%), while males are positively influenced to change by openness (5%) and held back by agreeableness (4%) (table 22).

With regard to overemployment, extraversion and openness are the strongest predictors of the probability of changing jobs, independent of sex (around 4%) (table 23). Interestingly, emotional stability is a negative predictor for women only

TABLE 22

RANDOME EFFECT ESTIMATIONS OF THE PROBABILITY OF UNDEREMPLOYED WORKERS TO CHANGE EMPLOYER

	Males					
	Locus	Emostab.	Consc.	Extrav.	Agreeab.	Openn.
I Q.	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
II Q.	-0.002	-0.008	-0.013	0.030	**-0.050****	**0.066*****
	(0.91)	(0.71)	(0.55)	(0.17)	**(0.03)**	**(0.00)**
III Q.	0.013	-0.007	0.008	0.014	**-0.043***	**0.062*****
	(0.54)	(0.73)	(0.71)	(0.51)	**(0.05)**	**(0.01)**
IV.	0.011	-0.027	0.036	0.014	**-0.043****	**0.053****
	(0.64)	(0.23)	(0.12)	(0.53)	**(0.05)**	**(0.02)**
Obs.	4348	4296	4296	4296	4290	4296

	Females					
	Locus	Emostab.	Consc.	Extrav.	Agreeab.	Openn.
I Q.	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
II Q.	-0.003	-0.014	0.027	0.001	-0.007	0.015
	(0.86)	(0.51)	(0.20)	(0.97)	(0.77)	(0.48)
III Q.	-0.013	0.006	**0.041****	0.004	-0.024	0.024
	(0.53)	(0.79)	**(0.04)**	(0.84)	(0.28)	(0.26)
IV.	-0.003	-0.012	**0.056*****	0.033	0.003	**0.078*****
	(0.89)	(0.58)	**(0.01)**	(0.12)	(0.89)	**(0.00)**
Obs.	4380	4300	4299	4303	4300	4300

Note: see above

TABLE 23

RANDOME EFFECT ESTIMATIONS OF THE PROBABILITY OF OVEREMPLOYED WORKERS TO CHANGE EMPLOYER

	Males					
	Locus	Emostab.	Consc.	Extrav.	Agreea.	Openn.
I Q.	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
II Q.	-0.028**	-0.003	0.007	0.016	0.018	0.019
	(0.04)	(0.82)	(0.60)	(0.22)	(0.17)	(0.15)
III Q.	-0.012	-0.028**	-0.013	**0.039*****	-0.001	0.023*
	(0.35)	(0.03)	(0.33)	**(0.00)**	(0.92)	(0.09)
IV.	-0.011	-0.007	-0.007	**0.032****	0.014	**0.044*****
	(0.42)	(0.58)	(0.62)	**(0.01)**	(0.30)	**(0.00)**
Obs.	11817	11609	11610	11610	11609	11609

	Females					
	Locus	**Emostab.**	**Consc.**	**Extrav.**	**Agreea.**	**Openn.**
I Q.	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
II Q.	0.002	-0.022	-0.002	0.028**	0.005	0.010
	(0.92)	(0.13)	(0.92)	(0.05)	(0.71)	(0.50)
III Q.	0.001	-0.022	0.022	0.022	-0.013	0.029**
	(0.93)	(0.12)	(0.12)	(0.11)	(0.37)	(0.04)
IV.	0.022	**-0.044*****	-0.009	**0.041*****	0.004	**0.049*****
	(0.14)	**(0.00)**	(0.52)	**(0.00)**	(0.79)	**(0.00)**
Obs.	10384	10236	10236	10236	10237	10236

Note: see above

3.5. Discussion

I discuss here some possible implications of all the findings listed in this chapter. Since this analysis is mainly conceived as explorative, I discuss the general patterns showed by the six personality traits token in consideration.

In terms of mismatch resolution, it seems that personality traits are not strongly relevant. The most important exception comes form internal locus of control, that increases the probability of resolving underemployment for both sexes. I expected significant results also in the resolution of overemployment, as well as in the other outcomes. A possible explanation is that internal locus of control already prevents workers from having mismatched working hours. If a mismatch happens, it may be voluntary. An overemployed man, for example, would rather remain in the same job with the same working hours if he needs to provide for his family. Similarly, people would rather sacrifice their free time in a critical period for their career. Further research may shed light on this pattern.

Emotional stability only predicts a higher probability of overemployed women changing employers. It is possible that emotional stability allows individuals to bear the stress required to actively look for a new job and, eventually, to leave the current one.

Conscientiousness works, in general, against underemployment and in favour of overemployment. This is not surprising, and it reflects one of the initial hypotheses. Conscientious workers are more likely to be committed and to work hard to get what they want, and this explains why they tend to resolve underemployment. On the other hand, conscientious overemployed men are less likely to resolve the mismatch. An explanation is

that these workers tend to value their careers more, and they eventually accept the mismatch voluntarily at the cost of having less free time if it increases their chances of advancing their career.

Extraversion and openness are the two traits mostly related with job mobility in case of overemployment. Interestingly, they don't predict higher chances of resolving it, but they are consistently correlated with both reducing working hours and changing employer, for men and women. However, I would tend to two different interpretations about the underlying processes. Extravert individuals are more likely to have wider and deeper social networks they can rely on. I expect them to have more informal contacts they can exploit in case they decide to search for a new job. As Granovetter (1973) demonstrated years ago, these contacts are fundamental to increase the chances of finding a job. Another hypothesis to be tested is that extrovert workers actually perform better in job interviews, thanks to their social skills.

On the other hand, openness is probably related with a general high job instability, as hypothesised in chapter 1. What seems to characterise highly open-minded workers is a sort of restlessness towards novelty and aversion towards routine. For this reason, they are pushed to change job-experience more frequently than their closed-mind counterparts. In chapter 2 I also showed that they are characterised by higher probability of developing mismatches (both underemployment and overemployment). This unhappiness with working hours is potentially related with the need of changing job and not falling in the routine. What remains to explain is the fact that neither reducing working hours neither changing employer seem to increase the probability of resolving overemployment.

The last trait, agreeableness, presents an expected result for underemployed men, who seems less capable of changing employer if highly agreeable. As explained in the previous chapters, this is probably due to their difficulty in asserting themselves in the labour market, making them more likely to 'suffer' from undesired conditions. On the others side, this trait presents two contradictory outcomes for overemployed workers. While it seems to reduce the probability of overemployed men to change job, it also increases the chances of overemployed men and women to reduce their working hours. A possible interpretation is that they tend to reduce their working hours within the same job. I remand to further research to disentangle this issue.

3.6. Conclusion - Chapter 2 and 3

Chapters 2 and 3 focussed on the relationship between personality traits and mismatched working hours. With respect to the hypothesis and the consolidated issues described in Chapter 1, my analysis demonstrates that the effect of personality on mismatched working hours is similar to that of the other labour market dynamics.

In general, personality traits that are associated with better labour market performances (locus of control, emotional stability and conscientiousness) tend to prevent mainly underemployment and to facilitate its resolution, while they have, in some cases, contradictory relationships with overemployment. My hypothesis is that in a competitive labour market like the western one, people who value career or who have financial responsibilities tend to move towards higher job positions and are, therefore, less exposed to the risk of underemployment and more exposed to overemployment. This also means that when they end up working more than they would like to, they may decide to sacrifice some free time to fulfil their responsibilities or their social expectations. Further research should explore more deeply how social norms regarding work shape preferences and expectations about careers, working hours and family, how this depends on gender social roles and how personality traits affect them all.

Agreeableness is also in line with the expectations. Agreeable people have more chances of ending up and remaining underemployed, meaning that they are more likely to remain in low-skilled and low-paying jobs. They also have statistically lower levels of mental health associated with underemployment. This information may suggest that the lower labour market performances associated with this trait are not desired but suffered.

Finally, openness remains the most intriguing trait. My initial hypothesis that the contradictory results related to this trait are due to the high job mobility and sensation seeking has found new evidence. Open-minded workers seem more impatient, regardless of what they do: they are more likely to feel both underemployed and overemployed, and if mismatched in terms of working hours, they have the highest chances of changing employers. New research should shed more light on these varied work paths, especially to observe whether they lead to satisfactory jobs and what they depend on.

CHAPTER 4 - PERSONALITY CHARACTERISTICS AND LIFE ATTITUDES AS RESILIENCE FACTORS AGAINST UNEMPLOYMENT

4.1. Introduction

This last chapter focusses on the topic of resilience to unemployment, and how it depends on personality traits. While twehere is an abundance of literature studying resilience in psychology, the research on individual resilience in economics is still scarce. Psychologists usually study small samples and specific populations, conceiving resilience as a context-specific characteristic (Windle, 2011). In this chapter, I focus on resilience to unemployment, and, by exploiting the information contained in the German Socio-Economic Panel (SOEP) (the representative survey of the German population), I built two resilience measures generalisable to the entire population. Specifically, my attention verts on those psychological characteristics which are stable over time.

The SOEP has a very rich supply of information about personality traits. It contains the Big Five – the personality traits that have already been widely examined in the economic literature – and other traits that can be grouped within the category of life attitudes. These personality characteristics encompass behavioural attitudes such as locus of control and risk aversion, and attitudes towards other people and society, such as anomie, trustfulness, and lifegoals.

The role of the big five and locus of control on labour market outcomes has already been documented, and the literature agrees on most of them (see chapter 1). Generally, high scores in these traits are associated with better labour market outcomes, with the exception of agreeableness (Heckman, 2011). On the other hand, the role of the other life attitudes remains largely unexplored. This study takes into consideration both the big five and life attitudes to examine whether they predict resilience against unemployment. It contributes both to the literature on resilience and to the literature on the effect of personality traits on the labour market.

My theoretical claim is that personality characteristics can be used as proxies for factors of resilience that are used in psychological resilience scales (see theoretical framework), like tolerance or acceptance of change. Also, I selected those resilience factors that I consider useful to contrast with unemployment. *Individual resilience* summarises all those characteristics that enables the individual not to be overwhelmed by the situation, to believe

that they are able to react to it positively, and not to be afraid of change. *Social resilience*, on the other hand, describes the capacity of activating a social network both for emotional and practical support.

Following Powdtavee (2016), I tested the two scales by examining how well they explained the variation in well-being due to unemployment. I expected high scores to significantly predict a smaller loss and a faster recovery. I observed the entire adjustment process, taking into consideration both the anticipation process starting four years before the event, the year when the workers lost their job, and four years after (Clarck, 2008). I assumed that resilience influences well-being both directly (as a psychological ability to resist stressful events) and indirectly (through accelerating the process of finding a new job).

The potential effect of individual resilience on unemployment is important for both psychologists and economists. Since it has already been demonstrated that involuntary unemployment affects well-being and health (for example: Winkelmann & Winkelmann, 1995; Gebel and Voßemer, 2014), it is important for social well-being to understand how people can cope with it. On the other hand, it is useful to understand which characteristics make people stronger when confronting economic adversities, especially if we believe that some personality traits are still malleable in early childhood (Borghans et al., 2008; Comi et al., 2019; Soto et al., 2011).

The chapter is structured as follows: section one briefly presents the literature on resilience and personality traits as predictors unemployment patterns. In section two I explain my theoretical framework and the rationale used to construct our resilience scales. Section three briefly describes the SOEP survey, the dataset used for this research, and the empirical strategy. Finally, section four and five present the results and robustness checks.

4.2. Literature Review

Resilience

In this section I introduce the current state of the art on individual resilience in economics and the role of personality traits on labour market outcomes.

For the American Psychological Association, resilience is 'the process of adapting well in the face of adversity, trauma, tragedy, threats or significant sources of stress — such as family and relationship problems, serious health problems or workplace and financial

stressors. It means "bouncing back" from difficult experiences'. (APA, 2002). This is the general framework of most the resilience studies in psychology (see, for example, Aburn, 2015).

The earlier research on resilience focussed on observing whether certain individuals were resistant to negative events that happened in their lives. Bonanno (2007), for example, found that only a small portion of the subjects he observed were severely affected by disasters like the 11th September terrorist attack, and few people were affected by the loss of a close person (2005). Similarly, Mancini et al. (2009) reported that most of the German adults surveyed were not strongly affected by the death of a close person. In economic literature, the underlying theory is that every individual has a specific and stable level of well-being, which can be perturbed by shocking events. After the event, the individual starts to adapt and, after certain time, he or she is generally able to bounce back to the previous 'baseline' level and complete the adjustment process (Clark, 2004). Clark examined the effect of six shocks (unemployment, dismissal, having a child, marriage, divorce, and widowhood) on life satisfaction, and he observed a complete recovery after five years for most of them (apart from unemployment for males).

Instead of focussing on who is resilient and who is not, a second approach is to explore which characteristics make people resilient. This literature usually stresses the role of *'protective factors'*, or 'assets', namely characteristics that enable resistance to adversity and which underlie the process of adaptation (Windle, 2011). Protective factors are identified across three levels of functioning: individual (like psychological characteristics, skills, socio-economics status, etc.), social (like family cohesion, parental support) and community/society (e.g. support systems such as institutional and economic factors). Also, 'competence' is the ability to enable these protective factors, and it is based on the belief of being effectively able to cope with events. Considering the role of the protective factors, a more comprehensive definition of resilience is: 'the process of effectively negotiating, adapting to, or managing significant sources of stress or trauma. Assets and resources within the individual, their life and environment facilitate this capacity for adaptation and "bouncing back" in the face of adversity' (Windle, 2011, p. 163).

Protective factors can be of a different nature. Clark and Lelkes (2005), for example, found out that being religious made people more resistant against adversities: these people experience smaller drops in life satisfaction. Boyce and Wood (2011) demonstrated that

agreeable people recover faster from a disability, while disagreeable ones need extra support to bounce back. Similarly, Powdthavee examined the role of locus of control (2016) and childhood characteristics (2014) as predictors of resilience against adulthood shocks, and he found out the people with an internal locus of control suffer less from some adversities, and that a few childhood characteristics (such as having had a good relationship with the father) make people more able to cope with unemployment.

Resilience scales usually tend to generate their own protective factors and they cover different areas (see table 24). In a more operational way, protective factors can be grouped into three categories: personal time-varying characteristics (such as number of friends, relationship with family, skills, etc.), personal stable characteristics (like personality traits) and socio-economic characteristics. In this research, I will focus on the second group: psychological characteristics which are stable over time.

Personality traits and unemployment

As shown in the first chapter, some personality traits are strongly correlated with labour market outcomes. I now briefly summarise those findings that refer to personality traits and unemployment.

Internal locus of control is probably the best predictor of re/employability. People with an internal locus who lose their job commit more to finding a new one (because they believe their efforts will be rewarded) and this proactivity translates into higher chances of re-employment (McGee & McGee, 2016). Periods of unemployment also seem to be shortened by conscientiousness and emotional stability (Uysal & Pohlmeier, 2011; Viinikainen & Kokko, 2012) and lengthened by agreeableness (Engelhardt, 2017). However, there is not much research on how personality traits reduce or (increase) the negative effect of unemployment on life satisfaction. A few exceptions can be found in Boyce et al. (2010), who observed that conscientious people, who generally care more about their career and job realisation, suffer more from unemployment; and Hahn et al. (2015), who confirmed the negative effect of conscientiousness after unemployment, and the positive effect of extraversion. Extravert people are supposed to be able both to rely on emotional support in order to cope with uncomfortable situations, and on a strong social network that eases the search for a new job.

The other life attitudes taken into consideration are not widely explored in the literature and will be discussed in the next section.

4.3.   Theoretical framework

My main assumption is that personality traits can be used as proxies for factors of resilience. The most used scales in psychology generally assess resilience through underlying factors, as shown in Table 24. Recently, some researchers have pointed out the strong correlation between personality traits and resilience (for a recent meta-analysis, see Oshio et al., 2018). It has been demonstrated that resilience is negatively correlated with neuroticism and positively correlated with the other Big Five. Waaktar and Torgersen (2010) even sustain that the Big five outperform resilience scales in predicting adjustment to adversities in adolescence, suggesting that resilience may be described in terms of a profile within the big five factor model. We follow this new stream of findings and use personality traits to build a measure of resilience.

My first step was to analyse six among the most used resilience scales, focussing on their theoretical frameworks and the factors created to measure resilience[9]. The first seven columns of Table 23 show the factors used in the six scales to measure individual resilience. My aim was to use individual personality characteristics as proxies for these underlying factors. Therefore, my second step was to analyse all the personality traits and social attitudes contained in the SOEP. The SOEP contains information on individual personality characteristics (for a summary of all the scales present in the SOEP, refer to the most recent *SOEP Scales Manual* by Richter et al., 2013). First, there is data on the Big Five, the psychological traits that describe individuals' personality (emotional stability, conscientiousness, extraversion, agreeableness, and openness to experience). Second, we have information on what we call social attitudes, which describe individuals' patterns of behaviour towards life, society, and other individuals. The SOEP contains data on trustfulness,

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[9] The scales I used are: the Connor-Davidson Resilience scale (CD-RISC) (Connor & Davidson, 2003), the Brief Resilience scale (BRS) (Smith et al, 2008), the Resilience scale for Adults (RSA) (Friborg et al, 2003), the Wagnild and Young's resilience scale (1993), the Scale of Protective Factors (SPF) (Ponce-Garcia, Madwell & Kenninson, 2015) and the Ego-Resilience scale (Block & Kremen 1996).

reciprocity, forgiveness, anomie, career-orientation, family-orientation, altruism, and locus of control.

Table 24
RESILIENCE SCALES AND CORRESPONDING FACTORS

	CD-RISC	RSA	WAGNILD	SPF	BRS	EGO-RES	INDIV. RES.	SOCIAL RES.
Tenacity and personal competence	X	X					X	
Social competence (emo. regulation)		X		X				X
Self-confidence and tolerance	X		X				X	
Acceptance of change	X						X	
Control/personal structure	X						X	
Spirituality	X							
Social support		X		X				X
Family coherence		X						X
Goal-setting efficacy				X				
Meaningful life			X				X	
Perseverance			X					
Equanimity			X					
Existential aloneness			X					
Planning behaviour				X				
Coping abilities	X				X	X	X	

Note: In parenthesis I put those factors that, even with different names, measure a very similar construct.

Third, I chose which of those traits and attitudes could be used as proxies for resilience. Following a commonly accepted classification (Windle, 2011), I sub-grouped resilience into two components: individual and social[10]. The last two columns of Table 24 show the correspondent resilience components for each factor. Finally, Table 25 shows which personality traits and attitudes were used as proxies for the two resilience components.

As shown in the table, I used emotional stability, openness, and locus of control as proxies for the individual component of resilience, and extraversion, altruism, and trustfulness for the social one. In this conceptualisation, individual resilience summarises all

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[10] According to Windle (2011), a third component is 'family cohesion'. However, since I decided to focus our analysis on personality trait, I didn't take it in consideration. For a research considering childhood family characteristics as resilience predictors, see Powdthavee (2014).

the personality characteristics necessary to activate practical resources and face unemployment. Whenever an individual faces unemployment, they necessarily are forced to change a previous routine and need to activate different resources to find a new equilibrium. As per many other adverse events, unemployment can be overwhelming and trigger a feeling of panic.

Table 25
INDIVIDUAL AND SOCIAL RESILIENCE:
PERSONALITY TRAITS AND THEIR CORRESPONDING FACTORS
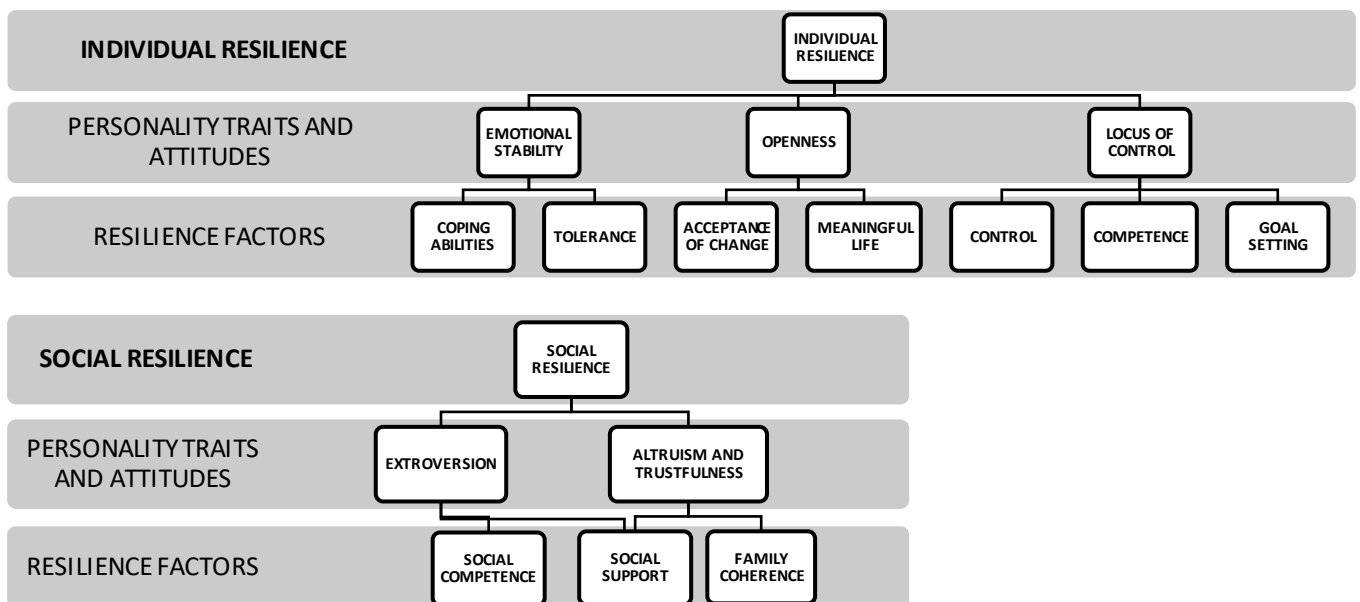
Note: '*Personality traits and attitudes*' contains the Big Five and the other attitudes used; '*Resilience factors*' lists the corresponding resilience factors.

The capacity to face adversity is the core definition of resilience itself: it is what makes people strong enough to resist negative events. When resilience scales measure this characteristic, they generally refer to it simply as 'resilience', rather than to an underlying factor[11]. The Brief Resilience Scale (BRS), for example, claims to measure directly the resilience construct (Smith et al., 2008). In Table 24, I refer to this factor as 'coping abilities'.

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[11] According to Oshio et al. (2018) resilience scales follow two main approaches. The 'ego-resilience' scales focus on determining individuals' coping abilities. In this way, they tend to assess resilience 'directly' by evaluating how people are prepared to face events. The ego-resilience scale and the brief resilience scale follow this approach. The second approach focusses on those characteristics that make people more or less resilient (namely the 'protective factors'). In this view, resilience is assessed indirectly. In Table 24, the factor 'resilience' refers to the first way of measuring resilience, namely the direct one. Generally, items of this type ask direct questions of the ability of the individual to cope with negative events (like how difficult it is to face it, how long it takes to recover, etc.).

Other scales measuring coping scales are the ego-resilience scale (Block & Kremen, 1996), and the CD-RISC (Connor & Davidson, 2003), which contains a factor supposed to measure 'trust in one's instincts, tolerance of negative affect, and strengthening effect of stress' (ivi, p.80). I proxied these factors through emotional stability, which is supposed to measure the capacity to face events and stressors without rapid change of mood or being overwhelmed. In particular, one facet of emotional stability ('anxiety vs. calm') focusses on the ability of not getting upset or too worried by things that go wrong (APA, 2007; Chaturvedi & Chander, 2010). Observing reaction to unemployment in a temporal scale, emotional stability represents the first necessary trait: it prevents people from 'freezing' and panicking, and then supports them to react positively. For a more biological perspective, Rosen & Schulkin (1998) call 'normal fear' the condition in which danger elicits a functionally adaptive behaviour to facilitate defensive responses, while 'pathological anxiety' is the condition of an 'exaggerated fear state in which hyperexcitability of fear circuits is expressed as hypervigilance and increased behavioural responsivity to fearful stimuli'. When the stress level overcomes the threshold of an adaptive behaviour, the individual may no longer be able to react to the situation (for example, they may give up in looking for a job). I expect emotionally stable individuals to be more likely to respond to stress with more adaptive behaviour, and to have a higher threshold level of pathological anxiety.

Similarly, people with high level of openness are less likely to be overwhelmed by job loss. People who enter unemployment may be forced to get out of their 'comfort zone' and to adapt to new conditions. I expect the resilience factor 'acceptance to change' (McCrae & Costa, 1997) and the personality trait openness (APA, 2007) to describe both the aptitude of not seeing change as a threat, but as an opportunity to grow. For example, it has been demonstrated the open-minded people tend to have higher levels of job mobility (Van Vianen et al., 2003), and a constant need of new experiences. I also related openness to the factor 'meaningful life' (Wagnild & Young, 1993). This resilience factor describes the feeling of having a purpose and being active and interested in things. Similarly, openness has been linked with life satisfaction and wisdom (Le, 2011) and with a higher engagement in leisure activities (Ihle et al., 2016). I expect open people to be active in different activities, and not only their job, which protects them in the case of unemployment.

Once recovered from the psychological shock of job loss, a person needs to activate practical resources to face the situation: looking for a new job, contacting people, doing

interviews, and so on. The resilience factors I used to summarise the capacity of activating the necessary resources are 'competence' and 'control' (or personal structure) (Connor & Davidson, 2003; Smith et al., 2008). Competence is defined as the 'the capacity or motivation for, or process of effective adaptation, and enables adaptive use of resources within and outside the person. It is based on the beliefs of perceived effectiveness in adaptation and arises from interactions with the environment' (Windle, 2011). Similarly, 'personal structure' and 'control' describe the feeling of (and the desire to be in) control of things. I linked these two factors to the locus of control. People with an internal locus of control believe that what they do will effectively influence the external world, and that their action will have a result that depends on them rather than on fate or luck[12]. For example, as demonstrated by Cobb-Clark and Tan (2009), people with an internal locus of control commit more to looking for a job when unemployed, which translated into higher rates of re-employability.

To summarise, our measure of individual resilience encompasses all the personality characteristics that enable people to activate what they need to face job loss. It doesn't consist of the *practical* resources themselves, but of what it takes to activate those resources. It groups the personality and attitudinal characteristics that make it possible. As theorised by more recent resilience researchers (see, for example, Rossouw & Rossouw, 2016), these resources should also be considered. For example, they underlie the importance of resilience factors like intelligence and health.

Social resilience summarises the capacity to activate a social network to receive both emotional and practical support. Like individual resilience, it doesn't define those resources themselves, but the personality and attitudinal characteristics that predict them. I took into consideration two main resilience factors: social competence and social support. Social support measures the 'support accessible to an individual through social ties to other individuals, groups, and the larger community' (Lin, 1979, p. 109): it measures both the quality of social relations, considering family members and friends, and the dimension of the social

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[12] Note that, conceptually, competence is closer the (internal) locus of control than personal structure/control. Both internal locus of control and competence describe the belief of being able to influence the course of events. On the other side, personal structure specifically describes the feeling of being in control. That is, people who believe they can influence things may not feel in control in that situation, or vice versa. However, I expect this to happen rarely, and the two constructs to be highly correlated.

network of the individual. Items that measure this factor generally focus on the number of important relationships, the quality of familiar bonds, and friends.

Social competence measures the social skills of the individual. In the resilience scales, social competence is usually measured as emotional or social regulation (for example, Ponce-Garcia et al., 2015). The term emotional regulation refers to the psychological mechanism by which we regulate the expression and strength of our emotions, and social regulation refers to the regulation of emotions in social contexts, considering both how we regulate ourselves and how we help others to regulate themselves (Grecucci et al., 2015). Being able to self-regulate in a social context entails the capacity to emotionally and cognitively understand others and is correlated with positive health and psychological outcomes (Ewart et al., 2002). I expect social regulation to assist individuals to build useful social relations over time – which can become useful when looking for a job – and in the case of job interviews.

I used extraversion, trustworthiness, and altruism as proxies for these factors. First, extraversion is naturally linked with social support. Extravert people tend to have more friends, stronger social networks, and better peer relations (Jensen-Campbell et al., 2002), and they are more likely to search for social support as a coping strategy (Amirkhan et al., 1995). According to Hahn et al. (2015), extravert people can rely on friends and relatives to cope with unemployment and can use their social network to find job interviews faster. However, extraversion doesn't simply describe a preference for socially dense situations, but also the ability to adapt emotional reactions to what is expected and advantageous in social situations, and to regulate emotional reactions with other people (Ciarrochi et al, 1999). It is correlated with understanding emotions and with the use of social support to regulate emotions (Kokkonen & Pulkkinnen, 2001). Also, Gurtman (1999) considers extraversion as a predictor of social competence, defined as a manifest aspect of social interaction (like speech style, non-verbal communication, and so on).

The role of the other two social attitudes, trustworthiness and altruism, remains quite unexplored. Trustworthiness is defined as the individuals' readiness to trust other individuals unknown to them (Stolle, 2002). When a society is highly trustworthy, people are more likely to engage with each other. Correlations between trustworthiness and social support have been demonstrated: childhood trustworthiness predicts the number of close friends in adolescence (Rotenberg et al., 2004), while managerial trustworthiness is positively related to job performance and organisational commitment (Byrne, 2011).

Altruism is one of the three factors measuring life goals, and it measures the perceived importance of helping other people and being involved in social activities (Headey, 2007) (the other two measures being the importance of career and family goals). There is no research assessing the relationship between altruism and social competence or social resources. Our hypothesis is that the combination of trustworthiness and altruism would lead people to build wider social networks and to develop more emotional and practical relations with others. In general, our expectation was that the combination of high levels of extraversion, trustworthiness, and altruism would generate both weak and strong social ties: close friends to rely on for emotional support and a social network for more practical support.

In general, I expect social resilience to prevent a decline in well-being due to unemployment in two ways. First, people with strong social support can rely on family and friends to get emotional support and recover more quickly from an inconvenient situation. Remaining emotionally stable does not only depend on internal resources, but also on other people's support. Also, a wide social network works as a practical resource and a tool to find a new job[13].

A last note on the two resilience scales relates to the reason why I omitted conscientiousness and agreeableness. In both cases, I expected these traits to have ambiguous effects on the adaptation to unemployment. Conscientious people have been demonstrated to suffer more from the experience of unemployment, due to their concern about social rules and the importance they attach to career (Boyce, 2010; Hahn, 2015). On the other hand, I also expected them to resolve unemployment faster. As a result, conscientiousness is hypothesised to increase the loss in well-being after unemployment and, at the same time, is likely to be associated with a steeper recovery. Agreeableness was expected to have the reverse effect: agreeable people are more likely to find emotional support, but also to have more difficulties in finding a new job (Cobb-Clark & Tan, 2009; Muller & Plug, 2006). I argue that the effect of these traits should be first analysed singularly.

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[13] Note that a wide social network does not directly describe the practical resources themselves, but the personality characteristics and attitudes associated with them.

4.4. Data and methods

The GSOEP

The dataset used in this study is the German Socio-economic Panel (SOEP), a longitudinal national-representative survey started in 1984. The SOEP survey is one of the few longitudinal datasets which collect information on psychological, social, and economic characteristics of households and individuals that is representative of the entire population. In this analysis, I consider waves 1 to 34, covering the years 1984–2017. I restricted my analysis to those individuals on whom I have full information on personality traits and life attitudes and to working people between the ages of 20 and 60. The main reason for selecting this age range is that the big five and locus of control are stable—as demonstrated by Cobb-Clark (2012, 2013). Apparently, the big five are still fluid in adolescence, and they tend to drop after 65. Similarly, life goals are defined as 'relatively long-term, value-laden life objectives' (Meier, 1959), while stability of trustworthiness was assessed by Naef and Schupp (2009)[14].

Personality traits

The SOEP contains several types of information on personality traits and social attitudes. The Big Five and the locus of control were introduced in 2005, trustworthiness in 2003, and altruism in 1990. All of them are then measured in regular intervals of four to five years. To compute the values of personality traits, I calculated the average considering all the values available for each individual in all waves, and finally I matched the result with all the waves with no information. In the literature, a common way to proceed is to take the value from one single wave (assuming the trait as stable, generally the first one available) and match it with all the other waves (see, for example, Cobb-Clark, 2009). By using the values from all the waves, I aimed to reduce measurement error. A person could pick a different number from the 'real value' due to situational and contingent reasons; this divergence should have decreased the more observations I took into account. Descriptive statistics of the six traits considered are shown in Table 26.

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[14] See Appendix 9 for an assessment of personality traits in the GSOEP

Table 26
Descriptive statistics of personality traits and social attitudes

Trait	Means	Std	Median	Max	Min	I.Q. 25% -75%	Observations
				Males			
Emotional stability	4.42	1.12	4.41	7	1	1.55	17989
Openness	4.79	1.08	4.75	7	1	1.5	17987
Locus of control	4.69	0.95	4.71	7	1	1.35	16406
Extraversion	4.85	1	4.91	7	1	1.58	17989
Trustworthiness	2.3	0.51	2.33	4	1	0.66	13017
Altruism	2.6	0.46	2.5	4	1	0.57	18390
				Females			
Emotional stability	3.9	1.15	4	7	1	1.5	22908
Openness	4.88	1.06	5	7	1	1.41	22905
Locus of control	4.65	0.93	4.7	7	1	1.28	19856
Extraversion	5.05	1.07	5	7	1	1.5	22908
Trustworthiness	2.34	0.5	2.33	4	1	0.67	17580
Altruism	2.72	0.45	2.36	4	1	0.5	24809

Std = sd. Deviation
I.Q. = interquartile range

Personality traits and locus of control showed similar patterns, with means of around 4.5 and 5 and standard deviation from 0.5 to 1. There were not strong differences between genders, except for emotional stability, which presented lower values for females. Emotional stability was also the trait with the highest variability, for both sexes. Trustworthiness and altruism presented normal distributions and similar variances between sexes. For the analysis, I divided all the traits in four quartiles (see, for example, Powdatwee, 2016). My aim was to see whether individuals belonging to different quartiles of resilience reacted differently to unemployment.

Table 27 presents descriptive data on the two standardised measures of individual and social resilience. Both the measures are normally distributed with a mean close to 0.

Table 27.
Descriptive statistics of individual and social resilience

	Sex	mean	std	min	max	I.Q. 25%	I.Q. 50%	I.Q. 75%	N
Individual resilience	Males	0.227	1.030	-4.885	3.690	-0.454	0.233	0.924	14465
	Females	-0.011	1.034	-5.094	3.480	-0.702	-0.007	0.688	16072
Social Resilience	Males	0.035	1.079	-4.251	4.015	-0.657	0.062	0.781	12542
	Females	0.146	1.029	-3.532	4.375	-0.537	0.142	0.781	14875

Note: see above

Table 28.
Effect of unemployment on life satisfaction

	Males	Females
Employed	0.078	0.057
Unemployed	-0.614	-0.239
T stat	98.917	51.507
p value	**0.00**	**0.00**
N	190297	188445

Explanatory and dependent variables

To observe the effect of resilience, I analysed the variation in life satisfaction after experiencing unemployment. The question, present in all the waves, asked respondents: 'How satisfied are you with your life, all things considered?' and the response was recorded on a scale from 0 to 10. I defined the variable *unemployment* as a dummy variable that took the value 0 when the individual was employed, and 1 if they were unemployed the following year. Considering only individuals with valid information on personality traits and the relevant variables, my final sample consisted of 7,105 observations for men's unemployment, and 10,846 for women. Table 28 shows that unemployed people's life satisfaction is significantly lower than employed ones, with a more pronounced effect on males. Table 29 compares life satisfaction means of unemployed people if they belong to the highest quartile of resilience versus the lowest quartile. The table shows that both the measures of resilience significantly predict a higher life satisfaction if people have high resilience values.

Table 29.
Average life satisfaction of unemployed workers, by resilience scores

	Individual resilience	Social resilience	Individual resilience	Social resilience
	Males		Females	
I quartile	-1.072	-0.932	-0.623	-0.618
IV quartile	-0.027	-0.077	0.287	0.184
T stat	-38.785	-30.308	-46.939	-42.222
p value	**0.00**	**0.00**	**0.00**	**0.00**
N	7704	7985	14373	13297

Note: the table shows average life satisfaction scores of unemployed workers, comparing people belonging to the highest and the lowest quartile of resilience.

Econometric Model

Following Clark's paper (2004), I first observed the effect of unemployment on life satisfaction by considering both the anticipation and the lag effect. To examine the consequences of unemployment on life satisfaction, I estimated an individual fixed-effect regression on these models:

$$Y_{it} = \alpha_i + \beta X_{it} + \theta_1 U_{1,i(t-4)} + \theta_2 U_{2,i(t-3)} + \theta_3 U_{3,i(t-2)} + \theta_4 U_{4,i(t-2)} + \theta_5 U_{5,i(t0)} + \mu_i + \varepsilon_{it} \quad (1)$$

$$Y_{it} = \alpha_i + \beta X_{it} + \theta_1 U_{1,i(t+1)} + \theta_2 U_{2,i(t+2)} + \theta_3 U_{3,i(t+3)} + \theta_4 U_{4,i(t+4)} + \mu_i + \varepsilon_{it}$$
$$(2)$$

where Y_{it} represents the level of life satisfaction of individual *i* at time t and U unemployment. ε_{it} is the time-variant error term and μ_i the time-constant one, namely the individual fixed effect. The inclusion of individual fixed effects takes away all the constant-over-time individual characteristics, that might influence life satisfaction, including psychological traits and our resilience factors. In this way I control for the direct effect of these factors on unemployment. The vector X included the following time-varying covariates: age, income, the starting or ending of a relationship, the birth of a baby, and changes in perceived health (Ferrer-i-Carbonell, 2004), and time dummies to control for common shocks occurring in any given year. As demonstrated by Clark (2008), some of these events have a strong and durable impact on people's well-being. Getting married and having a baby have a strong and positive impact on well-being, while a new-born is followed by a negative effect in the following years. Also, Boyce et al. (2013) found a negative effect of wage loss on well-being, which is stronger than the positive effect of its increase. Age has been demonstrated to have a U-shaped effect on happiness and has been associated with higher levels of well-being before 20 and after 50, with a decline in the middle (Schwandt, 2016). Finally, the relation between health and happiness has been widely explored and, even if the nature of the relationship is not yet clear, correlation between them are evident (see, for example, Argyle, 1997; Sabatini, 2014).

The first model (1) observed the anticipation effect, namely whether there is a change in life satisfaction starting four years before the event. The second one (2) focusses on the

effect of the event in the same year it happens (t_0) and four years later (adaptation effect). Through these models, I observed resilience as the adjustment of life satisfaction after unemployment. Resilience defines the amount of loss in life satisfaction, and the speed of adjustment to its previous level. I expected people with higher levels of resilience to have lower loss and to recover faster.

In order to extrapolate the effect of resilience, I interacted the two resilience measures with unemployment:

$$Y_{it} = \alpha_i + \beta X_{it} + \theta_1 (U * Z)_{1,i(t-4)} + \theta_2 (U * Z)_{2,i(t-3)} + \theta_3 (U * Z)_{3,i(t-2)} + \theta_4 (U * Z)_{4,i(t-2)} + \theta_5 (U * Z)_{5,i(t0)} + \varepsilon_{it} \qquad (3)$$

$$Y_{it} = \alpha_i + \beta X_{it} + \theta_1 (U * Z)_{1,i(t+1)} + \theta_2 (U * Z)_{2,i(t+2)} + \theta_3 (U * Z)_{3,i(t+3)} + \theta_4 (U * Z)_{4,i(t+4)} + \varepsilon_{it} \qquad (4)$$

Here, *Z* represents both our resilience measures (individual and social), separately. To observe its effect, I standardised it and divided it into quartiles and interacted each quartile dummy with the unemployment dummy. These interaction terms allowed me to examine whether belonging to the different parts of the distribution of resilience translated into a different anticipation and/or adaptation process. All our estimations were carried out using a fixed-effects linear model with cluster-robust standard errors (clustered at the individual level) (Cameron & Miller, 2015).

4.5. Results

Figure 12. Effect of unemployment on life satisfaction
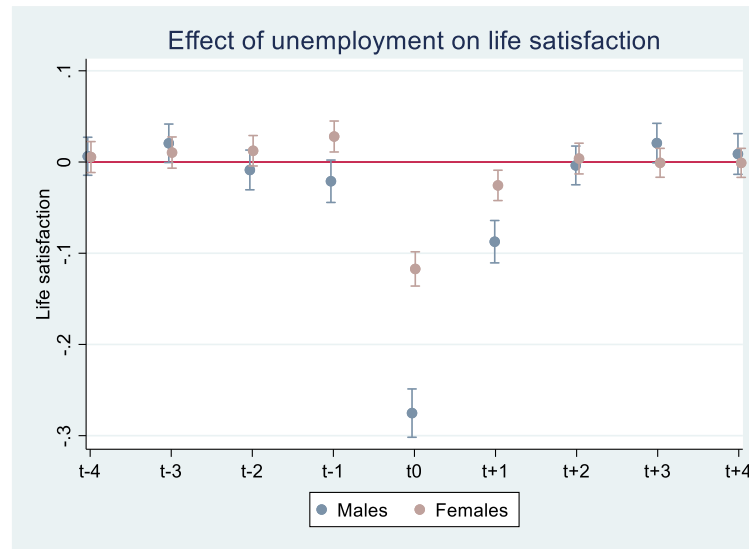
Figure 12 shows the effect of unemployment on life satisfaction. Results confirm what is widely agreed on in the literature (Dooley, 1994), namely that unemployment has a strong negative effect on well-being. Also, men seem to suffer more, since they have a significantly higher loss in well-being, which is still present one year later.

Fig. 13 graphically shows the effect of resilience on the adjustment to unemployment by comparing people in the highest quartile of the resilience distribution with people in the lowest quartile. As per resilience, people in the highest quartiles of the distribution have a much smaller loss in t_0 and, in few cases, in t_1. I also noticed that some of the variability was absorbed after introducing the covariates in the model. Table 30 presents the effects of the covariates. Family income and perceived health presents the strongest effects for both sexes, while having a child has a strong effect size for women. Finally, the effect of age seems negligible.

However, the effect of resilience remains significant in t_0 almost in all cases. Individual resilience is no longer significant for women in t_0, and it remains significant only in t_1. These results show that having a resilient personality significantly predicts a better adaptation to unemployment for both males and females. They also show a different pattern between

Figure 13. Effect of resilience on life satisfaction after experiencing unemployment (see appendix for the full tables)
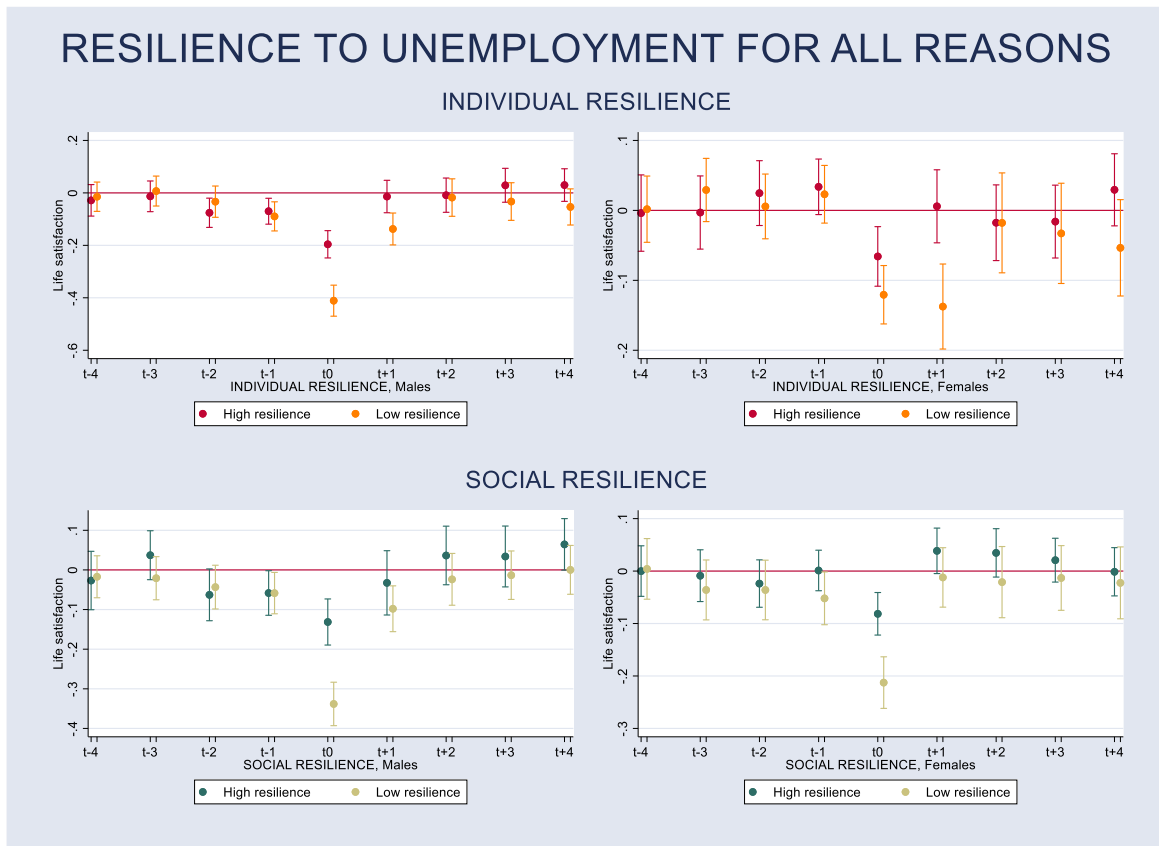
social and individual resilience. While the former influences mainly adaptation – rather than the speed of recovery (the difference is significant only in t_0) – the latter affects both the processes for men and only the speed of recovery for women (it remains significant only in t_1). There may be different explanations for this pattern. In my theoretical framework, individual resilience is the capacity of activating individual abilities to adapt to the situation, while social resilience mainly focusses on the ability to find emotional and social support. I argue that people with high levels of individual resilience are more likely to find a new job faster, and therefore the benefits are visible also in the following wave, when those individuals are probably re-employed. On the other hand, people with high levels of social resilience are more likely to find social support immediately after experiencing unemployment, but this does not necessarily translate into higher chances of employability later.

Table 30

The effect of socio-economic variables on life satisfaction

| | Individual resilience | | | | Social resilience | | | |
| | Males | | Females | | Males | | Females | |
	Life sat.	Life sat.	Life sat.	Life sat.	Life sat.	Life sat.	Life sat.	Life sat.
Age	-0.009***	-0.004***	-0.011***	-0.003**	-0.009***	-0.004***	-0.010***	-0.003**
	(0.00)	(0.00)	(0.00)	(0.02)	(0.00)	(0.00)	(0.00)	(0.02)
New child	0.055***	0.071***	0.161***	0.132***	0.055***	0.072***	0.158***	0.132***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Family income(log)	0.170***	0.207***	0.180***	0.171***	0.171***	0.207***	0.179***	0.171***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Relationship	0.065***	0.076***	0.042***	0.018	0.065***	0.075***	0.041***	0.019
	(0.00)	(0.00)	(0.00)	(0.26)	(0.00)	(0.00)	(0.01)	(0.26)
Perceived health	0.140***	0.145***	0.126***	0.133***	0.141***	0.145***	0.126***	0.133***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)

Note: Estimation of fixed-effect regressions of socio-demographic variables on life satisfaction.

P values in parenthesis

For the entire tables, see Appendix

In general, the results demonstrate that a combination of personality traits can be used as resilience measures in the face of unemployment. In my theoretical conception, they do not work as a direct measure of practical skills to gain re-employment rapidly. Rather, personality is what makes the individual able to react to adversity at an emotional level, and then to activate practical and emotional skills and resources.

4.6. Robustness checks

One assumption of this research is that the personality traits and social attitudes used to measure resilience are stable over time. Table 31 presents data on the average value of each personality trait and its standard deviation (column 2 and 3). The Big Five and the other personality traits are available for approximatively 16000-18000 observations for men and 17000-21000 for women (with less information for trustworthiness). Columns 4 and 5 of table 31 report information about mean-level changes. The change is calculated as the difference between the value in a certain measurement and the previous one. The results indicate that the changes in all the traits and social attitudes are normally distributed with mean zero and standard deviations between 0.5 and 1.

Table 31
Personality traits and mean level-change over time

Personality trait	Males						
	Mean	St. deviation	Median	max	min	N	Wave
Emo. Stability	4.426	1.126	4.417	7	1	17989	22, 26, 30, 34
Extraversion	4.85	1.096	4.917	7	1	17989	22, 26, 30, 34
Openness	4.792	1.082	4.75	7	1	17987	22, 26, 30, 34
Locus of control	4.69	0.953	4.714	7	1	16406	22, 27, 32
Trustworthiness	2.332	0.514	2.333	4	1	13017	20, 25, 30
Life Goals - altruism	2.659	0.466	2.5	4	1	18390	21, 25, 29, 33

Personality trait	Females						
	Mean	St. deviation	Median	max	min	N	Wave
Emo. Stability	3.929	1.148	4	7	1	20065	22, 26, 30, 34
Extraversion	5.032	1.065	5	7	1	20063	22, 26, 30, 34
Openness	4.872	1.072	4.944	7	1	20058	22, 26, 30, 34
Locus of control	4.631	0.939	4.714	7	1	17731	22, 27, 32
Trustworthiness	2.341	0.499	2.333	4	1	15261	20, 25, 30
Life Goals - altruism	2.722	0.449	2.667	4	1	21023	21, 25, 29, 33

The ideal data to examine the stability of personality traits would be a representative survey following individuals' personality traits over the entire lifespan. Since such information is not available, I decided to adopt a more operational way, by observing how traits change withing the range available. For example, if trustworthiness is measured in wave 20, 25 and 30, I measured whether this trait is stable within this 10-years range. I also controlled for both cohorts' effects. Some traits may score systematically differently in different cohorts: we may expect, let's say, younger generations to be more open to experience. To control for wave effects, I centred each measurement on the wave-mean level[15]. Then, I divided our population in 6 cohorts of five years each, starting from 1960-65 to 1985-90, and I observed the fluctuations of the mean levels over the wave in which they are measured. Since measurement of personality traits started around 2000, I have a span of around 15 years in which we observe their stability. In year 2005, for example, cohort 1 is 45-50 old, and, in 2015, 55-60. Note that, since individuals start entering in the survey after 18, we have less information on the youngest cohorts.

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[15] Note this strategy cannot control for external events affecting personality traits permanently (for which I would need to us an IV).

I rely on confidence intervals (99%) to assess stability of personality traits over time. All the results are graphically presented in the Appendix 9. The graphs show that most of the personality traits remain stable along each cohort, independently by gender. The graphs show that, apart from few exceptions, there are no significant differences across the measurements. Nevertheless, to control for potential change of personality trait over the lifespan, I run the main estimations restricting our sample to individual from 25 to 50 years old (fig. 14, at the end of the paragraph). Appendix 9 shows all the results. No significative differences emerge, confirming that the few cases of instability are not determinant to our results.

The second concern about personality traits is their intra-individual stability. As hypothesized by Cobb-Clark and Schurer (2013), the baseline level of a person's trait may permanently vary after experiencing one or more adverse events. The SOEP contains information about familiar and health shocks. As per familiar events, I considered different types of bereavement (of partner, child, parents and family members). As per health-related events, I kept the outbreak of a new disability, stroke, diabetes, high blood pressure, cancer and other illnesses. For the last two, the SOEP detects the information every two years. The variable is computed as 1 the first time the subject is diagnosed with the illnesses, and 0 otherwise (which implies either no illnesses or a second positive diagnosis of the same illness). Both familiar and health-related events were grouped in three categories, with 0 if the subject didn't suffer from any shock, 1 if he suffered from one event, and 2 if more than one event. Then, I computed an overall measure of events, summing the familiar to the health-related ones, and I divided it in three categories with the same logic. For each trait, I considered the intervals between each measurement separately[16]. In table 32, the last 3 rows show the number of observations of each category of negative events. Note that the data refer to the last measurement of the Big Five, namely the events occurred between the wave 30 and 34.

After creating the events-categories, I regressed the variation in personality traits with all of them. I considered the variation for each interval separately (for example, change in trustworthiness is first measured between wave 20-25, and the between 25-30[17]). The results

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[16] The intervals considered are the following: wave 22-26, 26-30, 30-34 for the big five; 22-25, 25-29, 29-33 for altruism; 20-25, 25-30, for trustfulness; 22-27, 27-32 for locus of control.

[17] The reason behind is to keep the most observation as possible. The other choice is to observe the difference in personality traits between the first and the last measurement. However, this would led to a big problem of attrition.

are shown in table 32 and 33. Here, I present results referring to the last measurement available (for example, the change of the Big Five between wave 30 and 34). In general, adverse events don't significantly affect the variation of personality trait, and no trait is significantly affected by a single event of any type. Those results demonstrate that negative events don't represent a determinant threat to stability of personality traits.

Table 32
Occurrence of negative events
(last measurement available)

Variable code	0	1	2
Number of events	0	1	+1
N obs: familiar events	11,301	1,231	83
N obs health events	9,571	2,626	418
N obs: Overall	8,580	3,291	744

Table 33.
Effect of life events on emotional stability, openness and locus of control

	INDIVIDUAL RESILIENCE					
	Males	Females	Males	Females	Males	Females
	Emo. Stab		Openness		Locus	
Fam. events: 0	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
Fam. events: 1	0.082	-0.003	-0.028	0.038	-0.031	-0.052
	(0.21)	(0.96)	(0.60)	(0.43)	(0.57)	(0.28)
Fam. events: 2+	0.013	0.107	0.093	0.044	-0.204	0.466**
	(0.96)	(0.57)	(0.69)	(0.77)	(0.27)	(0.01)
Health events: 0	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
Health events: 1	0.027	-0.011	0.070	0.026	-0.010	-0.033
	(0.60)	(0.81)	(0.10)	(0.48)	(0.82)	(0.36)
Health events: 2+	0.112	-0.171	-0.019	-0.102	0.007	0.095
	(0.48)	(0.12)	(0.89)	(0.25)	(0.95)	(0.27)
All events: 0	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
All events: 1	0.014	-0.020	0.029	0.015	-0.010	-0.033
	(0.76)	(0.62)	(0.44)	(0.66)	(0.80)	(0.35)
All events: 2+	0.177*	-0.068	0.063	-0.000	-0.061	0.031
	(0.09)	(0.40)	(0.47)	(1.00)	(0.40)	(0.60)
N	3159	3786	3159	3788	2740	3057

Note: Estimations of regression of the effect of negative events on personality traits' scores.

N refers to the number of observations for the event with more occurrences (familiar events). Note that, according to the event considered, N can vary slightly.

Table 34.
Effect of life events on altruism, trustworthiness and extraversion

	SOCIAL RESILIENCE					
	Males	Females	Males	Females	Males	Females
	Altruism		Trust		Extrav.	
Fam. events: 0	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
Fam. events: 1	-0.003	0.030	-0.055	0.025	-0.006	-0.051
	(0.90)	(0.17)	(0.08)	(0.34)	(0.91)	(0.30)
Fam. events: 2+	-0.057	0.009	0.156	0.054	-0.214	0.107
	(0.62)	(0.91)	(0.18)	(0.63)	(0.38)	(0.49)
Health events: 0	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
Health events: 1	0.038	0.038	0.043	-0.018	0.009	-0.021
	(0.15)	(0.08)	(0.08)	(0.37)	(0.83)	(0.57)
Health events: 2+	0.056	0.075	-0.116*	-0.020	0.265	0.019
	(0.53)	(0.32)	(0.04)	(0.67)	(0.06)	(0.83)
All events: 0	0.000	0.000	0.000	0.000	0.000	0.000
	(.)	(.)	(.)	(.)	(.)	(.)
All events: 1	0.030	0.033	0.003	0.001	0.011	-0.034
	(0.15)	(0.06)	(0.90)	(0.97)	(0.79)	(0.31)
All events: 2+	-0.023	0.058	-0.028	-0.008	0.049	-0.005
	(0.67)	(0.17)	(0.50)	(0.82)	(0.60)	(0.94)
N	4986	6398	3247	3701	3161	3786

Note: see above

Figure 14. Fixed effect estimations with sample restricted to individuals aged 25 to 50
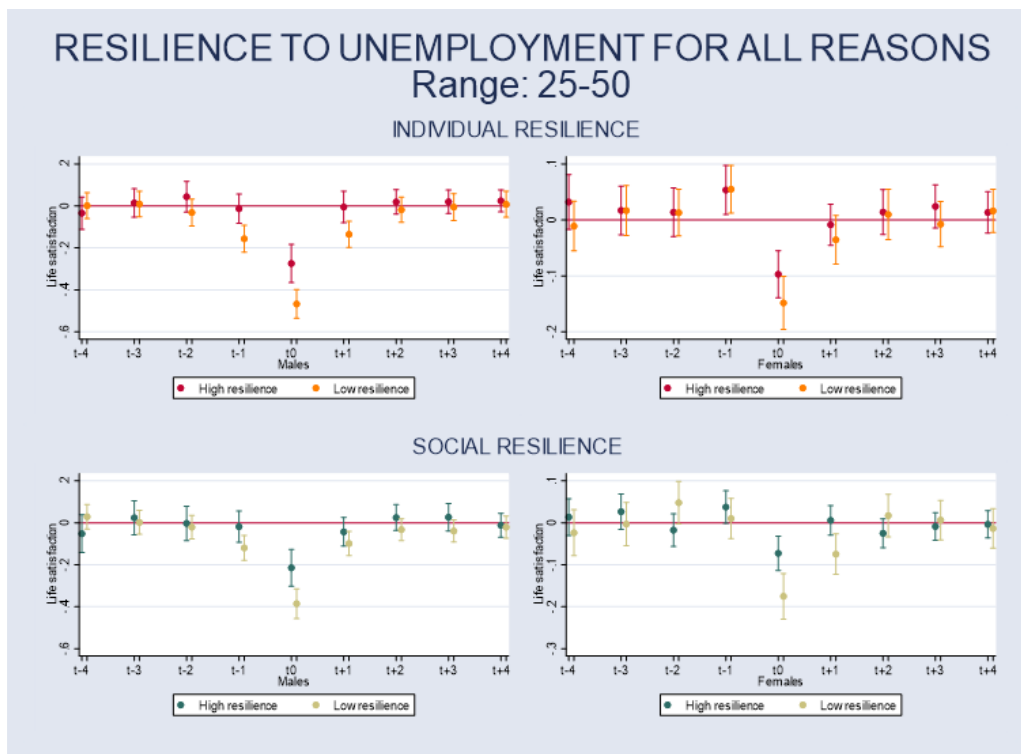
4.7. Conclusions

In this chapter I examined whether personality traits and social attitudes can be used as mediators of resiliency to unemployment. I hypothesised that a combination of personality traits can be used as proxies for different resilience factors. In particular, emotional stability, openness, and locus of control were used as proxies for coping abilities, tolerance, acceptance of change, a meaningful life, competence, personal structure, and goal setting, and were grouped within the category of 'individual resilience'. Similarly, extraversion, altruism, and trustworthiness were used as proxies for social and emotional regulation and grouped as 'social resilience'. Both my measures of individual and social resilience predicted a significantly better adaptation to unemployment, except for individual resilience for women. These results demonstrate that some combinations of personality traits can be considered as a protective factor, and that they are effective against unemployment. Since stability of personality traits remains a concern for researchers, I assessed the stability of all the traits I

used within the SOEP, both in respect to age and to adverse life events. Results show that none of the two issues represents a threat to the results.

This research opens the field to different developments. Resilience has usually been measured in respect of a single personality trait each time. My claim is that a combination of different traits and attitudes can predict resilience to different shocks. I expected different traits to protect people against other types of adverse life event (like familiar difficulties, health-related problems and others).

Also, other characteristics other than personality should be taken in account by economists. Recent resilience scales are starting to take in account characteristics such as cognitive skills and health (see, for example, Rossouw & Rossouw, 2016), which can be used a single resilience factors or as combinations of them.

CONCLUSIONS

Recent research has demonstrated that soft skills, in particular personality traits, are strongly correlated with labour market performances. Research and theories on human capital should consider its 'soft' component. Human capital is not only made up of easily measurable skills but also of more malleable components, such as beliefs, personality, attitudes and so on. All these characteristics can make the difference in each individual's life: at work, at school and in the social environment.

This dissertation explored the relationship between personality traits and resilience to labour market adversities. In the last two decades, the role of personality traits in labour market performances has become a hot topic. We have seen that a reason of this interest was the rise of the Big Five Inventory, a scale of five personality traits that is now commonly accepted in the psychological literature. Personality can predict wages, employability, unemployment duration, satisfaction at work and so on. As shown in Chapter 1, the Big Five and the locus of control are related to specific patterns in terms of labour market performances. Conscientiousness and internal locus of control are generally considered the best predictors of wages, employability and unemployment duration, followed by emotional stability and antagonism (the reverse of agreeableness). Extraversion is less related to labour market performances, and results seem more related to the sample and the population of reference, while openness presents controversial outcomes. Research on this topic is still

needed; however, some clear patterns have already emerged, and they appear in line with the definitions and conceptualizations of personality traits. Conscientious workers tend to invest more time in their career, and they care about social norms. For these reasons, they tend to be more successful in the labour market. Internal locus of control refers to an individual's belief that life outcomes depend on personal actions and not on fate. This belief translates into higher proactivity and therefore better labour market performances. Finally, emotionally stable individuals are probably more capable of facing the stressors in jobs and actively react to them. The reason why agreeableness is negatively related to wages and employability raises a question: is it a matter of preference or a labour market selection? The first evidence points in the direction of the second hypothesis, namely that agreeable workers, characterised by altruism and empathy, find difficulties in asserting themselves at work. Japanese labour market results, showing that agreeableness is instead rewarded, make us think that eventually, western labour markets will reward egoism and punish altruism. Extraversion seems less related to labour market outcomes. Possible unexplored questions regard the possibility that extraverted people may perform better in job interviews and in leadership positions. Finally, I interpreted the controversial results of openness as a consequence of the higher job mobility correlated with this trait. Open-minded individuals need a constant variety of experience, which translates into the need to change jobs more often than closed-minded people. A hypothesis that should be tested is that open-minded workers are characterised by higher job mobility, higher unemployment spells, lower employability in youth and by higher wages in adulthood.

In the other sections, I explored which personality traits make individuals more resilient to two types of labour market adversities: the development of mismatched working hours and unemployment.

Chapters 2 and 3 analysed the relationship between personality traits and working-hour dynamics (the development of a mismatch, its resolution and the well-being associated with them). Results show that traits correlated with positive labour market outcomes (conscientiousness, emotional stability and internal locus of control) prevent individuals from feeling underemployed, while internal locus of control also prevents overemployment. Openness increases the probability of both mismatches, while agreeableness is correlated with underemployment only. I also observed whether personality traits facilitate the probability of resolving a mismatch and how (through two possible channels: changing

employers and adapting the work hours). In some cases, conscientiousness, emotional stability and internal locus of control, other than preventing underemployment, also ease the resolution of mismatched working hours. Finally, openness and, interestingly, extraversion facilitate overemployment resolution. While openness facilitates resolution through its high job mobility, which increases the probability of changing employers, the same result on extraversion is probably related to the higher social network that extraverted people can rely on. As for well-being, I found that men and women react differently to underemployment in relation to their personality traits. Traits related to higher labour market outcomes predict a loss in mental health for men and, in some cases, an increase in women. A possible explanation is related to social norms, as it is more acceptable for women to work less than men. Finally, open-minded workers enjoy their free time more in a situation of underemployment and are more frustrated with their free time in the case of overemployment.

The last chapter explores the concept of resilience in greater detail and how it is related to personality traits. In my theoretical framework, personality traits can be used as proxies for resilience-scale factors. After analysing factors of resilience scales from the psychological literature, I associated them with personality traits present in the German Socio-Economic Panel to build two measures of resilience. The first measure, individual resilience, is made up of emotional stability, locus of control and openness, which are used as proxies for the following resilience factors: coping abilities, tolerance, acceptance of change, meaningful life, control, competence and goal setting. The second measure, social resilience, consists of extraversion and two other life attitudes, altruism and trustworthiness, which are used as proxies for social support and social competence. In this chapter, I examined whether the negative effect of unemployment on well-being is mitigated in people with high levels of resilience. Results show that both resilience measures predict a smaller loss in well-being and, in some cases, faster recovery.

In general, my results are in line with the previous literature. Conscientiousness, internal locus of control and emotional stability, which are related to higher job status and performances, are negatively correlated with underemployment and facilitate its resolution. Open-minded workers seem to be the most restless: they have the highest probability of developing mismatches and they suffer more if this happens. This confirm the hypothesis that

their need for new experiences and feelings also manifests in the work domain. Finally, agreeable workers seem to suffer more from mismatched working hours.

This research also leads to new issues. The first problematic issue that emerges is that most of the results are silently driven by social norms. In relation to social norms on work (for example, stigmas regarding unemployment or working too little), people can react differently depending on their personality. Conscientious workers may suffer more from unemployment if the norm is stronger, while open-minded individuals may care less. If social norms do not obligate people to work a lot, agreeable workers may feel more comfortable.

Other issues regard patterns of each single personality trait. The knowledge on traits and labour market performances is moving towards commonly accepted patterns; what remains to be done is to explore in more detail how these traits shape individual labour market histories and how they are correlated with different occupations. Some researchers have started looking at the heterogeneity driven by social traits (agreeableness and extraversion) in relation to jobs that require social skills. This exercise can be extended to all the other traits. For example, we can hypothesize that conscientious workers perform better in jobs that require perseverance and worst in those that require creativity. The reverse pattern may be true for openness. Similarly, we can expect emotionally stable and extraverted individuals to perform better in jobs that involve socially stressful situations (such as social performances, leadership positions and so on). Analysing these micro-patterns would shed more light on the relationship between labour market and psychological characteristics.

As written by Heineck (2011), research on the effect of personality traits on labour market outcomes has no straightforward policy implications. However, as pointed out by Heckman and Rubistein (2001), we still know too little on this area and, therefore, improving knowledge on this topic will lead policy intervention in the future.

A first type of policy implications would imply the capacity of an economic system to orient young people towards their preferences, based on their personality and attitudinal characteristics. It has been demonstrated that wellbeing and productivity are related with job satisfaction (Sironi, 2019; Böckerman, Ilmakunnas, 2012). This thesis has shown that satisfaction with working hours is associate with lower levels of wellbeing, and that mismatched workers usually try to fix their situation. Also, it demonstrates that working hour preferences are associated with different personality traits. A deeper understanding of these

associations should be linked with the knowledge of associations between personality traits and other job-related preferences (such as type of job, preference for career vs family, etc…) to build early campaigns to orient young people towards preferred occupations. This would prevent future mismatches and orient individuals at early stages of their job histories towards those jobs in which they would be more productive.

These campaigns would also reduce voluntary unemployment, since people would be happier with their jobs. In terms of voluntary unemployment, this area of research can improve knowledge on people's job-search decisions and strategies. People can rely on other people and informal networks or only on themselves and on formal ways to get a new job. Other people may be more discouraged than others and tend to withdraw into themselves. Increasing light on these dynamics can improve policies-design to promote job search of unemployed individual s (Cobb-Clark, 2011).

A closing note must be made on the predictive power of personality traits and labour market outcomes. Correlating personality traits to labour market patterns does not mean that these traits are substantially related to labour market outcomes. In other words, it is not a universal finding that emotionally stable individuals perform better at work. The real information we get is on the functioning of the western labour market. That is, if emotionally stable workers who are more resistant to stress perform better, it may be due to the fact that our labour markets require us to deal with a high amount of stress. Initial information on this direction is given by the reverse results obtained for agreeableness in the American and Japanese contexts. Conducting these types of research on different countries, characterised by different labour markets, would give information on which individual characteristics are required in each specific context.

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APPENDIX 1 – SAMPLE SIZES OF LITERATURE REVIEW

Table A1 - Sample sizes of literature review			
Sample	frequency	Percent	Cum.
56	1	1.35	1.35
116	1	1.35	2.7
151	1	1.35	4.05
242	1	1.35	5.41
293	1	1.35	6.76
396	2	2.7	9.46
533	3	4.05	13.51
595	2	2.7	16.22
612	1	1.35	17.57
818	2	2.7	20.27
828	3	4.05	24.32
1137	2	2.7	27.03
1384	3	4.05	31.08
1557	1	1.35	32.43
1758	2	2.7	35.14
2688	1	1.35	36.49
2868	3	4.05	40.54
2926	3	4.05	44.59
3571	3	4.05	48.65
3653	2	2.7	51.35
3848	1	1.35	52.7
4191	1	1.35	54.05
4355	3	4.05	58.11
4374	2	2.7	60.81
4466	1	1.35	62.16
4588	2	2.7	64.86
4705	3	4.05	68.92
5300	2	2.7	71.62
5328	1	1.35	72.97
5412	1	1.35	74.32
9284	1	1.35	75.68
9646	1	1.35	77.03
12686	2	2.7	79.73
12983	5	6.76	86.49
13021	4	5.41	91.89
51982	4	5.41	97.3
78909	2	2.7	100
Total	74		

APPENDIX 2 – PERSONALITY TRAITS QUESTIONNAIRES

Hilda – Big five questionnaire

B28 How well do the following words describe you? For each word, cross one box to indicate how well that word describes you. There are no right or wrong answers.

(Cross **X** ONE box for EACH word.)

	Does not describe me at all ——— Describes me very well (1–7)		Does not describe me at all ——— Describes me very well (1–7)
talkative		jealous	
sympathetic		intellectual	
orderly		extroverted	
envious		cold	
deep		disorganised	
withdrawn		temperamental	
harsh		complex	
systematic		shy	
moody		warm	
philosophical		efficient	
bashful		fretful	
kind		imaginative	
inefficient		enthusiastic	
touchy		selfish	
creative		careless	
quiet		calm	
cooperative		traditional	
sloppy		lively	

Hilda – Locus of Control questionnaire

116

B23 Please indicate, by crossing <u>one</u> box on <u>each</u> line, how much you agree or disagree with each of the following statements. The more you agree, the higher the number of the box you should cross. The more you disagree, the lower the number of the box you should cross.

(Please cross ☒ ONE box for EACH statement)

		Strongly disagree 1	2	3	4	5	6	Strongly agree 7
a	I have little control over the things that happen to me	☐	☐	☐	☐	☐	☐	☐
b	There is really no way I can solve some of the problems I have	☐	☐	☐	☐	☐	☐	☐
c	There is little I can do to change many of the important things in my life	☐	☐	☐	☐	☐	☐	☐
d	I often feel helpless in dealing with the problems of life	☐	☐	☐	☐	☐	☐	☐
e	Sometimes I feel that I'm being pushed around in life	☐	☐	☐	☐	☐	☐	☐
f	What happens to me in the future mostly depends on me	☐	☐	☐	☐	☐	☐	☐
g	I can do just about anything I really set my mind to do	☐	☐	☐	☐	☐	☐	☐

GSOEP – Big Five questionnaire

151. People can have many different qualities—some are listed below.
You will probably find that some of these descriptions fit you completely and that some do not fit you at all. Others may fit to a certain extent.

☞ *Please answer on a scale from 1 to 7, where*
1 means "does not describe me at all", and
7 meaning "describes me perfectly".

I am:	Does not desribe me at all 1	2	3	4	5	Describes me perfectly 6	7
– a thorough worker	☐	☐	☐	☐	☐	☐	☐
– communicative, talkative	☐	☐	☐	☐	☐	☐	☐
– sometimes a bit rude to others	☐	☐	☐	☐	☐	☐	☐
– original, someone who comes up with new ideas	☐	☐	☐	☐	☐	☐	☐
– a worrier	☐	☐	☐	☐	☐	☐	☐
– forgiving	☐	☐	☐	☐	☐	☐	☐
– somewhat lazy	☐	☐	☐	☐	☐	☐	☐
– outgoing, sociable	☐	☐	☐	☐	☐	☐	☐
– someone who values artistic, aesthetic experiences	☐	☐	☐	☐	☐	☐	☐
– nervous	☐	☐	☐	☐	☐	☐	☐
– effective and efficient in completing tasks	☐	☐	☐	☐	☐	☐	☐
– reserved	☐	☐	☐	☐	☐	☐	☐
– considerate and kind to others	☐	☐	☐	☐	☐	☐	☐
– imaginative	☐	☐	☐	☐	☐	☐	☐
– relaxed, able to deal with stress	☐	☐	☐	☐	☐	☐	☐
– eager for knowledge	☐	☐	☐	☐	☐	☐	☐

GSOEP – TRUSTWORTHINESS QUESTIONNAIRE

3. **What is your opinion on the following three statements?**

☞ *Please tick one of the boxes for each statement*

	Strongly agree	Agree	Disagree	Strongly disagree
People can generally be trusted	☐	☐	☐	☐
Nowadays you can't rely on anyone	☐	☐	☐	☐
If you are dealing with strangers, it is better to be careful before trusting them	☐	☐	☐	☐

GSOEP – LIFE GOALS QUESTIONNAIRE

6. **Different things are important to different people. How important are the following things to you? Very important, important, less important or not at all important?**

	Very important	Important	Less important	Not at all important
Being able to afford things for myself	☐	☐	☐	☐
Being there for others	☐	☐	☐	☐
Being personally fulfilled	☐	☐	☐	☐
Being successful in my career	☐	☐	☐	☐
Owning my own home	☐	☐	☐	☐
Having a happy marriage / relationship	☐	☐	☐	☐
Having children	☐	☐	☐	☐
Being politically and/or socially involved	☐	☐	☐	☐
Seeing the world and/or traveling	☐	☐	☐	☐
Faith, religion	☐	☐	☐	☐

GSOEP – TRUSTWORTHINESS QUESTIONNAIRE

5. **The following statements apply to different attitudes towards life and the future.**
To what degree to you personally agree with the following statements?

☞ *Please answer according to the following scale:*
1 means disagree completely, and
7 means agree completely.

	Disagree completely						Agree completely
	1	2	3	4	5	6	7
How my life goes depends on me	☐	☐	☐	☐	☐	☐	☐
Compared to other people, I have not achieved what I deserve	☐	☐	☐	☐	☐	☐	☐
What a person achieves in life is above all a question of fate or luck	☐	☐	☐	☐	☐	☐	☐
If a person is socially or politically active, he/she can have an effect on social conditions	☐	☐	☐	☐	☐	☐	☐
I frequently have the experience that other people have a controlling influence over my life	☐	☐	☐	☐	☐	☐	☐
One has to work hard in order to succeed	☐	☐	☐	☐	☐	☐	☐
If I run up against difficulties in life, I often doubt my own abilities	☐	☐	☐	☐	☐	☐	☐
The opportunities that I have in life are determined by the social conditions	☐	☐	☐	☐	☐	☐	☐
Inborn abilities are more important than any efforts one can make	☐	☐	☐	☐	☐	☐	☐
I have little control over the things that happen in my life	☐	☐	☐	☐	☐	☐	☐

APPENDIX 3 – HILDA LOCUS OF CONTROL: PRINCIPAL COMPONENT ANALYSIS

Estimations of principal component analysis conducted on locus of control items to check whether they correlated with the underlying factor (external vs internal locus of control).

I used the last wave available as an example (15th wave)

Variables

External locus	lsselc lssesp lsseci lssefh lssepa
Internal locus	lssefd lssecd

TABLE A2 – CORRELATION MATRIX OF LOCUS OF CONTROL ITEMS

	lssesp	lssesp	lsseci	lssefh	lssepa	lssefd	lssecd
lssesp	1						
lssesp	1	1					
lsseci	0.7087	0.7087	1				
lssefh	0.6617	0.6617	0.6375	1			
lssepa	0.5821	0.5821	0.5987	0.6982	1		
lssefd	-0.2402	-0.2402	-0.2542	-0.2344	-0.2548	1	
lssecd	-0.3357	-0.3357	-0.3474	-0.3749	-0.3291	0.6069	1

All the items are correlated with the supposed underlying factor

TABLE A3 – ROTATED FACTORS LOADINGS (PATTERN MATRIX AND UNIQUE VARIANCES

Variable	Factor1	Factor2	Uniqueness
lssesp	**0.9187**	-0.1337	0.1381
lssesp	**0.9187**	-0.1337	0.1381
lsseci	**0.8206**	-0.1921	0.2897
lssefh	**0.8136**	-0.2083	0.2947
lssepa	**0.7558**	-0.2151	0.3824
lssefd	-0.0953	**0.9012**	0.1787
lssecd	-0.2385	**0.8571**	0.2086

APPENDIX 4 – CHAPTER 2: DESCRIPTIVE STATISTICS

Hours worked, hours preferred, mental health and satisfaction with free time, associated

with personality traits (divided in 2 equals group around the median).
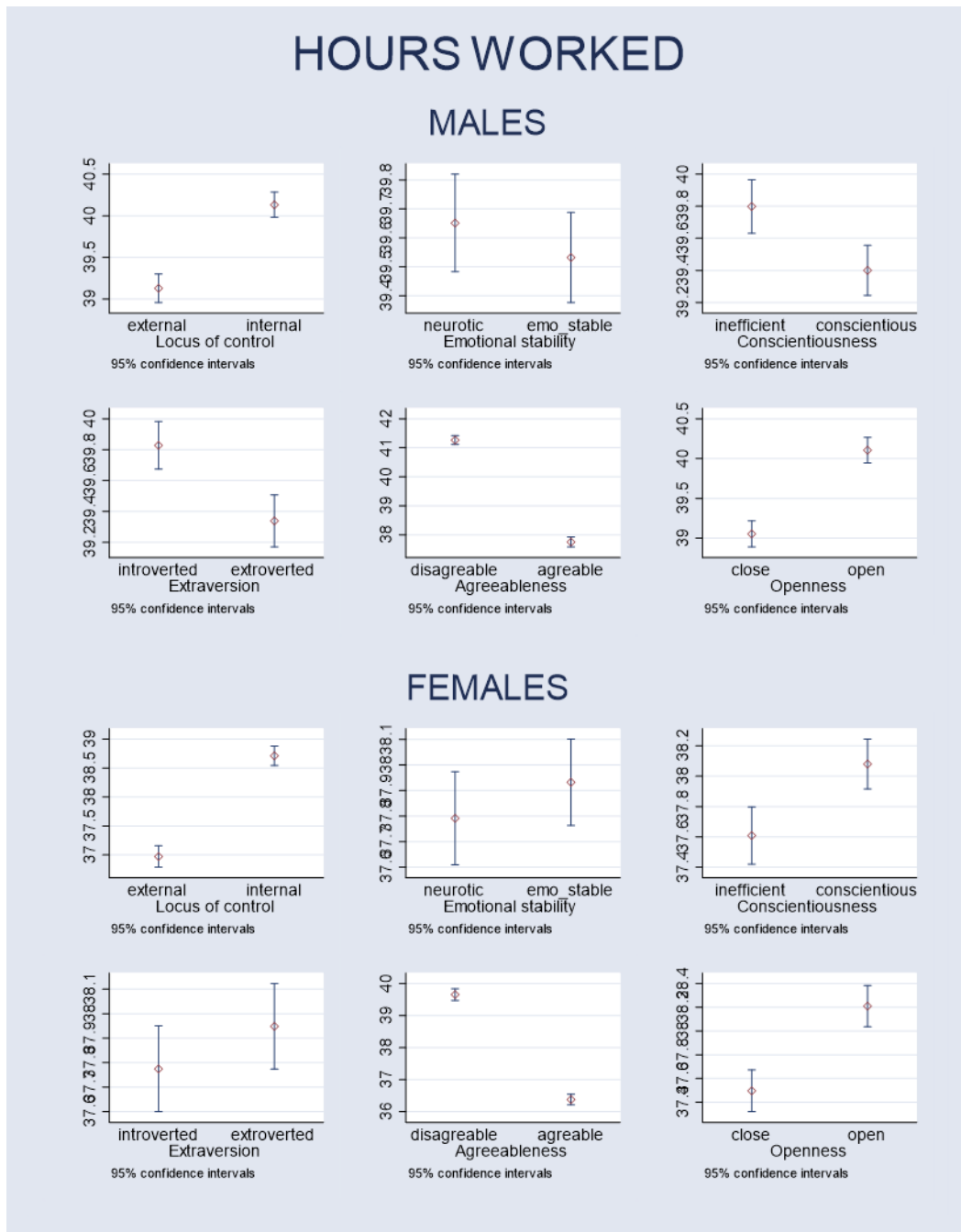
HOURS PREFERRED

MALES
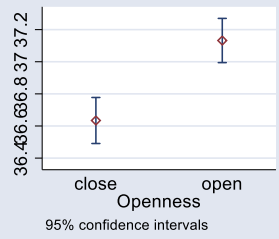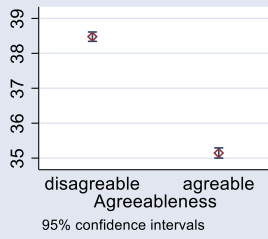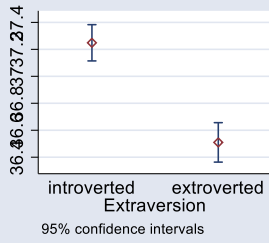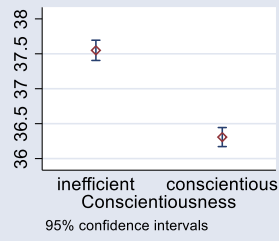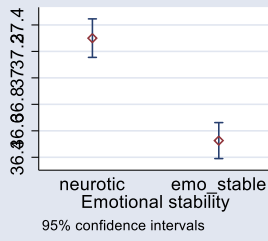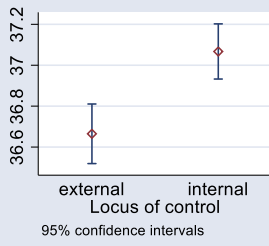
FEMALES
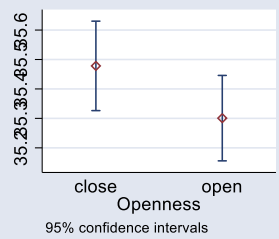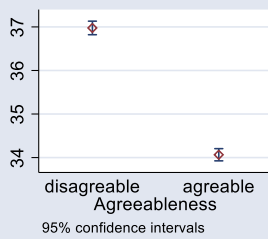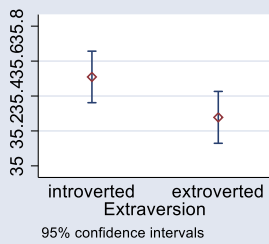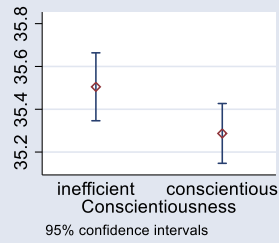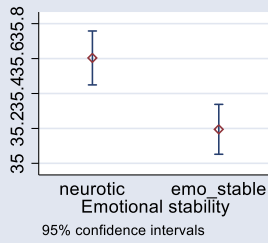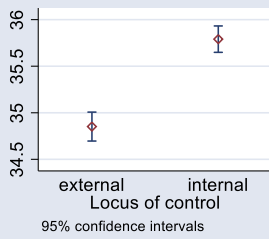
MENTAL HEALTH

MALES
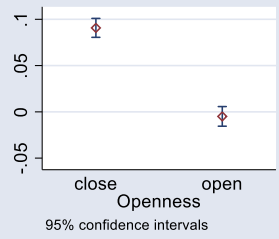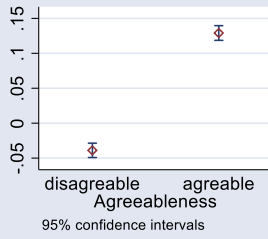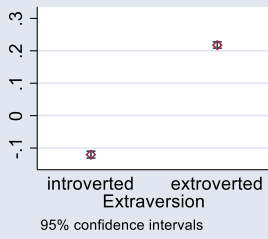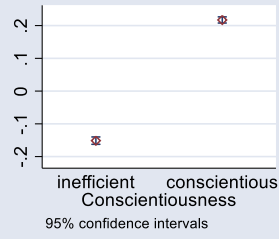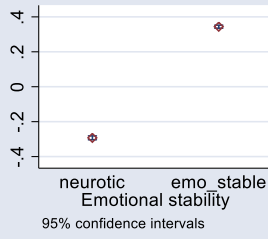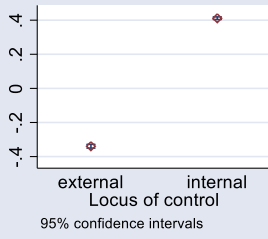
FEMALES

SATISFACTION WITH FREE TIME

MALES

95% confidence intervals
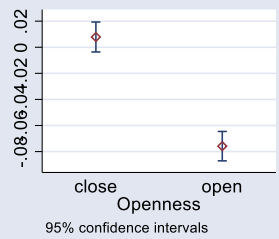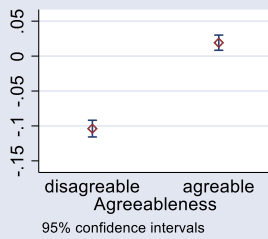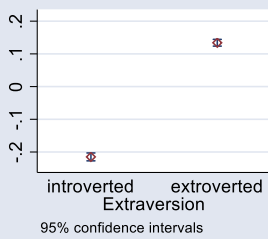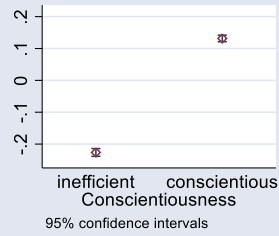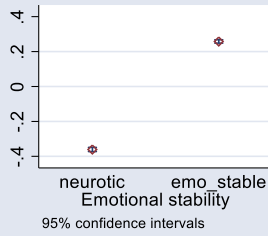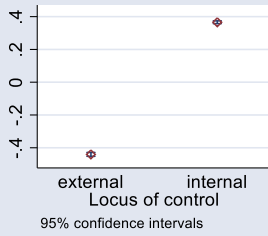
FEMALES
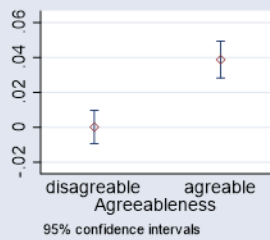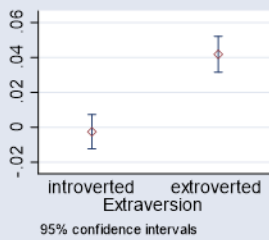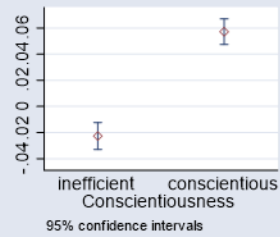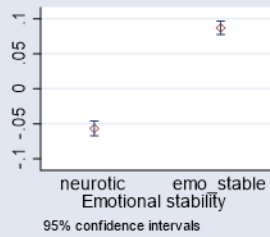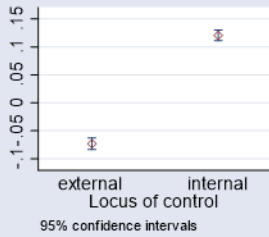
95% confidence intervals
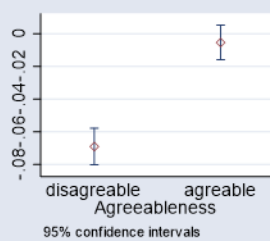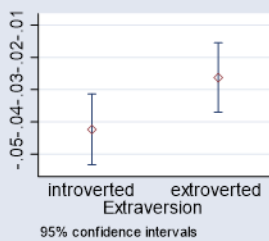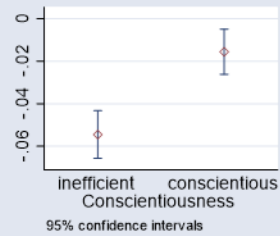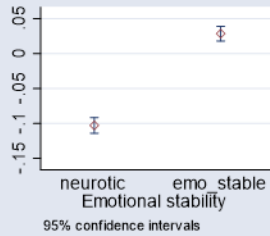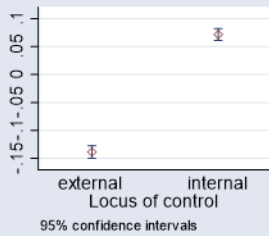
APPENDIX 5 – RANDOM EFFECT ESTIMATIONS OF CHAPTER 2

RANDOM EFFECT ESTIMATIONS OF THE PROBABILITY OF DEVELOPING UNDEREMPLOYMENT		
	Males	Females
strong_external	0.000	0.000
	(.)	(.)
weak_external	-0.030***	-0.034***
	(0.00)	(0.00)
weak_internal	-0.052***	-0.040***
	(0.00)	(0.00)
strong_inernal	-0.062***	-0.040***
	(0.00)	(0.00)
age	0.002	0.003
	(0.33)	(0.19)
age2	-0.000**	-0.000*
	(0.04)	(0.07)
h_income	-0.021***	-0.027***
	(0.00)	(0.00)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.007	-0.019***
	(0.16)	(0.00)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.008	0.003
	(0.11)	(0.56)
5 to 14 years	0.003	0.013***
	(0.55)	(0.01)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.39)	(0.83)
[3] Bachelor or honours	-0.017	-0.000
	(0.11)	(0.99)
="[4] Adv diploma	diploma"	diploma"
	(0.12)	(0.89)
[5] Cert III or IV	-0.017	0.018
	(0.13)	(0.12)
[8] Year 12	-0.001	0.000
	(0.93)	(0.99)
[9] Year 11 and below	0.006	0.017
	(0.58)	(0.17)
Permanent	0.000	0.000

	(.)	(.)
Fixed-term	0.021***	0.012**
	(0.00)	(0.02)
Casual	0.187***	0.174***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	0.008	0.017***
	(0.15)	(0.01)
[3] Technicians and Trades Workers	0.036***	0.049***
	(0.00)	(0.00)
[4] Community and Personal Service Workers	0.098***	0.088***
	(0.00)	(0.00)
[5] Clerical and Administrative Workers	0.021***	0.028***
	(0.00)	(0.00)
[6] Sales Workers	0.053***	0.070***
	(0.00)	(0.00)
[7] Machinery Operators and Drivers	0.066***	0.061***
	(0.00)	(0.00)
[8] Labourers	0.080***	0.114***
	(0.00)	(0.00)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.009	0.005
	(0.33)	(0.55)
Work-impacting health condition=0	0.000	0.000
	(.)	(.)
Work-impacting health condition=1	0.009*	0.019***
	(0.09)	(0.00)
Constant	0.151***	0.123***
	(0.00)	(0.00)
Observations	46808	42038
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	und_emp	und_emp
strong_neurotic	0.000	0.000
	(.)	(.)
weak_neurotic	-0.020**	-0.026***
	(0.01)	(0.00)
weak_emostab	-0.030***	-0.025***
	(0.00)	(0.00)
strong_emostab	-0.036***	-0.029***
	(0.00)	(0.00)
age	0.002	0.002

	(0.24)	(0.40)
age2	-0.000**	-0.000
	(0.03)	(0.18)
h_income	-0.022***	-0.028***
	(0.00)	(0.00)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.011**	-0.019***
	(0.02)	(0.00)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.006	0.001
	(0.24)	(0.80)
5 to 14 years	0.001	0.014***
	(0.85)	(0.00)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.31)	(0.99)
[3] Bachelor or honours	-0.020*	-0.003
	(0.06)	(0.76)
="[4] Adv diploma	diploma"	diploma"
	(0.14)	(0.69)
[5] Cert III or IV	-0.015	0.012
	(0.20)	(0.30)
[8] Year 12	-0.000	-0.009
	(0.99)	(0.48)
[9] Year 11 and below	0.008	0.014
	(0.50)	(0.27)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.021***	0.012**
	(0.00)	(0.02)
Casual	0.187***	0.175***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	0.009	0.015**
	(0.12)	(0.02)
[3] Technicians and Trades Workers	0.038***	0.046***
	(0.00)	(0.00)
[4] Community and Personal Service Workers	0.098***	0.085***
	(0.00)	(0.00)
[5] Clerical and Administrative Workers	0.026***	0.028***

	(0.00)	(0.00)
[6] Sales Workers	0.056***	0.071***
	(0.00)	(0.00)
[7] Machinery Operators and Drivers	0.067***	0.065***
	(0.00)	(0.00)
[8] Labourers	0.087***	0.115***
	(0.00)	(0.00)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.015*	0.006
	(0.09)	(0.49)
Work-impacting health condition=0	0.000	0.000
	(.)	(.)
Work-impacting health condition=1	0.011**	0.021***
	(0.05)	(0.00)
Constant	0.133***	0.138***
	(0.00)	(0.00)
Observations	46037	41485
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	und_emp	und_emp
strong_ineff	0.000	0.000
	(.)	(.)
weak_ineff	-0.014*	-0.035***
	(0.10)	(0.00)
weak_diligent	-0.009	-0.029***
	(0.28)	(0.00)
strong_diligent	-0.027***	-0.032***
	(0.00)	(0.00)
age	0.002	0.002
	(0.24)	(0.41)
age2	-0.000**	-0.000
	(0.03)	(0.17)
h_income	-0.022***	-0.028***
	(0.00)	(0.00)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.011**	-0.019***
	(0.03)	(0.00)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.006	0.001
	(0.25)	(0.83)
5 to 14 years	0.001	0.013***
	(0.86)	(0.00)

[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.28)	(0.95)
[3] Bachelor or honours	-0.020*	-0.003
	(0.07)	(0.79)
="[4] Adv diploma	diploma"	diploma"
	(0.12)	(0.67)
[5] Cert III or IV	-0.016	0.012
	(0.16)	(0.29)
[8] Year 12	-0.002	-0.009
	(0.88)	(0.47)
[9] Year 11 and below	0.007	0.014
	(0.55)	(0.26)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.021***	0.012**
	(0.00)	(0.02)
Casual	0.187***	0.175***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	0.009	0.014**
	(0.13)	(0.02)
[3] Technicians and Trades Workers	0.038***	0.046***
	(0.00)	(0.00)
[4] Community and Personal Service Workers	0.098***	0.085***
	(0.00)	(0.00)
[5] Clerical and Administrative Workers	0.026***	0.028***
	(0.00)	(0.00)
[6] Sales Workers	0.057***	0.071***
	(0.00)	(0.00)
[7] Machinery Operators and Drivers	0.067***	0.064***
	(0.00)	(0.00)
[8] Labourers	0.087***	0.115***
	(0.00)	(0.00)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.016*	0.006
	(0.08)	(0.53)
Work-impacting health condition=0	0.000	0.000
	(.)	(.)
Work-impacting health condition=1	0.012**	0.021***
	(0.04)	(0.00)

Constant	0.125***	0.143***
	(0.00)	(0.00)
Observations	46043	41481
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	und_emp	und_emp
strong_intro	0.000	0.000
	(.)	(.)
weak_intro	-0.001	0.008
	(0.90)	(0.36)
weak_extro	-0.005	0.005
	(0.56)	(0.58)
strong_extro	-0.011	0.003
	(0.15)	(0.73)
age	0.002	0.002
	(0.24)	(0.41)
age2	-0.000**	-0.000
	(0.02)	(0.16)
h_income	-0.022***	-0.028***
	(0.00)	(0.00)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.012**	-0.019***
	(0.02)	(0.00)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.006	0.001
	(0.24)	(0.83)
5 to 14 years	0.001	0.014***
	(0.84)	(0.00)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.29)	(0.98)
[3] Bachelor or honours	-0.020*	-0.004
	(0.07)	(0.73)
="[4] Adv diploma	diploma"	diploma"
	(0.13)	(0.67)
[5] Cert III or IV	-0.014	0.012
	(0.20)	(0.30)
[8] Year 12	-0.001	-0.009
	(0.96)	(0.47)
[9] Year 11 and below	0.009	0.014
	(0.46)	(0.27)

	0.000	0.000
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.021***	0.012**
	(0.00)	(0.02)
Casual	0.187***	0.175***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	0.009	0.015**
	(0.12)	(0.02)
[3] Technicians and Trades Workers	0.039***	0.047***
	(0.00)	(0.00)
[4] Community and Personal Service Workers	0.098***	0.086***
	(0.00)	(0.00)
[5] Clerical and Administrative Workers	0.026***	0.028***
	(0.00)	(0.00)
[6] Sales Workers	0.057***	0.071***
	(0.00)	(0.00)
[7] Machinery Operators and Drivers	0.068***	0.066***
	(0.00)	(0.00)
[8] Labourers	0.088***	0.116***
	(0.00)	(0.00)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.016*	0.006
	(0.08)	(0.49)
Work-impacting health condition=0	0.000	0.000
	(.)	(.)
Work-impacting health condition=1	0.012**	0.021***
	(0.03)	(0.00)
Constant	0.117***	0.116***
	(0.00)	(0.01)
Observations	46043	41492
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	und_emp	und_emp
strong_disagr	0.000	0.000
	(.)	(.)
weak_disagr	0.010	0.000
	(0.22)	(0.97)
weak_agreab	0.014*	0.011
	(0.09)	(0.19)
strong_agreab	0.022***	0.014*
	(0.00)	(0.10)

age	0.002	0.002
	(0.24)	(0.42)
age2	-0.000**	-0.000
	(0.02)	(0.16)
h_income	-0.022***	-0.028***
	(0.00)	(0.00)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.012**	-0.019***
	(0.01)	(0.00)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.006	0.001
	(0.22)	(0.79)
5 to 14 years	0.001	0.014***
	(0.83)	(0.00)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.26)	(1.00)
[3] Bachelor or honours	-0.020*	-0.004
	(0.06)	(0.73)
="[4] Adv diploma	diploma"	diploma"
	(0.12)	(0.70)
[5] Cert III or IV	-0.014	0.013
	(0.23)	(0.26)
[8] Year 12	0.000	-0.008
	(0.99)	(0.50)
[9] Year 11 and below	0.009	0.015
	(0.45)	(0.23)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.021***	0.012**
	(0.00)	(0.02)
Casual	0.187***	0.174***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	0.008	0.015**
	(0.14)	(0.02)
[3] Technicians and Trades Workers	0.040***	0.047***
	(0.00)	(0.00)
[4] Community and Personal Service Workers	0.097***	0.085***
	(0.00)	(0.00)

[5] Clerical and Administrative Workers	0.025***	0.028***
	(0.00)	(0.00)
[6] Sales Workers	0.056***	0.071***
	(0.00)	(0.00)
[7] Machinery Operators and Drivers	0.069***	0.067***
	(0.00)	(0.00)
[8] Labourers	0.089***	0.116***
	(0.00)	(0.00)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.015*	0.006
	(0.10)	(0.49)
Work-impacting health condition=0	0.000	0.000
	(.)	(.)
Work-impacting health condition=1	0.012**	0.021***
	(0.04)	(0.00)
Constant	0.102***	0.113***
	(0.01)	(0.01)
Observations	46033	41496
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	und_emp	und_emp
strong_close	0.000	0.000
	(.)	(.)
weak_close	0.020**	0.010
	(0.01)	(0.22)
weak_open	0.012	0.003
	(0.13)	(0.72)
strong_open	0.033***	0.022***
	(0.00)	(0.01)
age	0.002	0.002
	(0.23)	(0.45)
age2	-0.000**	-0.000
	(0.02)	(0.18)
h_income	-0.022***	-0.028***
	(0.00)	(0.00)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.011**	-0.019***
	(0.03)	(0.00)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.006	0.002
	(0.22)	(0.77)
5 to 14 years	0.001	0.014***

	(0.80)	(0.00)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.32)	(0.94)
[3] Bachelor or honours	-0.018*	-0.003
	(0.09)	(0.82)
="[4] Adv diploma	diploma"	diploma"
	(0.21)	(0.82)
[5] Cert III or IV	-0.009	0.016
	(0.41)	(0.18)
[8] Year 12	0.004	-0.005
	(0.72)	(0.66)
[9] Year 11 and below	0.016	0.019
	(0.18)	(0.13)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.020***	0.012**
	(0.00)	(0.03)
Casual	0.187***	0.174***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	0.009	0.015**
	(0.12)	(0.02)
[3] Technicians and Trades Workers	0.040***	0.047***
	(0.00)	(0.00)
[4] Community and Personal Service Workers	0.099***	0.086***
	(0.00)	(0.00)
[5] Clerical and Administrative Workers	0.027***	0.028***
	(0.00)	(0.00)
[6] Sales Workers	0.058***	0.072***
	(0.00)	(0.00)
[7] Machinery Operators and Drivers	0.069***	0.067***
	(0.00)	(0.00)
[8] Labourers	0.090***	0.117***
	(0.00)	(0.00)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.016*	0.006
	(0.09)	(0.52)
Work-impacting health condition=0	0.000	0.000
	(.)	(.)
Work-impacting health condition=1	0.012**	0.021***

	(0.04)	(0.00)
Constant	0.089**	0.109**
	(0.02)	(0.01)
Observations	46037	41484
p-values in parentheses		
="* p<.10	** p<.05	** p<.05

TABLE A5		
RANDOM EFFECT ESTIMATIONS OF THE PROBABILITY OF DEVELOPING OVEREMPLOYMENT		
	Males	Females
strong_external	0.000	0.000
	(.)	(.)
weak_external	-0.014	-0.003
	(0.16)	(0.76)
weak_internal	-0.011	0.001
	(0.28)	(0.90)
strong_inernal	-0.038***	-0.026***
	(0.00)	(0.01)
age	0.009***	0.010***
	(0.00)	(0.00)
age2	-0.000***	-0.000***
	(0.01)	(0.00)
h_income	0.026***	0.036***
	(0.00)	(0.00)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.019***	0.013*
	(0.01)	(0.06)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.039***	-0.015**
	(0.00)	(0.03)
5 to 14 years	-0.025***	-0.020***
	(0.00)	(0.00)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.12)	(0.01)
[3] Bachelor or honours	0.005	-0.047***

	(0.70)	(0.00)
="[4] Adv diploma	diploma"	diploma"
	(0.46)	(0.00)
[5] Cert III or IV	-0.035**	-0.084***
	(0.02)	(0.00)
[8] Year 12	-0.035**	-0.099***
	(0.03)	(0.00)
[9] Year 11 and below	-0.067***	-0.108***
	(0.00)	(0.00)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	-0.001	0.011
	(0.84)	(0.12)
Casual	-0.120***	-0.126***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.066***	-0.080***
	(0.00)	(0.00)
[3] Technicians and Trades Workers	-0.116***	-0.130***
	(0.00)	(0.00)
[4] Community and Personal Service Workers	-0.165***	-0.152***
	(0.00)	(0.00)
[5] Clerical and Administrative Workers	-0.087***	-0.116***
	(0.00)	(0.00)
[6] Sales Workers	-0.090***	-0.117***
	(0.00)	(0.00)
[7] Machinery Operators and Drivers	-0.141***	-0.118***
	(0.00)	(0.00)
[8] Labourers	-0.161***	-0.166***
	(0.00)	(0.00)
australian=0	0.000	0.000
	(.)	(.)
australian=1	-0.014	0.011
	(0.29)	(0.36)
Work-impacting health condition=0	0.000	0.000
	(.)	(.)
Work-impacting health condition=1	-0.006	0.009
	(0.44)	(0.26)
Constant	0.208***	0.238***
	(0.00)	(0.00)
Observations	46839	42078
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)

	over_emp	over_emp
strong_neurotic	0.000	0.000
	(.)	(.)
weak_neurotic	-0.004	-0.004
	(0.71)	(0.71)
weak_emostab	-0.005	-0.018*
	(0.61)	(0.07)
strong_emostab	-0.010	-0.020**
	(0.28)	(0.04)
age	0.009***	0.011***
	(0.00)	(0.00)
age2	-0.000**	-0.000***
	(0.01)	(0.00)
h_income	0.025***	0.034***
	(0.00)	(0.00)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.019***	0.014**
	(0.01)	(0.04)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.034***	-0.015**
	(0.00)	(0.04)
5 to 14 years	-0.024***	-0.019***
	(0.00)	(0.00)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.03)	(0.05)
[3] Bachelor or honours	0.010	-0.035**
	(0.46)	(0.01)
="[4] Adv diploma	diploma"	diploma"
	(0.90)	(0.00)
[5] Cert III or IV	-0.026*	-0.070***
	(0.07)	(0.00)
[8] Year 12	-0.029*	-0.083***
	(0.06)	(0.00)
[9] Year 11 and below	-0.062***	-0.095***
	(0.00)	(0.00)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	-0.003	0.016**
	(0.71)	(0.02)
Casual	-0.121***	-0.127***
	(0.00)	(0.00)

[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.064***	-0.080***
	(0.00)	(0.00)
[3] Technicians and Trades Workers	-0.115***	-0.134***
	(0.00)	(0.00)
[4] Community and Personal Service Workers	-0.161***	-0.151***
	(0.00)	(0.00)
[5] Clerical and Administrative Workers	-0.083***	-0.114***
	(0.00)	(0.00)
[6] Sales Workers	-0.092***	-0.120***
	(0.00)	(0.00)
[7] Machinery Operators and Drivers	-0.137***	-0.131***
	(0.00)	(0.00)
[8] Labourers	-0.158***	-0.164***
	(0.00)	(0.00)
australian=0	0.000	0.000
	(.)	(.)
australian=1	-0.011	0.012
	(0.40)	(0.34)
Work-impacting health condition=0	0.000	0.000
	(.)	(.)
Work-impacting health condition=1	-0.005	0.011
	(0.52)	(0.17)
Constant	0.186***	0.206***
	(0.00)	(0.00)
Observations	46071	41526
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	over_emp	over_emp
strong_ineff	0.000	0.000
	(.)	(.)
weak_ineff	0.010	0.008
	(0.32)	(0.46)
weak_diligent	-0.004	0.010
	(0.65)	(0.30)
strong_diligent	0.005	0.000
	(0.61)	(0.98)
age	0.009***	0.011***
	(0.00)	(0.00)
age2	-0.000**	-0.000***
	(0.01)	(0.00)
h_income	0.025***	0.034***
	(0.00)	(0.00)

partner=0	0.000	0.000
	(.)	(.)
partner=1	0.018***	0.014**
	(0.01)	(0.04)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.034***	-0.015**
	(0.00)	(0.04)
5 to 14 years	-0.024***	-0.019***
	(0.00)	(0.00)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.03)	(0.04)
[3] Bachelor or honours	0.010	-0.036***
	(0.45)	(0.01)
="[4] Adv diploma	diploma"	diploma"
	(0.90)	(0.00)
[5] Cert III or IV	-0.026*	-0.071***
	(0.07)	(0.00)
[8] Year 12	-0.029*	-0.084***
	(0.06)	(0.00)
[9] Year 11 and below	-0.061***	-0.095***
	(0.00)	(0.00)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	-0.003	0.017**
	(0.70)	(0.02)
Casual	-0.121***	-0.127***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.064***	-0.080***
	(0.00)	(0.00)
[3] Technicians and Trades Workers	-0.115***	-0.134***
	(0.00)	(0.00)
[4] Community and Personal Service Workers	-0.160***	-0.150***
	(0.00)	(0.00)
[5] Clerical and Administrative Workers	-0.083***	-0.114***
	(0.00)	(0.00)
[6] Sales Workers	-0.092***	-0.120***
	(0.00)	(0.00)
[7] Machinery Operators and Drivers	-0.136***	-0.130***
	(0.00)	(0.00)

[8] Labourers	-0.157***	-0.163***
	(0.00)	(0.00)
australian=0	0.000	0.000
	(.)	(.)
australian=1	-0.011	0.011
	(0.40)	(0.34)
Work-impacting health condition=0	0.000	0.000
	(.)	(.)
Work-impacting health condition=1	-0.005	0.012
	(0.53)	(0.15)
Constant	0.177***	0.192***
	(0.00)	(0.00)
Observations	46077	41522
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	over_emp	over_emp
strong_intro	0.000	0.000
	(.)	(.)
weak_intro	-0.012	-0.014
	(0.20)	(0.17)
weak_extro	-0.019**	-0.018*
	(0.04)	(0.08)
strong_extro	-0.010	0.003
	(0.29)	(0.78)
age	0.009***	0.011***
	(0.00)	(0.00)
age2	-0.000**	-0.000***
	(0.01)	(0.00)
h_income	0.025***	0.034***
	(0.00)	(0.00)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.019***	0.015**
	(0.01)	(0.03)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.034***	-0.015**
	(0.00)	(0.04)
5 to 14 years	-0.024***	-0.019***
	(0.00)	(0.00)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.03)	(0.05)

[3] Bachelor or honours	0.010	-0.036***
	(0.45)	(0.01)
="[4] Adv diploma	diploma"	diploma"
	(0.92)	(0.00)
[5] Cert III or IV	-0.025*	-0.069***
	(0.08)	(0.00)
[8] Year 12	-0.029*	-0.083***
	(0.06)	(0.00)
[9] Year 11 and below	-0.060***	-0.094***
	(0.00)	(0.00)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	-0.003	0.017**
	(0.72)	(0.02)
Casual	-0.121***	-0.127***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.064***	-0.080***
	(0.00)	(0.00)
[3] Technicians and Trades Workers	-0.115***	-0.133***
	(0.00)	(0.00)
[4] Community and Personal Service Workers	-0.160***	-0.150***
	(0.00)	(0.00)
[5] Clerical and Administrative Workers	-0.083***	-0.114***
	(0.00)	(0.00)
[6] Sales Workers	-0.091***	-0.120***
	(0.00)	(0.00)
[7] Machinery Operators and Drivers	-0.137***	-0.129***
	(0.00)	(0.00)
[8] Labourers	-0.157***	-0.162***
	(0.00)	(0.00)
australian=0	0.000	0.000
	(.)	(.)
australian=1	-0.011	0.011
	(0.40)	(0.36)
Work-impacting health condition=0	0.000	0.000
	(.)	(.)
Work-impacting health condition=1	-0.005	0.012
	(0.53)	(0.16)
Constant	0.192***	0.201***
	(0.00)	(0.00)
Observations	46077	41533
p-values in parentheses		
="* p<.10	** p<.05	** p<.05

	(1)	(1)
	over_emp	over_emp
strong_disagr	0.000	0.000
	(.)	(.)
weak_disagr	0.008	-0.012
	(0.42)	(0.23)
weak_agreab	-0.009	-0.014
	(0.34)	(0.17)
strong_agreab	0.008	-0.011
	(0.41)	(0.24)
age	0.009***	0.011***
	(0.00)	(0.00)
age2	-0.000**	-0.000***
	(0.01)	(0.00)
h_income	0.025***	0.034***
	(0.00)	(0.00)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.018***	0.014**
	(0.01)	(0.04)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.034***	-0.015**
	(0.00)	(0.03)
5 to 14 years	-0.024***	-0.019***
	(0.00)	(0.00)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.03)	(0.05)
[3] Bachelor or honours	0.010	-0.035***
	(0.45)	(0.01)
="[4] Adv diploma	diploma"	diploma"
	(0.90)	(0.00)
[5] Cert III or IV	-0.026*	-0.071***
	(0.07)	(0.00)
[8] Year 12	-0.029*	-0.083***
	(0.06)	(0.00)
[9] Year 11 and below	-0.061***	-0.095***
	(0.00)	(0.00)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	-0.003	0.017**
	(0.71)	(0.02)
Casual	-0.121***	-0.127***

	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.064***	-0.079***
	(0.00)	(0.00)
[3] Technicians and Trades Workers	-0.115***	-0.135***
	(0.00)	(0.00)
[4] Community and Personal Service Workers	-0.161***	-0.150***
	(0.00)	(0.00)
[5] Clerical and Administrative Workers	-0.083***	-0.114***
	(0.00)	(0.00)
[6] Sales Workers	-0.092***	-0.119***
	(0.00)	(0.00)
[7] Machinery Operators and Drivers	-0.136***	-0.131***
	(0.00)	(0.00)
[8] Labourers	-0.158***	-0.163***
	(0.00)	(0.00)
australian=0	0.000	0.000
	(.)	(.)
australian=1	-0.011	0.011
	(0.39)	(0.36)
Work-impacting health condition=0	0.000	0.000
	(.)	(.)
Work-impacting health condition=1	-0.005	0.011
	(0.53)	(0.16)
Constant	0.178***	0.204***
	(0.00)	(0.00)
Observations	46067	41537
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	over_emp	over_emp
strong_close	0.000	0.000
	(.)	(.)
weak_close	-0.005	0.010
	(0.64)	(0.31)
weak_open	0.007	0.022**
	(0.44)	(0.03)
strong_open	0.023**	0.043***
	(0.02)	(0.00)
age	0.009***	0.011***
	(0.00)	(0.00)
age2	-0.000**	-0.000***
	(0.01)	(0.00)
h_income	0.025***	0.034***

	(0.00)	(0.00)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.020***	0.016**
	(0.00)	(0.02)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.034***	-0.014*
	(0.00)	(0.05)
5 to 14 years	-0.023***	-0.018***
	(0.00)	(0.00)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.03)	(0.07)
[3] Bachelor or honours	0.012	-0.033**
	(0.37)	(0.02)
="[4] Adv diploma	diploma"	diploma"
	(0.90)	(0.00)
[5] Cert III or IV	-0.021	-0.062***
	(0.16)	(0.00)
[8] Year 12	-0.024	-0.076***
	(0.12)	(0.00)
[9] Year 11 and below	-0.055***	-0.082***
	(0.00)	(0.00)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	-0.003	0.016**
	(0.65)	(0.03)
Casual	-0.121***	-0.128***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.064***	-0.080***
	(0.00)	(0.00)
[3] Technicians and Trades Workers	-0.114***	-0.133***
	(0.00)	(0.00)
[4] Community and Personal Service Workers	-0.160***	-0.149***
	(0.00)	(0.00)
[5] Clerical and Administrative Workers	-0.082***	-0.113***
	(0.00)	(0.00)
[6] Sales Workers	-0.091***	-0.118***
	(0.00)	(0.00)
[7] Machinery Operators and Drivers	-0.135***	-0.128***

	(0.00)	(0.00)
[8] Labourers	-0.156***	-0.161***
	(0.00)	(0.00)
australian=0	0.000	0.000
	(.)	(.)
australian=1	-0.011	0.011
	(0.39)	(0.37)
Work-impacting health condition=0	0.000	0.000
	(.)	(.)
Work-impacting health condition=1	-0.006	0.011
	(0.49)	(0.20)
Constant	0.168***	0.172***
	(0.00)	(0.00)
Observations	46071	41525
p-values in parentheses		
="* p<.10	** p<.05	** p<.05

APPENDIX 6 – RANDOM EFFECT TABLES OF CHATER 2 (2ND PART)

TABLE A6		
REGRESSION ESTIMATIONS OF THE EFFECT OF UNDEREMPLOYMENT ON MENTAL HEALTH		
	MALES	FEMALES
	Standardized values of (ghmh)	Standardized values of (ghmh)
und_emp=0	0.000	0.000
	(.)	(.)
und_emp=1	0.005	-0.093***
	(0.86)	(0.00)
strong_external	0.000	0.000
	(.)	(.)
weak_external	0.000	0.000
	(.)	(.)
weak_internal	0.000	0.000
	(.)	(.)
strong_inernal	0.000	0.000
	(.)	(.)
und_emp=0 # strong_external	0.000	0.000
	(.)	(.)
und_emp=0 # weak_external	0.000	0.000
	(.)	(.)
und_emp=0 # weak_internal	0.000	0.000
	(.)	(.)
und_emp=0 # strong_inernal	0.000	0.000
	(.)	(.)
und_emp=1 # strong_external	0.000	0.000
	(.)	(.)
und_emp=1 # weak_external	-0.053	0.036
	(0.17)	(0.38)
und_emp=1 # weak_internal	-0.044	0.059
	(0.23)	(0.14)
und_emp=1 # strong_inernal	-0.019	0.073*
	(0.62)	(0.07)
age	-0.001	0.001
	(0.63)	(0.46)
h_income	0.012***	-0.010*
	(0.01)	(0.07)

partner=0	0.000	0.000
	(.)	(.)
partner=1	0.149***	0.109***
	(0.00)	(0.00)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.020	-0.015
	(0.20)	(0.36)
5 to 14 years	-0.053***	-0.051***
	(0.00)	(0.00)
Constant	0.010	-0.038
	(0.88)	(0.57)
Observations	45033	40562
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	Standardized values of (ghmh)	Standardized values of (ghmh)
und_emp=0	0.000	0.000
	(.)	(.)
und_emp=1	0.040	-0.110***
	(0.15)	(0.00)
strong_neurotic	0.000	0.000
	(.)	(.)
weak_neurotic	0.000	0.000
	(.)	(.)
weak_emostab	0.000	0.000
	(.)	(.)
strong_emostab	0.000	0.000
	(.)	(.)
und_emp=0 # strong_neurotic	0.000	0.000
	(.)	(.)
und_emp=0 # weak_neurotic	0.000	0.000
	(.)	(.)
und_emp=0 # weak_emostab	0.000	0.000
	(.)	(.)
und_emp=0 # strong_emostab	0.000	0.000
	(.)	(.)
und_emp=1 # strong_neurotic	0.000	0.000
	(.)	(.)
und_emp=1 # weak_neurotic	-0.071*	0.111***

	(0.06)	(0.01)
und_emp=1 # weak_emostab	-0.066*	0.093**
	(0.09)	(0.02)
und_emp=1 # strong_emostab	-0.119***	0.058
	(0.00)	(0.14)
age	-0.000	0.001
	(0.77)	(0.41)
h_income	0.012***	-0.009*
	(0.01)	(0.09)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.150***	0.111***
	(0.00)	(0.00)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.018	-0.016
	(0.26)	(0.30)
5 to 14 years	-0.052***	-0.053***
	(0.00)	(0.00)
Constant	-0.009	-0.053
	(0.89)	(0.44)
Observations	44511	40251
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	Standardized values of (ghmh)	Standardized values of (ghmh)
und_emp=0	0.000	0.000
	(.)	(.)
und_emp=1	0.053**	-0.102***
	(0.03)	(0.00)
strong_ineff	0.000	0.000
	(.)	(.)
weak_ineff	0.000	0.000
	(.)	(.)
weak_diligent	0.000	0.000
	(.)	(.)
strong_diligent	0.000	0.000
	(.)	(.)
und_emp=0 # strong_ineff	0.000	0.000
	(.)	(.)
und_emp=0 # weak_ineff	0.000	0.000
	(.)	(.)
und_emp=0 # weak_diligent	0.000	0.000
	(.)	(.)

und_emp=0 # strong_diligent	0.000	0.000
	(.)	(.)
und_emp=1 # strong_ineff	0.000	0.000
	(.)	(.)
und_emp=1 # weak_ineff	-0.082**	0.069*
	(0.02)	(0.07)
und_emp=1 # weak_diligent	-0.090**	0.083**
	(0.01)	(0.04)
und_emp=1 # strong_diligent	-0.138***	0.067
	(0.00)	(0.10)
age	-0.000	0.001
	(0.79)	(0.43)
h_income	0.012***	-0.010*
	(0.01)	(0.08)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.150***	0.112***
	(0.00)	(0.00)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.017	-0.017
	(0.27)	(0.29)
5 to 14 years	-0.052***	-0.052***
	(0.00)	(0.00)
Constant	-0.011	-0.051
	(0.87)	(0.45)
Observations	44514	40249
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	Standardized values of (ghmh)	Standardized values of (ghmh)
und_emp=0	0.000	0.000
	(.)	(.)
und_emp=1	-0.012	-0.027
	(0.65)	(0.40)
strong_intro	0.000	0.000
	(.)	(.)
weak_intro	0.000	0.000
	(.)	(.)
weak_extro	0.000	0.000
	(.)	(.)
strong_extro	0.000	0.000
	(.)	(.)
und_emp=0 # strong_intro	0.000	0.000

	(.)	(.)
und_emp=0 # weak_intro	0.000	0.000
	(.)	(.)
und_emp=0 # weak_extro	0.000	0.000
	(.)	(.)
und_emp=0 # strong_extro	0.000	0.000
	(.)	(.)
und_emp=1 # strong_intro	0.000	0.000
	(.)	(.)
und_emp=1 # weak_intro	-0.007	-0.017
	(0.85)	(0.68)
und_emp=1 # weak_extro	0.027	-0.021
	(0.46)	(0.61)
und_emp=1 # strong_extro	-0.063	-0.042
	(0.10)	(0.32)
age	-0.000	0.001
	(0.80)	(0.42)
h_income	0.012***	-0.010*
	(0.01)	(0.08)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.150***	0.112***
	(0.00)	(0.00)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.018	-0.016
	(0.25)	(0.30)
5 to 14 years	-0.053***	-0.052***
	(0.00)	(0.00)
Constant	-0.011	-0.052
	(0.86)	(0.44)
Observations	44514	40258
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	Standardized values of (ghmh)	Standardized values of (ghmh)
und_emp=0	0.000	0.000
	(.)	(.)
und_emp=1	0.014	-0.052*
	(0.62)	(0.06)
strong_disagr	0.000	0.000
	(.)	(.)
weak_disagr	0.000	0.000
	(.)	(.)
weak_agreab	0.000	0.000

	(.)	(.)
strong_agreab	0.000	0.000
	(.)	(.)
und_emp=0 # strong_disagr	0.000	0.000
	(.)	(.)
und_emp=0 # weak_disagr	0.000	0.000
	(.)	(.)
und_emp=0 # weak_agreab	0.000	0.000
	(.)	(.)
und_emp=0 # strong_agreab	0.000	0.000
	(.)	(.)
und_emp=1 # strong_disagr	0.000	0.000
	(.)	(.)
und_emp=1 # weak_disagr	-0.043	-0.008
	(0.24)	(0.84)
und_emp=1 # weak_agreab	-0.008	-0.003
	(0.84)	(0.93)
und_emp=1 # strong_agreab	-0.087**	0.025
	(0.03)	(0.52)
age	-0.000	0.001
	(0.79)	(0.42)
h_income	0.012***	-0.009*
	(0.01)	(0.08)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.150***	0.111***
	(0.00)	(0.00)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.018	-0.016
	(0.26)	(0.30)
5 to 14 years	-0.052***	-0.052***
	(0.00)	(0.00)
Constant	-0.011	-0.052
	(0.87)	(0.44)
Observations	44509	40253
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	Standardized values of (ghmh)	Standardized values of (ghmh)
und_emp=0	0.000	0.000
	(.)	(.)
und_emp=1	-0.064**	-0.038
	(0.01)	(0.15)

strong_close	0.000	0.000
	(.)	(.)
weak_close	0.000	0.000
	(.)	(.)
weak_open	0.000	0.000
	(.)	(.)
strong_open	0.000	0.000
	(.)	(.)
und_emp=0 # strong_close	0.000	0.000
	(.)	(.)
und_emp=0 # weak_close	0.000	0.000
	(.)	(.)
und_emp=0 # weak_open	0.000	0.000
	(.)	(.)
und_emp=0 # strong_open	0.000	0.000
	(.)	(.)
und_emp=1 # strong_close	0.000	0.000
	(.)	(.)
und_emp=1 # weak_close	0.059	0.038
	(0.11)	(0.31)
und_emp=1 # weak_open	0.053	-0.050
	(0.15)	(0.19)
und_emp=1 # strong_open	0.061*	-0.021
	(0.10)	(0.60)
age	-0.000	0.001
	(0.77)	(0.42)
h_income	0.012***	-0.010*
	(0.01)	(0.08)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.150***	0.111***
	(0.00)	(0.00)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.018	-0.016
	(0.25)	(0.30)
5 to 14 years	-0.053***	-0.052***
	(0.00)	(0.00)
Constant	-0.009	-0.052
	(0.89)	(0.44)
Observations	44511	40250
p-values in parentheses		
="* p<.10	** p<.05	** p<.05

	TABLE A7	
REGRESSION ESTIMATIONS OF THE EFFECT OF OVEREMPLOYMENT ON MENTAL HEALTH		
	MALES	FEMALES
	Standardized values of (ghmh)	Standardized values of (ghmh)
und_emp=0	0.000	0.000
	(.)	(.)
und_emp=1	-0.068***	-0.039
	(0.00)	(0.15)
strong_external	0.000	0.000
	(.)	(.)
weak_external	0.000	0.000
	(.)	(.)
weak_internal	0.000	0.000
	(.)	(.)
strong_inernal	0.000	0.000
	(.)	(.)
und_emp=0 # strong_external	0.000	0.000
	(.)	(.)
und_emp=0 # weak_external	0.000	0.000
	(.)	(.)
und_emp=0 # weak_internal	0.000	0.000
	(.)	(.)
und_emp=0 # strong_inernal	0.000	0.000
	(.)	(.)
und_emp=1 # strong_external	0.000	0.000
	(.)	(.)
und_emp=1 # weak_external	-0.042	-0.024
	(0.17)	(0.47)
und_emp=1 # weak_internal	0.014	-0.026
	(0.61)	(0.42)
und_emp=1 # strong_inernal	-0.002	-0.049
	(0.95)	(0.11)
age	-0.001	0.001
	(0.56)	(0.53)
h_income	0.015***	-0.005
	(0.00)	(0.32)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.150***	0.113***

	(0.00)	(0.00)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.023	-0.016
	(0.14)	(0.31)
5 to 14 years	-0.054***	-0.053***
	(0.00)	(0.00)
Constant	0.028	-0.030
	(0.66)	(0.65)
Observations	45059	40599
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	Standardized values of (ghmh)	Standardized values of (ghmh)
und_emp=0	0.000	0.000
	(.)	(.)
und_emp=1	-0.100***	-0.067***
	(0.00)	(0.00)
strong_neurotic	0.000	0.000
	(.)	(.)
weak_neurotic	0.000	0.000
	(.)	(.)
weak_emostab	0.000	0.000
	(.)	(.)
strong_emostab	0.000	0.000
	(.)	(.)
und_emp=0 # strong_neurotic	0.000	0.000
	(.)	(.)
und_emp=0 # weak_neurotic	0.000	0.000
	(.)	(.)
und_emp=0 # weak_emostab	0.000	0.000
	(.)	(.)
und_emp=0 # strong_emostab	0.000	0.000
	(.)	(.)
und_emp=1 # strong_neurotic	0.000	0.000
	(.)	(.)
und_emp=1 # weak_neurotic	0.019	-0.021
	(0.51)	(0.51)
und_emp=1 # weak_emostab	0.039	0.004

	(0.16)	(0.90)
und_emp=1 # strong_emostab	0.037	0.022
	(0.14)	(0.45)
age	-0.001	0.001
	(0.71)	(0.49)
h_income	0.014***	-0.005
	(0.00)	(0.33)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.152***	0.115***
	(0.00)	(0.00)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.021	-0.017
	(0.19)	(0.27)
5 to 14 years	-0.054***	-0.054***
	(0.00)	(0.00)
Constant	0.009	-0.042
	(0.89)	(0.54)
Observations	44540	40289
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	Standardized values of (ghmh)	Standardized values of (ghmh)
und_emp=0	0.000	0.000
	(.)	(.)
und_emp=1	-0.100***	-0.077***
	(0.00)	(0.00)
strong_ineff	0.000	0.000
	(.)	(.)
weak_ineff	0.000	0.000
	(.)	(.)
weak_diligent	0.000	0.000
	(.)	(.)
strong_diligent	0.000	0.000
	(.)	(.)
und_emp=0 # strong_ineff	0.000	0.000
	(.)	(.)
und_emp=0 # weak_ineff	0.000	0.000
	(.)	(.)
und_emp=0 # weak_diligent	0.000	0.000
	(.)	(.)
und_emp=0 # strong_diligent	0.000	0.000
	(.)	(.)

und_emp=1 # strong_ineff	0.000	0.000
	(.)	(.)
und_emp=1 # weak_ineff	0.017	0.041
	(0.54)	(0.18)
und_emp=1 # weak_diligent	0.030	0.009
	(0.25)	(0.76)
und_emp=1 # strong_diligent	0.047*	0.002
	(0.08)	(0.95)
age	-0.001	0.001
	(0.70)	(0.49)
h_income	0.014***	-0.005
	(0.00)	(0.34)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.152***	0.115***
	(0.00)	(0.00)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.021	-0.017
	(0.19)	(0.27)
5 to 14 years	-0.054***	-0.054***
	(0.00)	(0.00)
Constant	0.010	-0.042
	(0.88)	(0.53)
Observations	44543	40287
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	Standardized values of (ghmh)	Standardized values of (ghmh)
und_emp=0	0.000	0.000
	(.)	(.)
und_emp=1	-0.088***	-0.102***
	(0.00)	(0.00)
strong_intro	0.000	0.000
	(.)	(.)
weak_intro	0.000	0.000
	(.)	(.)
weak_extro	0.000	0.000
	(.)	(.)
strong_extro	0.000	0.000
	(.)	(.)
und_emp=0 # strong_intro	0.000	0.000
	(.)	(.)
und_emp=0 # weak_intro	0.000	0.000

	(.)	(.)
und_emp=0 # weak_extro	0.000	0.000
	(.)	(.)
und_emp=0 # strong_extro	0.000	0.000
	(.)	(.)
und_emp=1 # strong_intro	0.000	0.000
	(.)	(.)
und_emp=1 # weak_intro	-0.003	0.044
	(0.91)	(0.14)
und_emp=1 # weak_extro	0.018	0.071**
	(0.49)	(0.01)
und_emp=1 # strong_extro	0.036	0.034
	(0.17)	(0.21)
age	-0.001	0.001
	(0.71)	(0.49)
h_income	0.015***	-0.005
	(0.00)	(0.33)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.152***	0.115***
	(0.00)	(0.00)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.021	-0.017
	(0.19)	(0.27)
5 to 14 years	-0.054***	-0.054***
	(0.00)	(0.00)
Constant	0.009	-0.042
	(0.90)	(0.53)
Observations	44543	40296
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	Standardized values of (ghmh)	Standardized values of (ghmh)
und_emp=0	0.000	0.000
	(.)	(.)
und_emp=1	-0.067***	-0.081***
	(0.00)	(0.00)
strong_disagr	0.000	0.000
	(.)	(.)
weak_disagr	0.000	0.000
	(.)	(.)
weak_agreab	0.000	0.000
	(.)	(.)
strong_agreab	0.000	0.000

	(.)	(.)
und_emp=0 # strong_disagr	0.000	0.000
	(.)	(.)
und_emp=0 # weak_disagr	0.000	0.000
	(.)	(.)
und_emp=0 # weak_agreab	0.000	0.000
	(.)	(.)
und_emp=0 # strong_agreab	0.000	0.000
	(.)	(.)
und_emp=1 # strong_disagr	0.000	0.000
	(.)	(.)
und_emp=1 # weak_disagr	-0.023	0.018
	(0.37)	(0.56)
und_emp=1 # weak_agreab	-0.003	0.040
	(0.89)	(0.15)
und_emp=1 # strong_agreab	-0.006	0.003
	(0.81)	(0.92)
age	-0.001	0.001
	(0.71)	(0.49)
h_income	0.014***	-0.005
	(0.00)	(0.34)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.152***	0.115***
	(0.00)	(0.00)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.021	-0.017
	(0.18)	(0.27)
5 to 14 years	-0.054***	-0.054***
	(0.00)	(0.00)
Constant	0.009	-0.042
	(0.89)	(0.53)
Observations	44538	40291
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	Standardized values of (ghmh)	Standardized values of (ghmh)
und_emp=0	0.000	0.000
	(.)	(.)
und_emp=1	-0.061***	-0.061***
	(0.00)	(0.00)
strong_close	0.000	0.000
	(.)	(.)

weak_close	0.000	0.000
	(.)	(.)
weak_open	0.000	0.000
	(.)	(.)
strong_open	0.000	0.000
	(.)	(.)
und_emp=0 # strong_close	0.000	0.000
	(.)	(.)
und_emp=0 # weak_close	0.000	0.000
	(.)	(.)
und_emp=0 # weak_open	0.000	0.000
	(.)	(.)
und_emp=0 # strong_open	0.000	0.000
	(.)	(.)
und_emp=1 # strong_close	0.000	0.000
	(.)	(.)
und_emp=1 # weak_close	-0.012	-0.002
	(0.62)	(0.94)
und_emp=1 # weak_open	-0.010	0.007
	(0.67)	(0.81)
und_emp=1 # strong_open	-0.034	-0.020
	(0.23)	(0.49)
age	-0.001	0.001
	(0.70)	(0.49)
h_income	0.015***	-0.005
	(0.00)	(0.34)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.152***	0.115***
	(0.00)	(0.00)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.021	-0.018
	(0.18)	(0.26)
5 to 14 years	-0.054***	-0.054***
	(0.00)	(0.00)
Constant	0.009	-0.042
	(0.89)	(0.54)
Observations	44540	40288
p-values in parentheses		
="* p<.10	** p<.05	** p<.05

Table AX - Fixed effect estimations of the effect of overemployment on free time satisfaction		
	(1)	(1)
	Males	Females
und_emp=0	0.000	0.000
	(.)	(.)
und_emp=1	0.256***	0.281***
	(0.00)	(0.00)
strong_external	0.000	0.000
	(.)	(.)
weak_external	0.000	0.000
	(.)	(.)
weak_internal	0.000	0.000
	(.)	(.)
strong_inernal	0.000	0.000
	(.)	(.)
und_emp=0 # strong_external	0.000	0.000
	(.)	(.)
und_emp=0 # weak_external	0.000	0.000
	(.)	(.)
und_emp=0 # weak_internal	0.000	0.000
	(.)	(.)
und_emp=0 # strong_inernal	0.000	0.000
	(.)	(.)
und_emp=1 # strong_external	0.000	0.000
	(.)	(.)
und_emp=1 # weak_external	-0.015	-0.035
	(0.72)	(0.41)
und_emp=1 # weak_internal	-0.009	-0.096**
	(0.84)	(0.03)
und_emp=1 # strong_inernal	-0.041	-0.069
	(0.39)	(0.12)
age	0.012***	0.015***
	(0.00)	(0.00)
h_income	-0.026***	-0.031***
	(0.00)	(0.00)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.059***	-0.015
	(0.01)	(0.51)

no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.323***	-0.393***
	(0.00)	(0.00)
5 to 14 years	-0.198***	-0.235***
	(0.00)	(0.00)
Constant	-0.404***	-0.594***
	(0.00)	(0.00)
Observations	48680	43780
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	Standardized values of (losatft)	Standardized values of (losatft)
und_emp=0	0.000	0.000
	(.)	(.)
und_emp=1	0.241***	0.268***
	(0.00)	(0.00)
strong_neurotic	0.000	0.000
	(.)	(.)
weak_neurotic	0.000	0.000
	(.)	(.)
weak_emostab	0.000	0.000
	(.)	(.)
strong_emostab	0.000	0.000
	(.)	(.)
und_emp=0 # strong_neurotic	0.000	0.000
	(.)	(.)
und_emp=0 # weak_neurotic	0.000	0.000
	(.)	(.)
und_emp=0 # weak_emostab	0.000	0.000
	(.)	(.)
und_emp=0 # strong_emostab	0.000	0.000
	(.)	(.)
und_emp=1 # strong_neurotic	0.000	0.000
	(.)	(.)
und_emp=1 # weak_neurotic	-0.028	-0.027
	(0.51)	(0.54)
und_emp=1 # weak_emostab	0.046	-0.047
	(0.30)	(0.28)

und_emp=1 # strong_emostab	-0.036	-0.062
	(0.42)	(0.14)
age	0.013***	0.016***
	(0.00)	(0.00)
h_income	-0.027***	-0.034***
	(0.00)	(0.00)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.055**	-0.008
	(0.01)	(0.72)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.326***	-0.402***
	(0.00)	(0.00)
5 to 14 years	-0.198***	-0.240***
	(0.00)	(0.00)
Constant	-0.420***	-0.610***
	(0.00)	(0.00)
Observations	48050	43392
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	Standardized values of (losatft)	Standardized values of (losatft)
und_emp=0	0.000	0.000
	(.)	(.)
und_emp=1	0.243***	0.202***
	(0.00)	(0.00)
strong_ineff	0.000	0.000
	(.)	(.)
weak_ineff	0.000	0.000
	(.)	(.)
weak_diligent	0.000	0.000
	(.)	(.)
strong_diligent	0.000	0.000
	(.)	(.)
und_emp=0 # strong_ineff	0.000	0.000
	(.)	(.)
und_emp=0 # weak_ineff	0.000	0.000
	(.)	(.)
und_emp=0 # weak_diligent	0.000	0.000
	(.)	(.)
und_emp=0 # strong_diligent	0.000	0.000
	(.)	(.)
und_emp=1 # strong_ineff	0.000	0.000

	(.)	(.)
und_emp=1 # weak_ineff	-0.004	0.040
	(0.93)	(0.34)
und_emp=1 # weak_diligent	0.005	0.006
	(0.91)	(0.88)
und_emp=1 # strong_diligent	-0.031	0.089**
	(0.51)	(0.05)
age	0.013***	0.016***
	(0.00)	(0.00)
h_income	-0.027***	-0.034***
	(0.00)	(0.00)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.055**	-0.008
	(0.01)	(0.73)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.326***	-0.402***
	(0.00)	(0.00)
5 to 14 years	-0.198***	-0.240***
	(0.00)	(0.00)
Constant	-0.421***	-0.611***
	(0.00)	(0.00)
Observations	48056	43388
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	Standardized values of (losatft)	Standardized values of (losatft)
und_emp=0	0.000	0.000
	(.)	(.)
und_emp=1	0.341***	0.241***
	(0.00)	(0.00)
strong_intro	0.000	0.000
	(.)	(.)
weak_intro	0.000	0.000
	(.)	(.)
weak_extro	0.000	0.000
	(.)	(.)
strong_extro	0.000	0.000
	(.)	(.)
und_emp=0 # strong_intro	0.000	0.000
	(.)	(.)
und_emp=0 # weak_intro	0.000	0.000
	(.)	(.)

und_emp=0 # weak_extro	0.000	0.000
	(.)	(.)
und_emp=0 # strong_extro	0.000	0.000
	(.)	(.)
und_emp=1 # strong_intro	0.000	0.000
	(.)	(.)
und_emp=1 # weak_intro	-0.150***	0.009
	(0.00)	(0.84)
und_emp=1 # weak_extro	-0.116***	-0.046
	(0.01)	(0.31)
und_emp=1 # strong_extro	-0.157***	0.012
	(0.00)	(0.79)
age	0.013***	0.016***
	(0.00)	(0.00)
h_income	-0.027***	-0.034***
	(0.00)	(0.00)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.055**	-0.008
	(0.01)	(0.73)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.326***	-0.402***
	(0.00)	(0.00)
5 to 14 years	-0.198***	-0.240***
	(0.00)	(0.00)
Constant	-0.422***	-0.610***
	(0.00)	(0.00)
Observations	48056	43399
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	Standardized values of (losatft)	Standardized values of (losatft)
und_emp=0	0.000	0.000
	(.)	(.)
und_emp=1	0.221***	0.270***
	(0.00)	(0.00)
strong_disagr	0.000	0.000
	(.)	(.)
weak_disagr	0.000	0.000
	(.)	(.)
weak_agreab	0.000	0.000
	(.)	(.)
strong_agreab	0.000	0.000
	(.)	(.)

und_emp=0 # strong_disagr	0.000	0.000
	(.)	(.)
und_emp=0 # weak_disagr	0.000	0.000
	(.)	(.)
und_emp=0 # weak_agreab	0.000	0.000
	(.)	(.)
und_emp=0 # strong_agreab	0.000	0.000
	(.)	(.)
und_emp=1 # strong_disagr	0.000	0.000
	(.)	(.)
und_emp=1 # weak_disagr	-0.014	-0.042
	(0.75)	(0.36)
und_emp=1 # weak_agreab	0.015	-0.096**
	(0.73)	(0.03)
und_emp=1 # strong_agreab	0.058	-0.004
	(0.20)	(0.93)
age	0.013***	0.016***
	(0.00)	(0.00)
h_income	-0.027***	-0.034***
	(0.00)	(0.00)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.055**	-0.008
	(0.01)	(0.73)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.326***	-0.402***
	(0.00)	(0.00)
5 to 14 years	-0.199***	-0.239***
	(0.00)	(0.00)
Constant	-0.421***	-0.612***
	(0.00)	(0.00)
Observations	48045	43403
p-values in parentheses		
="* p<.10	* p<.05	* p<.05
	(1)	(1)
	Standardized values of (losatft)	Standardized values of (losatft)
und_emp=0	0.000	0.000
	(.)	(.)
und_emp=1	0.166***	0.228***
	(0.00)	(0.00)
strong_close	0.000	0.000
	(.)	(.)
weak_close	0.000	0.000

	(.)	(.)
weak_open	0.000	0.000
	(.)	(.)
strong_open	0.000	0.000
	(.)	(.)
und_emp=0 # strong_close	0.000	0.000
	(.)	(.)
und_emp=0 # weak_close	0.000	0.000
	(.)	(.)
und_emp=0 # weak_open	0.000	0.000
	(.)	(.)
und_emp=0 # strong_open	0.000	0.000
	(.)	(.)
und_emp=1 # strong_close	0.000	0.000
	(.)	(.)
und_emp=1 # weak_close	0.101**	-0.017
	(0.02)	(0.67)
und_emp=1 # weak_open	0.045	-0.003
	(0.31)	(0.94)
und_emp=1 # strong_open	0.135***	0.044
	(0.00)	(0.32)
age	0.013***	0.016***
	(0.00)	(0.00)
h_income	-0.027***	-0.034***
	(0.00)	(0.00)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.055**	-0.008
	(0.01)	(0.72)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.326***	-0.402***
	(0.00)	(0.00)
5 to 14 years	-0.199***	-0.240***
	(0.00)	(0.00)
Constant	-0.420***	-0.611***
	(0.00)	(0.00)
Observations	48050	43391
p-values in parentheses		
="* p<.10	** p<.05	** p<.05

	Table A7	
FIXED EFFECT ESTIMATIONS OF THE EFFECT OF UNDEREMPLOYMENT ON FREE TIME SATISFACTION		
	(1)	(1)
	Males	Females
over_emp=0	0.000	0.000
	(.)	(.)
over_emp=1	-0.371***	-0.407***
	(0.00)	(0.00)
strong_external	0.000	0.000
	(.)	(.)
weak_external	0.000	0.000
	(.)	(.)
weak_internal	0.000	0.000
	(.)	(.)
strong_inernal	0.000	0.000
	(.)	(.)
over_emp=0 # strong_external	0.000	0.000
	(.)	(.)
over_emp=0 # weak_external	0.000	0.000
	(.)	(.)
over_emp=0 # weak_internal	0.000	0.000
	(.)	(.)
over_emp=0 # strong_inernal	0.000	0.000
	(.)	(.)
over_emp=1 # strong_external	0.000	0.000
	(.)	(.)
over_emp=1 # weak_external	0.033	0.097***
	(0.30)	(0.00)
over_emp=1 # weak_internal	0.014	0.106***
	(0.64)	(0.00)
over_emp=1 # strong_inernal	0.033	0.041
	(0.30)	(0.21)
age	0.011***	0.014***
	(0.00)	(0.00)
h_income	-0.022***	-0.024***
	(0.00)	(0.00)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.053**	-0.010

	(0.01)	(0.67)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.333***	-0.394***
	(0.00)	(0.00)
5 to 14 years	-0.202***	-0.233***
	(0.00)	(0.00)
Constant	-0.226***	-0.431***
	(0.00)	(0.00)
Observations	48713	43821
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	Standardized values of (losatft)	Standardized values of (losatft)
over_emp=0	0.000	0.000
	(.)	(.)
over_emp=1	-0.373***	-0.373***
	(0.00)	(0.00)
strong_neurotic	0.000	0.000
	(.)	(.)
weak_neurotic	0.000	0.000
	(.)	(.)
weak_emostab	0.000	0.000
	(.)	(.)
strong_emostab	0.000	0.000
	(.)	(.)
over_emp=0 # strong_neurotic	0.000	0.000
	(.)	(.)
over_emp=0 # weak_neurotic	0.000	0.000
	(.)	(.)
over_emp=0 # weak_emostab	0.000	0.000
	(.)	(.)
over_emp=0 # strong_emostab	0.000	0.000
	(.)	(.)
over_emp=1 # strong_neurotic	0.000	0.000
	(.)	(.)
over_emp=1 # weak_neurotic	0.040	0.031
	(0.20)	(0.34)
over_emp=1 # weak_emostab	0.018	0.053*

	(0.55)	(0.09)
over_emp=1 # strong_emostab	0.033	0.042
	(0.27)	(0.18)
age	0.011***	0.014***
	(0.00)	(0.00)
h_income	-0.023***	-0.027***
	(0.00)	(0.00)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.049**	-0.002
	(0.02)	(0.93)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.335***	-0.403***
	(0.00)	(0.00)
5 to 14 years	-0.203***	-0.238***
	(0.00)	(0.00)
Constant	-0.248***	-0.439***
	(0.00)	(0.00)
Observations	48087	43434
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	Standardized values of (losatft)	Standardized values of (losatft)
over_emp=0	0.000	0.000
	(.)	(.)
over_emp=1	-0.350***	-0.357***
	(0.00)	(0.00)
strong_ineff	0.000	0.000
	(.)	(.)
weak_ineff	0.000	0.000
	(.)	(.)
weak_diligent	0.000	0.000
	(.)	(.)
strong_diligent	0.000	0.000
	(.)	(.)
over_emp=0 # strong_ineff	0.000	0.000
	(.)	(.)
over_emp=0 # weak_ineff	0.000	0.000
	(.)	(.)
over_emp=0 # weak_diligent	0.000	0.000
	(.)	(.)
over_emp=0 # strong_diligent	0.000	0.000
	(.)	(.)

over_emp=1 # strong_ineff	0.000	0.000
	(.)	(.)
over_emp=1 # weak_ineff	-0.004	0.020
	(0.89)	(0.54)
over_emp=1 # weak_diligent	0.008	0.037
	(0.80)	(0.23)
over_emp=1 # strong_diligent	-0.002	0.002
	(0.94)	(0.94)
age	0.011***	0.014***
	(0.00)	(0.00)
h_income	-0.023***	-0.027***
	(0.00)	(0.00)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.049**	-0.002
	(0.02)	(0.93)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.335***	-0.404***
	(0.00)	(0.00)
5 to 14 years	-0.203***	-0.238***
	(0.00)	(0.00)
Constant	-0.247***	-0.440***
	(0.00)	(0.00)
Observations	48093	43430
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	Standardized values of (losatft)	Standardized values of (losatft)
over_emp=0	0.000	0.000
	(.)	(.)
over_emp=1	-0.384***	-0.347***
	(0.00)	(0.00)
strong_intro	0.000	0.000
	(.)	(.)
weak_intro	0.000	0.000
	(.)	(.)
weak_extro	0.000	0.000
	(.)	(.)
strong_extro	0.000	0.000
	(.)	(.)
over_emp=0 # strong_intro	0.000	0.000
	(.)	(.)
over_emp=0 # weak_intro	0.000	0.000

	(.)	(.)
over_emp=0 # weak_extro	0.000	0.000
	(.)	(.)
over_emp=0 # strong_extro	0.000	0.000
	(.)	(.)
over_emp=1 # strong_intro	0.000	0.000
	(.)	(.)
over_emp=1 # weak_intro	0.058**	0.003
	(0.04)	(0.92)
over_emp=1 # weak_extro	0.054*	0.035
	(0.07)	(0.28)
over_emp=1 # strong_extro	0.027	-0.010
	(0.36)	(0.74)
age	0.011***	0.014***
	(0.00)	(0.00)
h_income	-0.023***	-0.027***
	(0.00)	(0.00)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.049**	-0.002
	(0.02)	(0.92)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.335***	-0.404***
	(0.00)	(0.00)
5 to 14 years	-0.203***	-0.238***
	(0.00)	(0.00)
Constant	-0.247***	-0.439***
	(0.00)	(0.00)
Observations	48093	43441
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	Standardized values of (losatft)	Standardized values of (losatft)
over_emp=0	0.000	0.000
	(.)	(.)
over_emp=1	-0.358***	-0.344***
	(0.00)	(0.00)
strong_disagr	0.000	0.000
	(.)	(.)
weak_disagr	0.000	0.000
	(.)	(.)
weak_agreab	0.000	0.000
	(.)	(.)
strong_agreab	0.000	0.000

	(.)	(.)
over_emp=0 # strong_disagr	0.000	0.000
	(.)	(.)
over_emp=0 # weak_disagr	0.000	0.000
	(.)	(.)
over_emp=0 # weak_agreab	0.000	0.000
	(.)	(.)
over_emp=0 # strong_agreab	0.000	0.000
	(.)	(.)
over_emp=1 # strong_disagr	0.000	0.000
	(.)	(.)
over_emp=1 # weak_disagr	0.007	0.044
	(0.81)	(0.18)
over_emp=1 # weak_agreab	0.038	-0.007
	(0.18)	(0.81)
over_emp=1 # strong_agreab	-0.012	-0.016
	(0.67)	(0.61)
age	0.011***	0.014***
	(0.00)	(0.00)
h_income	-0.023***	-0.027***
	(0.00)	(0.00)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.049**	-0.002
	(0.02)	(0.93)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.335***	-0.404***
	(0.00)	(0.00)
5 to 14 years	-0.203***	-0.238***
	(0.00)	(0.00)
Constant	-0.247***	-0.441***
	(0.00)	(0.00)
Observations	48082	43445
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	Standardized values of (losatft)	Standardized values of (losatft)
over_emp=0	0.000	0.000
	(.)	(.)
over_emp=1	-0.319***	-0.311***
	(0.00)	(0.00)
strong_close	0.000	0.000
	(.)	(.)

weak_close	0.000	0.000
	(.)	(.)
weak_open	0.000	0.000
	(.)	(.)
strong_open	0.000	0.000
	(.)	(.)
over_emp=0 # strong_close	0.000	0.000
	(.)	(.)
over_emp=0 # weak_close	0.000	0.000
	(.)	(.)
over_emp=0 # weak_open	0.000	0.000
	(.)	(.)
over_emp=0 # strong_open	0.000	0.000
	(.)	(.)
over_emp=1 # strong_close	0.000	0.000
	(.)	(.)
over_emp=1 # weak_close	-0.002	-0.024
	(0.93)	(0.45)
over_emp=1 # weak_open	-0.021	-0.014
	(0.48)	(0.65)
over_emp=1 # strong_open	-0.102***	-0.076**
	(0.00)	(0.02)
age	0.011***	0.014***
	(0.00)	(0.00)
h_income	-0.023***	-0.027***
	(0.00)	(0.00)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.049**	-0.002
	(0.02)	(0.92)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.336***	-0.403***
	(0.00)	(0.00)
5 to 14 years	-0.203***	-0.238***
	(0.00)	(0.00)
Constant	-0.246***	-0.439***
	(0.00)	(0.00)
Observations	48087	43433
p-values in parentheses		
="* p<.10	** p<.05	*** p<.01"

APPENDIX 7 – REGRESSIONS EFFECT ESTIMATIONS – CHATER 3

Chapter 3 – regression estimations

TABLE A8		
RANDOM EFFECT ESTIMATIONS OF THE PROBABILITY OF RESOLVING UNDEREMPLOYMENT		
	Males	Females
strong_external	0.000	0.000
	(.)	(.)
weak_external	0.051***	0.056***
	(0.01)	(0.00)
weak_internal	0.062***	0.040*
	(0.00)	(0.06)
strong_inernal	0.029	0.040*
	(0.19)	(0.05)
age	-0.003	-0.007
	(0.75)	(0.37)
age2	0.000	0.000
	(0.80)	(0.60)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.003	0.053***
	(0.86)	(0.00)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.006	0.047**
	(0.78)	(0.04)
5 to 14 years	-0.012	0.007
	(0.55)	(0.71)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.14)	(0.10)
[3] Bachelor or honours	-0.004	-0.043
	(0.92)	(0.36)
="[4] Adv diploma	diploma"	diploma"
	(0.42)	(0.36)
[5] Cert III or IV	0.019	-0.116**
	(0.67)	(0.01)
[8] Year 12	0.002	-0.096**
	(0.97)	(0.05)
[9] Year 11 and below	-0.005	-0.073
	(0.91)	(0.13)
Permanent	0.000	0.000
	(.)	(.)

Fixed-term	0.017	-0.030
	(0.55)	(0.29)
Casual	-0.049***	-0.016
	(0.00)	(0.30)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	0.007	-0.090*
	(0.87)	(0.07)
[3] Technicians and Trades Workers	-0.104**	-0.108**
	(0.02)	(0.03)
[4] Community and Personal Service Workers	-0.092**	-0.142***
	(0.03)	(0.00)
[5] Clerical and Administrative Workers	-0.052	-0.077
	(0.25)	(0.11)
[6] Sales Workers	-0.048	-0.207***
	(0.32)	(0.00)
[7] Machinery Operators and Drivers	-0.084*	-0.197***
	(0.07)	(0.00)
[8] Labourers	-0.116***	-0.183***
	(0.01)	(0.00)
australian=0	0.000	0.000
	(.)	(.)
australian=1	-0.010	0.104**
	(0.84)	(0.02)
year=2017	-0.595***	-0.532***
	(0.00)	(0.00)
Constant	0.693***	0.894***
	(0.00)	(0.00)
Observations	4460	4486
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	re_und	re_und
strong_neurotic	0.000	0.000
	(.)	(.)
weak_neurotic	0.014	-0.011
	(0.48)	(0.58)
weak_emostab	0.038*	0.032
	(0.07)	(0.13)
strong_emostab	0.030	0.028
	(0.17)	(0.18)
age	0.001	-0.006
	(0.87)	(0.49)
age2	-0.000	0.000
	(0.85)	(0.75)

partner=0	0.000	0.000
	(.)	(.)
partner=1	0.009	0.059***
	(0.63)	(0.00)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.018	0.053**
	(0.41)	(0.02)
5 to 14 years	-0.001	0.010
	(0.97)	(0.61)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.09)	(0.09)
[3] Bachelor or honours	0.015	-0.036
	(0.73)	(0.44)
="[4] Adv diploma	diploma"	diploma"
	(0.22)	(0.43)
[5] Cert III or IV	0.024	-0.104**
	(0.58)	(0.02)
[8] Year 12	0.016	-0.092*
	(0.72)	(0.05)
[9] Year 11 and below	0.013	-0.068
	(0.76)	(0.14)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.021	-0.025
	(0.47)	(0.37)
Casual	-0.060***	-0.018
	(0.00)	(0.27)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	0.013	-0.086*
	(0.77)	(0.08)
[3] Technicians and Trades Workers	-0.090**	-0.103**
	(0.04)	(0.04)
[4] Community and Personal Service Workers	-0.087**	-0.142***
	(0.05)	(0.00)
[5] Clerical and Administrative Workers	-0.038	-0.077
	(0.40)	(0.11)
[6] Sales Workers	-0.036	-0.198***
	(0.46)	(0.00)
[7] Machinery Operators and Drivers	-0.063	-0.188***
	(0.17)	(0.00)
[8] Labourers	-0.100**	-0.190***

	(0.02)	(0.00)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.036	0.050
	(0.46)	(0.25)
year=2017	-0.592***	-0.537***
	(0.00)	(0.00)
Constant	0.587***	0.872***
	(0.00)	(0.00)
Observations	4414	4407
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	re_und	re_und
strong_ineff	0.000	0.000
	(.)	(.)
weak_ineff	-0.001	0.028
	(0.97)	(0.18)
weak_diligent	-0.016	0.018
	(0.42)	(0.38)
strong_diligent	-0.034	0.041*
	(0.13)	(0.05)
age	0.001	-0.006
	(0.91)	(0.46)
age2	-0.000	0.000
	(0.91)	(0.70)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.008	0.056***
	(0.66)	(0.00)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.019	0.054**
	(0.41)	(0.02)
5 to 14 years	-0.000	0.010
	(0.99)	(0.58)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.08)	(0.07)
[3] Bachelor or honours	0.013	-0.038
	(0.77)	(0.40)
="[4] Adv diploma	diploma"	diploma"
	(0.25)	(0.41)
[5] Cert III or IV	0.023	-0.107**
	(0.60)	(0.02)

[8] Year 12	0.018	-0.094**
	(0.69)	(0.05)
[9] Year 11 and below	0.011	-0.070
	(0.80)	(0.13)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.019	-0.027
	(0.51)	(0.35)
Casual	-0.062***	-0.019
	(0.00)	(0.24)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	0.014	-0.083*
	(0.75)	(0.09)
[3] Technicians and Trades Workers	-0.098**	-0.102**
	(0.03)	(0.04)
[4] Community and Personal Service Workers	-0.089**	-0.140***
	(0.04)	(0.00)
[5] Clerical and Administrative Workers	-0.039	-0.074
	(0.39)	(0.13)
[6] Sales Workers	-0.042	-0.196***
	(0.38)	(0.00)
[7] Machinery Operators and Drivers	-0.075	-0.186***
	(0.10)	(0.00)
[8] Labourers	-0.109**	-0.188***
	(0.01)	(0.00)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.036	0.054
	(0.46)	(0.21)
year=2017	-0.595***	-0.540***
	(0.00)	(0.00)
Constant	0.633***	0.874***
	(0.00)	(0.00)
Observations	4414	4406
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	re_und	re_und
strong_intro	0.000	0.000
	(.)	(.)
weak_intro	0.015	0.002
	(0.47)	(0.94)
weak_extro	0.014	0.022
	(0.50)	(0.30)

strong_extro	0.010	0.007
	(0.65)	(0.75)
age	0.001	-0.006
	(0.87)	(0.48)
age2	-0.000	0.000
	(0.86)	(0.72)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.008	0.056***
	(0.66)	(0.00)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.016	0.055**
	(0.47)	(0.02)
5 to 14 years	-0.002	0.009
	(0.92)	(0.64)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.09)	(0.08)
[3] Bachelor or honours	0.014	-0.037
	(0.74)	(0.42)
="[4] Adv diploma	diploma"	diploma"
	(0.22)	(0.42)
[5] Cert III or IV	0.024	-0.105**
	(0.57)	(0.02)
[8] Year 12	0.019	-0.094**
	(0.67)	(0.05)
[9] Year 11 and below	0.012	-0.069
	(0.78)	(0.14)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.021	-0.025
	(0.48)	(0.37)
Casual	-0.061***	-0.019
	(0.00)	(0.23)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	0.016	-0.081*
	(0.72)	(0.10)
[3] Technicians and Trades Workers	-0.092**	-0.102**
	(0.04)	(0.04)
[4] Community and Personal Service Workers	-0.086**	-0.139***
	(0.05)	(0.00)
[5] Clerical and Administrative Workers	-0.036	-0.072

	(0.42)	(0.14)
[6] Sales Workers	-0.038	-0.197***
	(0.42)	(0.00)
[7] Machinery Operators and Drivers	-0.066	-0.188***
	(0.15)	(0.00)
[8] Labourers	-0.102**	-0.189***
	(0.02)	(0.00)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.034	0.054
	(0.49)	(0.21)
year=2017	-0.593***	-0.541***
	(0.00)	(0.00)
Constant	0.599***	0.876***
	(0.00)	(0.00)
Observations	4414	4410
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	re_und	re_und
strong_disagr	0.000	0.000
	(.)	(.)
weak_disagr	0.040*	0.022
	(0.06)	(0.35)
weak_agreab	0.005	-0.018
	(0.81)	(0.41)
strong_agreab	-0.004	-0.019
	(0.86)	(0.38)
age	0.001	-0.006
	(0.93)	(0.48)
age2	-0.000	0.000
	(0.92)	(0.72)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.009	0.056***
	(0.65)	(0.00)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.015	0.053**
	(0.49)	(0.02)
5 to 14 years	-0.001	0.008
	(0.95)	(0.66)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.09)	(0.08)

[3] Bachelor or honours	0.013	-0.037
	(0.77)	(0.42)
="[4] Adv diploma	diploma"	diploma"
	(0.24)	(0.42)
[5] Cert III or IV	0.026	-0.105**
	(0.55)	(0.02)
[8] Year 12	0.016	-0.092*
	(0.72)	(0.05)
[9] Year 11 and below	0.013	-0.070
	(0.77)	(0.13)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.020	-0.024
	(0.48)	(0.39)
Casual	-0.061***	-0.017
	(0.00)	(0.30)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	0.018	-0.080
	(0.69)	(0.10)
[3] Technicians and Trades Workers	-0.092**	-0.105**
	(0.04)	(0.04)
[4] Community and Personal Service Workers	-0.083*	-0.138***
	(0.06)	(0.00)
[5] Clerical and Administrative Workers	-0.037	-0.072
	(0.41)	(0.13)
[6] Sales Workers	-0.039	-0.196***
	(0.42)	(0.00)
[7] Machinery Operators and Drivers	-0.066	-0.192***
	(0.15)	(0.00)
[8] Labourers	-0.102**	-0.191***
	(0.02)	(0.00)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.036	0.052
	(0.46)	(0.23)
year=2017	-0.594***	-0.543***
	(0.00)	(0.00)
Constant	0.612***	0.894***
	(0.00)	(0.00)
Observations	4408	4407
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	re_und	re_und

strong_close	0.000	0.000
	(.)	(.)
weak_close	-0.018	-0.051**
	(0.40)	(0.01)
weak_open	-0.004	0.005
	(0.83)	(0.81)
strong_open	-0.006	-0.021
	(0.79)	(0.34)
age	0.001	-0.007
	(0.89)	(0.42)
age2	-0.000	0.000
	(0.88)	(0.65)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.009	0.057***
	(0.65)	(0.00)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.018	0.055**
	(0.44)	(0.02)
5 to 14 years	-0.001	0.009
	(0.94)	(0.65)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.09)	(0.09)
[3] Bachelor or honours	0.014	-0.034
	(0.75)	(0.45)
="[4] Adv diploma	diploma"	diploma"
	(0.22)	(0.42)
[5] Cert III or IV	0.025	-0.102**
	(0.56)	(0.03)
[8] Year 12	0.018	-0.090*
	(0.69)	(0.06)
[9] Year 11 and below	0.012	-0.065
	(0.78)	(0.16)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.021	-0.025
	(0.47)	(0.38)
Casual	-0.061***	-0.019
	(0.00)	(0.24)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	0.015	-0.083*
	(0.74)	(0.09)

[3] Technicians and Trades Workers	-0.091**	-0.101**
	(0.04)	(0.04)
[4] Community and Personal Service Workers	-0.087**	-0.139***
	(0.05)	(0.00)
[5] Clerical and Administrative Workers	-0.038	-0.074
	(0.40)	(0.12)
[6] Sales Workers	-0.039	-0.198***
	(0.41)	(0.00)
[7] Machinery Operators and Drivers	-0.067	-0.187***
	(0.15)	(0.00)
[8] Labourers	-0.103**	-0.186***
	(0.02)	(0.00)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.035	0.050
	(0.48)	(0.25)
year=2017	-0.593***	-0.542***
	(0.00)	(0.00)
Constant	0.621***	0.915***
	(0.00)	(0.00)
Observations	4414	4407
p-values in parentheses		
="* p<.10	** p<.05	** p<.05

TABLE A9 RANDOM EFFECT ESTIMATIONS OF THE PROBABILITY OF RESOLVING OVEREMPLOYMENT		
	Males	Females
strong_external	0.000	0.000
	(.)	(.)
weak_external	-0.014	0.006
	(0.39)	(0.75)
weak_internal	-0.011	0.015
	(0.48)	(0.39)
strong_inernal	0.014	0.017
	(0.40)	(0.33)
age	-0.026***	-0.015***
	(0.00)	(0.01)
age2	0.000***	0.000**
	(0.00)	(0.03)
partner=0	0.000	0.000

	(.)	(.)
partner=1	-0.013	-0.030**
	(0.34)	(0.02)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.064***	0.036**
	(0.00)	(0.02)
5 to 14 years	0.040***	0.042***
	(0.00)	(0.00)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.61)	(0.24)
[3] Bachelor or honours	0.012	0.031
	(0.60)	(0.16)
="[4] Adv diploma	diploma"	diploma"
	(0.05)	(0.02)
[5] Cert III or IV	0.067***	0.086***
	(0.01)	(0.00)
[8] Year 12	0.046*	0.077***
	(0.08)	(0.00)
[9] Year 11 and below	0.069***	0.106***
	(0.01)	(0.00)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.010	0.016
	(0.50)	(0.29)
Casual	0.164***	0.153***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	0.041***	0.059***
	(0.00)	(0.00)
[3] Technicians and Trades Workers	0.048**	0.088***
	(0.01)	(0.00)
[4] Community and Personal Service Workers	0.114***	0.120***
	(0.00)	(0.00)
[5] Clerical and Administrative Workers	0.045***	0.080***
	(0.01)	(0.00)
[6] Sales Workers	0.064***	0.053**
	(0.01)	(0.04)
[7] Machinery Operators and Drivers	0.104***	0.104***
	(0.00)	(0.00)
[8] Labourers	0.187***	0.103***

	(0.00)	(0.00)
australian=0	0.000	0.000
	(.)	(.)
australian=1	-0.056*	-0.013
	(0.07)	(0.64)
year=2017	-0.330***	-0.348***
	(0.00)	(0.00)
Constant	0.912***	0.651***
	(0.00)	(0.00)
Observations	12173	10789
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	re_over	re_over
strong_neurotic	0.000	0.000
	(.)	(.)
weak_neurotic	-0.005	0.004
	(0.77)	(0.82)
weak_emostab	-0.009	0.004
	(0.59)	(0.81)
strong_emostab	-0.023	0.008
	(0.14)	(0.63)
age	-0.029***	-0.017***
	(0.00)	(0.00)
age2	0.000***	0.000**
	(0.00)	(0.02)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.012	-0.029**
	(0.38)	(0.03)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.055***	0.038**
	(0.00)	(0.01)
5 to 14 years	0.040***	0.037***
	(0.00)	(0.01)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.59)	(0.23)
[3] Bachelor or honours	0.007	0.027
	(0.74)	(0.22)
="[4] Adv diploma	diploma"	diploma"
	(0.09)	(0.02)
[5] Cert III or IV	0.066***	0.089***

	(0.01)	(0.00)
[8] Year 12	0.051*	0.081***
	(0.05)	(0.00)
[9] Year 11 and below	0.063**	0.111***
	(0.02)	(0.00)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.007	0.016
	(0.61)	(0.31)
Casual	0.161***	0.150***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	0.035**	0.056***
	(0.01)	(0.00)
[3] Technicians and Trades Workers	0.046**	0.098***
	(0.02)	(0.00)
[4] Community and Personal Service Workers	0.107***	0.118***
	(0.00)	(0.00)
[5] Clerical and Administrative Workers	0.035**	0.076***
	(0.04)	(0.00)
[6] Sales Workers	0.055**	0.045*
	(0.03)	(0.08)
[7] Machinery Operators and Drivers	0.095***	0.094***
	(0.00)	(0.00)
[8] Labourers	0.186***	0.110***
	(0.00)	(0.00)
australian=0	0.000	0.000
	(.)	(.)
australian=1	-0.053*	0.001
	(0.08)	(0.98)
year=2017	-0.336***	-0.354***
	(0.00)	(0.00)
Constant	0.974***	0.690***
	(0.00)	(0.00)
Observations	11941	10620
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	re_over	re_over
strong_ineff	0.000	0.000
	(.)	(.)
weak_ineff	-0.015	0.002
	(0.37)	(0.89)
weak_diligent	-0.011	-0.004

	(0.48)	(0.83)
strong_diligent	-0.030*	-0.022
	(0.07)	(0.19)
age	-0.029***	-0.016***
	(0.00)	(0.00)
age2	0.000***	0.000**
	(0.00)	(0.02)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.012	-0.029**
	(0.41)	(0.02)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.055***	0.037**
	(0.00)	(0.01)
5 to 14 years	0.039***	0.037***
	(0.00)	(0.01)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.62)	(0.23)
[3] Bachelor or honours	0.007	0.027
	(0.76)	(0.22)
="[4] Adv diploma	diploma"	diploma"
	(0.10)	(0.02)
[5] Cert III or IV	0.064***	0.087***
	(0.01)	(0.00)
[8] Year 12	0.049*	0.081***
	(0.06)	(0.00)
[9] Year 11 and below	0.062**	0.110***
	(0.02)	(0.00)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.008	0.016
	(0.60)	(0.30)
Casual	0.162***	0.150***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	0.034**	0.055***
	(0.02)	(0.00)
[3] Technicians and Trades Workers	0.046**	0.097***
	(0.02)	(0.00)
[4] Community and Personal Service Workers	0.107***	0.117***

	(0.00)	(0.00)
[5] Clerical and Administrative Workers	0.035**	0.075***
	(0.04)	(0.00)
[6] Sales Workers	0.055**	0.043*
	(0.02)	(0.09)
[7] Machinery Operators and Drivers	0.094***	0.090***
	(0.00)	(0.00)
[8] Labourers	0.185***	0.106***
	(0.00)	(0.00)
australian=0	0.000	0.000
	(.)	(.)
australian=1	-0.052*	0.000
	(0.09)	(0.99)
year=2017	-0.335***	-0.355***
	(0.00)	(0.00)
Constant	0.983***	0.697***
	(0.00)	(0.00)
Observations	11942	10620
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	re_over	re_over
strong_intro	0.000	0.000
	(.)	(.)
weak_intro	0.030*	0.014
	(0.06)	(0.40)
weak_extro	0.036**	0.027
	(0.02)	(0.11)
strong_extro	0.013	0.010
	(0.40)	(0.53)
age	-0.029***	-0.017***
	(0.00)	(0.00)
age2	0.000***	0.000**
	(0.00)	(0.02)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.015	-0.030**
	(0.30)	(0.02)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.055***	0.038**
	(0.00)	(0.01)
5 to 14 years	0.040***	0.037***
	(0.00)	(0.01)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)

="[2] Grad diploma	grad certificate"	grad certificate"
	(0.70)	(0.25)
[3] Bachelor or honours	0.007	0.028
	(0.75)	(0.21)
="[4] Adv diploma	diploma"	diploma"
	(0.11)	(0.02)
[5] Cert III or IV	0.064***	0.088***
	(0.01)	(0.00)
[8] Year 12	0.052*	0.081***
	(0.05)	(0.00)
[9] Year 11 and below	0.060**	0.110***
	(0.02)	(0.00)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.008	0.015
	(0.59)	(0.31)
Casual	0.162***	0.150***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	0.036**	0.056***
	(0.01)	(0.00)
[3] Technicians and Trades Workers	0.047**	0.098***
	(0.02)	(0.00)
[4] Community and Personal Service Workers	0.108***	0.119***
	(0.00)	(0.00)
[5] Clerical and Administrative Workers	0.036**	0.076***
	(0.04)	(0.00)
[6] Sales Workers	0.055**	0.045*
	(0.02)	(0.08)
[7] Machinery Operators and Drivers	0.098***	0.094***
	(0.00)	(0.00)
[8] Labourers	0.187***	0.110***
	(0.00)	(0.00)
australian=0	0.000	0.000
	(.)	(.)
australian=1	-0.053*	0.001
	(0.08)	(0.98)
year=2017	-0.336***	-0.355***
	(0.00)	(0.00)
Constant	0.943***	0.680***
	(0.00)	(0.00)
Observations	11942	10620
p-values in parentheses		

="* p<.10	** p<.05	** p<.05
	(1)	(1)
	re_over	re_over
strong_disagr	0.000	0.000
	(.)	(.)
weak_disagr	-0.010	0.003
	(0.53)	(0.87)
weak_agreab	-0.003	0.007
	(0.86)	(0.67)
strong_agreab	-0.008	0.026
	(0.61)	(0.11)
age	-0.029***	-0.016***
	(0.00)	(0.00)
age2	0.000***	0.000**
	(0.00)	(0.02)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.013	-0.027**
	(0.36)	(0.03)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.056***	0.039***
	(0.00)	(0.01)
5 to 14 years	0.040***	0.037***
	(0.00)	(0.01)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.61)	(0.23)
[3] Bachelor or honours	0.007	0.028
	(0.75)	(0.21)
="[4] Adv diploma	diploma"	diploma"
	(0.10)	(0.02)
[5] Cert III or IV	0.065***	0.090***
	(0.01)	(0.00)
[8] Year 12	0.052*	0.083***
	(0.05)	(0.00)
[9] Year 11 and below	0.063**	0.113***
	(0.02)	(0.00)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.008	0.016
	(0.59)	(0.30)
Casual	0.162***	0.149***
	(0.00)	(0.00)

[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	0.035**	0.055***
	(0.01)	(0.00)
[3] Technicians and Trades Workers	0.047**	0.100***
	(0.02)	(0.00)
[4] Community and Personal Service Workers	0.108***	0.116***
	(0.00)	(0.00)
[5] Clerical and Administrative Workers	0.036**	0.074***
	(0.04)	(0.00)
[6] Sales Workers	0.056**	0.043*
	(0.02)	(0.09)
[7] Machinery Operators and Drivers	0.097***	0.094***
	(0.00)	(0.00)
[8] Labourers	0.187***	0.112***
	(0.00)	(0.00)
australian=0	0.000	0.000
	(.)	(.)
australian=1	-0.053*	0.001
	(0.08)	(0.97)
year=2017	-0.334***	-0.354***
	(0.00)	(0.00)
Constant	0.966***	0.678***
	(0.00)	(0.00)
Observations	11941	10621
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	re_over	re_over
strong_close	0.000	0.000
	(.)	(.)
weak_close	0.010	0.004
	(0.53)	(0.80)
weak_open	-0.007	0.003
	(0.66)	(0.88)
strong_open	-0.013	-0.003
	(0.44)	(0.85)
age	-0.029***	-0.017***
	(0.00)	(0.00)
age2	0.000***	0.000**
	(0.00)	(0.02)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.015	-0.029**
	(0.30)	(0.02)

no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.055***	0.038**
	(0.00)	(0.01)
5 to 14 years	0.040***	0.037***
	(0.00)	(0.01)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.65)	(0.24)
[3] Bachelor or honours	0.005	0.026
	(0.82)	(0.23)
="[4] Adv diploma	diploma"	diploma"
	(0.13)	(0.02)
[5] Cert III or IV	0.061**	0.088***
	(0.01)	(0.00)
[8] Year 12	0.048*	0.081***
	(0.07)	(0.00)
[9] Year 11 and below	0.058**	0.110***
	(0.03)	(0.00)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.008	0.016
	(0.57)	(0.30)
Casual	0.161***	0.151***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	0.035**	0.055***
	(0.01)	(0.00)
[3] Technicians and Trades Workers	0.047**	0.098***
	(0.02)	(0.00)
[4] Community and Personal Service Workers	0.108***	0.118***
	(0.00)	(0.00)
[5] Clerical and Administrative Workers	0.035**	0.075***
	(0.04)	(0.00)
[6] Sales Workers	0.055**	0.044*
	(0.02)	(0.09)
[7] Machinery Operators and Drivers	0.095***	0.093***
	(0.00)	(0.00)
[8] Labourers	0.186***	0.109***
	(0.00)	(0.00)
australian=0	0.000	0.000
	(.)	(.)

australian=1	-0.052*	0.001
	(0.08)	(0.98)
year=2017	-0.335***	-0.355***
	(0.00)	(0.00)
Constant	0.976***	0.692***
	(0.00)	(0.00)
Observations	11941	10620
p-values in parentheses		
="* p<.10	** p<.05	** p<.05

TABLE A10		
RANDOM EFFECT ESTIMATIONS OF THE PROBABILITY OF WORKING AT MORE IF UNDEREMPLOYED		
	Males	Females
strong_external	0.000	0.000
	(.)	(.)
weak_external	0.003	-0.032*
	(0.87)	(0.07)
weak_internal	0.024	-0.022
	(0.19)	(0.23)
strong_inernal	0.007	-0.026
	(0.72)	(0.15)
age	-0.008	0.009
	(0.25)	(0.22)
age2	0.000	-0.000*
	(0.38)	(0.10)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.011	0.007
	(0.52)	(0.60)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.008	0.037*
	(0.67)	(0.06)
5 to 14 years	0.021	0.015
	(0.25)	(0.35)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.54)	(0.04)
[3] Bachelor or honours	-0.046	-0.082**
	(0.23)	(0.04)
="[4] Adv diploma	diploma"	diploma"

	(0.69)	(0.01)
[5] Cert III or IV	-0.025	-0.113***
	(0.51)	(0.01)
[8] Year 12	-0.091**	-0.094**
	(0.02)	(0.03)
[9] Year 11 and below	-0.072*	-0.125***
	(0.06)	(0.00)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.116***	0.017
	(0.00)	(0.49)
Casual	0.219***	0.194***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.004	0.017
	(0.91)	(0.69)
[3] Technicians and Trades Workers	-0.055	-0.074*
	(0.17)	(0.09)
[4] Community and Personal Service Workers	-0.002	0.011
	(0.95)	(0.79)
[5] Clerical and Administrative Workers	0.004	0.003
	(0.91)	(0.95)
[6] Sales Workers	0.032	-0.041
	(0.46)	(0.34)
[7] Machinery Operators and Drivers	-0.023	-0.076*
	(0.58)	(0.09)
[8] Labourers	-0.003	-0.000
	(0.93)	(0.99)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.084**	0.077**
	(0.05)	(0.04)
year=2017	0.438***	0.478***
	(0.00)	(0.00)
Constant	0.703***	0.459***
	(0.00)	(0.00)
Observations	5300	5468
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_und	ch_und
strong_neurotic	0.000	0.000
	(.)	(.)
weak_neurotic	-0.018	0.021

	(0.31)	(0.24)
weak_emostab	0.032*	0.033*
	(0.07)	(0.07)
strong_emostab	0.028	0.025
	(0.14)	(0.15)
age	-0.004	0.006
	(0.54)	(0.40)
age2	0.000	-0.000
	(0.73)	(0.20)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.002	-0.002
	(0.89)	(0.87)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.007	0.042**
	(0.73)	(0.03)
5 to 14 years	0.017	0.020
	(0.35)	(0.21)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.43)	(0.03)
[3] Bachelor or honours	-0.038	-0.078**
	(0.31)	(0.04)
="[4] Adv diploma	diploma"	diploma"
	(0.96)	(0.01)
[5] Cert III or IV	-0.018	-0.114***
	(0.64)	(0.00)
[8] Year 12	-0.082**	-0.091**
	(0.04)	(0.02)
[9] Year 11 and below	-0.066*	-0.126***
	(0.08)	(0.00)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.120***	0.012
	(0.00)	(0.64)
Casual	0.210***	0.195***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.006	0.023
	(0.89)	(0.57)
[3] Technicians and Trades Workers	-0.048	-0.051
	(0.22)	(0.22)

[4] Community and Personal Service Workers	-0.001	0.025
	(0.98)	(0.53)
[5] Clerical and Administrative Workers	0.014	0.002
	(0.73)	(0.96)
[6] Sales Workers	0.044	-0.040
	(0.29)	(0.34)
[7] Machinery Operators and Drivers	-0.015	-0.055
	(0.71)	(0.21)
[8] Labourers	0.009	0.017
	(0.81)	(0.68)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.075*	0.061
	(0.07)	(0.11)
year=2017	0.451***	0.483***
	(0.00)	(0.00)
Constant	0.597***	0.456***
	(0.00)	(0.00)
Observations	5272	5403
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_und	ch_und
strong_ineff	0.000	0.000
	(.)	(.)
weak_ineff	0.006	0.015
	(0.73)	(0.39)
weak_diligent	-0.019	-0.004
	(0.27)	(0.81)
strong_diligent	-0.027	0.046**
	(0.16)	(0.01)
age	-0.006	0.006
	(0.40)	(0.36)
age2	0.000	-0.000
	(0.55)	(0.18)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.003	-0.002
	(0.88)	(0.88)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.006	0.042**
	(0.76)	(0.03)
5 to 14 years	0.016	0.021
	(0.38)	(0.18)

[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.39)	(0.04)
[3] Bachelor or honours	-0.040	-0.074*
	(0.30)	(0.06)
="[4] Adv diploma	diploma"	diploma"
	(0.89)	(0.01)
[5] Cert III or IV	-0.017	-0.110***
	(0.65)	(0.00)
[8] Year 12	-0.078**	-0.088**
	(0.04)	(0.03)
[9] Year 11 and below	-0.066*	-0.121***
	(0.08)	(0.00)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.117***	0.010
	(0.00)	(0.68)
Casual	0.209***	0.193***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.005	0.025
	(0.91)	(0.54)
[3] Technicians and Trades Workers	-0.057	-0.050
	(0.14)	(0.23)
[4] Community and Personal Service Workers	-0.005	0.026
	(0.89)	(0.51)
[5] Clerical and Administrative Workers	0.010	0.003
	(0.79)	(0.93)
[6] Sales Workers	0.034	-0.038
	(0.42)	(0.37)
[7] Machinery Operators and Drivers	-0.029	-0.052
	(0.48)	(0.24)
[8] Labourers	-0.002	0.019
	(0.96)	(0.64)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.077*	0.062*
	(0.06)	(0.10)
year=2017	0.449***	0.484***
	(0.00)	(0.00)
Constant	0.651***	0.446***
	(0.00)	(0.00)

Observations	5272	5401
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_und	ch_und
strong_intro	0.000	0.000
	(.)	(.)
weak_intro	0.009	-0.020
	(0.61)	(0.29)
weak_extro	0.027	-0.009
	(0.13)	(0.63)
strong_extro	0.018	0.027
	(0.33)	(0.14)
age	-0.005	0.007
	(0.46)	(0.35)
age2	0.000	-0.000
	(0.64)	(0.18)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.003	0.000
	(0.84)	(1.00)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.003	0.041**
	(0.87)	(0.04)
5 to 14 years	0.013	0.019
	(0.48)	(0.24)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.41)	(0.05)
[3] Bachelor or honours	-0.039	-0.073*
	(0.30)	(0.06)
="[4] Adv diploma	diploma"	diploma"
	(0.91)	(0.01)
[5] Cert III or IV	-0.018	-0.107***
	(0.64)	(0.01)
[8] Year 12	-0.079**	-0.086**
	(0.04)	(0.03)
[9] Year 11 and below	-0.067*	-0.119***
	(0.08)	(0.00)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.118***	0.011
	(0.00)	(0.67)

Casual	0.210***	0.192***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.003	0.024
	(0.94)	(0.56)
[3] Technicians and Trades Workers	-0.050	-0.050
	(0.20)	(0.24)
[4] Community and Personal Service Workers	-0.002	0.026
	(0.95)	(0.52)
[5] Clerical and Administrative Workers	0.014	0.002
	(0.72)	(0.95)
[6] Sales Workers	0.040	-0.038
	(0.35)	(0.36)
[7] Machinery Operators and Drivers	-0.018	-0.056
	(0.65)	(0.20)
[8] Labourers	0.006	0.019
	(0.87)	(0.64)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.073*	0.063*
	(0.07)	(0.09)
year=2017	0.449***	0.479***
	(0.00)	(0.00)
Constant	0.612***	0.455***
	(0.00)	(0.00)
Observations	5272	5406
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_und	ch_und
strong_disagr	0.000	0.000
	(.)	(.)
weak_disagr	0.010	-0.002
	(0.61)	(0.93)
weak_agreab	-0.010	0.005
	(0.58)	(0.79)
strong_agreab	0.009	-0.001
	(0.63)	(0.97)
age	-0.006	0.006
	(0.38)	(0.37)
age2	0.000	-0.000
	(0.54)	(0.19)
partner=0	0.000	0.000
	(.)	(.)

partner=1	-0.002	-0.003
	(0.91)	(0.84)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.006	0.043**
	(0.76)	(0.03)
5 to 14 years	0.016	0.021
	(0.38)	(0.19)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.43)	(0.04)
[3] Bachelor or honours	-0.041	-0.075*
	(0.28)	(0.05)
="[4] Adv diploma	diploma"	diploma"
	(0.89)	(0.01)
[5] Cert III or IV	-0.017	-0.110***
	(0.65)	(0.00)
[8] Year 12	-0.081**	-0.089**
	(0.04)	(0.03)
[9] Year 11 and below	-0.068*	-0.122***
	(0.08)	(0.00)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.119***	0.012
	(0.00)	(0.62)
Casual	0.210***	0.194***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.005	0.024
	(0.90)	(0.55)
[3] Technicians and Trades Workers	-0.053	-0.052
	(0.18)	(0.21)
[4] Community and Personal Service Workers	-0.004	0.024
	(0.92)	(0.54)
[5] Clerical and Administrative Workers	0.011	0.004
	(0.79)	(0.93)
[6] Sales Workers	0.035	-0.039
	(0.40)	(0.35)
[7] Machinery Operators and Drivers	-0.022	-0.055
	(0.58)	(0.21)
[8] Labourers	0.002	0.015
	(0.96)	(0.72)

australian=0	0.000	0.000
	(.)	(.)
australian=1	0.075*	0.062*
	(0.07)	(0.10)
year=2017	0.448***	0.481***
	(0.00)	(0.00)
Constant	0.644***	0.463***
	(0.00)	(0.00)
Observations	5265	5403
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_und	ch_und
strong_close	0.000	0.000
	(.)	(.)
weak_close	0.005	-0.012
	(0.77)	(0.51)
weak_open	-0.021	0.026
	(0.26)	(0.16)
strong_open	0.016	0.050***
	(0.40)	(0.01)
age	-0.005	0.006
	(0.44)	(0.39)
age2	0.000	-0.000
	(0.61)	(0.21)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.002	0.000
	(0.91)	(0.97)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.007	0.046**
	(0.74)	(0.02)
5 to 14 years	0.017	0.023
	(0.35)	(0.15)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.45)	(0.06)
[3] Bachelor or honours	-0.040	-0.074*
	(0.30)	(0.06)
="[4] Adv diploma	diploma"	diploma"
	(0.94)	(0.01)
[5] Cert III or IV	-0.015	-0.100***
	(0.69)	(0.01)

[8] Year 12	-0.077**	-0.078*
	(0.05)	(0.05)
[9] Year 11 and below	-0.064*	-0.105***
	(0.10)	(0.01)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.117***	0.008
	(0.00)	(0.74)
Casual	0.209***	0.190***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.004	0.020
	(0.93)	(0.62)
[3] Technicians and Trades Workers	-0.051	-0.053
	(0.20)	(0.21)
[4] Community and Personal Service Workers	-0.002	0.025
	(0.95)	(0.52)
[5] Clerical and Administrative Workers	0.012	0.004
	(0.75)	(0.92)
[6] Sales Workers	0.041	-0.037
	(0.33)	(0.37)
[7] Machinery Operators and Drivers	-0.021	-0.049
	(0.60)	(0.26)
[8] Labourers	0.005	0.018
	(0.89)	(0.66)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.075*	0.062*
	(0.07)	(0.10)
year=2017	0.449***	0.482***
	(0.00)	(0.00)
Constant	0.627***	0.438***
	(0.00)	(0.00)
Observations	5272	5403
p-values in parentheses		
="* p<.10	** p<.05	** p<.05

	(1)	(1)
	Adapting hours	Adapting hours
strong_external	0.000	0.000
	(.)	(.)
weak_external	0.003	-0.032*
	(0.87)	(0.07)
weak_internal	0.024	-0.022
	(0.19)	(0.23)
strong_inernal	0.007	-0.026
	(0.72)	(0.15)
Observations	5300	5468
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_und	ch_und
strong_neurotic	0.000	0.000
	(.)	(.)
weak_neurotic	-0.018	0.021
	(0.31)	(0.24)
weak_emostab	0.032*	0.033*
	(0.07)	(0.07)
strong_emostab	0.028	0.025
	(0.14)	(0.15)
Observations	5272	5403
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_und	ch_und
strong_ineff	0.000	0.000
	(.)	(.)
weak_ineff	0.006	0.015
	(0.73)	(0.39)
weak_diligent	-0.019	-0.004
	(0.27)	(0.81)
strong_diligent	-0.027	0.046**
	(0.16)	(0.01)
Observations	5272	5401
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_und	ch_und
strong_intro	0.000	0.000
	(.)	(.)

weak_intro	0.009	-0.020
	(0.61)	(0.29)
weak_extro	0.027	-0.009
	(0.13)	(0.63)
strong_extro	0.018	0.027
	(0.33)	(0.14)
Observations	5272	5406
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_und	ch_und
strong_disagr	0.000	0.000
	(.)	(.)
weak_disagr	0.010	-0.002
	(0.61)	(0.93)
weak_agreab	-0.010	0.005
	(0.58)	(0.79)
strong_agreab	0.009	-0.001
	(0.63)	(0.97)
Observations	5265	5403
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_und	ch_und
strong_close	0.000	0.000
	(.)	(.)
weak_close	0.005	-0.012
	(0.77)	(0.51)
weak_open	-0.021	0.026
	(0.26)	(0.16)
strong_open	0.016	0.050***
	(0.40)	(0.01)
Observations	5272	5403
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_und	ch_und
strong_external	0.000	0.000
	(.)	(.)
weak_external	0.003	-0.032*
	(0.87)	(0.07)
weak_internal	0.024	-0.022
	(0.19)	(0.23)
strong_inernal	0.007	-0.026
	(0.72)	(0.15)
age	-0.008	0.009

	(0.25)	(0.22)
age2	0.000	-0.000*
	(0.38)	(0.10)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.011	0.007
	(0.52)	(0.60)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.008	0.037*
	(0.67)	(0.06)
5 to 14 years	0.021	0.015
	(0.25)	(0.35)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.54)	(0.04)
[3] Bachelor or honours	-0.046	-0.082**
	(0.23)	(0.04)
="[4] Adv diploma	diploma"	diploma"
	(0.69)	(0.01)
[5] Cert III or IV	-0.025	-0.113***
	(0.51)	(0.01)
[8] Year 12	-0.091**	-0.094**
	(0.02)	(0.03)
[9] Year 11 and below	-0.072*	-0.125***
	(0.06)	(0.00)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.116***	0.017
	(0.00)	(0.49)
Casual	0.219***	0.194***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.004	0.017
	(0.91)	(0.69)
[3] Technicians and Trades Workers	-0.055	-0.074*
	(0.17)	(0.09)
[4] Community and Personal Service Workers	-0.002	0.011
	(0.95)	(0.79)
[5] Clerical and Administrative Workers	0.004	0.003
	(0.91)	(0.95)
[6] Sales Workers	0.032	-0.041

	(0.46)	(0.34)
[7] Machinery Operators and Drivers	-0.023	-0.076*
	(0.58)	(0.09)
[8] Labourers	-0.003	-0.000
	(0.93)	(0.99)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.084**	0.077**
	(0.05)	(0.04)
Constant	0.703***	0.459***
	(0.00)	(0.00)
Observations	5300	5468
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_und	ch_und
strong_neurotic	0.000	0.000
	(.)	(.)
weak_neurotic	-0.018	0.021
	(0.31)	(0.24)
weak_emostab	0.032*	0.033*
	(0.07)	(0.07)
strong_emostab	0.028	0.025
	(0.14)	(0.15)
age	-0.004	0.006
	(0.54)	(0.40)
age2	0.000	-0.000
	(0.73)	(0.20)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.002	-0.002
	(0.89)	(0.87)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.007	0.042**
	(0.73)	(0.03)
5 to 14 years	0.017	0.020
	(0.35)	(0.21)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.43)	(0.03)
[3] Bachelor or honours	-0.038	-0.078**
	(0.31)	(0.04)
="[4] Adv diploma	diploma"	diploma"

	(0.96)	(0.01)
[5] Cert III or IV	-0.018	-0.114***
	(0.64)	(0.00)
[8] Year 12	-0.082**	-0.091**
	(0.04)	(0.02)
[9] Year 11 and below	-0.066*	-0.126***
	(0.08)	(0.00)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.120***	0.012
	(0.00)	(0.64)
Casual	0.210***	0.195***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.006	0.023
	(0.89)	(0.57)
[3] Technicians and Trades Workers	-0.048	-0.051
	(0.22)	(0.22)
[4] Community and Personal Service Workers	-0.001	0.025
	(0.98)	(0.53)
[5] Clerical and Administrative Workers	0.014	0.002
	(0.73)	(0.96)
[6] Sales Workers	0.044	-0.040
	(0.29)	(0.34)
[7] Machinery Operators and Drivers	-0.015	-0.055
	(0.71)	(0.21)
[8] Labourers	0.009	0.017
	(0.81)	(0.68)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.075*	0.061
	(0.07)	(0.11)
Constant	0.597***	0.456***
	(0.00)	(0.00)
Observations	5272	5403
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_und	ch_und
strong_ineff	0.000	0.000
	(.)	(.)
weak_ineff	0.006	0.015
	(0.73)	(0.39)
weak_diligent	-0.019	-0.004

	(0.27)	(0.81)
strong_diligent	-0.027	0.046**
	(0.16)	(0.01)
age	-0.006	0.006
	(0.40)	(0.36)
age2	0.000	-0.000
	(0.55)	(0.18)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.003	-0.002
	(0.88)	(0.88)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.006	0.042**
	(0.76)	(0.03)
5 to 14 years	0.016	0.021
	(0.38)	(0.18)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.39)	(0.04)
[3] Bachelor or honours	-0.040	-0.074*
	(0.30)	(0.06)
="[4] Adv diploma	diploma"	diploma"
	(0.89)	(0.01)
[5] Cert III or IV	-0.017	-0.110***
	(0.65)	(0.00)
[8] Year 12	-0.078**	-0.088**
	(0.04)	(0.03)
[9] Year 11 and below	-0.066*	-0.121***
	(0.08)	(0.00)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.117***	0.010
	(0.00)	(0.68)
Casual	0.209***	0.193***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.005	0.025
	(0.91)	(0.54)
[3] Technicians and Trades Workers	-0.057	-0.050
	(0.14)	(0.23)
[4] Community and Personal Service Workers	-0.005	0.026

	(0.89)	(0.51)
[5] Clerical and Administrative Workers	0.010	0.003
	(0.79)	(0.93)
[6] Sales Workers	0.034	-0.038
	(0.42)	(0.37)
[7] Machinery Operators and Drivers	-0.029	-0.052
	(0.48)	(0.24)
[8] Labourers	-0.002	0.019
	(0.96)	(0.64)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.077*	0.062*
	(0.06)	(0.10)
Constant	0.651***	0.446***
	(0.00)	(0.00)
Observations	5272	5401
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_und	ch_und
strong_intro	0.000	0.000
	(.)	(.)
weak_intro	0.009	-0.020
	(0.61)	(0.29)
weak_extro	0.027	-0.009
	(0.13)	(0.63)
strong_extro	0.018	0.027
	(0.33)	(0.14)
age	-0.005	0.007
	(0.46)	(0.35)
age2	0.000	-0.000
	(0.64)	(0.18)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.003	0.000
	(0.84)	(1.00)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.003	0.041**
	(0.87)	(0.04)
5 to 14 years	0.013	0.019
	(0.48)	(0.24)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"

	(0.41)	(0.05)
[3] Bachelor or honours	-0.039	-0.073*
	(0.30)	(0.06)
="[4] Adv diploma	diploma"	diploma"
	(0.91)	(0.01)
[5] Cert III or IV	-0.018	-0.107***
	(0.64)	(0.01)
[8] Year 12	-0.079**	-0.086**
	(0.04)	(0.03)
[9] Year 11 and below	-0.067*	-0.119***
	(0.08)	(0.00)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.118***	0.011
	(0.00)	(0.67)
Casual	0.210***	0.192***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.003	0.024
	(0.94)	(0.56)
[3] Technicians and Trades Workers	-0.050	-0.050
	(0.20)	(0.24)
[4] Community and Personal Service Workers	-0.002	0.026
	(0.95)	(0.52)
[5] Clerical and Administrative Workers	0.014	0.002
	(0.72)	(0.95)
[6] Sales Workers	0.040	-0.038
	(0.35)	(0.36)
[7] Machinery Operators and Drivers	-0.018	-0.056
	(0.65)	(0.20)
[8] Labourers	0.006	0.019
	(0.87)	(0.64)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.073*	0.063*
	(0.07)	(0.09)
Constant	0.612***	0.455***
	(0.00)	(0.00)
Observations	5272	5406
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_und	ch_und
strong_disagr	0.000	0.000

	(.)	(.)
weak_disagr	0.010	-0.002
	(0.61)	(0.93)
weak_agreab	-0.010	0.005
	(0.58)	(0.79)
strong_agreab	0.009	-0.001
	(0.63)	(0.97)
age	-0.006	0.006
	(0.38)	(0.37)
age2	0.000	-0.000
	(0.54)	(0.19)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.002	-0.003
	(0.91)	(0.84)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.006	0.043**
	(0.76)	(0.03)
5 to 14 years	0.016	0.021
	(0.38)	(0.19)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.43)	(0.04)
[3] Bachelor or honours	-0.041	-0.075*
	(0.28)	(0.05)
="[4] Adv diploma	diploma"	diploma"
	(0.89)	(0.01)
[5] Cert III or IV	-0.017	-0.110***
	(0.65)	(0.00)
[8] Year 12	-0.081**	-0.089**
	(0.04)	(0.03)
[9] Year 11 and below	-0.068*	-0.122***
	(0.08)	(0.00)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.119***	0.012
	(0.00)	(0.62)
Casual	0.210***	0.194***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.005	0.024
	(0.90)	(0.55)

[3] Technicians and Trades Workers	-0.053	-0.052
	(0.18)	(0.21)
[4] Community and Personal Service Workers	-0.004	0.024
	(0.92)	(0.54)
[5] Clerical and Administrative Workers	0.011	0.004
	(0.79)	(0.93)
[6] Sales Workers	0.035	-0.039
	(0.40)	(0.35)
[7] Machinery Operators and Drivers	-0.022	-0.055
	(0.58)	(0.21)
[8] Labourers	0.002	0.015
	(0.96)	(0.72)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.075*	0.062*
	(0.07)	(0.10)
Constant	0.644***	0.463***
	(0.00)	(0.00)
Observations	5265	5403
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_und	ch_und
strong_close	0.000	0.000
	(.)	(.)
weak_close	0.005	-0.012
	(0.77)	(0.51)
weak_open	-0.021	0.026
	(0.26)	(0.16)
strong_open	0.016	0.050***
	(0.40)	(0.01)
age	-0.005	0.006
	(0.44)	(0.39)
age2	0.000	-0.000
	(0.61)	(0.21)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.002	0.000
	(0.91)	(0.97)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.007	0.046**
	(0.74)	(0.02)
5 to 14 years	0.017	0.023
	(0.35)	(0.15)

[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.45)	(0.06)
[3] Bachelor or honours	-0.040	-0.074*
	(0.30)	(0.06)
="[4] Adv diploma	diploma"	diploma"
	(0.94)	(0.01)
[5] Cert III or IV	-0.015	-0.100***
	(0.69)	(0.01)
[8] Year 12	-0.077**	-0.078*
	(0.05)	(0.05)
[9] Year 11 and below	-0.064*	-0.105***
	(0.10)	(0.01)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.117***	0.008
	(0.00)	(0.74)
Casual	0.209***	0.190***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.004	0.020
	(0.93)	(0.62)
[3] Technicians and Trades Workers	-0.051	-0.053
	(0.20)	(0.21)
[4] Community and Personal Service Workers	-0.002	0.025
	(0.95)	(0.52)
[5] Clerical and Administrative Workers	0.012	0.004
	(0.75)	(0.92)
[6] Sales Workers	0.041	-0.037
	(0.33)	(0.37)
[7] Machinery Operators and Drivers	-0.021	-0.049
	(0.60)	(0.26)
[8] Labourers	0.005	0.018
	(0.89)	(0.66)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.075*	0.062*
	(0.07)	(0.10)
Constant	0.627***	0.438***
	(0.00)	(0.00)
Observations	5272	5403
p-values in parentheses		

="* p<.10	** p<.05	** p<.05

TABLE A11
RANDOM EFFECT ESTIMATIONS OF THE PROBABILITY OF WORKING LESS IF OVEREMPLOYED

	Males	Females
strong_external	0.000	0.000
	(.)	(.)
weak_external	-0.004	0.011
	(0.74)	(0.40)
weak_internal	-0.004	0.011
	(0.72)	(0.36)
strong_inernal	-0.020*	0.012
	(0.09)	(0.35)
age	-0.010**	-0.007
	(0.03)	(0.13)
age2	0.000*	0.000
	(0.08)	(0.28)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.012	-0.008
	(0.30)	(0.42)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.016	0.010
	(0.22)	(0.42)
5 to 14 years	0.004	-0.006
	(0.71)	(0.58)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.60)	(0.39)
[3] Bachelor or honours	-0.027*	-0.009
	(0.09)	(0.58)
="[4] Adv diploma	diploma"	diploma"
	(0.77)	(0.62)
[5] Cert III or IV	0.015	0.001
	(0.39)	(0.94)
[8] Year 12	-0.004	0.000
	(0.83)	(0.99)
[9] Year 11 and below	-0.010	-0.020
	(0.60)	(0.30)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.010	0.011

	(0.44)	(0.38)
Casual	0.057***	0.030*
	(0.00)	(0.10)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.006	-0.000
	(0.62)	(0.99)
[3] Technicians and Trades Workers	-0.052***	-0.025
	(0.00)	(0.18)
[4] Community and Personal Service Workers	-0.020	-0.016
	(0.29)	(0.41)
[5] Clerical and Administrative Workers	-0.082***	-0.015
	(0.00)	(0.29)
[6] Sales Workers	-0.016	-0.045**
	(0.42)	(0.03)
[7] Machinery Operators and Drivers	-0.026	0.033
	(0.19)	(0.18)
[8] Labourers	-0.024	0.026
	(0.29)	(0.30)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.010	-0.074***
	(0.73)	(0.00)
year=2017	-0.329***	-0.360***
	(0.00)	(0.00)
Constant	0.583***	0.559***
	(0.00)	(0.00)
Observations	13802	12331
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_over	ch_over
strong_neurotic	0.000	0.000
	(.)	(.)
weak_neurotic	0.011	0.016
	(0.35)	(0.19)
weak_emostab	0.014	0.024*
	(0.21)	(0.05)
strong_emostab	-0.002	-0.002
	(0.87)	(0.88)
age	-0.012**	-0.009*
	(0.01)	(0.07)
age2	0.000**	0.000
	(0.03)	(0.18)
partner=0	0.000	0.000

	(.)	(.)
partner=1	0.011	-0.010
	(0.35)	(0.31)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.013	0.010
	(0.30)	(0.44)
5 to 14 years	0.007	-0.010
	(0.53)	(0.38)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.57)	(0.27)
[3] Bachelor or honours	-0.026	-0.013
	(0.12)	(0.43)
="[4] Adv diploma	diploma"	diploma"
	(0.61)	(0.45)
[5] Cert III or IV	0.014	-0.007
	(0.42)	(0.68)
[8] Year 12	-0.000	-0.007
	(0.99)	(0.73)
[9] Year 11 and below	-0.010	-0.025
	(0.60)	(0.20)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.012	0.007
	(0.36)	(0.59)
Casual	0.059***	0.038**
	(0.00)	(0.04)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.007	-0.002
	(0.55)	(0.87)
[3] Technicians and Trades Workers	-0.046***	-0.013
	(0.00)	(0.48)
[4] Community and Personal Service Workers	-0.019	-0.010
	(0.32)	(0.61)
[5] Clerical and Administrative Workers	-0.085***	-0.014
	(0.00)	(0.33)
[6] Sales Workers	-0.014	-0.036*
	(0.51)	(0.09)
[7] Machinery Operators and Drivers	-0.029	0.037
	(0.14)	(0.14)
[8] Labourers	-0.016	0.016

	(0.47)	(0.52)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.020	-0.075***
	(0.48)	(0.00)
year=2017	-0.335***	-0.360***
	(0.00)	(0.00)
Constant	0.616***	0.595***
	(0.00)	(0.00)
Observations	13506	12117
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_over	ch_over
strong_ineff	0.000	0.000
	(.)	(.)
weak_ineff	-0.004	0.013
	(0.73)	(0.32)
weak_diligent	-0.002	0.021*
	(0.88)	(0.09)
strong_diligent	-0.007	-0.012
	(0.53)	(0.33)
age	-0.012**	-0.008*
	(0.01)	(0.09)
age2	0.000**	0.000
	(0.03)	(0.20)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.011	-0.009
	(0.32)	(0.36)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.013	0.009
	(0.31)	(0.46)
5 to 14 years	0.007	-0.011
	(0.55)	(0.32)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.58)	(0.33)
[3] Bachelor or honours	-0.025	-0.013
	(0.12)	(0.43)
="[4] Adv diploma	diploma"	diploma"
	(0.64)	(0.43)
[5] Cert III or IV	0.014	-0.009

	(0.42)	(0.62)
[8] Year 12	-0.000	-0.007
	(1.00)	(0.72)
[9] Year 11 and below	-0.010	-0.025
	(0.61)	(0.20)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.012	0.007
	(0.36)	(0.59)
Casual	0.059***	0.038**
	(0.00)	(0.04)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.008	-0.003
	(0.52)	(0.78)
[3] Technicians and Trades Workers	-0.047***	-0.015
	(0.00)	(0.42)
[4] Community and Personal Service Workers	-0.020	-0.013
	(0.30)	(0.49)
[5] Clerical and Administrative Workers	-0.085***	-0.015
	(0.00)	(0.30)
[6] Sales Workers	-0.014	-0.037*
	(0.50)	(0.09)
[7] Machinery Operators and Drivers	-0.031	0.033
	(0.12)	(0.18)
[8] Labourers	-0.017	0.014
	(0.44)	(0.58)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.019	-0.075***
	(0.49)	(0.00)
year=2017	-0.334***	-0.360***
	(0.00)	(0.00)
Constant	0.624***	0.592***
	(0.00)	(0.00)
Observations	13507	12117
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_over	ch_over
strong_intro	0.000	0.000
	(.)	(.)
weak_intro	0.011	0.033***
	(0.34)	(0.01)
weak_extro	0.015	0.020

	(0.17)	(0.10)
strong_extro	0.006	0.013
	(0.60)	(0.25)
age	-0.012**	-0.008*
	(0.01)	(0.09)
age2	0.000**	0.000
	(0.03)	(0.21)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.010	-0.010
	(0.39)	(0.32)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.013	0.009
	(0.30)	(0.46)
5 to 14 years	0.007	-0.012
	(0.54)	(0.31)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.53)	(0.34)
[3] Bachelor or honours	-0.025	-0.012
	(0.12)	(0.46)
="[4] Adv diploma	diploma"	diploma"
	(0.63)	(0.48)
[5] Cert III or IV	0.014	-0.007
	(0.42)	(0.69)
[8] Year 12	0.001	-0.007
	(0.96)	(0.72)
[9] Year 11 and below	-0.011	-0.024
	(0.58)	(0.21)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.012	0.006
	(0.36)	(0.63)
Casual	0.059***	0.037**
	(0.00)	(0.04)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.007	-0.003
	(0.57)	(0.82)
[3] Technicians and Trades Workers	-0.046***	-0.015
	(0.00)	(0.45)
[4] Community and Personal Service Workers	-0.019	-0.013

	(0.32)	(0.50)
[5] Clerical and Administrative Workers	-0.085***	-0.014
	(0.00)	(0.32)
[6] Sales Workers	-0.014	-0.036
	(0.50)	(0.10)
[7] Machinery Operators and Drivers	-0.030	0.035
	(0.14)	(0.16)
[8] Labourers	-0.017	0.016
	(0.44)	(0.52)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.019	-0.075***
	(0.49)	(0.00)
year=2017	-0.334***	-0.360***
	(0.00)	(0.00)
Constant	0.611***	0.580***
	(0.00)	(0.00)
Observations	13507	12117
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_over	ch_over
strong_disagr	0.000	0.000
	(.)	(.)
weak_disagr	0.004	-0.012
	(0.74)	(0.34)
weak_agreab	0.009	-0.004
	(0.42)	(0.73)
strong_agreab	0.017	-0.011
	(0.13)	(0.35)
age	-0.012**	-0.008*
	(0.01)	(0.09)
age2	0.000**	0.000
	(0.03)	(0.21)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.010	-0.009
	(0.38)	(0.38)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.014	0.009
	(0.26)	(0.50)
5 to 14 years	0.008	-0.012
	(0.50)	(0.31)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)

	grad certificate"	grad certificate"
="[2] Grad diploma		
	(0.56)	(0.35)
[3] Bachelor or honours	-0.026	-0.012
	(0.11)	(0.44)
="[4] Adv diploma	diploma"	diploma"
	(0.63)	(0.50)
[5] Cert III or IV	0.015	-0.007
	(0.40)	(0.71)
[8] Year 12	0.001	-0.005
	(0.97)	(0.79)
[9] Year 11 and below	-0.010	-0.023
	(0.62)	(0.24)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.011	0.007
	(0.39)	(0.60)
Casual	0.059***	0.038**
	(0.00)	(0.04)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.008	-0.002
	(0.48)	(0.84)
[3] Technicians and Trades Workers	-0.045***	-0.014
	(0.01)	(0.46)
[4] Community and Personal Service Workers	-0.021	-0.011
	(0.27)	(0.58)
[5] Clerical and Administrative Workers	-0.086***	-0.014
	(0.00)	(0.33)
[6] Sales Workers	-0.015	-0.036
	(0.47)	(0.10)
[7] Machinery Operators and Drivers	-0.029	0.033
	(0.15)	(0.18)
[8] Labourers	-0.017	0.014
	(0.45)	(0.57)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.017	-0.076***
	(0.55)	(0.00)
year=2017	-0.333***	-0.360***
	(0.00)	(0.00)
Constant	0.610***	0.603***
	(0.00)	(0.00)
Observations	13506	12118
p-values in parentheses		

="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_over	ch_over
strong_close	0.000	0.000
	(.)	(.)
weak_close	0.001	-0.002
	(0.95)	(0.90)
weak_open	0.006	0.010
	(0.58)	(0.43)
strong_open	0.018	-0.012
	(0.13)	(0.35)
age	-0.011**	-0.008*
	(0.01)	(0.09)
age2	0.000**	0.000
	(0.03)	(0.21)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.012	-0.010
	(0.29)	(0.32)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.014	0.009
	(0.28)	(0.47)
5 to 14 years	0.007	-0.011
	(0.51)	(0.34)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.64)	(0.31)
[3] Bachelor or honours	-0.024	-0.014
	(0.14)	(0.37)
="[4] Adv diploma	diploma"	diploma"
	(0.78)	(0.40)
[5] Cert III or IV	0.019	-0.010
	(0.29)	(0.58)
[8] Year 12	0.005	-0.009
	(0.81)	(0.66)
[9] Year 11 and below	-0.004	-0.027
	(0.83)	(0.17)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.011	0.007
	(0.40)	(0.59)
Casual	0.059***	0.039**
	(0.00)	(0.03)

[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.007	-0.003
	(0.52)	(0.80)
[3] Technicians and Trades Workers	-0.046***	-0.014
	(0.00)	(0.47)
[4] Community and Personal Service Workers	-0.019	-0.012
	(0.32)	(0.53)
[5] Clerical and Administrative Workers	-0.084***	-0.014
	(0.00)	(0.32)
[6] Sales Workers	-0.013	-0.036*
	(0.54)	(0.10)
[7] Machinery Operators and Drivers	-0.029	0.035
	(0.15)	(0.15)
[8] Labourers	-0.014	0.016
	(0.53)	(0.53)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.018	-0.075***
	(0.52)	(0.00)
year=2017	-0.334***	-0.360***
	(0.00)	(0.00)
Constant	0.603***	0.600***
	(0.00)	(0.00)
Observations	13506	12117
p-values in parentheses		
="* p<.10	** p<.05	** p<.05

	(1)	(1)
	Adapting hours	Adapting hours
strong_external	0.000	0.000
	(.)	(.)
weak_external	0.005	-0.006
	(0.67)	(0.65)
weak_internal	0.020	0.012
	(0.11)	(0.34)
strong_inernal	-0.005	-0.005
	(0.71)	(0.70)
age	-0.004	0.004
	(0.39)	(0.36)

age2	0.000	-0.000
	(0.24)	(0.46)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.007	-0.010
	(0.54)	(0.32)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.012	0.001
	(0.35)	(0.92)
5 to 14 years	0.007	-0.007
	(0.56)	(0.53)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.87)	(0.92)
[3] Bachelor or honours	-0.020	0.022
	(0.25)	(0.19)
="[4] Adv diploma	diploma"	diploma"
	(0.40)	(0.95)
[5] Cert III or IV	0.001	0.015
	(0.97)	(0.41)
[8] Year 12	-0.000	0.018
	(0.99)	(0.37)
[9] Year 11 and below	0.016	0.025
	(0.45)	(0.20)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	-0.033***	-0.007
	(0.01)	(0.59)
Casual	-0.081***	-0.124***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	0.006	0.019
	(0.60)	(0.13)
[3] Technicians and Trades Workers	0.011	0.015
	(0.52)	(0.43)
[4] Community and Personal Service Workers	0.018	0.048**
	(0.36)	(0.01)
[5] Clerical and Administrative Workers	-0.011	0.034**
	(0.45)	(0.02)
[6] Sales Workers	-0.012	-0.041*
	(0.58)	(0.06)

[7] Machinery Operators and Drivers	-0.007	0.007
	(0.75)	(0.77)
[8] Labourers	-0.008	0.043*
	(0.71)	(0.09)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.014	-0.054**
	(0.62)	(0.03)
Constant	0.679***	0.518***
	(0.00)	(0.00)
Observations	13802	12331
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_over	ch_over
strong_neurotic	0.000	0.000
	(.)	(.)
weak_neurotic	0.010	0.004
	(0.43)	(0.74)
weak_emostab	0.017	0.002
	(0.17)	(0.84)
strong_emostab	0.020*	0.018
	(0.10)	(0.14)
age	-0.007	0.003
	(0.12)	(0.47)
age2	0.000*	-0.000
	(0.06)	(0.56)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.005	-0.012
	(0.64)	(0.21)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.007	-0.001
	(0.60)	(0.95)
5 to 14 years	0.009	-0.010
	(0.43)	(0.38)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.66)	(0.83)
[3] Bachelor or honours	-0.013	0.020
	(0.44)	(0.19)
="[4] Adv diploma	diploma"	diploma"
	(0.34)	(0.88)

[5] Cert III or IV	-0.000	0.009
	(1.00)	(0.62)
[8] Year 12	0.007	0.014
	(0.73)	(0.46)
[9] Year 11 and below	0.017	0.024
	(0.40)	(0.21)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	-0.034***	-0.013
	(0.01)	(0.30)
Casual	-0.080***	-0.113***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	0.002	0.021*
	(0.89)	(0.08)
[3] Technicians and Trades Workers	0.014	0.030
	(0.40)	(0.11)
[4] Community and Personal Service Workers	0.022	0.049***
	(0.26)	(0.01)
[5] Clerical and Administrative Workers	-0.010	0.038***
	(0.49)	(0.01)
[6] Sales Workers	-0.006	-0.029
	(0.78)	(0.17)
[7] Machinery Operators and Drivers	-0.005	0.022
	(0.81)	(0.36)
[8] Labourers	-0.007	0.048*
	(0.76)	(0.05)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.016	-0.041
	(0.56)	(0.11)
Constant	0.745***	0.535***
	(0.00)	(0.00)
Observations	13506	12117
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_over	ch_over
strong_ineff	0.000	0.000
	(.)	(.)
weak_ineff	0.007	0.012
	(0.56)	(0.33)
weak_diligent	0.012	0.026**
	(0.31)	(0.03)

strong_diligent	0.008	0.008
	(0.50)	(0.51)
age	-0.007	0.003
	(0.11)	(0.47)
age2	0.000*	-0.000
	(0.06)	(0.58)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.006	-0.014
	(0.59)	(0.17)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.007	-0.000
	(0.60)	(0.98)
5 to 14 years	0.009	-0.009
	(0.44)	(0.41)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.68)	(0.77)
[3] Bachelor or honours	-0.013	0.020
	(0.45)	(0.19)
="[4] Adv diploma	diploma"	diploma"
	(0.35)	(0.94)
[5] Cert III or IV	0.001	0.008
	(0.98)	(0.66)
[8] Year 12	0.008	0.013
	(0.70)	(0.48)
[9] Year 11 and below	0.017	0.021
	(0.39)	(0.27)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	-0.034***	-0.013
	(0.01)	(0.31)
Casual	-0.079***	-0.112***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	0.002	0.021*
	(0.89)	(0.07)
[3] Technicians and Trades Workers	0.013	0.029
	(0.44)	(0.12)
[4] Community and Personal Service Workers	0.021	0.049***
	(0.27)	(0.01)

[5] Clerical and Administrative Workers	-0.011	0.037***
	(0.46)	(0.01)
[6] Sales Workers	-0.007	-0.031
	(0.72)	(0.15)
[7] Machinery Operators and Drivers	-0.007	0.023
	(0.74)	(0.34)
[8] Labourers	-0.007	0.047*
	(0.74)	(0.06)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.016	-0.039
	(0.57)	(0.12)
Constant	0.749***	0.530***
	(0.00)	(0.00)
Observations	13507	12117
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_over	ch_over
strong_intro	0.000	0.000
	(.)	(.)
weak_intro	-0.039***	-0.001
	(0.00)	(0.92)
weak_extro	-0.031***	-0.010
	(0.01)	(0.40)
strong_extro	-0.045***	-0.029**
	(0.00)	(0.01)
age	-0.008*	0.003
	(0.09)	(0.50)
age2	0.000**	-0.000
	(0.04)	(0.61)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.011	-0.014
	(0.34)	(0.16)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.006	-0.000
	(0.63)	(0.98)
5 to 14 years	0.009	-0.009
	(0.43)	(0.41)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.79)	(0.83)

[3] Bachelor or honours	-0.014	0.021
	(0.42)	(0.18)
="[4] Adv diploma	diploma"	diploma"
	(0.38)	(0.83)
[5] Cert III or IV	0.001	0.009
	(0.95)	(0.63)
[8] Year 12	0.006	0.015
	(0.76)	(0.43)
[9] Year 11 and below	0.018	0.022
	(0.35)	(0.24)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	-0.033***	-0.013
	(0.01)	(0.32)
Casual	-0.080***	-0.111***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.000	0.020*
	(0.99)	(0.09)
[3] Technicians and Trades Workers	0.011	0.025
	(0.52)	(0.18)
[4] Community and Personal Service Workers	0.020	0.047**
	(0.30)	(0.01)
[5] Clerical and Administrative Workers	-0.011	0.036**
	(0.43)	(0.01)
[6] Sales Workers	-0.006	-0.029
	(0.77)	(0.17)
[7] Machinery Operators and Drivers	-0.010	0.018
	(0.63)	(0.45)
[8] Labourers	-0.008	0.041*
	(0.74)	(0.10)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.017	-0.040
	(0.53)	(0.11)
Constant	0.793***	0.557***
	(0.00)	(0.00)
Observations	13507	12117
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_over	ch_over
strong_disagr	0.000	0.000
	(.)	(.)

weak_disagr	-0.006	-0.011
	(0.63)	(0.38)
weak_agreab	-0.008	-0.002
	(0.48)	(0.90)
strong_agreab	-0.027**	-0.024**
	(0.02)	(0.04)
age	-0.007	0.003
	(0.12)	(0.47)
age2	0.000*	-0.000
	(0.05)	(0.58)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.008	-0.014
	(0.47)	(0.16)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.005	-0.003
	(0.69)	(0.82)
5 to 14 years	0.007	-0.010
	(0.51)	(0.35)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.74)	(0.79)
[3] Bachelor or honours	-0.012	0.020
	(0.50)	(0.20)
="[4] Adv diploma	diploma"	diploma"
	(0.37)	(0.93)
[5] Cert III or IV	0.000	0.008
	(0.98)	(0.65)
[8] Year 12	0.007	0.014
	(0.71)	(0.48)
[9] Year 11 and below	0.017	0.022
	(0.39)	(0.25)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	-0.033***	-0.013
	(0.01)	(0.31)
Casual	-0.080***	-0.112***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	0.003	0.022*
	(0.83)	(0.07)
[3] Technicians and Trades Workers	0.011	0.028

	(0.49)	(0.13)
[4] Community and Personal Service Workers	0.023	0.051***
	(0.23)	(0.01)
[5] Clerical and Administrative Workers	-0.008	0.039***
	(0.58)	(0.01)
[6] Sales Workers	-0.005	-0.030
	(0.80)	(0.16)
[7] Machinery Operators and Drivers	-0.009	0.019
	(0.65)	(0.42)
[8] Labourers	-0.010	0.043*
	(0.67)	(0.09)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.019	-0.041
	(0.49)	(0.11)
Constant	0.762***	0.552***
	(0.00)	(0.00)
Observations	13506	12118
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_over	ch_over
strong_close	0.000	0.000
	(.)	(.)
weak_close	0.008	0.004
	(0.50)	(0.73)
weak_open	-0.001	-0.017
	(0.97)	(0.15)
strong_open	-0.041***	-0.043***
	(0.00)	(0.00)
age	-0.008*	0.004
	(0.10)	(0.41)
age2	0.000**	-0.000
	(0.05)	(0.51)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.003	-0.017*
	(0.78)	(0.09)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	0.005	-0.003
	(0.70)	(0.83)
5 to 14 years	0.007	-0.011
	(0.52)	(0.33)
[1] Postgrad - masters or doctorate	0.000	0.000

	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.60)	(0.57)
[3] Bachelor or honours	-0.015	0.015
	(0.36)	(0.35)
="[4] Adv diploma	diploma"	diploma"
	(0.19)	(0.76)
[5] Cert III or IV	-0.009	-0.003
	(0.61)	(0.87)
[8] Year 12	-0.002	0.005
	(0.93)	(0.81)
[9] Year 11 and below	0.006	0.007
	(0.78)	(0.72)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	-0.032**	-0.012
	(0.01)	(0.35)
Casual	-0.080***	-0.108***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	0.001	0.020*
	(0.93)	(0.10)
[3] Technicians and Trades Workers	0.011	0.027
	(0.51)	(0.15)
[4] Community and Personal Service Workers	0.021	0.047**
	(0.29)	(0.01)
[5] Clerical and Administrative Workers	-0.011	0.034**
	(0.42)	(0.02)
[6] Sales Workers	-0.010	-0.035*
	(0.62)	(0.10)
[7] Machinery Operators and Drivers	-0.011	0.017
	(0.57)	(0.49)
[8] Labourers	-0.013	0.041
	(0.58)	(0.10)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.018	-0.039
	(0.51)	(0.12)
Constant	0.784***	0.562***
	(0.00)	(0.00)
Observations	13506	12117
p-values in parentheses		
="* p<.10	** p<.05	** p<.05

RANDOM EFFECT ESTIMATIONS OF THE PROBABILITY OF CHANGING EMPLOYER IF UNDEREMPLOYED		
	(1)	(1)
	change employer	change employer
change employer		
strong_external	0.000	0.000
	(.)	(.)
weak_external	0.016	-0.005
	(0.91)	(0.97)
weak_internal	0.130	-0.104
	(0.38)	(0.48)
strong_inernal	0.098	-0.015
	(0.53)	(0.92)
age	-0.078	-0.055
	(0.16)	(0.29)
age2	0.000	0.000
	(0.58)	(0.77)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.032	0.061
	(0.80)	(0.57)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.259*	-0.126
	(0.08)	(0.38)
5 to 14 years	-0.395***	-0.216*
	(0.01)	(0.08)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.05)	(0.10)
[3] Bachelor or honours	-0.527*	-0.540*
	(0.07)	(0.06)
="[4] Adv diploma	diploma"	diploma"
	(0.33)	(0.01)
[5] Cert III or IV	-0.467	-0.801***
	(0.11)	(0.01)

	(1)	(1)
[8] Year 12	-0.754**	-1.049***
	(0.01)	(0.00)
[9] Year 11 and below	-0.743**	-0.794***
	(0.01)	(0.01)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.867***	0.267
	(0.00)	(0.14)
Casual	1.279***	1.015***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.617**	-0.042
	(0.04)	(0.90)
[3] Technicians and Trades Workers	0.117	0.299
	(0.69)	(0.37)
[4] Community and Personal Service Workers	-0.224	-0.052
	(0.43)	(0.87)
[5] Clerical and Administrative Workers	-0.180	0.241
	(0.54)	(0.45)
[6] Sales Workers	0.057	0.356
	(0.85)	(0.28)
[7] Machinery Operators and Drivers	-0.033	0.346
	(0.91)	(0.32)
[8] Labourers	-0.129	0.482
	(0.65)	(0.13)
australian=0	0.000	0.000
	(.)	(.)
australian=1	-0.015	0.355
	(0.96)	(0.15)
Constant	0.941	0.335
	(0.41)	(0.76)
Observations	4348	4380
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_empl	ch_empl
ch_empl		
strong_neurotic	0.000	0.000
	(.)	(.)
weak_neurotic	-0.074	-0.093
	(0.61)	(0.51)
weak_emostab	-0.041	0.059
	(0.78)	(0.68)
strong_emostab	-0.223	-0.108

	(0.16)	(0.45)
age	-0.093*	-0.084
	(0.10)	(0.11)
age2	0.001	0.001
	(0.41)	(0.39)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.077	0.086
	(0.56)	(0.42)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.320**	-0.082
	(0.03)	(0.56)
5 to 14 years	-0.402***	-0.161
	(0.01)	(0.19)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.17)	(0.08)
[3] Bachelor or honours	-0.393	-0.638**
	(0.20)	(0.02)
="[4] Adv diploma	diploma"	diploma"
	(0.66)	(0.01)
[5] Cert III or IV	-0.285	-0.890***
	(0.34)	(0.00)
[8] Year 12	-0.499	-1.061***
	(0.11)	(0.00)
[9] Year 11 and below	-0.574*	-0.887***
	(0.06)	(0.00)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.882***	0.300*
	(0.00)	(0.10)
Casual	1.262***	1.030***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.440	0.007
	(0.15)	(0.98)
[3] Technicians and Trades Workers	0.248	0.436
	(0.40)	(0.18)
[4] Community and Personal Service Workers	-0.044	0.087
	(0.88)	(0.78)
[5] Clerical and Administrative Workers	-0.056	0.335

	(0.85)	(0.29)
[6] Sales Workers	0.133	0.490
	(0.67)	(0.13)
[7] Machinery Operators and Drivers	0.055	0.425
	(0.86)	(0.21)
[8] Labourers	0.008	0.607*
	(0.98)	(0.06)
australian=0	0.000	0.000
	(.)	(.)
australian=1	-0.346	0.373
	(0.26)	(0.12)
Constant	1.006	0.839
	(0.39)	(0.45)
Observations	4296	4300
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_empl	ch_empl
ch_empl		
strong_ineff	0.000	0.000
	(.)	(.)
weak_ineff	-0.098	0.219
	(0.51)	(0.13)
weak_diligent	0.049	0.323**
	(0.74)	(0.02)
strong_diligent	0.266*	0.433***
	(0.10)	(0.00)
age	-0.088	-0.082
	(0.11)	(0.12)
age2	0.000	0.001
	(0.48)	(0.42)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.077	0.079
	(0.55)	(0.45)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.324**	-0.077
	(0.03)	(0.58)
5 to 14 years	-0.409***	-0.162
	(0.01)	(0.19)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.16)	(0.06)

[3] Bachelor or honours	-0.382	-0.665**
	(0.21)	(0.02)
="[4] Adv diploma	diploma"	diploma"
	(0.68)	(0.00)
[5] Cert III or IV	-0.271	-0.911***
	(0.37)	(0.00)
[8] Year 12	-0.498	-1.094***
	(0.11)	(0.00)
[9] Year 11 and below	-0.555*	-0.885***
	(0.07)	(0.00)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.895***	0.294
	(0.00)	(0.10)
Casual	1.275***	1.028***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.442	-0.008
	(0.15)	(0.98)
[3] Technicians and Trades Workers	0.294	0.413
	(0.32)	(0.20)
[4] Community and Personal Service Workers	-0.030	0.081
	(0.92)	(0.80)
[5] Clerical and Administrative Workers	-0.049	0.303
	(0.87)	(0.33)
[6] Sales Workers	0.162	0.487
	(0.61)	(0.13)
[7] Machinery Operators and Drivers	0.128	0.417
	(0.68)	(0.22)
[8] Labourers	0.066	0.621**
	(0.82)	(0.05)
australian=0	0.000	0.000
	(.)	(.)
australian=1	-0.365	0.382
	(0.24)	(0.12)
Constant	0.769	0.575
	(0.51)	(0.60)
Observations	4296	4299
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_empl	ch_empl
ch_empl		
strong_intro	0.000	0.000

	(.)	(.)
weak_intro	0.258*	0.010
	(0.09)	(0.95)
weak_extro	0.166	0.057
	(0.28)	(0.70)
strong_extro	0.163	0.232
	(0.31)	(0.12)
age	-0.089	-0.083
	(0.11)	(0.12)
age2	0.000	0.001
	(0.47)	(0.40)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.073	0.101
	(0.57)	(0.34)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.328**	-0.091
	(0.03)	(0.52)
5 to 14 years	-0.405***	-0.177
	(0.01)	(0.15)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.17)	(0.09)
[3] Bachelor or honours	-0.386	-0.623**
	(0.20)	(0.03)
="[4] Adv diploma	diploma"	diploma"
	(0.64)	(0.01)
[5] Cert III or IV	-0.291	-0.877***
	(0.33)	(0.00)
[8] Year 12	-0.495	-1.059***
	(0.11)	(0.00)
[9] Year 11 and below	-0.582*	-0.868***
	(0.06)	(0.00)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.881***	0.290
	(0.00)	(0.11)
Casual	1.259***	1.020***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.435	0.011
	(0.15)	(0.97)

[3] Technicians and Trades Workers	0.259	0.449
	(0.38)	(0.17)
[4] Community and Personal Service Workers	-0.047	0.103
	(0.87)	(0.74)
[5] Clerical and Administrative Workers	-0.041	0.339
	(0.89)	(0.28)
[6] Sales Workers	0.140	0.497
	(0.66)	(0.13)
[7] Machinery Operators and Drivers	0.082	0.439
	(0.79)	(0.20)
[8] Labourers	0.024	0.642**
	(0.93)	(0.04)
australian=0	0.000	0.000
	(.)	(.)
australian=1	-0.363	0.377
	(0.24)	(0.12)
Constant	0.706	0.697
	(0.55)	(0.53)
Observations	4296	4303
p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_empl	ch_empl
ch_empl		
strong_disagr	0.000	0.000
	(.)	(.)
weak_disagr	-0.321**	-0.075
	(0.04)	(0.63)
weak_agreab	-0.306**	-0.180
	(0.05)	(0.24)
strong_agreab	-0.276*	0.026
	(0.07)	(0.86)
age	-0.097*	-0.084
	(0.08)	(0.11)
age2	0.001	0.001
	(0.38)	(0.40)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.090	0.092
	(0.49)	(0.39)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.322**	-0.076
	(0.03)	(0.59)
5 to 14 years	-0.389***	-0.159

	(0.01)	(0.20)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.17)	(0.09)
[3] Bachelor or honours	-0.384	-0.635**
	(0.21)	(0.02)
="[4] Adv diploma	diploma"	diploma"
	(0.63)	(0.01)
[5] Cert III or IV	-0.295	-0.894***
	(0.33)	(0.00)
[8] Year 12	-0.512	-1.051***
	(0.11)	(0.00)
[9] Year 11 and below	-0.583*	-0.888***
	(0.06)	(0.00)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.896***	0.298*
	(0.00)	(0.10)
Casual	1.270***	1.026***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.458	0.002
	(0.13)	(0.99)
[3] Technicians and Trades Workers	0.206	0.429
	(0.49)	(0.19)
[4] Community and Personal Service Workers	-0.053	0.090
	(0.86)	(0.77)
[5] Clerical and Administrative Workers	-0.052	0.334
	(0.86)	(0.29)
[6] Sales Workers	0.149	0.479
	(0.64)	(0.14)
[7] Machinery Operators and Drivers	0.025	0.408
	(0.93)	(0.23)
[8] Labourers	-0.010	0.608*
	(0.97)	(0.06)
australian=0	0.000	0.000
	(.)	(.)
australian=1	-0.358	0.364
	(0.25)	(0.13)
Constant	1.228	0.858
	(0.30)	(0.44)
Observations	4290	4300

p-values in parentheses		
="* p<.10	** p<.05	** p<.05
	(1)	(1)
	ch_empl	ch_empl
ch_empl		
strong_close	0.000	0.000
	(.)	(.)
weak_close	0.514***	0.099
	(0.00)	(0.50)
weak_open	0.465***	0.219
	(0.00)	(0.14)
strong_open	0.420**	0.581***
	(0.01)	(0.00)
age	-0.091	-0.086
	(0.10)	(0.10)
age2	0.001	0.001
	(0.44)	(0.36)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.094	0.120
	(0.47)	(0.26)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.301**	-0.048
	(0.04)	(0.73)
5 to 14 years	-0.390***	-0.139
	(0.01)	(0.26)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.20)	(0.12)
[3] Bachelor or honours	-0.340	-0.633**
	(0.26)	(0.02)
="[4] Adv diploma	diploma"	diploma"
	(0.76)	(0.01)
[5] Cert III or IV	-0.221	-0.805***
	(0.47)	(0.00)
[8] Year 12	-0.426	-0.961***
	(0.18)	(0.00)
[9] Year 11 and below	-0.457	-0.729**
	(0.14)	(0.01)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.890***	0.253
	(0.00)	(0.16)

Casual	1.277***	0.996***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.439	-0.057
	(0.15)	(0.86)
[3] Technicians and Trades Workers	0.247	0.403
	(0.40)	(0.21)
[4] Community and Personal Service Workers	-0.039	0.084
	(0.89)	(0.79)
[5] Clerical and Administrative Workers	-0.046	0.322
	(0.88)	(0.30)
[6] Sales Workers	0.146	0.491
	(0.64)	(0.13)
[7] Machinery Operators and Drivers	0.068	0.448
	(0.83)	(0.19)
[8] Labourers	0.040	0.607*
	(0.89)	(0.05)
australian=0	0.000	0.000
	(.)	(.)
australian=1	-0.365	0.370
	(0.24)	(0.13)
Constant	0.419	0.516
	(0.72)	(0.64)
Observations	4296	4300
p-values in parentheses		
="* p<.10	** p<.05	** p<.05

TABLE A12 RANDOM EFFECT ESTIMATIONS OF THE PROBABILITY OF CHANGING EMPLOYER IF UNDEREMPLOYED		
	Males	Females
strong_external	0.000	0.000
	(.)	(.)
weak_external	-0.002	-0.003
	(0.91)	(0.86)
weak_internal	0.013	-0.013
	(0.54)	(0.53)
strong_inernal	0.011	-0.003
	(0.64)	(0.89)
age	-0.016**	-0.011
	(0.03)	(0.13)
age2	0.000	0.000

	(0.18)	(0.43)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.003	0.004
	(0.86)	(0.78)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.038*	-0.017
	(0.05)	(0.40)
5 to 14 years	-0.048***	-0.026
	(0.01)	(0.12)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.07)	(0.13)
[3] Bachelor or honours	-0.068	-0.079*
	(0.10)	(0.07)
="[4] Adv diploma	diploma"	diploma"
	(0.42)	(0.01)
[5] Cert III or IV	-0.060	-0.116***
	(0.15)	(0.01)
[8] Year 12	-0.092**	-0.146***
	(0.04)	(0.00)
[9] Year 11 and below	-0.094**	-0.118***
	(0.03)	(0.01)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.095***	0.027
	(0.00)	(0.24)
Casual	0.167***	0.137***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.066*	-0.010
	(0.08)	(0.81)
[3] Technicians and Trades Workers	0.023	0.037
	(0.55)	(0.40)
[4] Community and Personal Service Workers	-0.012	-0.008
	(0.75)	(0.84)
[5] Clerical and Administrative Workers	-0.014	0.024
	(0.72)	(0.57)
[6] Sales Workers	0.018	0.053
	(0.65)	(0.22)
[7] Machinery Operators and Drivers	0.004	0.051

	(0.93)	(0.27)
[8] Labourers	-0.008	0.067
	(0.82)	(0.11)
australian=0	0.000	0.000
	(.)	(.)
australian=1	-0.010	0.042
	(0.80)	(0.23)
year=2017	0.659***	0.564***
	(0.00)	(0.00)
Constant	4348	4380
Observations	** p<.05	** p<.05
p-values in parentheses	(1)	(1)
="* p<.10	ch_empl	ch_empl
	0.000	0.000
	(.)	(.)
strong_neurotic	-0.008	-0.014
	(0.71)	(0.51)
weak_neurotic	-0.007	0.006
	(0.73)	(0.79)
weak_emostab	-0.027	-0.012
	(0.23)	(0.58)
strong_emostab	-0.017**	-0.015**
	(0.02)	(0.04)
age	0.000	0.000
	(0.12)	(0.18)
age2	0.000	0.000
	(.)	(.)
partner=0	0.008	0.007
	(0.64)	(0.64)
partner=1	0.000	0.000
	(.)	(.)
no kids below 14	-0.045**	-0.011
	(0.03)	(0.60)
0 to 4 years	-0.050***	-0.019
	(0.01)	(0.26)
5 to 14 years	0.000	0.000
	(.)	(.)
[1] Postgrad - masters or doctorate	grad certificate"	grad certificate"
	(0.24)	(0.10)
="[2] Grad diploma	-0.050	-0.096**
	(0.24)	(0.02)
[3] Bachelor or honours	diploma"	diploma"
	(0.74)	(0.00)
="[4] Adv diploma	-0.036	-0.132***

	(0.39)	(0.00)
[5] Cert III or IV	-0.056	-0.153***
	(0.20)	(0.00)
[8] Year 12	-0.072*	-0.134***
	(0.09)	(0.00)
[9] Year 11 and below	0.000	0.000
	(.)	(.)
Permanent	0.098***	0.030
	(0.00)	(0.19)
Fixed-term	0.166***	0.140***
	(0.00)	(0.00)
Casual	0.000	0.000
	(.)	(.)
[1] Managers	-0.045	-0.004
	(0.24)	(0.92)
[2] Professionals	0.038	0.055
	(0.32)	(0.20)
[3] Technicians and Trades Workers	0.010	0.012
	(0.80)	(0.77)
[4] Community and Personal Service Workers	0.001	0.036
	(0.98)	(0.37)
[5] Clerical and Administrative Workers	0.027	0.072*
	(0.52)	(0.09)
[6] Sales Workers	0.012	0.061
	(0.76)	(0.18)
[7] Machinery Operators and Drivers	0.007	0.085**
	(0.85)	(0.04)
[8] Labourers	0.000	0.000
	(.)	(.)
australian=0	-0.052	0.044
	(0.18)	(0.22)
australian=1	0.656***	0.639***
	(0.00)	(0.00)
year=2017	4296	4300
Constant	** p<.05	** p<.05
	(1)	(1)
Observations	ch_empl	ch_empl
p-values in parentheses	0.000	0.000
="* p<.10	(.)	(.)
	-0.013	0.027
	(0.55)	(0.20)
strong_ineff	0.008	0.041**
	(0.71)	(0.04)
weak_ineff	0.036	0.056***

	(0.12)	(0.01)
weak_diligent	-0.017**	-0.015**
	(0.02)	(0.04)
strong_diligent	0.000	0.000
	(0.16)	(0.19)
age	0.000	0.000
	(.)	(.)
age2	0.008	0.006
	(0.65)	(0.68)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.045**	-0.010
	(0.02)	(0.63)
no kids below 14	-0.051***	-0.018
	(0.01)	(0.27)
0 to 4 years	0.000	0.000
	(.)	(.)
5 to 14 years	grad certificate"	grad certificate"
	(0.22)	(0.08)
[1] Postgrad - masters or doctorate	-0.049	-0.100**
	(0.24)	(0.02)
="[2] Grad diploma	diploma"	diploma"
	(0.76)	(0.00)
[3] Bachelor or honours	-0.034	-0.134***
	(0.42)	(0.00)
="[4] Adv diploma	-0.056	-0.157***
	(0.20)	(0.00)
[5] Cert III or IV	-0.069	-0.135***
	(0.11)	(0.00)
[8] Year 12	0.000	0.000
	(.)	(.)
[9] Year 11 and below	0.100***	0.030
	(0.00)	(0.19)
Permanent	0.167***	0.140***
	(0.00)	(0.00)
Fixed-term	0.000	0.000
	(.)	(.)
Casual	-0.045	-0.005
	(0.24)	(0.90)
[1] Managers	0.044	0.052
	(0.25)	(0.22)
[2] Professionals	0.012	0.011
	(0.75)	(0.78)
[3] Technicians and Trades Workers	0.003	0.034
	(0.95)	(0.41)

[4] Community and Personal Service Workers	0.031	0.072*
	(0.45)	(0.09)
[5] Clerical and Administrative Workers	0.021	0.060
	(0.59)	(0.18)
[6] Sales Workers	0.015	0.087**
	(0.69)	(0.04)
[7] Machinery Operators and Drivers	0.000	0.000
	(.)	(.)
[8] Labourers	-0.055	0.045
	(0.16)	(0.21)
australian=0	0.623***	0.606***
	(0.00)	(0.00)
australian=1	4296	4299
year=2017	** p<.05	** p<.05
	(1)	(1)
Constant	ch_empl	ch_empl
	0.000	0.000
Observations	(.)	(.)
p-values in parentheses	0.030	0.001
="* p<.10	(0.17)	(0.97)
	0.014	0.004
	(0.51)	(0.84)
strong_intro	0.014	0.033
	(0.53)	(0.12)
weak_intro	-0.017**	-0.015**
	(0.02)	(0.04)
weak_extro	0.000	0.000
	(0.14)	(0.18)
strong_extro	0.000	0.000
	(.)	(.)
age	0.008	0.009
	(0.65)	(0.54)
age2	0.000	0.000
	(.)	(.)
partner=0	-0.045**	-0.012
	(0.02)	(0.56)
partner=1	-0.050***	-0.020
	(0.01)	(0.22)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	grad certificate"	grad certificate"
	(0.24)	(0.11)
5 to 14 years	-0.048	-0.094**

	(0.25)	(0.03)
[1] Postgrad - masters or doctorate	diploma"	diploma"
	(0.74)	(0.00)
="[2] Grad diploma	-0.036	-0.129***
	(0.39)	(0.00)
[3] Bachelor or honours	-0.055	-0.151***
	(0.20)	(0.00)
="[4] Adv diploma	-0.072*	-0.131***
	(0.09)	(0.00)
[5] Cert III or IV	0.000	0.000
	(.)	(.)
[8] Year 12	0.098***	0.029
	(0.00)	(0.21)
[9] Year 11 and below	0.165***	0.138***
	(0.00)	(0.00)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	-0.044	-0.003
	(0.25)	(0.94)
Casual	0.039	0.057
	(0.31)	(0.19)
[1] Managers	0.009	0.014
	(0.81)	(0.73)
[2] Professionals	0.002	0.037
	(0.95)	(0.36)
[3] Technicians and Trades Workers	0.028	0.073*
	(0.50)	(0.09)
[4] Community and Personal Service Workers	0.015	0.063
	(0.71)	(0.16)
[5] Clerical and Administrative Workers	0.008	0.089**
	(0.82)	(0.03)
[6] Sales Workers	0.000	0.000
	(.)	(.)
[7] Machinery Operators and Drivers	-0.053	0.045
	(0.17)	(0.21)
[8] Labourers	0.625***	0.621***
	(0.00)	(0.00)
australian=0	4296	4303
australian=1	** p<.05	** p<.05
	(1)	(1)
year=2017	ch_empl	ch_empl
	0.000	0.000
Constant	(.)	(.)
	-0.050**	-0.007

Observations	(0.03)	(0.77)
p-values in parentheses	-0.043*	-0.024
="* p<.10	(0.05)	(0.28)
	-0.043**	0.003
	(0.05)	(0.89)
strong_disagr	-0.018**	-0.015**
	(0.01)	(0.04)
weak_disagr	0.000	0.000
	(0.11)	(0.18)
weak_agreab	0.000	0.000
	(.)	(.)
strong_agreab	0.010	0.008
	(0.58)	(0.60)
age	0.000	0.000
	(.)	(.)
age2	-0.045**	-0.010
	(0.03)	(0.62)
partner=0	-0.048**	-0.019
	(0.01)	(0.27)
partner=1	0.000	0.000
	(.)	(.)
no kids below 14	grad certificate"	grad certificate"
	(0.23)	(0.10)
0 to 4 years	-0.049	-0.097**
	(0.24)	(0.02)
5 to 14 years	diploma"	diploma"
	(0.71)	(0.00)
[1] Postgrad - masters or doctorate	-0.038	-0.133***
	(0.36)	(0.00)
="[2] Grad diploma	-0.059	-0.153***
	(0.18)	(0.00)
[3] Bachelor or honours	-0.074*	-0.135***
	(0.08)	(0.00)
="[4] Adv diploma	0.000	0.000
	(.)	(.)
[5] Cert III or IV	0.100***	0.030
	(0.00)	(0.19)
[8] Year 12	0.166***	0.140***
	(0.00)	(0.00)
[9] Year 11 and below	0.000	0.000
	(.)	(.)
Permanent	-0.046	-0.004
	(0.22)	(0.93)
Fixed-term	0.032	0.054
	(0.40)	(0.20)

Casual	0.009	0.012
	(0.82)	(0.76)
[1] Managers	0.002	0.037
	(0.96)	(0.36)
[2] Professionals	0.029	0.072*
	(0.48)	(0.09)
[3] Technicians and Trades Workers	0.008	0.059
	(0.85)	(0.19)
[4] Community and Personal Service Workers	0.005	0.085**
	(0.89)	(0.04)
[5] Clerical and Administrative Workers	0.000	0.000
	(.)	(.)
[6] Sales Workers	-0.053	0.043
	(0.17)	(0.23)
[7] Machinery Operators and Drivers	0.691***	0.642***
	(0.00)	(0.00)
[8] Labourers	4290	4300
australian=0	** p<.05	** p<.05
	(1)	(1)
australian=1	ch_empl	ch_empl
	0.000	0.000
year=2017	(.)	(.)
	0.066***	0.015
Constant	(0.00)	(0.48)
	0.062***	0.024
Observations	(0.01)	(0.26)
p-values in parentheses	0.053**	0.078***
="* p<.10	(0.02)	(0.00)
	-0.017**	-0.015**
	(0.02)	(0.04)
strong_close	0.000	0.000
	(0.14)	(0.16)
weak_close	0.000	0.000
	(.)	(.)
weak_open	0.011	0.011
	(0.54)	(0.46)
strong_open	0.000	0.000
	(.)	(.)
age	-0.043**	-0.007
	(0.03)	(0.73)
age2	-0.049***	-0.016
	(0.01)	(0.33)
partner=0	0.000	0.000
	(.)	(.)

partner=1	grad certificate"	grad certificate"
	(0.27)	(0.13)
no kids below 14	-0.044	-0.095**
	(0.30)	(0.02)
0 to 4 years	diploma"	diploma"
	(0.83)	(0.01)
5 to 14 years	-0.028	-0.120***
	(0.51)	(0.01)
[1] Postgrad - masters or doctorate	-0.047	-0.141***
	(0.28)	(0.00)
="[2] Grad diploma	-0.057	-0.114***
	(0.19)	(0.01)
[3] Bachelor or honours	0.000	0.000
	(.)	(.)
="[4] Adv diploma	0.099***	0.026
	(0.00)	(0.27)
[5] Cert III or IV	0.167***	0.137***
	(0.00)	(0.00)
[8] Year 12	0.000	0.000
	(.)	(.)
[9] Year 11 and below	-0.044	-0.011
	(0.25)	(0.78)
Permanent	0.038	0.051
	(0.31)	(0.23)
Fixed-term	0.011	0.011
	(0.76)	(0.78)
Casual	0.003	0.036
	(0.94)	(0.37)
[1] Managers	0.029	0.073*
	(0.48)	(0.09)
[2] Professionals	0.014	0.064
	(0.73)	(0.16)
[3] Technicians and Trades Workers	0.012	0.084**
	(0.75)	(0.04)
[4] Community and Personal Service Workers	0.000	0.000
	(.)	(.)
[5] Clerical and Administrative Workers	-0.053	0.045
	(0.17)	(0.21)
[6] Sales Workers	0.578***	0.595***
	(0.00)	(0.00)
[7] Machinery Operators and Drivers	4296	4300
[8] Labourers	** p<.05	** p<.05

australian=0		
australian=1		
year=2017		
Constant		
Observations		
p-values in parentheses		
="* p<.10		

TABLE A13 RANDOM EFFECT ESTIMATIONS OF THE PROBABILITY OF CHANGING EMPLOYER IF OVEREMPLOYED		
	Males	Females
strong_external	0.000	0.000
	(.)	(.)
weak_external	-0.028**	0.002
	(0.04)	(0.92)
weak_internal	-0.012	0.001
	(0.35)	(0.93)
strong_inernal	-0.011	0.022
	(0.42)	(0.14)
age	-0.011***	-0.013***
	(0.01)	(0.00)
age2	0.000	0.000*
	(0.16)	(0.09)
partner=0	0.000	0.000
	(.)	(.)
partner=1	0.007	-0.020**
	(0.54)	(0.04)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	-0.019*	-0.002
	(0.09)	(0.85)
5 to 14 years	-0.021**	-0.003
	(0.03)	(0.80)
[1] Postgrad - masters or doctorate	0.000	0.000
	(.)	(.)
="[2] Grad diploma	grad certificate"	grad certificate"
	(0.17)	(0.76)
[3] Bachelor or honours	-0.040**	0.002

	(0.03)	(0.91)
="[4] Adv diploma	diploma"	diploma"
	(0.58)	(0.90)
[5] Cert III or IV	-0.004	0.007
	(0.82)	(0.73)
[8] Year 12	-0.012	-0.018
	(0.58)	(0.42)
[9] Year 11 and below	-0.008	-0.001
	(0.72)	(0.96)
Permanent	0.000	0.000
	(.)	(.)
Fixed-term	0.038***	0.025**
	(0.00)	(0.02)
Casual	0.133***	0.140***
	(0.00)	(0.00)
[1] Managers	0.000	0.000
	(.)	(.)
[2] Professionals	-0.014	-0.029***
	(0.18)	(0.01)
[3] Technicians and Trades Workers	0.009	-0.003
	(0.56)	(0.85)
[4] Community and Personal Service Workers	-0.022	-0.044**
	(0.23)	(0.01)
[5] Clerical and Administrative Workers	-0.021	-0.003
	(0.11)	(0.85)
[6] Sales Workers	0.024	0.039**
	(0.19)	(0.04)
[7] Machinery Operators and Drivers	0.007	0.035
	(0.71)	(0.12)
[8] Labourers	0.000	0.012
	(0.99)	(0.61)
australian=0	0.000	0.000
	(.)	(.)
australian=1	0.037*	0.026
	(0.09)	(0.19)
year=2017	0.494***	0.519***
	(0.00)	(0.00)
Constant	11817	10384
Observations	** p<.05	** p<.05
p-values in parentheses	(1)	(1)
="* p<.10	ch_empl	ch_empl
	0.000	0.000
	(.)	(.)
strong_neurotic	-0.003	-0.022

	(0.82)	(0.13)
weak_neurotic	-0.028**	-0.022
	(0.03)	(0.12)
weak_emostab	-0.007	-0.044***
	(0.58)	(0.00)
strong_emostab	-0.011***	-0.013***
	(0.01)	(0.00)
age	0.000	0.000*
	(0.13)	(0.06)
age2	0.000	0.000
	(.)	(.)
partner=0	0.005	-0.021**
	(0.65)	(0.04)
partner=1	0.000	0.000
	(.)	(.)
no kids below 14	-0.017	0.002
	(0.12)	(0.83)
0 to 4 years	-0.022**	0.000
	(0.02)	(0.96)
5 to 14 years	0.000	0.000
	(.)	(.)
[1] Postgrad - masters or doctorate	grad certificate"	grad certificate"
	(0.10)	(0.76)
="[2] Grad diploma	-0.046**	-0.003
	(0.01)	(0.87)
[3] Bachelor or honours	diploma"	diploma"
	(0.34)	(0.85)
="[4] Adv diploma	-0.013	0.006
	(0.51)	(0.78)
[5] Cert III or IV	-0.017	-0.022
	(0.43)	(0.32)
[8] Year 12	-0.021	-0.002
	(0.33)	(0.92)
[9] Year 11 and below	0.000	0.000
	(.)	(.)
Permanent	0.042***	0.028**
	(0.00)	(0.01)
Fixed-term	0.133***	0.135***
	(0.00)	(0.00)
Casual	0.000	0.000
	(.)	(.)
[1] Managers	-0.019*	-0.029***
	(0.07)	(0.01)
[2] Professionals	0.009	-0.005
	(0.55)	(0.79)

[3] Technicians and Trades Workers	-0.026	-0.046**
	(0.15)	(0.01)
[4] Community and Personal Service Workers	-0.019	-0.005
	(0.15)	(0.71)
[5] Clerical and Administrative Workers	0.022	0.037*
	(0.22)	(0.06)
[6] Sales Workers	-0.005	0.027
	(0.80)	(0.23)
[7] Machinery Operators and Drivers	0.000	0.011
	(0.99)	(0.66)
[8] Labourers	0.000	0.000
	(.)	(.)
australian=0	0.034	0.018
	(0.12)	(0.37)
australian=1	0.512***	0.553***
	(0.00)	(0.00)
year=2017	11609	10236
Constant	** p<.05	** p<.05
	(1)	(1)
Observations	ch_empl	ch_empl
p-values in parentheses	0.000	0.000
="* p<.10	(.)	(.)
	0.007	-0.002
	(0.60)	(0.92)
strong_ineff	-0.013	0.022
	(0.33)	(0.12)
weak_ineff	-0.007	-0.009
	(0.62)	(0.52)
weak_diligent	-0.011***	-0.013***
	(0.01)	(0.00)
strong_diligent	0.000	0.000*
	(0.13)	(0.07)
age	0.000	0.000
	(.)	(.)
age2	0.005	-0.020**
	(0.64)	(0.05)
partner=0	0.000	0.000
	(.)	(.)
partner=1	-0.018	0.002
	(0.11)	(0.87)
no kids below 14	-0.023**	0.001
	(0.02)	(0.96)
0 to 4 years	0.000	0.000
	(.)	(.)

5 to 14 years	grad certificate"	grad certificate"
	(0.10)	(0.76)
[1] Postgrad - masters or doctorate	-0.047**	-0.003
	(0.01)	(0.87)
="[2] Grad diploma	diploma"	diploma"
	(0.32)	(0.89)
[3] Bachelor or honours	-0.015	0.006
	(0.44)	(0.76)
="[4] Adv diploma	-0.019	-0.022
	(0.37)	(0.31)
[5] Cert III or IV	-0.021	-0.002
	(0.32)	(0.93)
[8] Year 12	0.000	0.000
	(.)	(.)
[9] Year 11 and below	0.042***	0.028**
	(0.00)	(0.01)
Permanent	0.133***	0.133***
	(0.00)	(0.00)
Fixed-term	0.000	0.000
	(.)	(.)
Casual	-0.019*	-0.029***
	(0.07)	(0.01)
[1] Managers	0.010	-0.005
	(0.51)	(0.76)
[2] Professionals	-0.025	-0.045**
	(0.15)	(0.01)
[3] Technicians and Trades Workers	-0.019	-0.004
	(0.15)	(0.77)
[4] Community and Personal Service Workers	0.023	0.037*
	(0.21)	(0.05)
[5] Clerical and Administrative Workers	-0.004	0.029
	(0.84)	(0.21)
[6] Sales Workers	0.002	0.015
	(0.91)	(0.54)
[7] Machinery Operators and Drivers	0.000	0.000
	(.)	(.)
[8] Labourers	0.034	0.018
	(0.12)	(0.36)
australian=0	0.504***	0.527***
	(0.00)	(0.00)
australian=1	11610	10236
year=2017	** p<.05	** p<.05
	(1)	(1)

Constant	ch_empl	ch_empl
	0.000	0.000
Observations	(.)	(.)
p-values in parentheses	0.016	0.028**
="* p<.10	(0.22)	(0.05)
	0.039***	0.022
	(0.00)	(0.11)
strong_intro	0.032**	0.041***
	(0.01)	(0.00)
weak_intro	-0.011***	-0.013***
	(0.01)	(0.00)
weak_extro	0.000	0.000*
	(0.15)	(0.07)
strong_extro	0.000	0.000
	(.)	(.)
age	0.002	-0.020*
	(0.84)	(0.05)
age2	0.000	0.000
	(.)	(.)
partner=0	-0.017	0.002
	(0.13)	(0.86)
partner=1	-0.022**	0.000
	(0.02)	(0.99)
no kids below 14	0.000	0.000
	(.)	(.)
0 to 4 years	grad certificate"	grad certificate"
	(0.08)	(0.69)
5 to 14 years	-0.047**	-0.005
	(0.01)	(0.80)
[1] Postgrad - masters or doctorate	diploma"	diploma"
	(0.31)	(0.93)
="[2] Grad diploma	-0.015	0.006
	(0.45)	(0.78)
[3] Bachelor or honours	-0.018	-0.024
	(0.39)	(0.27)
="[4] Adv diploma	-0.023	-0.003
	(0.28)	(0.89)
[5] Cert III or IV	0.000	0.000
	(.)	(.)
[8] Year 12	0.042***	0.027**
	(0.00)	(0.01)
[9] Year 11 and below	0.134***	0.132***
	(0.00)	(0.00)
Permanent	0.000	0.000
	(.)	(.)

Fixed-term	-0.019*	-0.028**
	(0.08)	(0.01)
Casual	0.011	-0.002
	(0.45)	(0.89)
[1] Managers	-0.025	-0.045**
	(0.17)	(0.01)
[2] Professionals	-0.018	-0.003
	(0.17)	(0.82)
[3] Technicians and Trades Workers	0.022	0.037*
	(0.23)	(0.05)
[4] Community and Personal Service Workers	0.000	0.031
	(0.99)	(0.17)
[5] Clerical and Administrative Workers	0.004	0.016
	(0.84)	(0.49)
[6] Sales Workers	0.000	0.000
	(.)	(.)
[7] Machinery Operators and Drivers	0.033	0.018
	(0.13)	(0.36)
[8] Labourers	0.476***	0.504***
	(0.00)	(0.00)
australian=0	11610	10236
australian=1	** p<.05	** p<.05
	(1)	(1)
year=2017	ch_empl	ch_empl
	0.000	0.000
Constant	(.)	(.)
	0.018	0.005
Observations	(0.17)	(0.71)
p-values in parentheses	-0.001	-0.013
="* p<.10	(0.92)	(0.37)
	0.014	0.004
	(0.30)	(0.79)
strong_disagr	-0.011***	-0.013***
	(0.01)	(0.00)
weak_disagr	0.000	0.000*
	(0.12)	(0.05)
weak_agreab	0.000	0.000
	(.)	(.)
strong_agreab	0.005	-0.020**
	(0.66)	(0.05)
age	0.000	0.000
	(.)	(.)
age2	-0.017	0.003
	(0.12)	(0.81)

partner=0	-0.022**	0.001
	(0.03)	(0.90)
partner=1	0.000	0.000
	(.)	(.)
no kids below 14	grad certificate"	grad certificate"
	(0.10)	(0.75)
0 to 4 years	-0.047**	-0.004
	(0.01)	(0.84)
5 to 14 years	diploma"	diploma"
	(0.33)	(0.85)
[1] Postgrad - masters or doctorate	-0.013	0.006
	(0.49)	(0.75)
="[2] Grad diploma	-0.019	-0.021
	(0.39)	(0.33)
[3] Bachelor or honours	-0.021	-0.002
	(0.31)	(0.93)
="[4] Adv diploma	0.000	0.000
	(.)	(.)
[5] Cert III or IV	0.042***	0.028**
	(0.00)	(0.01)
[8] Year 12	0.135***	0.134***
	(0.00)	(0.00)
[9] Year 11 and below	0.000	0.000
	(.)	(.)
Permanent	-0.019*	-0.029***
	(0.07)	(0.01)
Fixed-term	0.010	-0.005
	(0.50)	(0.77)
Casual	-0.025	-0.045**
	(0.16)	(0.01)
[1] Managers	-0.019	-0.004
	(0.14)	(0.77)
[2] Professionals	0.023	0.037*
	(0.21)	(0.05)
[3] Technicians and Trades Workers	-0.002	0.029
	(0.92)	(0.20)
[4] Community and Personal Service Workers	0.002	0.013
	(0.93)	(0.58)
[5] Clerical and Administrative Workers	0.000	0.000
	(.)	(.)
[6] Sales Workers	0.033	0.018
	(0.13)	(0.37)
[7] Machinery Operators and Drivers	0.495***	0.538***
	(0.00)	(0.00)

[8] Labourers	11609	10237
australian=0	** p<.05	** p<.05
	(1)	(1)
australian=1	ch_empl	ch_empl
	0.000	0.000
year=2017	(.)	(.)
	0.019	0.010
Constant	(0.15)	(0.50)
	0.023*	0.029**
Observations	(0.09)	(0.04)
p-values in parentheses	0.044***	0.049***
="* p<.10	(0.00)	(0.00)
	-0.011***	-0.013***
	(0.01)	(0.00)
strong_close	0.000	0.000*
	(0.14)	(0.06)
weak_close	0.000	0.000
	(.)	(.)
weak_open	0.006	-0.017*
	(0.56)	(0.09)
strong_open	0.000	0.000
	(.)	(.)
age	-0.016	0.004
	(0.14)	(0.75)
age2	-0.021**	0.002
	(0.03)	(0.88)
partner=0	0.000	0.000
	(.)	(.)
partner=1	grad certificate"	grad certificate"
	(0.12)	(0.88)
no kids below 14	-0.044**	0.001
	(0.02)	(0.97)
0 to 4 years	diploma"	diploma"
	(0.51)	(0.63)
5 to 14 years	-0.005	0.017
	(0.79)	(0.41)
[1] Postgrad - masters or doctorate	-0.010	-0.013
	(0.64)	(0.55)
="[2] Grad diploma	-0.010	0.013
	(0.64)	(0.54)
[3] Bachelor or honours	0.000	0.000
	(.)	(.)
="[4] Adv diploma	0.041***	0.026**
	(0.00)	(0.02)

[5] Cert III or IV	0.132***	0.131***
	(0.00)	(0.00)
[8] Year 12	0.000	0.000
	(.)	(.)
[9] Year 11 and below	-0.019*	-0.028**
	(0.07)	(0.01)
Permanent	0.010	-0.003
	(0.49)	(0.87)
Fixed-term	-0.024	-0.043**
	(0.18)	(0.02)
Casual	-0.017	-0.002
	(0.18)	(0.89)
[1] Managers	0.024	0.040**
	(0.18)	(0.04)
[2] Professionals	-0.001	0.033
	(0.96)	(0.15)
[3] Technicians and Trades Workers	0.006	0.018
	(0.77)	(0.46)
[4] Community and Personal Service Workers	0.000	0.000
	(.)	(.)
[5] Clerical and Administrative Workers	0.033	0.017
	(0.13)	(0.40)
[6] Sales Workers	0.468***	0.502***
	(0.00)	(0.00)
[7] Machinery Operators and Drivers	11609	10236
[8] Labourers	** p<.05	** p<.05
australian=0		
australian=1		
year=2017		
Constant		
Observations		
p-values in parentheses		
="* p<.10		

APPENDIX 8 – REGRESSION ESTIMATIONS – CHAPTER 4

Full fixed-effect regressions' estimations (effect of unemployment on life satisfaction)

		Table 12: Individual Resilience							
		Males		Females		Males		Females	
		Life sat.	Life sat.	Life sat.	Life sat.	Life sat.	Life sat.	Life sat.	Life sat.
	Age	-0.013***	-0.007***	-0.013***	-0.006***	-0.009***	-0.004***	-0.011***	-0.003**
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.02)
	New child					0.055***	0.071***	0.161***	0.132***
						(0.00)	(0.00)	(0.00)	(0.00)
	Family income (log)					0.170***	0.207***	0.180***	0.171***
						(0.00)	(0.00)	(0.00)	(0.00)
	Relationship					0.065***	0.076***	0.042***	0.018
						(0.00)	(0.00)	(0.00)	(0.26)
	Perceived health					0.140***	0.145***	0.126***	0.133***
						(0.00)	(0.00)	(0.00)	(0.00)
Q. = I	t-4	0.010		0.024		0.015		0.034*	
		(0.69)		(0.24)		(0.52)		(0.09)	
	t-3	0.024		0.009		0.041*		0.011	
		(0.31)		(0.63)		(0.07)		(0.56)	
	t-2	0.028		0.008		0.038		0.018	
		(0.25)		(0.67)		(0.11)		(0.36)	
	t-1	0.002		0.043**		0.009		0.053***	
		(0.93)		(0.03)		(0.72)		(0.01)	
	t0	-0.210***		-0.054***		-0.165***		-0.071***	
		(0.00)		(0.01)		(0.00)		(0.00)	
Q. = II	t-4	-0.018		0.014		-0.002		0.041**	
		(0.41)		(0.44)		(0.94)		(0.02)	
	t-3	0.021		-0.001		0.033		0.007	
		(0.37)		(0.95)		(0.16)		(0.71)	
	t-2	-0.031		-0.001		-0.023		0.007	
		(0.19)		(0.94)		(0.33)		(0.70)	
	t-1	-0.033		0.055***		-0.009		0.050***	
		(0.21)		(0.00)		(0.73)		(0.00)	
	t0	-0.259***		-0.142***		-0.198***		-0.130***	
		(0.00)		(0.00)		(0.00)		(0.00)	
Q. = III	t-4	0.047**		-0.045**		0.068***		-0.029*	
		(0.04)		(0.01)		(0.00)		(0.10)	
	t-3	-0.024		-0.012		0.006		-0.001	
		(0.29)		(0.51)		(0.80)		(0.97)	
	t-2	-0.034		0.017		-0.018		0.020	
		(0.14)		(0.31)		(0.43)		(0.23)	
	t-1	-0.047*		-0.022		0.001		-0.007	
		(0.06)		(0.23)		(0.95)		(0.68)	
	t0	-0.320***		-0.111***		-0.262***		-0.109***	
		(0.00)		(0.00)		(0.00)		(0.00)	

I Q.	t-4	-0.033		-0.030		-0.008		-0.007	
		(0.14)		(0.10)		(0.72)		(0.68)	
	t-3	-0.010		0.006		0.014		0.018	
		(0.67)		(0.74)		(0.53)		(0.32)	
	t-2	-0.041*		0.008		-0.012		0.019	
		(0.09)		(0.64)		(0.59)		(0.27)	
	t-1	-0.125***		0.025		-0.089***		0.036**	
		(0.00)		(0.18)		(0.00)		(0.04)	
	t0	-0.433***		-0.153***		-0.347***		-0.133***	
		(0.00)		(0.00)		(0.00)		(0.00)	-0.007
IV Q.	t+1		-0.042		-0.009		-0.009		(0.68)
			(0.13)		(0.64)		(0.76)		0.026
	t+2		0.026		0.011		0.024		(0.17)
			(0.27)		(0.57)		(0.28)		0.023
	t+3		0.023		0.018		0.043*		(0.22)
			(0.32)		(0.32)		(0.06)		0.010
	t+4		0.031		0.020		0.040*		(0.58)
			(0.19)		(0.27)		(0.08)		0.011
III Q.	t+1		-0.112***		-0.008		-0.081***		(0.50)
			(0.00)		(0.66)		(0.00)		-0.025
	t+2		-0.027		-0.027		-0.005		(0.14)
			(0.25)		(0.12)		(0.82)		-0.001
	t+3		-0.012		-0.001		0.013		(0.94)
			(0.63)		(0.94)		(0.58)		-0.007
	t+4		0.006		-0.013		0.022		(0.67)
			(0.81)		(0.46)		(0.38)		-0.071***
II Q.	t+1		-0.125***		-0.075***		-0.083***		(0.00)
			(0.00)		(0.00)		(0.00)		0.013
	t+2		-0.037		-0.001		0.002		(0.41)
			(0.13)		(0.94)		(0.93)		-0.013
	t+3		0.002		-0.024		0.013		(0.42)
			(0.94)		(0.13)		(0.57)		-0.030*
	t+4		-0.031		-0.024		-0.011		(0.07)
			(0.19)		(0.17)		(0.62)		-0.031*
I Q.	t+1		-0.196***		-0.045**		-0.128***		(0.10)
			(0.00)		(0.02)		(0.00)		0.009
	t+2		-0.029		-0.005		-0.008		(0.66)
			(0.24)		(0.81)		(0.72)		-0.000
	t+3		0.004		0.006		0.011		(1.00)
			(0.89)		(0.71)		(0.66)		0.015
	t+4		-0.011		0.004		0.010		(0.36)
			(0.67)		(0.82)		(0.69)		-2.128***
	Constant	0.652***	0.255***	0.607***	0.222***	-1.873***	-2.506***	-1.784***	(0.00)
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	84355
	Observations	88921	84541	92605	88232	85555	81299	88582	
	p-values in parentheses								

		Table 11: Social resilience							
		Males		**Females**		**Males**		**Females**	
		Life sat.	Life sat.	Life sat.	Life sat.	Life sat.	Life sat.	Life sat.	Life sat.
	Age	-0.013***	-0.007***	-0.013***	-0.006***	-0.009***	-0.004***	-0.010***	-0.003**
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.02)
	New child					0.055***	0.072***	0.158***	0.132***
						(0.00)	(0.00)	(0.00)	(0.00)
	Family income(log)					0.171***	0.207***	0.179***	0.171***
						(0.00)	(0.00)	(0.00)	(0.00)
	Relationship					0.065***	0.075***	0.041***	0.019
						(0.00)	(0.00)	(0.01)	(0.26)
	Perceived health					0.141***	0.145***	0.126***	0.133***
						(0.00)	(0.00)	(0.00)	(0.00)
I Q.	t-4	-0.014		0.012		-0.007		0.019	
		(0.59)		(0.53)		(0.78)		(0.30)	
	t-3	-0.007		0.026		0.002		0.028	
		(0.79)		(0.15)		(0.93)		(0.11)	
	t-2	-0.016		-0.009		0.003		-0.005	
		(0.58)		(0.62)		(0.92)		(0.76)	
	t-1	-0.035		0.040**		-0.020		0.042**	
		(0.19)		(0.02)		(0.44)		(0.01)	
	t0	-0.218***		-0.051**		-0.154***		-0.054***	
		(0.00)		(0.01)		(0.00)		(0.00)	
II Q.	t-4	-0.001		-0.003		0.007		0.027	
		(0.98)		(0.89)		(0.77)		(0.13)	
	t-3	0.006		-0.025		0.031		-0.018	
		(0.80)		(0.15)		(0.18)		(0.29)	
	t-2	-0.004		0.039**		0.012		0.039**	
		(0.87)		(0.02)		(0.60)		(0.01)	
	t-1	-0.047*		0.048***		-0.009		0.045***	
		(0.08)		(0.00)		(0.73)		(0.01)	
	t0	-0.270***		-0.102***		-0.206***		-0.108***	
		(0.00)		(0.00)		(0.00)		(0.00)	
III Q.	t-4	0.006		-0.025		0.032		-0.013	
		(0.76)		(0.15)		(0.11)		(0.44)	
	t-3	-0.010		0.026		0.019		0.034**	
		(0.63)		(0.14)		(0.37)		(0.05)	
	t-2	-0.018		-0.009		-0.010		0.003	
		(0.43)		(0.58)		(0.65)		(0.86)	
	t-1	-0.034		0.017		-0.009		0.032*	
		(0.15)		(0.35)		(0.68)		(0.07)	

	t0	-0.352***		-0.134***		-0.284***		-0.122***	
		(0.00)		(0.00)		(0.00)		(0.00)	
I Q.	t-4	0.002		-0.032		0.025		-0.005	
		(0.92)		(0.13)		(0.24)		(0.82)	
	t-3	0.002		-0.026		0.021		-0.010	
		(0.91)		(0.23)		(0.35)		(0.64)	
	t-2	-0.054**		0.015		-0.029		0.029	
		(0.01)		(0.48)		(0.17)		(0.17)	
	t-1	-0.098***		-0.014		-0.058**		0.004	
		(0.00)		(0.51)		(0.01)		(0.85)	
	t0	-0.379***		-0.182***		-0.312***		-0.159***	
		(0.00)		(0.00)		(0.00)		(0.00)	
IV Q.	t+1		-0.121***		0.004		-0.084***		0.012
			(0.00)		(0.82)		(0.00)		(0.48)
	t+2		0.020		-0.039**		0.026		-0.018
			(0.47)		(0.02)		(0.33)		(0.27)
	t+3		-0.004		-0.013		0.032		-0.009
			(0.89)		(0.44)		(0.24)		(0.58)
	t+4		-0.010		-0.004		0.010		-0.007
			(0.67)		(0.81)		(0.69)		(0.65)
III Q.	t+1		-0.098***		-0.024		-0.049*		-0.027
			(0.00)		(0.17)		(0.07)		(0.11)
	t+2		-0.024		-0.027		-0.012		-0.016
			(0.34)		(0.13)		(0.62)		(0.35)
	t+3		0.035		0.022		0.061**		0.030*
			(0.16)		(0.20)		(0.01)		(0.07)
	t+4		0.044*		-0.020		0.036		-0.015
			(0.09)		(0.23)		(0.16)		(0.35)
II Q.	t+1		-0.117***		-0.063***		-0.087***		-0.043**
			(0.00)		(0.00)		(0.00)		(0.01)
	t+2		-0.004		0.025		0.018		0.026
			(0.87)		(0.14)		(0.40)		(0.11)
	t+3		0.012		-0.030*		0.012		-0.027*
			(0.63)		(0.06)		(0.62)		(0.08)
	t+4		0.005		0.004		0.026		0.008
			(0.82)		(0.79)		(0.26)		(0.60)
Q.	t+1		-0.160***		-0.058***		-0.098***		-0.043**
			(0.00)		(0.01)		(0.00)		(0.03)
	t+2		-0.053**		0.009		-0.018		0.023
			(0.02)		(0.70)		(0.39)		(0.29)
	t+3		-0.025		0.021		-0.014		0.014
			(0.25)		(0.29)		(0.51)		(0.47)
	t+4		-0.040*		-0.003		-0.010		-0.004
			(0.09)		(0.88)		(0.66)		(0.36)
	Constant	0.663***	0.258***	0.606***	0.222***	-1.876***	-2.509***	-1.782***	-2.130***
		(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)

	Observations	88921	84541	92605	88232	85555	81299	88582	84355
	p-values in parentheses								
	="* p<.10	** p<.05	*** p<.01"						

Stability of personality traits
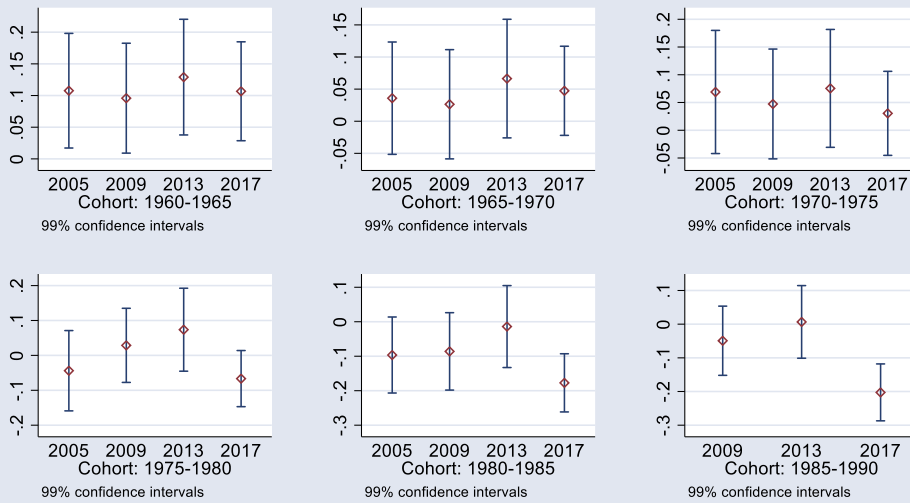
Emotional stability

Change of Emotional stability
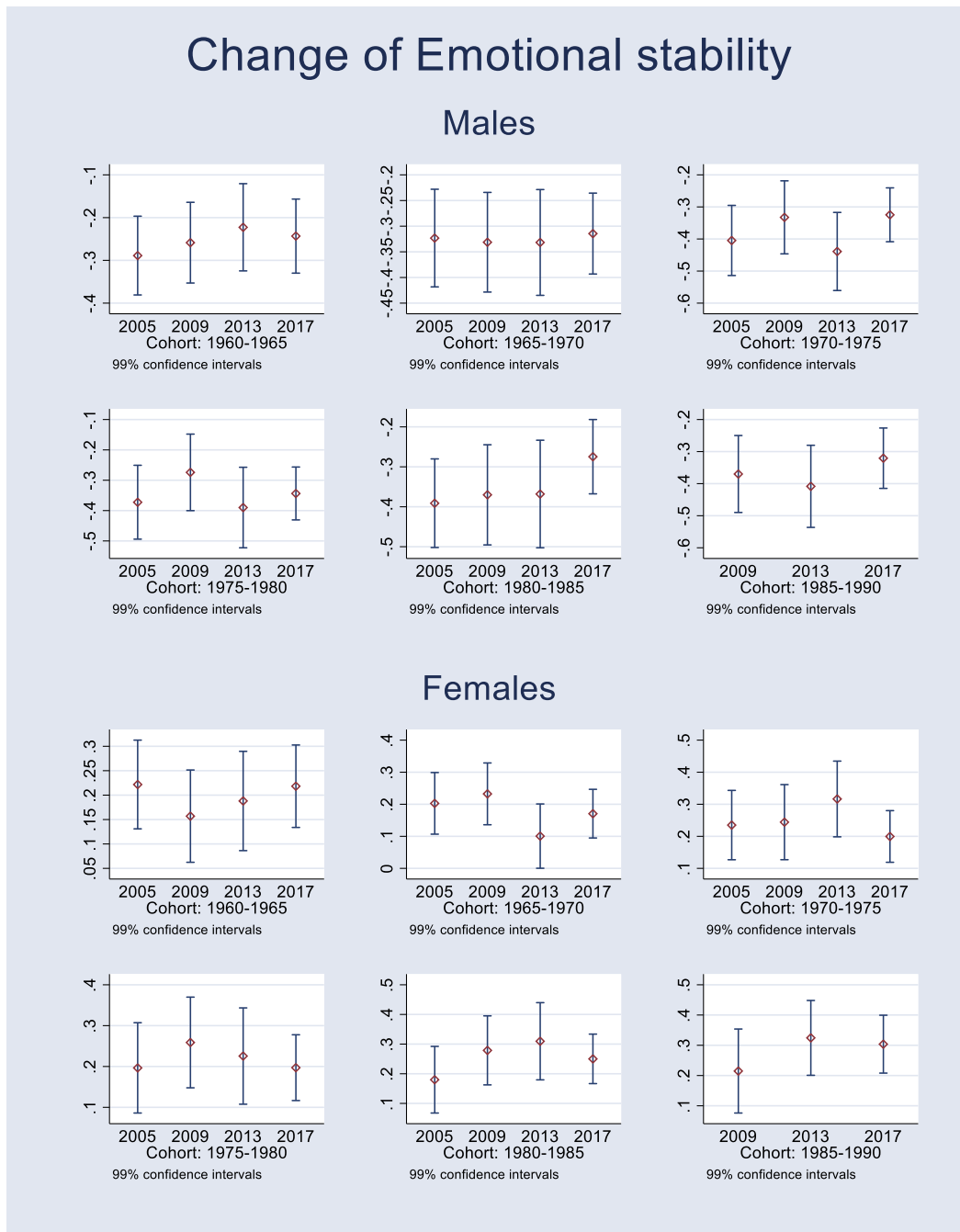
Openness to experience

Change of Openness

Males

Females

268
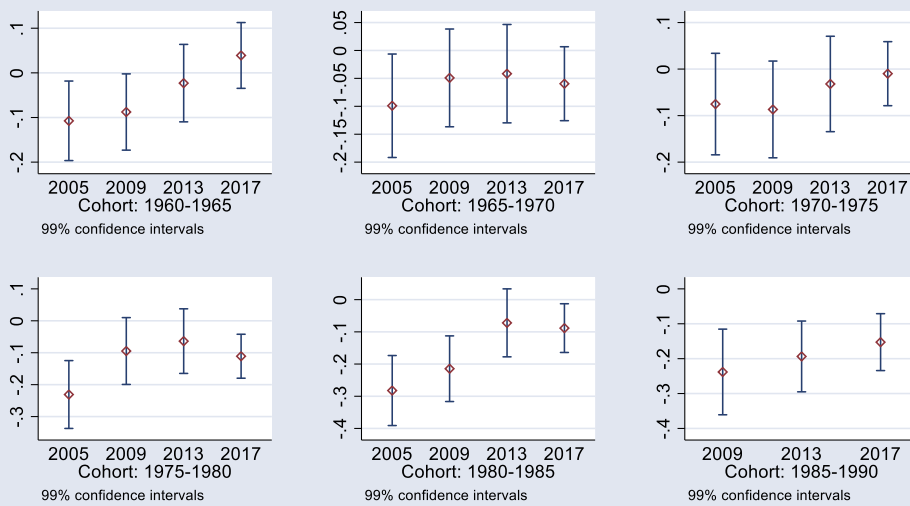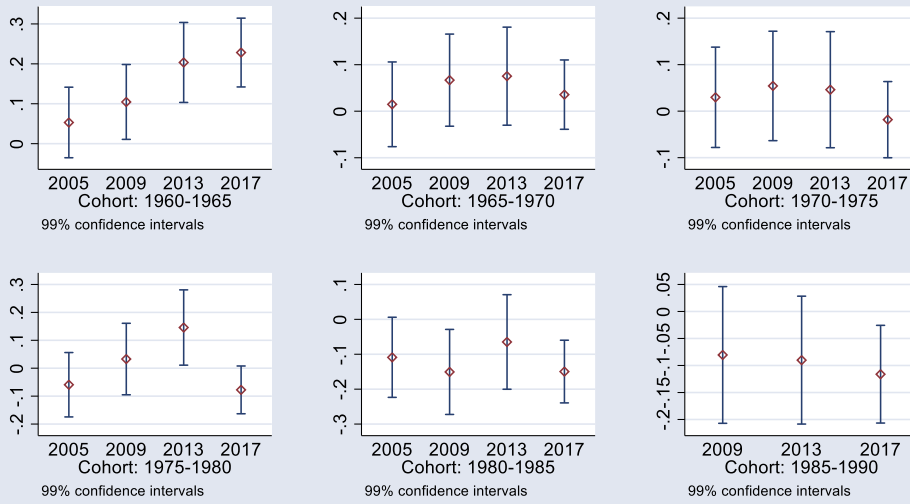
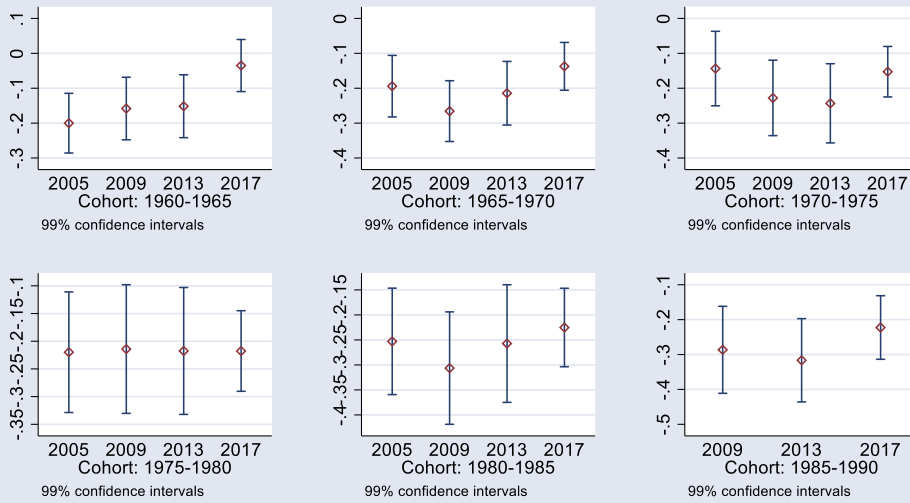**Locus of control**

Change of Locus of control

Males

Females

99% confidence intervals

Extraversion

Change of Trustworthiness
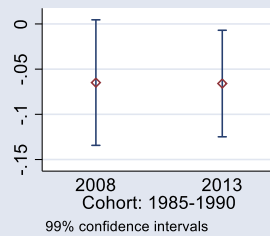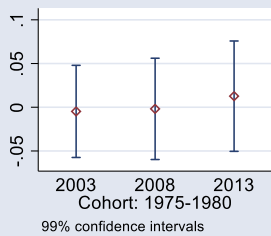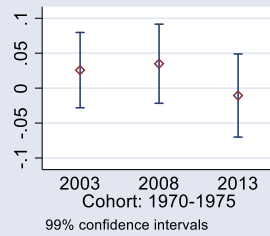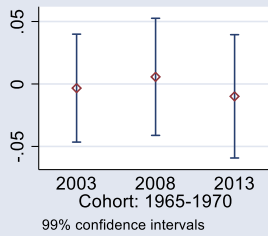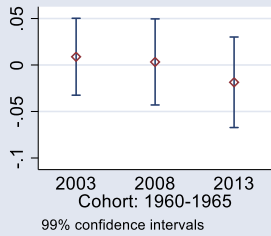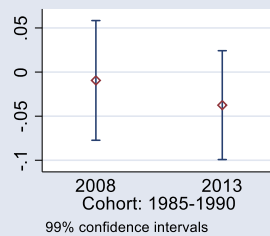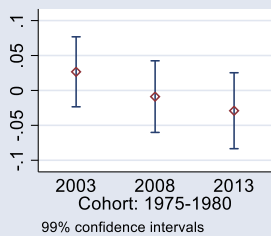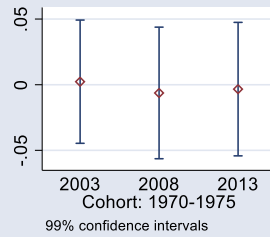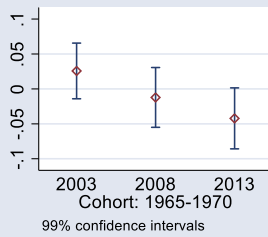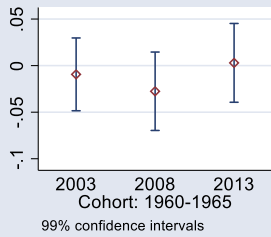
Change of Altruism

Males

Females